Cl/SfB
(41) R08
November 2023

Proteus SP
Data Sheet

Proteus SP
SPANDREL PANEL

What is Proteus SP?

Proteus SP is an insulated spandrel panel system that integrates into a curtain walling or window systems with an aluminium, steel, ceramic or glass facing material.

The system provides an effective way of breaking up the aesthetics of the facade or as a method of hiding floor slabs, ceilings or other building elements. Proteus SP consists of a medium-density mineral fibre core insulation that has been structurally bonded to an external face of back painted glass, porcelain ceramic or an array of aluminium & steel finishes.

The panel is inserted into a pre-prepared glazing opening before being clamped into position on all four edges within the glazing system. The configuration of your spandrel panels can be determined on a project-specific basis, by varying the metal and insulation depth to accommodate the thermal or acoustic requirements of a particular project.

Fire performance

Proteus SP is tested to achieve a classification in accordance with EN13501 for a variety of insulation depths and material finishes. See page 5 for a table of classifications. For additional materials & finishes, we will undertake project specific EN13501 classification.

Thermal Performance

The mineral fibre core insulation within the Proteus SP panel system has a linear thermal transmission of 0.038W/mK. The insultion depth can be amended to accommodate a variety of thermal performance requirements.

Acoustics

A wide variety of sound reduction values can be achieved with the Proteus SP panel by utilising different material thicknesses for the inner and outer skins of the panel. The higher the dB rating, the more mass is required within the panel. Our technical department can advise the most effective way to achieve the requirement of a project.

- **Large-format panels with exceptional flatness**
- **Wide variety of material finishes and textures available**
- **All panels are assembled at our factory and pre-finished for rapid installation on site**
- **Composite construction can be broken down and fully recycled**
- **Variety of insulation depths for thermal and acoustic requirements**
- **Classified in accordance with EN13501**
- **Manufactured to bespoke sizes**

Proteus SP Metal Spandrel Panel

Example of a Metal Stepped Rear Spandrel Panel

1. Panel Inner Skin
Available in aluminium or steel with a wide range of finishes. Please see Materials & Finishes on page 6.

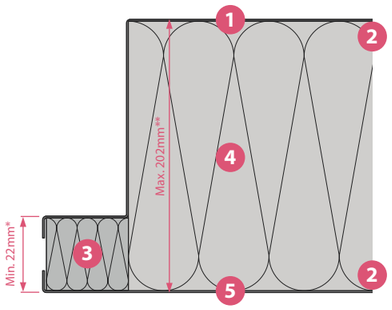
2. Adhesive
Adhesive forming a structural bond between panel insulation and skins. Adhesive applied via a CNC controlled application ensures both quality and compliance to product classification.

3. Panel Edge Insulation
High-density mineral fibre edge insulation.
**Example shows minimum 20mm edge insulation thickness with a 1mm PPC aluminium outer & 0.9mm polyester aluminium inner, to match glazing thickness.*

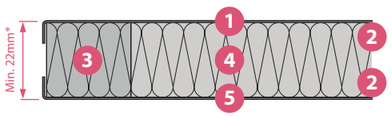
4. Panel Core Insultation
Medium-density mineral fibre core insulation.
***Example shows maximum 200mm core insulation thickness with a 1mm PPC aluminium outer & 0.9mm polyester aluminium inner, produced to suit project-specific thermal and acoustic requirements.*

5. Panel Outer Skin
Available in aluminium or steel with a wide range of finishes.

Stepped Rear Spandrel Panel

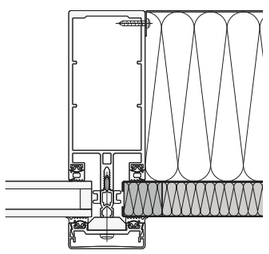


Flat Spandrel Panel

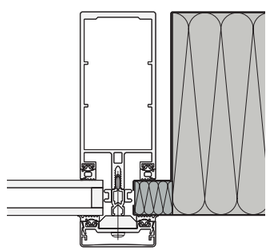


Section Drawings

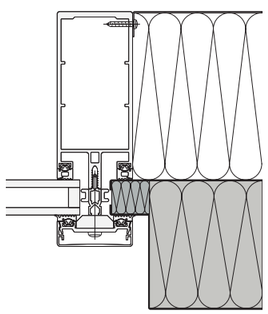
Curtain Wall Pressure Cap System
Flat Spandrel Panel with additional insulation to rear by Contractor



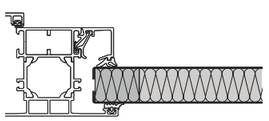
Curtain Wall Pressure Cap System
Stepped Rear Spandrel Panel



Curtain Wall Pressure Cap System
Stepped Face Spandrel Panel with additional insulation to rear by Contractor



Internally Glazed Window
Flat Spandrel Panel



Proteus SP Glass & Ceramic Spandrel Panel

Example of a Glass Flat Spandrel Panel with additional insulation to rear by Contractor

1. Panel Inner Skin
Steel skin available in a range of finishes. Please see materials & Finishes on page 7.

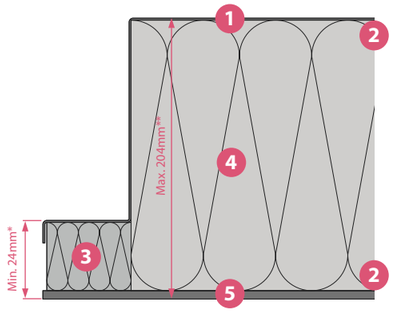
2. Adhesive
Adhesive forming a structural bond between panel insulation and skins. Adhesive applied via a CNC controlled application ensures both quality and compliance to product classification.

3. Panel Edge Insulation
High-density mineral fibre edge insulation.
**Example shows minimum 20mm edge insulation thickness with a 3mm porcelain ceramic outer & 0.7mm PVDF steel inner, to match glazing thickness.*

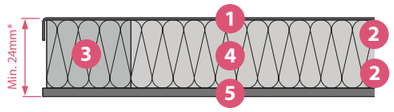
4. Panel Core Insultation
Medium-density mineral fibre core insulation.
***Example shows maximum 200mm core insulation thickness with a 3mm porcelain ceramic outer & 0.7mm PVDF steel inner, produced to suit project-specific thermal and acoustic requirements.*

5. Panel Outer Skin
Available as back painted glass or porcelain ceramic in a range of finishes.

Stepped Rear Spandrel Panel

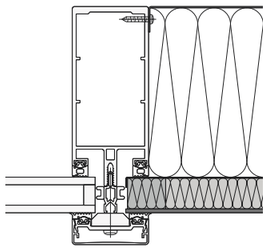


Flat Spandrel Panel

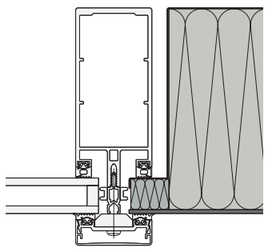


Section Drawings

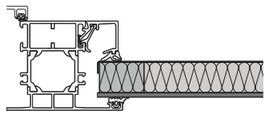
Curtain Wall Pressure Cap System
Flat Spandrel Panel with additional insulation to rear by Contractor



Curtain Wall Pressure Cap System
Stepped Rear Spandrel Panel



Internally Glazed Window
Flat Spandrel Panel



Proteus SP Performance

Proteus SP Metal Spandrel Panel

Available in aluminium or steel, offering an extensive range of finishes to choose from.

The data shown here is for the thermal and acoustic performance of typical panel build-ups using mineral fibre core insulation.

Mineral fibre core insulation has a linear thermal transmission of 0.038W/mK.

Mineral fibre edge insulation has a linear thermal transmission of 0.052W/mK.

High-density mineral fibre edge insulation has a short term water absorption value of <1kg/m² and a long term value of <3kg/m².

** Other materials are available but will require project specific testing. Please contact our technical department to discuss.*

Range of Materials Available

Panel Outer Skin		Panel Inner Skin		EN13501 Classification
Material	Gauge Range	Material	Gauge Range	
PPC Aluminium	0.9mm - 5.0mm	Polyester Aluminium	0.9mm	A2-s1, d0
		Mill Finish Aluminium	0.9mm - 5.0mm	A2-s1, d0
		PPC Aluminium	0.9mm - 5.0mm	A2-s1, d0
PPC Steel	0.7mm - 3.0mm	PVDF Steel	0.7mm - 1.5mm	A2-s1, d0
		Galvanised Steel	0.7mm - 3.0mm	A2-s1, d0
		PPC Steel	0.7mm - 3.0mm	A2-s1, d0

Aluminium - Outer (mm) / Inner (mm) Thickness

Panel Thickness (mm)	1.0mm / 1.0mm		3.0mm / 1.0mm		4.0mm / 1.0mm	
	U - Value (W/m²K)	Acoustic (dB)	U - Value (W/m²K)	Acoustic (dB)	U - Value (W/m²K)	Acoustic (dB)
22	1.46	27				
24	1.37	27	1.46	33		
28	1.20	27	1.28	33	1.32	35
32	1.06	27	1.13	33	1.16	35
36	0.96	27	1.01	34	1.04	36
200	0.19	39	0.19	50	0.19	53

Steel - Outer (mm) / Inner (mm) Thickness

Panel Thickness (mm)	0.7mm / 0.7mm		2.0mm / 0.7mm		3.0mm / 0.7mm	
	U - Value (W/m²K)	Acoustic (dB)	U - Value (W/m²K)	Acoustic (dB)	U - Value (W/m²K)	Acoustic (dB)
22	1.46	33				
24	1.37	33	1.41	40	1.44	42
28	1.20	33	1.23	40	1.26	42
32	1.06	34	1.09	40	1.11	42
36	0.96	34	0.99	40	0.99	43
200	0.19	54	0.19	66	0.18	70

Proteus SP Glass & Ceramic Spandrel Panel

Available in back painted glass or porcelain ceramic with an extensive range of finishes offering you unique and endless contemporary design options.

The data shown here is for the thermal and acoustic performance of typical panel build-ups using mineral fibre core insulation.

Mineral fibre core insulation has a linear thermal transmission of 0.038W/mK.

Mineral fibre edge insulation has a linear thermal transmission of 0.052W/mK.

High-density mineral fibre edge insulation has a short term water absorption value of <1kg/m² and a long term value of <3kg/m².

Range of Materials Available

Panel Outer Skin		Panel Inner Skin		EN13501 Classification
Material	Gauge	Material	Gauge	
Back Painted Glass	4.0mm	PVDF Steel	0.7mm	A2-s1, d0
Porcelain Ceramic	3.0mm	PVDF Steel	0.7mm	A2-s1, d0

Glass / Ceramic - Outer (mm) / **Steel** - Inner (mm) Thickness

Back Painted Glass		
Panel Thickness (mm)	4.0mm / 0.7mm	
	U - Value (W/m²K)	Acoustic (dB)
25	1.46	36
28	1.32	36
32	1.16	36
36	1.03	37
200	0.19	61

Porcelain Ceramic		
Panel Thickness (mm)	3.0mm / 0.7mm	
	U - Value (W/m²K)	Acoustic (dB)
24	1.46	35
28	1.28	35
32	1.13	35
36	1.01	35
200	0.19	57

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.

Pre coated and post coated aluminium

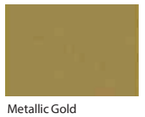
Aluminium, with its distinctive contemporary look, can be post coated in any RAL colour and can be prefinished with unique coating formulations offering long-term performance.

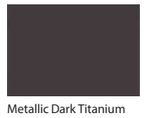
Material width: 1000, 1250, 1500mm
Max panel width: 970, 1220, 1470mm


All RAL Colours


Metallic Silver


Metallic Bronze


Metallic Gold


Metallic Dark Titanium


Design Dark Granite


Design Terracotta


Design Terra Sand


Wood Colonial Red


Chameleon Silver Gold

Grey White

Light Ivory


Sapphire Blue


Jet Black


Squirrel Grey


Basalt Grey


Anthracite Grey

Pre coated and post coated steel

Steel, with its distinctive contemporary look, can be post coated in any RAL colour and can be prefinished with unique coating formulations offering long-term performance.

Material width: 1000, 1250mm
Max panel width: 970, 1220mm


All RAL Colours

Grey White


Pearl Dark Grey


Grey Aluminium


Pebble Grey


Quartz Grey


Chestnut Brown


Oxide Red

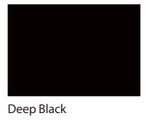

Grey Brown

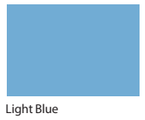

Graphite Black

Back painted glass

Back painted glass offers a unique reflective surface. Standard ranges such as AGC Lacobel / Matelac coated to any RAL colour.

Material width: Bespoke
Max panel width: Project Specific


Deep Black


Light Blue


Petrol Green


Anthracite Grey


Zen Grey


Moka


Cool White


Crisp White


Misty White


Oyster White


Black

Opaque White


Cactus Green


Bronze Tone


Harmony Bronze


EMALIT Ref: 79 300


EMALIT Ref: 35 700


EMALIT Ref: 28 300


EMALIT Ref: 35 300


EMALIT Ref: 25 300

Porcelain Ceramic

A range of coloured porcelain ceramic materials can be provided in Marble, Stone, Cement, Wood, Metallic or Coloured.

Material size: 1000 x 3000mm
Max panel size: 990 x 2990mm


Dover


Brera Creme

Calacatta


Travertino

Marhil

Cement Sand


Cement Beige

White

Ivory


Beige

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

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ENGINEERED FACADE TECHNOLOGY

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