



+40°C

Coldstore Segment

Precision
in Temperature-Controlled
Environments

-40°C

isocab
By Kingspan

Introduction: Your Partners in Temperature Control



Who We Are – Kingspan Group

**Kingspan is a global leader in
high-performance building envelope solutions.**

Our mission is to accelerate a net-zero emissions future through advanced materials and solutions that enhance energy efficiency, reduce carbon footprint, and improve building performance.



Kingspan Insulated Panels – Our Role in Controlled Environments

At Kingspan Insulated Panels, we focus on delivering cutting-edge solutions for the most technically demanding environments - cold storage, food processing, cleanrooms, and pharmaceutical applications.

We combine advanced panel technology with engineering know-how to solve the specific challenges of temperature-controlled facilities.

We are not just panel manufacturers, we are solution partners. From airtight thermal envelopes to fire-compliant, hygienic systems, we offer integrated, high-performance solutions that ensure long-term operational efficiency, compliance, and resilience.

At Kingspan Insulated Panels, our global team of coldstore specialists is here to support you wherever you are. A local expert is always within reach — feel free to contact us for personalised assistance. (See contact details on p. 34)

€8.6bn

Revenue
2024

22,000+

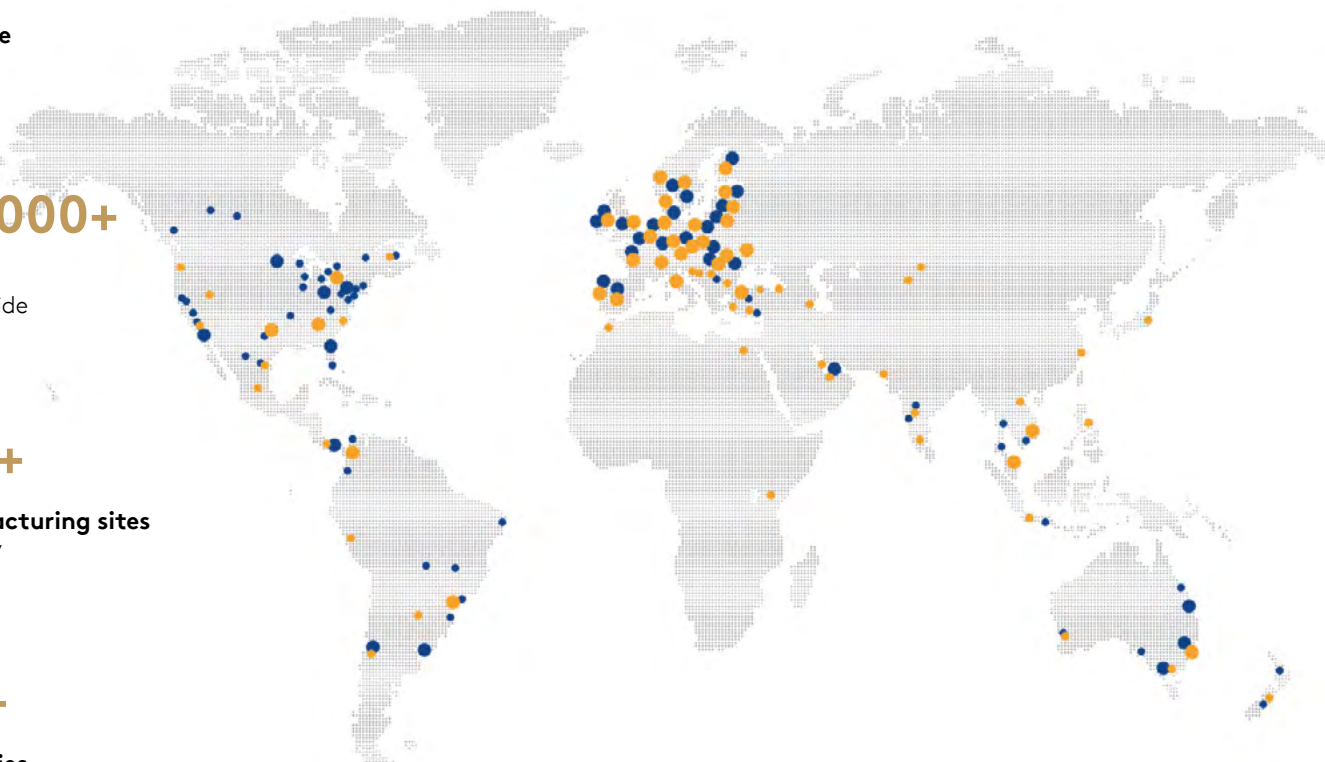
People
Worldwide

212+

Manufacturing sites
Globally

80+

Countries
Worldwide



Introduction: Your Partners in Temperature Control

Who We Are – Isocab By Kingspan

Isocab By Kingspan is a global leader in high-performance building envelope solutions.

Isocab By Kingspan is a global expert in high-performance insulated panel systems for controlled environments, delivering thermal efficiency, fire safety, durability and hygiene for food, logistics, healthcare and high-tech industries.

Isocab By Kingspan Insulated Panels – Our Role in Controlled Environments

Isocab By Kingspan has a truly global footprint, serving customers in more than 60 countries with solutions for controlled environments. While our two state-of-the-art production facilities in France ensure high-quality manufacturing, our commercial offices and expert teams are strategically located worldwide to provide local support. This international presence allows us to deliver reliable insulated panel systems to food processing, logistics, healthcare, and high-tech industries across the globe.

Isocab By Kingspan solutions are widely used in the food industry to meet strict requirements for thermal performance, hygiene, and safety. They are implemented in a variety of environments such as cold rooms for product preservation, preparation and processing areas, industrial kitchens, slaughterhouses, mushroom farms, as well as logistics and storage spaces for positive or negative temperatures.

Thanks to their insulated sandwich panels and tailored accessories, these solutions ensure optimal airtightness, certified fire resistance, and easy cleaning, thereby supporting regulatory compliance and reducing energy costs.



The Temperature - Controlled Landscape

+40°C*

-40°C

UNDERSTANDING THE TEMPERATURE-CONTROLLED LANDSCAPE

Temperature-controlled environments (TCEs) span a wide range of applications, from chilled preparation areas and cold storage to ultra-low temperature blast freezers and pharmaceutical clean rooms.

Each of these spaces has a spectrum of technical, hygienic and operational requirements, defined by the products stored, the processes carried out and the level of environmental control needed.

Understanding this landscape is essential to selecting the right building solutions. At Isocab By Kingspan, we address the entire temperature spectrum, from +40°C to -40°C, to ensure optimal performance, compliance and efficiency across industries.

-40°C to +40°C (QuadCore) | -28°C to +40 °C (Mineral Wool)



Controlled Ambient Rooms (+15°C to +40°C)

Applications:

Pharmaceuticals, electronics storage,
food preparation areas

Key requirements:

Stable temperature, humidity
control, hygiene standards

Typical panel thickness:

40-80mm





Chilled Cold Rooms (0°C to +12°C)

Applications:

Fresh food storage, dairy products,
beverages, pharmaceutical storage

Key requirements:

Positive temperature maintenance,
frequent access considerations

Typical panel thickness:

80-140mm





Freezer Cold Rooms (0°C to -28°C)

Applications:

Frozen food storage, long-term preservation, ice cream storage

Key requirements:

Negative temperature maintenance, minimised air infiltration

Typical panel thickness:

140-220 mm





Deep-Freezing & Blast Applications (-30°C to -40°C)

Applications:

Rapid freezing tunnels, ultra-low temperature storage

Key requirements:

Extreme thermal resistance,
frost heave prevention

Typical panel thickness:

200-220 mm



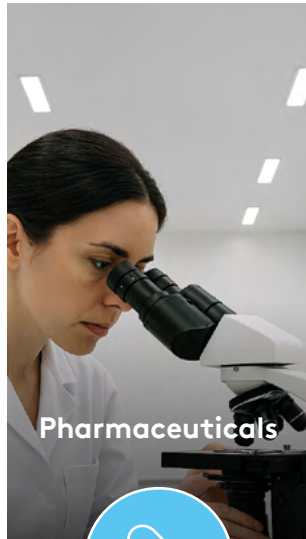
Industry Applications Across the Spectrum:



**Food Processing
& Storage**



Ensuring
product integrity
and safety.



Pharmaceuticals



Maintaining
strict temperature controls
for sensitive products.



Cleanrooms



Providing contamination-
free environments
for research and
manufacturing.



High-Tech Industries



Delivering advanced
solution to support
precision manufacturing
and protect sensitive
technologies.



**Cold Storage
Warehouses**



Efficiently preserving
perishable goods.



**Logistics
& Distribution
Centers**



Streamlining
temperature-sensitive
supply chains.

Insulated Panels for optimal performance



THE FOUNDATION OF TEMPERATURE CONTROL

Isocab By Kingspan insulated panels are single-component, factory-pre-engineered systems designed specifically to meet the complex demands of temperature-controlled environments.

Each panel features Isocab By Kingspan's unique insulation core, securely sandwiched between two metal facings - an external weather-resistant skin and a pre-finished internal liner suitable for hygienic spaces.

This all-in-one solution replaces traditional multi-part construction, delivering a complete barrier system that ensures durable thermal performance, insulation continuity, minimal air leakage, and prevention of condensation and cold bridging - even in the most extreme environments.



With fast, single-fix installation, our insulated panels reduce build time, simplify detailing, and improve construction quality. From concept to execution, they are engineered to provide consistent performance, hygiene, and reliability across the full temperature-controlled spectrum.

SINGLE COMPONENT >
Accelerated build speed can reduce time on site

DURABILITY >
Lifetime performance

HIGH PERFORMANCE INSULATION >
Low U-values

EXTERIOR METAL SKIN >
High-performance weather barrier

INTERIOR METAL SKIN >
High-performance vapour barrier

WEATHERTIGHT SYSTEM >
Warranties available for panels and cohesive systems

ENVIRONMENT >
Specification Axis (BREEAM, Carbon footprint,...)

COST-EFFECTIVE SOLUTION >
Reduction in structural and installation costs:
solution offering long spans

LIGHT & FAST INSTALLATION >
Lightweight solution for roof structures



QuadCore: The Performance Revolution

With decades of expertise and a commitment to innovation, Isocab By Kingspan sets the benchmark in insulated panel technology.

At the heart of our system is QuadCore®, the next generation of self-blended hybrid insulation cores designed to deliver uncompromising performance in cold storage and controlled environments.

Featuring distinctive grey microcells, QuadCore® is the highest-performing closed-cell insulation core on the market and is engineered to raise performance standards across multiple criteria:

Thermal Performance:



With Lambda as low as 0.018 W/m·K, QuadCore® is as twice as thermally efficient as mineral fibre insulation, enabling thinner constructions without compromising performance.

Fire Performance:



- Reaction to fire: B-s1,d0 for panel thicknesses from 60 mm
- FM4880/4881/4882 certified for wall & ceiling (thicknesses of 40 to 220 mm) except when mounted with foamed-in omega profiles
- Fire Resistance: EI 30 : 120 mm (V) / EI 60 : 220 mm (V)

More info here (<https://www.isocab.com/gb/en/products/insulated-panels/wall/quadcore-ind-insulated-panel/>)

Environmental Performance:



QuadCore® is a low Global Warming Potential solution which is also CFC and HCFC free.

FibreFREE:



QuadCore® is non-sensitising (does not cause skin irritation when handled) and non-hazardous.



When Fire Safety is Paramount: Decaroc

For buildings with the strictest requirements for fire performance, Isocab By Kingspan offers the Decaroc Insulated Panel-a non-combustible solution with a mineral fibre core.

- **Euroclass Rating:**
A2-s1,d0 – suitable for the majority of new and existing buildings where non-combustibility is essential.
- **Thermal Conductivity:**
0.044 W/m·K.
- **Fire Risk Reduction:**
Decaroc reduces fire-related risks and simplifies compliance with the most demanding regulations.

Whether your priority is maximum insulation or highest fire classification, Isocab By Kingspan offers the right core technology for your cold storage needs.

Performance Where It Matters



Energy Efficiency & Cost



The Performance Demands:

Maintain strict internal temperatures with minimal energy use

- U-values typically required:
 - ≤ 0.25 W/m²K (chilled rooms)
 - ≤ 0.15 W/m²K (freezer rooms)
 - ≤ 0.10 W/m²K (deep-freeze)
- Minimise heat gain to reduce refrigeration load
- Ensure compliance with energy regulations (e.g. Part L2, EPBD)
- Support long-term operating cost reductions and sustainability targets



How Isocab By Kingspan Delivers:

- QuadCore® technology achieves U-values as low as 0.08 W/m²K, reducing energy loss and cooling demand
- High thermal resistance enables smaller, more efficient cooling systems. Lambda value: 0.018 W/m.K
- Superior performance supports compliance with EU energy codes
- Long-term savings backed by a 25-year thermal performance warranty





Safety & Compliance: Fire Performance



The Performance Demands:

- Contain fire and limit smoke generation
- Meet national and international fire codes (EN 13501-1, EN 13501-2, FM Approvals)
- Suitability for high-risk and smoke-sensitive environments
- Insurance-approved materials and assemblies



How Isocab By Kingspan Delivers:

- QuadCore® Coldstore Panels achieves B-s1,d0 fire rating (60 - 220 mm) with low smoke and no flaming droplets
- Fire resistance ratings up to 60 minutes integrity and insulation, EI60 - 200 mm
- FM 4880, 4881 and 4882 for QuadCore® Coldstore Panels for thicknesses 40 - 220 mm
- Decaroc option available for A2-s1,d0 non-combustible performance

Safety & Compliance: Hygiene Standards



The Performance Demands:

- Hygienic, food-safe surfaces that resist contamination
- Washable, non-porous finishes suitable for clean environments
- Compliance with hygiene standards (HACCP, FDA, CFIA, EC regulations)



How Isocab By Kingspan Delivers:

- CLEANsafe and stainless-steel finishes for food and pharma use
- Seamless, smooth interiors resist mould and bacterial growth
- Chemical-resistant coatings withstand regular washdowns
- Fully compliant with global food hygiene regulations
- Adaptable insulated solutions for CPI1 to CPI5 environments.





Operational Excellence: Airtightness & Moisture Control



The Performance Demands:

- Absolute control over air leakage and vapour transmission
- Prevention of condensation and frost formation
- Long-term preservation of thermal performance



How Isocab By Kingspan Delivers:

- Precision joints and integrated sealing systems achieving $0.89 \text{ m}^3/\text{h}/\text{m}^2$ at 50 Pa with dry seal and $0.04 \text{ m}^3/\text{h}/\text{m}^2$ with wet seal.
- Factory-fitted gaskets, silicone sealants, and PIB tape at critical junctions
- QuadCore® closed-cell insulation resists moisture ingress
- Prevents cold bridging and ensures long-term envelope integrity
- Tailored solution for controlled environments, including low-oxygen conservation chambers.

Operational Excellence: Durability & Maintenance



The Performance Demands:

- Resistance to corrosion, chemical exposure, and temperature cycling
- Structural stability and appearance over decades of use
- Minimal maintenance requirements



How Isocab By Kingspan Delivers:

- Steel facings with durable coatings: Cleansafe, Destral, Spectrum
- Maintains performance under harsh cleaning and operating conditions
- Simple inspection protocols support long-term reliability



Solutions Portfolio



At Isocab By Kingspan Insulated Panels we deliver fully integrated envelope systems.

From precision-engineered panel solutions to flashings, cold-store doors, and accessories, our systems are designed to work together seamlessly, ensuring a tight, thermally efficient, and compliant building envelope.

1. Industrial IND Flat roof system
2. Insulated Panels
3. Floor Insulation boards
4. Acoustic barrier
5. Smoke extraction hatch
6. Insulated sliding door
7. Service Door
8. Insulated hinged door
9. Sectional Door
10. Inspection Door



Product pages

QUADCORE COLDSTORE PANEL

QuadCore Coldstore Panels are designed specifically for use within the food and drink industry in applications such as food manufacture and temperature-controlled storage. Panels can also be used in standard building environment conditions.



PRODUCT FEATURES:

- Suitable for food processing, chilled and cold applications
- Lengths from 2 - 19 m
- Thicknesses from 60 - 220 mm
- Temperatures from -40°C to +40°C
- Suitable for use internally and externally
- U-values as low as 0.08W/m²K
- Unique castellated and symmetrical tongue and groove joint achieves low air leakage performance



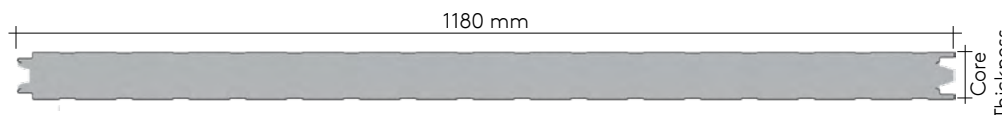
View full
product information



DIMENSIONS, WEIGHT AND THERMAL PERFORMANCE

Core thickness (mm)	40	60	80	100	120	140	170	200	220
Wall U (W/m².K)	0,46	0,3	0,22	0,18	0,15	0,13	0,11	0,09	0,08
Wall R (m².K/W)	2,17	3,33	4,55	5,56	6,67	7,69	9,09	11,11	12,5
Weight (40 kg/m³ nominal value) (kg/m²)	9,84	10,64	11,44	12,24	13,04	13,84	15,04	16,24	17,04

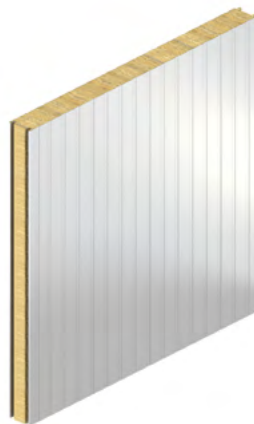
Notes: These values are in accordance with BS EN 14509, calculated using Finite Element Analysis, and take into account any thermal bridging through the longitudinal joint. Shaded area denotes typical thicknesses for temperature controlled applications. The U-values have been calculated using an aged



Product pages

DECAROC COLDSTORE PANEL

Construction projects with high demands on fire safety, hygiene & thermal insulation turn to Decaroc sandwich panels for walls, partition walls, ceilings. Mineral wool panels have several advantages: A2-s1, d0, and using Rockwool 50F as a fire wall with a rating of up to 240 minutes.



PRODUCT FEATURES:

- Suitable for food processing, chilled and cold applications
- Certification Nominal thermal conductivity (λ) = 0.044 W/mK
- Mechanics: Spans /Loads and Seismic validated
- Reaction to fire: A2-s1, d0 for panel thicknesses from 60 to 300 mm
- FM4880/4881 certified for partition walls and ceilings, and for walls, for panel thicknesses of 60 to 300 mm
- Fire resistance from EI60 to EI240 depending on panel thicknesses & mounting
- Insulation core made of mineral wool, type 50C or 50F
- Symmetrical tongue-&-groove joint allows for an airtight & hygienic finish on walls or ceilings & makes them washable
- Strong sound absorption

View full
product information



Thicknesses (mm)	60	80	100	120	150	170	200	240	300
Decaroc 50C $\lambda=0.042$ W/m.K									
Wall U (W/m ² .K)	0,66	0,5	0,4	0,34	0,27	0,24	0,21	0,17	0,14
Wall R (m ² .K/W)	1,52	2	2,5	2,94	3,7	4,17	4,88	5,88	7,14
Weight 50C (0.6*0.5mm) (kg/m ²)	14,89	16,79	18,69	20,59	23,44	25,34	28,19	31,99	37,69
Decaroc 50F $\lambda=0.044$ W/m.K									
Wall U (W/m ² .K)	0,69	0,52	0,42	0,35	0,29	0,25	0,21	0,18	0,14
Wall R (m ² .K/W)	1,45	1,92	2,38	2,86	3,51	4	4,76	5,56	7,14
Weight 50C (0.6*0.5mm) (kg/m ²)	16,39	18,79	21,19	23,59	27,19	29,59	33,19	37,99	45,19

Volumic masses 50C = 100kg/m³ & 50F=120 kg/m³ with nominal densities. U = 1/R



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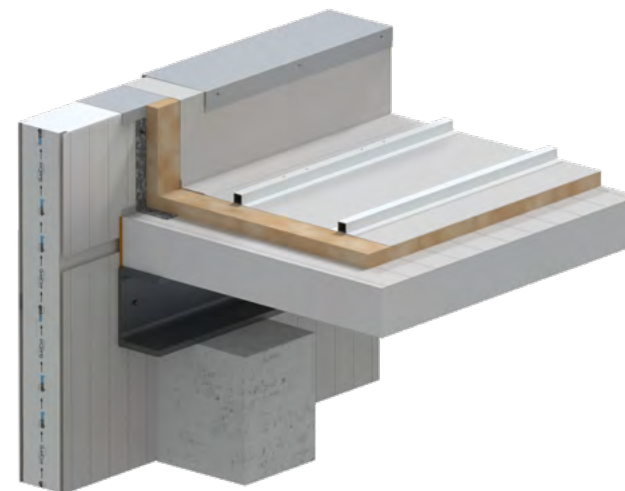
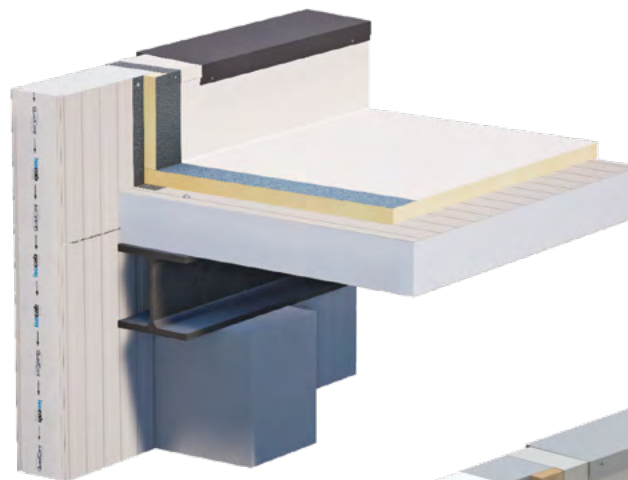
System page

INDUSTRIAL IND FLAT ROOF SYSTEM

Industrial IND Flat Roof System is designed for cold logistics at positive or negative temperatures. This roof system consists of the Industrial IND or QuadCore IND Insulated Panel fixed directly to the trusses or purlins, then covered with an additional insulation and finally with a mechanically fixed waterproofing membrane, thus creating a flat roof with a minimum slope of 3.1%

PRODUCT FEATURES:

- High thermal performance thanks to the QuadCore IND Insulated panels with a lambda value of 0,018 W/m.K CE
- Installation of the insulation and waterproofing of the building at the same time
- The solution avoids easily the thermal breaks
- The solution is suitable for both distribution centres and food processing buildings
- The ceiling coating is easy to clean and meets the standards of hygiene



View full
product information



Product pages

SMOKE EXTRACTION HATCH

Smoke ventilation hatches play a vital role in building fire safety. Designed to evacuate hot gases and smoke, they help maintain acceptable evacuation conditions and facilitate emergency response. The ISOFEU solutions offered by Isocab By Kingspan comply with strict standards. When properly designed and maintained, they are a key element of a building's fire safety strategy and meet the following technical requirements:

- Tightness
- Hygiene
- Maintenance
- Pneumatic
- Natural smoke ventilation
- Certification
- Safety

This hatch, equipped with two pulling actuators, is designed for more aggressive environments requiring regular cleaning. Its actuators are installed on the outside, reducing the number of components inside the chamber, which makes cleaning easier and saves space. Fitted with stainless steel elements, this hatch is perfectly suited for harsh environments. This design ensures high-performance sealing control and helps maintain the strict cleanliness and pressurization conditions required in sensitive areas.



View full
product information



Product pages

ACCESSORIES

Finishing accessories play a crucial role in ensuring the continuity of technical performance, the hygiene of installations, and regulatory compliance. Isocab By Kingspan offers a complete range of accessories designed to integrate seamlessly with insulated sandwich panel systems.

These elements (floor channels, cover strips, skirting boards, corner profiles, specific fasteners, etc.) are manufactured from materials suitable for controlled environments, resistant to corrosion, intensive cleaning, and chemical agents. All our accessories also guarantee the continuity of mechanical, hygienic, and fire performance of the installed systems.

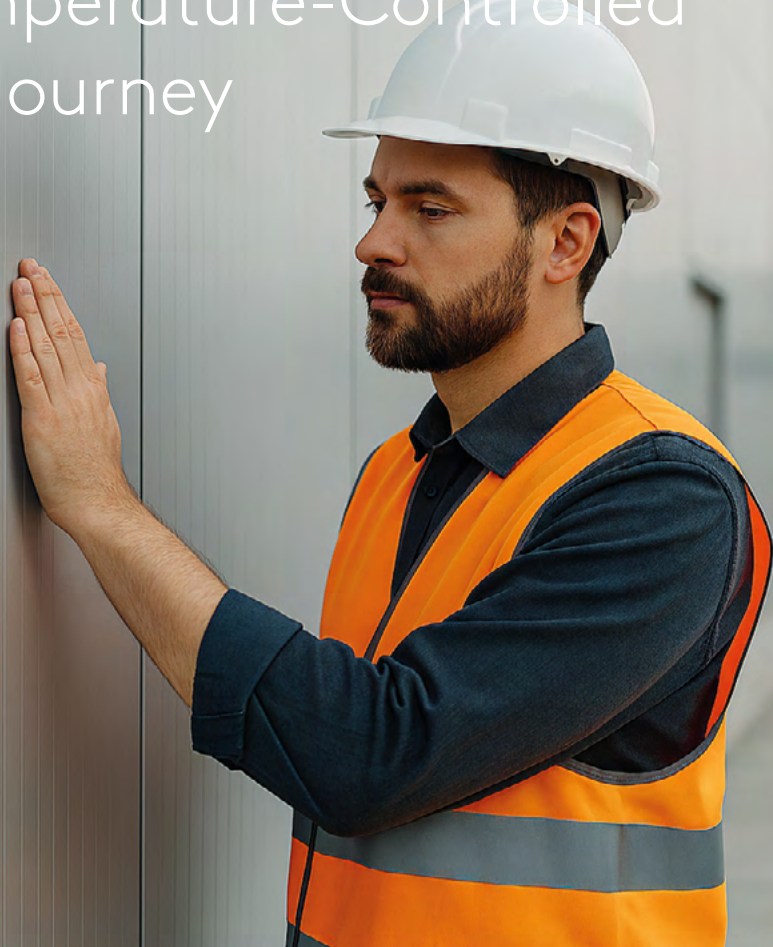
Using Isocab By Kingspan accessories means ensuring a reliable, durable installation that complies with the strictest standards. Request our Installation Guides for Coldstore at both positive and negative temperatures.



View full
product information



Your Temperature-Controlled Project Journey



Our experienced teams support you at every stage of your project - from initial concept and technical design, through installation and commissioning, to final completion and handover.

By partnering with us, you gain access to unparalleled expertise and support throughout your temperature-controlled project, ensuring optimal performance, regulatory compliance, and long-term value.

360° Service & Support

WITH YOU ALL THE WAY.

Our dedicated and experienced team can deliver a full service for a wide range of Coldstore applications.

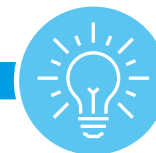
With you from the outset, we will offer support on all necessary aspects of your cleanroom project, from conception, through installation, to completion and handover.

1. Specification



Our specialist Coldstore Sales Team are here to support you with the appropriate selection and specification of our comprehensive product range, providing quotations and cost support.

2. Technical Support



Our Coldstore Technical Team provides dedicated support throughout the design and construction process for our customers. With our specialist team we are here to offer support on ISO and GMP Coldstore standard compliance.

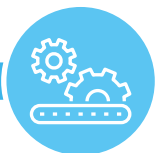
We provide installation guidance and offer product layouts upon order, subject to customers product selection and project demands.

3. Customer Service ▶



Our dedicated customer service advisers will be with you every step of the way.

4. Production ▶



Our streamlined process, using automated manufacturing equipment, combined with our highly skilled and experienced workforce, ensures consistently high quality and efficient production of your chosen solution.

5. Delivery ▼



We work with you to quickly provide a professional delivery schedule to suit your project needs.

8. Warranty



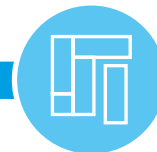
Our service continues after the project is complete. With proven performance, you can be confident that you've chosen the ultimate solution for cold storage buildings. Our team is here to support you with any questions you may have.

◀ 7. Project Handover



On completion, we will support you as required with all the relevant documentation including data to support your operation and maintenance manuals that will ensure you get the best from your Coldstore solution.

◀ 6. Construction



Our modular solution offers simple integration to provide fast and efficient installation.

Efficient Choice for Temperature-Controlled Environments

From deep-freeze logistics hubs to cleanroom production facilities, Isocab By Kingspan delivers high-performance building envelope systems that meet the most exacting demands of controlled-temperature applications. Our insulated panel solutions are trusted worldwide for their durability, compliance, and long-term energy savings.

Isocab By Kingspan is the first choice for future-proof cold storage and controlled environments - efficient, safe, and built to perform.

Thermal Excellence:



U-values as low as 0.08 W/m²K, delivering outstanding energy efficiency and full regulatory compliance.

Airtightness & Moisture Control:



Precision-engineered joints and vapour barriers for a leak-free, condensation-resistant envelope.

Certified Fire Safety:



Fire resistance EI60 $\geq$ 200 mm
FM4880/4881/4882 certified for wall & ceiling (thicknesses of 40 to 220 mm) except when mounted with foamed-in omega profiles

Hygienic & Food-Safe Design:



Smooth, washable, CLEANsafe-approved finishes for food and pharma facilities.

Proven Durability:



Long-lasting, corrosion-resistant systems

Fast, Single-Fix Installation:



Factory-engineered panels that combine insulation, weather barrier, and vapour control in one component.

Design Flexibility:



Available in multiple thicknesses, finishes, and lengths-customisable to suit your project.

Expert Support, End to End:



From initial design to final handover, our teams support your entire project lifecycle.

Notes

Notes

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