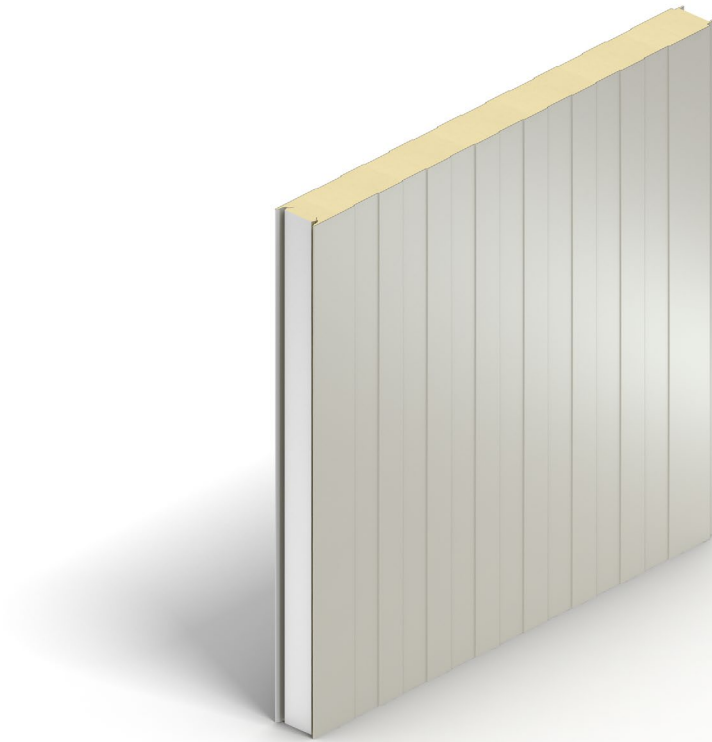




KSN1100CS Coldstore Panel

Product Data Sheet



Product Data Sheet

KSN1100CS Coldstore Panel

Kingspan Controlled Environment panels are designed for use within temperature controlled and hygiene safe environments where performance is critical, such as food processing, freezers, cold/chill store and clean rooms for the bio-technology and pharmaceutical industries.

Applications

These hygienic and fibre free insulated panel systems are suitable for internal and external walls and ceilings, including internal 'box within a box' applications.

Manufacture

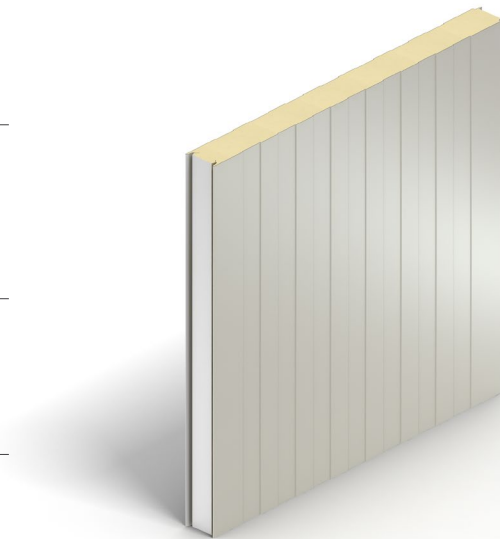
Panels are manufactured in a Kingspan owned facility in Christchurch, New Zealand.

Available Lengths

Standard lengths are from 2.4m to 24.0m.

Fixing Method

Through-fix.



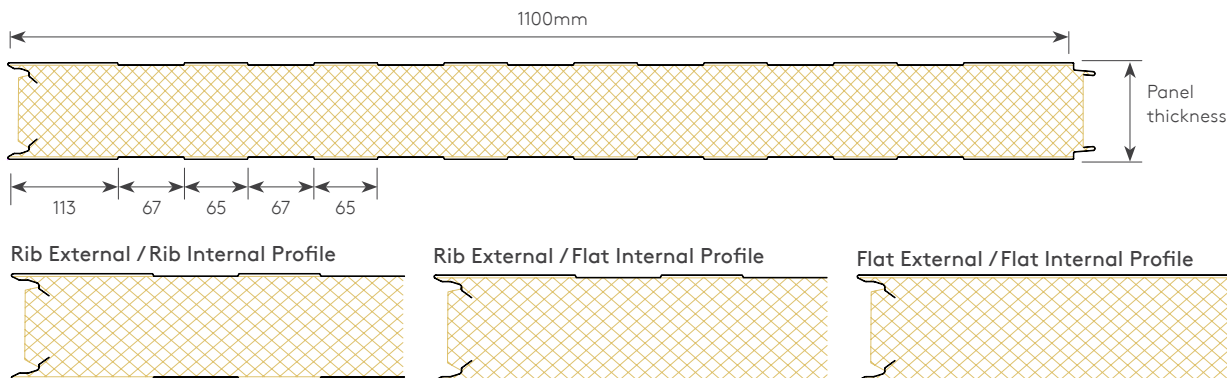
Panel Performance

A - Core Thickness (mm)	50	75	100	125	150
Material R value (m ² .K/W)*	2.1	3.19	4.31	5.64	6.77
Installed R value (m ² .K/W)**	2.22	3.31	4.43	5.76	6.89
Weight (kg/m ²)**	12.1	13.1	14.1	15.1	16.1

* Material R value = the aged thermal value @ 15°C, as independently tested and calculated to AS/NZS4859 parts 1&2: 2018 before installation. Note this is for the product only before installation.

** Installed R value = the thermal resistance of the installed product and includes air films as per NZS 4214

*** other steel thicknesses both external and internal are available and could alter the weight. Actual weight subject to vary ±10% due to manufacturing and raw material tolerances



Note: 1000mm wide panels available, subject to MOQ

Materials

Exterior Weather Sheet:

- 0.55mm thick Z275 CP G300S coated steel in accordance with AS1397:2021.
- Paint coating in accordance with AS/NZS 2728:2013
- Standard Colour – Titania
- Other colours available on extended lead time and price

Insulation Core:

- Non-hygroscopic polyisocyanurate (PIR), with zero Ozone Depletion Potential (Zero ODP).
- PIR foam is a thermosetting material. It does not melt, flow or drip when exposed to fire. It forms a strong char that helps protect the foam core and prevent flame spread within the panels.

Internal Liner Sheet:

- 0.55mm thick Z275 CP G300S coated steel in accordance with AS1397:2021.
- Standard Colour – Titania
- Other colours available on extended lead time and price

Fasteners

All fixings (screws, rivets or bolts) to be either carbon or stainless steel.

Flashings

All flashings to be steel. No aluminium to be used in order to achieve fire performance.

Structure

The panel is considered a cladding element which is connected to a supporting structure.

Acoustic Performance

KSN1100CS Coldstore Panels have a single figure weighted sound reduction index of $R_w = 24\text{dB}^*$. Results are based on panels with a similar profile and core material.

Frequency (Hz)	125	250	500	1000	2000	4000	STC	R _w
SRI (dB)	17.2	18.2	19.1	24.8	37.3	39.5	21	24

* Please contact Technical Services for project specific support and product specification.

Product Tolerances

Length < 3 m	±5 mm
Length > 3 m	±10 mm
Cover Width	±2 mm
Thickness < 100 mm	±2 mm
Thickness > 100 mm	±2%
Squareness	≤0.6% of width

NZGBC
TE KAUNIHERA HANGANGA TAUTAI AO
Member 2024-2025

NZBC Compliance

Coldstore panels have been used around New Zealand, on many building types for in excess of 15 years.

When designed, used, installed and maintained in accordance with Kingspan standard details, the KSN1100CS Coldstore Panel is compliant with the applicable sections of the NZBC:

- B1 Structure — B1.3.1; B1.3.2; B1.3.3(a, c, f, g, h, j); B1.3.4
- B2 Durability — B2.3.1(b)
- C3 Fire Affecting Areas Beyond the Fire Source — C3.4(a); C3.5; C3.7
- E2 External Moisture — E2.3.2; E2.3.7
- E3 Internal Moisture — E3.3.5
- F2 Hazardous Building Materials — F2.3.1
- H1 Energy Efficiency — H1.3.1

Sprinkler Code NZS 4541:2020

The Sprinkler Standard NZS 4541:2020 contains levels of sprinkler protection required for buildings constructed with “Approved” and “Not Approved” panels - refer to clause 2.12 and Appendix K.

Kingspan’s PIR-cored KSN1100CS Coldstore Panels are considered ‘Approved’ under the standard, as they have FM approval.

Fire Performance

The KSN1100 CS panel has been rigorously tested to both NZ and international building standards and the standards expected of the insurance industry.

Internal Surface Finish (NZBC C.4.17.1) (to ISO 9705)	
Standard Details	
Group 1S	
External Radiation (NZBC C.5.8) (to ISO 5660-1)	
Building Code Document	Cladding Material Type
NZBC Acceptable Solutions C/AS1 Table 5.1	< 100kW/m² and < 25 MJ/m²
NZBC Acceptable Solutions C/AS2 Table C1.3	Type A
Foam Plastic Core (NZBC C.4.17.2)	
Core meets the fire requirements of AS 1366.2	

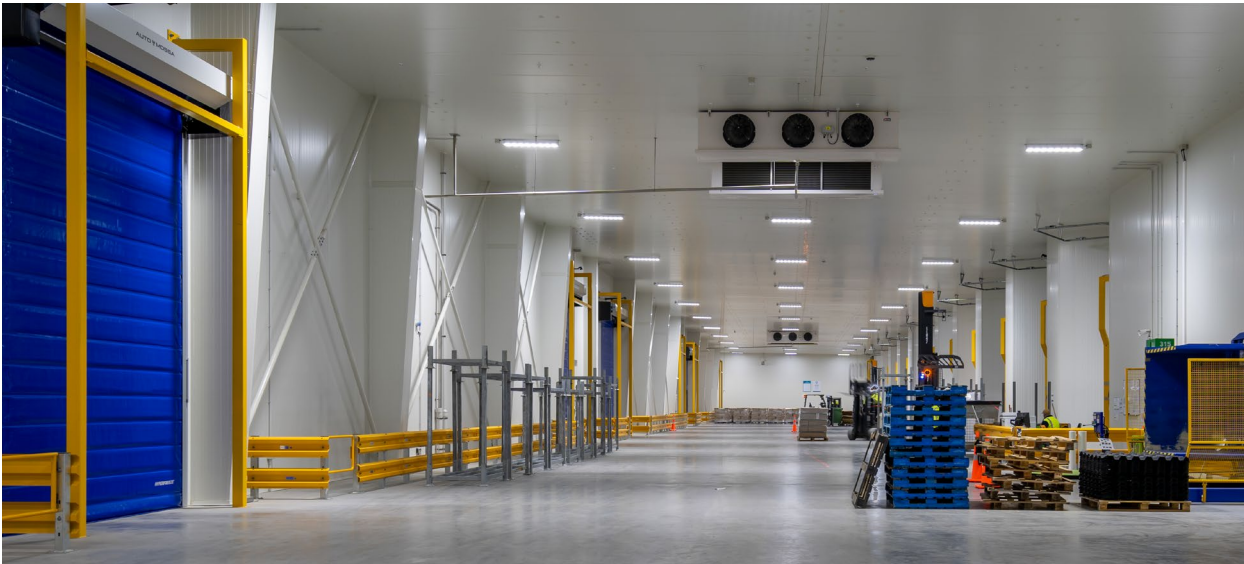
Insurance

Kingspan KSN1100CS Coldstore Panels are approved by FM to the following Approval Standards:

- **FM4880** - Internal wall and ceiling panels without height restriction (All thicknesses: 50, 75, 100, 125, and 150 mm)
(certified names: KSN1100 CS, KSN1000 CS)



Insurer approvals are large scale testing regimes that provide objective third party testing, which is underpinned by yearly factory surveillance audits (depending on the region) to verify compliance. Insurer approvals are subject to panel thickness, width, orientation, method of assembly, steel coating and manufacturing facility. Please contact Kingspan for project specific details.



Product Selection Assistance

Sales representatives are available nationwide to answer queries on product options, assist with detailing, spans, colour swatches and other queries. They can also provide early stage budget estimates and co-ordinate the provision of project specifications.

Technical Assistance

Our technical team is available to provide specific advice on panel spans, product specifications, standard and bespoke detailing, panel optimisation, fire wall options, project specific acoustic solutions, panel guarantees, thermal condensation risk calculation along with general building science cladding advice.

Kingspan Technical Services can provide 'side by side' assistance with regard to project detailing, attending design meetings, providing training and undertaking site visits when required.

Guarantees

Kingspan will provide product guarantees on an individual project basis.

Up to 10 years for a coldstore/processing application. Refer to Kingspan for further details. All guarantees are subject to a maintenance regime. Specialist coatings are available for marine and other more corrosive areas.

Biological

Kingspan panels are normally immune to attack from mould, fungi, mildew, and vermin. No urea or formaldehyde is used in the construction, and the panels are not considered deleterious to health.

Quality and Durability

KSN1100CS Coldstore Panels are manufactured from the highest quality materials using state-of-the-art production equipment to rigorous quality control standards.

Delivery & Packing

Standard Packing

Protective film is applied to the external face.

Kingspan panels are stacked horizontally.

The number of panels in each pack depends on panel thickness.

Delivery

All deliveries (unless indicated otherwise) are by road transport to project site by flat bed truck for off-loading by crane or fork hoist.

Off-loading is the responsibility of the installer.

Handling guidelines are available from Kingspan Technical Services.

Site Installation Procedure

A site assembly instruction brochure is available from Kingspan Technical Services.



Span Tables

Span tables are currently being developed. Please contact Kingspan Technical for more information.

[illegible]

Contact Details

New Zealand

Kingspan Limited

97 Montreal Street | Christchurch 8023

T: 0800 12 12 80 or +64 (0) 3 260 5530

E: info@kingspanpanels.co.nz

www.kingspanpanels.co.nz

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

Care has been taken to ensure that the contents of this publication are accurate, but Kingspan Limited and its subsidiary companies do not accept responsibility for errors or for information that is found to be misleading. Suggestions for, or description of, the end use or application of products or methods of working are for information only and Kingspan Limited and its subsidiaries accept no liability in respect thereof.

To ensure you are viewing the most recent and accurate product information, please visit:
<https://www.kingspan.com/content/dam/kingspan/kip-west/coldstore/ksn1100cs-coldstore-panel/kingspan-ksn1100cs-coldstore-panel-data-sheet-en-nz.pdf>

© Kingspan and the Lion Device are Registered Trademarks of the Kingspan Group plc in the UK, Ireland and other countries. All rights reserved.

