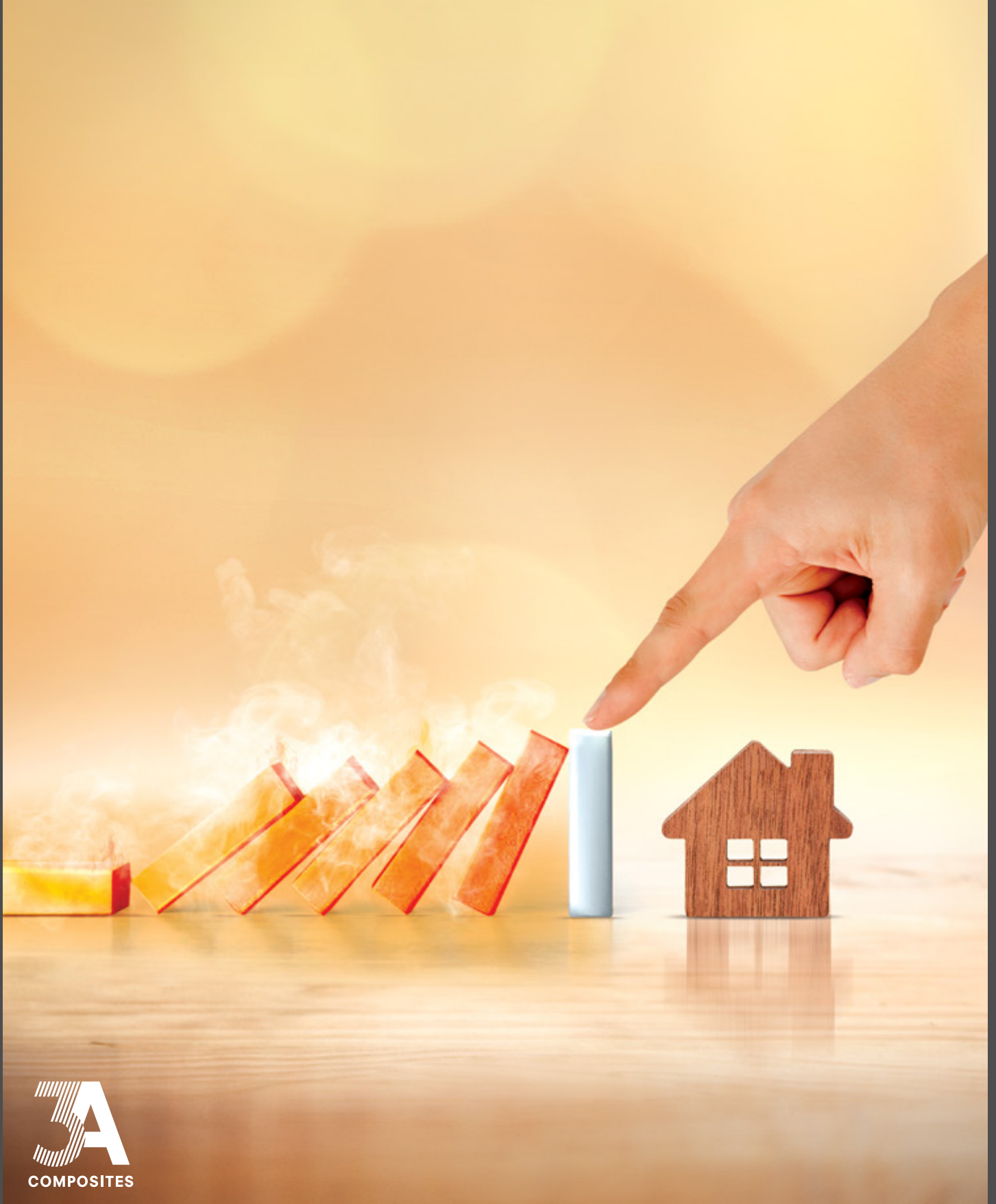
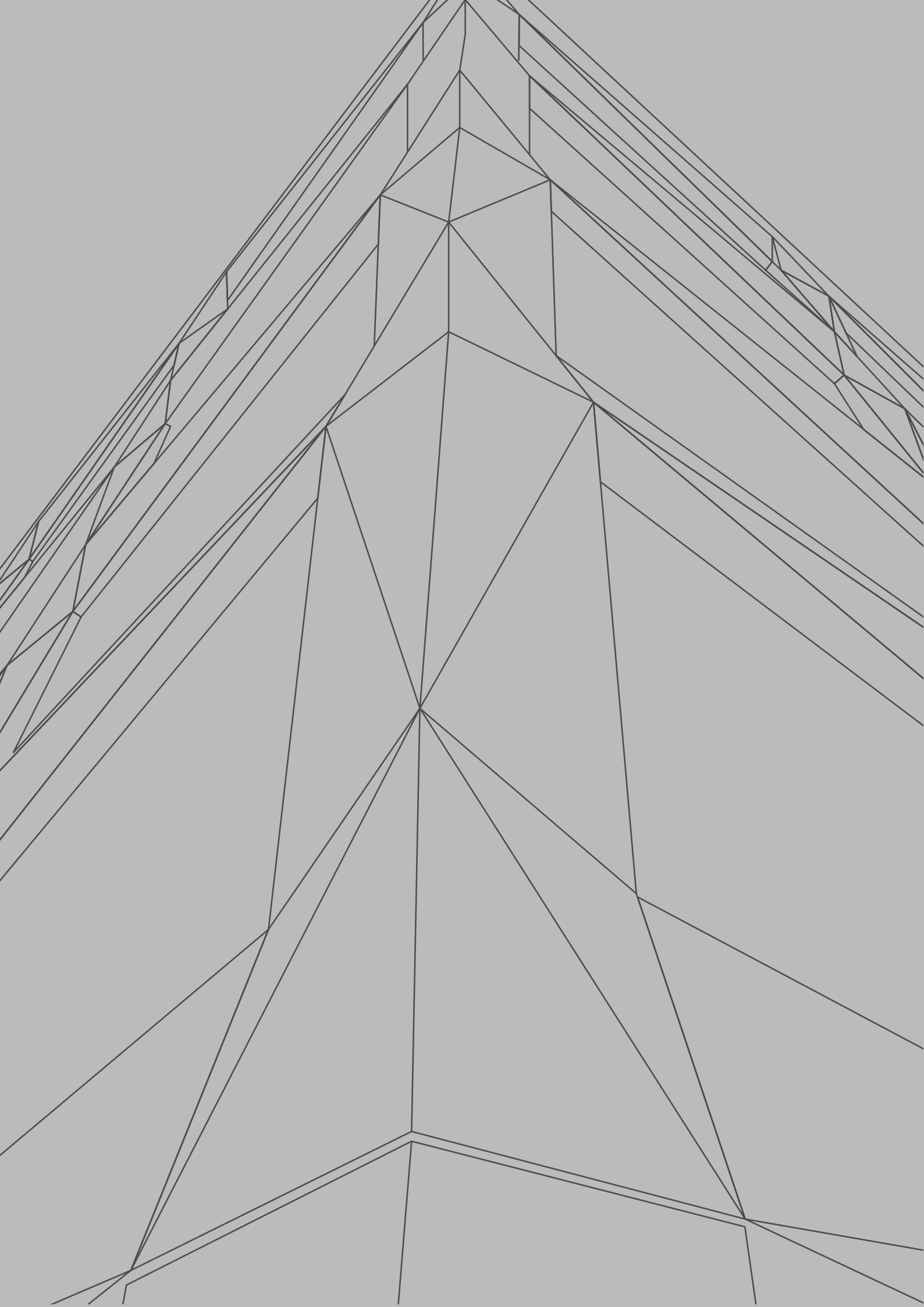


SANDWICH PANEL SYSTEM

Fire retardant and energy-saving composite panels

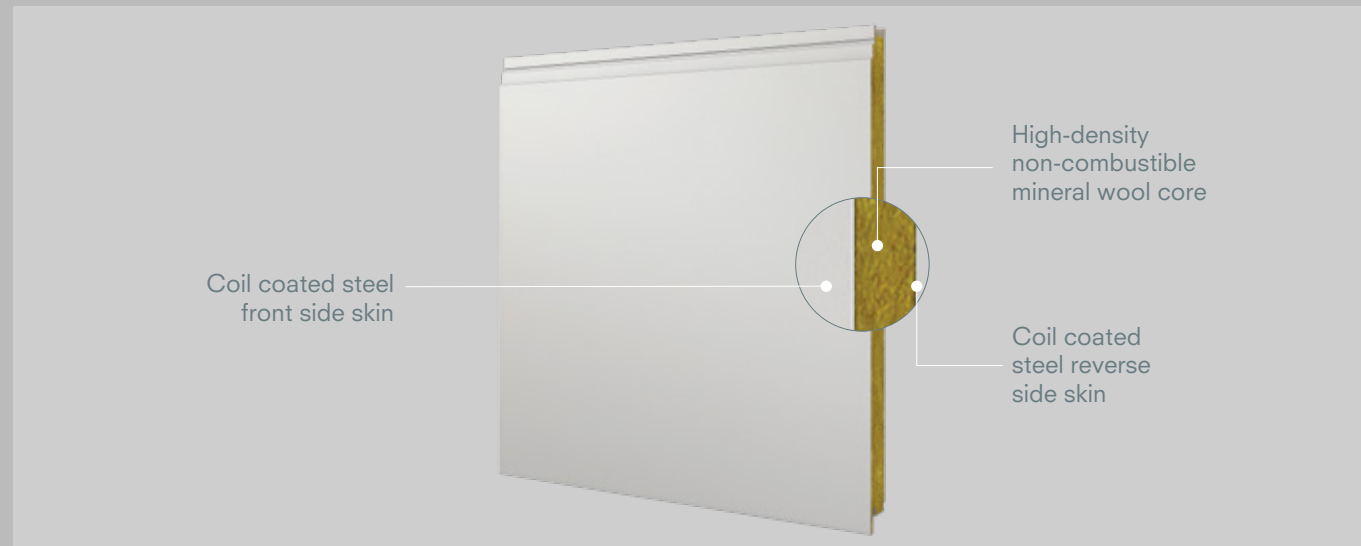




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3A COMPOSITES SANDWICH PANEL SYSTEM

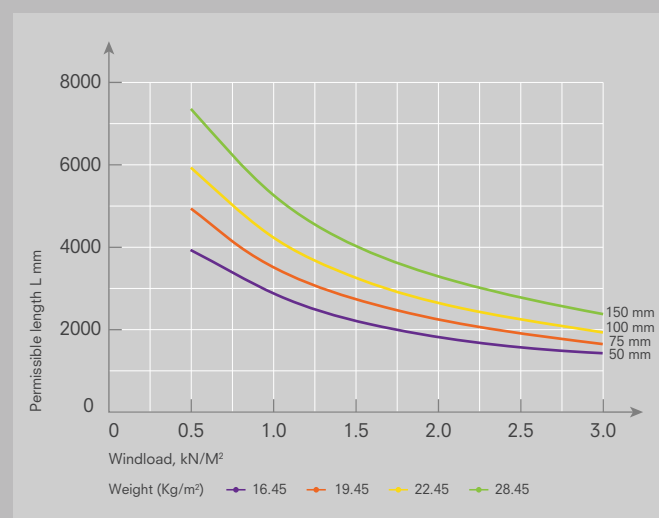
3A Composites Sandwich Panel System is a globally-used architectural solution that offers insulation, energy efficiency and fire retardancy. The system is composed of high-density non-combustible mineral wool core sandwiched between two layers of steel sheets.

3A Composites Sandwich Panel System comes with concealed installation systems to meet the building's aesthetics, wind load, water tightness, airtightness, insulation and fire safety requirements. This system is used as non-load bearing walls and partitions for facade and roofing applications.

Apart from providing a variety of sizes, thickness and colour options 3A Composites Sandwich Panel System can also meet various engineering needs and design requirements. This includes options for joint types such as concealed or exposed joints.

Applications - Exterior wall, Interior partition, Roofing and Ceiling.

Types of buildings - Data centers, Manufacturing facilities, Warehouses, Cold storages, Clean rooms and Medical facilities.



Wind load and permissible panel sizes

The diagram indicates the available range of panel sizes and permissible range lengths at a given panel width, depending on the wind load applied.

The diagram applies to panels supported on four sides (corners fixed). Dimensional values for other systems are available on request.

Calculated and tested as per GB/T 23932.
Deflection limits taken L/200 using fixing for pull out and pull over.



SYSTEM FEATURES



Fire Rating/Retardancy: 3A Composites Sandwich Panel System has extremely high fire resistant mineral wool core.



Energy saving: With excellent heat insulation performance, 3A Composites Sandwich Panel System can largely reduce heating/cooling expenses and keep the space inside the buildings at desired temperature throughout the year.



Sound insulation and absorption: Due to the use of high-density mineral wool, 3A Composites Sandwich Panel System has good sound absorption performance and also meets the requirements of various construction standards.



Large panel size and even flatness: The system has a specially constructed composite structure produced on a continuous line that allows for a perfectly flat panel surface without the need for reinforcing ribs.



Lightweight: 3A Composites Sandwich Panel System has high strength and light weight - the weight of a 100 mm is about 22 kg/m², which is much lower than a traditional concrete wall.



Durability: The system is designed to withstand harsh conditions and comes with a 10 year warranty.



Quick installation: 3A Composites Sandwich Panel System can be easily installed by fixing two long sides to meet horizontal or vertical layout requirements. It uses a specially designed dry fastening system which allows for a quick installation.



Environmental protection: The system uses natural and environmentally friendly materials that meet the environmental protection requirements in the countries of the European Union and the US.



Technical support: 3AC technical team provides assistance around product selection, fixing systems and installation methodology.

EXTERNAL WALL PANEL SYSTEM



Materials

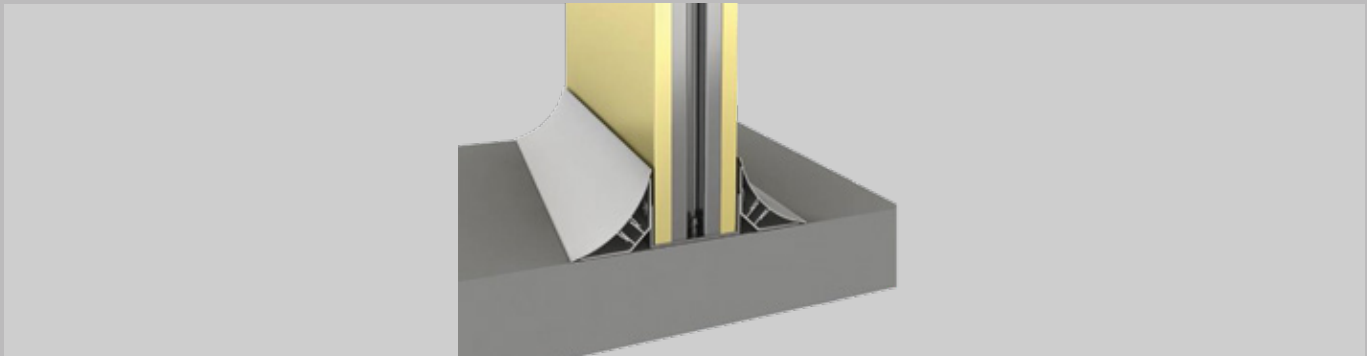
Cover Sheet	Flat-smooth/Ribbed, Steel skin on both sides
Core Material	High density mineral wool
Adhesive	High performance - two component adhesive
Fixing	Hexagon flange head self-tapping and drilling screws with thermal pad
Accessories	Joint metal clip, Weatherproof flashing, End cap

Specifications

Panel Thickness	50 mm	100 mm
Width	500/600/700/800/900/1000 mm	
Length	≤12,000 mm	
Steel Skins Thickness	fs. 0.6 mm / rs. 0.5 mm	fs. 0.7 mm / rs. 0.5 mm
Insulation	Mineral wool 120 kg/m³	
Weight (steel)	15 kg/m²	22.2 kg/m²
Coating	PVDF/ FEVE/ HDP	
Accoustic	≥30 dB	
Thermal	U= 0.74 W/(m²K), R= 1.35 (m²K)/W	U= 0.37 W/(m²K), R= 2.7 (m²K)/W
Fire Classification	A2-s1, d0 as per EN 13501-1	
Fire Rating	2 hrs as per BS 476 part 22	

*Customise width/length/skin thickness are available upon request.

INTERIOR WALL PANEL SYSTEM



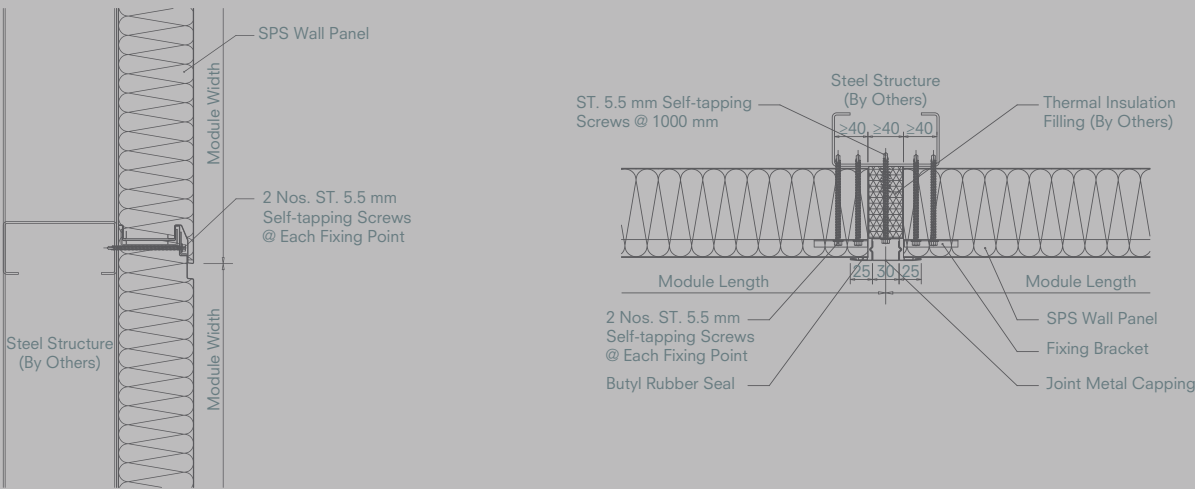
Materials

Cover Sheet	Flat-smooth/Ribbed, Steel skin on both sides
Core Material	High density mineral wool
Adhesive	High performance - two components adhesive
Fixing	Hexagon flange head self-tapping and drilling screws with thermal pad
Accessories	Joint metal clip, U-shape runner, PVC corner covering, Corner profile

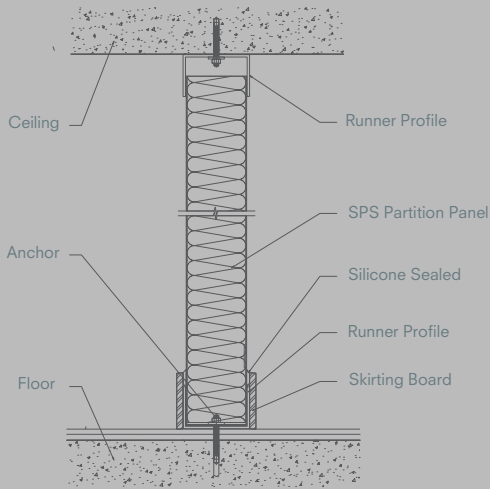
Specifications

Panel Thickness	50 mm	100 mm
Width	500/600/700/800/900/1000 mm	
Length	≤12,000 mm	
Steel Skins Thickness	fs. 0.6 mm / rs. 0.5 mm	fs. 0.7 mm / rs. 0.5 mm
Insulation	Mineral wool 120 kg/m³	
Weight (steel)	15 kg/m²	22.2 kg/m²
Coating	PVDF/ FEVE/ HDP	
Accoustic	≥30 dB	
Thermal	U= 0.74 W/(m²K), R= 1.35 (m²K)/W	U= 0.37 W/(m²K), R= 2.7 (m²K)/W
Fire Classification	A2-s1, d0 as per EN 13501-1	
Fire Rating	2 hrs as per BS 476 part 22	

*Customise width/length/skin thickness are available upon request.

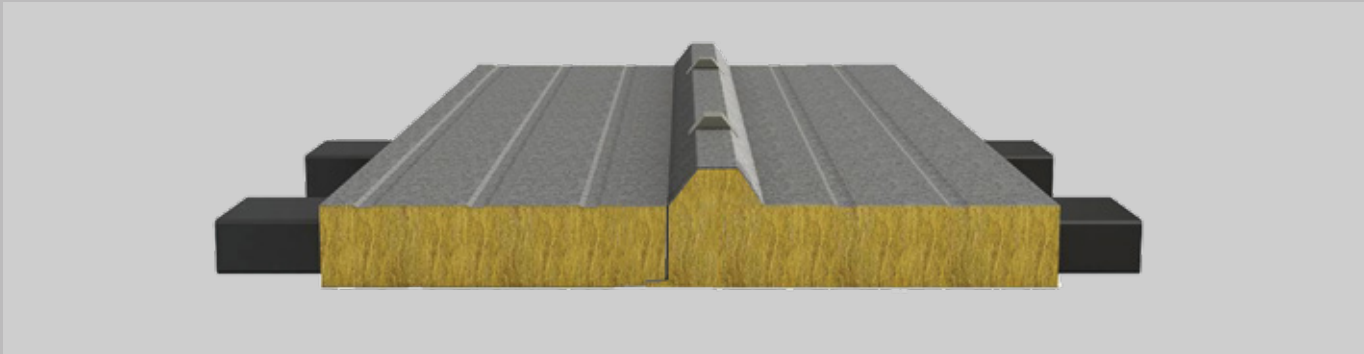


3AC SPS Horizontal Installation System



3AC SPS Partition Horizontal Installation System

ROOFING PANEL SYSTEM

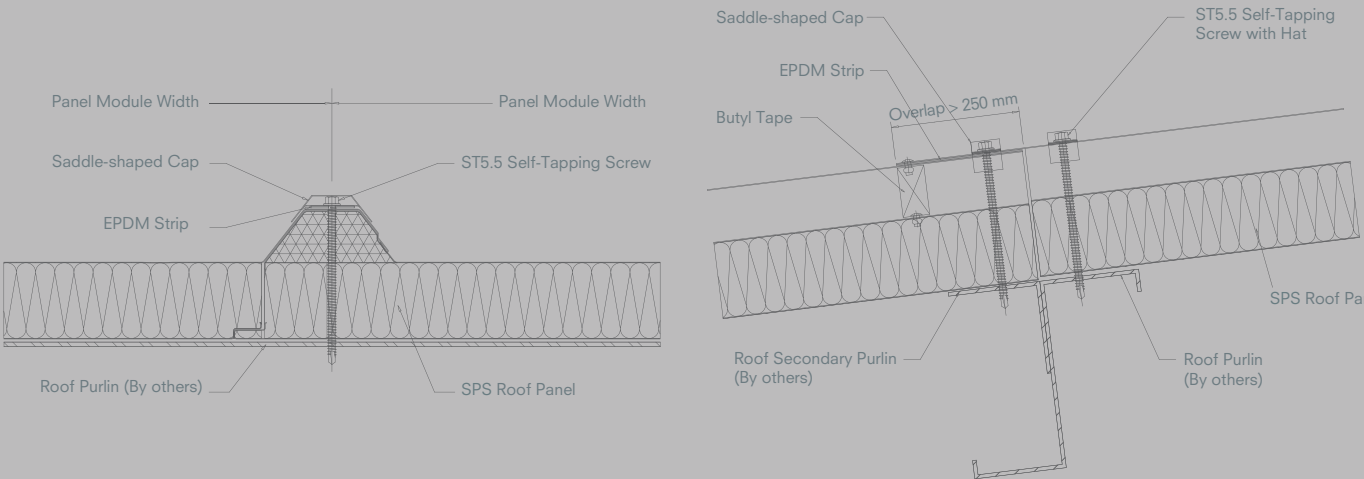


Materials

Cover Sheet	Trapezoidal steel on front side, Flat-smooth on rear side
Core Material	High density mineral wool
Adhesive	High performance - two components adhesive
Fixing	Hexagon flange head self-tapping and drilling screws with thermal pad
Accessories	Weatherproof flashing, Saddle washer or Butyl tape, End cap

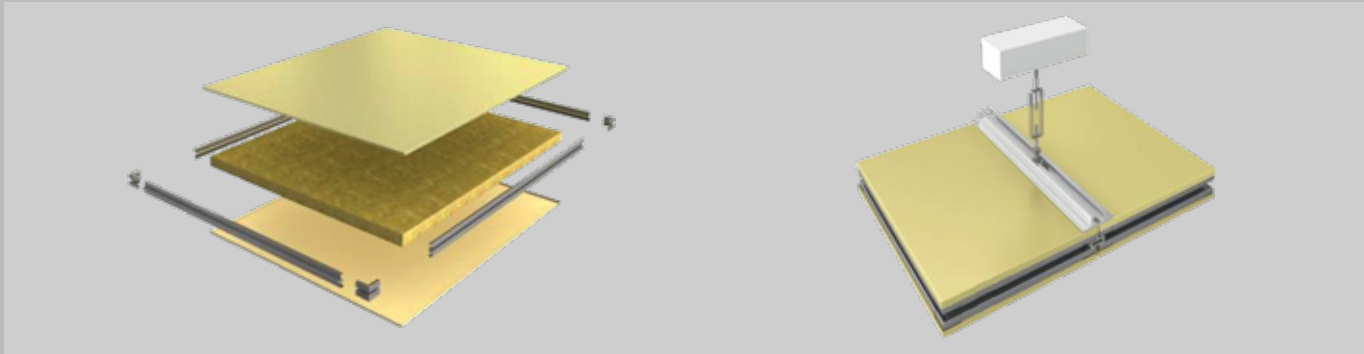
Specifications

Panel Thickness	100 mm
Width	1000 mm
Length	≤12,000 mm
Steel Skins Thickness	fs. 0.7 mm / rs. 0.5 mm
Insulation	Mineral wool 120 kg/m³
Weight (steel)	23 kg/m²
Coating	PVDF/ FEVE/ HDP
Accoustic	≥30 dB
Thermal	U= 0.37 W/(m²K), R= 2.7 (m²K)/W
Fire Classification	A2-s1, d0 as per EN 13501-1



3AC SPS Roof Installation System

CEILING PANEL SYSTEM

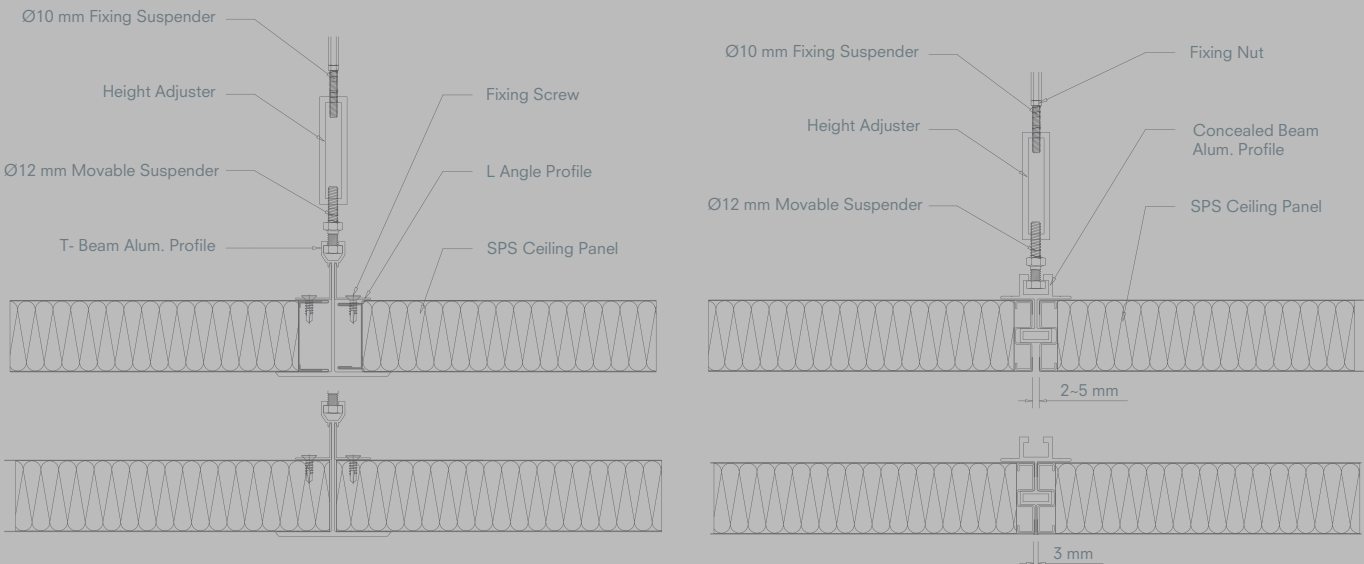


Materials

Cover Sheet	Flat-smooth steel skins on both sides
Core Material	High density mineral wool
Adhesive	High performance - two components adhesive
Fixing	Suspension bar and bolts with thermal or isolation pan
Accessories	T-beam profile, U-shape runner, PVC corner covering

Specifications

Panel Thickness	50 mm
Width	1180 mm
Length	≤6,000 mm
Steel Skins Thickness	fs. 0.5 mm / rs. 0.5 mm
Insulation	Mineral wool 80 kg/m³
Weight (steel)	18 kg/m²
Coating	PVDF/ FEVE/ HDP/ PE/ Antiseptic/ Antistatic
Accoustic	≥28 dB
Thermal	U= 0.74 W/(m²K), R= 1.35 (m²K)/W
Fire Classification	A2-s1, d0 as per EN 13501-1



3AC SPS Ceiling Suspension System

TECHNICAL DATA SHEET

3A Composites Sandwich Panel System

Technical Data	Standard	Unit	SPS 100mm	SPS 50mm
Steel Sheet Thickness	EN10147	mm	0.7 Fs. / 0.5 Rs.	0.6 Fs. / 0.5 Rs.
Galvanized Coating Mass		g/m²	≥ 150 (Both Sides)	
Yield Strength		Mpa	275 ~ 315	
Tensile Strength		Mpa	370 ~ 380	
Elongation		%	32 ± 2	
Color Coil Coating Systems	EN10169		PVDF/HDP/PE	
Coil Coating Thickness		µm	PVDF ≥ 25/HDP ≥ 25/PE ≥ 20	
Pencil Hardness			≥ H	
Coil Coating Gloss (60°)		%	20 ~ 80	
Core Material	High Density Mineral Wool			
Density		Kg/m³	120	
Hydrophobic Rate		%	≥ 98	
Acidity Coefficient			1.8	
SPS Panel Thickness		mm	100	50
Weight (Areal Density)		Kg/m²	22.2	15
Acoustical Properties	ISO 140-3	dB	Rw ≥ 32	Rw ≥ 30
Airborne Sound Insulation Index	ISO 717-1			
Thermal Properties	EN 12667			
K (λ) Value		W/(mK)	≤ 0.044	≤ 0.044
U Value		W/(m²K)	0.37	0.74
R Value		(m²K)/W	2.7	1.35
Steel Sheet SPS Thermal Expansion 0.65 mm/m/50 °C				
Firerated Performance	EN 13501-1		EN 13501-1	BS 476-6/7
Fire Classification	BS476-6/7		A2-s1, d0	Class 0
Fire Rating			2 hrs as per BS 476 part 22	

Other thickness also available on request.

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