



Systems and Solutions Guide

Low-Carbon, High-Performance Building Envelopes

Insulated Roof and Wall Panels / Architectural Façades and Roofs / Cold Storage and Cleanrooms / Door Systems / Fabrications / Fall Protection Systems / Energy Solutions / Daylighting Systems



'Together we have the opportunity to make our built environments more energy efficient, attractive, adaptable, environmentally sensitive and productive. The way we build can be more effective and reach higher standards than ever before. We can make our buildings really work for us; consuming and generating energy smartly to become real investments in our future.'

Gene M Murtagh, CEO, Kingspan Group



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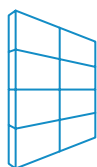
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About Kingspan Group

Kingspan Group is a dynamic, diverse business that boasts a comprehensive portfolio of products for the built environment, with the ambition to become the world's leading provider of energy-saving building systems. Founded in the late 1960s, the Group has grown steadily to become a prominent brand within the construction industry. Today, the Group has more than 166 manufacturing plants around the globe, sells in more than 70 countries and employs more than 15,500 people worldwide. The Group comprises five divisions:

Insulated Panels



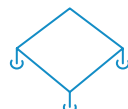
Insulation



Water & Energy



Data & Flooring Technology



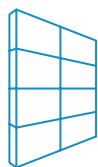
Light + Air



Kingspan Insulated Panels, the biggest division of the five, is a global leader in the design, development and delivery of advanced building envelope products and solutions. It is widely recognised in the industry for the high quality and performance of its products as well as its commitment to excellent customer service and technical support. Our product portfolio includes: Insulated Roof & Wall Panels, Architectural Roofing, Fabrications, Safety &

Lighting Solutions, Cold Storage and Cleanroom Panels, Structural Products and Façade & Roof Systems. Our wide range of products allows developers, architects and contractors to meet and exceed today's construction challenges and create functional buildings that are aesthetically pleasing, energy efficient, safe, cost effective and sustainable.

Kingspan Insulated Panels Portfolio



Insulated Panel Systems

- Wall Panel Systems
- Roof Panel Systems
- Fall Protection Systems
- Daylighting Systems
- Fabrications
- Industrial and Hangar Door Systems



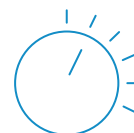
Architectural Façade Systems

- Panelised Façade Systems
- Rainscreen Façades



Architectural Roofing

- KingZip Linea
- KingZip Infiniti

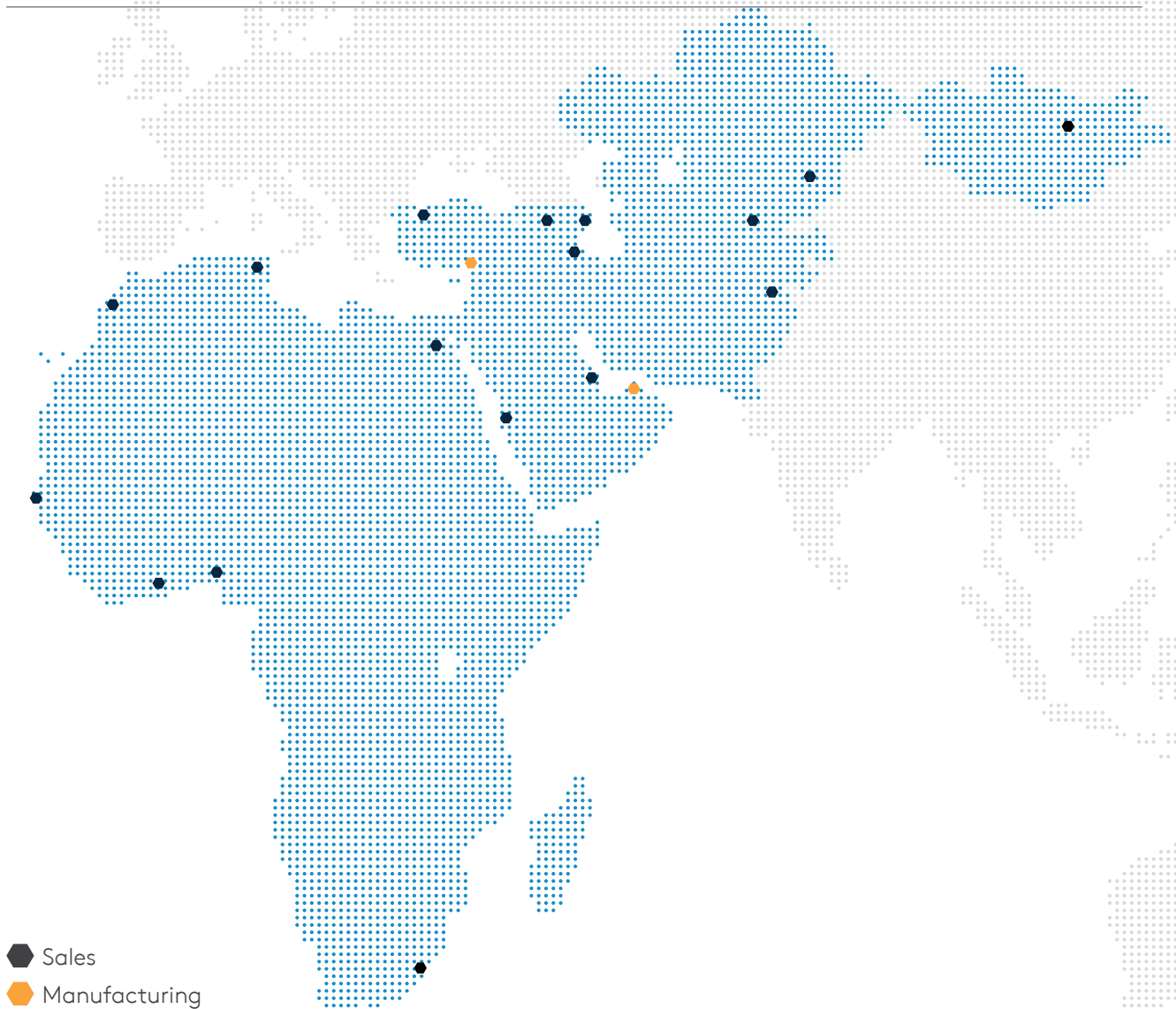


Cold Storage and Cleanrooms

- Cold Storage Panel Series
- Cleanroom Systems
- ModularisCold System
- Cold Storage Door Systems

Kingspan MEATCA

Middle East, Africa, Turkey, Central Asia



Kingspan Insulated Panels has served the Middle East, Africa, Turkey and Central Asia region for over 30 years, and in the last 10 years, has made acquisitions to expand its scope of regional work. The Group has ultramodern manufacturing plants in Dubai, UAE and in Adana, Turkey with the aim of bringing the region up to date with Kingspan's latest manufacturing processes and equipment. The manufacturing plants produce the company's most advanced insulated panels using the formidable QuadCore™ Technology.

The Dubai and Adana plants produce Insulated Roof & Wall Panels, Cold Store Panels, Standing Seam Architectural Roof Systems and Architectural Façade Evolution Panels. The product range also includes flashings, accessories, fabrications, cold store and industrial door sections.

We are committed to innovation, sustainability and the communities here in the MEATCA region and we are proud to operate in this geography.



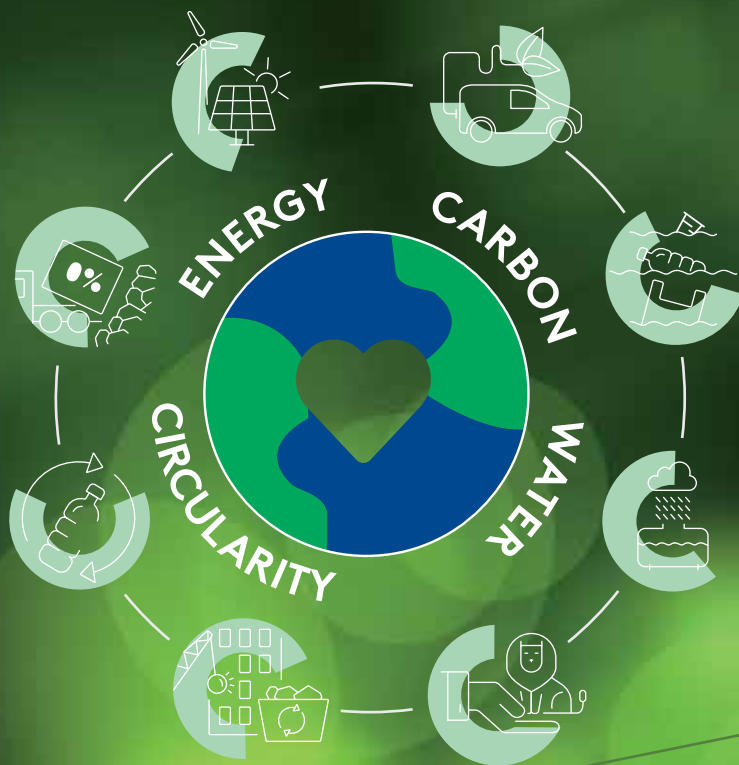
Our Sustainability Journey

Introducing our new 10-year groupwide sustainability programme that aims to impact on three big global issues: climate change, circularity and protection of our natural world.



With Planet Passionate we are setting ourselves challenging goals for the next 10 years. We are committing to hard targets in the areas of energy, carbon and water reduction while enhancing the circularity of our products. This won't be easy, and will take serious leadership, commitment and effort across our group. I know we can, and must, make this happen.

Gene M. Murtagh, Chief Executive Officer, Kingspan Group



ENERGY

- Maintain our Net-Zero energy target
- Increase our direct use of renewable energy to 60%
- Increase our on-site generation of renewable energy to 20%
- Install solar PV systems on all facilities

CARBON

- Net-Zero carbon manufacturing
- Zero emission ready company cars
- 50% reduction in product CO₂ intensity from our primary supply partners

WATER

- 5 active ocean clean-up projects
- Harvest 100 million litres of rainwater

CIRCULARITY

- Zero company waste to landfill
- 1 billion PET bottles upcycled into insulation by 2025
- All QuadCore™ insulation to utilise upcycled PET by 2025

Are you Planet Passionate?

Find out about our Planet Passionate network.
Email planetpassionate@Kingspan.com



**PLANET
PASSIONATE**

Integrated Systems for Building Envelopes

Safer, healthier and more attractive buildings with a lower lifetime operating cost: that's what we strive to deliver at Kingspan.

We offer an unrivalled range of compatible systems that, when designed and installed optimally, deliver superior building lifetime performance.

Kingspan building envelopes are designed to be faster to build and deliver exceptional results in terms of:

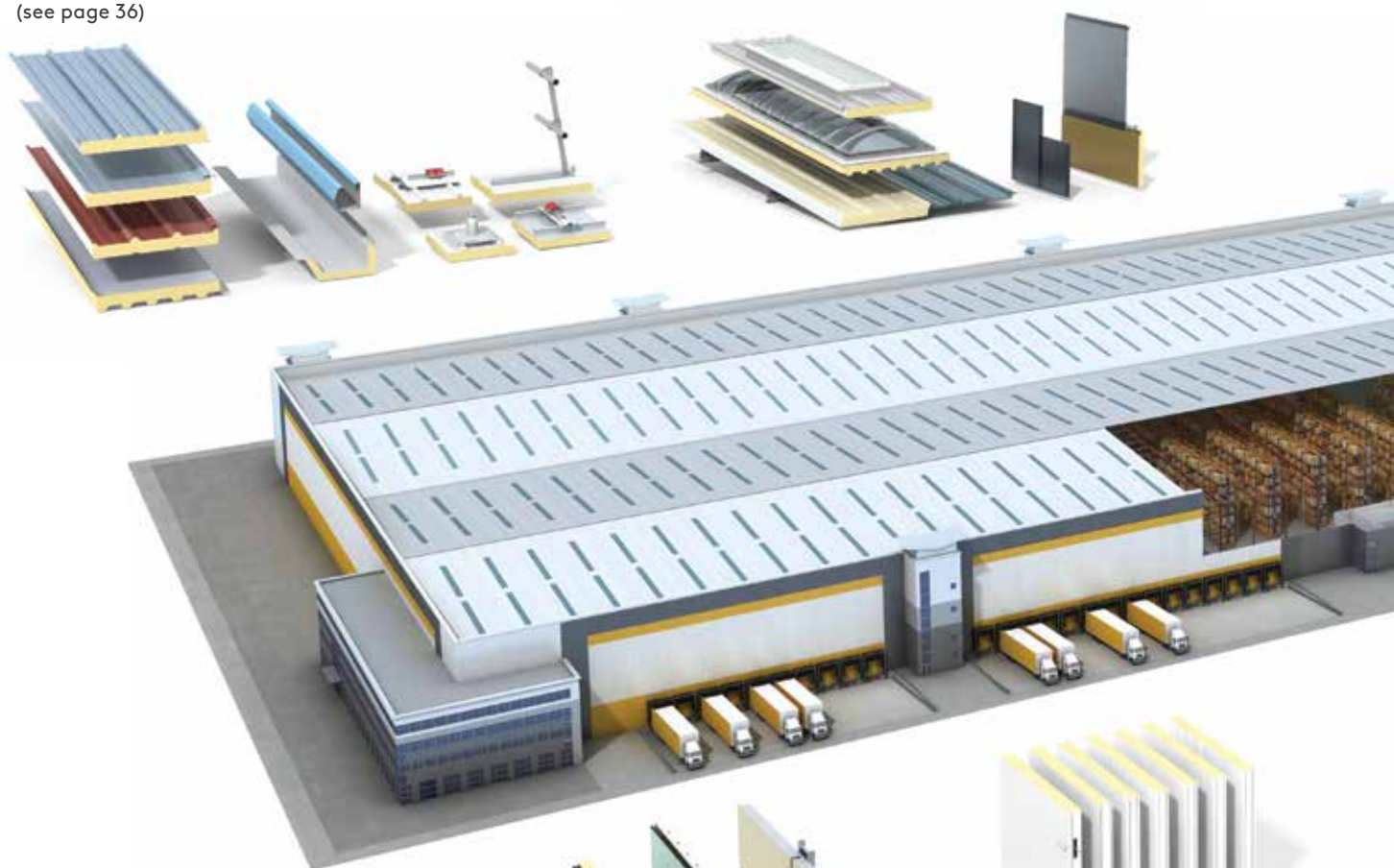
- **Fire safety,**
- **Operating costs** (due to better thermal efficiency and airtightness, as well as the elimination of lighting energy,
- **Low maintenance** (due to robust construction and superior weather resilience),
- **Comfort** (due to more natural daylight, improved temperature regulation and excellent acoustics),
- **Aesthetics.**

Insulated Roof Panel Systems

A range of integrated insulated roof panels, gutters and height safety systems. (see page 36)

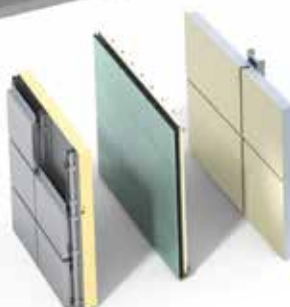
Daylightings Systems

A specialist range of polycarbonate roof and wall lights. (see page 126)



Architectural Façade Systems

A range of visually appealing, fast installed and high-performance panelised and rainscreen facade systems. (see page 46)



Cold Storage Panels Series

High-specification insulated panel systems for temperature-controlled and cleanroom applications. (see page 80)



Our technical design team provides guidance on how to achieve this high performance with a wide range of additional services, including:

- Complex R and U-value calculations,
- Project specific system detailing,
- Building Energy Modelling (BEM) services,
- Building Information Modelling (BIM),
- Whole building energy efficiency advice,
- Fire engineering and design proposals,
- Whole project pricing,
- Complete envelope design support.

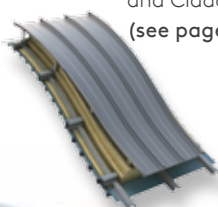
Structural Steel Products

A range of cold-rolled structural products and steel building solutions. (see page 156)



Architectural Roofing

KingZip Standing Seam Roofing and Cladding Systems. (see page 64)



Cold Storage Doors

A range of service, hinged and sliding cold storage doors with fire-rated and non-fire-rated options. (see page 100)



Industrial Doors

A range of sectional doors, roller shutters, high-speed PVC doors, hangar door systems and loading technology solutions. (see page 104)



Insulated Wall Panel Systems

A range of insulated wall panels offering a wealth of aesthetic flexibility. (see page 22)



Fabrications

An extensive portfolio of architectural features to complete any building envelope. (see page 108)

System Benefits

Kingspan insulated panels are single-component, factory pre-engineered systems.

The panels are made up of Kingspan's unique insulation core which is sandwiched between two layers of metal sheets –one on the external weather side, the other a pre-finished internal liner. The result is a single-component solution that replaces multi-part construction.

Kingspan insulated roof and wall systems offer significant advantages over conventional site-assembled systems. They provide fast, single-fix installation with high and durable thermal performance, insulation continuity, minimal air leakage and the elimination of interstitial cavity condensation and cold bridging.

Single Component

Accelerated build speed
can reduce time on site

Durability

Lifetime performance

High Performance Insulation

High U-values / FIREsafe /
FIBREfree

Exterior Metal Skin

Perfect weather barrier

Interior Metal Skin

Perfect vapour barrier

Airtight System

Guaranteed for the lifetime
of the building



Available Insulated Cores

Kingspan produces two insulated cores for use in its insulated panel systems. Both cores are manufactured using unique advanced technology. The first is polyisocyanurate (PIR) and the second is Kingspan's latest insulated core, QuadCore™, a superior performing insulant utilising PIR and Phenolic technology.

PIR
FIREsafe
ECOsafes

POWERED BY
QuadCore™
TECHNOLOGY

Superior Efficiency

At Kingspan Insulated Panels, we are pioneering better technologies and methods of building for a low-carbon world. Improving building performance, construction methods and ultimately people's lives – that's what drives our people across the world.

Energy efficiency is at the heart of our innovation, from making the industry's most thermally efficient core for our insulated panels, to producing the most airtight interfaces, to providing technical and field-service support on how to build optimally.

As the world demands more from buildings in terms of energy efficiency, fire safety, weather resilience, health and aesthetics, we have expanded beyond insulated panels in recent years.



Quality Assurance

Kingspan strives to continually deliver the best quality products and, with this in mind, all panels are manufactured in production facilities which are certified to ISO 9001.

Kingspan Insulated Panels has attained certification to Environmental Management Standard ISO 14001 across most of its manufacturing sites globally and is currently working to complete accreditation for the remaining sites. The majority of sites have also achieved OHSAS 18001 (Health & Safety).

Both Kingspan Insulated Panels' unique QuadCore™ and FIREsafe PIR insulation cores are tried, tested and proven by internal teams and external bodies for fire performance, thermal and structural continuity.

Kingspan Warranty

In recognition of the many different demands on construction professionals today, Kingspan Insulated Panels guarantees not just one aspect of its products, but key performance areas.

- Thermal Performance: up to 40 years
- Structural Performance: up to 40 years
- Acoustic Performance: up to 40 years
- Coating Performance: up to 40 years

Our range of warranty packages give you the flexibility to choose the best warranty protection to suit your building envelope and business needs.

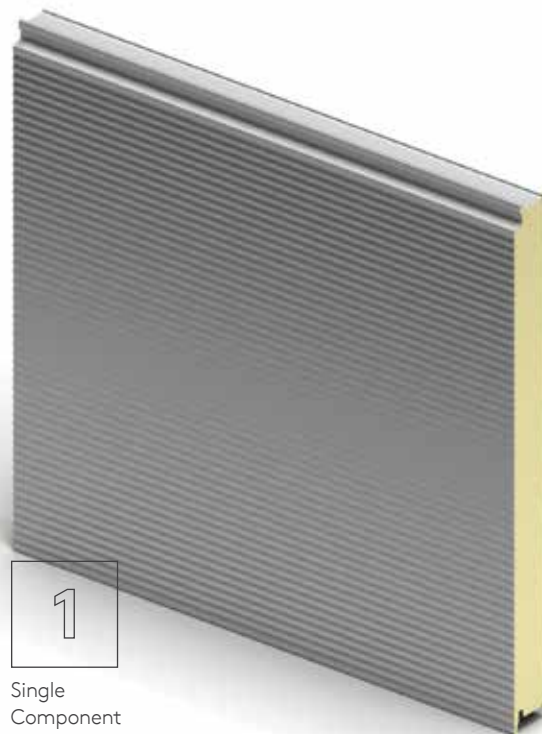
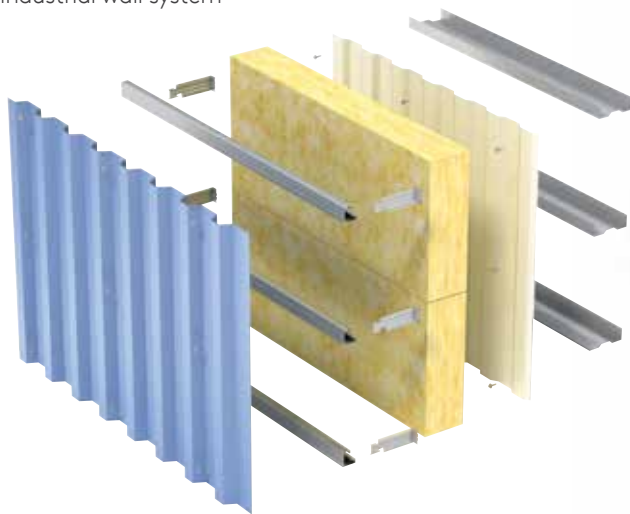
System Benefits

Build Speed



Insulated metal-faced panels as a single-component system increase the speed of build, minimising delays and the need for multiple trades.

Traditional multi-component built-up industrial wall system

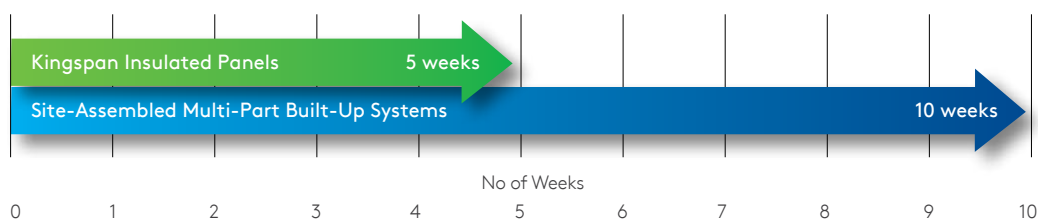


Single
Component

Faster Build

Consultants for a large retail chain estimate that they were able to shorten their construction schedule by five weeks in a multiple-unit construction with insulated metal panels.

Construction Schedule



Site-Assembled, Multi-Component System

Site-assembled, built-up systems are more likely to experience delays in construction due to the scheduling of multiple trades and the ordering of multiple components.

At the same time, warranties, service support, site inspections and maintenance are also supplied by multiple sources, which can lead to an increased risk of liabilities.

Insulated Panel, Single-Component System

Unlike traditional multi-component systems, Kingspan insulated metal-faced panels are single-component systems, delivered by one company. The systems can be quickly and easily installed with the aid of mechanical lifting equipment (if required) through a single-fix installation process. The rapid speed of installation can help to reduce the risk of accidents, as less time is spent working at height. It also means that the building is weathertight sooner, allowing internal fit-out and external finishing to commence earlier, minimising delays and the need for multiple trades.



The easiest, fastest and most cost-effective strategy to reduce heating and cooling energy demand and construction costs is to use Kingspan insulated wall and roof systems.

The excellent thermal performance of Kingspan insulated panels can result in energy savings of as much as 30% more than standard, cavity-based insulation systems.

Superior U-values

Kingspan insulated panels have a QuadCore™ or FIREsafe & FIBREfree PIR insulation core, uniquely designed in-house to guarantee superior thermal performance in hot and cold climates. The panels are fitted to the exterior of the building and create a thermal skin that reduces internal temperature loss and provides a thermal shield against external temperatures.

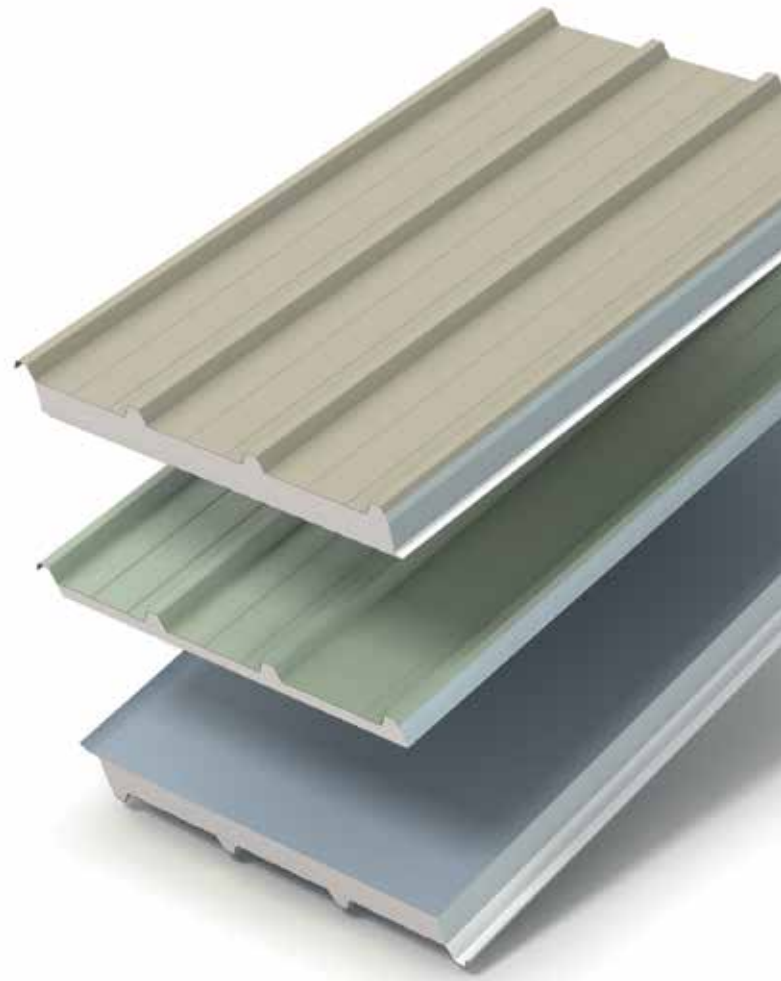
The closed cell structure of the insulation resists moisture ingress, allowing Kingspan to provide an aged thermal conductivity of 0,018 W/mK for QuadCore™ and 0,020 W/mK for PIR.

Design Flexibility and Aesthetic Appeal

Kingspan's commercial and industrial wall and roof systems offer designers a comprehensive range of building solutions for vertical and horizontal wall applications.

Available in multiple profiles, finishes, colour options and cover widths, insulated panels allow for customised building design and creative freedom.

The panels are easily integrated with traditional construction methods and building systems.



POWERED BY
QuadCore™
TECHNOLOGY

Guaranteed Airtightness and Weathertightness

One of the biggest sources of building heat loss or heat gain is due to air leakage i.e. 'leaky buildings'. The superior joints on our systems ensure that they remain both air and weathertight over the life of the building.

Our factory pre-engineered systems incorporate high precision joints, which create unsurpassed airtight buildings.

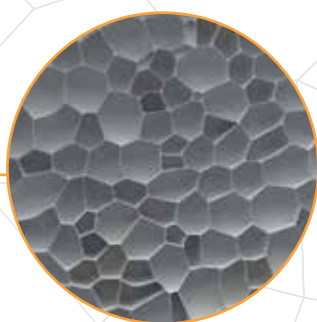
We guarantee:

- Insulation continuity with no gaps or missing insulation
- Low energy usage and operating costs
- Exceptional U-value compliance and reliability
- Low CO₂ emissions

QuadCore™ Technology

It's all in the grey cells...

QuadCore™ Technology is Kingspan's next-generation, self-blended hybrid insulation core. Across the world of insulated panels, this innovation with its distinctive grey offers offering superior fire protection, up to 20% thermal enhancement and a higher environmental performance - all supported by an exceptional guarantee.



POWERED BY
QuadCore™
TECHNOLOGY

1

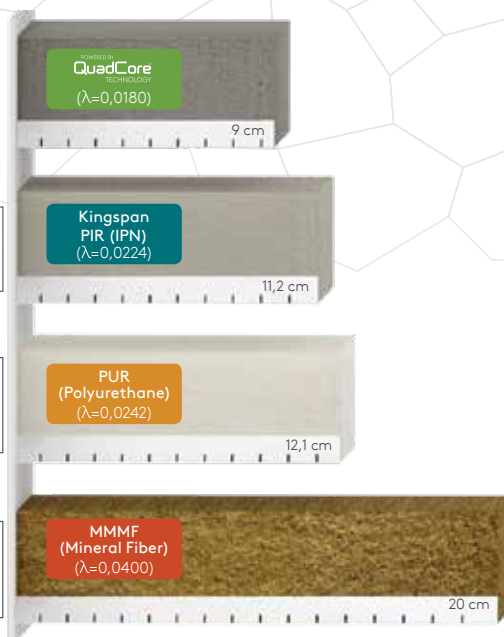


The Best
THERMAL
Efficiency

11%
BETTER
THAN PIR ^{(1), (2)}

25%
BETTER
THAN PUR ^{(1), (2)}

55%
BETTER
THAN MW ^{(1), (2)}



For illustrative purposes only; please refer to relevant Product Data Sheets to make accurate performance comparisons.

Lifetime performance and value benefits

1. The class-leading aged lambda value of 0.018W/mk means QuadCore™ Technology is certified as the leading thermally efficient closed cell insulation core on the market. It is almost twice as thermally efficient as mineral fibre, offering significant advantages in terms of thinner walls (resulting in more internal space and potentially higher yields).
2. QuadCore™ Technology is a more streamlined solution relative to other insulation materials with associated benefits in interior space optimisation, transport, less amount of needed flashings and ease of handling during construction.

Notes:

1) The thermal conductivity range is based on data from insulation manufacturers websites or agreement certificates.

2) Thermal conductivity (lambda) W/mK values quoted at 10°C.

2



Superior FIRE Protection

The hybrid nature of QuadCore™ Technology delivers a range of unique improvements in fire performance.

Lifetime performance and value benefits

- QuadCore™ insulated panels have been subjected to rigorous large-scale system tests and are insurer approved to FM and LPCB standards.
- QuadCore™ Technology has also received FM4882 certification (the FM Global insurance standard for smoke sensitive occupancies).

Images shown are from an EN11925-3 comparative test using a roofer's torch as the fire source.



Non-insurer-approved PIR



QuadCore™ Technology



3



Enhanced ENVIRONMENTAL Credentials

The improved thermal performance of QuadCore™ Technology helps optimise resource efficiency. It is also 100% recyclable; CFC, HCFC, HFC free and has a very low Global Warming potential.

Lifetime performance and value benefits

- Its superior material efficiency and ease of disassembly can contribute towards credits in BREEAM 2018 and other green building rating systems. The slimmer structure of a QuadCore™ envelope can also allow more natural daylight to enter a building, enhancing its health and wellbeing properties.
- The improved resource efficiency delivers better transport utilisation, which results in fewer truck movements to site.

4



Up to 40 Year Thermal and Structural Panel GUARANTEE

QuadCore™ closed cell insulation is unequivocally guaranteed to perform to its specified thermal performance for up to 40 years. Unlike some insulation materials, it is not subject to degradation of thermal performance over time due to moisture ingress caused by poor weather on site or indeed damage to the building structure during its lifetime.

Fire Engineered Panel Systems

Extensive Fire Testing – Reaction to Fire Performance

Kingspan insurer certified sandwich panels can achieve high levels of reaction to fire performance in tests specified for regulatory purposes, large scale tests developed by the insurance industry and large scale tests developed by other organisations including ISO, British Standards Institute (BSI) and the National Fire Protection Agency (NFPA).

In summary:

- Europe: EN 13501-1, particularly B-s1, d0. The 's1' rating being the best (lowest emission) smoke rating.
- Global Insurance: FM 4880 – Class 1 Internal wall and ceiling panels without height restriction.
- Global Insurance: FM 4881 – Class 1 External wall panel systems without height restriction.
- Global Insurance: FM 4882 – Class 1 Interior wall and ceiling panels for pharmaceutical manufacturing and storage areas, food preparation and storage areas or similar occupancies.
- Global Insurance: FM 4471 – Class 1 Roof panel systems.
- USA /Global: UBC 26-3 Room test.
- Global: ASTM E-84 Surface Burning Characteristics.
- Global: ISO 13784 Part 1 – Small room test for sandwich panels.

- UK /Ireland Insurance: LPS1181 Part 1 Approval for external wall and roof panel systems.
- UK /Ireland Insurance: LPS 1181 Part 2 Approval for internal wall and ceiling applications.
- USA /Global: NFPA 285 Façade testing.
- EN 11925 Part 3 Ignitability of Building Products.
- EN 13501-2:2009 + A1:2010: Fire classification of construction products and building elements.
- LPS 1208: Issue 2.2
- Dubai Civil Defense Approved.

The following examples, on pages 16 to 17, demonstrate a range of medium and large-scale testing regimes where certain QuadCore™ and PIR core panels have achieved a high standard of performance. Please check local market availability and performance levels achieved by specific tested/certified panel systems.

'According to many global insurance companies, FM/LPCB approved sandwich panels carry the same level of risk as non-combustible products, thereby helping reduce premiums for building owners/occupiers.'

FM 4880 / FM 4881. The 50ft test shown below forms part of the assessment requirements for approval to Class 1 Internal wall and ceiling panels with no height restriction (FM 4880) and external walls with no height restriction (FM 4881).



Test setup



Fire development



End of test

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QuadCore
TECHNOLOGY



FM 4882. The FM parallel panel test shown below is used to measure smoke emissions from the panels and delivers certification for smoke sensitive occupancies. QuadCore™ panel systems can achieve 'Class 1 interior wall and ceiling panels' and help deliver certification for pharmaceutical manufacturing, food preparation and storage areas or similar occupancies.



Test setup



Fire development



End of test

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QuadCore
TECHNOLOGY



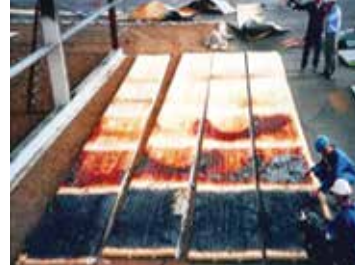
LPS 1181: Part 1. The test shown below forms part of the assessment requirements for EXT-B and EXT-A approval.



Test setup



During test



Inspection of protective char formation after test

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QuadCore
TECHNOLOGY



LPS 1181 Part 2:
Issue 2 Cert No. 279

LPS 1181: Part 2. The test shown below forms part of the assessment requirements for INT-1 and INT-2 approval for internal applications.



Test setup



During test



Inspection of protective char formation after test

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QuadCore
TECHNOLOGY



LPS 1181 Part 2:
Issue 2 Cert No. 279

EN 13501-1: B-s1, d0 can be achieved to EN 13501 specifications.



Test setup



During test



Inspection of protective char formation after test

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QuadCore
TECHNOLOGY



NFPA 285. Evaluation of fire propagation characteristics of exterior wall assemblies. Kingspan has successfully passed the NFPA 285 test for vertical and horizontal insulated panels, available in the United Arab Emirates.



Testing of (100mm) thick Kingspan insulated metal panels



Fire exposure during test



End of test demonstrating damage to Kingspan insulated metal panels remaining intact

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QuadCore
TECHNOLOGY



Real Fire Case Studies

Audi Dealership, Belgium

The fire occurred in the external compound of a large Audi dealership in Belgium in October 2014. It was a deliberate act of arson.

The building is of steel frame construction clad with 1m wide by 100mm thick Kingspan FM/LPCB certified PIR-cored sandwich panels and provides single-storey showroom and workshop accommodation and an internal mezzanine floor for additional vehicles and back of house accommodation.

Photograph 1 shows the aftermath of the fire and is a photograph taken (by others) shortly after the fire event. The car in the foreground is understood to be an Audi Q3 with other cars being of at least a similar make and model.

Photograph 2 shows a sample of the PIR core material removed from the ECOsafe PIR core panel at the location of predicted peak incident radiative heat flux of $31,8\text{kW/m}^2$. The photograph indicates that the PIR core had pyrolysed to a carbon char to a depth of about 40mm at this location. At locations remote from the area of peak incident radiative heat flux, the charring of the PIR core was significantly reduced, demonstrating that combustion had not been propagated by the PIR core material.

The inside of the workshop showed no evidence of fire penetration in an area adjacent to the external fire attack.

Conclusions:

- The PIR-cored sandwich panels were subject to a fire likely to have lasted at least 15 minutes from ignition.
- It is likely that the cladding will have been subjected to peak incident radiative heat flux of at least $31,8\text{kW/m}^2$ for a period of at least 10 minutes.
- The sandwich panels exposed to these conditions sustained damage in terms of delamination of the exposed steel skin of the panels away from the PIR core, removal of the paint coating and pyrolysis of the PIR core material to a depth of approximately 40mm.
- There was no evidence of repropagation within the panels.



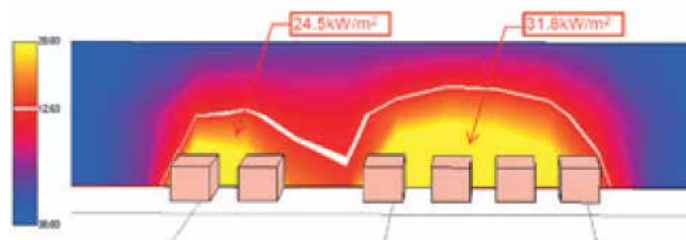
Photograph 1



Photograph 2



No evidence of fire penetration to interior of the workshop



Real Fire Case Studies

Food Processing Warehouse, Turkey



Photograph 1



Photograph 2



Charred PIR-insulated panel sample collected from the site



Ceiling panels maintain structural integrity after exposure to fire

The fire broke out in the afternoon when electrical panels short circuited, igniting flammable cooking oils stored at a food processing warehouse in Turkey.

The fire originated in the refined food processing section of the warehouse at around 3.45pm, as footage from the warehouse security cameras show the sparks igniting into flames. By the time the employees noticed the fire and contacted the fire department at around 4.00pm, the flames had already reached the ceiling panels. As per the fire department's official log, the fire response team began trying to extinguish the flames at around 4.18pm. The records indicate that the fire was completely extinguished by 5.23pm, putting the total duration of the fire at around 1.5 hours.

Firefighters identified the cause of the fire as the short circuiting of electrical panels located in the cooking oil storage room, as shown in Photograph 2. The contact of fire sparks with flammable cooking oils accelerated the spread of fire, causing the flames to rapidly grow higher and come into direct contact with Kingspan's PIR-insulated ceiling panels. Photograph 1 shows the location of the distribution box where the fire first broke out, with visible damage to the ceiling.

Conclusions:

- During the 1,5 hours between the fire originating and it being extinguished, Kingspan's PIR-insulated ceiling panels maintained their structural integrity and insulation performance. By helping to contain the fire to its original location, the ceiling panels prevented the fire from reaching the plenum space.
- Only minor deformations, delamination and smoke marks were observed on the surface of panels near the point of origin which were not directly exposed to fire.
- Similarly, the adjacent rooms in the warehouse, separated by Kingspan's PIR-insulated panels maintained their workable conditions and continued their operation right after the fire was extinguished.

Sectors

**Exhibition**

Australian National Maritime Museum, Sydney, Australia

**Hotel & Leisure**

Hotel Novotel, Brisbane
Airport, Australia

**Infrastructure**

New Istanbul Airport, Turkey

**Accommodation**

Abertay University, UK

**Education**

WSN Building Pavilion, University of Groningen,
Netherlands

**Office**

Chinguacousy Sports Park, Ontario, Canada

Retail

Friars Walk Shopping Centre,
Newport, UK



Cold Storage

Korzinka, Tashkent, Uzbekistan



Cleanrooms

Jt. James, Dublin



Industrial and Logistics

Bravo SuperMarket Logistics Warehouse,
Baku, Azerbaijan



Healthcare

Imperial Health Sciences
Pharmaceutical Storage,
Nairobi, Kenya



Sports and Leisure

Esjim Sport, Turkey



Insulated Wall Panel Systems

Trapezoidal Wall Panel Systems

24



Architectural Wall Panel Systems

28



Trapezoidal Wall Panel Systems

01

Port of Tyne Warehouse 21
UK

02

Agility Logistics Warehouse
KSA

03

Loreal Manchester Centre
UK

04

Arigna Mining Experience
Ireland

05

Dandirri Contact Centre
Australia





Trapezoidal Wall Panel Systems

KS100 PRW System

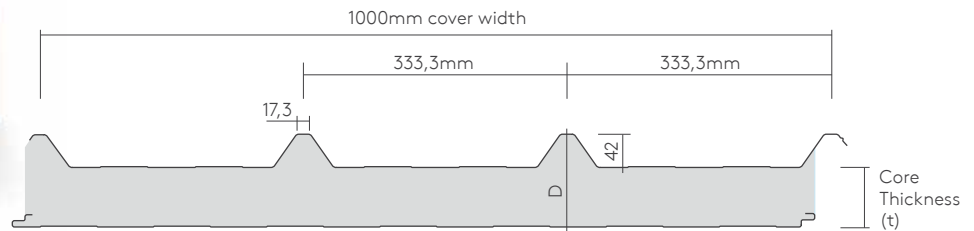


Scan QR Code to
Access BIM Model



POWERED BY
QuadCore™
TECHNOLOGY

The KS100 trapezoidal wall is a through-fix wall system which can be laid vertically or horizontally and is suitable for wall cladding on all types of buildings except where there are low internal temperature conditions.



Thermal Performance, Dimensions and Weight

t - Core Thickness (mm)	40	50	60	80	100	120	150
D - Overall dimension (mm)	82	92	102	122	142	152	192
U-value (W/m²K)	0,43	0,35	0,29	0,22	0,18	0,15	0,12
R-value (m²K/W)	2,33	2,86	3,45	4,55	5,56	6,67	8,33
Weight (kg/m²) Steel 0,5 / 0,4mm	9,81	10,19	10,43	11,19	11,95	12,71	13,85

The U-values have been calculated using a thermal conductivity when tested at 10°C.
R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temp.	BS EN 13501-1	Fire Rating FM 4880 / FM 4881 / FM 4882
KS100 PRW Prestige	✓	✓	✓	✓	•	✓	✓

Profile: Trapezoidal 42mm deep

Core Type: QuadCore™

Fixing Detail: Through-fix

Metal Type: Steel or Aluminium

Colours and Coatings: A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use/function and warranty requirements.

Lengths: 2,0 - 11,9m (standard) / 11,9 - 19m (non standard - depending on panel thickness) / <2,0m (non standard)

Cover Width: 1000mm

Environmental Rating: Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP)
Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable

Fire Rating: BS EN 13501-1:2007 + A1:2009: B-s1, d0
FM 4880 / FM 4881 / FM 4882 - Class 1

Preformed Corners and Panels: Externally (vertically laid panels only)

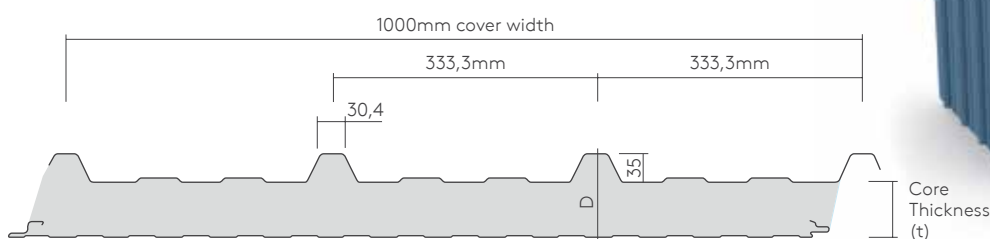
Product Compatibility: Integrates with Kingspan Day-Lite Trapezoidal and Upstand, Kingspan Safety solutions

Seals: Site Applied

Trapezoidal Wall Panel Systems

KSD1000 RW System

Kingspan KSD1000 RW is a 35mm deep trapezoidally profiled insulated panel. It is a proven and tested system with a performance track record of 30 years.



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QuadCore
TECHNOLOGY

Thermal Performance, Dimensions and Weight

t - Core Thickness (mm)	40	60	70	80	100	120
D - Overall Thickness (mm)	75	95	105	115	135	155
U-value (W/m ² K)	0,43	0,29	0,25	0,22	0,18	0,15
R-value (m ² K/W)	2,12	2,34	4,00	4,50	5,50	6,66
Weight (kg/m ²) Steel 0,5 / 0,4mm	9,90	10,70	11,00	11,50	12,30	12,60

The U-values have been calculated using a thermal conductivity when tested at 10°C.
R-values in Imperial units (ft²°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temp. Control	Hygiene	High Humidity	Low Temp.	Fire Rating			
						NFPA 285	BS EN 13501-1	ASTM D 1929	FM 4880 / FM 4881 / FM 4882
KSD1000RW	✓	✓	✓	✓	•	✓	✓	✓	✓

Profile: Trapezoidal 35mm deep

Core Type: QuadCore™

Fixing Detail: Through-fix

Metal Type: Steel and Aluminium

Colours and Coatings: A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use/function and warranty requirements.

Lengths: From 1.8m to 18m

Cover Width: 1000mm

Environmental Rating: Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP)
Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable

Fire Rating: ASTM D 1929-16: Self Ignition above 343°C
BS EN 13501-1:2007 + A1:2009: B-s1, d0
NFPA 285
FM 4880 / FM 4881 / FM 4882 - Class 1

Preformed Corners and Panels: Externally (vertically laid panels only)

Product Compatibility: Integrates with Kingspan Day-Lite Trapezoidal and Upstand, Kingspan Safety solutions

Seals: Site Applied

Architectural Wall Panel Systems

01Fokker Elmo
Turkey**02**Kamatsu HQ
Dubai**03**Eastgate Mall
South Africa**04**Eren Enerji
Turkey**05**Baku Shipyard
Azerbaijan

4



5



3



2



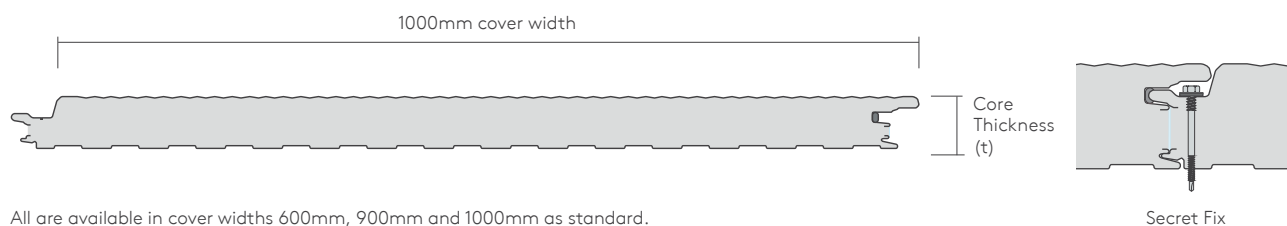
Architectural Wall Panel Systems

KSD 600 / 900 / 1000



KSD 600 / 900 / 1000 Architectural Wall Series are secret-fix wall panels that offer unprecedented freedom of design and top-of-the-range performance to clients, architects and contractors. Available in 4 distinct profiles, these systems allow architects to look beyond traditional insulated panel designs to create buildings with more inspiring façades at an affordable cost to the client.

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TECHNOLOGY



All are available in cover widths 600mm, 900mm and 1000mm as standard.

Product Profiles



Flat
KSD600-1000 FL



Mini-Micro
KSD600-1000 MM



Micro-Rib
KSD600-1000 MR



Flat-Stucco
KSD600-1000 FL-S

Thermal Performance, Dimensions and Weight

t - Core Thickness (mm)	50	60	75	100	120
U-value (W/m²K)	0,35	0,29	0,23	0,18	0,15
R-value (m²K/W)	2,85	3,30	4,35	5,55	6,67
Weight (kg/m²) Steel 0,5 / 0,4mm	9,90	10,30	10,90	11,90	12,70

The U-values have been calculated using a thermal conductivity when tested at 10°C.
R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temp. Control	Hygiene	High Humidity	Low Temp.	Fire Rating			
						NFPA 285	BS EN 13501-1	ASTM D 1929	FM 4880 / FM 4881 / FM 4882
KSD600	✓	✓	✓	✓	•	•	•	✓	•
KSD900	✓	✓	✓	✓	•	•	•	✓	✓
KSD1000	✓	✓	✓	✓	•	✓	✓	✓	✓

Profile:	Flat, Mini-Micro, Micro-Rib, Flat-Stucco
Core Type:	QuadCore™
Fixing Detail:	Secret-fix
Metal Type:	Steel or Aluminium (no fire certification for aluminium faced products)
Colours and Coatings:	A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use/function and warranty requirements.
Application:	Suitable for vertical or horizontal applications
Lengths:	From 1,8m up to 18m (subject to transportation limitations)
Cover Width:	600mm, 900mm, 1000mm
Environmental Rating:	Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP) Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable
Fire Rating:	ASTM D 1929-16: Self Ignition above 343°C BS EN 13501-1:2007 + A1:2009: B-s1, d0 NFPA 285 FM 4880 / FM 4881 / FM 4882 - Class 1 (for 900mm and 1000mm cover widths only)
Product Compatibility:	All profiles integrate with each other, as well as with Optimo and Kingspan Day-Lite Architectural
Preformed Corners and Panels:	Corners can be cranked or mitred depending on profile vertically and horizontally
Seals:	Factory-applied jointing gasket

Architectural Wall Panel Systems

KS103 SSF / MSF

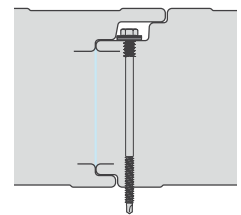


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POWERED BY
QuadCore™
TECHNOLOGY

The KS103 wall is a concealed fixed wall system which can be laid vertically or horizontally and is suitable for wall claddings on all types of buildings except where there are low internal temperature conditions (below 0°C).



Now available as a Longspan insulated panel. Please contact our Technical Services Team for further information.

Secret Fix

Product Profiles



Micro-Rib (Microlambri)
KS103 SSF
External



Box (Superlambri)
KS103 SSF
External / Liner Profile



Flat (Smoothlambri)
KS103 SSF
External / Liner Profile



Mega-Box (Megalambri)
KS103 MSF
External

Thermal Performance, Dimensions and Weight

t- Core Thickness (mm)	40	50	60	80	100
U-value (W/m ² K) (KS103 SSF)	0,48	0,38	0,31	0,23	0,18
R-value (m ² K/W) (KS103 SSF)	2,08	2,63	3,22	4,35	5,55
Weight (kg/m ²) Steel 0,5/0,4mm (KS103 SSF)	9,75	10,07	10,36	11,15	11,93
U-value (W/m ² K) (KS103 MSF)	0,54	0,43	0,34	0,25	0,19
R-value (m ² K/W) (KS103 MSF)	1,60	2,35	2,94	4,00	5,26
Weight (kg/m ²) Steel 0,5/0,4mm (KS 103 MSF)	9,75	10,09	10,38	11,17	11,95

The U-values have been calculated using a thermal conductivity when tested at 10°C.
R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temperature	Fire Rating	
						BS EN 13501-1	FM4880/4881/4882
KS103SSF/MSF	✓	✓	✓	✓	•	✓	✓

Profile:	Micro-Rib, Box, Flat, Mega-Box
Core Type:	QuadCore™
Fixing Detail:	Secret-fix
Metal Type:	Steel or Aluminium (no fire certification for aluminium faced products)
Colours and Coatings:	A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use/function and warranty requirements.
Application:	Suitable for vertical or horizontal applications
Lengths:	2,0 - 11,9m (standard) / 11,9 - 19m (non standard - depending on panel thickness) / <2,0m (non standard)
Cover Width:	1030mm
Fire Rating:	BS EN 13501-1:2007 + A1:2009: B-s1, d0 FM 4880 / FM 4881 / FM 4882 - Class 1
Product Compatibility:	All profiles integrate with each other
Preformed Corners and Panels:	Panels can be curved on the length or width, corners can be cranked or mitred depending on profile
Seals:	Site Applied

*11,9m for container transport, 13m for truck.

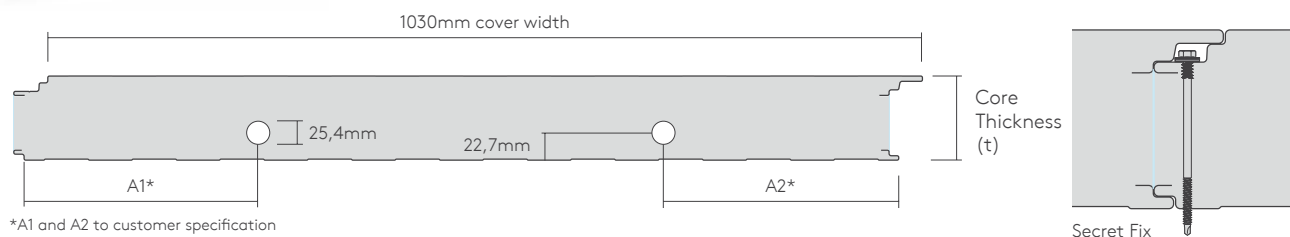
Architectural Wall Panel Systems

TD Effect KS103 SSF



Kingspan TD Effect KS103 SSF is a secret-fix, factory-manufactured insulated panel with a pre-installed pipe system, inserted along the length of each panel which can be used as conduit for cables for computing, electrical wiring, telephone or security systems. The KS 103 SSF TD Effect panel's secret-fix joint detail conceals the fasteners to the primary structure of the building. The TD Effect panel is available with a wide range of smooth and decorative surface finishes for aesthetic appeal.

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QuadCore
TECHNOLOGY



Thermal Performance, Dimensions and Weight

t- Core Thickness (mm)	40	50	60	80	100
U-value (W/m ² K)	0,48	0,38	0,31	0,23	0,18
R-value (m ² K/W)	2,08	2,63	3,22	4,35	5,55
Weight (kg/m ²) Steel 0,5/0,4mm	9,75	10,07	10,36	11,15	11,93

The U-values have been calculated using the method required by the appropriate national building regulations.

The U-values have been calculated using a thermal conductivity when tested at 10°C.

R-values in Imperial units (ft²°F·hr/BTU) available upon request.

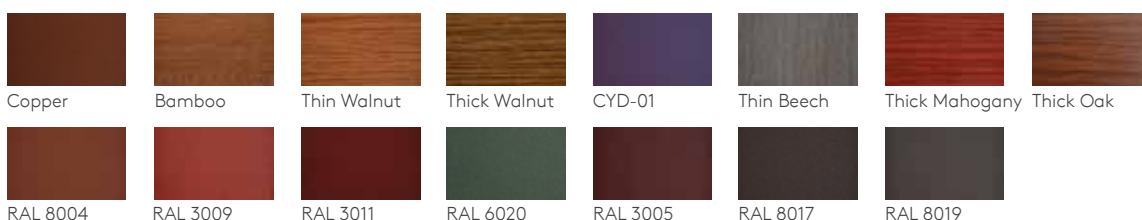
Product Specifications and Accreditations

Product Reference	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temperature
KS103 SSF TD Effect	✓	✓	✓	✓	•

Profile:	Flat
Core Type:	QuadCore™
Fixing Detail:	Secret-fix
Metal Type:	Steel
Application:	Suitable for internal wall applications including internal 'box within a box' applications. Suitable for vertical or horizontal applications.
Lengths:	2,0 - 11,9m (standard) / 11,9 - 19m (non standard - depending on panel thickness) / <2,0m (non standard)
Cover Width:	1030mm
Spanning Capability:	90/100 7,5 metres, subject to loadings
Product Compatibility:	All profiles integrate with each other

*11,9m for container transport, 13m for truck.

TD Effect Finishes



The printed colours are as accurate as possible but are for guidance purposes only. Please request a swatch sample from the Kingspan Marketing Department to view accurate colour and texture prior to specification.



Metro Grossmarket, Turkey



Insulated Wall
Panel Systems



Limak Limkom, Turkey



Atabey, Ekol Logistics Warehouse, Turkey

Insulated Roof Panel Systems

Trapezoidal
Roof Panel

38



Flat Roof Panel

45



Trapezoidal Roof Panels

01Ecosciences Precinct
Australia**02**Limak Limkon
Turkey**03**Mas Makine
Turkey**04**Christchurch Police Station
New Zealand**05**Ekol Logistics
Turkey**05**Ali Bin Ali Logistics Village
Middle East

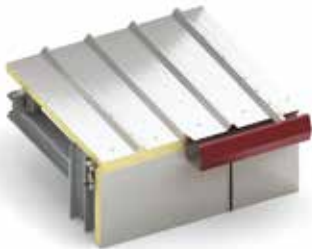


Trapezoidal Roof Panels

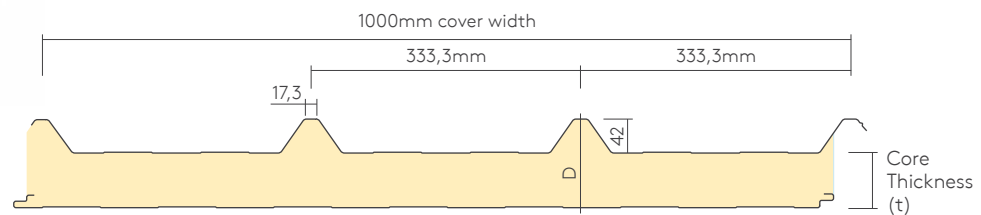
KS100 PRW Prestige



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Access BIM Model



KS100 PRW is a through-fix, trapezoidal profiled insulated roof panel, which can be used for building applications with roof pitches of 4° or more after deflection. Roof slope should be min 4° (7%) for a single panel. Where overlap is needed it should be min 6° (10%). The KS100 PRW roof insulated panel has a profile depth of 42mm and can also be used as wall cladding.



Thermal Performance, Dimensions and Weight

t- Core Thickness (mm)	40	50	60	80	100	120	150
D - Overall dimension (mm)	82	92	102	122	142	152	192
U-value (W/m²K)	0,50	0,40	0,33	0,25	0,20	0,16	0,13
R-value (m²K/W)	2,00	2,50	3,03	4,00	5,00	6,35	7,69
Weight (kg/m²) Steel 0,5 / 0,4mm	9,81	10,19	10,43	11,19	11,95	12,71	13,85

The U-values have been calculated using a thermal conductivity when tested at 10°C.

R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temperature	Fire Rating FM 4471
KS100 PRW	✓	✓	✓	✓	•	✓

Profile: Trapezoidal 42mm

Core Type: Kingspan PIR (IPN)

Fixing Detail: Through-fix

Metal Type: Steel (aluminium available upon request)

Colours and Coatings: A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use/function and warranty requirements.

Application: Pitched roofs of 4° or more after deflection

Lengths: 2,0 - 11,9m (standard) / 11,9 - 19m (non standard - depending on panel thickness) / <2,0m (non standard)

Cover Width: 1000mm

Environmental Rating: Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP)
Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable

Fire Rating: FM 4471 - Class 1 (for steel panels only)

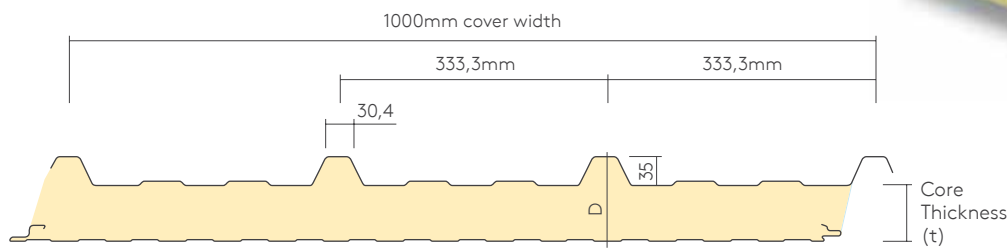
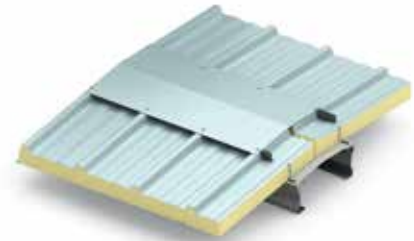
Product Compatibility: Integrates with Kingspan Day-Lite Upstand, Kingspan Safety solutions

Seals: Site Applied

Trapezoidal Roof Panels

KSD1000 RW

Kingspan KSD1000 RW is a 35mm deep trapezoidally profiled insulated roof panel which can be laid on roof slopes from 4° upwards. It is a proven and tested system with a performance track record of 30 years.



Thermal Performance, Dimensions and Weight

t - Core Thickness	40	60	70	80	100
D - Overall Dimension (mm)	75	95	105	115	135
R-value (m²K/W)	2,16	3,10	3,58	3,97	5,00
U-value (W/m²K)	0,47	0,32	0,27	0,24	0,19
Weight (kg/m²) Steel 0,5 / 0,4mm	9,90	10,70	11,20	11,50	12,30

The U-values have been calculated using a thermal conductivity when tested at 10°C.
R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temperature	Fire Rating	
						ASTM D 1929	BS EN 13501-5
KSD1000 RW	✓	✓	✓	✓	•	✓	✓

Profile: Trapezoidal 35mm

Core Type: Kingspan PIR

Fixing Detail: Through-fix

Metal Type: Steel or Aluminium

Colours and Coatings: A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use/function and warranty requirements.

Application: Pitched roofs of 4° or more after deflection

Lengths: From 1.8m to 18m

Cover Width: 1000mm

Environmental Rating: Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP)
Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable

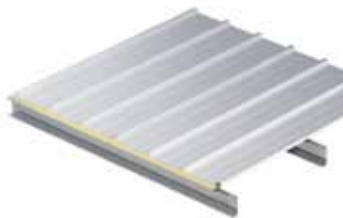
Fire Rating: ASTM D 1929-16: Self Ignition above 343°C
BS EN 13501-5 + A1:2009 B roof (t4)

Product Compatibility: Integrates with Kingspan Day-Lite Trapezoidal and Kingspan Safety solutions

Seals: Site Applied

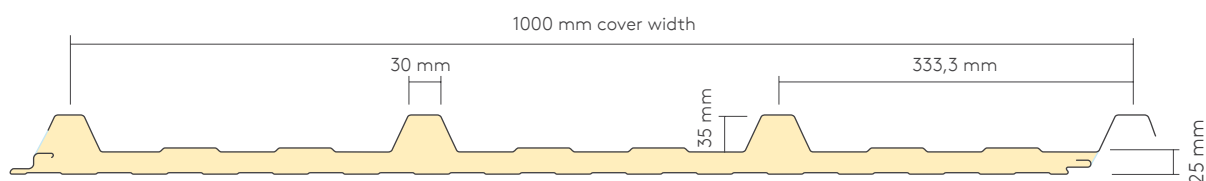
Trapezoidal Roof Panels

KSD1000 RW-KC K-Clad



Kingspan K-Clad is a viable alternative to the traditional construction methods of industrial buildings, out performing built-up systems in areas such as thermal comfort, temperature and heat gain control, condensation control, spanning capability, build speed and durability, while providing a metal finished internal ceiling.

K-Clad is designed for a variety of applications such as large-scale logistics facilities, distribution buildings, storage of temperature sensitive goods and agricultural construction. Thanks to the prefabricated nature of the insulated panels, they are quicker to install than traditional roof structures, making the roof instantly wind and water-tight and significantly reducing construction risks.



Dimensions, Weight & Thermal Performance

Core Thickness (mm)	25
Overall Thickness (mm)	60
R-value (m ² K/W)	1,33
U-value (W/m ² K)	0,75
Weight (kg/m ²) 0,5 steel /0,4 steel	9,40

Profile:	Trapezoidal 35 mm
Core Type:	Kingspan PIR (IPN)
Fixing Detail:	Through-fix
Metal Type:	Steel
Application:	Pitched roofs of 3° (5.2%) or more after defection*
Standard lengths:	From 3 m to 13.5 m
Cover Width:	1000mm
Product Compatibility:	Integrates with Kingspan Safety Solutions and Kingspan Fabrication Systems
Environmental Rating:	Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP) Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable
Seals:	Site Applied

* Lower pitches can be achieved where there are no end laps and the product is crown fixed. For advice on using Trapezoidal Roof on lower pitch applications, please contact Kingspan Technical Services.



EN 15011
CE Marked
MRC 40t

Eilbeck

ABUS

MRC 40t

Eilbeck

MRC 40t



Metro Grossmarket, Turkey



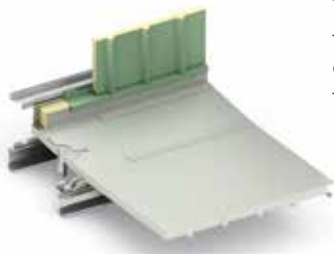
Ciner Group Habertürk Newspaper, Turkey

Flat Roof Panel

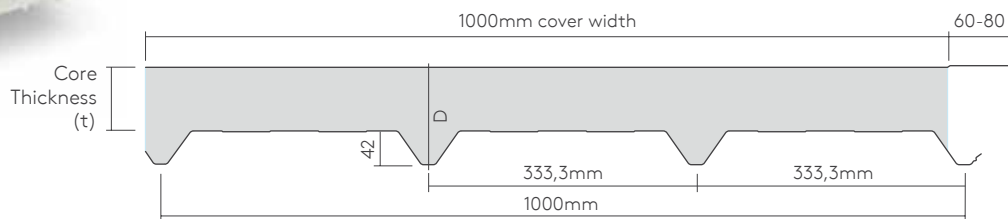
KS100 ERO Europanel



Scan QR Code to
Access BIM Model



The KS100ERO Europanel is a membraned roof system with a direct fastening of bottom deck to structure, which can be used for all building applications where the roof slope is 0.5° (1%) or more. The panel can be used for curved roofs that have a minimum radius (R) of 50m in the longitudinal direction and 20m in the transversal direction.



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QuadCore
TECHNOLOGY

Thermal Performance, Dimensions and Weight

t - Core Thickness (mm)	50	60	80	100
D - Overall Dimension (mm)	92	102	122	142
U-value (W/m²K) IPN	0,40	0,33	0,25	0,20
R-value (m²K/W) IPN	2,50	3,03	4,00	5,00
U-value (W/m²K) QuadCore™	0,35	0,29	0,22	0,18
R-value (m²K/W) QuadCore™	2,86	3,45	4,55	5,56
Weight (kg/m²) PVC membrane - ext. Sheet 0,6mm - int.	8,27	8,31	9,27	10,03

The U-values have been calculated using a thermal conductivity when tested at 10°C.
R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temperature	Fire Rating EN 13501-5
KS100 ERO Europanel	✓	✓	✓	✓	•	✓

Profile:	Flat single-ply PVC/TPO membrane
Core Type:	QuadCore™ and Kingspan PIR (IPN)
Fixing Detail:	Secret-fix appearance
Metal Type:	External: N/A; Internal: steel
Finishes:	External: Single-ply 1,2mm reinforced membrane Internal: PES and PLS (Plastisol)
Colours:	Membranes: see colour charts. Internal: bright white (standard)
Application:	Flat and pitched roofs of (0,5°) 1% or more after deflection Curved roofs with a convex curve (45m radius) and concave curve (50m radius)
Lengths:	2,0 - 11,9m (standard) / 11,9 - 19m (non standard - depending on panel thickness) / <2,0m (non standard)
Cover Width:	1000mm
Fire Rating:	BS EN 13501-5 + A1:2009 B roof (t2) (IPN)
Product Compatibility:	Integrates with Kingspan Safety solutions and is compatible with common lighting solutions such as Kingspan KS1000 DVLT
Membrane:	PVC (Polyvinyl Chloride) / TPO (Thermoplastic Polyolefin)

*11,9m for container transport, 13,5m for truck.

Architectural Façade Systems

Panelised
Façade Systems

48



Rainscreen
Façade Systems

54



Panelised Façade Systems

01Selçuk Ecza Deposu
Konya, Turkey**02**Western Australian
Institute of Sport**03**Centenary Hospital
Australia**04**Jaguar Augsburg
Germany**05**Bravo Supermarket
Azerbaijan**06**Istanbul New Airport
Turkey



Panelised Façade

For buildings with a more linear façade, or where the design requires a simpler solution, Kingspan offers Evolution wall panels. Evolution panel is a simple and effective single-component solution that delivers aesthetically pleasing finishes with exceptionally fast install time.



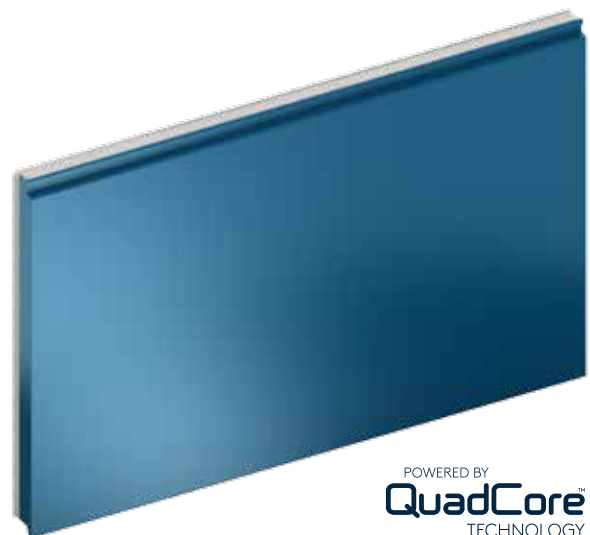
Absheron Logistics Center, Azerbaijan

Kingspan Evolution KS100 BMSF

Evolution has the look and feel of a super smooth rainscreen façade with the advantage of single-point installation and excellent thermal performance.

The system meets, or exceeds, all the statutory regulation criteria, such as structural, thermal, acoustic and durability performance, offers a sustainable rated solution and, most importantly of all, provides life and property fire protection.

Evolution panels are unique among insulated panels due to their folded edges. Automatic high-technology robotic machines fold the edges of the insulated panel, combining the aesthetics of a façade cassette with the advantages of an insulated wall panel. Self standing, insulated, aesthetic walls with fast installation speed...



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QuadCore™
TECHNOLOGY

System Performance

Thermal

Evolution insulation cores provide superior thermal performance with tested U-values. Most importantly, the insulation is on the exterior of the building structure to provide the best possible thermal envelope by reducing thermal bridging typical of cavity wall systems.

In addition, the panels feature excellent insulation core-to-core contact, which provides an unbroken thermal shield against heat.

Fire

The panelised façade systems are widely recognised by investors, property insurers, designers and constructors for their superior fire performance and reduction of fire risk. The systems are tested and approved to European and country-specific standards, complying with all relevant building regulations.

Acoustic

Evolution façade panels have a minimum single weighted sound reduction index R_w of 25dB.

Superior Airtightness and Weathertightness

One of the biggest sources of building heat loss (or heat gain) is air leakage, i.e., 'leaky buildings'. Evolution is rigorously tested to ensure airtightness and weathertightness over the life cycle of the building.

Structural

Evolution panels consist of two metal faces positioned on either side of a core that is a thermally insulating material, which is firmly bonded to both faces so that the three components act compositely when under load. The individual layers by themselves have limited flexural rigidity and cannot therefore bear loads but, by combining the two outer surface layers with the core, a shear rigid composite section is formed.

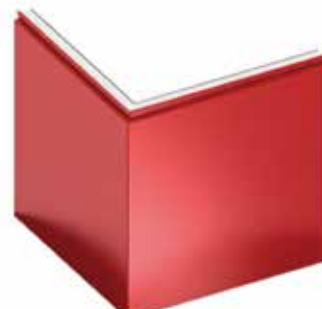
- Super-smooth unprofiled insulated panel
- Secret fix
- Can be laid vertically or horizontally
- Fastest construction method
- Factory-made
- Cost-effective
- Quick order turnaround
- Broad range of colours



Istanbul New Airport, Turkey

Curves & Corners

Curved elevations and neatly formed secret-fix corners are easily achieved with the Evolution range. Panels can be curved vertically and horizontally to create large sweeping elevations or used for more understated corner sections. Panels can also be cranked and mitred to form internal or external corner units or to add depth to a boxed and recessed window detail.



Flashings & Fabrications

We can manufacture complementary flashing, gutters and accessories for all projects.

Top Hats

The Evolution range has two joint options or Top Hats that can be used vertically or horizontally, giving more design freedom.



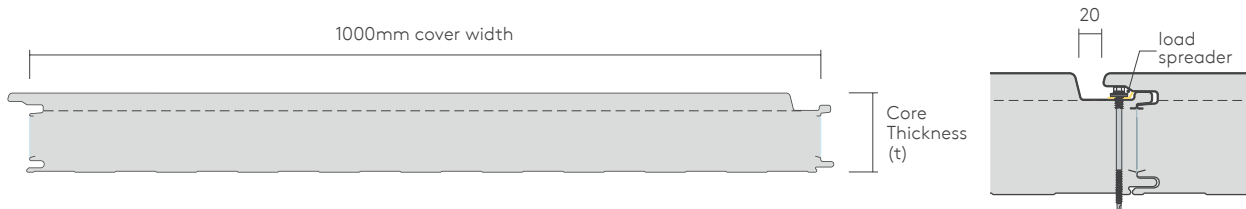
System Q2
with Epdm gasket



System Q2A
with Epdm gasket with an aluminium insert



Evolution



Thermal Performance, Dimensions and Weight

Core Thickness (mm)	80	100
U-value (W/m²K)	0,23	0,18
R-value (m²K/W)	4,35	5,55
Weight (kg/m²) Steel 0,5/0,7mm	14,15	15,00

The U-values have been calculated using a thermal conductivity when tested at 10°C.
R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temp. Control	Hygiene	High Humidity	Low Temp.	Fire Rating		
						EN 13501-1	EN 13501-2	FM 4882 / 4881 / 4880
KS100 BMSF Evolution	✓	✓	✓	✓	•	✓	✓	✓

Profile:	Flat, Flat
Core Type:	QuadCore™
Fixing Detail:	Secret-fix
Metal Type:	Steel or Aluminium (no fire certification for aluminium faced products)
Colours and Coatings:	A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use/function and warranty requirements.
Application:	Suitable for vertical or horizontal applications
Lengths:	From 1,8m up to 6m (subject to transportation limitations)
Cover Width:	1000mm
Environmental Rating:	Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP). Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable
Fire Rating:	BS EN 13501-1:2007 + A1:2009: B-s1, d0 FM4882 / 4881 /4880 : Class 1 with no height restrictions EN 13501-2:2016 achieved 60min Integrity and EI20, (80mm panel, horizontal orientation) achieved 60min Integrity and EI60, (80mm panel, vertical orientation with FR plasterboard lining)
Product Compatibility:	All profiles integrate with each other, as well as with Optimo and Kingspan Day-Lite Architectural
Preformed Corners and Panels:	Corners can be cranked depending on profile vertically and horizontally
Seals:	Site applied sealant

Rainscreen Façade Systems

01Parkview West Condominiums
US**02**Central Fleet
US**03**Pittsburg State University
Bicknell Family Center
US**04**Mill Woods Library
Canada**05**Veterinary Specialty
Emergency Center
US

4



5



3



2



Rainscreen Façades

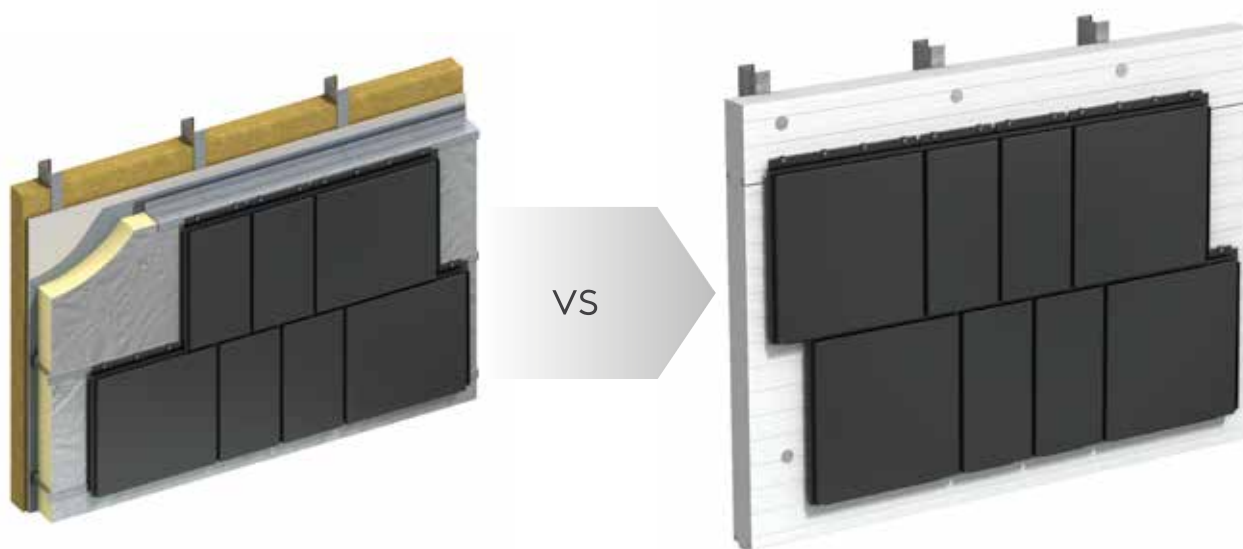
Rainscreen Substructure

Utilising our hybrid QuadCore™ insulation with a unique 40-year thermal and structural performance guarantee, the QuadCore™ Karrier panel can be factory or site installed onto SFS studs to provide a full structural wall solution with a super-efficient install time. The installation of the QuadCore™ Karrier panel allows the build team to remove the façade from the critical path of the build programme.

In situations where Kingspan does not offer the project-specific façade type to meet the client or designer's requirements, we can work with your preferred supplier to provide structural calculations to allow attachment of this façade type to our QuadCore™ Karrier panel or SFS studs, allowing all projects to reap the benefits of our system.

QuadCore™ Karrier

Safe, Quick and Easy Install



Conventional
Façade Method

Kingspan QuadCore™
Karrier and Façade

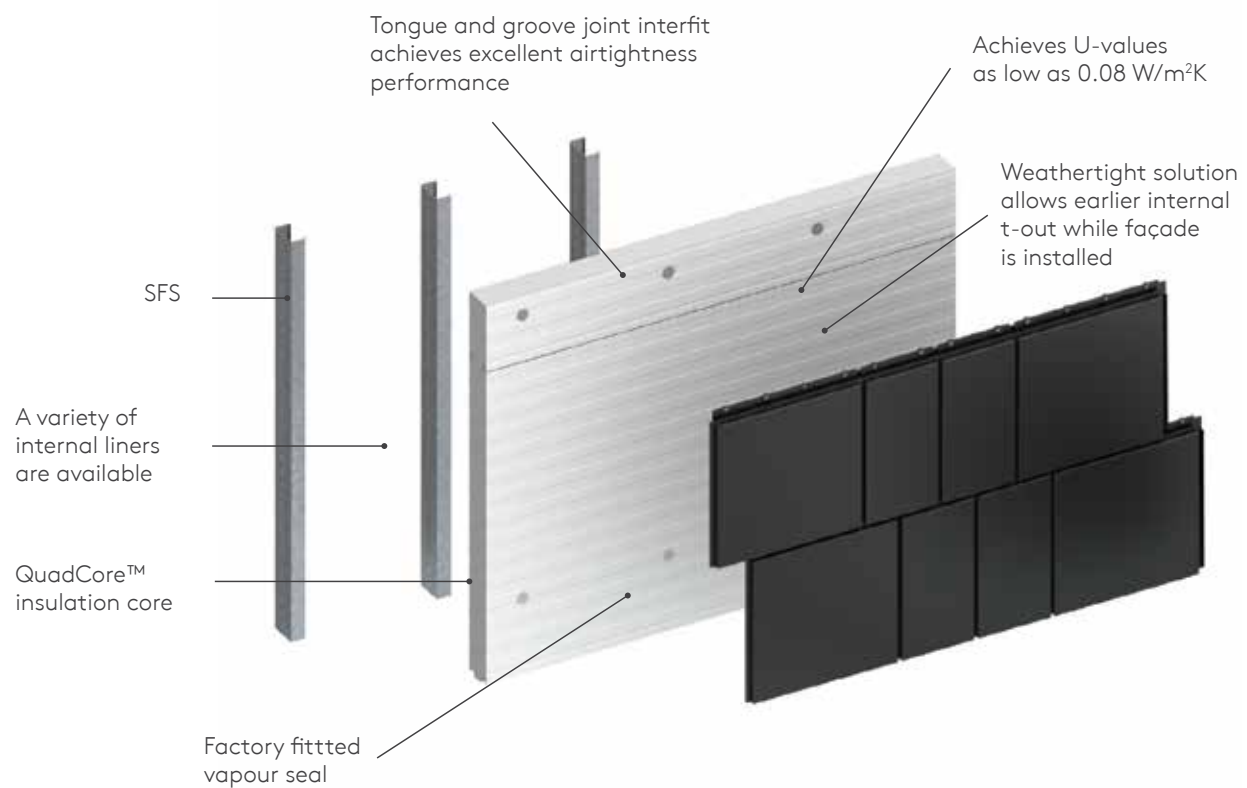
The QuadCore™ Karrier System is a proven factory-engineered building system which comprises individual high-performance insulated panels designed to support the façades.

Standard panels are available in a width of 1100mm and can be cut, making them ideal for projects with close window arrangements.

The lightweight panels can be manually lifted into position or can be installed with mechanical handling devices. This option is extremely flexible and can be considered in the design and post-design stages of a project.

The QuadCore™ Karrier system combines the aesthetic flexibility of rainscreen façades with the practical benefits of a composite panel - quick installation, excellent airtightness and low U-values coupled with enormous design choice in colour, shape and material.

Safe and easy to install, QuadCore™ Karrier provides a weathertight building envelope in a fraction of the time of other systems, without compromising creativity or design. The panels can be used in conjunction with Kingspan's broad selection of rainscreen façades and with a range of other materials. Please contact Technical Services for more details.



QuadCore™ Karrier

Standard lengths 1,8 to 14 metres. 14 to 19,7 metres can be supplied but may be subject to a transport surcharge and restrictions. Panels less than 1.8m long will be charged at full 1.8m price, plus cutting cost.

We can work with your design team to prepare desktop studies performed by an independent fire specialist where a project requires alternative product combinations to those tested.

Thermal Performance

Core Thickness (mm)	80	100	125	150	175	200
U-value (W/m²K)	0,23	0,18	0,15	0,12	0,10	0,09
R-value (m²K/W)	4,35	5,56	6,67	8,33	10,10	11,11

R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

POWERED BY
QuadCore™
TECHNOLOGY

Superfast Install Metal Façade Panels

Dri-Design Flat

Dri-Design Flat patented design installs at least twice as fast as most comparable systems and can be installed as direct fix or ventilated cavity cassettes. No sealants, gaskets or butyl tape in the cassette joints, means no dirty streaks or a legacy of maintenance for the building owner. When used within the QuadCore™ Karrier System, Dri-Design offers even greater time saving advantages over any other system.



First cassette hooks onto the J Rail and is fixed to QuadCore™ Karrier Panel.



Subsequent cassettes hook into neighbour, next layer fixes into lower layer and neighbours.



Brick bond or stack bond are easily attained.

QuadCore™ Karrier Panel

Dri-Design Flat



Dri-Design Tapered

Dri-Design Tapered cassettes can be angled in any direction with varying depths and degree of slope. This freedom to design each specific cassette gives you an unlimited capacity to create a dynamic, one-of-a-kind surface on nearly any façade, without the need to modify the substrate or weather barrier.

As with all Dri-Design, the Tapered cassette is a patented design that installs much faster than most similar systems, available as direct fix or ventilated cavity. There are no seals or gaskets so it is easily maintained.



Increasing depth to one side allows a tapered variation of a standard Flat cassette; fixing system remains the same.



Adding tapered cassette is simple thanks to Dri-Design's easy installation.

QuadCore™ Karrier Panel

Dri-Design Tapered



Superfast Install Metal Façade Panels

Dri-Design Shadow

Dri-Design Shadow cassettes let you add depth and definition to any architectural design. Individual panels can be extended at varying depths to create texture or a dynamic variation in patterns, all while keeping the substrate and weather barrier in the same plane. As with our other patented Dri-Design designs, the Shadow cassettes install much faster than most similar systems, available as direct fix or ventilated cavity. There are no seals or gaskets so it is easily maintained.



Increasing depth allows a 'shadow' variation of a standard Flat cassette, which when used with the Flat cassette gives depth and texture - fixing system remains the same.



Add depth to any design by including Dri-Design Shadow without complicated rail systems.

QuadCore™ Karrier Panel

Dri-Design Shadow



Perforated

Dri-Design Flat, Tapered and Shadow patented design cassettes can be perforated using advanced computer based manufacturing to create complex images using perforations. By varying the size, location and density of the perforations, areas of light, dark and shades in between are created to form an image. These perforations also allow the cassette to provide needed airflow and/or shade to a structure. Since the images can be created from any digital picture, you are only limited by your imagination.



QuadCore™ Karrier Panel

Dri-Design Perforated



Standard Install Metal Façade Panels

Shingle

Shapes

Available in any polygon shape. No secondary support system lessens costs.

Dimensions

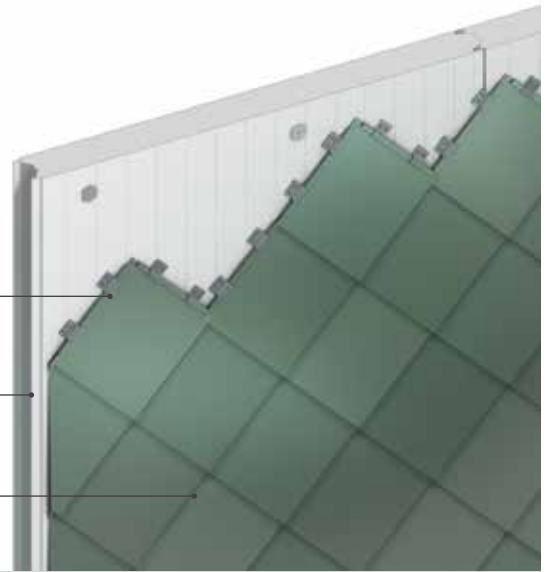
Minimum size for shingle, 200mm x 200mm

Maximum size for shingle, 300mm x 300mm

Shingle clip

QuadCore™ Karrier Panel

Shingle



Standard Install - Hook-On Cassette

Shapes

Available in any rectangular shape

Dimensions

Minimum size for cassettes, 150mm x 150mm

Maximum size for cassettes, 3800mm x 1350mm

QuadCore™ Karrier Panel

Vertical support rails

Hook-on cassette



Interlocking Plank

Shapes

Available in any rectangular shape

Dimensions

Minimum size for plank, 160mm x 150mm

Maximum size for plank, 3950mm x 290mm

QuadCore™ Karrier Panel

Vertical support rails

Interlocking plank



Recessed Cassette

Shapes

Available in any rectangular shape

Dimensions

Minimum size for cassettes, 150mm x 150mm

Maximum size for cassettes, 2870mm x 500mm

QuadCore™ Karrier Panel

Vertical support rails

Recessed cassette



Architectural Roofing

KingZip Linea

70



KingZip Infiniti

71



KingZip Linea & KingZip Infiniti

01Queen Alia Airport
Jordan**02**Caspian Waterfront
Azerbaijan**03**Moro Hub
UAE**04**Deira Night Souk
UAE**05**Abu Dhabi International
Airport
UAE

4



5



3



2



1



Kingzip Standing Seam System

Freeform Building Envelope Solutions

Bring Art & Architecture Together with KingZip

Our KingZip Freeform Building Envelope Solutions enable you to fulfil design intent with total flexibility from initial form finding to construction without compromise.

KingZip Linea and Infiniti are manufactured on-site, from 1 metre up to 150 metres, allowing envelopes to be constructed using very long sheet lengths, eliminating the need for any endlaps and considerably increasing speed of construction.

Our systems are available in two application formats

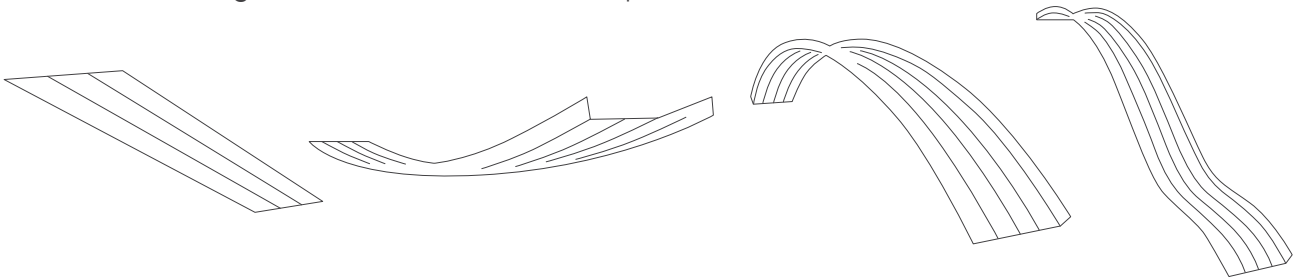
- KingZip Linea for 2D
- KingZip Infiniti for full 3D geometric envelope capability

KingZip systems provide advanced structural, thermal, acoustic and fire performance combined with interlocking seams, offering exceptional long-term weatherisation and durability.

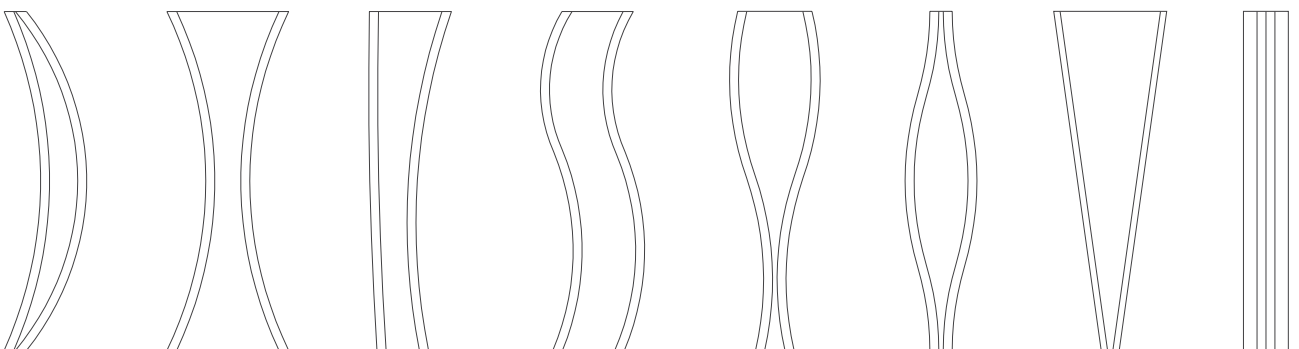
Our systems offer the ultimate in design flexibility

Our KingZip Freeform Building Envelope Solutions fully integrate with our insulated roof, wall and façade systems and accessories to provide a single-source, high-performance, fully guaranteed package.

KingZip Linea gives you full flexibility to create functional and technically perfect convex, concave and angular architectural roof shapes.



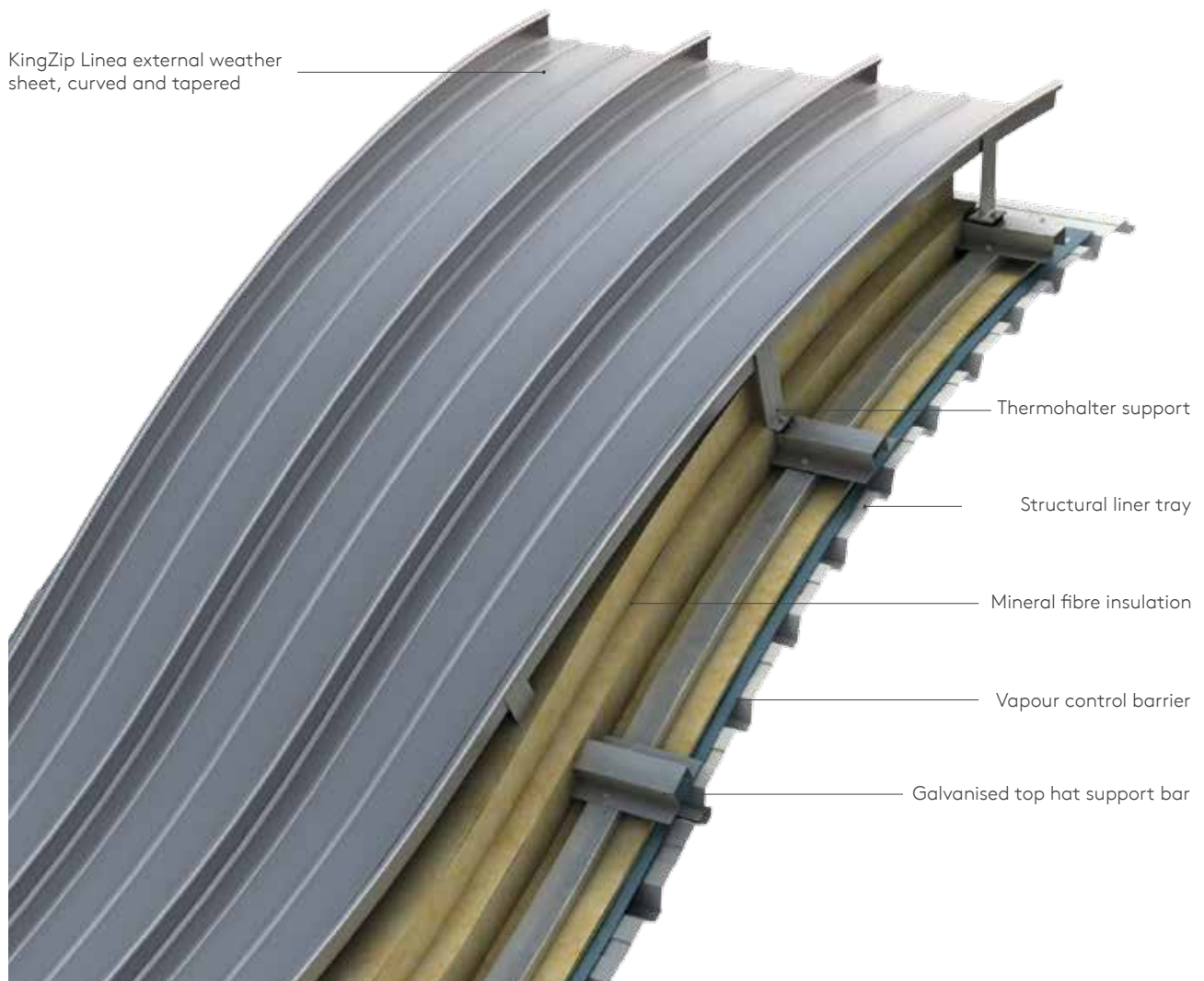
KingZip Infiniti offers virtually unlimited design capability to develop sophisticated envelopes that are artistic and creative.



KingZip Linea

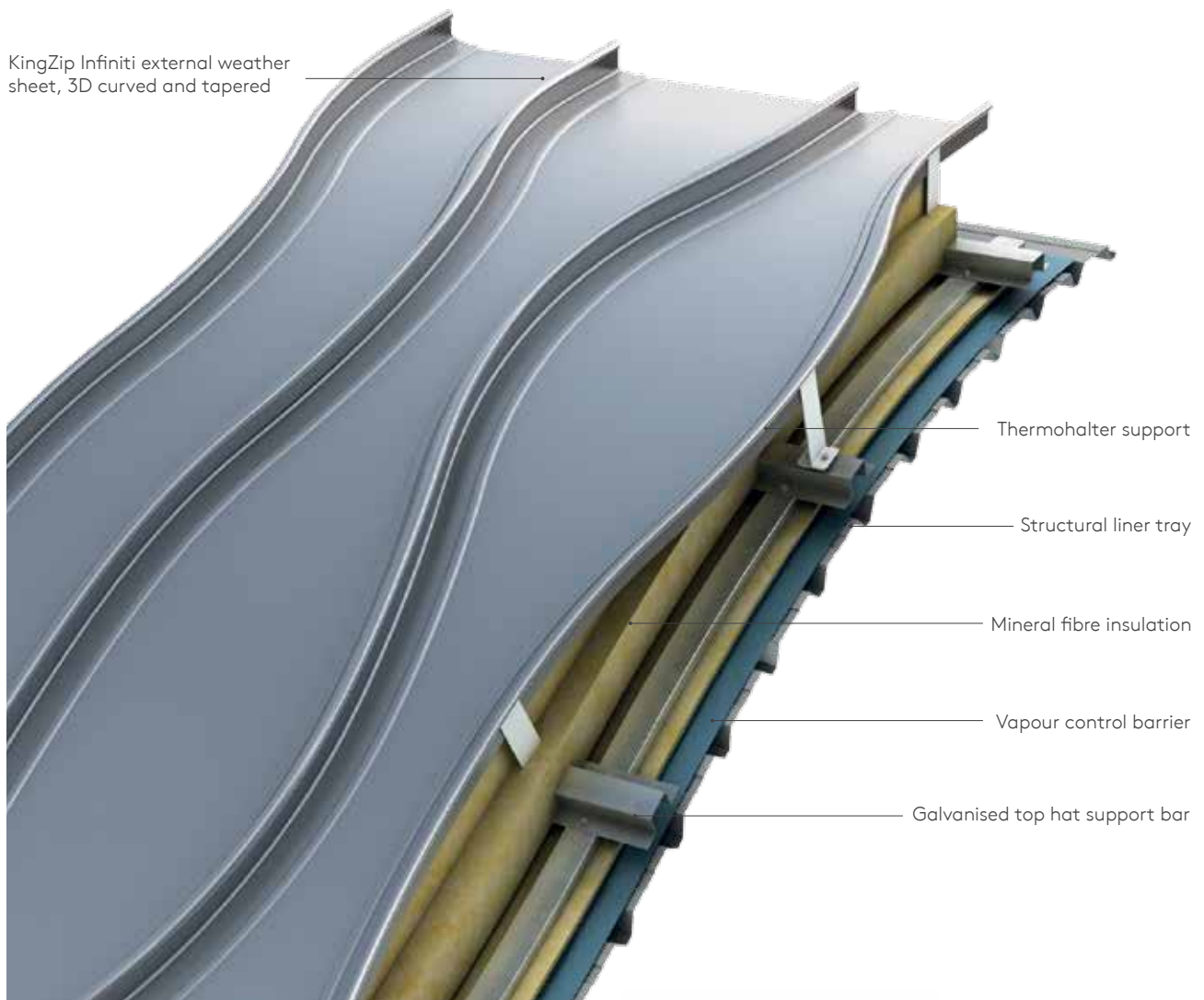
KingZip Linea enables you to realise building envelope designs with total flexibility, creating technically perfect angular, convex, concave and tapered architectural forms.

KingZip Linea external weather sheet, curved and tapered



KingZip Infiniti

KingZip Infiniti offers you unprecedented freedom to create extraordinary 3D geometric buildings with complex shapes and forms – taking design and construction of the building envelope to new levels.

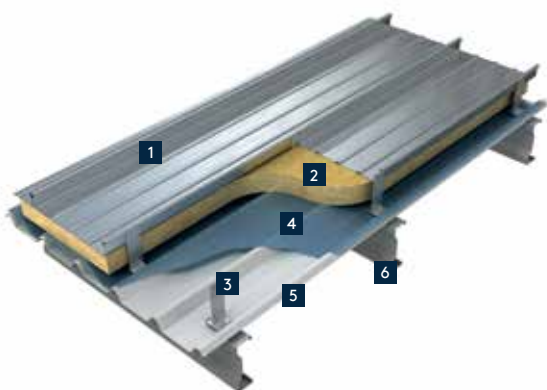


Technical Data

Typical Construction Solutions

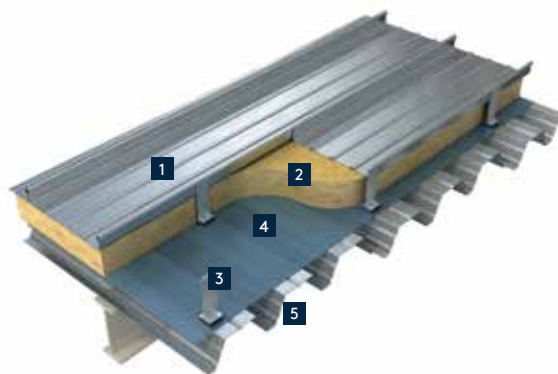
For project and performance specifications, please contact Kingspan.

KingZip insulated system on steel purlins



- | | |
|---|---------------------------------|
| 1. KingZip Linea / Infiniti Standing Seam | 4. Vapour control layer (VCL) |
| 2. Single layer mineral wool insulation | 5. Kingspan structural liner |
| 3. Halter with thermal pad | 6. Secondary steelwork - purlin |

KingZip insulated system on structural liner deck



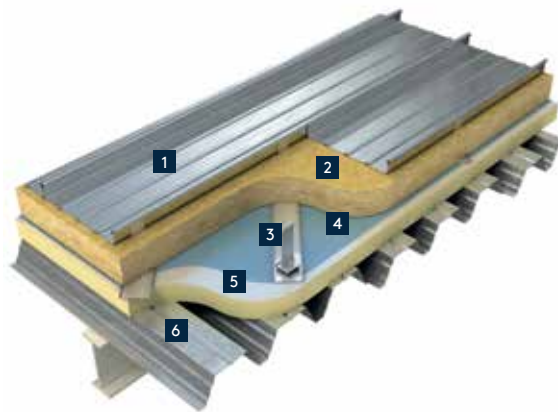
- | | |
|---|---|
| 1. KingZip Linea / Infiniti Standing Seam | 4. Vapour control layer (VCL) |
| 2. Single layer mineral wool insulation | 5. Kingspan structural liner deck (can be perforated) |
| 3. Halter with thermal pad | |

KingZip enhanced insulation system on structural liner deck



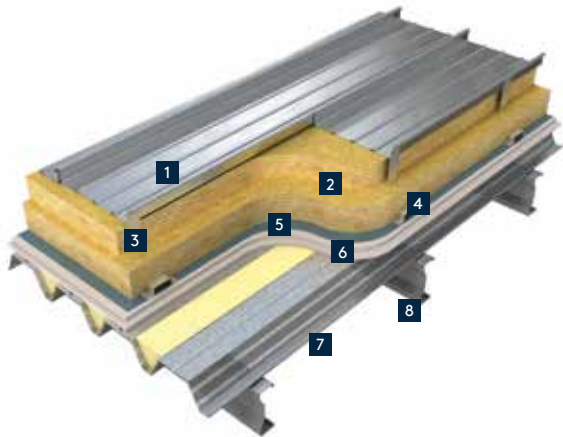
- | | |
|---|---|
| 1. KingZip Linea / Infiniti Standing Seam | 5. Single layer mineral wool insulation |
| 2. Single layer mineral wool insulation | 6. Halter support system |
| 3. Halter with thermal pad | 7. Galvanised top hat support channel |
| 4. Vapour control layer (VCL) | 8. Kingspan structural liner deck |

KingZip enhanced insulation system on structural liner deck



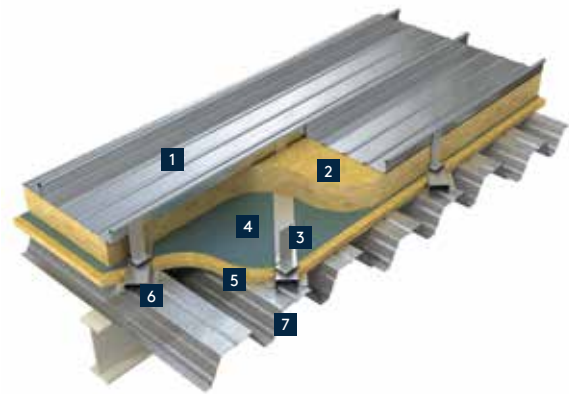
- | | |
|--|--|
| 1. KingZip Linea / Infiniti Standing Seam | 4. Vapour control layer (VCL) |
| 2. Single layer mineral wool insulation | 5. Single layer fire-rated PIR foil-faced insulation board |
| 3. Halter with thermal pad and support channel | 6. Kingspan structural liner deck |

KingZip acoustic system on structural liner deck



- | | |
|---|---|
| 1. KingZip Linea / Infiniti Standing Seam | 5. Vapour control layer (VCL) |
| 2. Double layer mineral wool insulation | 6. Double layer acoustic plasterboard |
| 3. Halter with thermal pad | 7. Kingspan perforated structural liner deck with fire-rated PIR insulation |
| 4. Galvanised top hat support channel | 8. Secondary steelwork - purlin |

KingZip acoustic system on structural liner deck



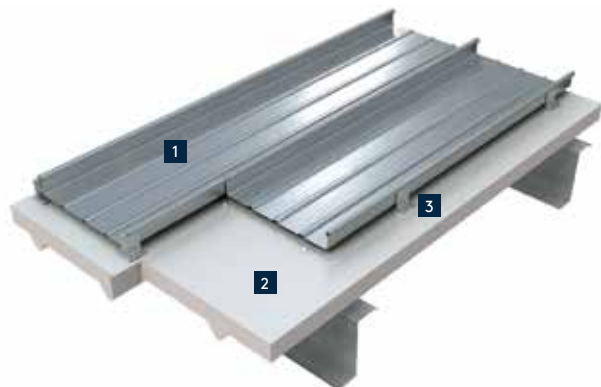
- | | |
|--|--|
| 1. KingZip Linea / Infiniti Standing Seam | 4. Vapour control layer (VCL) |
| 2. Single layer mineral wool insulation | 5. Single layer mineral wool insulation |
| 3. Halter with thermal pad and support channel | 6. Galvanised top hat support channel |
| | 7. Kingspan perforated structural liner deck |

KingZip Roofliner Hybrid System



- | | |
|---|---------------------------------|
| 1. KingZip Linea / Infiniti standing seam | 3. Halter with thermal pad |
| 2. Kingspan QuadCore™ Roofliner panel | 4. Secondary steelwork - purlin |

KingZip Linea + KS100 PRW Hybrid System



- | | |
|---|----------------------------|
| 1. KingZip Linea / Infiniti standing seam | 3. Halter with thermal pad |
| 2. Kingspan QuadCore™ KS100 PRV | |

Technical Data

KingZip Linea & Infiniti

Weatherisation & Durability

Both KingZip Linea and Infiniti provide proven exceptional weatherisation performance, with aluminium options being the preferred choice for highly demanding environments such as airports, marine, industrial and urban locations.

Inherently durable, aluminium offers almost maintenance-free weather resistance performance, creating an inert oxidised layer that is highly resistant to corrosion and most pollutants, and is non-sensitive to UV for the lifetime of the building.

Site Welding

Enhanced lifetime weatherisation performance is achieved by site-welded watertight interface junctions and penetrations (aluminium only).

Structural Performance

Both KingZip Linea and Infiniti are high load-bearing structural solutions, suitable for projects worldwide, including seismic code-specific applications.

Thermal & Airtightness Performance

KingZip Linea and Infiniti systems can be customised to any insulation specification requirements with thermal values from $0.11 \text{ W/m}^2\text{K}$. A range of high-performance insulation products is available to meet individual project demands, including man-made mineral fibre (MMM) and fire-rated insulation board.

KingZip Linea and Infiniti systems have been subjected to CWCT and ASTM E1680 and achieve $5 \text{ m}^3/\text{hr}/\text{m}^2$ @ 50 Pa.

Structural Liner Decks & Trays

Manufactured from high-grade steel, our internal structural liner deck and tray ranges provide economical solutions for a wide variety of span requirements. Profiles can be perforated for enhanced acoustic specifications, and can support increased insulation levels for more rigorous acoustic requirements.

Environmental

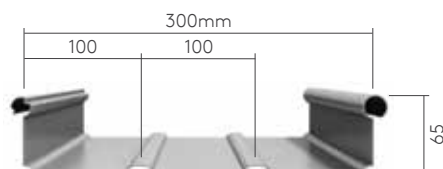
Sustainability is firmly at the heart of Kingspan's approach. We don't just manufacture and supply sustainable products and systems such as KingZip, we also aim to operate within a sustainable business. We have made a commitment to ensure that all our facilities are Net-Zero Energy by 2020, with an interim target of 50% already exceeded. Our KingZip roof systems are manufactured and supplied under ISO 14001: 2004.

Vapour Control Layer (VCL)

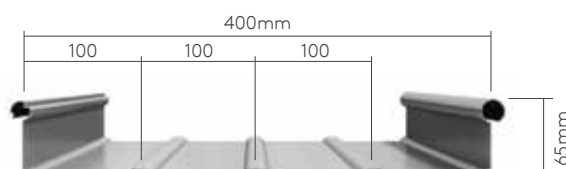
Vapour Control Layers are an important part of the KingZip; roof systems. We offer a range of VCL options to suit roof construction and specification, including options for high humidity / high occupancy projects.

KingZip Linea

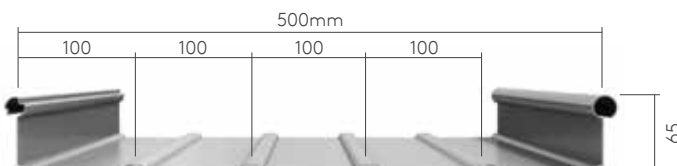
KingZip Linea 300



KingZip Linea 400



KingZip Linea 500



Profile:	Standing Seam
Fixing Detail:	Secret-fix appearance, mechanically seamed on site
Metal Type:	Steel and Aluminium
Core Type:	Built-up system with loose laid mineral fibre insulation
Coatings:	External Weather Sheet, Kingspan PVDF, Kingspan ARS, Kingspan Polyester, Durabond
Colours:	All of the above coatings are available in a wide range of colours. Please consult our Customer Services Team for availability
Application:	Curved and pitched roofs of 1,5° or more after deflection
Lengths:	From 1m to 150m (Linea), 2,75m to 200m (Infiniti)
Cover Width:	300mm, 400mm and 500mm (Linea), 130mm min and 1000mm max (Infiniti)
Product Compatibility:	Integrates with Kingspan Safety solutions, day lighting and fabrications
Acoustic Properties:	The KingZip Linea system has the flexibility to meet the acoustic requirements of most buildings. For further information, please contact our Technical Department
Standards and Approvals:	KingZip Linea is produced to the highest quality standards including BS EN ISO 9001. The product has been designed to fulfil a specific application and is manufactured to precise standards and tolerances, fully compliant with ASTM E1637 and FM 4471. Systems with UL 580-90 certification are available

Dimensions

Nominal Gauge (mm)	0,8 / 0,9 / 1,0 / 1,2 (Linea) 0,9 / 1,0 / 1,2 (Infiniti)
Sheet Length (m)	1,5 to 150* (Linea) 2,75 min (Infiniti)
Standard Cover Width (mm)	300, 400 and 500** (Linea) From 130mm up to 1000mm / from 190mm to 1000mm when curved (Infiniti)

* Can be manufactured on or off site. Factory manufactured up to 15m depending on the geographic location. Please contact our Technical Department for further information.

** KingZip Linea 500 must be used only in a fully supported system. Other widths are available on request.

Tolerances (KingZip Linea and Infiniti)

Cover Width	+2mm / -2mm
Edge Squareness	1% of sheet cover width
- up to 10m long	+10mm / -5mm
- over 10m long	+10mm (+1mm per metre length over 10m) / -5mm

Fire Performance

KingZip Standing Seam System achieves a Class 0 rating as defined in various national building regulations.

Test	Result
BS 476-3: 2004 Classification and method of test for external fire exposure to roofs	FAA / SAA
BS 476-6: 2009 Method of test for fire propagation for products	$l < 12$ i < 6
BS 476-7: 1997 Method of test to determine the classification of the surface spread of flame of products	Class 1 Rating for aluminium / steel inner / outer metal facings
FM 4471 Panel Roofs	Class 1

Quality Assurance

Our KingZip systems are manufactured under ISO 9001: 2008 procedures both off- and on-site. Our on-site manufacturing facilities have the same dimensional quality as factory production.

All quality testing undertaken on-site is aligned with our factory testing procedures and results.



Weight (Aluminium) (KingZip Linea and Infiniti)

Cover Width	0,9mm		1,0mm		1,1mm		1,2mm	
	g/m ²	kg/lm	kg/m ²	kg/lm	kg/m ²	kg/lm	kg/m ²	kg/lm
300mm	3,87	1,16	4,29	1,28	4,72	1,41	5,13	1,54
400mm	3,53	1,41	3,94	1,57	4,33	1,73	4,70	1,88
500mm	3,34	1,67	3,72	1,86	4,08	2,04	4,44	2,22

Cold Storage and Cleanrooms

Cold Storage
Panel Series

80



Cleanroom Systems

92



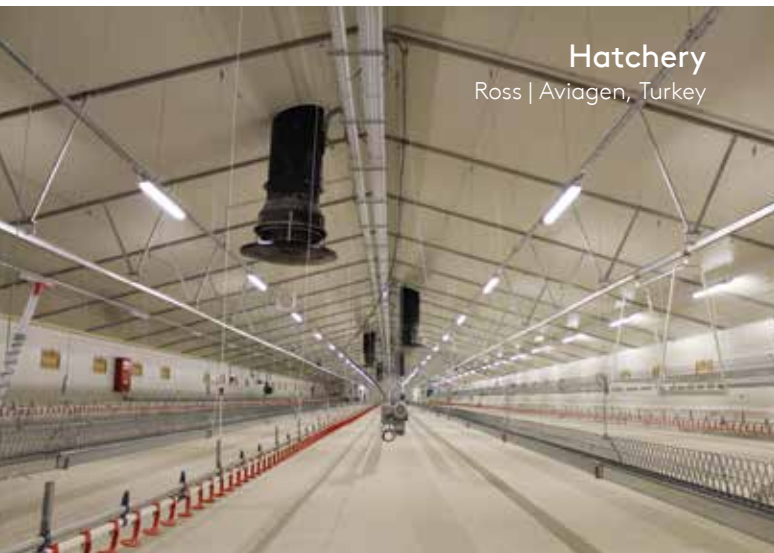
ModularisCold System

94



Cold Storage Sectoral Case Studies





Cold Storage Panel Series

01
Vekofin Turkey
02
Coşkun Et Turkey
03
Eker Turkey
04
Önallar Gıda Turkey
05
Öztar Turkey





1



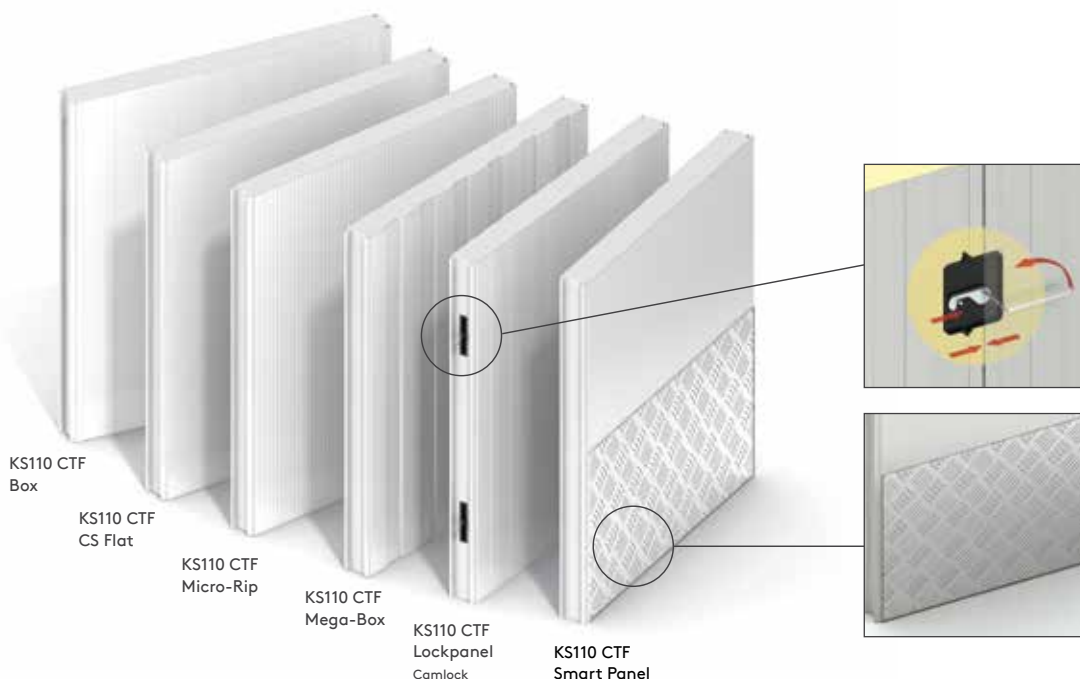
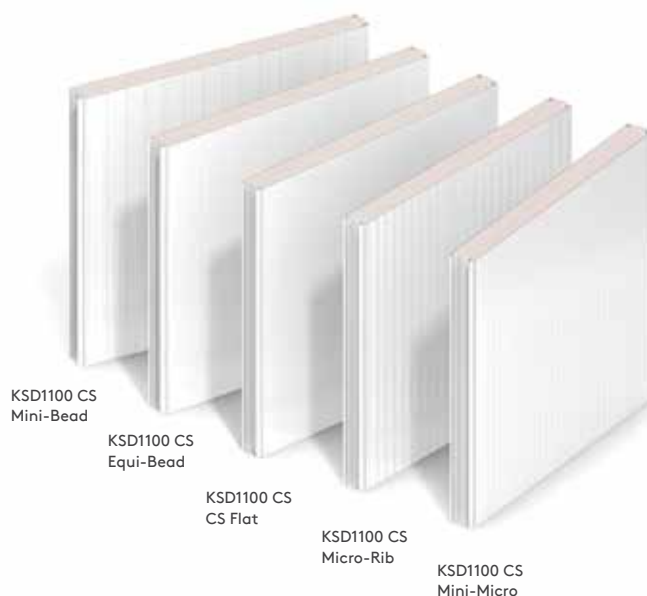
Cold Storage Panel Series

Cold Store Panels Series is a range of insulated roof, wall and ceiling panels designed specifically for use within the temperature and environmental control industry, such as food manufacturing and temperature controlled storage.

These enhanced panels are ideal for temperature ranges of between -40°C to $+80^{\circ}\text{C}$, and feature an innovative joint system designed to withstand high pressure washing and regular cleaning, preventing water ingress and minimising potential bacteria growth.

Benefits

- Designed to withstand internal / external temperature differences of up to 80°C .
- Suitable for cold and chill stores and food processing applications, with an internal temperature range of -50°C to $+60^{\circ}\text{C}$.
- Suitable for internal and external applications including mushroom growing, data centres, partition walls, agricultural and controlled atmospheres.
- Incorporates a panel joint that achieves excellent thermal performance and can accommodate vapour and hygiene safe seals.
- Large range of profiles, coatings and insulation core thicknesses to meet project-specific demands.
- Available in lengths up to 11,75 metres.
- Hygiene safe, resisting moisture ingress and any risk of toxic mould and bacterial growth.

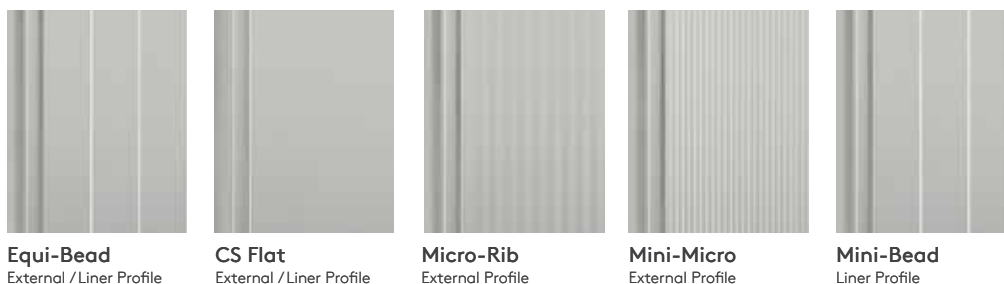


KSD1100 CS

KSD1100 CS insulated panels are available in a choice of six distinct profiles, offering a range of aesthetics to suit project-specific requirements.



Product Profiles



Thermal Performance, Dimensions and Weight

t - Core Thickness (mm)	80	100	125	150	175	200
U-value (W/m²K)	0,23	0,18	0,15	0,12	0,10	0,09
R-value (m²K/W)	4,35	5,56	6,67	8,33	10,00	11,00
Weight (kg/m²) Steel 0,5 / 0,5mm	11,80	12,60	13,60	14,60	15,60	16,60

The U-values have been calculated using the method required by EN14509 guidelines.
R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temp. Control	Hygiene	High Humidity	Low Temp.	Fire Rating			
						ASTM D 1929-16	ASTM E119	EN 13501-1	FM 4880 / FM 4881 / FM 4882
KSD1100 CS	✓	✓	✓	✓	✓	✓	✓	✓	✓

Profile: Equi-Bead, CS Flat, Micro-Rib, Mini-Micro, Mini-Bead

Core Type: QuadCore™

Metal Type: Steel / Stainless Steel

Colours and Coatings: A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use / function and warranty requirements.

Application: Suitable for internal wall and ceiling applications with a temperature range from -28°C to ambient.

Lengths: 2,0 - 11,9m (standard) / 11,9 - 19m (non standard - depending on panel thickness) / <2,0m (non standard)

Cover Width: 600mm to 1200mm. Standard width 1100mm

Environmental Rating: Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP)
Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable

Fire Rating: ASTM D 1929-16: Self Ignition above 343°C
BS EN 13501-1:2007 + A1:2009: B-s1, d0
ASTM E 119: achieved 30 mins fire integrity and insulation (100mm panel)
FM 4880 / FM 4881 / FM 4882 - Class 1

Seals: Site Applied

KS110 CTF



KS110 CTF insulated panels are available in a choice of four distinct profiles suitable for all types of buildings where there are low internal temperature conditions.



Product Profiles



Box (Izocold)
External / Liner Profile



CS Flat (Pharmacold)
External / Liner Profile



Micro-Rib (Microcold)
External Profile



Mega-Box (Megacold)
External Profile



Smart Panel
KS110 CTF*

POWERED BY
QuadCore™
TECHNOLOGY

*Suitable for internal walls in high-impact and corrosive areas.

Thermal Performance, Dimensions and Weight

t - Core Thickness (mm)	45	50	60	80	100	120	140	150	170	200
U-value (W/m²K)	0,40	0,37	0,30	0,22	0,18	0,15	0,13	0,12	0,11	0,09
R-value (m²K/W)	2,50	2,70	3,33	4,55	5,56	6,67	7,69	8,33	9,09	11,11
Weight (kg/m²) Steel 0,5 / 0,5mm*	11,26	11,49	11,69	12,53	13,36	14,20	15,04	15,45	16,29	17,54
U-value (W/m²K) Mega-Box	-	-	-	0,24	0,19	0,16	0,13	0,12	0,11	0,09
R-value (m²K/W) Mega-Box	-	-	-	4,17	5,26	6,25	7,69	8,33	9,09	11,11
Weight (kg/m²) Mega-Box Steel 0,5 / 0,5mm	-	-	-	12,65	13,48	14,32	15,15	15,57	16,41	17,66

U-values are calculated in accordance with EN14509:2013 (Section A.10.3).

* Allow for 6,8 kg/m² additional weight from Smartpanel Stainless Steel Skirting add-on panel surface.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temp.	Fire Rating		
						EN 13501-1	EN13501-2	FM 4880 / FM 4881 / FM 4882
KS110 CTF	✓	✓	✓	✓	✓	✓	✓	✓

Profile: Box, CS Flat, Micro-Rib, Mega-Box

Core Type: QuadCore™

Metal Type: Steel / Stainless Steel

Colours and Coatings: A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use/function and warranty requirements.

Application: Suitable for internal wall and ceiling applications with a temperature range from -28°C to ambient.

Lengths: 2,0 - 11,9m (standard) / 11,9 - 19m (non standard - depending on panel thickness) / <2,0m (non standard)

Cover Width: Standard width 1100 mm

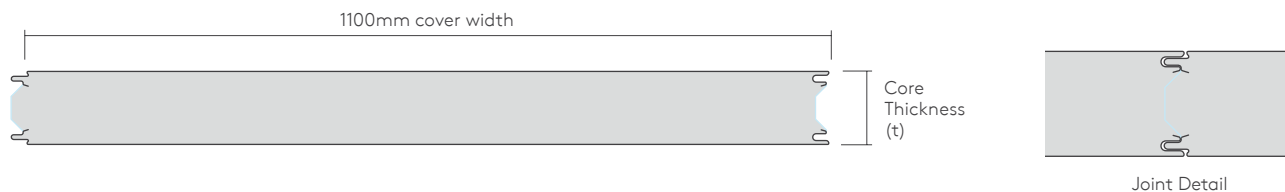
Environmental Rating: Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP)
Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable

Fire Rating: TS EN 13501-1:2007 + A1:2009: B-s1, d0
TS EN 13501-2, achieved EI45 (120mm panel) - vertically applied wall application
achieved EI60 (200mm panel) - vertically applied wall application
FM 4880 / FM 4881 / FM 4882 - Class 1

Seals: Site Applied

KS110 NCTF

These FIREsafe, hygienic and bre free insulated wall panel systems are available in three profiles, suitable for internal and external walls and ceilings, including 'box within a box' applications.



Product Profiles



Box (Izocold)
External / Liner Profile



CS Flat (Pharmacold)
External / Liner Profile



Micro-Rib (Microcold)
External

Thermal Performance, Dimensions and Weight

t - Core Thickness (mm)	100	150	200
U-value (W/m²K)	0,18	0,12	0,09
R-value (m²K/W)	5,56	8,33	11,11
Weight (kg/m²) Steel 0,5 / 0,5mm	13,36	15,45	17,54

The U-values have been calculated using the method required by EN14509 guidelines.
R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temp. Control	Hygiene	High Humidity	Low Temp.	Fire Rating		
						EN 13501-1	EN 13501-2	FM 4880 / FM 4881 / FM 4882
KS110 NCTF	✓	✓	✓	✓	✓	✓	✓	✓

Profile: Box, CS Flat, Micro-Rib

Metal Type: Steel / Stainless Steel

Core Type: QuadCore™

Colours and Coatings: A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use/function and warranty requirements.

Application: Suitable for internal and external roof, wall and ceiling applications with a temperature range from -40 °C to ambient.

Lengths: 2,0 - 11,9m (standard) / 11,9 - 19m (non standard - depending on panel thickness) / <2,0m (non standard)

Cover Width: 1100mm

Environmental Rating: Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP)
Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable

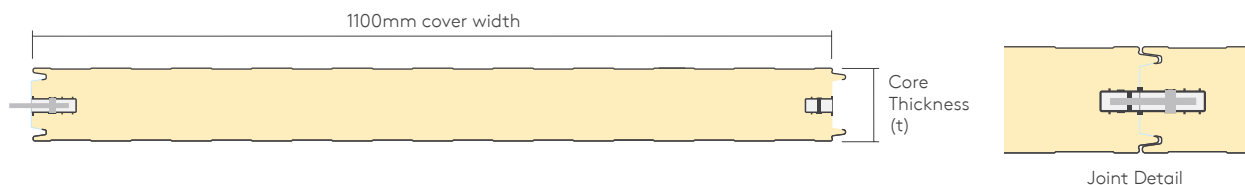
Fire Rating: TS EN 13501-1:2007 + A1:2009: B-s1, d0
TS EN 13501-2 achieved EI20 (100mm panel) - vertically applied wall application
FM 4880 / FM 4881 / FM 4882 - Class 1

Seals: Site Applied

KS110 CTF LockPanel

Camlock

The Kingspan KS110 CTF Lockpanel cold store system is supplied with the unique Kingspan Camlock interlocking system and is available in four profiles.



Product Profiles



Box (Izocold)
External / Liner Profile



CS-Flat (Pharmacold)
External / Liner Profile



Micro-Rib (Microcold)
External

Thermal Performance, Dimensions and Weight

t - Core Thickness (mm)	80	100	120	150	200
U-value (W/m ² K)	0,25	0,20	0,17	0,13	0,10
R-value (m ² K/W)	4,00	5,00	5,88	7,69	10,00
Weight (kg/m ²) Steel 0,5 / 0,5mm	12,53	13,36	14,20	15,45	17,54

U-values are calculated in accordance with EN14509:2013 (Section A.10.3).

R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temp. Control	Hygiene	High Humidity	Low Temp.	EN 13501-1	Fire Rating FM 4880 / FM 4881
LockPanel KS110 CTF (Camlock)	✓	✓	✓	✓	✓	✓	✓

Profile: Box, CS Flat, Micro-Rip

Core Type: Kingspan PIR (IPN)

Metal Type: Steel / Stainless Steel

Colours and Coatings: A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use/function and warranty requirements.

Application: Suitable for internal wall and ceiling applications with a temperature range from -28 °C to ambient.

Lengths: 2,0 - 11,9m (standard) / 11,9 - 19m (non standard - depending on panel thickness) / <2,0m (non standard)

Cover Width: 1100mm

Environmental Rating: Environmental Rating: Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP) Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable

Fire Rating: TS EN 13501-1:2007 + A1:2009: B-s1,d0
FM 4880 / FM4881

Seals: Site Applied

KS103LMSF and KS103LSSF

Clad Rack Panel

Kingspan Clad Rack Panel is specifically designed for use in industrial structures where external cladding rack systems and high-level thermal insulation are needed. It is a secret-fix system available in a 200 mm insulation depth, offering economical but aesthetic solutions to designers, contractors and clients alike. Suitable for horizontal and vertical applications.



Product Profiles



Box (Clad Rack Super)
KS103LSSF
External / Liner Profile



Mega-Box (Clad Rack Mega)
KS103LMSF
External



Micro-Rib (Clad Rack Micro)
KS103LSSF
External

Thermal Performance, Dimensions and Weight

t - Core Thickness (mm)	200
U-value (W/m²K)	0,09
R-value (m²K/W)	11,11
Weight (kg/m²) (KS 103 LSSF) Steel 0,6 / 0,6 mm	18,52
Weight (kg/m²) (KS 103 LMSF) Steel 0,6 / 0,6 mm	18,58

U-values are calculated in accordance with EN14509:2013 (Section A.10.3).

R-values in Imperial units (ft²·°F·hr/BTU) available upon request.

Product Specifications and Accreditations

Product Reference	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temperature	Fire Rating EN13501-1
KS 103 LSSF / LMSF	✓	✓	✓	✓	✓	✓

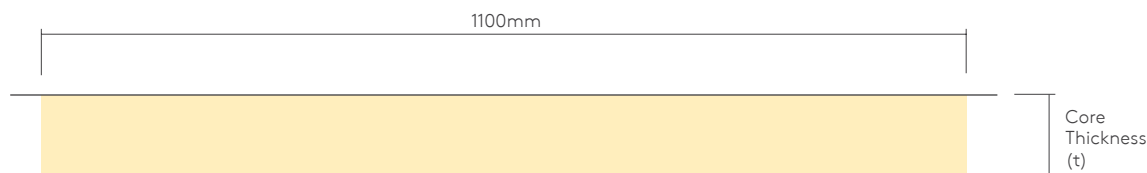
Profile:	Box, Mega-Box, Micro-Rib
Core Type:	QuadCore™ (Contact Kingspan Technical Team for Kingspan PIR Core option availability in your region)
Fixing Detail:	Secret-fix
Metal Type:	Steel
Colours and Coatings:	A large selection of external colours and coating options are available with a wide variety of finishes including metallic, matte and solid. Please consult with your local Kingspan technical team to get the best coating and finish recommendation for your project depending on its geographic location, building use / function and warranty requirements.
Application:	Suitable for industrial structures where external cladding rack systems and high-level thermal insulation are needed. Designed for installations with temperature range from -40°C to ambient.
Lengths:	2,0 - 11,9m (standard) / 11,9 - 19m (non standard - depending on panel thickness) / <2,0m (non standard)
Cover Width:	1030mm
Spanning Capability:	Cladrack – up to 8,2m, frame to frame
Product Standard:	EN 14509
Acoustic Insulation:	Approx. 25 dB across all panel thicknesses
Environmental Rating:	Zero Ozone Depleting Potential (ODP), Low Global Warming Potential (GWP) Free from CFC, HCFC & HFC, free from halogenated flame retardants and 100% recyclable
Seals:	Site Applied



Integrated Accessories

Floor Insulation Board

The Kingspan FIREsafe Board is a high compressive strength insulation board suitable for floors, partitions and inverted roof areas of cold stores.



Thermal Performance, Dimensions and Weight

t - Core Thickness (mm)	50	60	100
U-value (W/m ² K)	0,42	0,35	0,21
R-value (m ² K/W)	2,38	2,86	4,76
Weight (kg/m ²)	2,09	2,49	4,19

Core Type:	Rigid IPN / PIR foam, does not contain CFCs and HCFCs
Facing Type:	Kraft paper – Alukraft paper
Dimensional Stability and Long Term Thermal Performance:	FIREsafe Board comprises a high-performance rigid thermoset polyisocyanurate (PIR) fibre-free insulation core, faced on both sides with a low emissivity composite foil, autohesively bonded to the insulation core during manufacture
Insulation Materials:	Rigid IPN / PIR foam, does not contain CFC and HCFC
Cover Width:	1100mm
Product Length:	Depending on the panel thickness, it can be produced up to 19m
Reaction to Fire Performance:	B-s1, d0 according EN 13501-1
Product Conformity Standard:	TS EN 14509
Acoustic Insulation:	Approx. 25 dB in all thicknesses

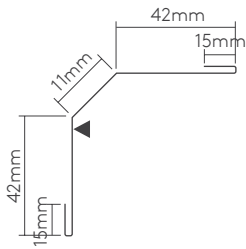
Cold Storage System Accessories

The versatile Kingspan cold storage system offers a range of integrated accessories for corners, floor tracks, cover profiles and hangers.



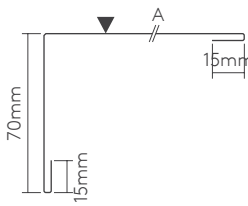
S101 Inner corner profile

Max length = 8,000mm



S102 Outer corner profile

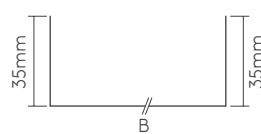
Max length = 8,000mm



Ref	A
S125	70
S102	100
S103	120
S104	140
S130	160
S105	190
S106	240

S107 Floor U profile

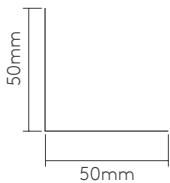
Max length = 4,000mm



Ref	B
S107	42
S128	47
S127	52
S108	62
S109	82
S110	102
S136	122
S126	152
S129	202

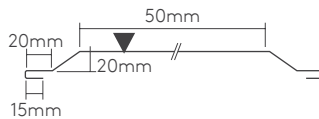
S111 Floor L profile

Max length = 4,000mm



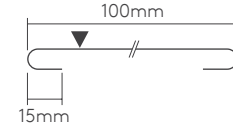
S121 Cover profile 3

Max length = 8,000mm

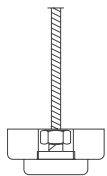


S120 Cover profile 2

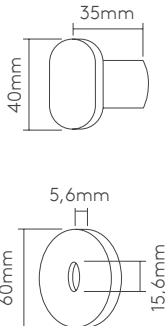
Max length = 8,000mm



S119 PVC nut

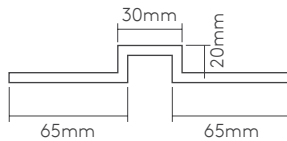


S119-1 PVC washer



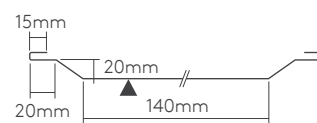
S112 Ceiling suspension profile

Max length = 4,000mm



S113 Cover profile

Max length = 8,000mm



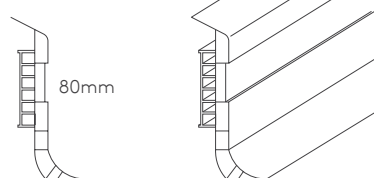
S115 Ceiling suspension profile

Max length = 6,000mm



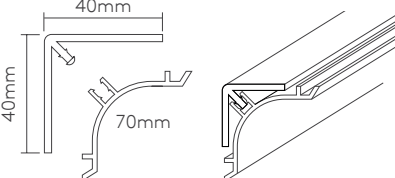
S118 PVC plinth profile

Max length = 4,000mm



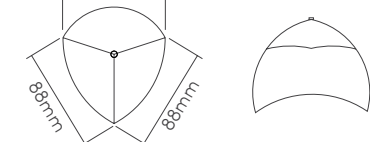
S116 PVC inner corner profile

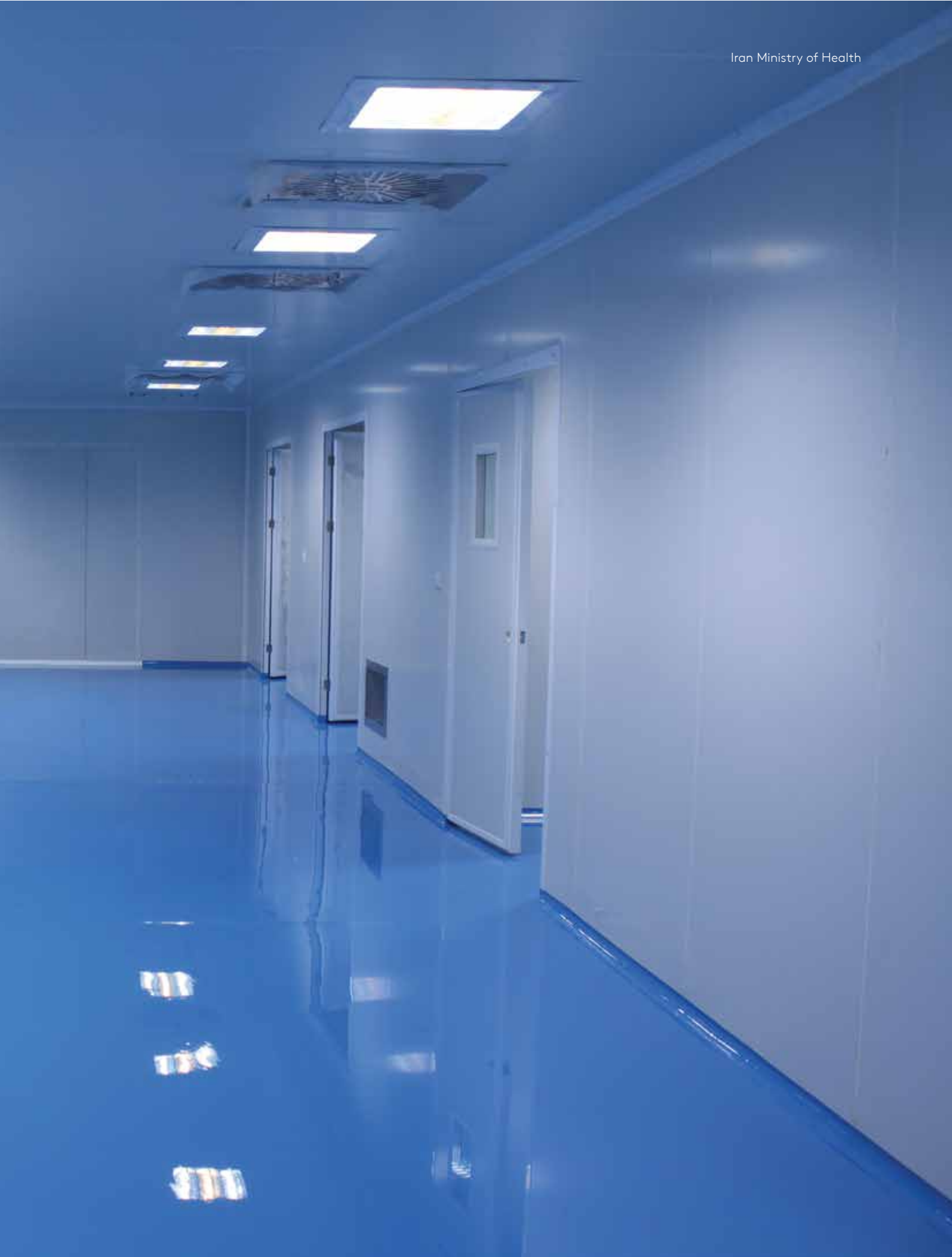
Max length = 4,000mm



S116-1 PVC corner profile

Max length = 4,000mm





Cleanroom Systems

UltraTech is a range of high-specification insulated partition walls and walk-on ceiling panels, including a complete range of compatible integrated doors, windows and ancillary components.

UltraTech Cleanroom Systems

Available in flush (F) and semi-flush (SF) options, the UltraTech range offers flexible, high-performance, engineered cleanroom solutions that deliver both cost and operational benefits, minimising risk and maximising return on investment.

UltraTech Cleanroom Systems are backed up by exceptional 360° support and service from initial concept through detailed 3D design, manufacture, installation and project handover.

UltraTech Versatile

UltraTech Versatile is our new revolutionary hybrid cleanroom system that offers the client high-performance solutions to fulfil their every aspiration for cleanroom systems at a much lower cost than traditional methods.

With the option to choose either flush, semi-flush or a combination of both elements, UltraTech Versatile removes the boundaries to provide totally flexible cleanroom design.

UltraTech Precision

UltraTech Precision is a conventional flush modular system for specialist cleanroom applications. With a choice of three core options – ECOsafe PIR, MF Core and Aluminium Honeycomb – UltraTech Precision is suitable for cleanrooms with distinct performance requirements.

Profile:	Flat
Metal Type:	Steel / Stainless Steel
Core Options:	QuadCore™*, Polyisocyanurate (PIR), MF Core** and Aluminium Honeycomb**
Application:	Suitable for internal applications
Lengths:	F: Up to 6m, SF: 1,2m to 11,75m (due to container restrictions)
Cover Width:	F: 300/600/900/1200mm, in increments of 10mm, SF: 1100mm
Thickness:	F: 80mm, SF: 50mm to 220mm
Environmental Rating:	May be Green Guide A+ rated subject to project specific assessment
Fire Rating:	SF: FM approved (50mm – 200mm only) Approved to FM 4882 for smoke sensitive occupancies (Dependent on panel choice. Please refer to product datasheets)

* Available with UltraTech Versatile only. ** Available with UltraTech Precision only.



Also available in FIBREfree core option.

FIBREfree



Coca-Cola Amatil, Indonesia



ModularisCold System



Scan QR Code
for Video

Bringing you ModularisCold: a game-changer in modular coldstore system design for unrivalled cost efficiencies, installation speed, increased capacity and lifetime performance.

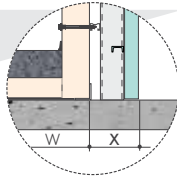
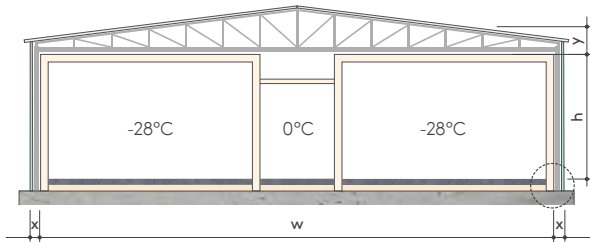
Kingspan's revolutionary modular cold store concept is created by the smart use of the load bearing capacity of sandwich panels according to strict rules of engineering. Structural analysis and calculations for this patented innovative system have been developed with the academic partnership of Kingspan and the esteemed Istanbul Technical University in Turkey based on international standards.

Kingspan's Turnkey Modularis Offering Includes:

- Simplicity and speed of construction
- Engineering calculations
- Design support services using BIM
- Robust construction details
- Heating and cooling solutions through approved partners
- Installation support
- Warranty

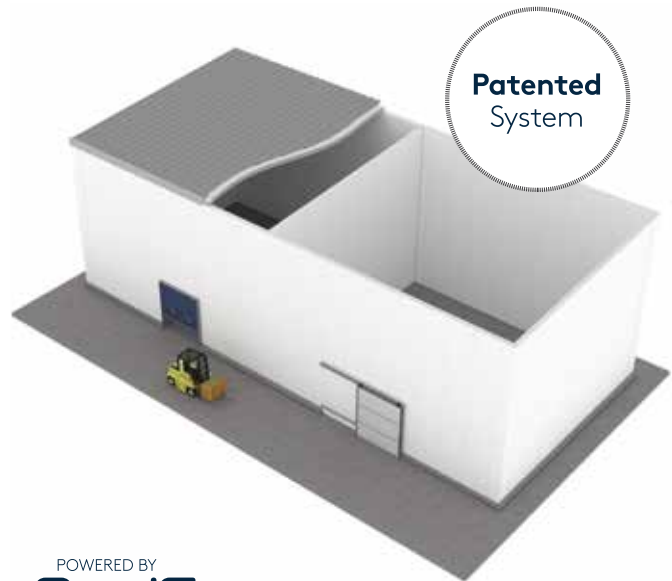
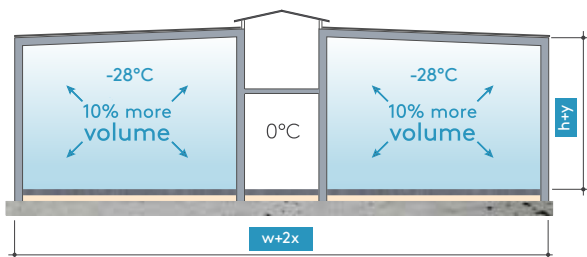
Conventional Cold Store

1000 Ton Warehouse Example



ModularisCold System

1000 Ton Warehouse Example



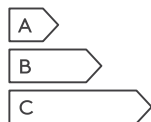
POWERED BY
QuadCore
TECHNOLOGY



Highly Durable
& Resilient



Innovative
System



Unparalleled
Energy Efficiency



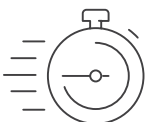
Self-supporting
System Eliminates
Steel Structure



Turnkey Project
Solutions



Reduced
Construction Costs



Accelerated
Build Speed



Increased
Storage Volume



Reduced
Operational Costs



Warehouse
Hygiene / Safety



Sustainable



Superior Fire
Protection

Door Systems

Cold Store Doors

100

Fire Protection
Systems

102



Industrial Doors

104



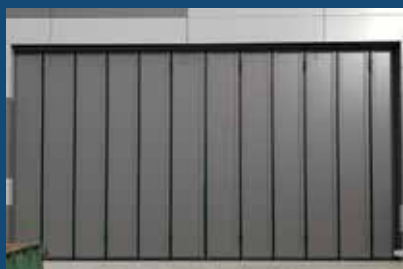
Loading Technology

105



Hangar Doors

106





Ekur - Burger King Logistics, Turkey



Baku Dry Port, Azerbaijan



Al Wadaq, Iraq



Brahim Amine, Morocco



Aldawaa, KSA

Polidoor is a subsidiary of Kingspan established in 2010 to provide cold storage door solutions to complement Kingspan's controlled environment solutions. The company has been growing rapidly year-on-year and the Polidoor name has become a reliable and established brand in the MEATCA region. The product offering has expanded significantly through innovation and research in the past decade. In recent years, Polidoor has evolved into a complete turnkey door solutions powerhouse. The company now has an expansive range of certified and quality assured doors in its portfolio, catering to any type of door requirements for commercial and industrial projects.

In addition to being a manufacturer and supplier of doors, Polidoor is a solutions provider offering the following suite of services to its customers:

- Door selection assistance based on project requirements
- Specification development and support
- Design assistance and technical support
- On site installation support
- 360° customer service

Polidoor Door Solutions

Cold Storage Doors



Polidoor's cold storage range includes service, hinged and sliding doors with fire-rated and non-fire-rated options. Each door is available in a range of custom sizes and features wrap around frames for easy installation.

Fire Protection Systems



In addition to having the first certified fire-rated cold storage door portfolio in the MEATCA region, Polidoor's fire protection solutions include fire-rated sectional doors, roller shutters and PVC curtains.

Industrial Doors



Polidoor's industrial doors range includes sectional doors, roller shutters and high-speed PVC doors. All models are available in a wide variety of configurations, with options designed specifically to meet a wide variety of business needs.

Loading Technology



Polidoor offers a complete range of products for loading stations. The complete loading technology offering includes electrohydraulic levellers combined with a sectional door and a retractable shelter.

Hangar Door Systems



Polidoor's hangar door systems are designed to cater for extremely large openings located around harsh environmental conditions such as high wind loads and extreme temperature cycles. With almost no limitation to size or configuration, they are the choice for airplane hangars, mining industry and shipyards.

Cold Storage Doors

Coldstore Hinged Door

Hinged doors are insulated and airtight elements which play a critical role in maintaining consistent temperatures in coldrooms.

These doors are generally used at entrance or exits of storage depots where stored goods are lifted out manually or at fire exits of rooms with large openings.

Thermal Performance and Dimensions

Temperature Range:	-40°C /ambient
Dimensions:	Single leaf: Min: 800 x 2000mm, Max: 1500 x 2500mm Double leaf: Min: 1400 x 2000mm, Max: 2400 x 3000mm
Thickness:	90mm, 100mm, 120mm, 140mm
U-Value:	0,30 - 0,20 W.m ² /K depending on thickness
Finishes:	Plastisol and INOX 304



Flip - Flap Doors

The Flip - Flap doors are single or double leaf doors having polyethylene sheets with stable oval porthole (fixed window) and protective bars to absorb shocks from carts, pallet trucks & forklifts. These doors are extremely durable and are used in areas where employees will constantly pass through with trolleys or forklifts. They are generally used to separate private and public areas e.g. a kitchen and the front of house area of a restaurant or a production line and storage corridor.

Thermal Performance, Dimensions and Weight

Door Dimensions:	Min: 900 x 2000mm Max: 2500 x 2500mm
Door Thickness:	15mm
Key Features:	Strike absorbers, food safe in accordance with HACCP standards, Easy-Pass installation, CFC and HCFC free.



Coldstore Insulating Rapid Speed PVC Door

Insulated Rapid Speed PVC Doors are designed to be used at interior passage ways of heavy traffic coldstores.

They prevent heat loss by minimising the time that the passage is open during the transit of goods coming in and out of the coldstores providing substantial savings in energy consumption.

Thermal Performance and Dimensions and Weight

Temperature Range:	-30°C /ambient
Dimensions:	Min: 800 x 2000mm, Max: 4000 x 4000mm Custom sizes available upon request
U-value:	3,3 (W.K/m ²)
Finishes:	PVC canvas



Coldstore Sliding Door

Sliding doors are generally used in environments where temperature control is needed and when an opening width of 1200 mm or more is required in order to save space, as they open out to the wall, occupying minimum corridor / room area when opened.

These steel-faced doors have insulating properties with beehive cells, perfect adhesion and door heating elements installed for defrosting.

Thermal Performance and Dimensions

Temperature Range:	-40°C /ambient
Dimensions:	Min: 800 x 2000mm, Max: 3000 x 6000mm
Thickness:	90mm, 100mm, 120mm, 140mm
U-Value:	0,30 - 0,20 W.m ² /K depending on thickness
Finishes:	Plastisol and INOX 304



Coldstore Cleanroom Door

Cleanroom doors are airtight, foodsafe doors that combine contemporary design and aesthetics with high acoustic and thermal performance.

Thermal Performance and Dimensions

Temperature Range:	0°C / ambient
Door Dimensions:	Single leaf: Min: 700 x 1700mm, Max: 1500 x 2400mm Double leaf: Min: 1200 x 1700mm, Max: 2000 x 2500mm
Thickness:	40mm
Finishes:	Plastisol and INOX 304



Coldstore Controlled Atmosphere Door

Controlled Atmosphere doors are sliding doors with guaranteed hermetic sealing, specially designed for temperature and humidity controlled environments with absolute gas tightness requirements.

Thermal Performance and Dimensions

Temperature Range:	0°C /ambient
Dimensions:	Min: 800 x 2000mm, Max: 3000 x 4000mm
Thickness:	90mm, 100mm, 120mm, 140mm
U-Value:	0,30 - 0,20 (W.K/m ²) depending on thickness
Finishes:	Plastisol and INOX 304



Fire Protection Systems

Coldstore Fire Rated Coldstore Sliding Doors

These specialised doors have the same function as sliding doors but provide fire protection up to 90 minutes for integrity and 60 minutes for insulation as per EN13501-2:2016.

Thermal Performance and Dimensions

Temperature Range:	-40°C / ambient
Dimensions:	Min: 1200 x 2000mm, Max: 3000 x 3000mm
Thickness:	120mm, 140mm
Fire rating:	E90, EI2 90, EI1 60 classification as per EN13501-2 when tested as per EN1634-1:2014+A1:2018
U-Value:	0,10 (W.K/m²) for 120 mm thickness
Finishes:	Plastisol and INOX 304



Coldstore Fire Rated Coldstore Hinged Doors

These specialised doors have the same function as regular hinged doors but provide fire protection up to 60 minutes for integrity and insulation as per EN13501-2:2016.

Thermal Performance and Dimensions

Temperature Range:	-40°C / ambient
Dimensions:	Min: 800 x 2000mm, Max: 1500 x 2500mm
Thickness:	120mm, 140mm
Fire Rating:	EI2 60 classification as per EN13501-2 when tested as per EN1634-1:2014+A1:2018
U-Value:	0,20 (W.K/m²) for 120 mm thickness
Finishes:	Plastisol and INOX 304



Fire-Rated Metal Doors

Fire-rated metal doors are available as single or double leaf configurations, and are designed to reduce fire spread and provide temperature and smoke control inside a building in case of a fire. They can provide fire protection up to 180 minutes. They are generally used in fire escape routes and fire exits in buildings.

Thermal Performance, Dimensions and Weight

Temperature Range:	0 / +10°C
Fire Rating:	EI60, EI90, EI120 or up to EI180 as per EN13501-2:2016
Door Dimensions:	Min: 800 x 1900mm, Max: 2100 x 2500mm
Door Thickness:	40mm, 60mm, 80mm
Finishes:	Plastisol and INOX 304, Fire-Rated Metal Doors Painted black or galvanized steel



Fire Rated Stacking Doors

Innovative composite materials. A new generation of fire-protecting doors with classification EI120-C5. Stacking door needs only little space and vanishes nearly invisible above a suspended ceiling. It requires due to its low weight no special preparation of the supporting construction. The panels may be decorated with paint or decor films. Electrically operated with gravity failsafe function ensuring closure even if power is lost.

Thermal Performance, Dimensions and Weight

Temperature Range:	0 / +40°C
Fire Rating:	E90, EI2 90, EI1 60 classification as per EN13501-2 when tested as per EN1634-1:2014+a1:2018
Door Dimensions:	Min: 800 x 800mm, Max: 6000 x 6000mm
Key Features:	<p>Lightweight sections, made from fire protective boards.</p> <p>Side guides with fire protective cover.</p> <p>Electrical drive with self-closing device to close the door without electrical power in case of alarm at a limited speed of max. 15 cm/s (gravity failsafe).</p> <p>Release device with backup battery to hold open the door even in case of failure of main power supply for some time.</p> <p>Siren with flasher being triggered automatically in case of a fire alarm (acc. to EN 12604).</p>



Fire Rated Roller Shutters

Fire-resistant rolling doors are designed to isolate a fire and prevent it from spreading to another room. They have a service life of around 30 years, which is estimated to be approx. 10,000 opening and closing cycles. They do not have thermal insulation properties.

Thermal Performance, Dimensions and Weight

Temperature Range:	0 / +40°C
Fire Rating:	E240 classification as per EN13501-2 when tested as per EN1634-1:2014+a1:2018
Door Dimensions:	Min: 2000 x 2000mm, Max: 7000 x 5000mm
Key Features:	<p>Rolling slates are made from hot dipped galvanised steel, equipped with fire alarm, photocells, safety edge and manual chain hoist with optional smoke sensor.</p>



Industrial Doors

Sectional Doors

Polidoor sectional doors are designed to simplify the installation process while providing the best values in terms of air permeability and thermal performance. These doors are generally used in warehouses and are equipped with dock levellers and dock shelters.

Thermal Performance, Dimensions and Weight

Wind Load: up to class 5

Air Permeability: up to class 4

Water Penetration: up to class 3

U-Values: 40mm panel - 1,0 W/m²k, 80mm panel

Door Dimensions: Min: 1000 x 1000mm, Max: 8000 x 9000mm

Door Thickness: 40mm, 80mm

Key Features: Panels are made with Kingspan foam, can be spring or power pack operated, CE marked, best in class thermal performance on a sectional door, thermal and fire safe products can be electrically or hydraulically operated, equipped with photocells and self-diagnostic motor.



Roller Shutters

Polidoor roller shutters are available as single skin or dual skin PU-insulated profiles produced from galvanised roll-formed steel sections. The complete structure is self-supported, can be offered in any colour and is equipped with a programmable electronic board. Their power pack is strictly heavy duty, as no counterbalance springs are used. Installation of roller shutters can be performed either inside or outside of the building (Weather protection/aesthetic covers are available).

Thermal Performance, Dimensions and Weight

Temperature Range: 0 / +50°C

Door Dimensions: Min: 1000 x 1000mm, Max: 10000 x 10000mm

Door Thickness: 40mm, 60mm, 80mm, 100mm

Key Features: EN 13241-1 compliant, available as insulated and wind class 4, equipped with photocells and self-diagnostic motor, full vision panoramic window, fully deployable section with side personnel wicket door, soundproof, Wind-lock protection system, safety edge, inductive loop, microwave movement sensor, remote controlled, hydraulic leveller interconnection.



Rapid Speed PVC Doors

Polidoor can offer a wide range of rapid speed PVC doors in several different configurations to meet any customer requirement. They can be installed in internal environments, offering quick access and enclosure of rooms with opening speed of up to 3m/sec. The structure of rapid speed PVC doors can be galvanised steel or aluminium according to customer's specifications. The PVC canvas has a thickness of 0,9mm as standard with other thickness options available upon request. All Polidoor rapid speed doors can be offered in self-repairing configurations upon request.

Thermal Performance, Dimensions and Weight

Temperature Range: -24 / +40°C

Door Dimensions: Min: 1000 x 1000mm, Max: 9000 x 10000mm

Opening Speed: ~1,0m/sec

Key Features: Up to 3m/sec opening speed option, photocells and safety edge provided as standard, option to connect to microwave sensor, inductive loops, pull cords, remote controls, wheeled Wind-lock model that can withstand mild pressure differences between rooms for buildings operating at overpressure, folding/rollup /self-repairing options available.



Loading Technology

Dock Levellers

Dock levellers are electro-hydraulic moving dock equipment that corrects height differences and eliminates the gap between warehouse facilities and transport vehicles creating a passable section during the loading and unloading of materials and goods. Based on the way they are configured, they can be embedded, self hanging, boxed or with constructed with precast structured metal frame. The hydraulic dock levellers are available at load capacities of 6 or 10 tons as standard and can bridge any type of transportation vehicle, from a small truck (W1820mm) all the way to a flat rack container protecting a span.



Dimensions and Weight

Temperature Range: -20 / +68°C

Platform Dimensions: Min: 1800 x 2000mm, Max: 2200 x 4000mm

Capacity: 6 tons, 10 tons static

Key Features: CE marking, non-skid platform, self-diagnostic motor, 'dead man' lift, compatible with new-generation fork lifts, safety barrier available supplied with prefabricated frame and protection bumpers, hinged lip or telescopic lip options available.

Dock Shelter

Dock shelters guarantee safe loading and unloading in all weather conditions. Heat loss during the loading is minimised, and sealing between loading track and shelter provides appropriate conditions, mainly isolating dust and rain. Dimensions can vary depending on the size of loading trucks, dock station door size and placement of the door in reference to ground level. These shelters seal the dock doors, providing thermal insulation on the inside while protecting the building from the outside.

Thermal Performance, Dimensions and Weight

Temperature Range: -30 / +80°C

Shelter Dimensions: According to door

Key Features: Dual steel frame made from galvanised steel, foldable PVC cover, flaps made from two-ply polyester with PVC top cover on both sides.



Dock Houses

Dock houses are used outside the main building structure, but are also connected to it. External dock platform, hydraulic dock leveller with bumpers, twin doors and dock shelter options are available depending on the customer's configuration requirements.



Hangar Doors

Sliding Doors

Aircraft hangars and naval industries require the use of specially designed doors for exceptionally large openings. Polidoor hangar doors are designed to withstand extreme levels of wind pressure along with high fluctuations in moisture and temperature. Doors are ground-supported with bottom rails made of laminated steel profiles. Cladding options are available with Kingspan insulated panels (up to 100mm) or with glazing. Polidoor offers turnkey solutions for sliding hangar doors as a single-source supplier.



Thermal Performance, Dimensions and Weight

Door Dimensions:	Maximum Height= 40m
Door Thickness:	Up to 120mm

Key Features

Operating Speed:	200mm/sec
U-Value:	1,53 W/m²K as standard
Wind Speed:	Up to 180 km/h (Wind Class 4)

Moving Post Doors

Polidoor can provide smart and efficient moving post system solutions for buildings that require oversized openings while having logistical restrictions due to size of the roller shutters to be transported to site. The moving post system's main feature is its capability to separate large openings into two (2), three (3) or five (5) sections with the help of motor-controlled movable posts. The system consists of standard Polidoor roller shutters and the moving posts, sharing a common rail at the top that is used to move roller shutter posts to the sides when required.



Thermal Performance, Dimensions and Weight

Door Dimensions:	Maximum Height= 12m Maximum Width= 60m
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Key Features

Operating Speed:	1200mm/sec
Wind Speed:	Up to 133 km/h (up to wind class 4)

Folding Doors

Polidoor folding doors are designed to operate in demanding commercial and industrial environments. They can be produced with Kingspan insulated panels or with glazing options. They can be opened by sliding to left, right or in both directions if required. The door frame is manufactured using extruded aluminium profiles. Polidoor folding doors can be operated manually or with 'dead man' control.



Thermal Performance, Dimensions and Weight

Door Dimensions:	Maximum Height= 12,5m
Door Thickness:	Up to 120mm

Key Features

Operating Speed:	200mm /sec
U-Values:	1,53 W/m²K as standard
Wind Speed:	Up to 102km/h (Wind Class 4)

Moving Post PVC Doors

Similar to the rolling shutter application, the moving post system can also be integrated with industrial PVC doors. The system consists of standard industrial PVC doors and the moving posts. The system's main feature is its capability to separate large openings into two (2), three (3) or five (5) sections with the help of motor-controlled movable posts.



Thermal Performance, Dimensions and Weight

Door Dimensions:	Maximum Height= 26m
	Maximum Width= 80m

Key Features

Operating Speed:	150-250mm
Wind Speed:	Up to 102km/h (up to windclass 5)

Oversized PVC Doors

Polidoor can provide a fast and flexible solution of oversized foldable PVC doors for buildings that require rapid operation of an oversized door. The complete system is divided into small subsections that are joined together during system assembly, which minimises the transportation requirements. Polidoor oversized foldable PVC doors can be equipped with single or dual PVC fabric, full vision panoramic strip, inductive loop, microwave movement sensors, remote control and all electronic accessories.



Thermal Performance, Dimensions and Weight

Door Dimensions:	Maximum Height= 26m
	Maximum Width= 80m

Key Features

Operating Speed:	150-250mm
Wind Speed:	Up to 102km/h (up to windclass 5)

Fabrications

Gutter Systems

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Flashings

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Top Hats

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Corners

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Fabrications Overview

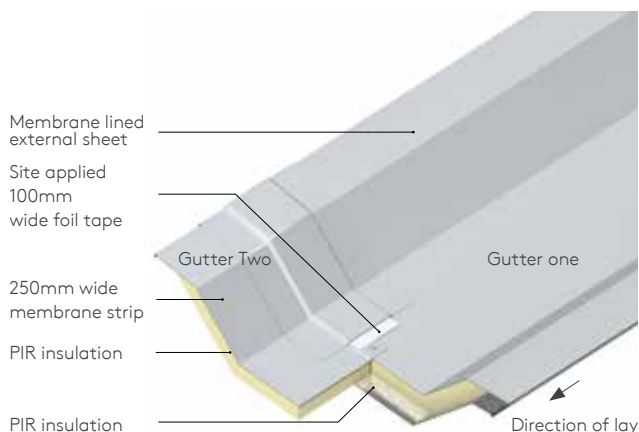
Our extensive experience in fabrication techniques, combined with state-of-the-art production equipment, enables us to create eye-catching and unique architectural features.

From aperture vents and reveals, including window pods and service penetrations, to insulated guttering, all our products are custom designed and fabricated for each project – in various colours, module sizes and shapes.

Membrane Lined Insulated Gutters

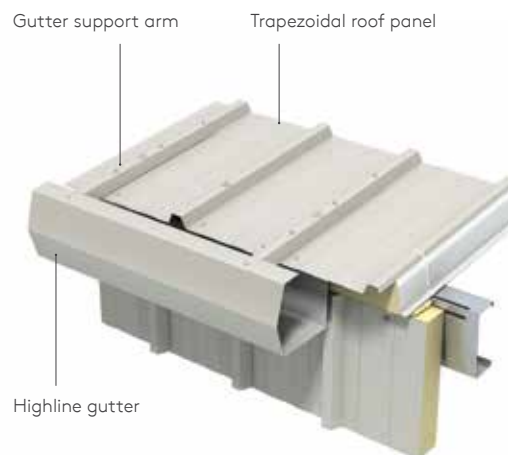
Our membrane lined insulated gutter is suitable for both boundary wall and valley-hip gutter applications. It is available in lengths up to 8m maximum, making it fast to install. For any additional information, please contact us. The system incorporates a closed-cell FM approved PIR insulation core. It is fully tested and provides U-values of 0,31 W/m²K and 0,20 W/m²K for 60mm and 100mm thicknesses, respectively.

Gutter components to complete the system, including internal and external corners, stop ends, T-sections, sumps, overflows, soakers, weirs and downpipes are available to order.



Highline Gutters

Lightweight pre-coated steel guttering is available in lengths up to 8m and is supplied in a corrosion-resistant range of finishes. Downpipes, brackets and accessories, including unique architectural hopper boxes, are also available to complete our gutter system.



Gutter Design Software

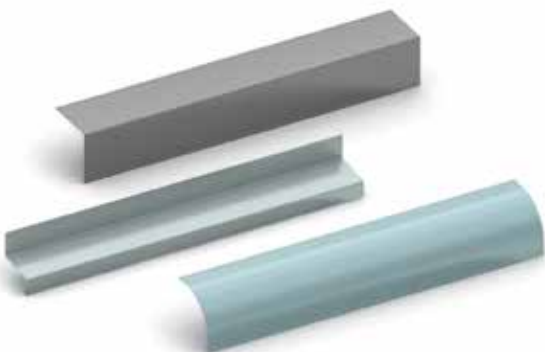
We provide a full gutter design package specifying all technical data to confirm that the gutter is of a functional design.

Flashings

From simple functional flashings to attractive aerofoil eaves, fascia panels and cappings, our range combines functionality, performance and true aesthetics to provide the finishing touch to any building envelope.

With a wide selection of materials, gauges and finishes available, the possibilities for fabricated flashings are endless. Material options include pre-coated steel, galvanised steel and aluminium combined with a selection of insulated backings. Secret-fix joint details are also offered, providing clean uninterrupted lines. A large range is held in stock to facilitate immediate supply.

Available in lengths up to 8m as standard. For longer lengths or further information, please contact our technical office.



Specialist Fabrications

From aperture units to wall panel louvres, all our specialist fabrication products are custom designed to suit individual project needs. The range includes:

- Aperture units, ventilators and ridge vents;
- Soffits, verges and fascias;
- Bullnoses and feature details;
- Soakers and upstands;
- Plank profiles;
- Spandrel panels; and
- Box, integrated and dummy louvres.

Louvres are manufactured to the same module depths as insulated panels, and incorporate compatible male and female joint extrusions to facilitate quick and efficient installation.



Top Hats

We manufacture a range of bespoke top hats designed to complement our insulated wall panel systems.

Our top hats provide solutions for vertical and horizontal applications, and steel top hats are available in standard or slimline dimensions to meet individual design requirements.

- Manufactured from high-quality steel and aluminium.
- Available in lengths up to 4m.
- Standard pre-cut finishes include plain mill aluminium, polyester (PES), silicone polyester coatings and polyester powder coating.
- Other finishes are available upon request.

Product Compatibility

Top hats are available for Architectural Wall Panel (AWP), and Trapezoidal Wall panels. All top hats are suitable for vertical applications, whilst our aluminium raised cap and rubber gasket options are also suited to horizontal applications. Dimensions will vary depending on the panel specification.

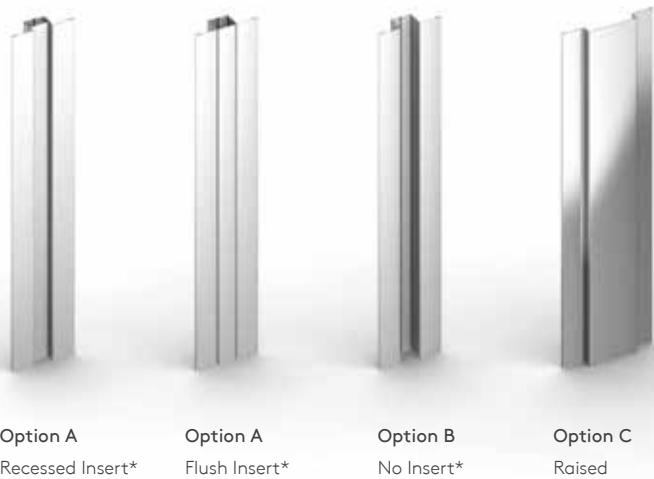
Available Lengths

Top hats are available in lengths up to 4m. For further information, please contact us using the details on the back cover page of the brochure.

Compatibility with Insulated Wall Panels (Laid Horizontally)

Material	Description / Options	Option	AWP	Trapezoidal Wall
Steel	Fitted with a recessed or flush steel insert	A	✓	✓
	With no insert	B	✓	✓
Steel	Raised feature detail	C	✓	•
Aluminium	Extruded top hat with a recessed aluminium insert	D	✓	•
	Fitted with a flush aluminium insert or a rubber gasket infill	E/F	✓	•

Steel Top Hat Profiles



Aluminium Top Hat Profiles



* Standard steel top hats shown above are for AWP insulated panels. Top hats for Trapezoidal Wall insulated panels are slightly different in design and dimensions. Please contact us using the detail on page 160 for panel-specific information.

Preformed Corners

Preformed corners are essential to completing the overall architectural finish of a building, and our range offers a wide choice of bespoke products to suit individual project needs.

Our range of insulated preformed corners combine insulation continuity with aesthetic design to offer an alternative solution to traditional corner flashings.

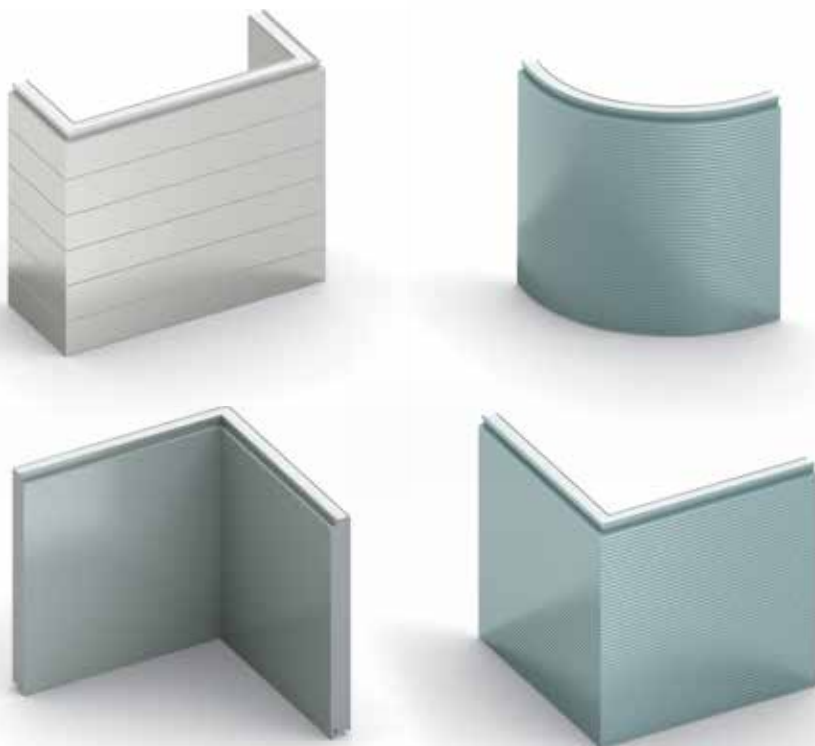
Our preformed corners can be curved, cranked or mitred vertically and horizontally, as well as internally and externally, to achieve a truly bespoke solution.

Preformed corners provide the following benefits:

- Smooth panel joints for a superior architectural finish whilst maintaining insulation continuity with the wall panels;
- A more aesthetically pleasing alternative to flashings;
- Compatibility with the entire range of Kingspan insulated wall panels and available in the same colour options; and
- Can be applied on the vertical or horizontal corners of the insulated panel.

Available Lengths

Minimum and maximum lengths, angles and radii will vary depending on the type of corner specified. For more information, please contact us using the details on the back cover page of the brochure.



Please note that our Curvewall, Louvre and Trapezoidal Wall insulated panels are not available in a curved option. They are mitred rather than cranked, due to the nature of the profiles.

Fall Protection Systems

SafePro2

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Safetraxx

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Saferidge

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Safeside

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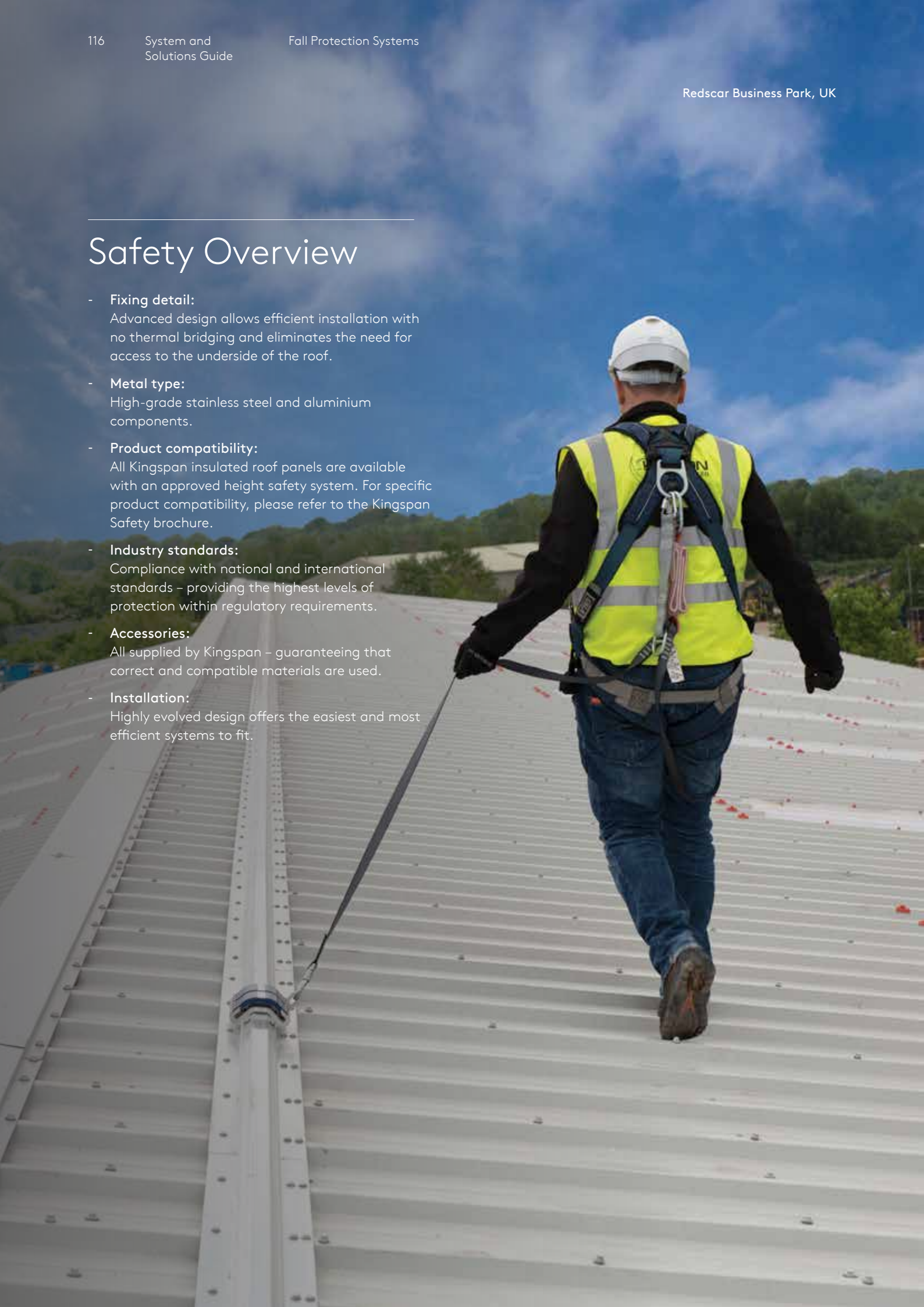
KingZip SF Walkways

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Safety Overview

- **Fixing detail:**
Advanced design allows efficient installation with no thermal bridging and eliminates the need for access to the underside of the roof.
- **Metal type:**
High-grade stainless steel and aluminium components.
- **Product compatibility:**
All Kingspan insulated roof panels are available with an approved height safety system. For specific product compatibility, please refer to the Kingspan Safety brochure.
- **Industry standards:**
Compliance with national and international standards – providing the highest levels of protection within regulatory requirements.
- **Accessories:**
All supplied by Kingspan – guaranteeing that correct and compatible materials are used.
- **Installation:**
Highly evolved design offers the easiest and most efficient systems to fit.



Safepro2

Safepro2 is an innovative personal fall protection system, designed to protect both the worker and the roof to which it is fixed. The Safepro2 system comprises a high-strength steel cable, supported on energy-absorbing roof anchor posts.

Roof anchor posts incorporate force minimisation technology, which limits the load transferred to the roof in a fall arrest event to less than 6kN. This is a significant improvement on previous types of force control posts, which applied a load of 10kN or more.

Safepro2 is one of the easiest systems available on the market when it comes to design, installation and usage.

Applications

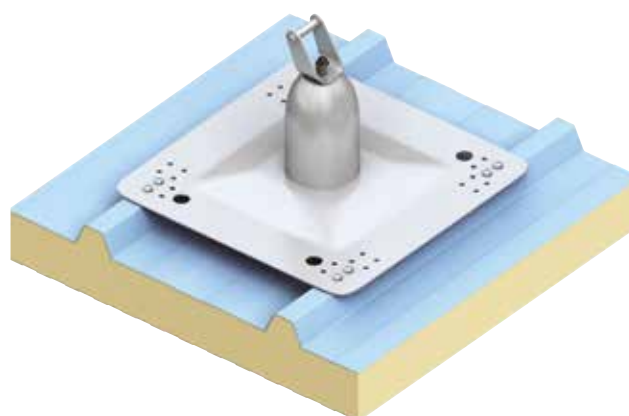
Safepro2 is fully compliant with BS EN 795: C, and has been designed specifically for use with various Kingspan insulated roof panel systems, including Trapezoidal Roof, Europanel and Kingzip Standing Seam Roof System. Safepro2 can be installed anywhere on the roof to ensure the most practicable solutions are provided.

Features & Benefits

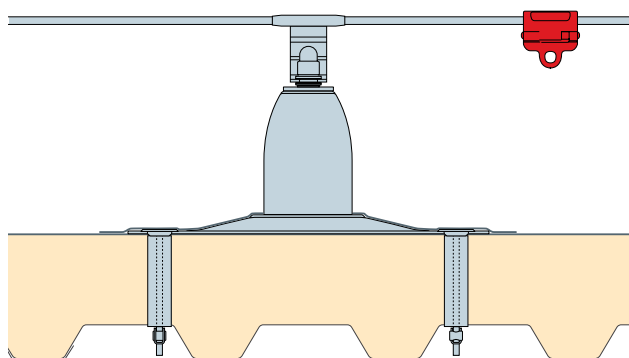
- Fully compliant with BS EN 795: C
- Fully compliant with ACR[M]002: 2009 Testing of Roof Anchors on Roof Systems
- Compatible with most Kingspan insulated roof panels
- Available with the Kingspan Guarantee
- Does not affect the Kingspan Insulated Panels Guarantee
- High-grade stainless steel and aluminium components, providing superior levels of corrosion resistance, durability and service life
- Advanced fixing design allows efficient installation without the need to access the underside of the roof
- Systems are fixed to the top skin only, with no penetration of the insulation, eliminating thermal bridging. (For Topdek membrane lined insulated panel applications, fully insulated toggle fixings are used)
- Can be installed to ensure safe installation and maintenance of Kingspan Energy Rooftop Solar PV
- Highly evolved force minimisation technology, can be installed during or after construction



Safepro2 with Kingzip SF Base Plate



Safepro2 with Trapezoidal Roof Panel Base Plate



Safepro2 with Membrane Roof Panel Base Plate

Safetraxx

Safetraxx is a robust personal fall protection system, comprising a high-grade precision-extruded aluminium rail. This flexible rail-based anchor system dissipates forces in a fall arrest event to minimise potential damage, and provide protection across the whole roof area.

Featuring a discreet low profile rail, the Safetraxx system minimises aesthetic impact whilst also providing high resistance to wind and snow loading. Various colour options are available to offer a complementary or contrasting finish.

Applications

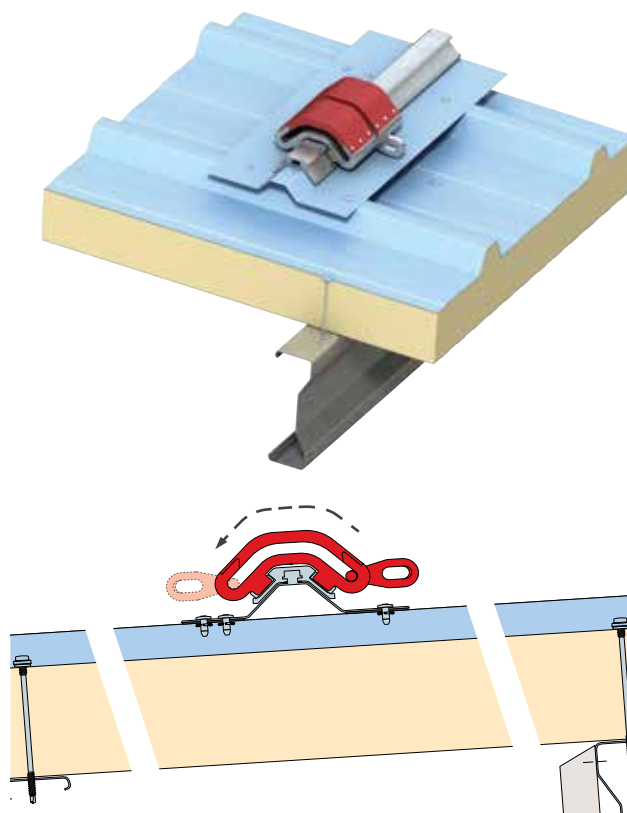
Safetraxx is fully compliant with BS EN 795: D, and has been designed specifically for use with various Kingspan insulated roof panel systems, including Trapezoidal Roof, Europanel and Kingzip Standing Seam Roof System.

Features & Benefits

- Fully compliant with BS EN 795: D
- Compatible with most Kingspan insulated roof panels
- Available with the Kingspan Guarantee
- Does not affect the Kingspan Insulated Panels Guarantee
- High-grade steel and aluminium components, providing superior levels of corrosion resistance, durability and service life
- Advanced fixing design allows efficient installation without the need to access the underside of the roof
- Systems are fixed to the top skin only, with no penetration of the insulation, eliminating thermal bridging
- Can be installed to ensure safe installation and maintenance of Kingspan Energy Rooftop Solar PV
- Can be installed during or after construction



Safetraxx with Trapezoidal Roof Panel



Saferidge

Saferidge is a personal fall protection system comprising a high-grade precision-extruded aluminium rail, factory-fitted to a steel ridge capping (which is bespoke and fabricated for each roof). This unique rail-based anchor system is designed to dissipate fall arrest forces across a wide roof area, minimising potential damage to the roof.

Featuring a discreet low profile rail, the Saferidge system minimises aesthetic impact whilst also providing high resistance to wind and snow loading. Various colour options are available to offer a complementary or contrasting finish.



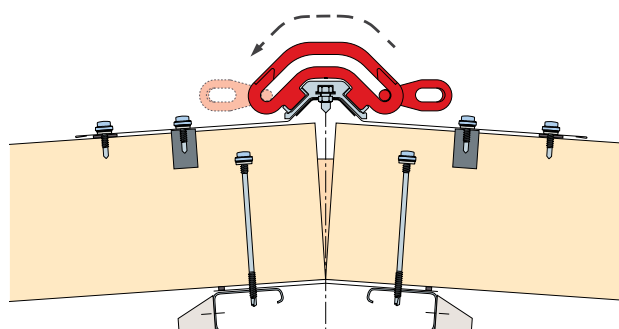
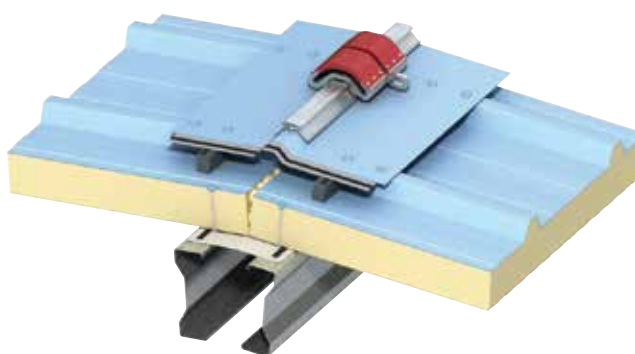
Saferidge with Trapezoidal Roof Panel

Applications

Saferidge is fully compliant with BS EN 795: D, and has been designed specifically for use with various Kingspan insulated roof panel systems, including Trapezoidal Roof, Europanel and Kingzip Standing Seam Roof System.

Features & Benefits

- Fully compliant with BS EN 795: D
- Compatible with most Kingspan insulated roof panels
- Available with the Kingspan Guarantee
- Does not affect the Kingspan Insulated Panels Guarantee
- High-grade steel and aluminium components, providing superior levels of corrosion resistance, durability and service life
- Advanced fixing design allows efficient installation without the need to access the underside of the roof
- System is fixed to the top skin only, with no penetration of the insulation, eliminating thermal bridging
- Can be installed to ensure safe installation and maintenance of Kingspan Energy Rooftop Solar PV



Safeside

Safeside is a cost-effective collective fall protection system for flat roof or suspended ceiling applications. This flexible guard rail system provides high levels of fall protection to the perimeter of the roof, and is suitable for accessible areas of any size and layout.

Installation is simple and quick, with no specialist tools required, and approved installation contractors can offer a cost-effective full design, supply and installation service.

Applications

Safeside is fully compliant with BS EN 13374: A, and is compatible with various Kingspan insulated roof panel systems, including Trapezoidal Roof, Europanel, Kingzip Standing Seam Roof System as well as cold store panels. Safeside can be used externally on pitched roofs up to 10°, and internal walk-on ceilings.

Features & Benefits

- Fully compliant with BS EN 13374: A
- Compatible with most Kingspan insulated roof panels, and suitable for suspended ceiling applications
- Available with the Kingspan Guarantee
- Does not affect the Kingspan Insulated Panels Guarantee
- High-grade steel components, providing superior levels of corrosion resistance, durability and service life
- No penetration of the insulation, eliminating thermal bridging
- Can be installed to ensure safe installation and maintenance of Kingspan Energy Rooftop Solar PV
- Can be installed during or after construction

Safeside with Controlled Environments Panel



KingZip SF Walkways

Kingspan aluminium walkways prevent roof panel damage caused by foot traffic, allowing safe, convenient access to and across the roof. The Kingspan walkway system is designed to complement the KingZip SF Standing Seam System.

The walkways are fixed to the roof profile without penetration of the sheeting, maintaining the KingZip SF System's integrity.

Kingspan has developed a system of anchoring clamps that is specifically designed for the KingZip SF Standing Seam System; however, the clamps will fit most profiles with a bulb-shaped upstand.

The KingZip SF clip is attached to the rib of the standing seam using a single stainless steel bolt and nut, which can be easily released to allow for the repositioning or the removal of the walkway.

An optional extra for this walkway is a cost-effective handrail with slim profile posts to one or both sides, using a 25mm-diameter aluminum tube and 8mm stainless steel wires, creating an unobtrusive and safe access walkway.

The handrail system is easy-to-install, with no need for special tools, hoists, cranes or specialist equipment.



Features & Benefits

- External frame - aluminium extrusion 6082TF alloy, thickness 2-3mm
- Support rails - aluminium channel 6082TF alloy 3mm thick
- Treads - trapezoidal profile, pan perforated, 30% free area, alloy AA 3105 H26 1.5mm thick
- Standard unit size - 3m x 600mm, with 100mm integral upstanding kick plates on each side
- Walkways can be laid to falls on roofs with a pitch of up to 6°. Levelling kits are available for roofs with a pitch over 6°
- Special sections, such as corner units and staircase units, are manufactured to order. Please contact our technical department for details
- Handrails are available as an optional extra upon request
- Units are of welded construction. Kingspan Insulated Panels offers a complete design, manufacture and supply service

*A variety of halter clamp solutions are available to suit particular applications.

Energy Solutions

Solar PV Systems

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Solar PV Systems

At Kingspan, we are committed to providing world-leading, energy-efficient and cost-effective solutions to satisfy our clients' sustainability goals. The system components are extensively tested for compliance with numerous industry standards and safety codes. Our solar systems allow our clients to benefit from the advantages of renewable energy while maintaining the airtightness and thermal performance of their buildings. This results in extensive cost savings and an environmentally friendly building solution. We provide our clients with a service bundle tailored to their facility in a transparent manner, including detailed offerings such as provision of project layout, system design, technical feasibility, financial feasibility, performance simulations, procurement, installation, commissioning and remote monitoring.

Solar Panel

The solar panels used in our systems are industry leading in material quality, build quality, performance and are certified by leading certification organisations. Various types of solar panel technology used on a project-by-project basis to ensure system optimisation. This is done with the purpose of maximising electricity production while minimising project costs for our clients.

Our Solar Panel Features

- Designed for commercial and industrial applications
- 20-year linear power output guarantee
- High output supported by high conversion efficiency
- Protection from dirt and dust via high-tech surface
- High performance in low-light irradiance
- Excellent mechanical load resistance (snow & wind)
- Certified resistance to salt and ammonia



Inverters

The inverters used in our systems, similar to the solar panels, are industry leading in material quality, build quality, performance and are certified by leading certification organisations. Inverters are chosen in various capacities and functions depending on system design to ensure optimisation and maximum output. Supplementary components and devices can be utilised to enhance functionality depending on project requirements.

Our Inverter Features

- High efficiency on all output levels
- Wide input voltage range
- Connectivity with supplementary devices
- Shade and temperature management
- Remote monitoring
- Easy wall mounting
- Module-tailored system design

Benefits of Using Solar Systems

- Diversification of energy supply
- Independent of electricity production
- Hedging against rapidly increasing electricity prices
- Low operational cost
- Proven operational life in excess of 25 years
- Corporate social responsibility

Daylighting Systems

Wall Light Systems

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Roof Light Systems

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Continuous Rooflight Systems

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Ventilation Systems

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Wall Light Systems

Day-Lite Architectural KS1000 DLAWP

Day-Lite Architectural is a secret-fix, translucent polycarbonate wall light system suitable for both vertical and horizontal applications. The system is fully compatible with all Architectural Wall Panel (AWP) and Optimo wall panels. The system is suitable for all building applications, except where the occupants or processes add significant quantities of water to the air, or where there are internal environments with low temperatures. Day-Lite Architectural is available in standard lengths of 1,2m to 8m. Longer lengths are available upon request. Additional costs and transport restrictions may apply for non-standard lengths.



Features & Benefits

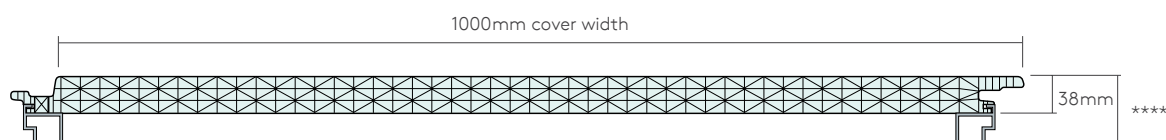
- Compatible with AWP and Optimo insulated wall panels
- Offers a low U-value of 1,3 W/m²K
- Available in lengths up to 8m
- Available in a range of colours

Product Reference	Thickness (mm)	Weight (kg/m ²)*	U _g -value (W/m ² K)*	Light Transmission (%)**	Solar Heat Gain Coefficient ***
KS500 DLKK Clear	40	4,0	1,3	60	0,64
KS500 DLKK Opal	40	4,0	1,3	49	0,57
KS500 DLKK Blue	40	4,0	1,3	20	0,51
KS500 DLKK Green	40	4,0	1,3	46	0,55
KS500 DLKK Purple	40	4,0	1,3	15	0,54
KS500 DLKK Red	40	4,0	1,3	27	0,56
KS500 DLKK Orange	40	4,0	1,3	34	0,59
KS500 DLKK Yellow	40	4,0	1,3	59	0,61

* The U-value has been calculated using the method required by the appropriate National Building Regulations.

** Light transmission, according to BS EN 410, is as measured on 600mm x 600mm samples.

*** Solar Heat Gain Coefficient (SHGC), according to BS EN 410, is the total solar energy that enters the interior of a building.



**** Aluminium spacers to suit panel thickness



Shanks Waste Management, UK



Chatterley Walley, UK

Wall Light Systems

Day-Lite Klick KS500 DLKK

Day-Lite Klick is a secret-fix wall light system typically suited for vertical applications. Featuring an innovative joint detail, this flexible wall light system is designed for standalone use where no integration with insulated panels is required, and is combined with an extruded aluminium frame to allow for use with a range of building materials including insulated panels, brick and render. The system is suitable for most building applications, although very low temperature environments may not be appropriate. If used as a rainscreen application, the cavity must be fully ventilated to prevent heat gain within the cavity. Day-Lite Klick is available in standard lengths of up to 12m. Longer lengths are available upon request.



Features & Benefits

- Designed for standalone use or integration with a range of building materials
- Offers a low U-value of 0,98 W/m²K
- Available in lengths up to 12m as standard
- Available in a range of colours

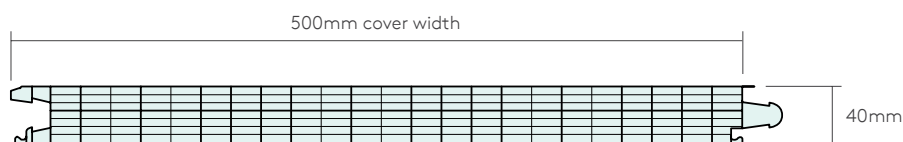
Product Reference	Thickness (mm)	Weight (kg/m ²)*	U _g -value (W/m ² K)**	Light Transmission (%)***	Solar Heat Gain Coefficient ****
KS500 DLKK Clear	40	4,0	0,98	60	0,64
KS500 DLKK Opal	40	4,0	0,98	49	0,57
KS500 DLKK Blue	40	4,0	0,98	20	0,51
KS500 DLKK Green	40	4,0	0,98	46	0,55
KS500 DLKK Purple	40	4,0	0,98	15	0,54
KS500 DLKK Red	40	4,0	0,98	27	0,56
KS500 DLKK Orange	40	4,0	0,98	34	0,59
KS500 DLKK Yellow	40	4,0	0,98	59	0,61

* A full system weight, including perimeter extrusions, will depend on project-specific design.

** The U-value has been calculated using the method required by the appropriate National Building Regulations.

*** Light transmission, according to BS EN 410, is as measured on 600mm x 600mm samples.

**** Solar Heat Gain Coefficient (SHGC), according to BS EN 410, is the total solar energy that enters the interior of a building.





Roof Light Systems

Day-Lite Trapezoidal KS1000 DLTR, KS1000 DLTR KOOL 1.6 FAS and KS1000 DLTR Plus

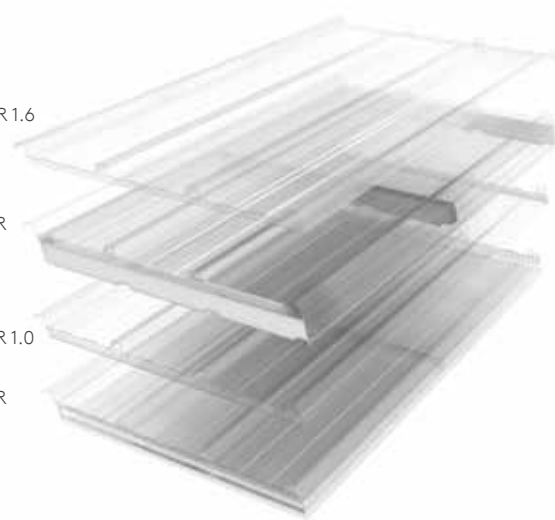
Designed to be an integral part of the Trapezoidal Roof panel system, Day-Lite Trapezoidal and Day-Lite Trapezoidal Plus are suitable for all building applications with a roof pitch of 4° or above after deflection, except where the occupants or processes add significant quantities of water to the air, or where there are internal environments with low temperatures.

Day-Lite Trapezoidal is a range of co-extruded, multi-wall polycarbonate rooflights. Two thicknesses are available, offering U-values of 1,6 W/m²K and 1.0 W/m²K. Day-Lite Trapezoidal Plus is a factory assembled co-extruded, multi-wall polycarbonate rooflight offering U-values of 1,3 W/m²K and 0,8 W/m²K. This premium polycarbonate rooflight system features a flush fixing which results in an enhanced flush internal finish, and has been designed specifically for quick and simple installation.

KS1000 DLTR 1.6

KS1000 DLTR
PLUS 1.3

KS1000 DLTR 1.0

KS1000 DLTR
PLUS 0.8

Features & Benefits

- Excellent light transmission with minimal degradation
- Opal diffused finish as standard, Clear also available or other finishes subject to minimum quantities
- Low solar heat gain
- High degree of colour fastness—will not discolour over time
- KS1000 DLTR KOOL 1,6 FAS offers enhanced light transmission and even lower solar heat gain
- Suitable for roof pitches of 4° or more
- Excellent air and weathertightness

Product Reference	Thickness (mm)	Weight (kg/m²)	U-value (W/m²K)*	Light Transmission (%)**	Solar Heat Gain Coefficient***
KS 1000 DLTR 1.6	24	3,3	1,6	61	0,57
KS1000 DLTR 1.0	40	6,0	1,0	41	0,44
KS1000 DLTR KOOL 1.6 FAS	to suit roof panel	4,25	1,6	58	0,48
KS1000 DLTR PLUS 1.3	to suit panel	5,17	1,3	55	0,52
KS1000 DLTR PLUS 0.8	to suit panel	6,23	0,8	40	0,43

* Based on an 80mm module with spacers at 1,8m centres. The U-values have been calculated using the method required by the appropriate National Building Regulations.

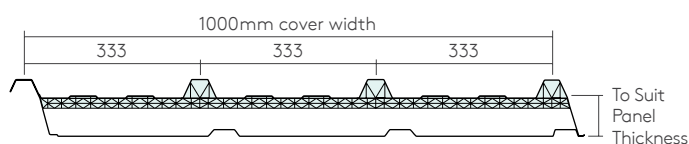
** Based on an opal polycarbonate finish. Light transmission, according to BS EN 410, is as measured on 600mm x 600mm samples.

*** Solar Heat Gain Coefficient (SHGC), according to BS EN 410, is the total solar energy that enters the interior of a building. In addition to the standard Day-Lite colour range, white (0.34 SHGC) is also available, offering enhanced SHGC performances. Please contact the Kingspan Technical Services Department for more information.

Day-Lite Trapezoidal KS1000 DLTR and KS1000 DLTR KOOL 1.6 FAS



Day-Lite Trapezoidal Plus KS1000 DLTR PLUS



Core Thickness (mm)	40	50	60	70	80	100	115	120	137	150
KS1000 DLTR 1.6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
KS1000 DLTR 1.0	✓	•	✓	✓	✓	✓	✓	✓	✓	✓
KS1000 DLTR PLUS 1.3	•	•	•	•	✓	✓	✓	✓	✓	✓
KS1000 DLTR PLUS 0.8	•	✓	✓	✓	✓	✓	✓	✓	✓	✓



Continuous Rooflight Systems

Day-Lite Vault KS1000 DLVLT

Day-Lite Vault, KS1000 DLVLT, is a translucent polycarbonate barrel vault rooflight for flat or low-pitch roofs. It allows high levels of natural light into buildings, providing excellent long-term light transmission, thermal and structural properties. Day-Lite Vault is designed specifically to integrate with Kingspan Topdek roof deck, and offers a UV-resistant daylighting system with a U-value of 1,1 W/m²K.



Features & Benefits

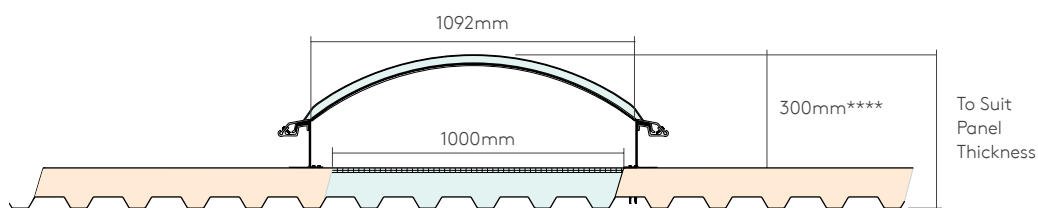
- Specially designed for integration with Topdek roof panels
- Suitable for flat and pitched roofs above 0,72° after deflection
- Offers a low U-value of 1,1 W/m²K
- Modular design allows any length continuous rooflight run to be achieved

Product Reference	Overall Height (mm)	Weight (kg/m ²)*	U _g -value (W/m ² K)***	Light Transmission (%)**	Solar Heat Gain Coefficient
KS1000 DLVLT	to suit panel	variable	1,1	41	0,41

* Weight is dependent upon the Topdek roof deck thickness specified. Please refer to the product data sheet for more information. The U-value has been calculated using the method required by the appropriate National Building Regulations.

** Based on a clear polycarbonate finish. Light transmission, according to BS EN 410, is as measured on 600mm x 600mm samples.

*** Standard U-value is shown above. Standalone U-value of FAU is 1,35 W/m²K. Solar Heat Gain Coefficient (SHGC), according to BS EN 410, is the total solar energy that enters the interior of a building. Please contact the Kingspan Technical Services Department for more information.



Application with KS1000 TD

**** Based on standard kerb profile.

Day-Lite Vault rooflight systems are supplied with three main components:

1. Factory assembled unit (FAU);
2. Barrel vaults;
3. End caps.

A standard kerb designed to be fixed at purlin centres is available and should be supplied by Kingspan, along with the standard clamps and other components.

Continuous Rooflight Systems

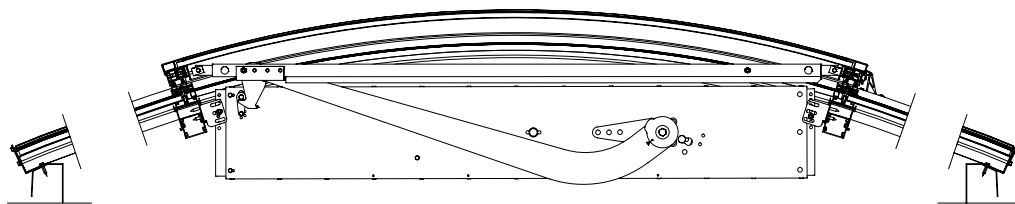
Arcade Rooflight

The Arcade Rooflight is a standard modular system for industrial and commercial roofs (for example warehouses or sport centres) with a roof slope of up to 20°. It can be used for pure daylighting, aeration or complex smoke and heat extraction – in new builds and refurbishment projects. The profile system is made from aluminium and the glazing material is multi-wall polycarbonate.



Features & Benefits

- Available in any length and in span widths of 1–6 m
- Different glazing options available for a wide range of requirements
- Extremely functional with a wide range of accessories
- Individually adaptable to static requirements
- Non-fragility to ACR (M)001:2014 Class B, when installed as per Kingspan details



Double flap with NSHE

- Installation position: Over the entire span of the arcade rooflight
- Flap Dimensions:
1000 x 2000mm
2060 x 2000mm
3120 x 2000mm
1000 x 2500mm
2060 x 2500mm
- SHE flap systems tested in accordance with EN 12101-2

Apex vent with NSHE

- Installation position: In the ridge with two frame profiles for mounting
- Flap dimensions:
870 x 2060mm
870 x 1000mm
1370 x 2060mm
1370 x 1000mm
1670 x 2060mm
1670 x 1000mm
- SHE flap systems tested in accordance with EN 12101-2

Glazing Options	Span Width in m	U _g Value (W/m ² ·K)	Sound Reduction (weighted S _{Ri})	Light Transmission ³⁾ (%)	g Value ³⁾ Opal (%)
PC 10/4	1 - 6	2,5 ¹⁾	19	61	61
PC 16/7	2 - 6	1,8 ¹⁾	21	45	46
PC 20/7	2,5 - 6	1,7	23	44	45
PC 10/4 + 10/4	1 - 6	1,7	24	37	43
PC 10/4 + glass mat + PC 10/4 ²⁾	1 - 6	1,7	24	27	33
PC 16/7 + 10/4 ²⁾	2 - 6	1,3	24	28	37
PC 16/7 + glass mat + PC 10/4 ²⁾	2 - 6	1,3	24	20	29
PC 16/7 + 6mm PETG	2 - 6	1,9	30	38	43
PC 10/2 with Aerotech Filling	1 - 4	2	21	74	71
PC 16/3 with Aerotech Filling	2 - 4	1,3	21	65	64
PC 20/3 with Aerotech Filling	2 - 4	1,1	21	63	63
PC 16/7 IR Control White	2 - 6	1,8 ¹⁾	21	22	31
PC16/7 + 16/7	2 - 6	1,1	25	20	29

¹⁾ Vertical installation

²⁾ Meets the requirements of 'hard roofing' B roof (t1)

³⁾ Opal glazing only, others available upon request

NSHE (T-05) from span of 1,35 m (national)

The specified sound reduction corresponds to the value of the glazing option

Arcade PLUS Rooflight



The modular Arcade PLUS Rooflight supplements the proven Kingspan rooflight systems with an energy-rated, high-quality, thermally separated, arched aluminium profile design. This makes it ideal for use in new builds and refurbishment projects with increased requirements on heat insulation, sealing and condensation protection; for example, heated industrial halls, trade fair halls, sport and exhibition halls, commercial and administration buildings. The system can be used for flat roofs with a maximum slope of 20° (larger slopes available upon request). Compatible with Kingspan frame systems or custom-built frame upstands. It features an intelligent connection system thanks to its retrofittable frame safety connection made of EPDM. The profile system is made from aluminium and the glazing material is multi-wall polycarbonate.

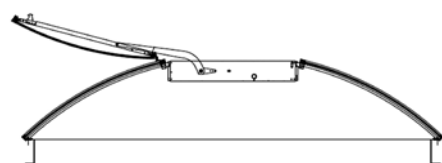


Features & Benefits

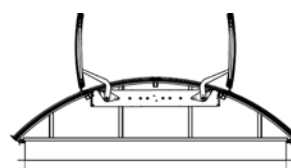
- Available in any length in span widths of 1–6 metres
- Individually adaptable to static requirements
- Different glazing options available for a wide range of requirements such as heat, sound, sun or emission protection
- High sealing integrity of the overall system
- Saving of heating costs due to highly efficient overall design
- Safety drainage in a labyrinth system

Glazing Options	Span Width in m	U _g -value (W/m ² K)	Sound Reduction Index	Light Transmission *** (%)	g-value *** opal (%)	Fire Behaviour
PC 16/7	2 – 6	1,8*	22	43	47	B-s1, d0
PC 20/7	2,5 – 6	1,7	19	54	47	–
PC 10/4 + 10/4	1 – 6	1,7	24	36	43	E
PC 10/4 + glass fleece + PC 10/4**	1 – 6	1,7	22	27	36	E
PC 16/7 + 10/4	2 – 6	1,3	24	19	22	E
PC 16/7 + glass fleece + PC 10/4**	2 – 6	1,3	24	27	33	–
PC 16/7 + 16/7	2 – 6	1,1	25	20	29	–
PC 16/7 + 6 mm PETG	2 – 6	1,9	30	38	43	E
PC 10/2 Aerogel	1 – 4	2	–	74	71	E
PC 16/3 Aerogel	2 – 4	1,3	–	65	64	E
PC 20/3 Aerogel	2,5 – 4	1,1	–	63	63	E
IR control	2 – 6	1,8	22	22	31	B-s1, d0

U_{ic} and U_{ic} inst can be calculated individually upon request. The Classic Plus Arcade Rooflight is supplied with a pitch of 1/5 or 1/9 depending on the glazing material and width.



Classic Plus Arcade Rooflight with ridge flap



Classic Plus Arcade Rooflight with double flap

Dimensions (m)	
0,87 x 1	1,37 x 2
0,87 x 2	1,67 x 1
1,37 x 1	1,67 x 2

Dimensions (m)	
1 x 2	1 x 2,5
2,06 x 2	2,06 x 2,5
3,12 x 2	–

* Vertical installation

** Meets the requirements of 'hard roofing' B roof (t1)

*** Opal glazing only, others upon request



Ventilation Systems

Day-Lite Kapture

The rooflight is triple-glazed using specially designed polycarbonate layers to maximise both light transmission and diffusion. The shape of the rooflight unit has been specially designed to capture the maximum level of light, even at low angles, so is ideal for use in geographical areas such as Northern Europe. The rooflight units are pre-glazed ready for installation into the prefabricated kerbs. The U-value of the polycarbonate glazing is 2,2 W/m² K. Through the utilisation of nano-prismatic technology, Kapture Skylights offer exceptional levels of light transmission, coupled with 100% diffusion and 100% UV resistance. Additionally, nano-prismatic technology eliminates glare and therefore hot spots, reducing heat gains in buildings. More light is directed to the work plane, providing the light levels required in any building for more hours than any

other rooflight. With these features, Kapture Skylights will help comply with daylighting requirements, new European Daylighting Guidelines and BREEAM H01 Visual comfort requirements.



Applications

KS700DLK, KS1400DLK, KS1500DLK & KS2750DLK rooflights are suitable for use with all Kingspan insulated roof panels as well as other roof systems. Frames include an integral condensation and drainage gutter which drains interior moisture to the outside.

Features & Benefits

- Unique shape captures low incident light and redirects it into the building
- Provides more hours of natural daylight than any other rooflight
- Nano-prismatic technology provides optimal performance: over 80% visible light transmission and 100% diffusion
- Non-fragility to ACR [M]001:2014 Class B, when installed as per Kingspan details

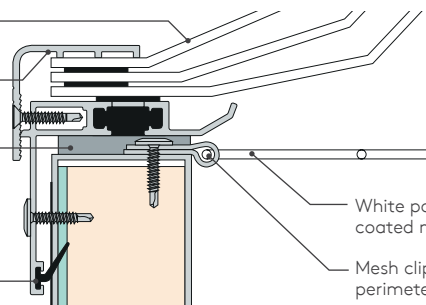
Triple-skin nano-prismatic polycarbonate lens assembly

Thermally broken aluminium frame & aluminium cap

Factory-applied tape for sealing to kerb

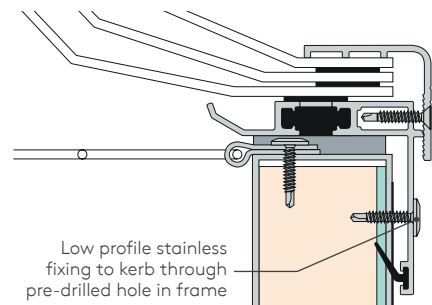
Low profile stainless fixing

Factory applied weather sweep flipper gasket



White polyester powder-coated mesh

Mesh clips to top of perimeter upstand



Product Reference	Diffusion	SHGC (g-value)	Light Transmittance (%)**
Standard	100%	0,70	83
Climate Control	100%	0,45	81

** Light transmission according to EN 410 is as measured on 600mm x 600mm samples.

Product Reference	KERB O.D		External Dimensions		Daylight Opening Dimensions			Skylight Weight (kg)	Kerb Height (mm)	Kerb Weight (kg)	Mesh Weight (kg)
	Length (mm)	Width (mm)	Length (mm)	Width (mm)	Length (mm)	Width (mm)	Area (m ²)				
KS700DLK	770	770	810	810	682	682	0,465	12	150 309	19,2 27,8	0,9
KS1400DLK	770	1550	810	1590	682	1462	0,997	24	150 309	29,0 41,7	1,9
KS1500DLK	1620	1550	1660	1590	1532	1462	2,24	44	150 309	39,5 57,0	4,2
KS2750DLK	2836	1550	2875	1590	2748	1462	4,018	62	150 309	54,5 78,7	7,6

Ventilation Systems

Day-Lite Kapture Air

The Day-Lite Kapture Air rooflight is suitable for use with all Kingspan insulated roof panels as well as other roof systems. The rooflight is triple-glazed using specially designed polycarbonate layers to maximise both light transmission and diffusion. The shape of the rooflight unit has been specially designed to capture the maximum level of light, even at low angles, so is ideal for use in geographical areas such as Northern Europe. The U-value of the 300mm skylight base is 1,3 W/m²K. The U-value of the polycarbonate glazing is 2,2 W/m²K. The optional wire mesh, fabricated for security, has been tested to withstand the impact of a 50kg weight (400mm in diameter) dropped from a height of 2400mm (BS EN 1873:2014 Class SB1200).

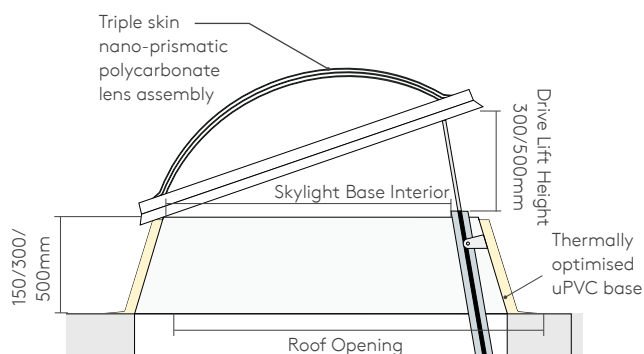
The rooflight features a motorised actuator for daily aeration and ventilation, as well as for exploiting daylight. Quick and easy installation. Can be installed in roofs with pitches up to 25° (max).

The rooflight base is manufactured in two materials:

1. Heat-insulating white uPVC, which is available in heights of 150mm, 300mm or 500mm
2. Galvanised steel, which is available in heights of 300mm, 400mm or 500mm

Features & Benefits

- Unique shape captures low incident light and redirects it into the building
- Provides more hours of natural daylight than any other rooflight
- Nano-prismatic technology provides optimal performance: over 80% visible light transmission and 100% diffusion
- Non-fragility to ACR [M]001:2014 Class B, when installed as per Kingspan details



Product Reference	Diffusion	SHGC (g-value)	Light Transmittance (%)**
Standard	100%	0,70	83
Climate Control	100%	0,45	81

** Light transmission according to EN 410 is as measured on 600mm x 600mm samples.

Product Reference	Roof Opening		Skylight Base Interior		Drive Lift	Free Ventilation Area m ²
	Length (mm)	Width (mm)	Length (mm)	Width (mm)	Height (mm)	
KS700DLK	930	930	730	730	300	0,44
KS700DLK	930	930	730	730	500	0,73
KS1400DLK	1720	930	1520	730	300	0,68
KS1400DLK	1720	930	1520	730	500	1,13
KS1500DLK	1720	1790	1520	1590	300	0,93
KS1500DLK	1720	1790	1520	1590	500	1,56
KS2750DLK	1720	2996	1520	2796	300	1,29
KS2750DLK	1720	2996	1520	2796	500	2,16

Day-Lite Kapture Smoke Vent

The Day-Lite Kapture Smoke Vent rooflight is suitable for use with all Kingspan insulated roof panels as well as other roof systems. The rooflight is triple-glazed using specially designed polycarbonate layers to maximise both light transmission and diffusion. The shape of the rooflight unit has been specially designed to capture the maximum level of light, even at low angles, so is ideal for use in geographical areas such as Northern Europe. The U-value of the 300mm skylight base is 1,3 W/m²K. The U-value of the polycarbonate glazing is 2,2 W/m²K. The wire mesh, fabricated for security, has been tested to withstand the impact of a 50kg weight (400mm in diameter) dropped from a height of 2,400mm (BS EN 1873:2014 Class SB1200).

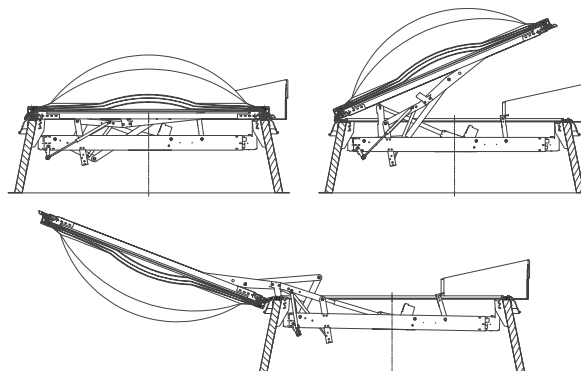
The rooflight features a natural smoke and heat extraction system via an electric 24v/48v actuator, with a 165° opening angle. The opener is triggered, at 68°C or via manual triggering at emergency triggering stations. Quick and easy installation. Can be installed in roofs with pitches up to 25° (max). For smoke ventilation areas (Aa) please refer to product data sheets. Note that all smoke safety solutions must be commissioned by Kingspan Light + Air or one of our certified partners.

The rooflight base is manufactured in two materials:

1. Heat-insulating white uPVC, which is available in heights of 300mm or 500mm
2. Galvanised steel, which is available in heights of 300mm, 400mm or 500mm

Features & Benefits

- Unique shape captures low incident light and redirects it into the building
- Provides more hours of natural daylight than any other rooflight
- Nano-prismatic technology provides optimal performance: over 80% visible light transmission and 100% diffusion
- Non-fragility to ACR [M]001:2014 Class B, when installed as per Kingspan details



Product Reference	Diffusion	SHGC (g-value)	Light Transmittance (%)**
Standard	100%	0,70	83
Climate Control	100%	0,45	81

** Light transmission according to EN 410 is as measured on 600mm x 600mm samples.

Product Reference	KERB O.D.		External Dimensions		Daylight Opening Dimensions			Skylight Weight (kg)	Kerb Height (mm)	Kerb Weight (kg)	Mesh Weight (kg)
	Length	Width	Length	Width	Width	Width	Area				
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(m ²)				
KS700DLK	770	770	810	810	682	682	0,465	12	150 309	19,2 27,8	0,9
KS1400DLK	770	1550	810	1590	682	1462	0,997	24	150 309	29,0 41,7	1,9
KS1500DLK	1620	1550	1660	1590	1532	1462	2,24	44	150 309	39,5 57,0	4,2
KS275DLK	2836	1550	2875	1590	2748	1462	4,018	62	150 309	54,5 78,7	7,6

Louvred Ventilation Units

Eura, Eura Excellent and Eura-R

The fall-through protected Eura and Eura-R are suitable for natural ventilation and smoke and heat extraction. They extract large amounts of air, smoke and heat within a short period of time and can be used for supplying air (façade) and for extracting air (façade and roof). The Eura-R variant also has side openings with integral rain gutter providing all-weather ventilation. The fins are made from toughened, corrosion-resistant aluminium (AlMg3). Optionally anodised or powder-coated (in RAL colours) upon request.

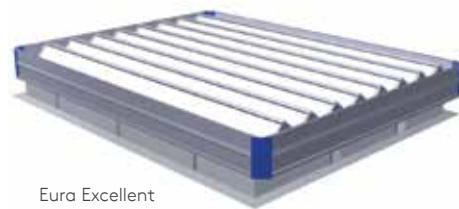
The Eura Excellent, with its strongly improved insulation value, is based on the Eura louvred ventilator which has already been applied for decades. This ongoing development is done in the context of enhancing the thermal insulation values. Using new materials and techniques helps achieve a U-value improvement of up to 56%. The Eura Excellent is perfectly capable of extracting large amounts of air and heat in a short time, and is suitable for both air supply (façade) and air extraction (façade and roof). The impact resistant, EN 12101-2 certified Eura Excellent can be supplied in two base versions with various high-insulating louvre types.

Features & Benefits

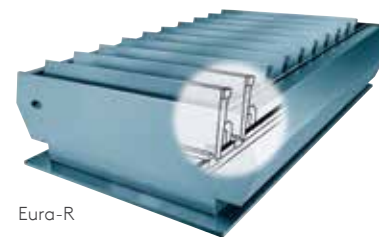
- Quick opening and closing
- Large selection of operating systems
- Flexible installation/set-up between 0° and 90° (Eura-R ≤ 30°)
- Optionally available with sound traps and wire nets
- Certified in accordance with EN 12101-2



Eura



Eura Excellent



Eura-R

Dimensions	
Type	Width (mm)
30	300
60	600
120	1200
180	1800
240	2400

The Eura can be combined in any width with all lengths. Special sizes available upon request. Eura-R is only available up to 1800mm maximum width.

Dimensions	
Length (mm)*	Number of Lamellas
720	3
940	4
1160	5
1380	6
1600	7
1820	8
2040	9
2260	10
2480	11
2700	12
2920	13
3140	14
3360	15
3580	16
3800	17

* note effective length of uninsulated high base is affected by 40mm.

Metal Skylight Bases

Weathering Frame

The Weathering Frame for the Classic Skylight Dome series consists of a peripheral, aluminium-reinforced and corner-welded hard uPVC profile that covers the roofing membrane connected to the Skylight Base by 100mm, providing enhanced protection from the weather. The fastening hinges for the Skylight Dome are fully premounted on the Weathering Frame.



Metal Skylight Base (Single-Skinned)

The Single-Skinned Skylight Bases with insulation are made of steel sheet and can be supplied in heights of 300, 400 and 500mm. The Skylight Base with the flat flange has 40mm-thick insulation integrated in it.



With insulation

Metal Skylight Base (Double-Skinned)

The Double-Skinned Metal Skylight Bases are constructed with aluminium on the exterior and steel on the interior. They are thermally separated, insulated and can be supplied in different heights. The Metal Skylight Bases are non-combustible and comply with European fire protection regulations as well as EN 13501 and BS 476 fire regulations.

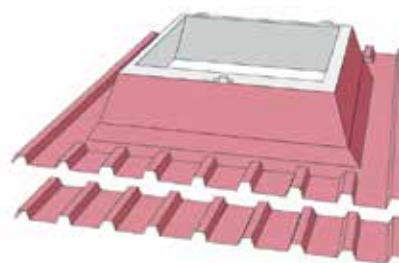


With profiled flange

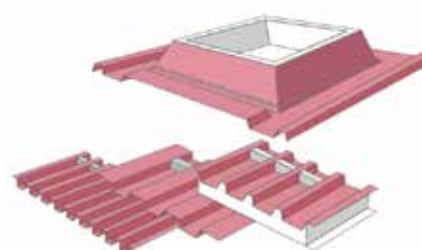
Metal Profile Connection (MPC)

A Metal Profile Connection (sometimes known as a soaker) is an optional external weathering sheet that can be used with uPVC bases or a single-skinned metal base to weather the roof penetration into a standard profiled metal roof system. Available to suit any trapezoidal metal roof system, the MPC is a simple, cost-effective method of installing skylights and access hatches into a profiled metal roof.

The profiled soaker sheet will be manufactured to order in accordance with individual requirements, and supplied with a minimum 200mm flange. At the time of ordering, the direction of lay and all profile dimensions will need to be provided. Sealants, fillers and fixings are not supplied as part of this kit.



The full-profiled version

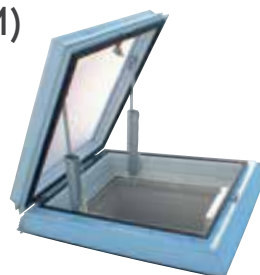


Roof Access Hatches

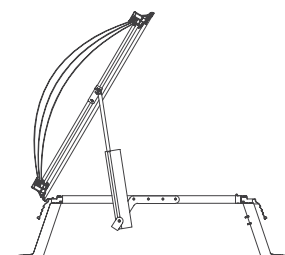
All access hatches (except Type 6/1 Access Hatch for retrofitting) are prefabricated at the factory, and available with uPVC bases or metal bases as standard. The opening angle depends on the type of access hatch and size of the opening. All access hatches are tested for non-fragility to ACR[M]001:2014 and achieve Class B when installed in accordance with Kingspan details.

Access Hatch with Linear Drives (Type M)

- Convenient opening and closing via two laterally attached linear drives and additional locking drive on the opening side
- Convenient entry and exit with all nominal sizes
- Opening and closing possible per vent switch
- Can be used for daily aeration and ventilation
- Secure fixing of the Skylight Dome in all positions
- Optionally available with ladder support point
- Can be used for geometric smoke dissipation



With linear drive



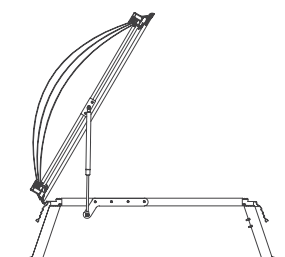
With drive, opening width 1100mm

Access Hatch with Gas Spring Fittings (Type G)

- Easy and controlled opening by means of two gas pressure springs fitted on both sides
- Secure fixing of the Skylight Dome in the open position through highly effective end position cushioning of all gas compression springs
- Locking of the Skylight Dome by a secure lock
- Access hatches can be configured to lock from the inside or outside, and can be used for entry or exit
- Standardised opening width of 1100mm



With gas spring fitting, chain drive and ladder bracket

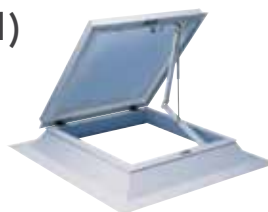


With gas pressure spring, opening width 1100mm

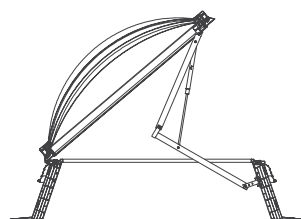
The Access Hatches Type M and Type G with additional chain drive can also be used for smoke dissipation – Set consists of Access Hatch Type M or Type G with additional chain drive, Classic Plus with Skylight Base and staircase control panel.

Access Hatch with Scissor Arm (Type 6/1)

The access hatch with scissor arm Type 6/1 is available for retrofitting existing Classic Skylight Domes. The integrated gas pressure springs provide the correct force for convenient opening and closing, in all available nominal sizes.



Secure locking mechanism with convenient lock



For retrofitting, opening width 850mm

Ecolux AT Roof Access Aluminium

Ecolux AT Access Hatch for installation on waterproofed roofs features a flat or angled insulated galvanised steel kerb and a multi-wall polycarbonate or aluminium cover. This access hatch offers easy access to the roof. It is fitted with several components: handrail, opening grill and ladder docking bar.

Access to the roof will be completed with Ecolux AT Roof Access skylights from Kingspan Light+Air | ECODIS. The straight metal kerb is made of galvanised steel and insulated. The skylight may be equipped with a side mechanism, a retractable handrail, a ladder and fixing bar, an opening RE protection grid, and can be closed with the locking system.



Modular Skylight Domes

Classic Skylight Dome

The Classic Skylight Dome is suitable for multiple applications and, depending on thermal insulation and soundproofing requirements, can be supplied with a variety of glazing options in different sizes to conform to the requirements of the EN 1873 for Skylight Domes. There are a variety of glazing options available to meet specific project requirements. However, all our Skylight Domes are glazed with three skins of polycarbonate in an opal finish as standard. Transparent glazing is available as an option. The Weathering Frame can be supplied with all dome and base options to deliver greater weathering protection.

Features & Benefits

- Available as fixed, ventable and smoke & heat extraction (SHE) units
- High-quality polycarbonate glazing, opal-coloured or in transparent upon request
- Stable border frame with moulded additional drip edge as protection against the elements in case of inclined assembly
- Non-fragility to ACR [M]001:2014 Class B, when installed as per Kingspan details



Shown here on a 500mm uPVC Skylight Base



With optional Weathering Frame

Version	U _g -value (W/m ² K)*	Light Transmission (%)	U _{RC}	g-value	Sound Reduction Index
Polycarbonate glazing, triple-skinned	2,2	43%	1,6	49%	22 dB**
Polycarbonate glazing, triple-skinned, impact-resistant	2,2	43%	1,6	49%	22 dB**

A variety of glazing options are available upon request. Light transmission and g-value figures given here are for opal finish.

ECOLUX Fixed / ECOBAC Fixed

ECOLUX and ECOBAC are point devices intended to equip the covers of 'waterproofing support' type or dry cover. These skylights allow an optimum supply of natural and free light. ECOLUX includes a metal curb bracket and a hood. ECOBAC consists of a polyester base and an illumination cover. For more information on our large selection of dimensions, please contact us.

Daylighting will be provided by ECOLUX-type (waterproofing cover) or ECOBAC-type (dry cover) skylights: insulated 350mm curb or polyester base (sandwich for insulated steel tanks) tinted on the cover and hood in cellular polycarbonate 10 or 16mm thick.



Metal Roof and Wall Profiles

Metal Wall Profiles

150



Metal Roof Profiles

154





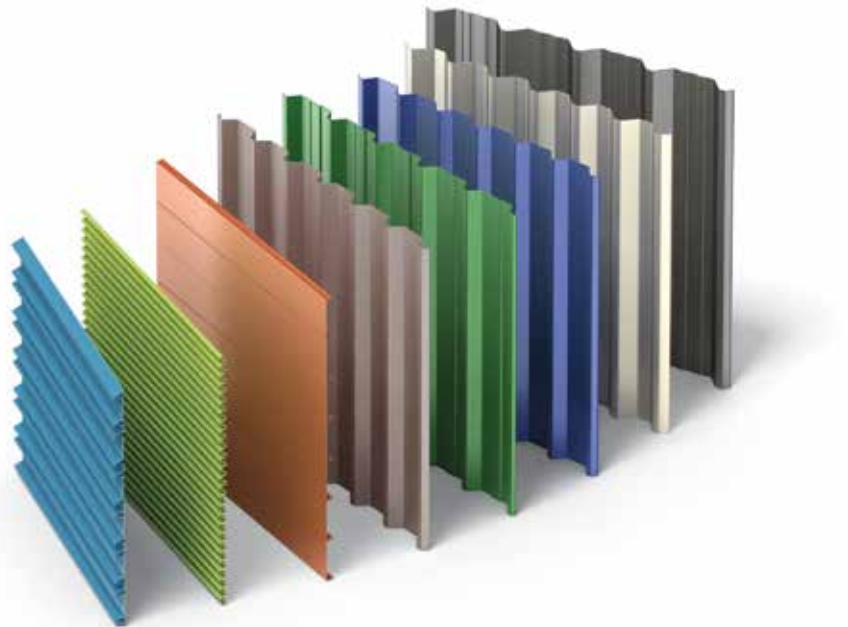
Metal Roof and Wall Profiles

Our profiled cladding and roofing products offer a diverse range of solutions, providing variety and interest to architects and building designers who seek uniqueness and differentiation for façade and roofing applications.

Many of these profiles can be combined with our insulated panel systems to offer high levels of thermal and fire performance.

The Kingspan Metal Roof and Wall Systems provide a cost-effective cladding solution for projects where single skin or twin skin sheets are required. They offer simple and fast installation and are flexible, allowing for curves in a design. All our Metal Roof and Wall Systems can be produced in a variety of gauges, profiles and colours and they offer good acoustic and thermal properties when used as part of an insulated panel façade system.

The perfect solution for single and twin skin roof cladding requirements, they are available in either steel or aluminium in varying gauges, a wide choice of trapezoidal profiles and a vast colour range.



Metal Wall Profiles

Kingspan's unique profiled wall cladding products, PL 300, HC35/800 MR and Sinusoidal, are available in a wide range of colours and coatings. They are designed to offer the architect and façade design professionals a unique and differentiated suite of options to add features, accents and diversity of appearance to wall cladding and façade applications which create outstanding visual impressions. They are single skin, non-insulated façade elements, but can be readily matched and installed onto Kingspan Karrier insulated wall panels to provide energy-saving, high-performance envelope systems.

PL 300



Product Features

Profiles:	PL 300	Cover Width:	Riblok: 300mm
Fixing Detail:	PL 300 is designed to be fixed directly to a bespoke carrier system where the wall sheets will snap into place	Fire Rating:	Carries a spread of flame and smoke index rating of 0. Twin skin systems using the profiles can be designed with mineral wool insulation to offer good through-the-wall fire performance
Metal Type:	Aluminium in gauge 0,9mm	Product Compatibility:	Any wall system vertically or horizontally laid or external cladding
Coatings:	See Kingspan coating selector and technical guidance document	Seals:	Simple end and side lap detail sealed with polybutyl tape or permanently elastic sealant
Colours:	Standard RAL colour chart		
Finish:	Mill finish or stucco-embossed		
Application:	Vertical and horizontal		
Lengths:	From 1,5m up to 11,8m		

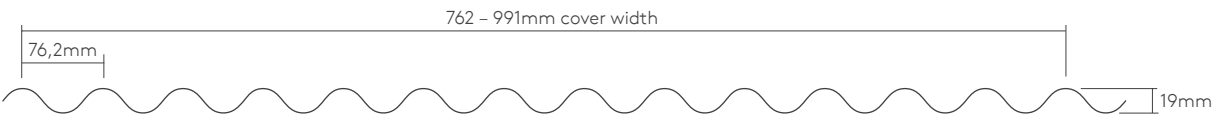
HC35/800 MR



Product Features

Profiles:	HC35/800 MR	Lengths:	From 1,5m up to 8m
Fixing Detail:	Through-fix system designed to be fastened with self-sealing fixings. Fixings can also be colour-coated or capped where visible for a cleaner aesthetic appearance	Cover Width:	800mm
Metal Type:	Aluminium in gauges 1,0mm and 1,2mm	Fire Rating:	Carries a spread of flame and smoke index rating of 0. Twin skin systems using the profiles can be designed with mineral wool insulation to offer good through-the-wall fire performance
Coatings:	See Kingspan coating selector and technical guidance document	Product Compatibility:	Any wall system vertically or horizontally laid or external cladding
Colours:	See Kingspan standard colour charts	Seals:	Simple end and side lap detail sealed with polybutyl tape or permanently elastic sealant
Finish:	Mill finish or stucco-embossed		
Application:	Vertical, horizontal and diagonal		

Sinusoidal



Product Features

Profiles:	Sinusoidal	Lengths:	From 1,5m up to 11,8m
Fixing Detail:	Through-fix system designed to be fastened with self-sealing fixings. Fixings can also be colour-coated or capped where visible for a cleaner aesthetic appearance	Cover Width:	762mm and 991mm
Metal Type:	Steel or aluminium in gauges 0,5mm, 0,7mm, 0,9mm, 1,0mm and 1,2mm	Fire Rating:	Carries a spread of flame and smoke index rating of 0. Twin skin systems using these profiles can be designed with mineral wool insulation to offer good through-the-wall fire performance
Coatings:	See Kingspan coating selector and technical guidance document	Product Compatibility:	Any wall system vertically or horizontally laid or external cladding
Colours:	See Kingspan standard colour charts	Seals:	Simple end and side lap detail sealed with polybutyl tape or permanently elastic sealant
Finish:	Mill finish or stucco-embossed		
Application:	Vertical, horizontal and diagonal		

Metal Wall Profiles



Kingspan profiled metal wall cladding is a range of profiles designed to complement our range of insulated panel products as well as offering a standalone selection of attractive wall cladding profiles. They are available in a wide range of profiles, coatings and colours, designed to add attractive and accented variations to all wall cladding and façade applications.

Profiles:	Trapezoidal TKS 1000-6, TKS 1000-4, WA200, 45/250, WA900, WA6, WB6,
Fixing Detail:	Through-fix system designed to be fastened with self-sealing fixings. Fixings can also be colour-coated or capped where visible for a cleaner aesthetic appearance
Metal Type:	Steel and aluminium in gauges 0,5mm, 0,6mm, 0,7mm, 0,9mm, 1,0mm and 1,2mm
Profile:	Perforated is available upon request
Coatings:	See Kingspan coatings selector
Colours:	See Kingspan colour charts for range of standard and non-standard colours
Finish:	Mill finish or stucco-embossed
Application:	Vertical, horizontal and diagonal
Lengths:	From 1,5m up to 11,8m
Fire Rating:	Carries a spread of flame and smoke index rating of 0. Twin skin systems using these profiles can be designed with mineral wool insulation to offer good through-the-wall fire performance
Product Compatibility:	Any wall system vertically or horizontally laid or external cladding
Seals:	Simple end and side lap detail sealed with polybutyl tape or permanently elastic sealant

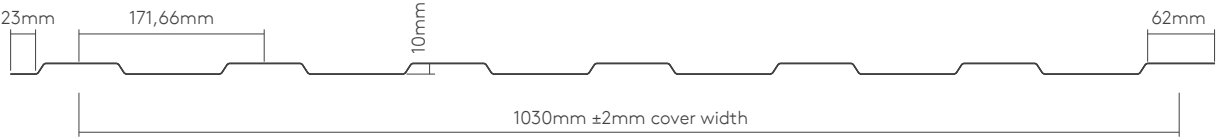
Product Specifications and Accreditations

Product Reference	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temperature	Fire Rating	
						LPCB	FM
KSD1000 RW	✓	✓	✓	✓	•	•	•

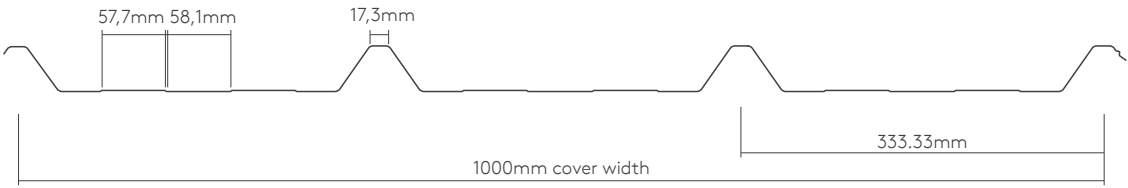
Gauges and Cover Widths

Steel Gauge Thickness	0,5mm	0,6mm	0,7mm	0,9mm	1,0mm	Cover Width
TKS 1000-6	4,71	5,65	6,59	•	•	1030mm
TKS 1000-4	4,59	5,51	6,43	•	•	1000mm
WA200	4,78	•	6,70	8,61	9,56	1000mm
45/250	4,70	•	6,59	8,47	9,41	1000mm
WA900 (outer)	4,65	•	6,50	8,36	•	900mm
WA900 (liner)	4,59	•	6,42	8,26	•	900mm
WA6	4,70	•	6,59	8,47	•	914mm
WB6	4,63	•	6,48	8,33	•	914mm

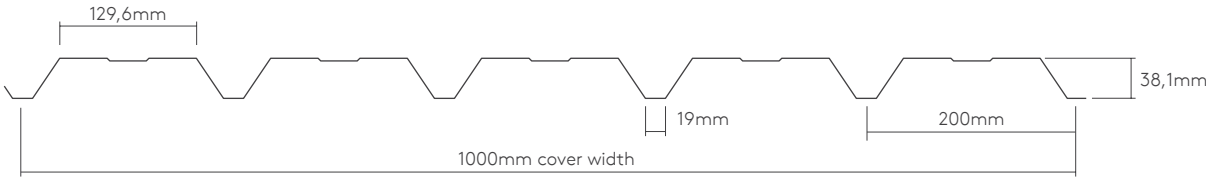
TKS 1000-6



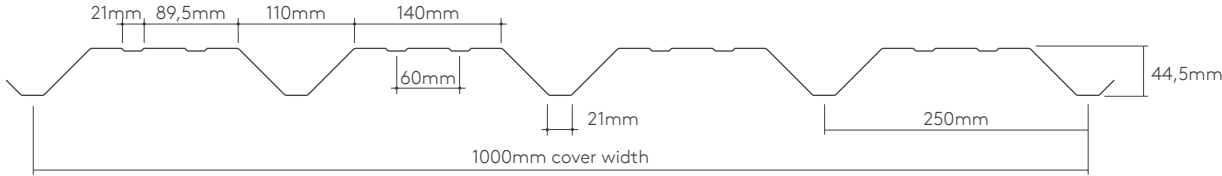
TKS 1000-4



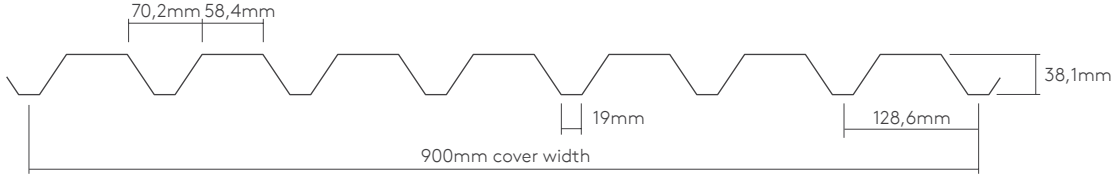
WA200



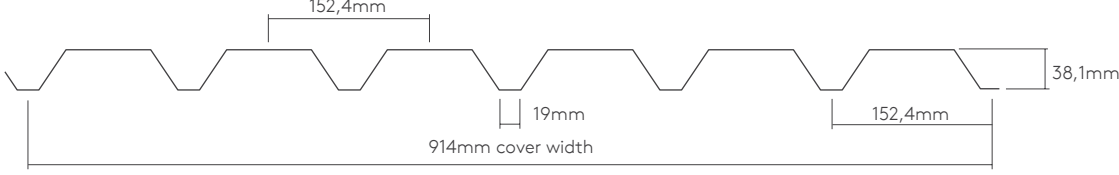
45/250



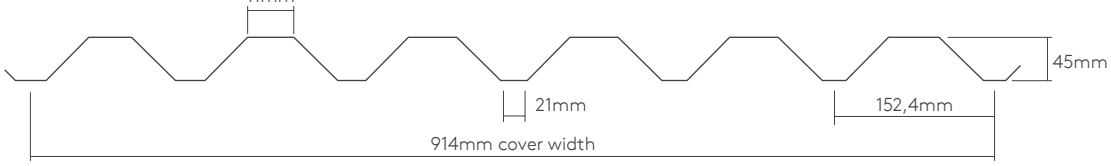
WA900



WA6



WB6



Metal Roof Profiles



Kingspan roll-formed metal roofing profiles are available in a wide range of cover widths, substrate thicknesses, coatings and colours to complement the Kingspan insulated panels range and KingZip range of roofing systems. They can be laid on pitched and curved roofed buildings.

Profiles:	Trapezoidal TKS 1000-4, WA200, 45/250, WA900, WA6, WB6
Fixing Detail:	Through-fix system designed to be fastened with self-sealing fixings
Metal Type:	Steel or aluminium in gauges 0,5mm, 0,6mm, 0,7mm, 0,9mm, 1,0mm and 1,2mm
Profile:	Perforated is available upon request
Coatings:	See Kingspan coatings selector
Colours:	See Kingspan colour charts for range of standard and non-standard colours
Finish:	Mill finish or stucco-embossed
Application:	For flat, pitched and curved roofing
Lengths:	From 1,5m up to 12m
Fire Rating:	45/250 profile sheet in either steel or aluminium carries a spread of flame and smoke index rating of 0. Twin skin systems using the 45/250 profile can be designed with mineral wool insulation to offer good through-the-wall fire performance
Product Compatibility:	Any roof system as a soffit, vertically or horizontally laid or external cladding
Seals:	Single corrugation side lap sealed with a strip sealant and riveted at 300-400mm centres, dependent on the roof pitch. In vertical situations or roof pitches above 15° the sealant strip can be omitted, although rivets are required.

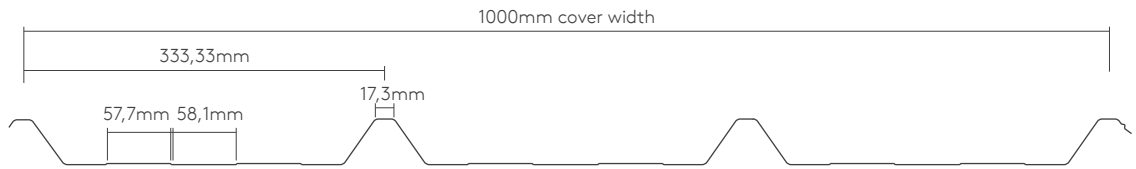
Product Specifications and Accreditations

Product Reference	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temperature	Fire Rating	
						LPCB	FM
KSD1000 RW	✓	✓	✓	✓	•	•	•

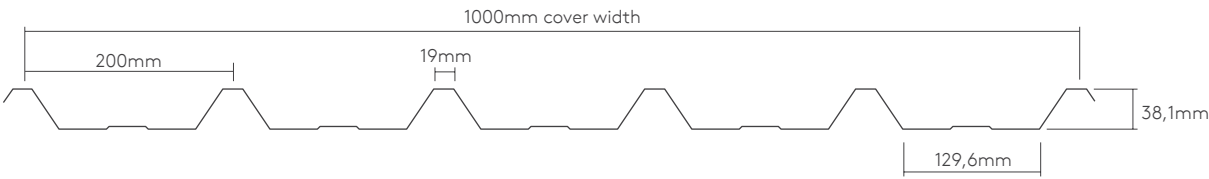
Gauges and Cover Widths

Steel Gauge Thickness	0,5mm	0,6mm	0,7mm	0,9mm	1,0mm	Cover Width
TKS 1000-4	4,59	5,51	6,43	•	•	1000mm
WA200	4,78	•	6,70	8,61	9,56	1000mm
45/250	4,70	•	6,59	8,47	9,41	1000mm
WA900 (outer)	4,65	•	6,50	8,36	•	900mm
WA900 (liner)	4,59	•	6,42	8,26	•	900mm
WA6	4,70	•	6,59	8,47	•	914mm
WB6	4,63	•	6,48	8,33	•	914mm

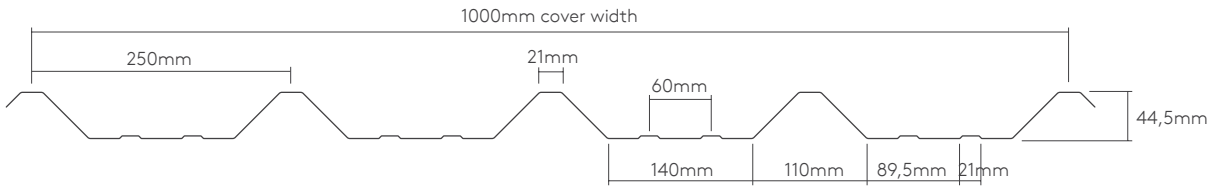
TKS 1000-4



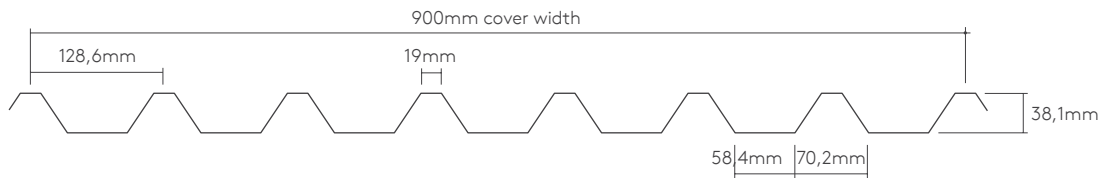
WA200



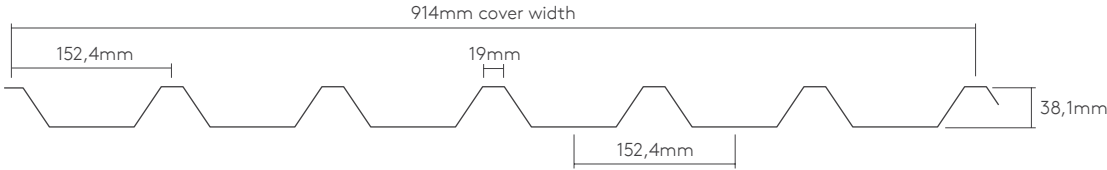
45/250



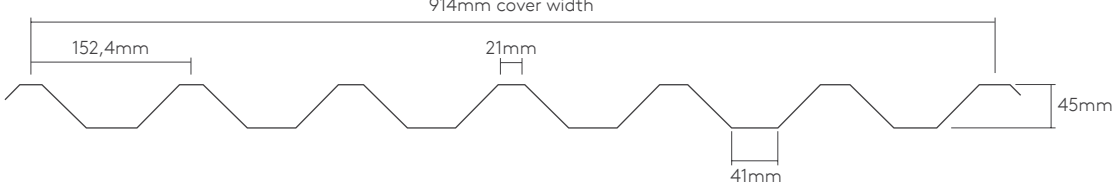
WA900



WA6



WB6



Structural Steel Products

Multideck Floordecks

160



Kingspan
Structural Decks

162



Kingspan Liner Trays

163





Structural Steel Products

A range of cold roll-formed structural decking and liner tray products.

Multideck Floordecks

Multideck profiles are high-performance profiled galvanised steel decks manufactured in high-yield steel for use in the construction of composite floor slabs.

The range consists of four different profiles, including 50-V3, 60-V2, 80-V2 and 146.

The unique profile requires less concrete than other decks to achieve any given slab thickness and can span up to 6m unpropped and in lengths of up to 14m.



Kingspan Structural Decks

Structural decking offers a simplified method of roof construction by dispensing with the need for purlins. The liner sheet is used to span the structural frame of the building, resulting in fewer components and giving clean, uncluttered lines to the interior of the roof structure. Use of structural decking can also stiffen the structure and act as a bracing if required.

Acoustic properties can be designed into the system, thereby engineering sound absorption and transmission characteristics.

Structural decks will span up to 10m, dependant on the design load, and once in place provide a strong, walkable surface for the rest of the roofing works.



Kingspan Liner Trays

In wall applications, trays can be used horizontally, replacing traditional sheeting rails spanning the portal frames of the building.

The shallow profile of the tray pan creates a clean, uncluttered finish to the interior of the wall. Also, the edges of the trays serve to support the insulation material, thus preventing insulation 'slump' and consequent cold spots.

Trays can also be used in roofing applications and can be supplied with perforations to the flat surface, if required, for acoustic applications.



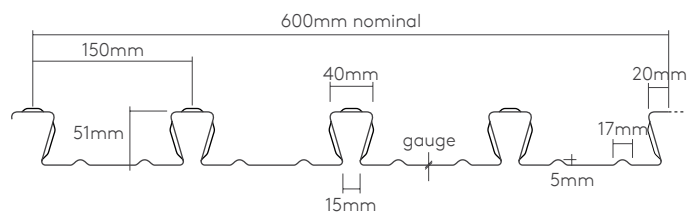
Multideck Floordecks

The large range of Multideck gauge thicknesses available allow a much closer matching of design requirements and deck performance. The Multideck ranges allow for quicker installation as they require fewer panels and sidelaps and require no temporary supports under most conditions.

Multideck 50 Floordeck

Key Features:

- 50mm 'dovetail' profile maximising deck bond to concrete;
- Spans up to 4m unpropped;
- Metal thickness 0,9 to 1,2mm;
- 1 hour fire performance; and
- Acoustic robust solution.



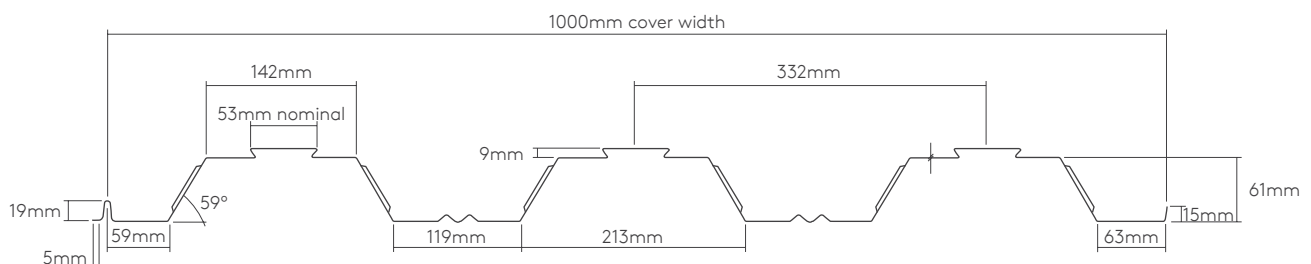
Product Features

Profiles:	Multideck 50
Metal Type:	0,9mm, 1,0mm and 1,2mm gauge. Steel strip with a guaranteed minimum yield strength of 350N/mm ²
Lengths:	Up to 12m
Slab Depth:	From 100 to 250mm
Reinforcement:	Mesh or bar
Embossment:	Unique embossments on each face of the 'dovetail' provide mechanical connection to enhance the bond between the concrete and the deck
Fire Performance:	Up to 4 hours

Multideck 60 Floordeck

Key Features:

- Spans up to 4,5m unpropped;
- 1 hour fire performance; and
- 20% less concrete;
- 1m cover width.



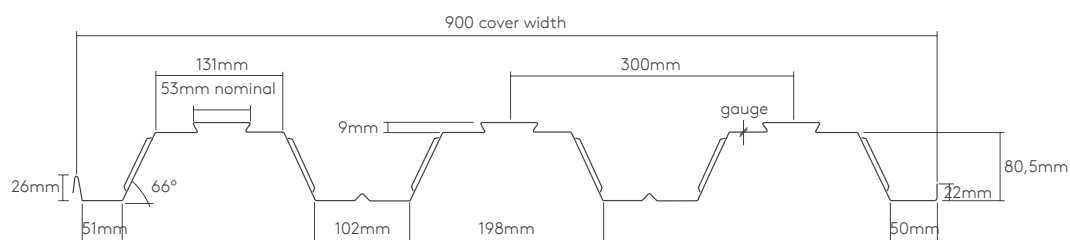
Product Features

Profiles:	Multideck 60
Metal Type:	0,9mm, 1,0mm, 1,1mm and 1,2mm gauge. Steel strip with a guaranteed minimum yield strength of 350N/mm ²
Lengths:	Up to 12m
Slab Depth:	From 120 to 250mm
Reinforcement:	Hot rolled bars or fabric
Embossment:	Raised diagonal embossments in opposite directions on each face of the webs provide mechanical connection to enhance the bond between the concrete and the deck
Fire Performance:	Up to 1 hour with 130mm slab depth

Multideck 80 Floordeck

Key Features:

- Spans up to 5,4m unpropped;
- Efficient concrete design; and
- Up to 4 hours fire performance.



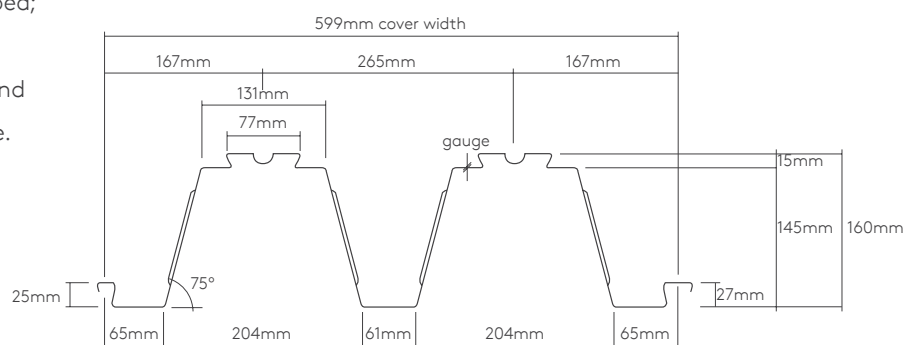
Product Features

Profiles:	Multideck 80
Metal Type:	1,0mm, 1,1mm and 1,2mm gauge. Steel strip with a guaranteed minimum yield strength of 350N/mm ²
Lengths:	Up to 12m
Slab Depth:	From 130 to 250mm
Reinforcement:	Hot rolled bars or mesh
Embossment:	Raised diagonal embossments in opposite directions on each face of the webs provide mechanical connection to enhance the bond between the concrete and the deck
Fire Performance:	Up to 1 hour with 140mm slab depth

Multideck 146 Floordeck

Key Features:

- Long span up to 6,2m unpropped;
- Ideal for car park deck;
- Steel thickness 1,0 to 1,2mm; and
- Up to 4 hours fire performance.

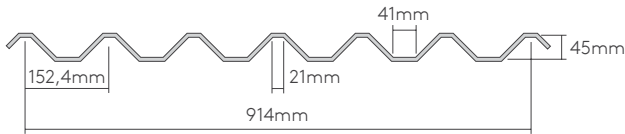


Product Features

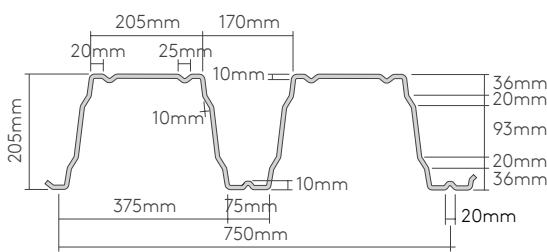
Profiles:	Multideck 146
Metal Type:	1,2mm and 1,5mm gauge. Steel strip with a guaranteed minimum yield strength of 350N/mm ²
Lengths:	Up to 14m
Slab Depth:	From 215 to 305mm
Reinforcement:	Steel or hot rolled bars
Embossment:	Raised diagonal embossments in opposite directions on each face of the webs provide mechanical connection to enhance the bond between the concrete and the deck
Fire Performance:	Up to 120 minutes

Structural Decks

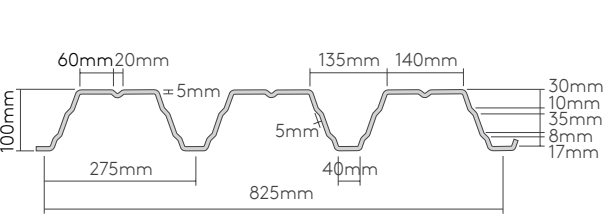
WB6



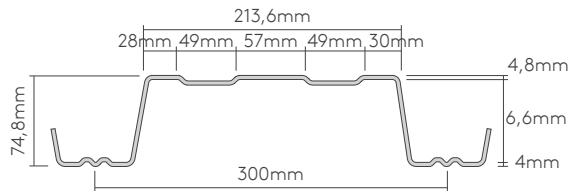
RD 200/750



RD 100/825

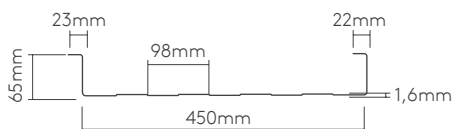


RD 75/300

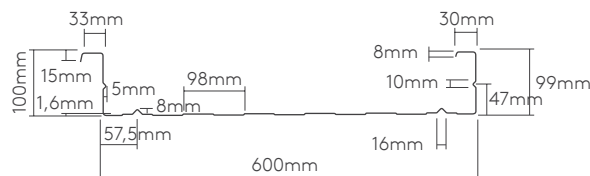


Structural Liner Trays

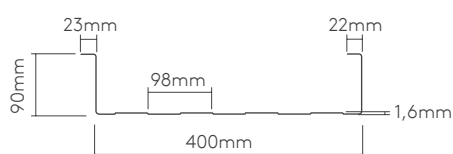
RT 65-450



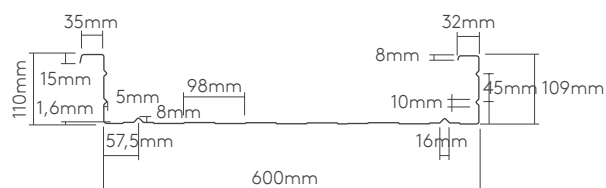
RT 100-600



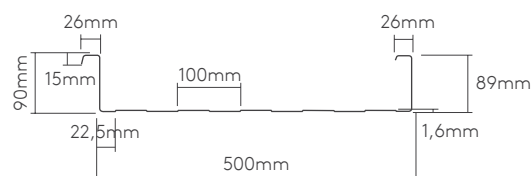
RT 90-400



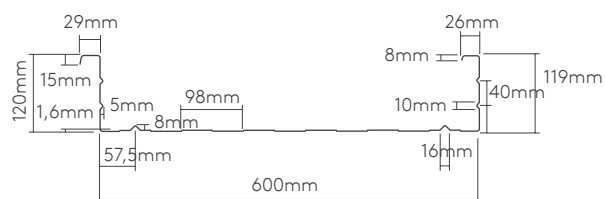
RT 110-600



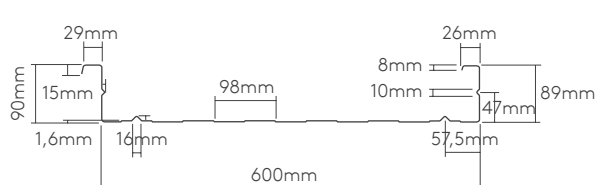
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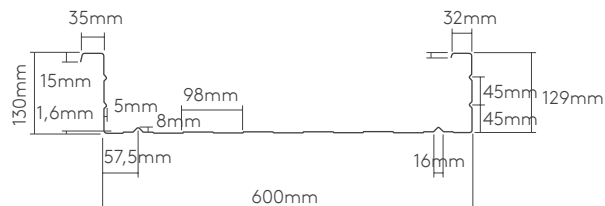
RT 120-600



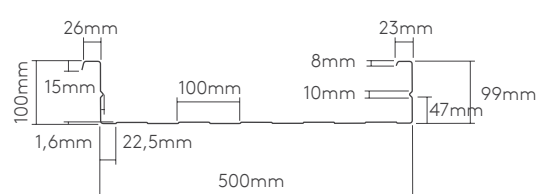
RT 90-600



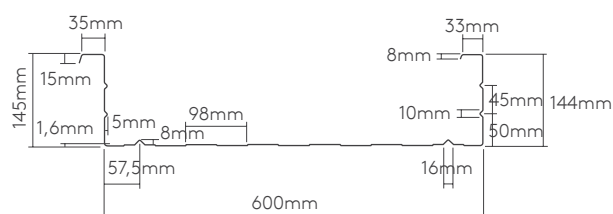
RT 130-600



RT 100-500



RT 145-600



Please note: All profiles are perforated.

Service and Support

Technical Support



From project conception to completion, our dedicated in-house teams are available to support all of your project needs.



Technical Services

Our technical services team provides the industry with bespoke project advice and assistance. This includes various calculations such as fastener calculations, structural calculations, U-value/condensation risk analysis, thermal modelling, energy modelling, building information modelling (BIM), acoustic calculations and rainwater drainage calculations.

The team also provides project support by generating and issuing specifications, product information, construction details, installation guides, colour charts and more. These are all complimentary services.

Our technical services team in the MEATCA Region are building envelope specialists with vast experience in giving bespoke technical assistance and advice to architects, installers, contractors, insurers, building owners and the general construction industry.

Turkey Technical Team:

Tel: +90 (212) 236 60 32

Email: info.turkey@kingspan.com

UAE Technical Team:

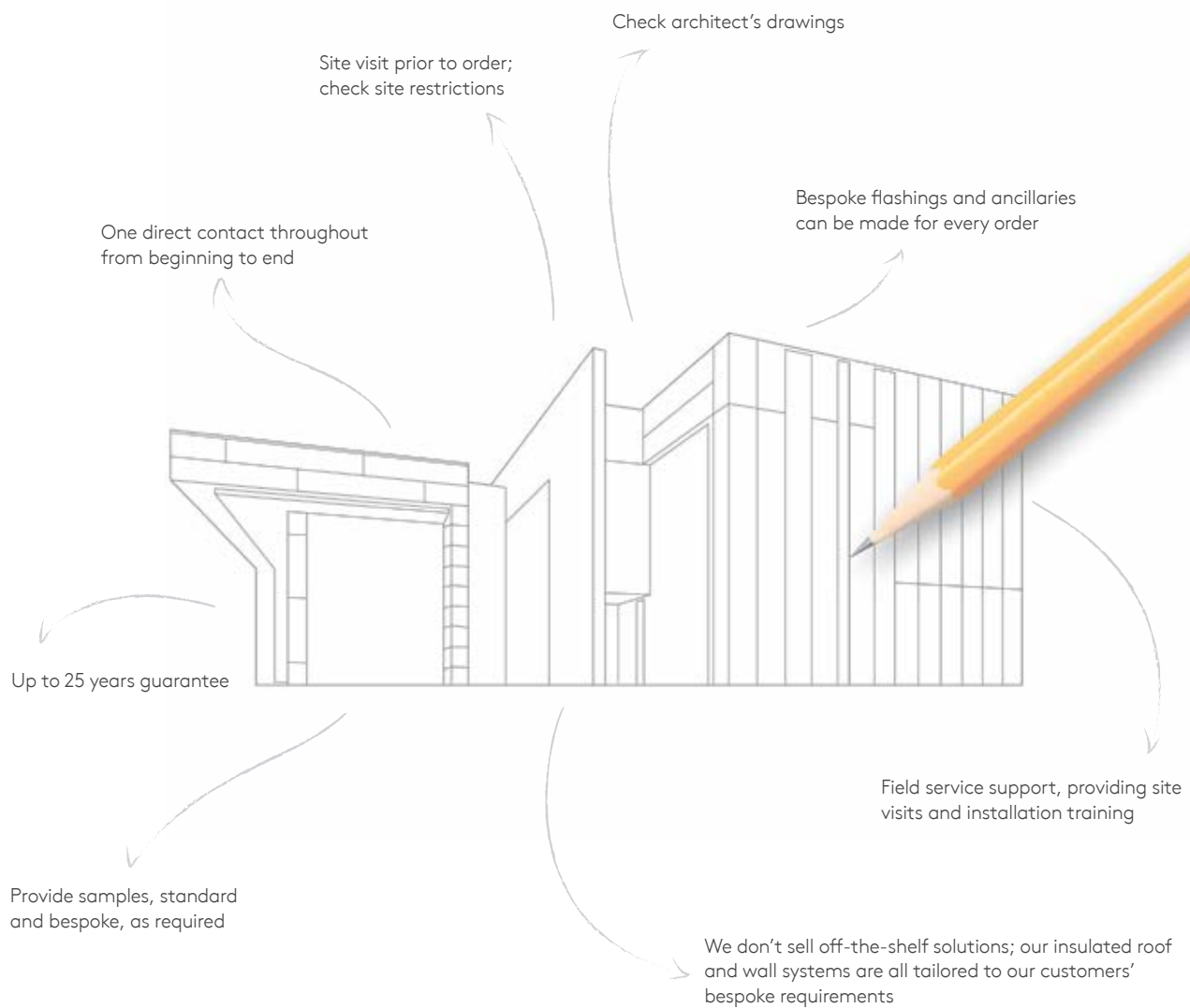
Tel: +971 (0) 4 885 42 32

Email: info@kingspanpanels.ae

Field Services

Specialist installation training

Our field services team offers specialist installation training and demonstration of the products and systems we offer. This extensive training provides a basic level of competency in installation of our standard roof and wall systems, covering the installation procedure, from safe unloading and handling to installation and completion.



Samples

We offer a range of standard samples which include each of our core products; RW Trapezoidal panels for roof or wall, Architectural Wall and Cold Store Panel samples, Kingzip Standing Seam samples and more. A standard sample is available in selected colours, which can be supplemented with our spectrum of colour swatches to help you visualise your product and project.



Customer Services

Our customer services team across the MEATCA region are dedicated to providing care and attention to our customers' needs. Various queries are quickly dealt with, ranging from order placement to scheduling to on-site delivery.

Transport and Containerisation Support

The safe, reliable international transit of Kingspan panels is a key part of our commitment to quality. We take the packing, loading and securing of our products very seriously so that we can guarantee their condition on arrival.

We have developed a unique system which enables us to use the common, back-loading containers for all sizes of panels. The benefits to this include:

- No increase in cost to transport larger panels as there is no need to hire an open-top container;
- Quick loading using our bespoke system allows up to six containers to be packed per day;
- Container can be delivered to all ports, bypassing the restrictions placed on open-top containers; and
- A very high packing specification that protects and secures the load within the container.

The system works through a series of pallets fastened to a rig, which allow our experienced teams to load the panels in the regular way. Cardboard protective sheets are then attached to the panels and the whole load is rolled onto the container. After the fitting of inflatable airbags at key points, straps are used to secure the panels in place and the container is sealed. The whole process is also photographed for our customers' peace of mind.

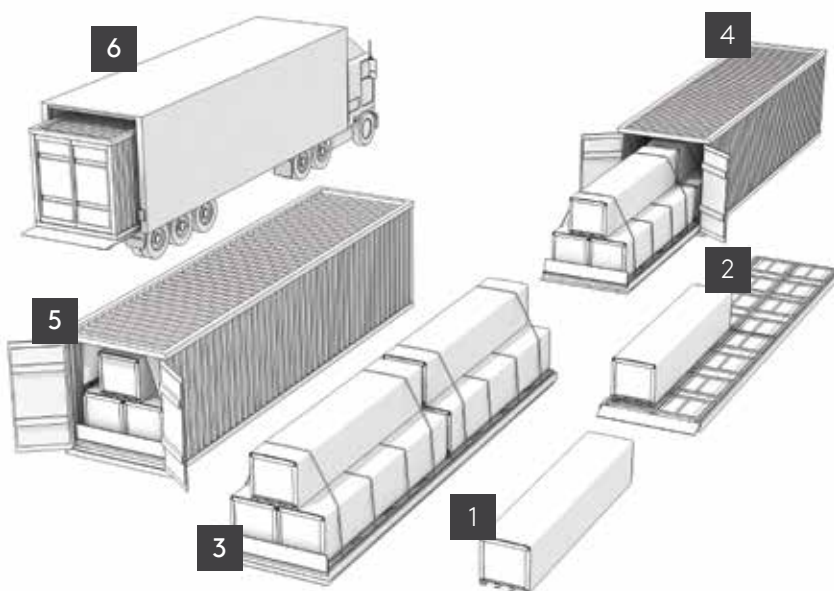
We have fine-tuned this process so that we can be confident the hundreds of containers we despatch internationally every year deliver the product at the same quality standard as when it left our factory.

Other options include the use of Heat-Treated Timber Pallets in accordance with ISPM 15, which are available at an extra cost and overland transport where appropriate. Ex-works is also available, should customers wish to make their own arrangements.

We can advise customers on the most cost-effective, efficient way to transport the panels. Due to the different sizes, profiles and depths of our panels, the number that can be taken by one container will vary. The tables on the next page give an indication of the variation in quantity on some of our most popular insulated panels. Please be aware that containers limit the length of panels to 11,8m internally.

For more detailed information on specific panel requirements, please contact us (details on the back cover page of the brochure).

- 1 Product is manufactured to export packaging specification, which includes additional protection around the corners and sides with heat-treated pallets where required.
- 2 A mobile loading platform (skate) is constructed from pallets and connectors on hydraulic loading platform.
- 3 The load is constructed on the skate in the way a standard trailer would be loaded and is banded to the skate.
- 4 The container is brought up to the platform and the entire load and skate is wheeled into the container.
- 5 The load is secured with restraining straps and air bags inflated around it to prevent movement and damage.
- 6 The container is closed and sealed, ready for transport to port of exit.



Containerisation Tables

From these tables the number of insulated panels that can be transported by a container can be calculated. We have selected our most popular insulated panels; however, for a more detailed quote or for another type of product, please contact us (details on the back cover page of the brochure).

The tables show the average number of panels found in a pack and containers can accommodate approximately four packs. So for an approximate calculation, multiply the given number by four.

E.g. A container can take approximately 136 panels of 60mm deep, 1,4m long Architectural Wall Panel (AWP) (34x4=136).

For a more exact number, the weights of the panels can be used. Containers cannot exceed 2000kg and the maximum length for a container is around 11,5m. The weight of every panel can be calculated by multiplying the weight per kg/m² by the length. Then divide this number by 500kg to see how many panels can fit exactly into a pack and then multiply by 4 to get the number of packs per container.

E.g. For 60mm AWP, 1,4m long. 1,4 (the length of panels) x 11,34 (weight p/kg m²) = 15,9kg per panel. 500 (the maximum kilos for a pack) / 15,9 = 31. Therefore the total number of panels that it is possible to fit exactly in a container is 124.

Loading Information

KS103 SSF Architectural Wall Panels

Panel Thickness (mm)	Pack Qty	Total Piece	Weight per kg/m ²
40	16	96	9,75
50	13	78	10,07
60	11	64	10,36
80	10	42	11,19
100	8	34	11,95
120	7	30	12,71
150	6	24	13,85

KSD 600 / 900 / 1000 Architectural Wall Panels

Panel Thickness (mm)	Pack Qty	Pcs	Weight per kg/m ²
		600	900 to 1000
50	21	126	84
60	15	90	60
75	12	72	48
100	10	60	40
120	8	48	32

KS100 PRW Trapezoidal Roof & Wall Panels

Panel Thickness (mm)	Pack Qty	Total Piece	Weight per kg/m ²
40	48	64	9,81
50	9	56	10,19
60	8	48	10,43
80	10	42	11,19
100	8	34	11,95
120	7	30	12,71
150	6	24	13,85

KSD1000 RW Trapezoidal Roof & Wall Panels

Panel Thickness (mm)	Pack Qty	Total Piece	Weight per kg/m ²
40	17	68	9,90
60	13	52	10,70
70	12	48	11,20
80	11	44	11,50
100	7	28	12,30

KS110 CTF Cold Storage Panel

Panel Thickness (mm)	Pack Qty	Total Piece	Weight per kg/m ²
45	15	88	11,26
50	14	84	11,49
60	11	64	11,69
80	13	52	12,53
100	10	42	13,36
120	9	36	14,20
140	7	30	15,04
150	7	28	15,45
170	6	24	16,29
200	5	20	17,54

KSD1100 CS Cold Storage Panel

Panel Thickness (mm)	Pack Qty	Total Piece	Weight per kg/m ²
80	13	52	11,80
100	11	44	12,60
125	8	32	13,60
150	7	28	14,60
175	6	24	15,60
200	5	20	16,60

TR

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

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05/2021

