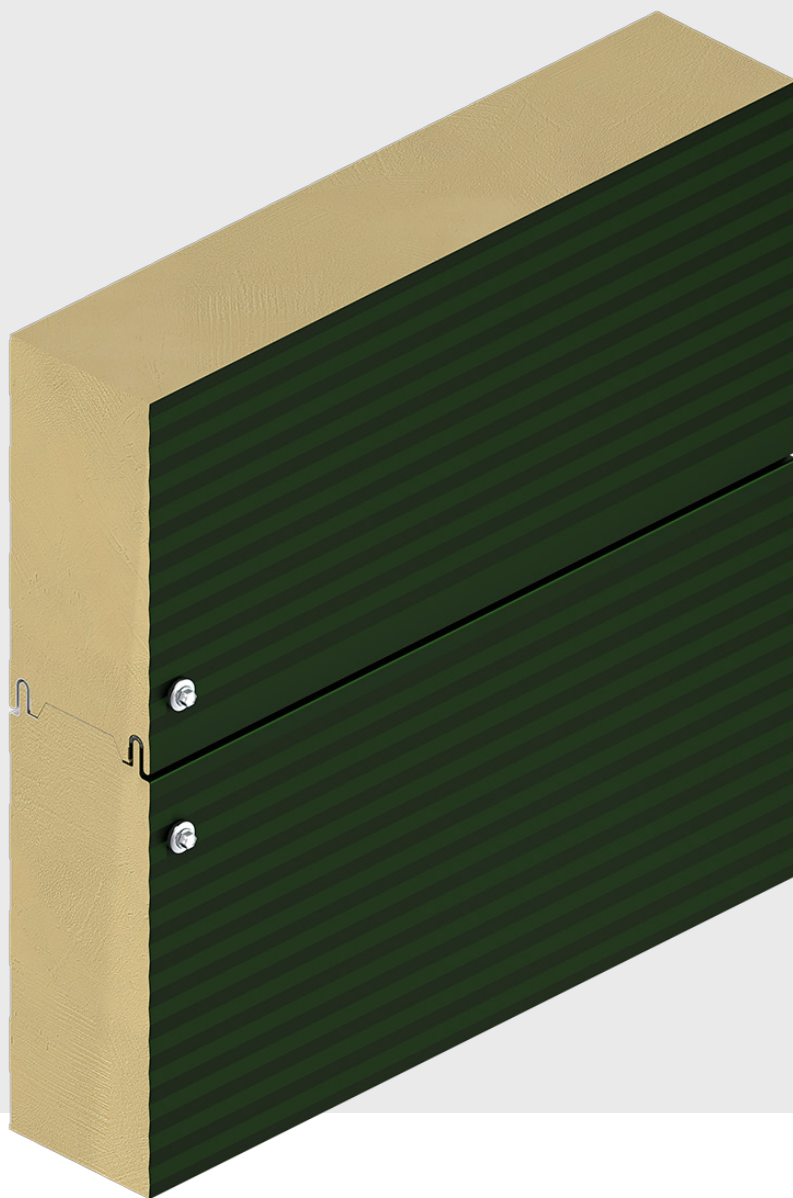


Insulated Panels
CEME Divisions

ems Thermowand EF Product Data Sheet



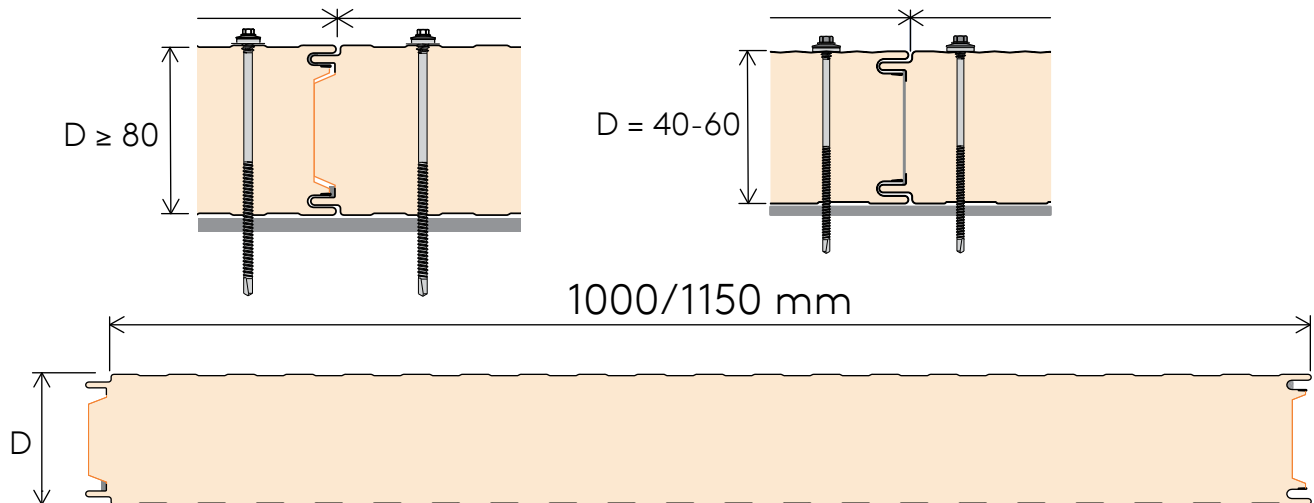
Product Overview

ems Thermowand EF Wall Panel is a wall system with visible fixing and a special joint geometry. ems Thermowand EF wall panel has two factory-applied, condensation-repellent sealing tapes in the longitudinal joint, both on the outer and on the inner side.

Application

ems Thermowand EF Wall Panel can be used for all types of buildings in both horizontal and vertical design and is excellent for use in cold stores and temperature controlled environments.

Panel Cross Section



Technical Parameters

The ems Thermowand EF Wall Panel has been tested and approved to comply with EN 14509:2013.

Module width/Cover width [mm]	Core Thickness [mm]	Mass	Thermal Transmittance (U-value) acc. EN 14509:2013 [W/m ² .K]	Thermal Transmittance (U-value) acc. EN ISO 6946:2017 [W/m ² .K]	GWP for modules A1-A3	GWP for modules A-C
1,150/1,150	80	12.38 kg/m ²	0.27	0.27	33.8 kg CO ₂ -eq./m ²	45.3 kg CO ₂ -eq./m ²
	100	13.14 kg/m ²	0.22	0.21	35.7 kg CO ₂ -eq./m ²	48.9 kg CO ₂ -eq./m ²
	120	13.9 kg/m ²	0.18	0.18	37.9 kg CO ₂ -eq./m ²	52.8 kg CO ₂ -eq./m ²
	150	15.04 kg/m ²	0.15	0.14	41.3 kg CO ₂ -eq./m ²	60.7 kg CO ₂ -eq./m ²
	170	15.8 kg/m ²	0.13	0.13	43.3 kg CO ₂ -eq./m ²	64.6 kg CO ₂ -eq./m ²
	200	16.94 kg/m ²	0.11	0.11	45.2 kg CO ₂ -eq./m ²	67.8 kg CO ₂ -eq./m ²

The technical data is valid for a face thickness of Ext / Int. 0.60 / 0.50 mm.

Dimensions

Length

Shorter lengths (non-standard) [mm]	270-1799
Standard lengths [mm]	1800-14500
Longer lengths (non-standard) [mm]	14500-18000

Additional costs and transport restrictions may apply for non-standard trucks (> 13,50 m).

Product Tolerances

Product tolerances are measured according to the standard EN

14509:2013, attachment D.

Length tolerance	$L \leq 3m$, -	5 mm
Length tolerance	$L \leq 3m$, +	5 mm
Length tolerance	$L > 3m$, -	10 mm
Length tolerance	$L > 3m$, +	10 mm
Cover width tolerance	-	2 mm
Cover width tolerance	+	2 mm
Thickness tolerance	-	2 mm
Thickness tolerance	+	2 mm
Thickness tolerance	$D > 100mm$, -	2 %
Thickness tolerance	$D > 100mm$, +	2 %
Deviation from squareness		$0.006 \times w$
Deviation from straightness (on length)		1mm/m, maximum 5 mm/m

Materials

Insulation Core

Polyisocyanurate (IPN 3) insulation core with a Thermal Conductivity (λ_D) of 0.022 W/m-K according to EN 14509:2013.

External facing

The standard thicknesses of the coil coated steel sheet are 0.60 mm. Standard coating: Polyester (25 μ m) – PES. Optional: Spectrum™ (50 μ m) or Foodsafe (150 μ m) – for applications with increased hygienic requirements. The special FS3000 and FS4000 coating is also available as an option for use in food processing exclusively for interior applications.

Internal facing

The standard thicknesses of the coil coated steel sheet are 0.50 mm. On request also 0.40 mm or 0.60 mm steel sheet thicknesses available. Standard coating: Thin film coating (15 μ m). Optional: Polyester (25 μ m) – PES or Foodsafe (150 μ m) – for applications with increased hygienic requirements. The special FS3000 and FS4000 coating is also available as an option for use in food processing.

Seals

The ems Thermowand EF wall panel in D = 80-200 mm has a factory-applied, condensation-repellent sealing tape in the longitudinal joint on both the outer and inner joint.

Profilings

The available profilings can be found in the corresponding profiling table further back in the document.

Colours

The colours available can be found in the 'Colours and Coatings' brochure.

Fire Performance

The ems Thermowand EF Wall Panel has been tested and approved to comply with EN 14509:2013. Product technical specifications relating to fire classification are available from Kingspan Technical Support. For FM Approved product specifications please contact ems Technical Support.

Module width/ Cover width [mm] / [mm]	Core Thickness [mm]	Reaction to Fire
1,150/1,150	80	B-s1, d0
	100	B-s1, d0
	120	B-s1, d0
	150	B-s1, d0
	170	B-s1, d0
	200	B-s1, d0

Mechanical Resistance

For load / span tables, please refer to the 'Span table' on our website or contact our Technical Support.

Environmental Performance

Our production facilities generate renewable energy onsite

which contributes to that sites energy mix. Kingspan Insulated Panels source steel with 15-25% recycled content. Kingspan Insulated Panels directly contribute to BREEAM® and LEED® credits.

Production Standard

Kingspan Insulated Panels apply to the European Standard EN 14509:2013 self-supporting double skin metal faced insulating panels.

Quality

ems Insulated Panels are manufactured to rigorous quality control standards, complying with ISO 9001:2015 Quality management systems standards, ensuring long term reliability and durability. The panels are also manufactured under Environmental management system certification EN ISO 14001:2015 and Occupational health and safety certification EN ISO 45001:2018. The ems Thermowand EF Wall Panel is CE marked to EN 14509:2013.

Packing

Standard Packing - Road Transportation

ems Thermowand EF Wall Panel is stacked weather side to internal side. The top, bottom, sides and ends are protected with foam and polystyrol packing and the entire palette is wrapped with protection film. The number of panels in a pack depends on panel thickness and length. Quantities are reduced for exceptionally long panels.

Core Thickness [mm]	80	100	120	150	170	200
Number of Panels	13	11	9	7	6	5

Delivery

All deliveries are by road transport to a project site unless otherwise indicated. Unloading is the responsibility of the customer. Please refer to our 'Handling & Assembly' brochure.

Sea Freight

Full timber crate packs are available at extra cost for projects requiring sea freight delivery. Alternatively steel containers can be used. Special loading charges apply.

Site Storage & Installation

For site storage and installation instructions please refer to our 'Handling & Assembly' brochure and the 'Guideline for the planning and implementation of roof, wall & ceiling constructions made from proled metal panels' of the IFBS.

Guarantee

Guarantees are individually assessed for each project, depending in particular on the aggressiveness of the environment and the type of surface treatment chosen.

Profiles

Profile	External	Internal
B - Box		
E - Eurobox		
F - Flat		
M - Micro		
Q - Minibox		
W - Wave		
D - Deep		

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