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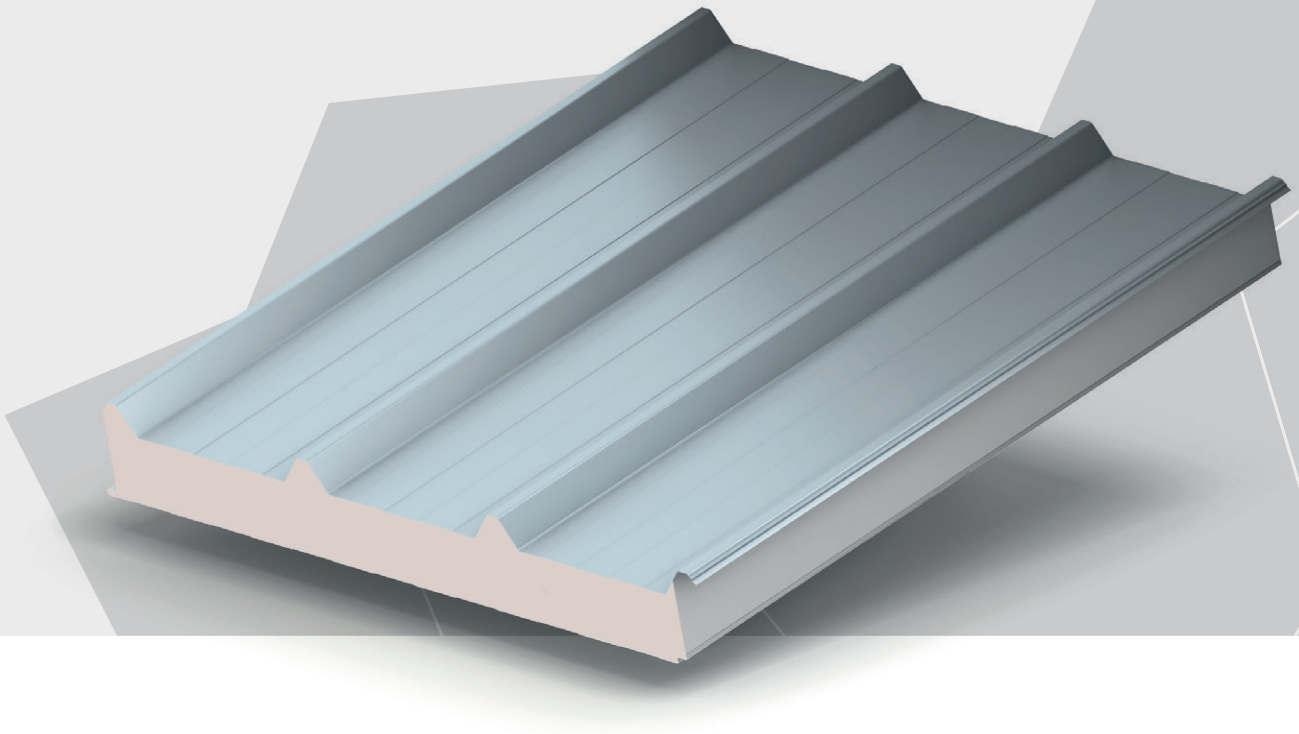
Insulated Panels
Middle East, Africa, Türkiye
& Central Asia

QuadCore™ KS100PRW Roof Panel

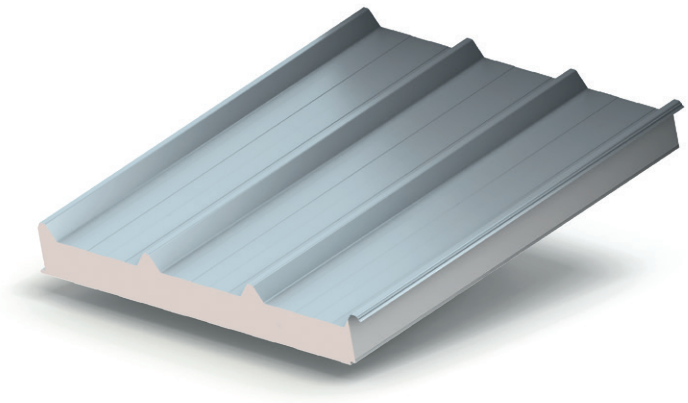
Product Data Sheet



POWERED BY QuadCore™ TECHNOLOGY

Kingspan®

Product Data



Product Description

QuadCore™ KS100PRW Roof Panel is a through-fix and trapezoidal profiled panel with a high performance QuadCore™ insulation core.

The panel is available in 1000 mm width.

Applications

QuadCore™ KS100PRW Roof Panel is suitable for pitched roof applications of 4° or more after steel deflection. Roof slope should be minimum 4° (7%) for a single panel. Where overlap is required it should be minimum 6° (10%).

Available Lengths

Standard Lengths		2.20 m - 11.90 m
Non-Standard Lengths	Longer Lengths	11.90 m - 18.0 m
	Shorter Lengths (subject to additional surcharge)	< 2.20 m

Note: Additional costs and transport restrictions may apply for non-standard lengths.

Cover Width

1000 mm.

Panel Joints

Through-fix.

Thermal Performance, Dimensions and Weight

Core Thickness (mm)	40	50	60	80	100	120	150
Overall Thickness (mm)	82	92	102	122	142	162	192
U-Value (W/m^2K)	0.43	0.35	0.29	0.22	0.18	0.15	0.12
R-Value (m^2K/W)	2.33	2.86	3.45	4.55	5.56	6.67	8.33
Weight (kg/m^2) 0.5 steel / 0.4 steel	9.22	9.53	9.80	10.56	11.32	12.08	13.22

Notes:

The QuadCore™ insulation used in this panel has a Thermal Conductivity (λ) of 0.018 W/m.K.

QuadCore™ KS100PRW Roof Panel has a Thermal Transmittance (U-Value), calculated by using Finite Element Analysis in accordance with EN 14509: 2013 taking into account the profile geometry of the panel and the thermal influence of the longitudinal joint.

Insulation Core

The core insulation of QuadCore™ hybrid is free from HCFCs, CFCs, and HFCs, achieving a thermal conductivity value of λ =0.018 W/m·K at 10°C.

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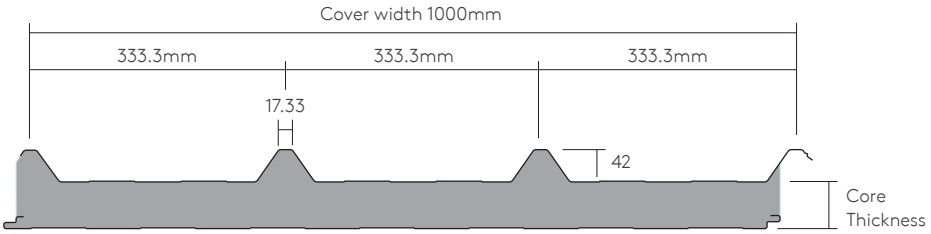
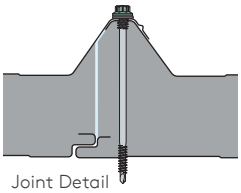
Profile

Trapezoidal 42 mm height.

Product Data





Materials

Metal Type

Steel or aluminium.

Metal Thickness Range

External Metal Sheet
4 Crown: 0.50 - 0.70 mm

Internal Metal Sheet
Box: 0.40 - 0.60 mm

Notes: The given metal thickness ranges include coating.

For Galvanized Steel Thickness: Tolerances to be in accordance with EN 10143 or ASTM A 924 / A924M-13, applicable for an external weather sheet and internal liner.

For Aluminium Thickness: Tolerances to be in accordance with BS EN 485 / BS EN 508 or ASTM B209M, applicable for an external weather sheet and internal liner.

Substrate

Metallic and non-metallic protected steel as per EN 10346: 2015.

Note: The default colour is a light non-metallic shade.

Please contact Kingspan Tech-eXchange for other substrate options.

Coatings & Finishes

External Weather Sheet

- Polyester.
- PVDF.

Internal Liner Sheet

- Polyester.

Please consult Kingspan Tech-eXchange for guidance in selection of the correct coating for your specific geographic location.

Coating Durability

The durability of a metal coating can be impacted by various factors such as geographic location, local environment, colour selection, and coating type. These factors can affect the lifespan of the coating.

Please contact Kingspan Tech-eXchange to provide guidance on the best finish options and most suitable coating based on project specific requirements and the environmental conditions.

Colours

A diverse array of external colour choices is at your disposal, featuring a broad spectrum of finishes such as metallic, matte, and solid.

For expert guidance on selecting colours for your project, kindly reach out to Kingspan Tech-eXchange.

Certification & Testing

Reaction to Fire

The **QuadCore™ KS100PRW Roof Panel** designed with galvanized steel material on both exterior and interior facings, has undergone testing according to EN 13501-1: 2018. This testing is conducted under the declaration names "KS100PRW QuadCore™ 50 mm" and "KS100PRW QuadCore™ 150 mm:

- EN 13501-1: 2018, a **50 mm thickness**, achieved a classification of **B-s2,d0**.
- EN 13501-1: 2018, a **150 mm thickness**, achieved a classification of **B-s1,d0**.

This declaration of test results is relevant to the tested product specifications, which include:

- Panel Thickness: 50 mm and 150 mm.
- Panel Width: 1000 mm.

Notes:

The standard panel thicknesses are 40 mm, 50 mm, 60 mm, 80 mm, 100 mm, 120 mm, and 150 mm.

The test result declaration does **NOT** include the panel thicknesses: 40 mm, 60 mm, 80 mm, 100 mm, and 120 mm.

Please contact Kingspan Tech-eXchange for the most up-to-date declaration test results.

Environmental

Kingspan upholds its dedication to environmental sustainability, with a commitment to being free from CFC, HCFC, HFC, and Halogenated Fire Retardants. The company is certified for the Environmental Management System ISO 14001.

Please contact Kingspan Tech-eXchange for the latest certificates.

Product Data

Air Infiltration & Water Penetration

Please contact Kingspan Tech-eXchange for details.

Acoustic Performance

QuadCore™ KS100PRW Roof Panel has an average predicted weighted sound reduction index Rw = 26dB based on a desktop study.

Product Tolerances

Length ≤ 3 m	± 5 mm
Length > 3 m	± 10 mm
Width	± 2 mm
Thickness (Core ≤ 100 mm)	± 2mm
Thickness (Core > 100 mm)	± 2%
End Square	≤ 0.6% of the nominal cover width

All product tolerances are in compliance with TS EN 14509.

Seals

Site applied.

Handing

QuadCore™ KS100PRW Roof Panels can be manufactured in both left to right handed (LH) and right to left handed (RH).

Quality & Durability

Manufactured with meticulous attention to detail, the **QuadCore™ KS100PRW Roof Panel** is produced using premium-grade materials and advanced production machinery. It adheres to stringent quality control measures that align with the ISO 9001 standard.

To obtain the most up-to-date certificate, please contact Kingspan Tech-eXchange.

Warranty

Kingspan offers product coating warranties tailored to each specific project, taking into account the environmental conditions of the project's geographical location.

These warranties are contingent upon adherence to a maintenance regimen.

For further information, please contact Kingspan Tech-eXchange.

Health & Safety

Kingspan Insulated Panels adheres to the requirements of the Occupational Health and Safety Certification ISO 45001: 2018.

For comprehensive safety instructions and complete details regarding the secure usage of our product prior to application, please contact Kingspan Tech-eXchange.

Packing

The panels are stacked horizontally, with the facing sheets positioned upwards to minimise the pack's overall height. The upper and lateral sides are protected using either cardboard or polystyrene, along with spiral wrap stretch polyfilm.

Customers must promptly remove the protective film and other delivery packaging right after installation, making sure it's done within a maximum of two months from the production date.

The number of panels in a pack will vary depending on the thickness, as detailed below:

Trailer Loading

Panel Thickness (mm)	Bundle (pcs)	Total of Panels in Trailer (pcs)	Weight (kg/m²)
40	12	72	9.22
50	10	60	9.53
60	10	52	9.80
80	12	44	10.56
100	10	38	11.32
120	8	32	12.08
150	7	26	13.22

Container Loading

Panel Thickness (mm)	Bundle (pcs)	Total of Panels in Container (pcs)	Weight (kg/m²)
40	11	64	9.22
50	9	56	9.53
60	8	48	9.80
80	10	42	10.56
100	8	34	11.32
120	7	30	12.08
150	6	24	13.22

Please contact Kingspan Tech-eXchange for the Kingspan guidelines booklet on the storage, site handling, and offloading of metal coils, building sheets, and insulated panels at the site.

Product Data

Transport

Delivery

Unless otherwise specified, all deliveries are conducted via road transport to the designated project site.

Sea Freight

For projects requiring sea freight shipping via containers, timber wooden pallets are available with an additional charge.

Unloading at Site

The responsibility for unloading goods lies with the recipient on-site. It is crucial to avoid dropping or tossing goods off the vehicle and refrain from stacking them on uneven surfaces.

During the unloading process, it is of utmost importance to exercise careful attention in order to protect the goods from any potential damage and to prioritize the safety of on-site personnel.

Manual unloading of goods is not the recommended approach. Instead, it is advisable to utilise specialised equipment such as a forklift or crane equipped with a spreader beam. This precautionary measure prevents applying excessive pressure on the goods, which could lead to issues such as delamination, damage to joints, and surface irregularities.

Please contact Kingspan Tech-eXchange to acquire the guidelines provided by Kingspan for the storage, on-site handling, and safe offloading of metal coils, building sheets, and insulated panels.

Site Storage

Ensuring proper storage conditions for the goods is crucial for maintaining their quality. It is mandatory to store the goods in a covered space on a clean, level surface, with stacking not exceeding two bundles to prevent any undue pressure.

While storing the goods in an uncovered area is not recommended, if circumstances necessitate outdoor storage, they can be placed on a gently sloping surface to mitigate the risk of water accumulation.

When storing goods outdoors, it is imperative to employ a waterproof covering that allows sufficient air circulation beneath it. Additionally, it's vital to keep the goods at a safe distance from potential fire hazards and the risk of falling objects.

These measures are essential to ensure the goods' integrity and safety throughout their storage duration.

Please contact Kingspan Tech-eXchange to acquire the guidelines provided by Kingspan for the storage, on-site handling, and safe offloading of metal coils, building sheets, and insulated panels.

Handling

To enhance safety and prevent potential damage to the goods during unloading and movement, it is strongly advisable to choose mechanical handling equipment over manual methods.

Upon receiving the goods at the site, we kindly request recipients to diligently inspect the stacked goods before proceeding with unloading. If any visible damage is detected on the goods, which occurred prior to handling and unloading, please immediately report it to the Kingspan QA/QC team for a thorough investigation. It's important to avoid any goods movement or unloading until Kingspan completes its examination of the reported damages. For your convenience, comprehensive handling guidelines are provided on each goods bundle.

Customers must handle and store the products in accordance with their respective technical requirements. Any product damage attributed to the protective film and packaging will be considered only within two months from the production date of the delivered products.

Please contact Kingspan Tech-eXchange to acquire the guidelines provided by Kingspan for the storage, on-site handling, and safe offloading of metal coils, building sheets, and insulated panels.

Site Installation Procedure

To obtain site assembly instructions and construction specifics, please contact Kingspan Tech-eXchange.

Product Data
Load / Span Tables

Triple Span

Core Thickness (mm)	Load Type (kN/m²)	Span (m)						
		1.0	1.5	2.0	2.5	3.0	3.5	4.0
40	Pressure	4.30	2.16	1.37	0.97	0.73	0.57	0.45
	Suction	-4.97	-2.73	-1.84	-1.36	-0.91	-.066	-0.51
50	Pressure	4.50	2.34	1.53	1.12	0.86	0.64	0.50
	Suction	-5.36	-3.09	-2.15	-1.57	-1.05	-0.77	-0.59
60	Pressure	4.70	2.53	1.70	1.26	0.90	0.67	0.52
	Suction	-5.76	-3.45	-2.47	-1.78	-1.19	-0.87	-0.67
80	Pressure	5.10	2.89	2.00	1.33	0.96	0.73	0.57
	Suction	-6.57	-4.20	-2.86	-2.07	-1.47	-1.08	-0.83
100	Pressure	5.49	3.25	2.08	1.40	1.02	0.78	0.61
	Suction	-7.40	-4.73	-3.08	-2.25	-1.76	-1.29	-0.99
120	Pressure	5.88	3.61	2.17	1.47	1.07	0.82	0.65
	Suction	-8.24	-4.99	-3.28	-2.41	-1.90	-1.49	-1.15
150	Pressure	6.46	3.80	2.29	1.56	1.15	0.89	0.71
	Suction	-9.52	-5.37	-3.57	-2.65	-2.10	-1.73	-1.39

1 Steel thickness ext/int: 0.5 mm/0.4 mm.

2 Values have been calculated using the method described in EN 14509, for colour group 1.

3 The following deflection limits have been used:
- Pressure loading $L/200$.
- Suction loading $L/200$.

4 All panel thicknesses have been calculated with a minimum end support width of 40 mm and intermediate support width of 60 mm. Larger support widths are possible.

5 The actual wind suction resisted by the panel is dependent on the number of fasteners.

6 The fastener calculation should be carried out in accordance with the appropriate standards.

7 For intermediate values linear interpolation may be used.

8 The allowable steelwork tolerance between bearing planes of adjacent supports is ±5 mm.

Contact Details

Manufacturing Facilities in the MEATCA Region

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For a list of contacts and locations for Kingspan Businesses in MEATCA, please send an email to enquiry@kingspan.com

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For the product offering in other markets please contact your local sales representative or visit www.kingspanpanels.com