Cl/SfB

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Proteus SR

SOLID METAL RAINSCREEN

What is Proteus SR?

Proteus SR is a secret fix rainscreen system that is available in a multitude of materials and finishes, including Powder Coated Aluminium, Pre Coated Aluminium, Anodised Aluminium, Stainless Steel and Weathering Steel.

The versatility of the Proteus SR rainscreen system allows the material thickness to be from 1.5mm to 5.0mm. Designers have the freedom using the Proteus SR system to lay panels in vertical, horizontal or a combination of both orientations. Standard 20mm vertical and horizontal joints provide a clean and effortless sightline to your facade.

The panels fix to a carrier rail with hooks at engineered centres. The hooks bolt into predesigned ports within the vertical rails rather than using self-drilling fixings, which offer maximum site adjustability and construction tolerance.

Vertical rails connect to support brackets engineered to a depth specific to your project with accompanying thermal isolator pads, allowing the system to be connected to all types of primary structures, including blockwork, precast concrete, timber frame, SIPS panels, SFS and insulated steel panels.

Secondary horizontal rails may be required, subject to the project's framing system. This flexibility assists in reducing installation periods and offers maximum flexibility for new build, refurbishment and cladding remediation projects.

What is a rainscreen?

Rainscreen cladding is the attachment of an outer skin of rear-ventilated cladding to a new or existing building. The system is a form of double-wall construction that uses an outer layer to keep out the rain and an inner layer to provide thermal insulation, prevent excessive air leakage and carry wind loading. The outer layer breathes like a skin while the inner layer reduces energy losses.

The structural frame of the building is kept dry, as very minimal amounts of water can cross the cavity to reach the thermal insulation on the backing wall. Evaporation and drainage in the cavity removes this water that penetrates between panel joints.

Water droplets are not driven through the panel joints or openings because the rainscreen principle means that wind pressure acting on the outer face of the panel is equalised in the cavity. Therefore, there is no significant pressure differential to drive the rain through joints. During extreme weather, minimal water may penetrate the outer cladding, this, however, will run as droplets down the back of the panels and be dissipated through evaporation and drainage.

- **Proteus SR is ideal for refurbishment and replacement cladding projects**
- **All panels manufactured at our factory are pre-finished for rapid installation**
- **Stud welded mid-span supports**
- **Material can be broken down and fully recycled**
- **Variety of insulation depths for thermal and acoustic requirements**
- **Classified A1 or A2-s1, d0 in accordance with EN13501**
- **Fully tested and compliant with CWCT standards**

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1. Backing Wall

The backing wall is responsible for carrying both the self-weight of the rainscreen and wind loadings. The system is designed to incorporate fixing to a range of substrates, for example with steel framing system (SFS) continuous channels can be used allowing vertical panel joints to be positioned independently of SFS vertical stud positions.

2. Insulation

A good thermal build-up design will improve energy efficiency of the building. Specified insulation can be used within the inner wall or in the envelope cavity. There is to be a minimum clean air cavity of 38mm between the face of the substrate/insulation and panel rear. Insulation should be tightly fitted around mullion brackets. Mullion brackets can be supplied as Aluminium or Stainless Steel with optional thermal isolator pads to reduce cold spots across the substrate.

3. Panel Support System

The Proteus SR support system utilises spring loaded tapped blocks in an engineered rail port for three-dimensional adjustment ensuring the façade is plumb and level. A specialised self-drilling fixing is used allowing the system to accommodate for structural movement adequately. Mullion Brackets can be designed and engineered to various cavity depths to meet insulation build-up requirements.

4. Panel Fixing Brackets

The Proteus SR hook brackets use the spring-loaded tapped block feature in the system and are fitted with a bolt connection that can be adjusted to a precise set-out. The SR panels are designed with hook slots of the appropriate size to facilitate joint tolerance and movement within the system. To secure the panels in place, a low-profile self-drilling screw is fixed through the top fold of the panel, which remains concealed by the panel above, creating a secret fix system. If necessary, the panels can be individually demounted as per the design requirements.

5. Panel Joints

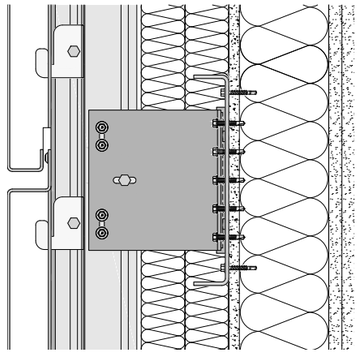
The vertical panel joint uses a compression fit gasket benefiting the panels installation. The horizontal joint is a labyrinth design preventing direct water penetration. Both horizontal and vertical are 20mm recessed joints. The panel top fold finishes the horizontal joint whilst an infill strip, finished to match the panels, finishes the vertical joint.

6. Panels

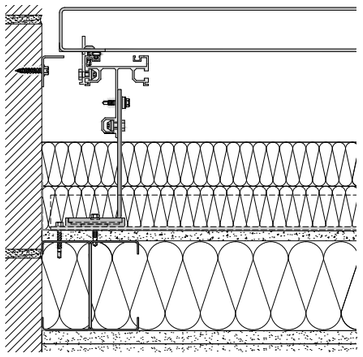
The SR panels are a 50mm deep hook-on cassette, this depth is suited to open state cassette inserts benefitting fire barrier solutions. The panels act as the main defence for the envelope shedding water and snow down the external face whilst the systems support transfers wind loadings back the primary structure. Panels are supplied shrink wrapped on pallets, individually numbered for traceability.

Section drawings

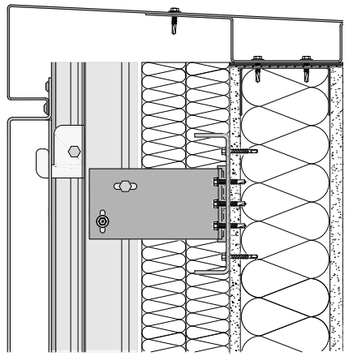
Horizontal joint



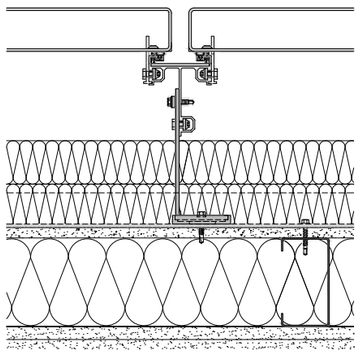
Termination



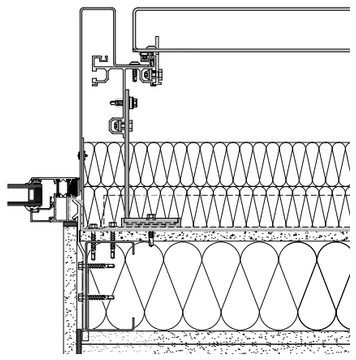
Capping



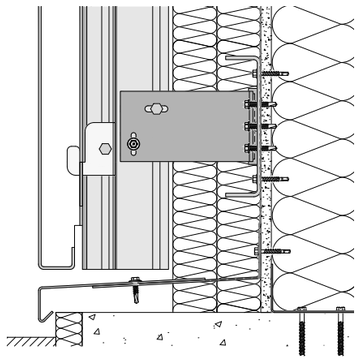
Vertical joint



Window jamb



Base



Performance

Fire performance

The Proteus SR system is classfied in accordance with EN13501 achieving A1 or A2-s1, d0 depending upon the material and finish specified. Any specified fire breaks / insulation would be supplied by a competent contractor.

Weather testing

The Proteus SR system has successfully undergone testing in accordance with CWCT Standard Test Methods for walls with ventilated rainscreens. The Proteus SR system passed the water tightness testing using dynamic pressure and wind resistance testing for both Safety (3.6kn/m2) and Serviceability (2.4kn/m2).

Durability

The Proteus SR system uses various metals as a finished face; these metals all have their own intrinsic durability properties and will be determined by geographical location, local environment and possibly the colour selected. The Proteus SR system has been tested for both soft and hard body impact as part of the CWCT test sequence.

Maintenance

Proteus SR is a low-maintenance system that can be easily cleaned with water and a mild detergent. Subject to material finish there may be no requirement for a scheduled cleaning regime.

Materials and Finishes

Please note that all colours shown are representative in print process, we recommend that you request a swatch sample from our sales department for an accurate representation.

A1 Pre Coated Aluminium

Precoated aluminium provides a contemporary finish with pre-applied colours, combining durability with design flexibility.

Material width: 1250, 1500mm
Max panel width: 1050, 1300mm

All RAL Colours

Cream P003

Copper Brown P016

Basalt Grey P010

Anthracite Grey P013

PPC Aluminium

Aluminium's clean, modern appearance is elevated with durable powder coatings, available in any RAL colour.

Material width: 1000, 1250, 1500, 2000mm
Max panel width: 800, 1050, 1300, 1800mm

All RAL Colours

RAL 8004 Copper Brown

RAL 7006 Beige Grey

RAL 7035 Light Grey

RAL 9002 Grey White

Anodised Aluminium

Anodising enhances aluminium's surface, delivering a durable metallic finish that reflects light and shadow beautifully.

Material width: 1000, 1250, 1500, 2000mm
Max panel width: 800, 1050, 1300, 1800mm

Natural Silver

Regancy Gold 1

Anolok® 543 Umber

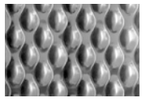
Anolok® 547 Bronze

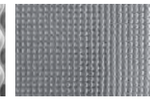
Sandalor® 130-0

Stainless Steel

Stainless steel offers exceptional strength and corrosion resistance, with a sleek, reflective finish ideal for modern façades.

Material width: 1250, 1500mm
Max panel width: 1050, 1300mm


6WL


Canvas

Quilted

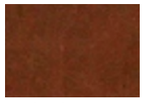
Chapagne Granex

Blue Granex

Weathering Steel

Weathering steel forms a protective patina over time, providing enhanced corrosion resistance and a bold, industrial look.

Material width: 1000, 1250, 1500mm
Max panel width: 800, 1050. 1300mm


Weathered COR-TEN Steel

The finishes shown are a small sample of the available finishes, please see our website for more www.proteusfacades.com

Project:
Alder Hey, Sunflower House & The Catkin Centre
Liverpool

Sector: Healthcare
Architect: 10 Architect
Finish: Weathering Steel

Proteus Facades have supplied eye-catching Weathering Steel cladding to Alder Hey.

Project services

Consultation

We offer a full consultation service at the early stages of your project, helping you choose the right specification for your scheme and your budget. Our technical department will provide design assistance to ensure compliance and provide a cost-effective solution. As part of the consultation process we can provide standard product samples and can also assist in the development of project specific prototypes, mock ups and project samples to allow you to visualise your perfect Proteus solution.

Estimating

Our experienced estimators can advise on all aspects of the Proteus system and its application, along with detailed cost information in a timely manner. We can provide robust budget estimates for cost plan purposes through to full project take-offs with detailed quotations taking into account all Proteus materials required to complete your project.

Manufacture

All Proteus products are custom manufactured in our UK factory for each individual project. All elements are supplied pre-finished, ready for on-site installation. Our manufacturing operation features state-of-the art production facilities, backed up by an uncompromising approach to quality control. Our CNC-driven process offers full flexibility in terms of dimensions.

Quality assurance

We manufacture all our products to the highest quality standard, operating a BSI accredited Quality Management System in compliance with the requirements of ISO 9001. Our products are manufactured from the highest-quality materials from our approved supply chain, using state-of-the-art production equipment which is rigorously controlled through inspection and testing at each production stage. Our products are designed and manufactured in accordance with all related and prevailing standards.

Environment

We operate a highly efficient manufacturing facility that operates an accredited Environmental Management System in compliance with the requirements of ISO 14001. We are constantly focused on increasing our understanding and improving the sustainability of our products. By continually improving our products and processes we aim to recover and recycle all our waste. Using the most precise material optimisation software, we ensure our yield of finished product from raw materials is maximised, thus reducing our waste. As a direct result, we reduce our carbon-dioxide emissions, reducing our environmental footprint and that of our customers. Our systems can be simply disassembled on site and transported to be reused or recycled.

Health and safety

Our Business Delivery is managed efficiently and responsibly through the practice of our accredited Occupational Health & Safety Management System in compliance with the requirements of ISO 45001. Through our Management System we promote a safe and healthy working environment by providing a framework that allows our organisation to identify and control its health and safety risks, reduce the potential for accidents, ensure legislative compliance and improve overall performance.

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