

LiteSpan Stone Wool Sandwich Panel

Flat & Deep Profiled — mineral-wool (Rock Wool) core

Product description

LiteSpan Stone Wool panels laminate a high-density, resin-bonded mineral-wool core (predominantly vertical fibre) between galvalume-coated steel skins. This is the **fire and high-temperature** core: Euroclass A1 non-combustible with rated fire-resistance systems and 760 °C service.

Applications

- Temperature-controlled & cold rooms
- Laboratories and GMP areas
- Agricultural and industrial buildings
- Food processing areas
- Hospitals and clinics
- Indoor swimming pools
- Prefabricated or modular buildings
- Logistics centres and office buildings

Benefits

- **Fire:** non-combustible **A1** core; classified **FR30 / FR60** for non-loadbearing systems (SANS 10177-2)
- **Thermally efficient:** R-values up to 4.29 m²K/W at 150 mm
- **High-temperature:** 760 °C service, melting point >1000 °C · **acoustic:** excellent absorption
- **Durable:** chemically stable, rot-proof, dimensionally consistent
- Fast single-pass envelope: structure, insulation & finished face in one element

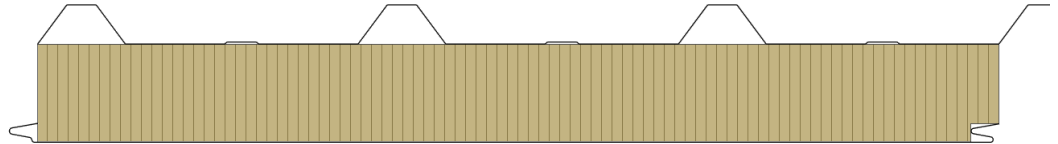
Basic technical parameters

Core thickness (mm)	Panel weight (kg/m ²)	'U' value (W/m ² .K)	'R' value (m ² .K/W)
50	13.55	0.70	1.43
75	15.93	0.47	2.14
100	18.30	0.35	2.86
150	23.05	0.23	4.29

Panel types

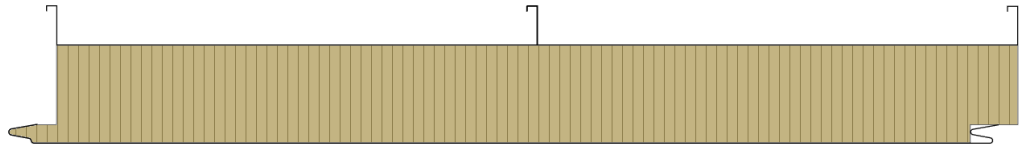
990 IBR Roof Panel (DPR)

990 mm cover · IBR ribs @ 330 mm centres
· 44 mm crown · exposed stitching-screw fixing



990 Standing Seam Roof Panel

990 mm cover (2 × 495 mm) · concealed clip fixing, seamed on site · airtight tongue-&-groove underside



1145 Flat Wall Panel

1145 mm cover · smooth / micro-pleated both faces · tongue-&-groove interlocking side-laps



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System characteristics







- **Steel:** Chromadek or similar skins, range of colours; Z / AZ / ZAM coatings. Skin thickness 0.5 mm minimum.
- **Cover width:** 990 mm (DPR) / 1145 mm (Flat). Panel thickness 50 / 75 / 100 / 150 mm; longer on request.
- **Support & pitch:** steel purlins; bearing width 50 mm minimum; pitch 4° minimum for DPR.
- **Fasteners:** Class 3/4 self-drilling Tek screws with seal, fix-through — three per support (centre of every trough for 990 DPR; three equally spaced for 1145 Flat).
- **Laps & closures:** end-lap 150 mm min; side laps stitched at 500 mm centres; flashings/closures at 500 mm centres.

Stone wool core properties

Property	Unit	Value	Standard
Density	kg/m ³	120	TS EN 1602
Compressive strength (10% def.)	kPa	120	TS EN 826
Tensile strength	kPa	≥15	TS EN 1607
Thermal conductivity (10°C)	W/mK	max 0.035	TS EN 12667
Reaction to fire	—	A1 (non-combustible)	SANS 53501-1
Max operation temp.	°C	760	—
Melting point	°C	>1000	DIN 4102
Water absorption (short/long)	kg/m ²	<1 / <3	TS EN 1609/12087

Colours

Steel skins are available in the following colours:

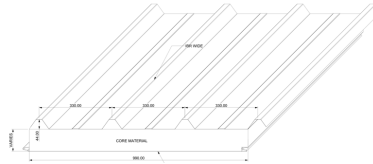
	Colour name	RAL code
	Dove Grey	7042
	Basalt Grey	7012
	Sandstone Beige	1002
	Signal Brown	8002
	Anthracite Grey	7016
	Frost White	9016

See the **LiteSpan Core Selection Guide** to compare Stone Wool, EPS and PIR cores side by side.

Installation details

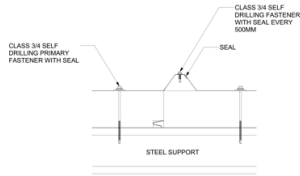
Panel geometry, fixing & laps

Panel geometry & core

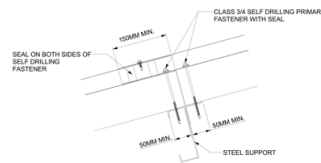


990 IBR panel — 990 mm cover, IBR ribs @ 330 mm centres, 44 mm crown, insulation core & smooth / micro-pleated underside

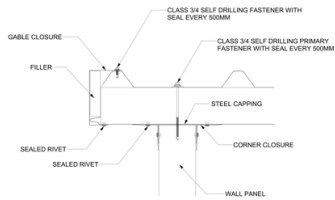
Side-lap, end-lap & gable closures



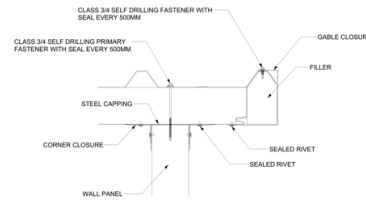
DPR IBR - SIDE LAP DETAIL



DPR IBR - END LAP DETAIL



DPR IBR - GABLE FEMALE CLOSURE DETAIL
TYPE 1



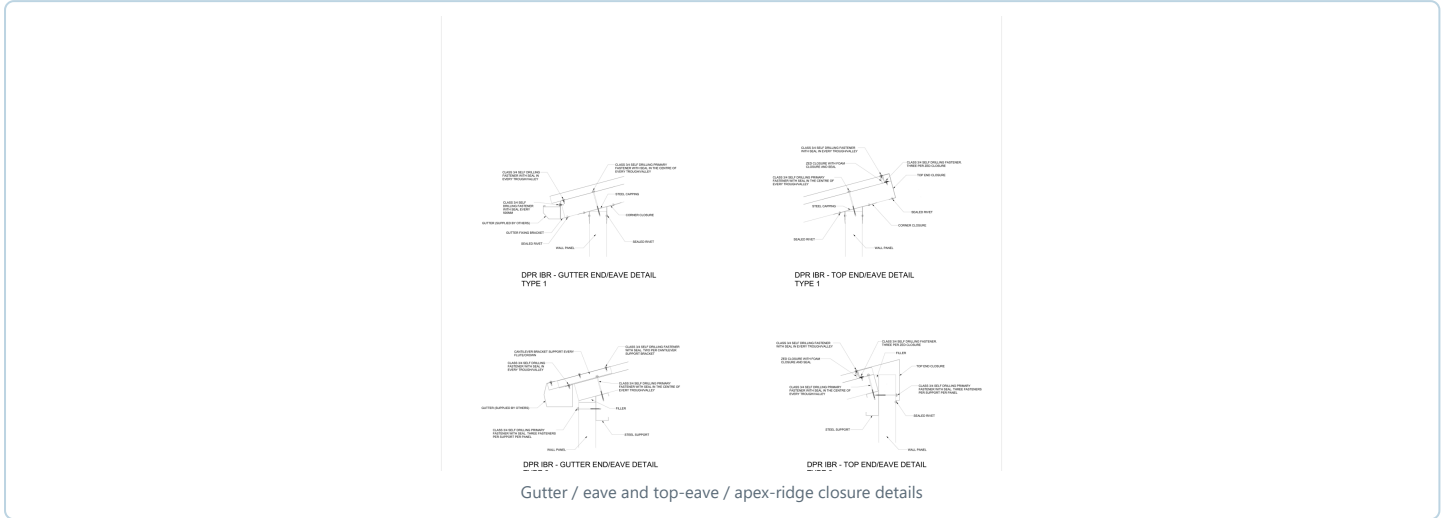
DPR IBR - GABLE MALE CLOSURE DETAIL
TYPE 1

Side-lap & end-lap details and gable female / male closures — Class 3/4 self-drilling fasteners; end-lap 150 mm min; side laps stitched @ 500 mm centres

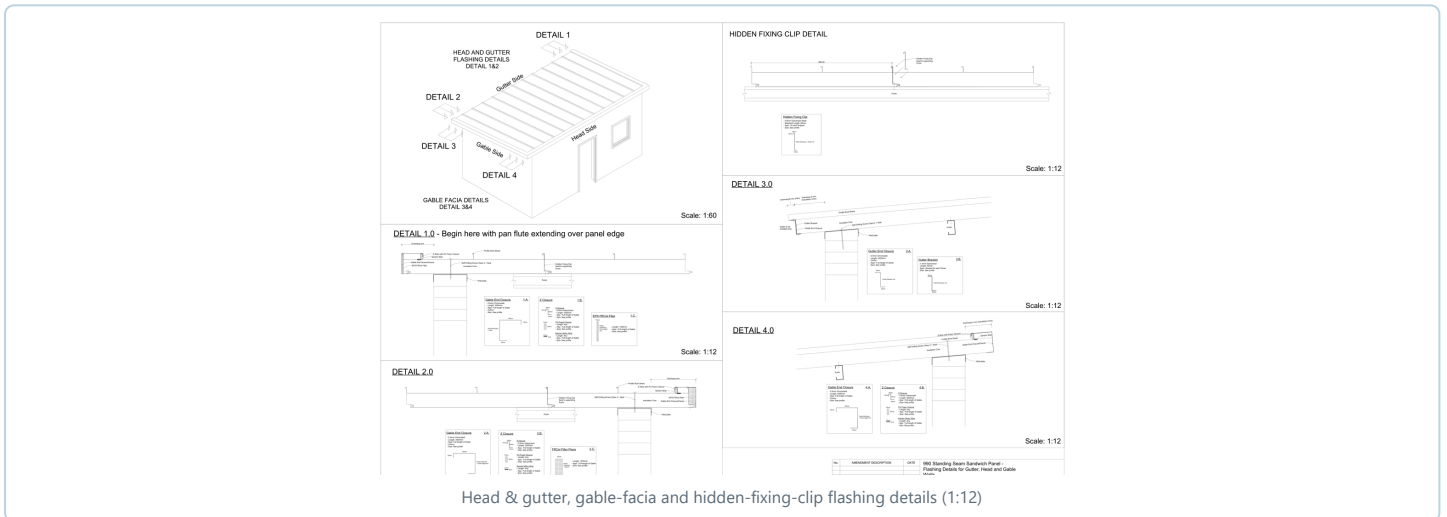
Installation details

Eaves, ridge, flashings & standing-seam fixing

Eaves, gutter & apex / ridge closures



Head, gutter & gable flashings



Standing-seam hidden-clip fixing

