

Hygiene Wall

Product Data Sheet



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and quotation service
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AVANTA
WORKSPACE CREATION

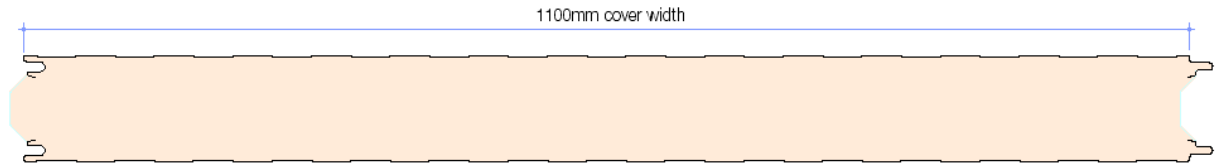
Product Data Sheet

Product: KS1100 CS – Insulated Temperature Controlled & Hygiene Safe Panel

APPLICATION

KS1100 CS is an insulated panel system which can be laid vertically or horizontally. It is suitable for use within temperature controlled and hygiene safe environments.

PANEL DATA



DIMENSIONS & WEIGHT

Core Thickness (mm)	50	60	80	100	125	150	175	200	220
Weight kg/m ² 0.5/0.5 steel	10.6	11.0	11.8	12.6	13.6	14.6	15.6	16.6	17.4
Weight kg/m ² 0.7/0.5 steel	12.4	12.8	13.6	14.4	15.4	16.4	17.4	18.4	19.2

PROFILE

Equi-Bead

Internal application – Internal wall or ceiling

External wall application – Vertically or horizontally laid

Mini-Bead

Internal application – Internal wall or ceiling

External wall application – Vertically or horizontally laid

Flat

Internal application – Internal wall. Internal ceiling, internal face only.

External roof application – External face only with site applied single ply membrane weathering system

Micro-Rib

External wall application – External weather face only - Vertically or horizontally laid

PRODUCT TOLERANCES

Length	-3mm	+3mm
Width	-1mm	+1mm
Thickness	-2mm	+2mm
End Squareness	-2mm	+2mm
Flatness (per metre)	-2mm	+2mm

AVAILABLE LENGTHS

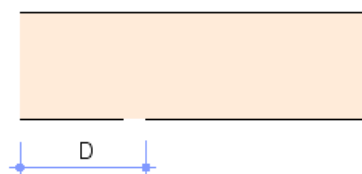
Standard lengths 1.8 to 12metres. 12 to 19.5 metres can be supplied but are subject to additional transport surcharge.

PANEL END

All panels are produced flush-ended. It is recommended that panels are used in continuous lengths from ridge to eaves with no end joints.

THERMAL BREAK

Panels can be manufactured with a thermal break cut to one side at base to provide insulation continuity at floor slab level if required. Dimension D = Max. 300mm.



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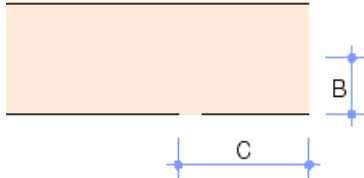
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PANEL REBATE

Panels can be manufactured with a rebate cut to one side at the head, if required.

Dimension B: Unless otherwise stated, the depth will be 50% of the panel thickness.

Dimension C: Unless otherwise stated, the depth will be 50mm; 60mm; 80mm; 100mm; 125mm; 150mm; 175mm; 200mm and 225mm.



NB. Rebates and thermal breaks are subject to Kingspan manufacturing tolerances. Details available upon request.

PANEL SIDE JOINT

The tongue and groove joint interfit achieves excellent thermal performance. The panel side joint can accommodate vapour or hygiene safe seals.

MATERIALS

STEEL

Substrate

- **Bright White Polyester, Polyester and Foodsafe Laminate:** Material Hot dip zinc coated to BS EN 10326: 2004, Standard sheet thickness 0.5mm.
- **Kingspan XL Forte, Kingspan Spectrum, Kingspan Aquasafe, and Kingspan CleanSafe:** S220GD+ZA hot-dip zinc/aluminium Galfan coated steel to BS EN10214: 1992. Standard sheet thickness 0.5mm, 0.63mm available on request.

Coatings - Internal Liner Sheet

- **Bright White Polyester:** The coating has been developed for use for the internal lining of insulated panels. Standard colour is "bright white" with an easily cleaned surface. Polyester is not suitable for external roof or wall cladding applications.
- **Polyester:** Fully foodsafe coating although not recommended for prolonged contact with moist or wet food. 25 micron thick standard organic coating – standard colour white. Polyester is not suitable for external roof or wall cladding applications.
- **Foodsafe Laminate:** Safe for continuous contact with food. 120 micron thick chemically inert polymer film bonded to steel suitable for cladding the interior of cold and chill stores and food processing and other hygienic applications. The standard colour is white. Foodsafe laminate is not suitable for external roof and wall cladding applications.
- **Kingspan AquaSafe:** The coating has been developed for use for the internal lining of panel to suit high humidity internal environments (class 5 as defined by the Building regulations)
- **Kingspan CleanSafe:** The coating has been developed for use for the internal lining of the panel where a high level of cleanliness and hygiene is required, and the panels are to be cleaned down on a regular basis. CleanSafe is not suitable for external roof or wall cladding applications

Coatings - External Weather Sheet

- **Kingspan XL Forte:** High performance coating applied to the weather side of the panel. Designed to achieve high levels of durability and colour stability, is highly resistant to damage in transit and on-site.
- **Kingspan Spectrum:** High performance coating applied to the weather side of the panel. Designed to achieve high levels of durability and colour stability, is highly resistant to damage in transit and on-site.

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INSULATION CORE

Polyisocyanurate (PIR): EcoSafe LPCB certificated PIR formulation. Receiving BREEAM Credit (Pollution 4: Insulant GWP) 2006 credit.

ENVIRONMENTAL

The KS1100 CS panels have a Green Guide A + rating as per the BRE Global “The Green Guide To Specification”, Green Guide 2008 ratings. Generic Green Guide element number 806600001.

PERFORMANCE

Thermal Insulation

The KS1100 CS panels have a Thermal Transmittance (U value):

Core Thickness (mm)	50	60	80	100	125	150	175	200	220
U value (W/m²K)	0.39	0.31	0.25	0.20	0.16	0.13	0.11	0.10	0.095

Heat Transmission

Thermal Conductivity = 0.020W/mK.

Panel Thickness (mm)	50	60	80	100	125	150	175	200	220
U value	0.39	0.31	0.25	0.20	0.16	0.13	0.11	0.1	0.09
Temp diff (°C)									
10	4.00	3.33	2.50	2.00	1.60	1.33	1.14	1.00	0.91
15	6.00	5.00	3.75	3.00	2.40	2.00	1.71	1.50	1.36
20	8.00	6.67	5.00	4.00	3.20	2.67	2.29	2.00	1.82
25	10.00	8.33	6.25	5.00	4.00	3.33	2.86	2.50	2.27
30	12.00	10.00	7.50	6.00	4.80	4.00	3.43	3.00	2.73
35	14.00	11.67	8.75	7.00	5.60	4.67	4.00	3.50	3.18
40	16.00	13.33	10.00	8.00	6.40	5.33	4.57	4.00	3.64
45	18.00	15.00	11.25	9.00	7.20	6.00	5.14	4.50	4.09
50	20.00	16.67	12.50	10.00	8.00	6.67	5.71	5.00	4.55
55	22.00	18.33	13.75	11.00	8.80	7.33	6.29	5.50	5.00
60	24.00	20.00	15.00	12.00	9.60	8.00	6.86	6.00	5.45
65	26.00	21.67	16.25	13.00	10.40	8.67	7.43	6.50	5.91
70	28.00	23.33	17.50	14.00	11.20	9.33	8.00	7.00	6.36
75	30.00	25.00	18.75	15.00	12.00	10.00	8.57	7.50	6.82
80	32.00	26.67	20.00	16.00	12.80	10.67	9.14	8.00	7.27

The recommended minimum insulation value for Coldstores is 10W/m2 heat gain.
(See Code of Practice for the Design of Coldstore Envelopes).

Biological

The KS1100 CS system is fibre-free and immune to attack from mould, fungi, mildew and vermin and therefore forms no health and safety risk to building occupants. No urea formaldehyde is used in the construction, and the panels are not considered deleterious.

Fire

The KS1100 CS insulated panel system is both LPCB and FM approved.

- Loss Prevention Certification Board certified to LPS 1208: Issue 2 - Grade FR30 and FR60. Specifications are available on request from Kingspan *envirocare*® Technical Services.
- FM Global approved to FMRC 4880 Class 1 Fire Classification (no height restriction – i.e. - Unlimited Height).
- The steel outer and inner facings have Class 1 surface spread of flame to BS 476-7: 1997 (Fire tests on building materials and structures. Method of test to determine the classification of the surface spread of flame of products) and are Class 0, as defined by Building Regulations.
- European reaction to fire classification according to the European Standard BS EN 13501-1: B – s2, d0.

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Acoustics

All KS1100 CS panels have a predicted single figure weighted sound reduction $R_w = 24\text{dB}$.

Predicted Sound Reduction Index (SRI)

Frequency Hz	63	125	250	500	1k	2k	4k	8k
SRI dB	20	15	17	23	18	25	40	46

QUALITY

Kingspan Insulated Panels are manufactured from the highest quality materials, using state of the art production equipment to rigorous quality control standards, approved to ISO 9001:2000 standard. Kingspan manufacturing plant are ISO 14001 (Environmentally) and ISO 18001 (Health & Safety) accredited.

PACKING

Standard Packing

KS1100 CS systems are stacked horizontally with facing sheets upward. The top and bottom, sides and ends are protected with polystyrene and timber packing and the entire pack is wrapped in polythene. The number of panels in each pack depends on panel length, weight and thickness. Typical pack height is 1200mm. Maximum pack weight 1500kg.

Core Thickness (mm)	50	60	80	100	125	150	175	200	220
Panels per pack	22	18	13	11	8	7	6	5	4

DELIVERY

All deliveries (unless indicated otherwise) are by road transport to project site. Off loading is the responsibility of the client.

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