Australasia & SEA Product Selector

A Guide to the Kingspan Range of
High Performance Building Envelopes

Kingspan®
Insulated Panels

Royal North Shore Hospital, Clinical Services Building, Sydney, Australia. BENCHMARK Evolution Axis.

Kingspan
Insulated Panels

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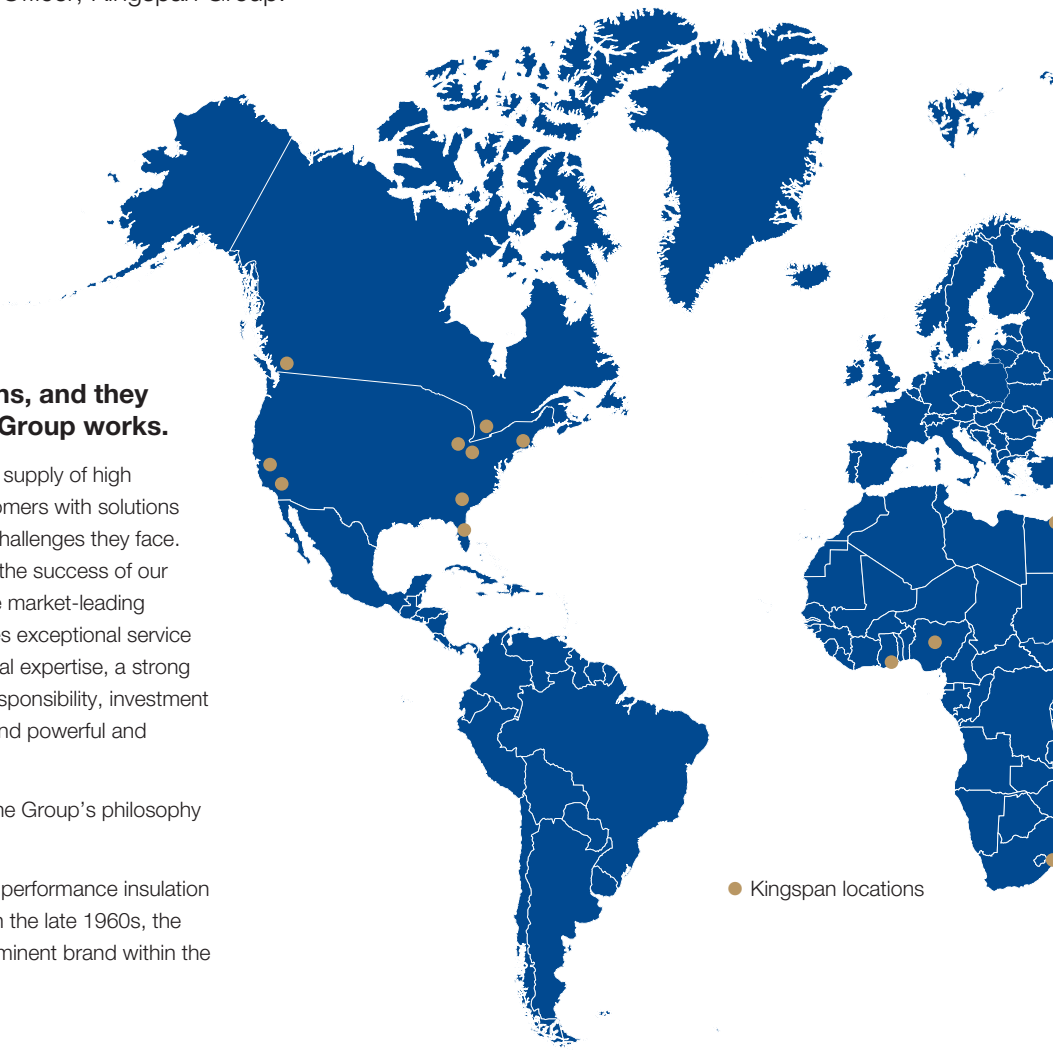
Kingspan Insulated Panels

About Kingspan Group

"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, Chief Executive Officer, Kingspan Group.



These are Kingspan's aspirations, and they shape every aspect of how the Group works.

We go beyond the simple manufacture and supply of high performance products, to provide our customers with solutions that take into account every aspect of the challenges they face. This bespoke, holistic approach has driven the success of our business until now, and made Kingspan the market-leading brand it is today. The Kingspan way includes exceptional service and support, grounded in unrivalled technical expertise, a strong commitment to environmental and social responsibility, investment in continuous research and development, and powerful and practical guarantees backing all products.

Our market-leading businesses epitomise the Group's philosophy of customer-led, value-added solutions.

Kingspan Group is the global leader in high performance insulation and building envelope solutions. Founded in the late 1960s, the Group has grown steadily to become a prominent brand within the construction industry.

Global Presence

Today the Group has manufacturing plants around the globe, sells in more than 85 countries and employs more than 6,000 people worldwide.

About Kingspan Group

The Group comprises four divisions:

- **Insulated Panels;**
- **Insulation;**
- **Environmental;**
- **Access Floors.**

Kingspan Insulated Panels, the biggest division of the four, 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.

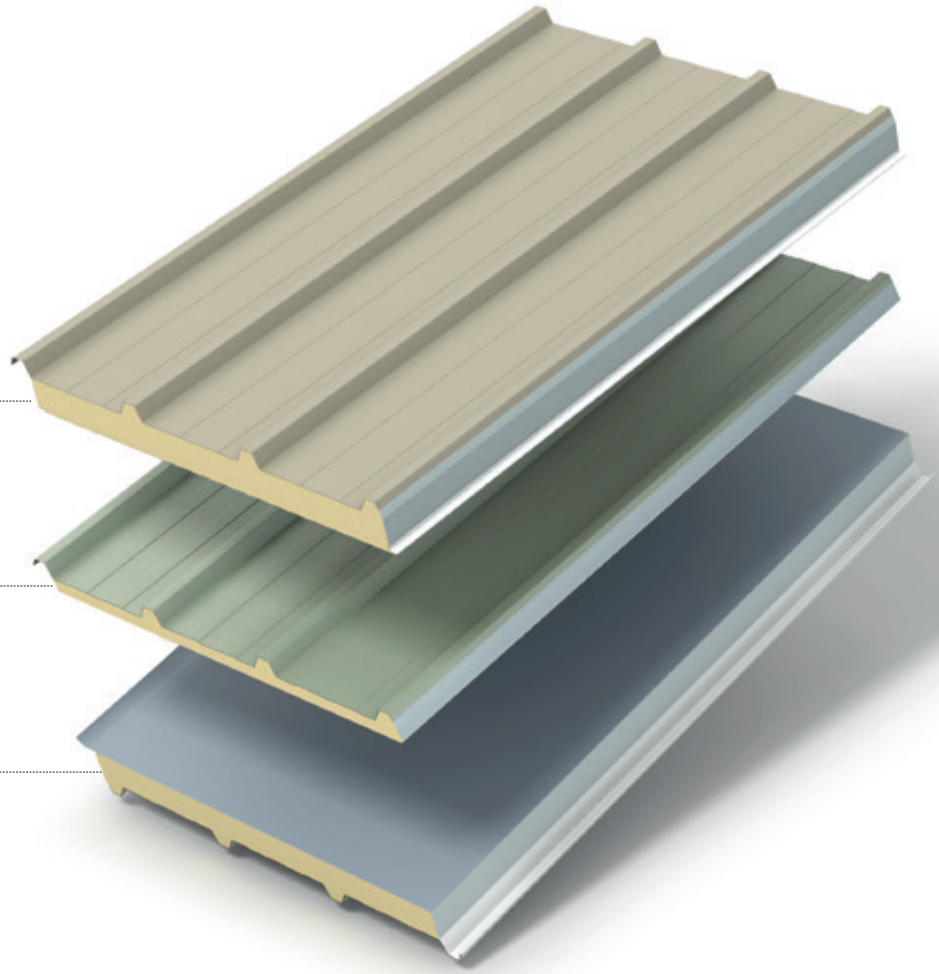
Our product portfolio includes Insulated Roof & Wall Panels; Standing Seam Systems; Fabrications, Safety & Lighting Solutions; Controlled Environments; Kingspan Energy Rooftop Solar PV and BENCHMARK high-end Façade & Roof Systems.

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.

Product Range At a Glance

Insulated Roof & Wall Panels

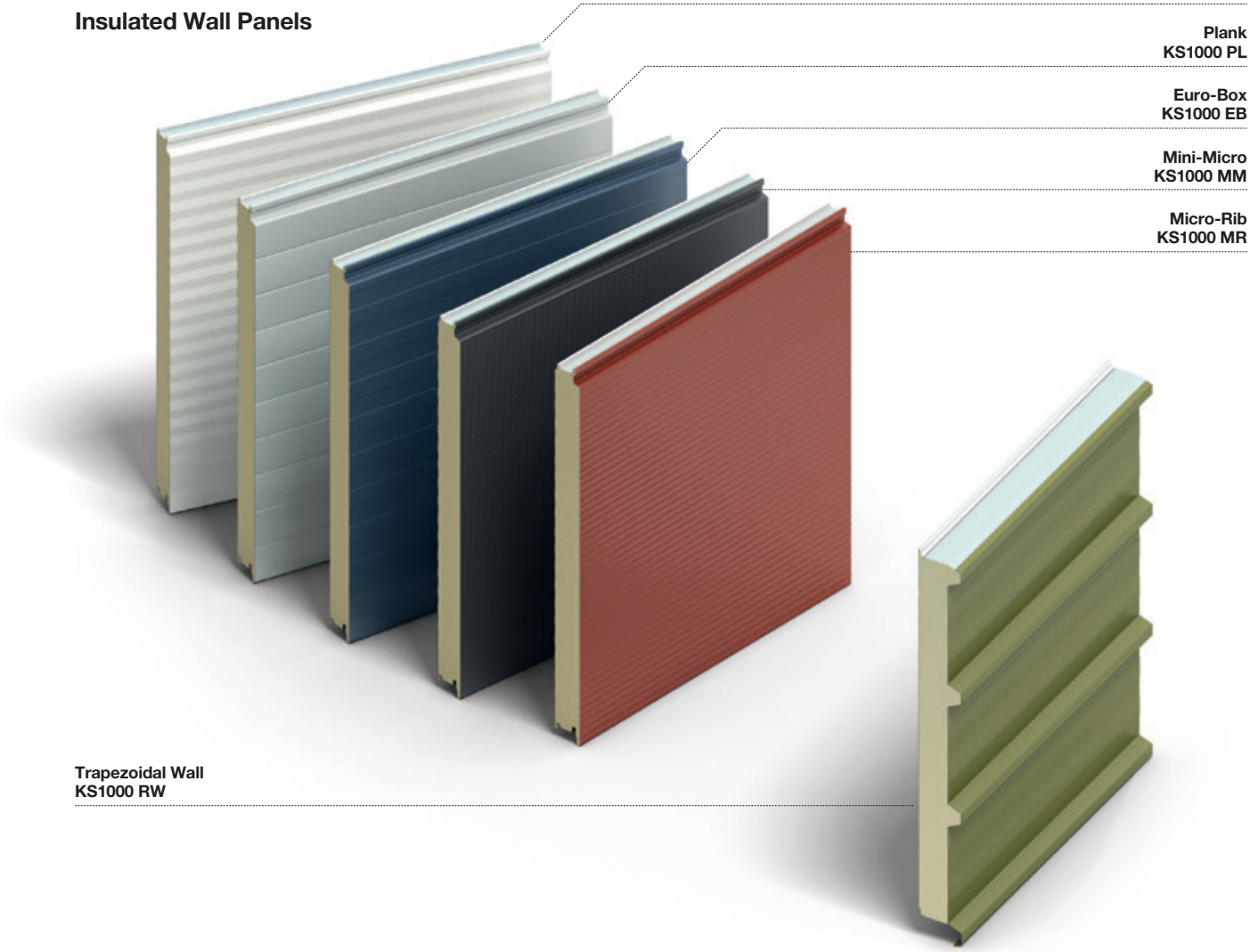
Insulated Roof Panels



Product Range At a Glance

Insulated Roof & Wall Panels

Insulated Wall Panels



Architectural Wall Panels (AWP)

Wave
KS1000 WV

Plank
KS1000 PL

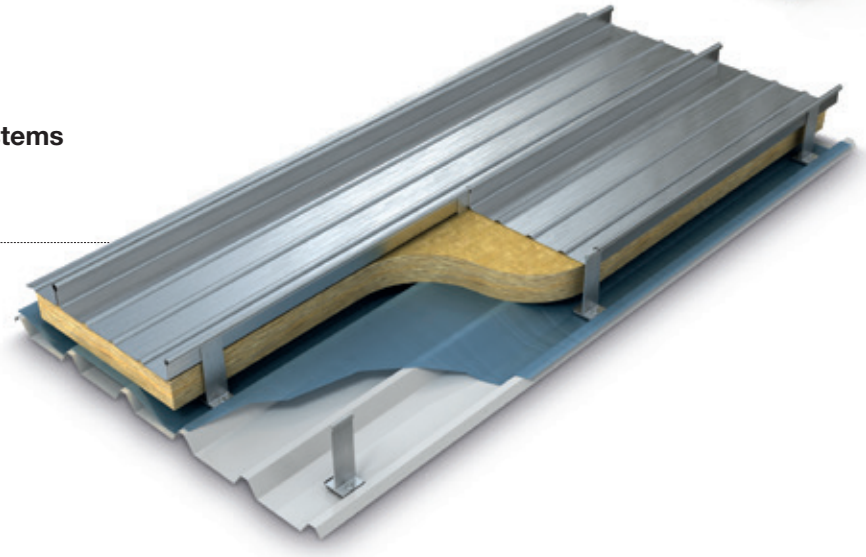
Euro-Box
KS1000 EB

Mini-Micro
KS1000 MM

Micro-Rib
KS1000 MR

Trapezoidal Wall
KS1000 RW

Standing Seam Systems



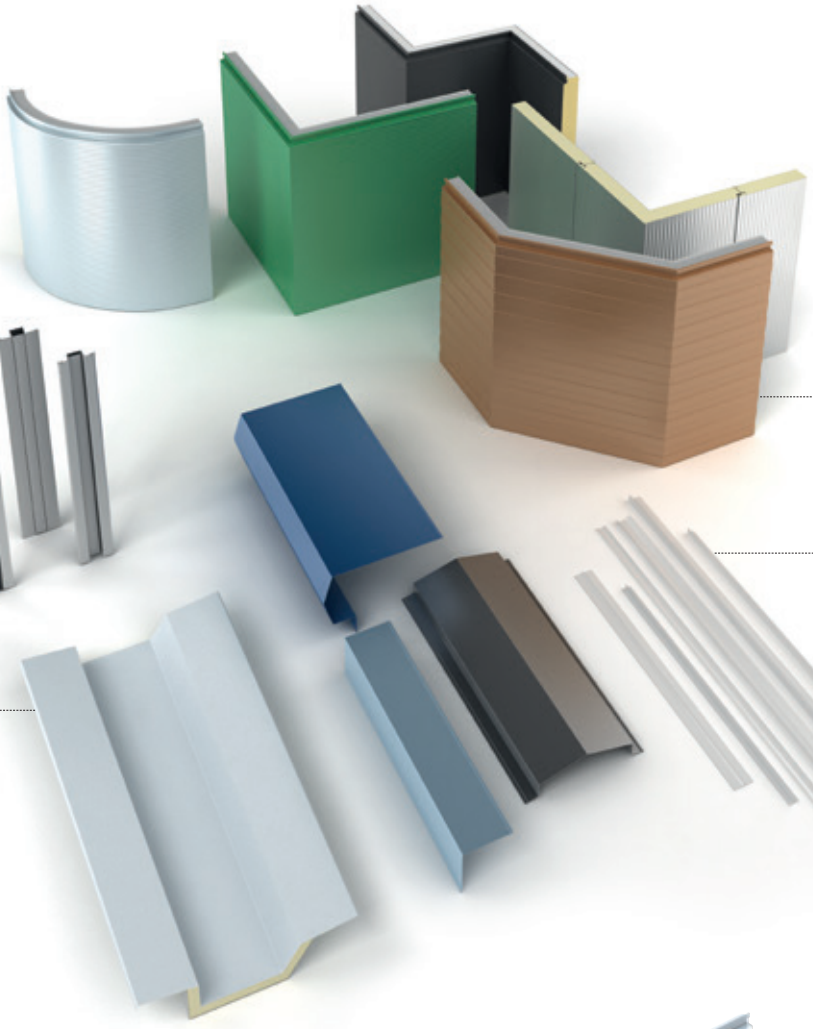
KingZip SF

Kingspan Insulated Panels

Product Range At a Glance

Fabrications, Safety & Lighting Solutions

Fabrications



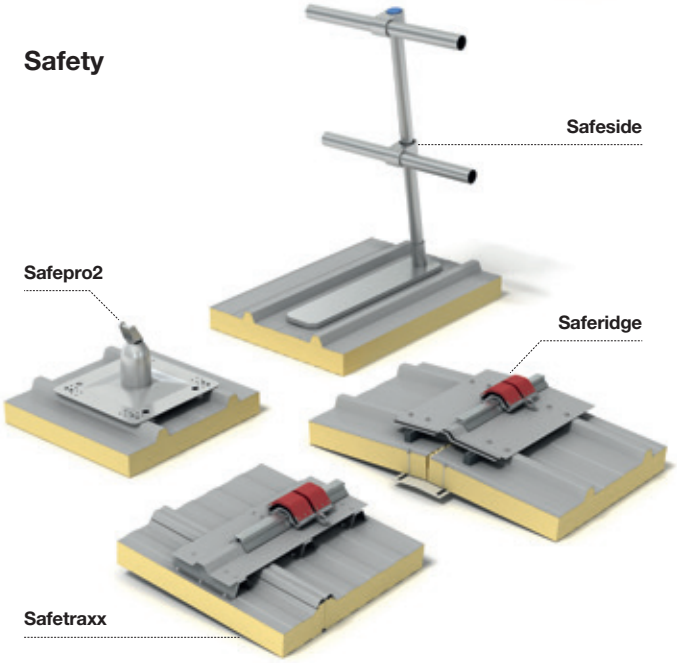
Preformed Corners

Top Hats

Flashings

Gutters

Safety



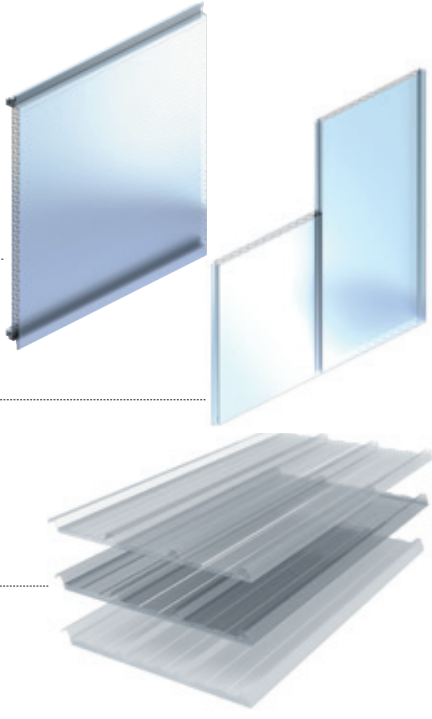
Safeside

Safepro2

Saferidge

Safetraxx

Lighting



Kingspan Day-Lite Architectural

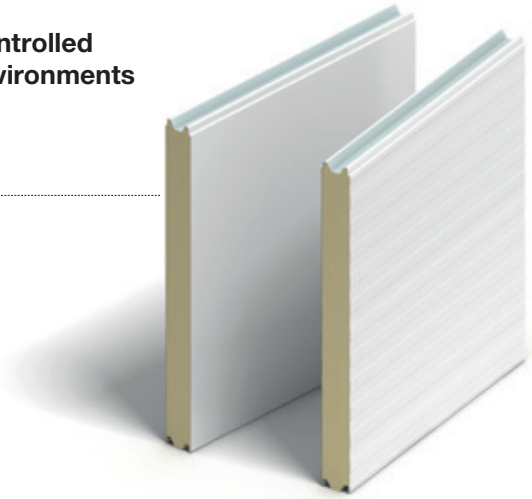
Kingspan Day-Lite Klick

Kingspan Day-Lite Trapezoidal

Product Range At a Glance

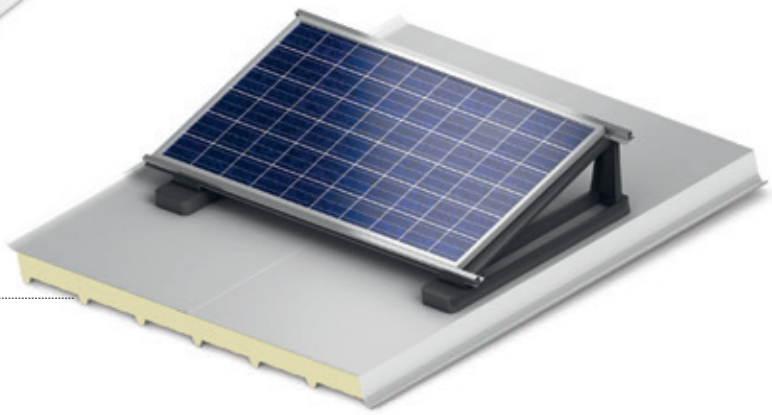
Controlled Environments

Flat / Ribbed
KS1100 CS



Kingspan Energy Rooftop Solar PV

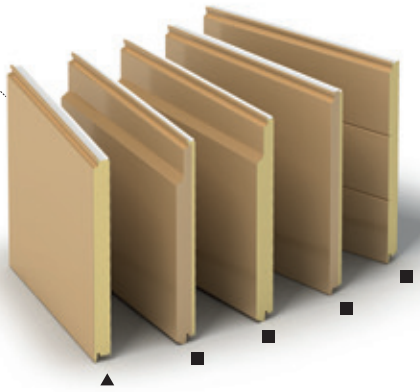
Roof Mounted
Solar PV System



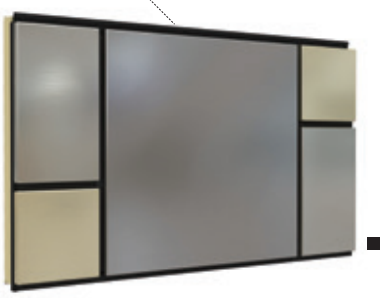
BENCHMARK Façade & Roof Systems

BENCHMARK Evolution
Design Wall Series

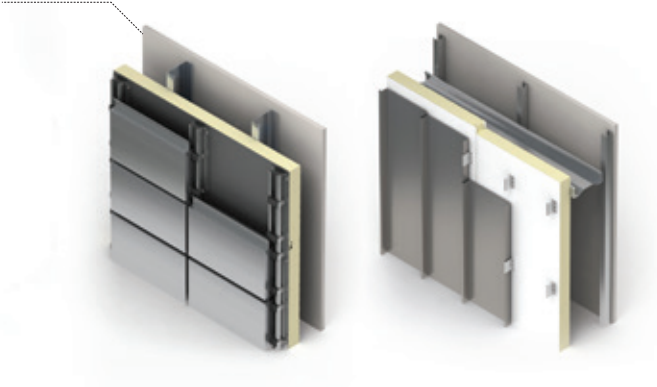
Manufactured in:
▲ Australia
■ UK



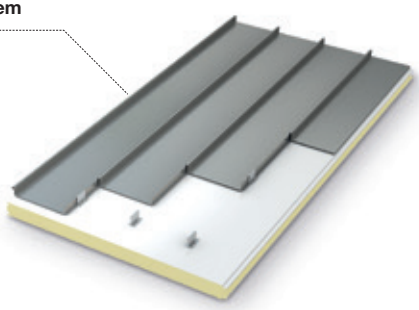
BENCHMARK Kreate
Integrated Façade System



BENCHMARK Karrier
BENCHMARK Wall Liner
Engineered Façade Systems



BENCHMARK Roofliner
Roof System



Kingspan
Insulated Panels

Market Sectors

Our products are used in a wide cross section of sectors for a range of building types.
The sectors below give an indication of the variety of uses for our products.

Image: Nigel Young / Foster + Partners.

Infrastructure
Queen Alia International Airport New Terminal, Jordan

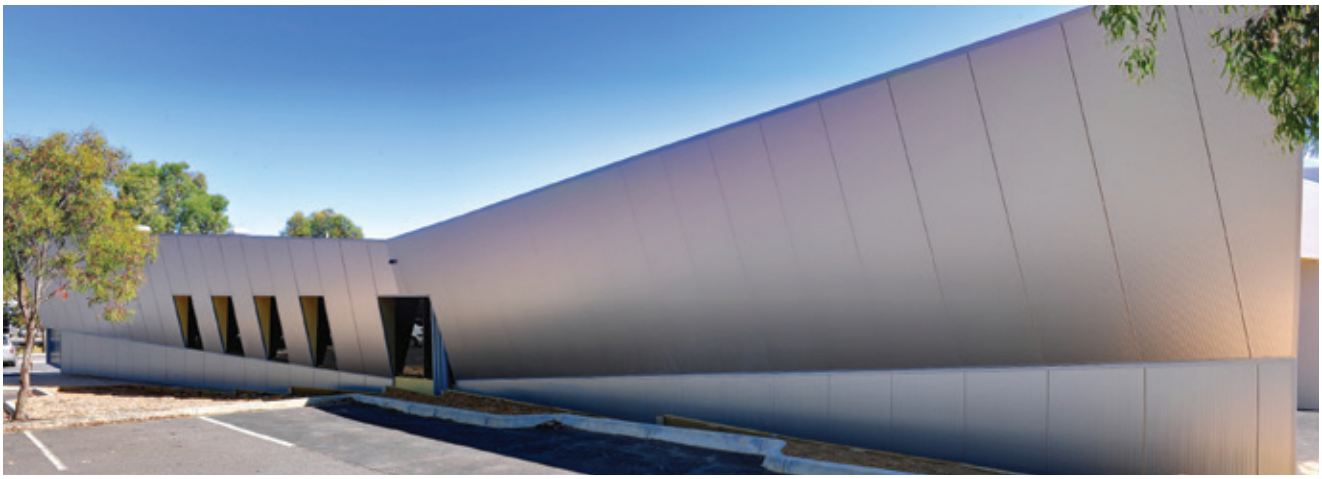
Private Housing
Mercy Aged Care, Melbourne, Victoria, Australia

Industrial
Yealands Estate, Blenheim, New Zealand

Hotel & Leisure
Katsumata Centre, Geelong, Victoria, Australia

Community & Amenity
Hastings Court, New Zealand

Market Sectors



Education
Bendigo TAFE, Victoria, Australia

Offices
Majura Park, Canberra, Australia

Retail
Craigieburn Central Shopping Centre, Victoria, Australia

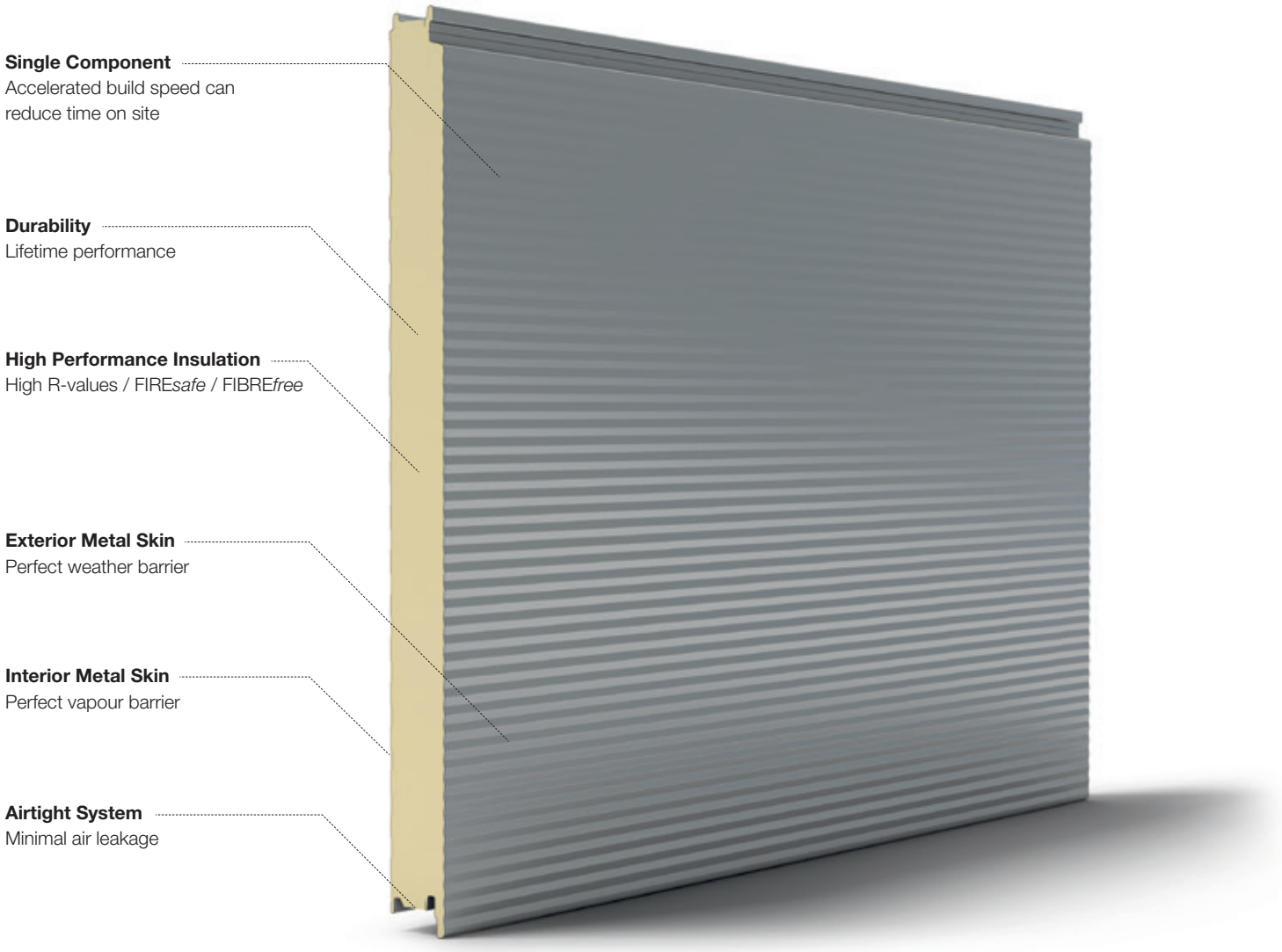
Health
Royal North Shore Hospital, Sydney, Australia

System Benefits

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

The panels are made up of Kingspan's unique FIRE*safe* & FIBRE*free* Insurer Approved PIR (Polyisocyanurate) insulation core which is sandwiched between two layers of metal – one 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 a fast, single-fix installation with high thermal performance, insulation continuity, minimal air leakage and the elimination of interstitial cavity condensation and cold bridging.



System Benefits

Hotel Novotel, Brisbane Airport, Queensland, Australia

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 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 have also achieved OHSAS / ISO 18001 (Health & Safety).

Kingspan Insulated Panels' unique FIRE*safe* Insurer Approved PIR insulation core technology is tried, tested and proven by internal teams and external bodies for consistent thermal, structural and fire performance.

Guarantee

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

Kingspan guarantees cover the coating, structural, durability and thermal performance of a product in a single, unique package.

Carlton Football Club, Victoria, Australia

System Benefits

Unlike traditional multi-component systems, Kingspan insulated metal-faced panels are single-component systems, delivered by one company.

Ease & Speed of Build

The systems can be quickly and easily installed with the aid of mechanical lifting equipment 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, therefore achieving a significant reduction of overall build programme and cost.

Insulated Panel, Single-component System

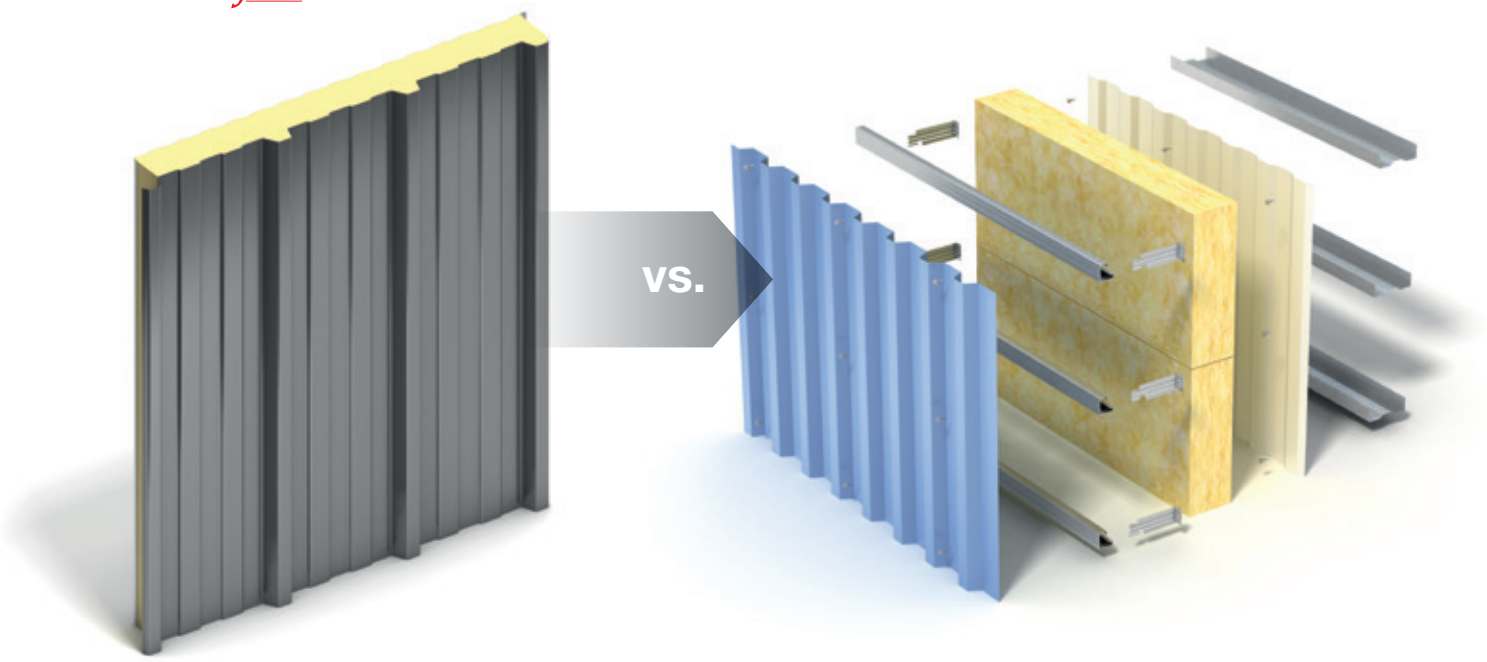
- Closed cellular structure of the insulation =
  - zero moisture ingress;
  - no air infiltration;
  - lifetime thermal reliability, without ageing or degradation.
- No risk of toxic mould and bacteria growth.
- No release of fugitive fibres into internal environments.

FIBREfree

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, guarantees, service support and site inspections are also supplied by multiple sources which can lead to an increased risk of liabilities.



System Benefits

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

Kingspan insulated panels have a FIRE*safe* & FIBRE*free* Insurer Approved PIR insulation core, designed by Kingspan to guarantee a 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 cellular structure of the insulation provides zero moisture ingress with no air infiltration. This guarantees lifetime thermal reliability, without ageing or degradation.

Design Flexibility & 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 and for flat and pitched roof applications. The wide range of fabrication accessories enables the creation of fully integrated, eye catching and unique architectural features.

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

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

Guaranteed Airtightness & Weathertightness

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

We guarantee:

- Insulation continuity with no gaps or missing insulation;
- Low energy usage and operating costs;
- Exceptional R-value compliance and reliability;
- Low CO_2 emissions;
- $3m^3/hr/m^2$ airtightness certainty at 50Pa.

Kingspan Insulated Panels

NOT ALL INSULATION IS THE SAME...

Fire Performance

The ability of buildings to perform well in the case of fire and to offer protection to both occupants and property are of primary importance to specifiers, owners, investors and insurers.

Kingspan Insulated Panels takes this issue extremely seriously and therefore all products have undergone extremely rigorous testing to ensure that they not only meet regulatory standards, but in most instances go far beyond.

Reaction to Fire Performance

Kingspan Insurer Certified FIRE*safe* PIR core 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.

FIRE*safe*

FM APPROVED

In summary:

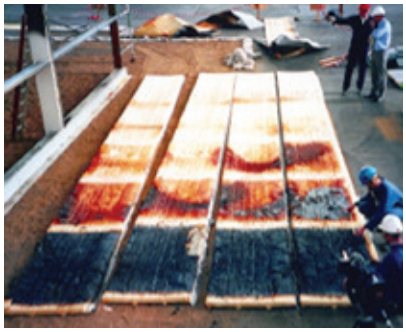
- Australia: AS1530-3 indices 0,0,0,2 & ISO 9705;
- Australia / New Zealand: ISO 9705 / ISO 13784;
- Europe: EN 13501-1, particularly B-s1,d0. The 's1' rating being the best (lowest) smoke rating;
- Australia / New Zealand insurance: FM 4880 – Class 1 Internal wall and ceiling panels without height restriction;
- Australia / New Zealand insurance: FM 4881 – Class 1 External wall panel systems;
- Australia / New Zealand insurance: FM 4471 – Class 1 Roof panel systems;
- New Zealand: ISO 5660;
- New Zealand: AS1366.2;
- UK Insurance: LPCB certified to LPS 1181 Grade EXT-A & B, for external roof and wall panel systems;
- USA / Global: NFPA 285 Façade testing;
- UK: BS 8414 – Façade testing; passed BR 135 & LPS 1582;
- Nordic countries – SP Fire 105 Façade testing.

For other fire tests or fiewall details, please contact Kingspan Technical Services.

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

Test set up

During test



Inspection of char formation after test

System Benefits

Fire Performance

Poultry Processing Factory Fire, Australia

A fire occurred at an Australian poultry processing premises, late on an afternoon in January 2010. The area involved in the fire included the loading dock, finished product chiller, tunnelling chiller and plant room, all of which were contained within one building structure, approximately 10 metres in height and with 3,000m^2 floor area.

The walls and internal ceilings of the building were constructed from polystyrene (EPS) insulated panels, with Kingspan Insurer Certified PIR panels used to extend the building some years later as the plant volumes expanded. The roof and higher parts of the external walls above the ceiling level were constructed of sheet metal cladding material.

The fire started at one end of the building in a storage area, and quickly spread through the building (*photograph 1*). The core material (EPS) in the wall panels has been destroyed by the fire, and the remaining panel steel faces have collapsed.

The deformation of structural steelwork indicates significant heat was generated, probably due to the fuel load in the adjoining storeroom and the polystyrene panels, resulting in high flame temperatures. The fire quickly spread throughout the ceiling section of the chiller area until the fire reached the Kingspan panels, which effectively stopped the fire from spreading any further. *Photograph 2* shows some of the debris from the fire, including collapsed EPS walls and ceilings. The former ceiling level is evident from the line of steel support cables which were used to hold the EPS ceiling panels, which collapsed in the fire.

Photograph 3 shows a control room which still remains standing – built at the end of the building where the fire started, using Kingspan Insurer Certified PIR panels.

Conclusions

- The Kingspan Insurer Certified PIR insulated panels suffered only minor damage from heat.
- The heat created by the fire in adjacent non-Kingspan EPS panels resulted in significant heat being generated, which caused distortion of steel structural building framework, and melting of plastic pipes and fittings.
- The Kingspan panels did not contribute to the fire in any way, and provided firewall type shielding to a significant portion of the building to stop spread of the fire, and protect specialised processing facilities from damage.

Photograph 1

Photograph 2

Photograph 3

System Benefits

Sustainability

Sustainability is firmly at the heart of Kingspan's approach.

Kingspan's sustainability vision is,
"To be a global leader in sustainable business and establish a leading position in providing sustainable, renewable and affordable solutions for the construction sector".

Environmental Impact

As part of our journey towards this vision, we have sought independent verification of our panel performance. We have completed Life Cycle Assessments for many of our products, and from these we have published Environmental Product Declarations (EPD's), which show the low global warming potential of our panels. We have also achieved GreenTag certification for our Australian manufactured panels which confirms that their performance is equal to those manufactured in the UK, which have been assessed as A+ by the Building Research Establishment (BRE) in their Green Guide to Specification rating tool.

The lifetime environmental performance of Kingspan products can help buildings to achieve Green Star, LEED®, BREEAM, and Estidama certification.

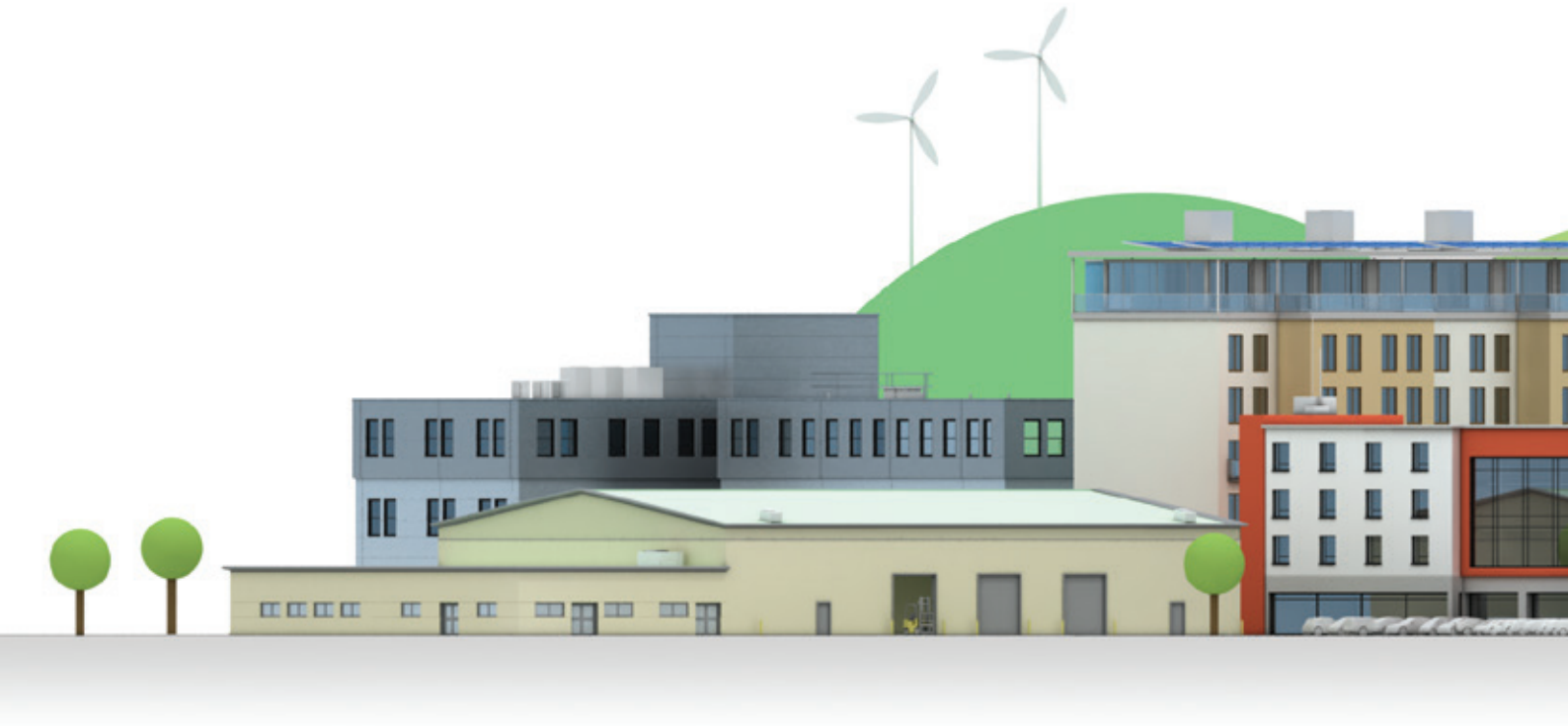
GreenTag Certification

Kingspan Insulated Panels Australian manufactured products have achieved a Global GreenTag$^{CERT\ TM}$ Gold Plus certification with a GreenRate® Level A. Kingspan was the first insulated panel manufacturer to receive this globally respected third party certification which allows specifiers to easily earn points for both the Green Building Councils of Australia and New Zealand under the Green Star programs.

Global GreenTag$^{CERT\ TM}$ is recognised by the GBCA and NZGBC under the Green Star Third Party Certification scheme.

Global GreenTag$^{CERT\ TM}$ is a Type 1 ecolabel in conformance with ISO 14024 and is underpinned by rigorous, independent, scientific assessment processes.

For more information visit the Global GreenTag$^{CERT\ TM}$ website:
www.globalgreentag.com



System Benefits

Impact on Energy

Kingspan is committed to moving towards net-zero energy at all manufacturing sites. This achievement is being prioritised at Holywell and Sherburn, UK, which are the largest sites. There are already small-scale renewable energy systems in place, including solar thermal hot water, wind and a large scale photovoltaic array, commissioned in 2011, that is currently delivering over 300,000 kWh per annum.

Energy efficiency is a key stage of achieving net-zero energy and we have started to invest heavily in energy efficiency improvements. For example, an energy performance contract is in place at Holywell, UK, which is part funded by the UK Green Investment Bank. This project, costing over £700,000, is guaranteed to save 1,130,000 kWh of electricity use per annum.

It is estimated that Kingspan's building envelope systems are currently saving more than 10,563 billion kWh of energy per year worldwide, which is equivalent to saving €403.2 million, 2.09 million tonnes of CO_2 and 4.86 million barrels of oil annually, and this figure is growing.

Sustainability

"Kingspan provides global, sustainable, energy saving building solutions for all sectors.

Backed by over 40 years of technical experience, rooted in customer service, and steeped in industry knowledge, we are leading the way on the journey towards a collective sustainable future, and are perfectly placed to support customers, the industry and society as a whole as we progress towards a true net-zero energy future."

Insulated Roof & Wall Panels

An extensive range of high performance roof panels systems that are suitable for pitched or flat roof applications. Secret or through-fix insulated wall panel systems that can be laid vertically or horizontally; all come in a wide range of colours and profiles.

Kingspan®
Insulated Panels

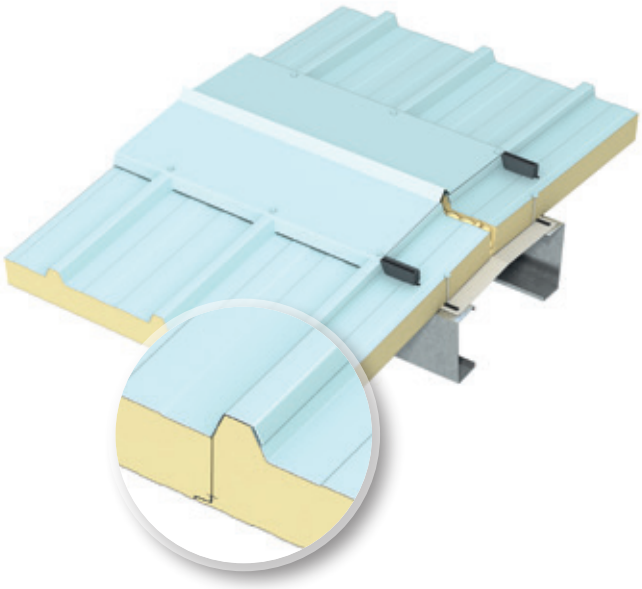
Insulated Roof & Wall Panels

Trapezoidal Roof KS1000 RW

Leongatha Specialist School, Victoria, Australia

Craigieburn Central Shopping Centre, Victoria, Australia

Trapezoidal Roof 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.



Product Features KS1000 RW

Profile:	Trapezoidal
Fixing detail:	Through-fix
Metal type:	Steel
Application:	Pitched roofs of 4° or more after deflection*
Lengths:	From 2m to 13.7m**
Cover width:	1000mm
Environmental rating:	Global GreenTag[CERT TM] LCARate Gold GreenRate Level A
Fire rating:	FM approved
Product compatibility:	Integrates with Kingspan Day-Lite Trapezoidal, Kingspan Safety solutions and Kingspan Roof Mounted PV System

* For advice on using Trapezoidal Roof on lower pitch applications, please contact Kingspan Technical Services.

** Please be aware that for orders outside Australia maximum lengths are 11.8m. Maximum length for panels transported by rail is 12m.

FIRE*safe* FIBRE*free*

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ecospecifier global GREEN TAG CERTIFIED

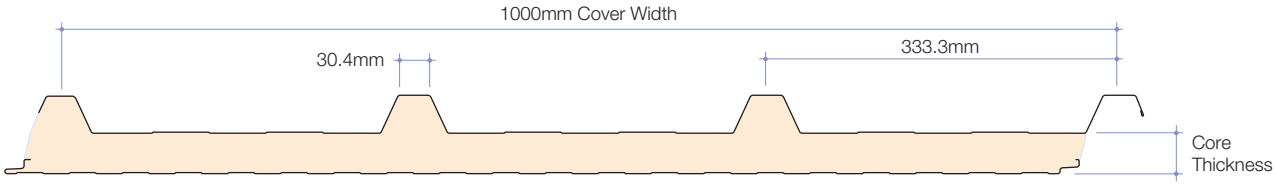
trust brands

Insulated Roof & Wall Panels

Trapezoidal Roof KS1000 RW

Paraparaumu College, Wellington, NZ

KS1000 RW



Dimensions, Weight and Thermal Performance

Core Thickness (mm)	40	60	100
Overall Thickness (mm)	75	95	135
R-value (m^2K/W)	2.34	3.36	5.35
U-value (W/m^2K)	0.43	0.30	0.19
Weight (kg/m^2) 0.5 steel / 0.4 steel	9.9	10.7	12.3

The R-values / U-values have been calculated using the method required by the appropriate National Building Regulations.

Kingspan Insulated Panels

Insulated Roof & Wall Panels

Foilback KS1000 FB

Kingspan Foilback is designed for applications with suspended ceilings that require thermal regulation compliance (air conditioned space) and used in combination with additional insulation methods or for applications where a prefinished steel internal liner is not required.

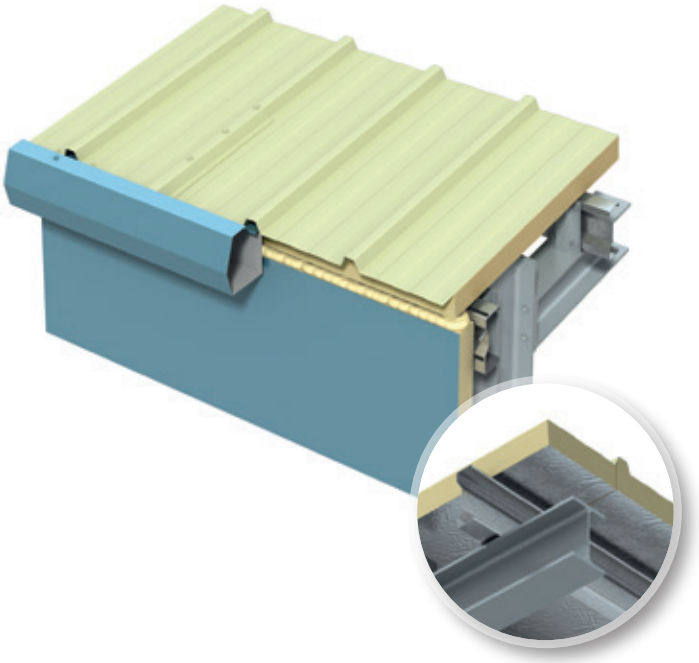
Not recommended for high humidity or applications or areas that are subject to wash down regimes.

Product Features KS1000 FB

Profile:	Trapezoidal
Fixing detail:	Through-fix
Metal type:	Steel
Application:	Pitched roofs of 4° or more after deflection
Lengths:	From 2m to 13.7m**
Cover width:	1000mm
Fire rating:	FM approved
Product compatibility:	Integrates with Kingspan Day-Lite Trapezoidal, Kingspan Safety solutions and Kingspan Roof Mounted PV System

* Please be aware that for orders outside Australia maximum lengths are 11.8m. Maximum length for panels transported by rail is 12m.

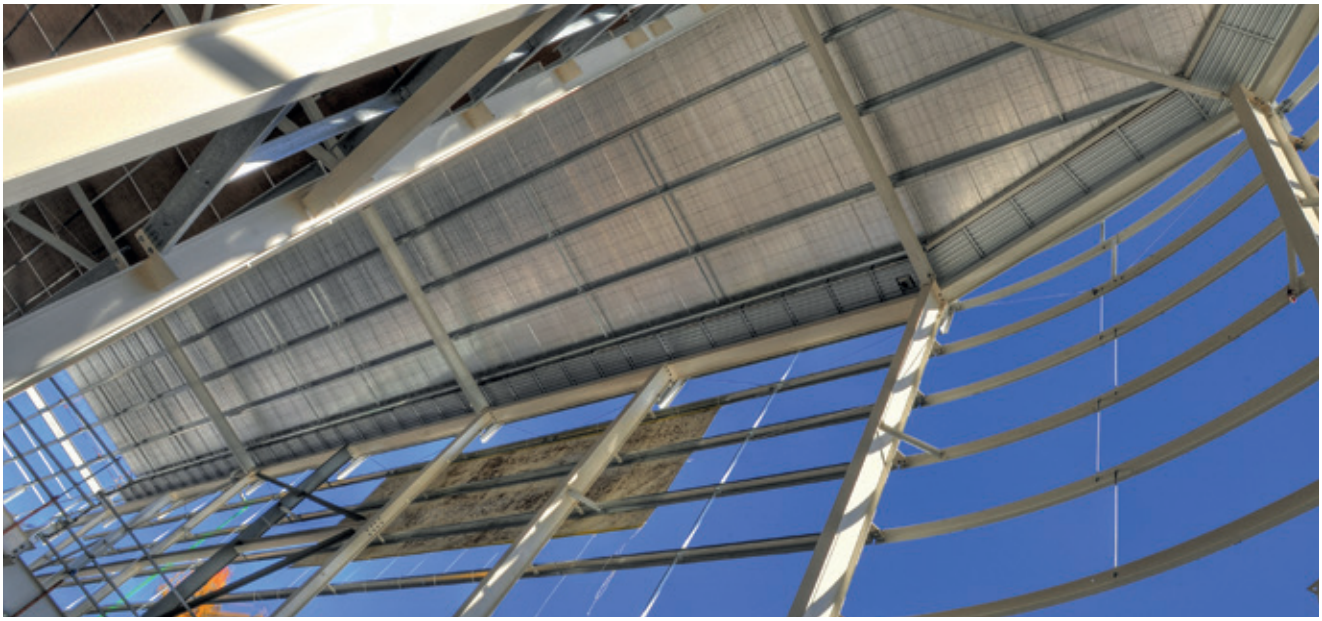
FIRE*safe* FIBRE*free*



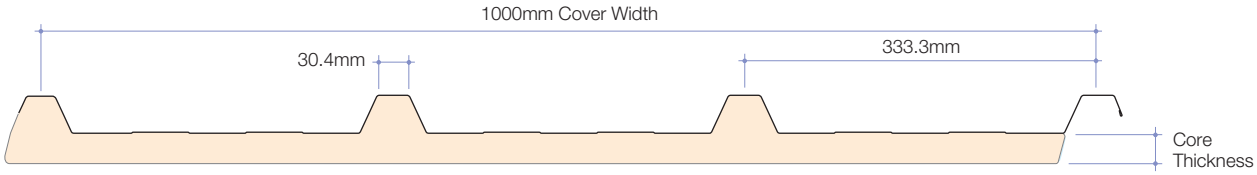
View from below showing foil liner

Insulated Roof & Wall Panels

Foilback KS1000 FB



KS1000 FB



Dimensions, Weight and Thermal Performance

Core Thickness (mm)	**30**
Overall Thickness (mm)	65
R-value (m^2K/W)	2.42*
U-value (W/m^2K)	0.41
Weight (kg/m^2)	6.1

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

* This is a summer (down) condition for a low roof sloped commercial building. Where there is a suspended ceiling below this can be increased to R=3.65 down. Winter (up) conditions in both cases are less.

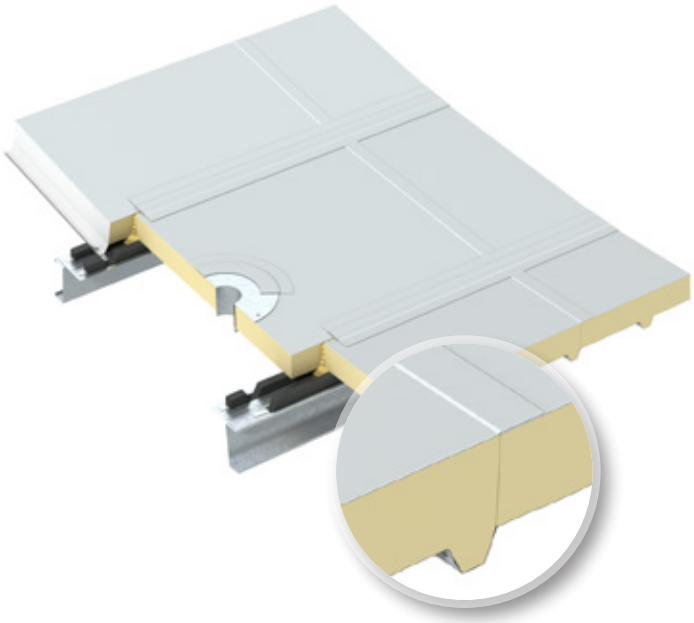
Insulated Roof & Wall Panels

Kingspan K-Dek KS1000 KD

Crescent Park, Cheltenham, UK.

Kingspan K-Dek is an energy efficient, high performance insulated single-ply membrane roofdeck system, suitable for flat, pitched and curved roofing applications.

The factory-adhered, high performance membrane is BBA certified and has a lifetime durability of 30 years.



Product Features KS1000 KD

Profile:	Flat single-ply PVC / TPO membrane, with standing seam aesthetic optional
Fixing detail:	Secret-fix appearance
Metal type:	N/A
Colours:	White or Light Grey
Application:	Flat and pitched roofs above 1:80 (0.72º) after deflection, and curved roof with a convex curve (40m radius) and concave curve (50m radius)
Lengths:	From 2m to 13.7m*
Cover width:	1000mm
Environmental rating:	Global GreenTag[CERT TM] LCARate Gold GreenRate Level A
Product compatibility:	Integrates with Kingspan Safety solutions and Kingspan Roof Mounted PV System and is compatible with common lighting solutions such as domed, pyramid and atria
Type of membrane:	PVC / TPO

* Please be aware that for orders outside Australia maximum lengths are 11.8m. Maximum length for panels transported by rail is 12m.

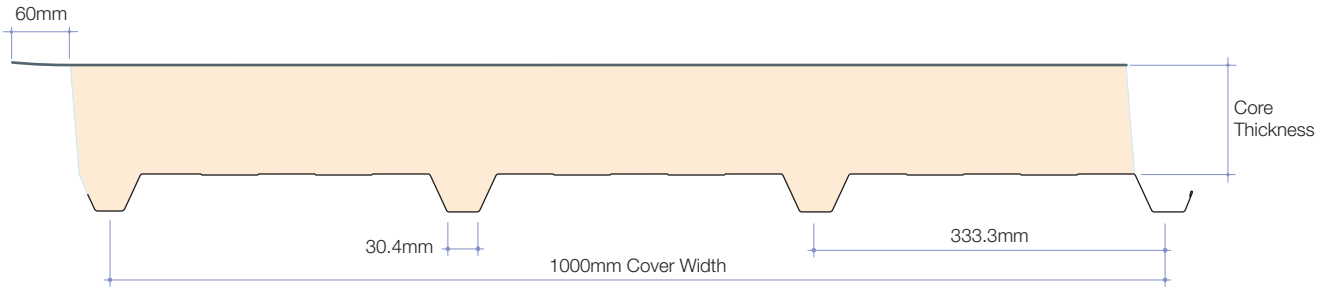
FIRE*safe* FIBRE*free*

Insulated Roof & Wall Panels

Kingspan K-Dek KS1000 KD

Captains Club Hotel, Christchurch, UK

Kingspan KS1000 KD



Dimensions, Weight and Thermal Performance

Core Thickness (mm)	**100**
Overall Thickness (mm)	135
R-value (m^2K/W)	5.27
U-value (W/m^2K)	0.19
Weight (kg/m^2) 0.5mm deck	9.00

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

Kingspan Insulated Panels

Insulated Roof & Wall Panels

Logan Sports Centre, Queensland, Australia

The Katsumata Centre, Geelong, Victoria, Australia.

Architectural Wall Panels

Holmesglen TAFE, Melbourne, Victoria, Australia.

Architectural Wall Panels (AWP) are secret-fix wall panel systems that offer unprecedented freedom of design and top-of-the-range performance to architects.

The products come in 5 distinct profiles (Mini-Micro, Micro-Rib, Plank, Wave and Euro-Box), allowing architects to look beyond traditional insulated panel designs to create buildings with more inspiring façades within the same cost bracket.

Product Features KS1000 MM/MR/PL/WV/EB

Profile:	Mini-Micro, Micro-Rib, Plank, Wave and Euro-Box
Fixing detail:	Secret-fix
Metal type:	Steel
Application:	Suitable for vertical or horizontal applications
Lengths:	From 2m up to 13.7m†
Cover width:	1000mm
Environmental rating:	Global GreenTag CERT TM LCARate Gold GreenRate Level A
Fire rating:	FM approved.
Product compatibility:	All profiles integrate with each other, as well as with Kingspan Day-Lite Architectural (AWP only)

* Please be aware that for orders outside Australia maximum lengths are 11.8m. Maximum length for panels transported by rail is 12.8.m.

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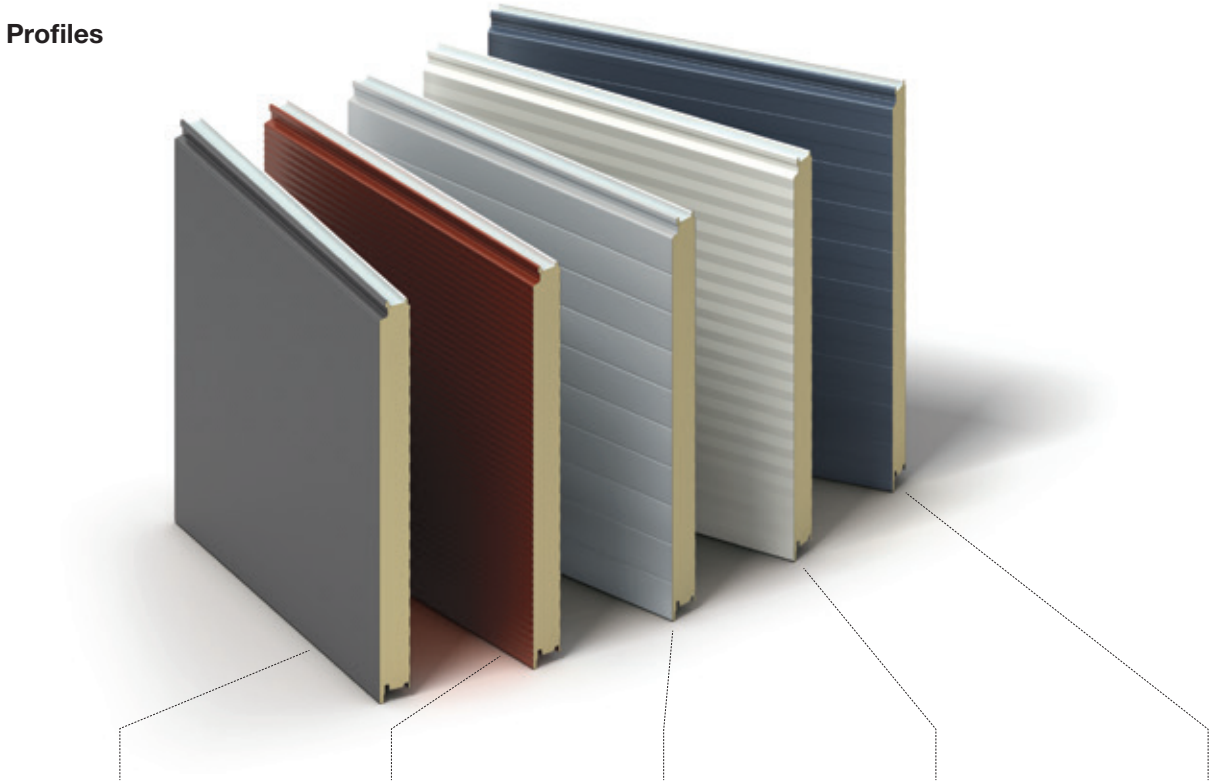
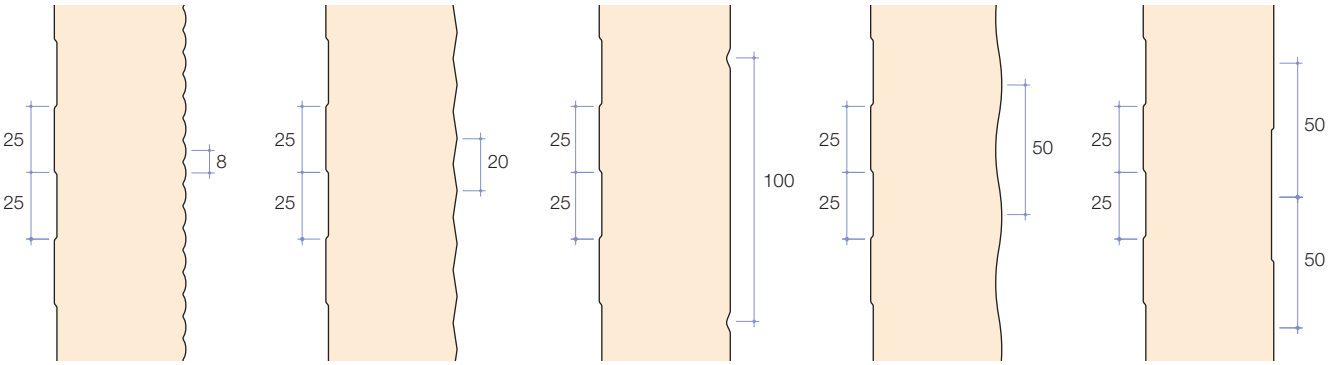
Insulated Roof & Wall Panels

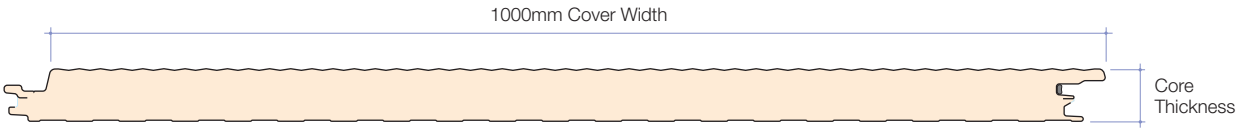
Architectural Wall Panels

Profiles



Mini-Micro KS1000 MM | Micro-Rib KS1000 MR | Plank KS1000 PL | Wave KS1000 WV | Euro-Box KS1000 EB





Dimensions, Weight and Thermal Performance

Core Thickness (mm)	50	80	100	140
R-value (m^2K/W)	2.65	4.15	5.15	7.15
U-value (W/m^2K)	0.38	0.24	0.19	0.14
Weight (kg/m^2) 0.5 steel / 0.4 steel	11.2	12.4	13.2	14.8

The R-values / U-values have been calculated using the method required by the appropriate National Building Regulations.

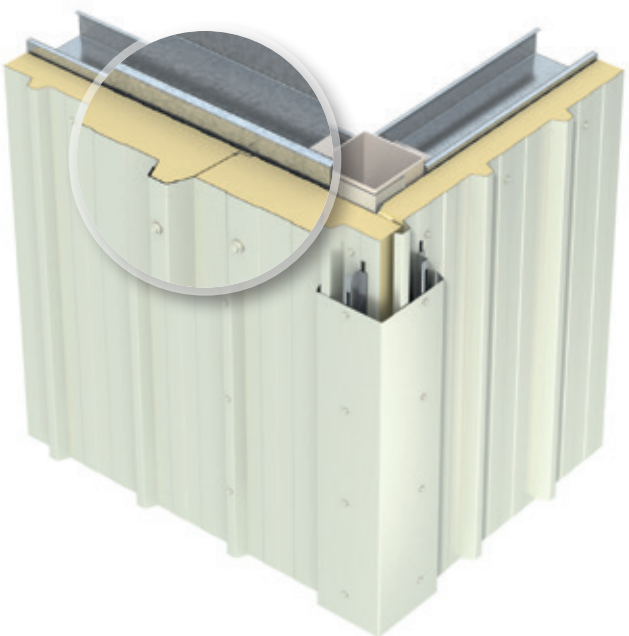
Kingspan Insulated Panels

Insulated Roof & Wall Panels

Trapezoidal Wall KS1000 RW

Craigieburn Central Shopping Centre, Victoria, Australia

Trapezoidal Wall is a through-fix, trapezoidal-profiled insulated wall panel which can be installed vertically or horizontally depending on the desired aesthetics.



Product Features KS1000 RW

Profile:	Trapezoidal
Fixing detail:	Through-fix
Metal type:	Steel
Application:	Suitable for vertical or horizontal application
Lengths:	From 2m to 13.7m*
Cover width:	1000mm
Environmental rating:	Global GreenTag CERT TM LCARate Gold GreenRate Level A
Fire rating:	FM approved
Product compatibility:	Integrates with Kingspan Day-Lite Trapezoidal

* Please be aware that for orders outside of Australia maximum lengths are 11.8m. Maximum length for panels transported by rail is 12m.

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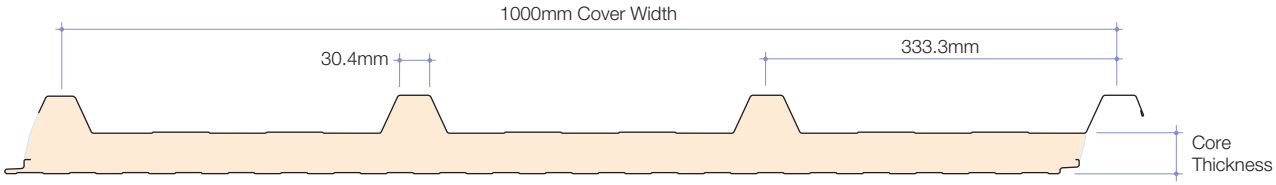
Insulated Roof & Wall Panels

Trapezoidal Wall KS1000 RW

Craigieburn Central Shopping Centre, Victoria, Australia

KS1000 RW

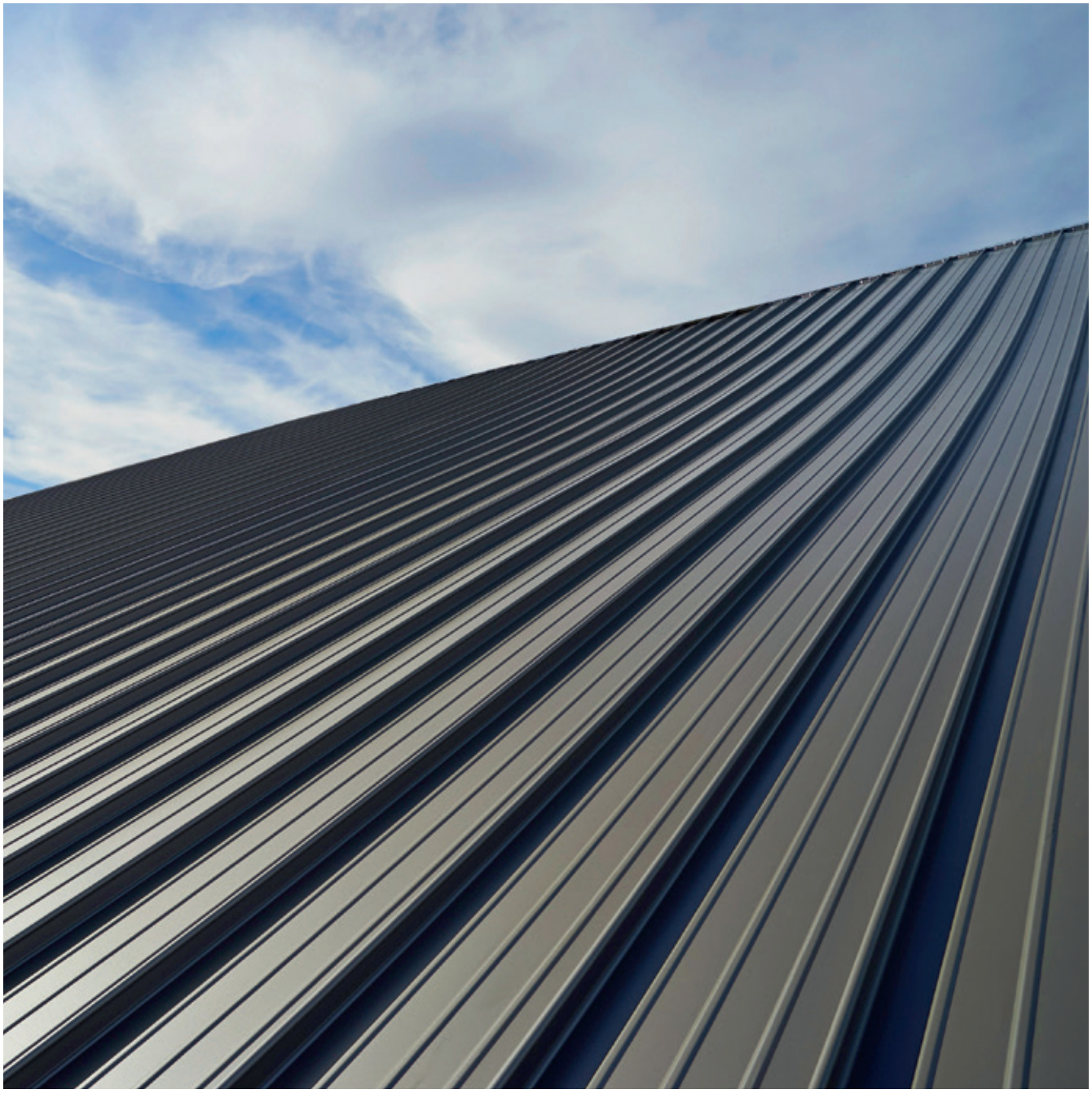


Dimensions, Weight and Thermal Performance

Core Thickness (mm)	40	60	100
Overall Thickness (mm)	75	95	135
R-value (m^2K/W)	2.35	3.37	5.36
U-value (W/m^2K)	0.43	0.30	0.19
Weight (kg/m^2) 0.5 steel / 0.4 steel	9.9	10.7	12.3

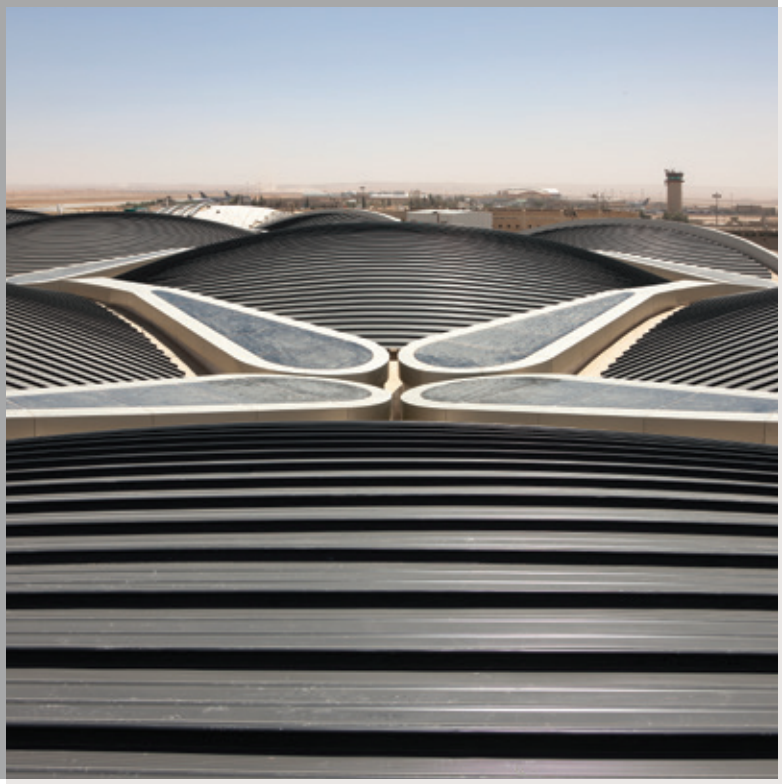
The R-values / U-values have been calculated using the method required by the appropriate National Building Regulations.

Kingspan Insulated Panels



Adelaide Convention Centre, Australia

Standing Seam Systems

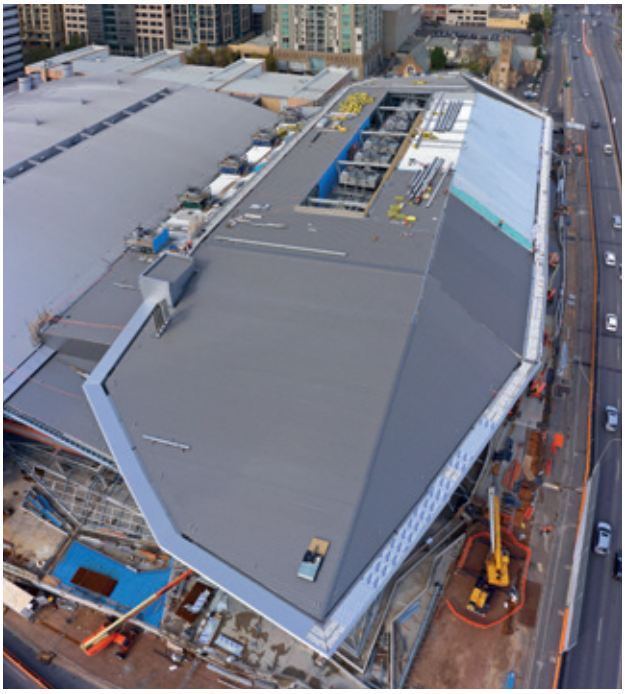


A unique high performance standing seam roofing system offering premium aesthetic and that is zipped on-site to create a weathertight solution.

Kingspan®
Insulated Panels

Standing Seam Systems

KingZip SF



Adelaide Convention Centre, Australia

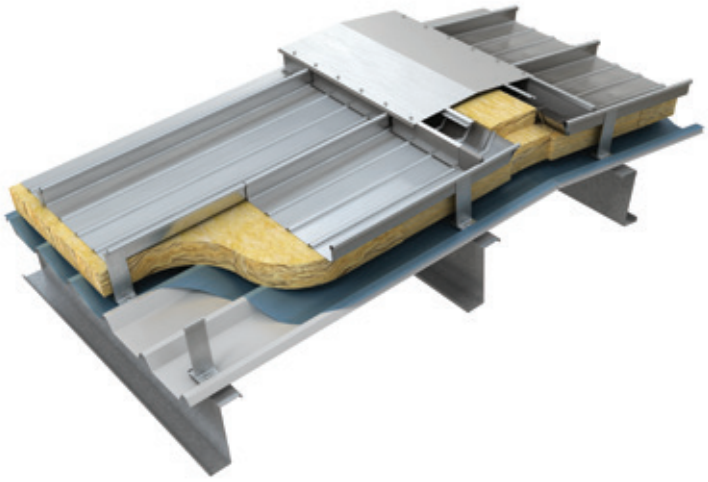
Dubai Sports City Football Academy, Dubai, UAE.

Queen Alia International Airport New Terminal, Jordan
Image: Nigel Young/Foster + Partners

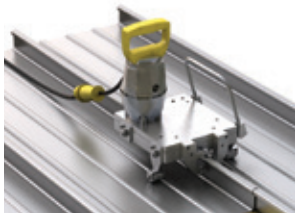
Image: Nigel Young / Foster + Partners.

Providing a seamless transition from roof to wall, KingZip SF offers the designer the freedom to combine functionality with stunning aesthetics, to create truly extraordinary buildings.

Predominantly manufactured in aluminium, KingZip SF is also available in stainless / coated steel, zinc or copper and can be supplied smooth, embossed, crimp curved, concave or convex smooth curved, tapered, wave formed or tapered and smooth curved.



But it's not just about shape and form. With options tailored for project specific requirements – thermal, structural and acoustic – and the ability for integration with Kingspan insulated wall and BENCHMARK façade solutions, KingZip SF provides the designer with the tools to push the boundaries of contemporary design for the global construction market.



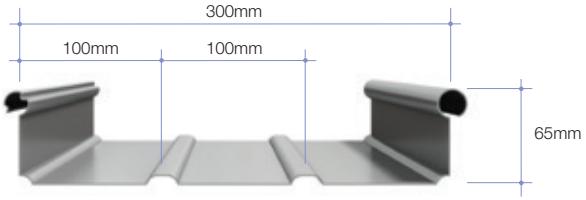
KingZip SF is an FM, UL and ASTM approved, advanced 'zip-up' standing seam system that creates a continuous weathertight roof and is supplied as a complete package with outer weather sheet, structural liner, vapour barrier, halters, thermal barrier pads, clips, fasteners and accessories. The side laps are 'zipped-up' in conjunction with a unique halter system that is fixed directly to the supporting structure without penetrating the external weather sheet. This method of secret fixing creates a structurally sound roof construction that provides excellent weathertightness and resistance to wind uplift.

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

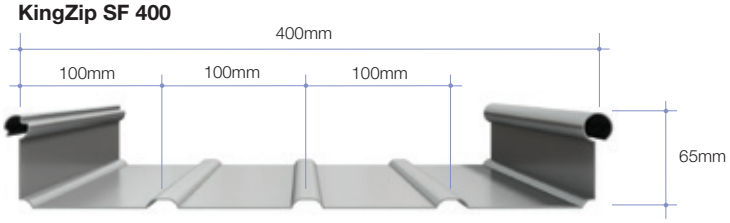
Standing Seam Systems

KingZip SF

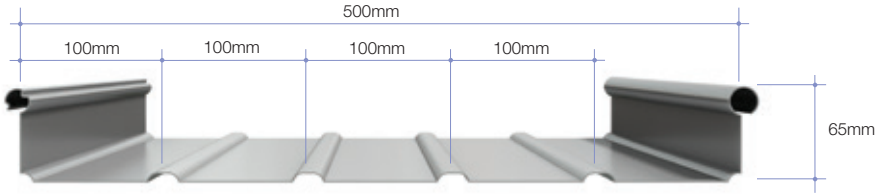
KingZip SF 300



KingZip SF 400



KingZip SF 500



Features and Benefits

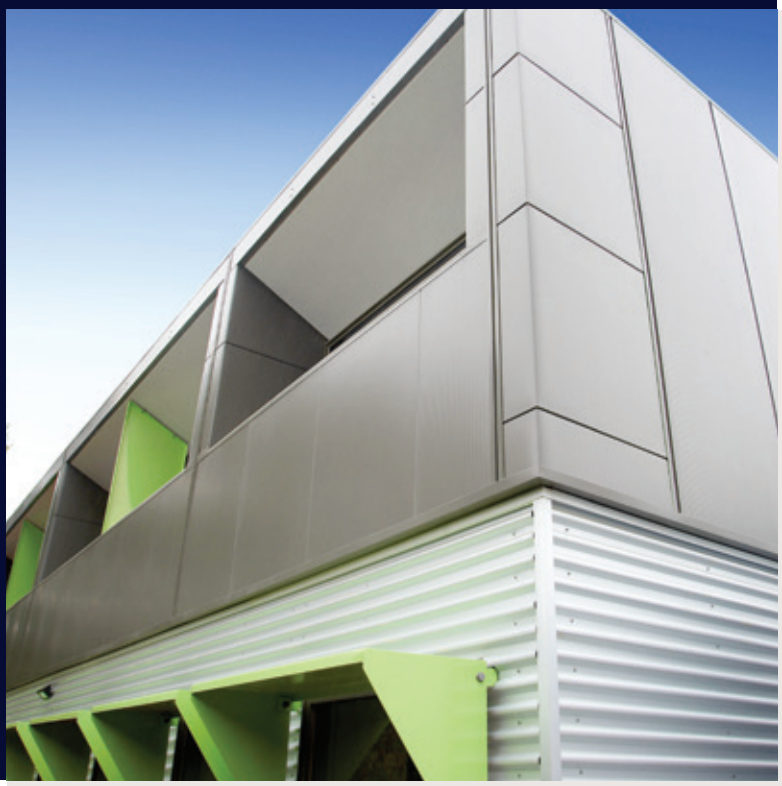
- Design flexibility and superior aesthetics.
- Standard cover widths of 300mm, 400mm and 500mm and can be supplied in any width between 250-500.
- Lengths of 1m to 150m, manufactured on-site.
- Gauges of aluminium typically are 0.8mm, 0.9mm, 1.0mm and 1.2mm.
- Broad range of metal substrates including aluminium, coated steel, stainless steel, zinc and copper.
- Lightweight roofing and cladding solutions.
- Approved network of trained installers.
- Advanced modern production technology.
- Can be naturally curved on site for radii over 40m.
- Can be mechanically smooth curved to 5m convex or 8m concave radii and mechanically crimp convex curved to 500mm radius.Tighter curves available depending on metal gauge. Please contact Kingspan for further information.
- Tapered sheets can be manufactured on site, using fully automated single pans machinery, in cover widths from 250mm to 500mm.
- Suitable for pitches as low as 1.5º including deflection.
- Simple waterproof detailing and superior weathertightness as well as excellent resistance to wind uplift.
- Bespoke specifications to meet project specific thermal and acoustic requirements.
- Fully integrates with Kingspan insulated panels and accessories as well as BENCHMARK Façade Systems to offer single-source, high performance, fully guaranteed, striking building envelopes.
- Architectural fabrications service available to all contractors.
- Fully complies with Building Regulations.
- Micro-rib profile.
- Up to 30 year warranty available on a project by project basis.
- Comprehensive colour ranges for coated metal systems.
- Simple fast track installation.
- Non-combustible roofing system – could reduce insurance premiums.
- BS EN ISO 9001 (Quality Management) approved systems.
- Factory Mutual FM 4471 approved and UL 580-90 certified.

FM APPROVED

CLASSIFIED UL

Kingspan Insulated Panels

Fabrications, Safety & Lighting Solutions



A comprehensive range of high performance and aesthetically pleasing insulated gutters and flashings, personal and collective fall protection systems, and superior-quality natural daylighting products.

Kingspan® Insulated Panels

Fabrications

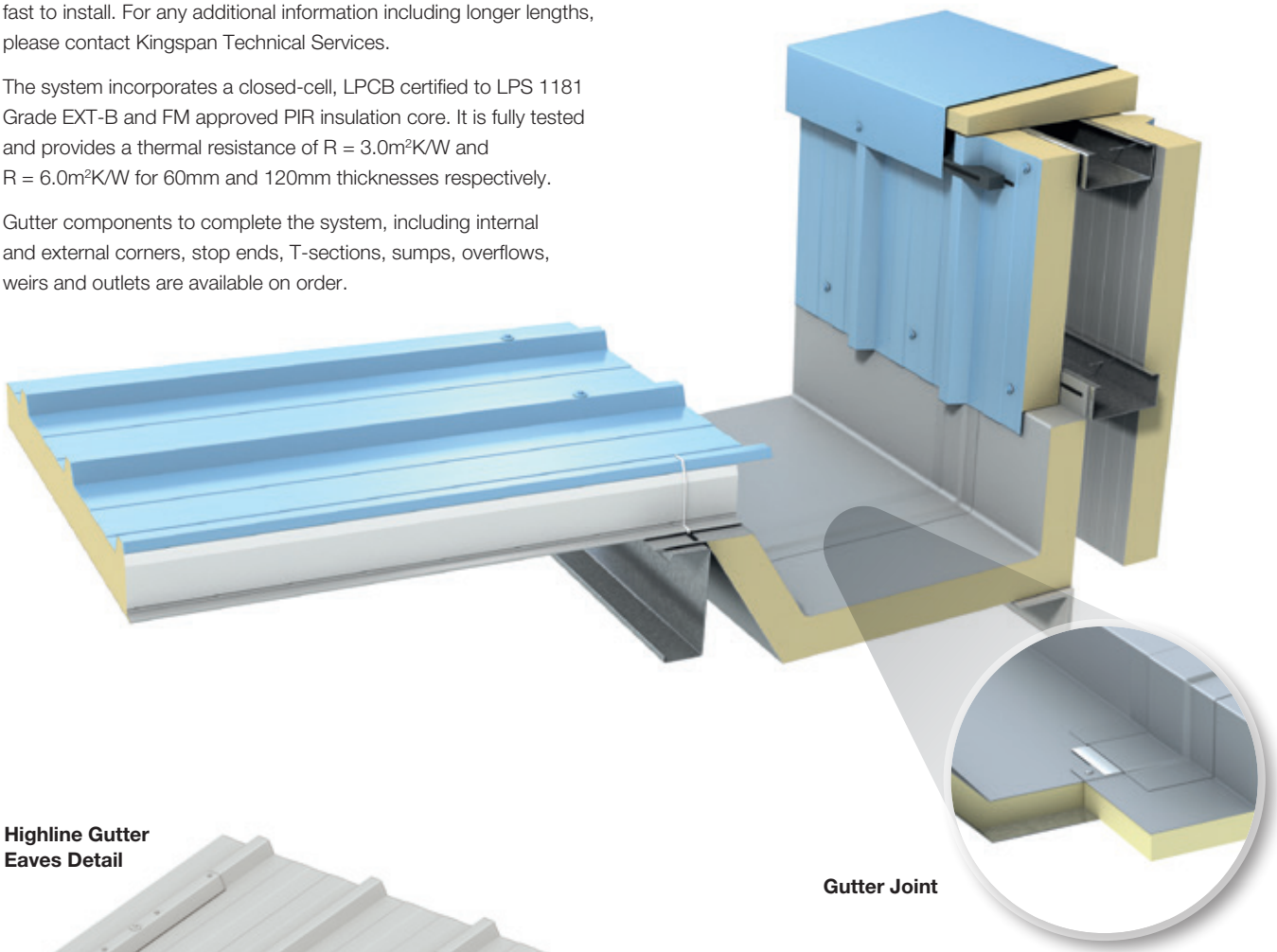
Extensive experience in fabrication techniques, combined with state-of-the-art production equipment, enables us to produce eye-catching and unique architectural features. All our products are custom designed and fabricated for each project – in various colours, module sizes and shapes.

Membrane Lined Insulated Gutter

Our membrane Lined Insulated Gutter is suitable for both boundary wall and valley gutter applications. It is available for manufacture to customer's requirements up to and including 6m long, making it fast to install. For any additional information including longer lengths, please contact Kingspan Technical Services.

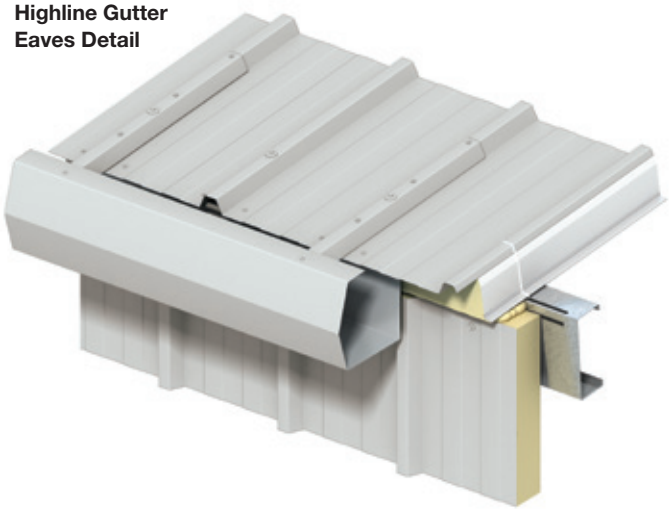
The system incorporates a closed-cell, LPCB certified to LPS 1181 Grade EXT-B and FM approved PIR insulation core. It is fully tested and provides a thermal resistance of R = 3.0m^{2}K/W and R = 6.0m^{2}K/W for 60mm and 120mm thicknesses respectively.

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



Gutter Joint

Highline Gutter Eaves Detail



Highline Gutters

Lightweight pre-coated steel guttering is available in lengths up to 6m and is supplied in a corrosion-resistant range of finishes. Downpipes, brackets and accessories are also available to complete our gutter system.

Fabrications, Safety & Lighting Solutions

Fabrications

Flashings

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

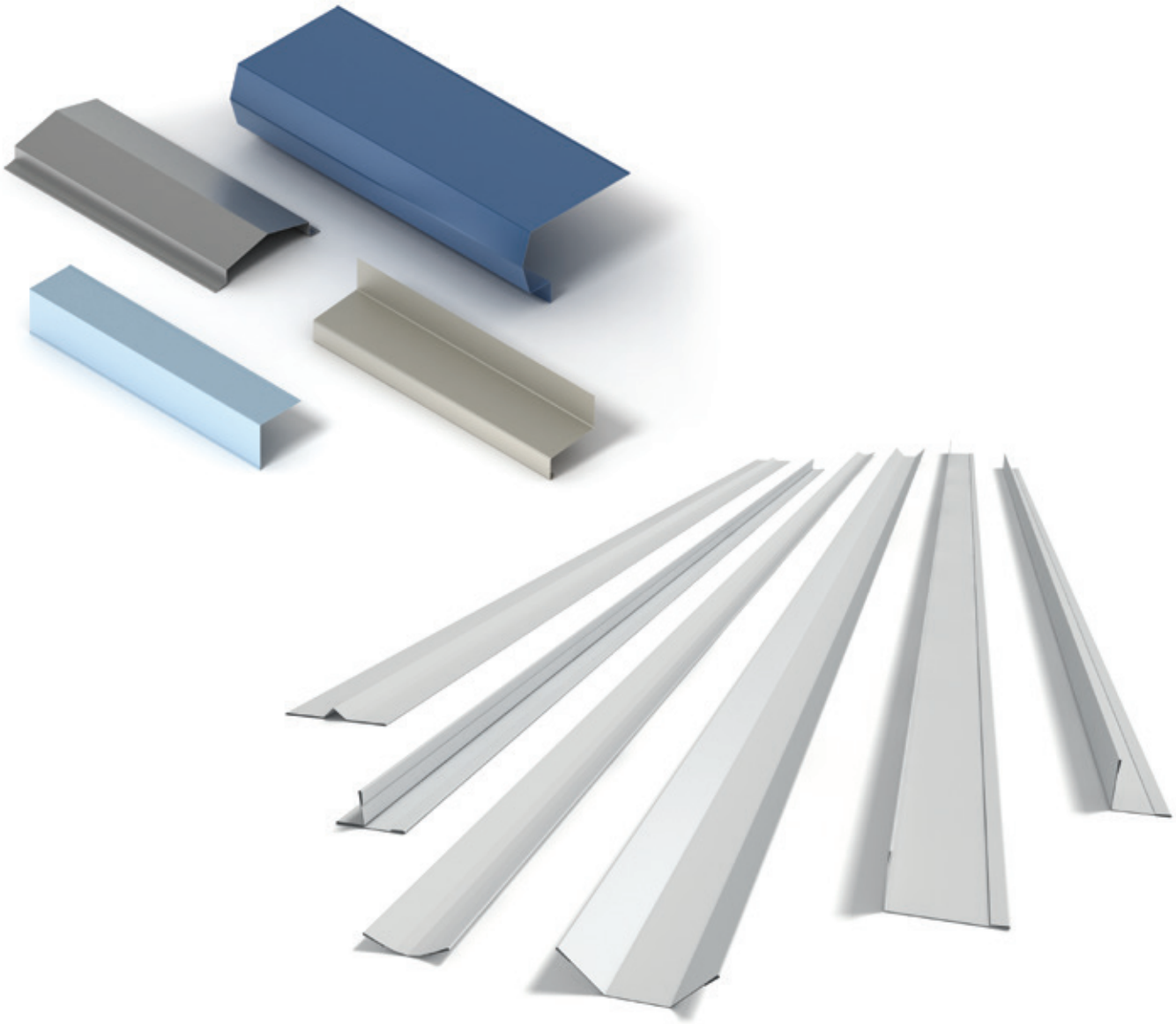
With a wide selection of materials, gauges and finishes available, the possibilities for fabricated flashings are endless. Kingspan Insulated Panels holds a range of materials in stock to facilitate immediate supply of all client requirements.

Available Lengths

Flashings are available in lengths up to 6m as standard. For longer lengths, or further information, please contact our Technical Services Department.

Product Specific Benefits

- Corner, drip, ridge and verge profiles are available.
- Precisely folded to suit any application.
- Available in lengths up to 6m.
- Manufactured from high-quality steel. Other materials are available upon request.
- A range of gauges are provided, including 0.5mm to 0.7mm (pre-coated steel).
- Membrane-lined flashings and fabricated ancillary components are also available, to complement our Kingspan K-Dek panels.
- Kingspan coating finishes include AQUA*safe* and anti-bacterial for Controlled Environment applications.



Fabrications

We manufacture a range of bespoke Top Hats designed to compliment our insulated wall panel systems.

Application

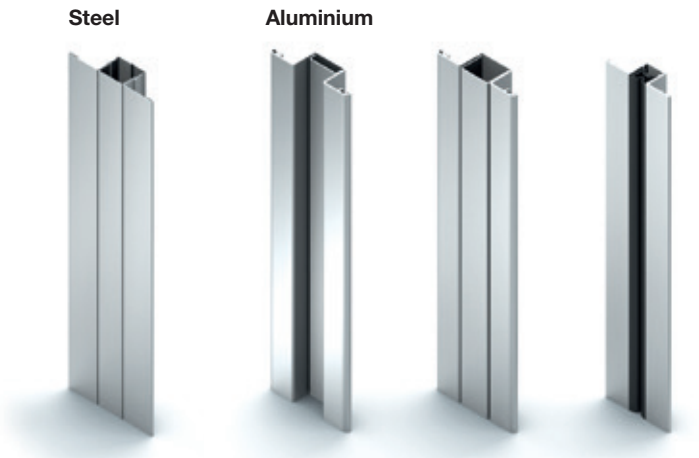
Top hats are available for Architectural Wall Panel (AWP) and Trapezoidal Wall (RW) insulated panels. All top hats are suitable for vertical applications.

Available Lengths

Top hats are available in lengths up to 3m for steel and 6m for aluminium. For further information, please contact our Technical Services Department.

Product Specific Benefits

- Manufactured from high-quality steel and aluminium.
- Available in lengths up to 6m (aluminium).
- Compatible with the entire range of Kingspan insulated wall panels.



Compatibility with Insulated Wall Panels

Material	Description/Options	AWP	Trapezoidal
Steel	Flush steel insert	✓	✓
Aluminium	Extruded top hat with either a recessed or flush aluminium insert, or fitted with a rubber gasket infill	✓	•

Fabrications, Safety & Lighting Solutions

Fabrications

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

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. Options include:

- Single-cranked;
- Double-cranked/mitred;
- Column encasements;
- Chamfered;
- Vertical crank;
- Curved;
- Z-shaped.

Application

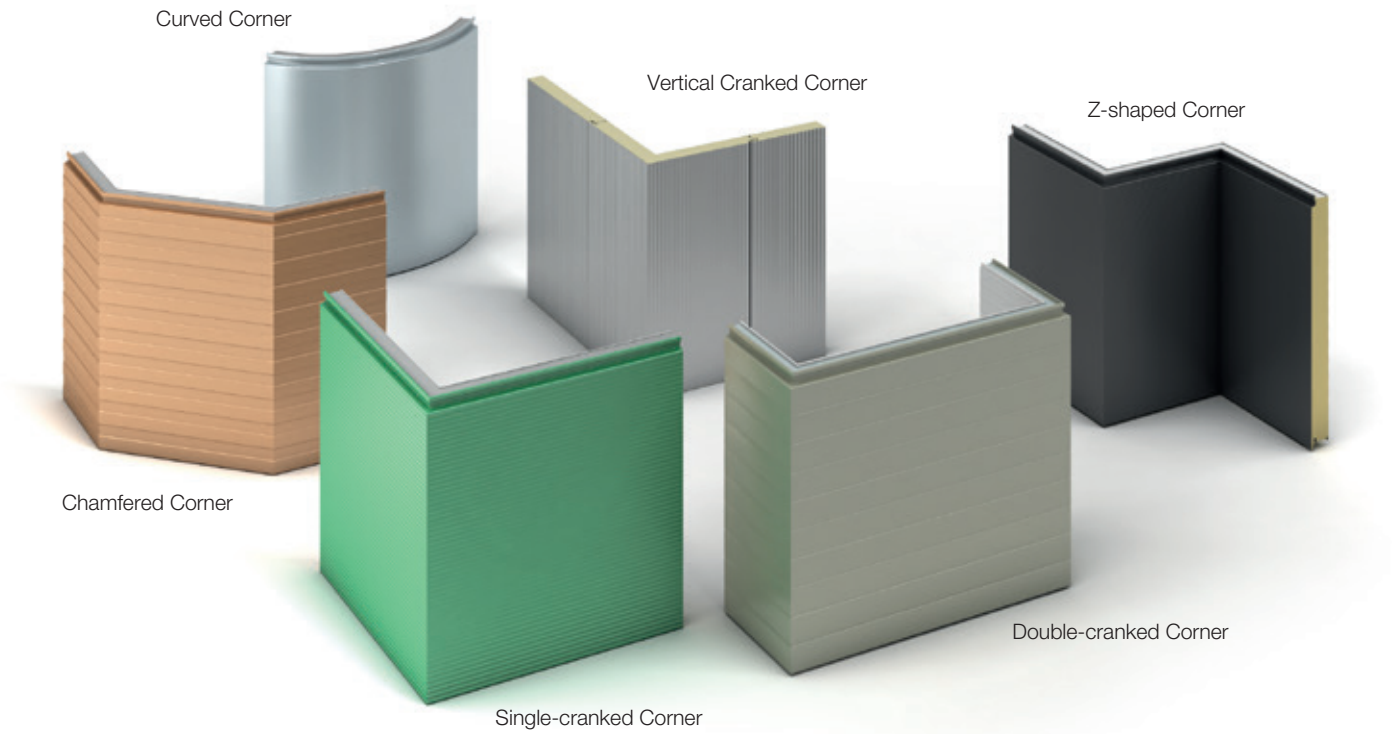
Our preformed corners can be cranked vertically and horizontally, as well as internally and externally, to achieve a truly bespoke solution.

Available Lengths

Minimum and maximum lengths and angles will apply depending on the type of corner specified. For more information, please contact our Technical Services Department.

Product Specific Benefits

- Preformed corners offer a more aesthetically pleasing alternative to flashings.
- Compatible with the entire range of Kingspan insulated wall panels.
- Suitable for horizontal and vertical applications.



Kingspan Insulated Panels

Safety

Redscar Business Park, UK

Kingspan Insulated Panels offers a range of personal and collective fall protection systems including Safepro2, Safetraxx, Saferidge and Safeside. All these systems provide proven, effective and discreet fall protection solutions for working at height, and are the only systems that are fully tested and approved for use on our range of insulated roof panels, ensuring protection of our insulated panels guarantee.

Product Features

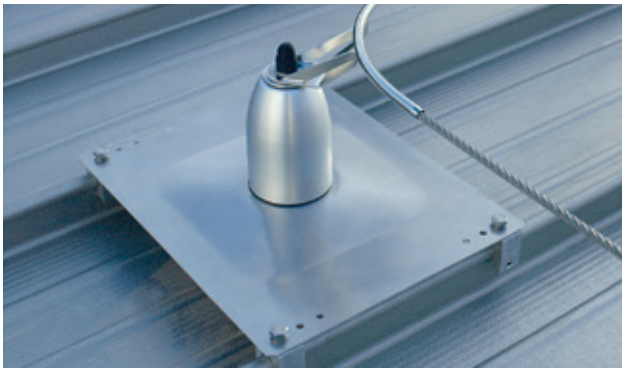
Fixing detail:	Advanced design allows efficient installation with no thermal bridging and eliminates the need for access to underside of the roof.
Metal type:	High-grade stainless steel and aluminium components.
Product compatibility:	The only height safety systems approved by Kingspan for installation on Kingspan insulated panels.
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.
Technical Support:	Available directly from Kingspan allowing designers, installers and users to maximise potential.

Fabrications, Safety & Lighting Solutions

Safety

Safepro2

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



Safetraxx

Safetraxx is a robust and discreet personal fall protection system. Safetraxx comprises a high-grade, precision-extruded, aluminium rail, designed to be fixed in a variety of different roof locations.

Saferidge

Saferidge is a unique personal fall protection system which is integrated into the roof apex cap detail. Saferidge comprises a high-grade precision-extruded aluminium rail, factory-fitted to a steel apex cap, which is a bespoke fabrication for each roof. It is designed to dissipate fall arrest forces across a wide roof area, minimising potential damage to the roof in a fall arrest event.

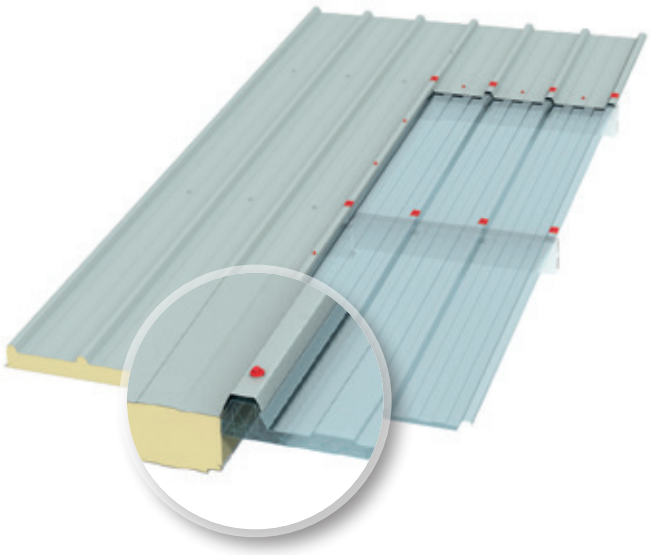
Safeside

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.

Red Scar Business Park, Preston, UK

Kingspan Day-Lite Trapezoidal is a transparent, co-extruded, multi-wall polycarbonate rooflight panel that allows high levels of natural light to flow into buildings.

Developed to complement the Trapezoidal Roof panel system, these products have excellent resistance to UV degradation and age-induced loss of light transmission, resulting in significant energy savings.



Product Features KS1000 DLTR

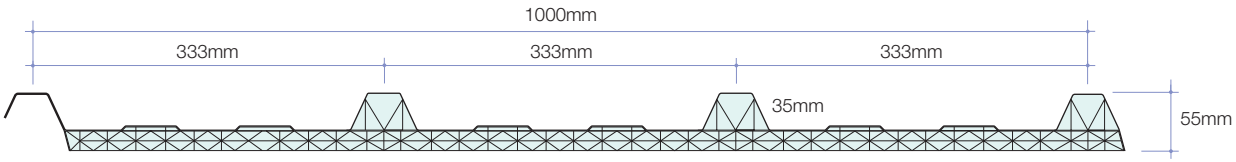
Profile:	Trapezoidal
Fixing detail:	Self-drilling and tapping fixings with storm washers (poppy red)
Application:	Suitable for roof pitches of 4° or more after deflection*
Lengths:	From 1.8m to 6.5m including 150mm overlap
Cover width:	1000mm
Product compatibility:	Developed to complement Trapezoidal Roof panel system
Seals:	Site-applied side and end lap weather seals

* For pitches below 4°, please contact Kingspan Technical Services.

Lighting

Warehouse, Sunshine West, Victoria, Australia

Kingspan Day-Lite Trapezoidal (U-value 1.58W/m²K)



Colour and Daylighting Performance

Product Reference	Colour	Visible Light Transmission (VLT) (%)	Direct Solar Transmittance (%)	Total Solar Transmittance (%)	Solar Heat Gain Coefficient	Shading Coefficient
Kingspan Day-Lite Trapezoidal	Clear	65	62	65	0.65	0.75
	Opal	58	64	55	0.55	0.63
	Opal 0.34 SHGC	21.7	28.5	34	0.34	0.38
	Opal 0.29 SHGC	18.3	24.7	29	0.29	0.33

Light transmission, according to ASTM D1003, is as measured on 600mm x 600mm samples. Solar Transmission, according to ASTM D1003, is the total solar energy that enters the interior of a building. Shading Coefficient (or b-value) is the ratio of the total solar energy that enters the interior of a building with a given material, and the total solar energy that enters the interior of a building with a standard 3mm glass panel.

Dimensions, Weight and Thermal Performance

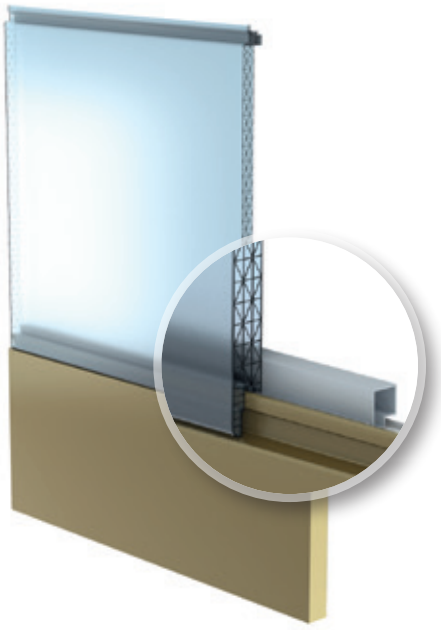
Product Reference	R-value (m²K/W)	U-value (W/m²K)	Overall Thickness (mm)	Weight (kg/m²)
Kingspan Day-Lite Trapezoidal	0.63	1.58	55	3.3

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

High Performance Sport Training Centre, Christchurch, NZ

Kingspan Polycarbonate Day-Lite Architectural is a translucent wall panel that allows natural daylight into buildings, whilst maintaining thermal efficiency and aesthetic appearance.

This co-extruded, multi-wall polycarbonate wall light is available in a wide range of colours and offers excellent interior levels of natural light without compromising the performance of the building. The system is suitable for use as an alternative to traditional vertical daylighting systems without any restriction on design options as it integrates fully with the Architectural Wall Panel range.



Product Features KS1000 DLAWP

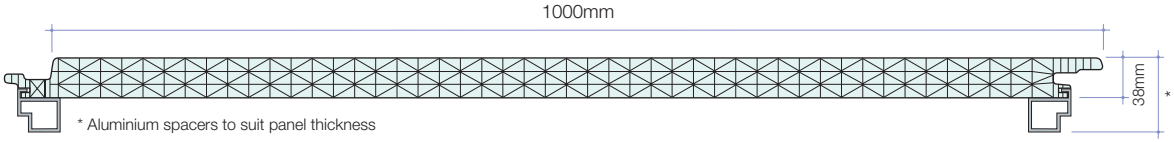
Profile:	Flat
Fixing detail:	Joint configuration to integrate with Architectural Wall Panel systems and BENCHMARK Evolution
Application:	Suitable for vertical or horizontal application
Lengths:	From 2m to 6.5m
Cover width:	1000mm
Product compatibility:	Ensures excellent fit with all Architectural Wall Panel systems and BENCHMARK Evolution façade systems

Lighting

Image courtesy of Gazeley and Central Photography.

Blue Planet, Chatterley Valley, UK

Kingspan Day-Lite Architectural



Colour and Day Lighting Performance

Product Reference	Colour	Visible Light Transmission (VLT) (%)	Direct Solar Transmittance (%)	Total Solar Transmittance (%)	Solar Heat Gain Coefficient	Shading Coefficient
Kingspan Day-Lite Architectural	Clear	55	53	58	0.58	0.66
	Opal	50	49	55	0.55	0.63
	Blue	18	36	48	0.48	0.55
	Green	43	41	51	0.51	0.59
	Purple	13	39	48	0.48	0.55
	Red	25	42	52	0.52	0.59
	Orange	33	41	50	0.50	0.58
	Yellow	55	50	56	0.56	0.64
	IR Green	35	21	40	0.40	0.46
	IR Blue	19	15	36	0.36	0.41

Light transmission, according to ASTM D1003, is as measured on 600mm x 600mm samples. Solar Transmittance, according to ASTM D1003, is the total solar energy that enters the interior of a building. Shading Coefficient (or b-value) is the ratio of the total solar energy that enters the interior of a building with a given material, and the total solar energy that enters the interior of a building with a standard 3mm glass panel.

Dimensions, Weight and Thermal Performance

Product Reference	R-value (m^2K/W)	U-value (W/m^2K)	Core Thickness (mm)	Weight (kg/m^2)
Kingspan Day-Lite Architectural	0.79	1.26	38	4.7

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

Images courtesy of SABIC Innovative Plastics.

Kingspan Day-Lite Klick Innovative Joint

Kingspan Day-Lite Klick is a secret-fix, translucent polycarbonate wall panel that offers designers and installers a more cost-effective wall light solution, where large areas of polycarbonate cladding are required.

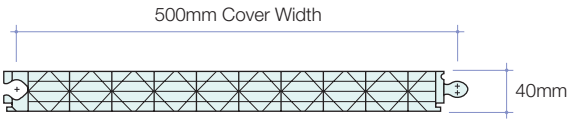
Kingspan Day-Lite Klick is a co-extruded, multi-wall polycarbonate wall light offering excellent interior levels of natural light whilst maintaining thermal efficiency and aesthetic appearance. Featuring an innovative joint detail and extruded aluminium frame, this flexible wall light system is designed for standalone use where no integration with insulated panels is required. The specially-designed frame also allows Kingspan Day-Lite Klick to integrate with a range of building materials including insulated panels, bricks and render.

Product Features KS1000 DLKK

Profile:	Flat
Fixing detail:	Thermally broken aluminium extruded section for perimeter fixing or aluminium fixing bracket for intermediate fixing
Colours:	Kingspan Day-Lite
Application:	Suitable for vertical applications
Lengths:	From 1.2m to 8m
Cover width:	500mm
Fire rating:	Class 0
Product compatibility:	Compatible with a range of building materials including insulated panels, bricks and render
Seals:	Factory-fitted to aluminium extrusion, factory-fitted barrier tapes to ends of polycarbonate

GE Corporate Air Transport Facility, Newbury, New York, USA

Kingspan Day-Lite Klick, KS500 DLKK



Dimensions, Weight and Thermal Performance

Product Reference	Thickness (mm)	Weight (kg/m²)	R-value (m²K/W)	U-value (W/m²K)	Light Transmission (%)	Solar Heat Gain Coefficient
KS500 DLKK Clear	40	4.0	0.77	1.3	59	0.64
KS500 DLKK Opal White	40	4.0	0.77	1.3	50	0.57
KS500 DLKK Blue	40	4.0	0.77	1.3	20	0.51
KS500 DLKK Green	40	4.0	0.77	1.3	46	0.55
KS500 DLKK Purple	40	4.0	0.77	1.3	15	0.54
KS500 DLKK Red	40	4.0	0.77	1.3	27	0.56
KS500 DLKK Orange	40	4.0	0.77	1.3	34	0.59
KS500 DLKK Yellow	40	4.0	0.77	1.3	59	0.61
KS500 DLKK IR Green	40	4.0	0.77	1.3	38	0.40
KS500 DLKK IR Blue	40	4.0	0.77	1.3	23	0.37

The R-value / 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, according to BS EN 410, is the total solar energy that enters the interior of a building.

Fabrications, Safety & Lighting Solutions

ZerO Energy Lighting

Extending our daylighting range, and continuing a tradition of sustainable innovation, we now offer a unique concept: Zero Energy Lighting.

Lighting is accountable for over 19%* of the world's energy usage, and improvements in lighting technology represent an opportunity to substantially lower our reliance on traditional energy sources, whilst delivering tangible financial savings and a path to sustainable development.

ZerO Energy Lighting (ZEL) offers a unique blend; consisting of high quality daylight solutions, intelligent LED lighting, fully programmable automatic controls and Kingspan Energy Rooftop Solar PV.

Our intelligent LED lighting offers a major improvement in energy efficiency, as a light source and also through improved levels of lighting control. The automatically-controlled lighting levels are imperceptible to occupants as they move around the building, surrounding them with a consistent level of natural quality light from a combination of daylight and artificial sources.

How Does it Work?

By optimising the application and design of Kingspan Day-Lite polycarbonate rooflights, we can maximise the benefit of natural light, reducing energy demand and improving comfort levels.

Research shows that more exposure to natural light enhances the productivity, safety and wellbeing of a building's occupants. Yet many of today's commercial and industrial buildings are still equipped with inefficient High Intensity Discharge (HID) lighting, that provides a poor quality of light that is often dull and yellowish.

With the introduction of Kingspan Smart-Lite, our highly-efficient intelligent LED technology, a natural quality of light is created, replicating the midday sunlight in terms of colour temperature and vibrancy. Furthermore, lighting energy costs are minimised, typically offering a reduction of 50% when compared to traditional lighting sources.

Each Kingspan Smart-Lite luminaire can include smart controls that react rapidly to changing environmental conditions. Automatic daylight dimming ensures the most efficient use of natural daylight, whilst occupancy sensors provide precise zonal control, so that areas are only lit when required. This intelligent technology can typically provide an additional energy saving of 40%.

With the addition of Kingspan Energy Rooftop Solar PV, we can eliminate the residual lighting energy demand, achieving or surpassing our ZEL objective.

*Source: Compiled by Earth Policy Institute from International Energy Agency (IEA), Light's Labour's Lost: Policies for Energy-efficient Lighting (Paris: 2006); 2005 electricity consumption estimated from IEA, World Energy Outlook 2006 (Paris: 2006).

Fabrications, Safety & Lighting Solutions

ZerO Energy Lighting

Production & Warehouse Facility, UK.
Before refurbishment: traditional fluorescent lighting

After: ZEL installation featuring Kingspan Smart-Lite High Bay LED lighting

Kingspan Smart-Lite High Bay
An ultra-efficient design that significantly cuts lighting energy usage Kingspan Smart-Lite High Bay creates a more natural light, replicating midday sunlight in terms of colour temperature and vibrancy.

With its low-glare design, uniform light distribution and choice of narrow-aisle or open-area optics, Kingspan Smart-Lite High Bay is suitable for a range of applications such as production, warehouse and retail environments.

Kingspan Smart-Lite Linear
Offering a range of utility lighting modules that are ideal for car parks, coldrooms, walkways and a multitude of other applications, Kingspan Smart-Lite Linear is a a tough, tamper-resistant and easy to install LED luminaire module that offers significant energy savings compared to traditional fluorescent lighting.

A range of optics is also available, in a choice of three lengths, offering varying degrees of light distribution and luminance depending on application and project requirements.

Kingspan Smart-Lite Recess
Kingspan Smart-Lite Recess offers a range of inspirational and aesthetic LED luminaires, delivering a transformational lighting solution that creates the feeling of natural daylight with beautifully uniform and bright, yet soft lighting.

These recessed LED luminaires create a uniform light distribution and luminance, making them the perfect choice for high occupancy working environments where a substantial amount of floor light is required such as offices, retail, hospitality, healthcare and commercial applications.

Kingspan
Smart-Lite High Bay

Kingspan
Smart-Lite Linear

Kingspan
Smart-Lite Recess

Controlled Environments

A range of high performance insulated panel systems that have been designed for use within temperature controlled and clean-safe environments.

Kingspan®
Insulated Panels

Controlled Environments

Temperature Controlled Systems

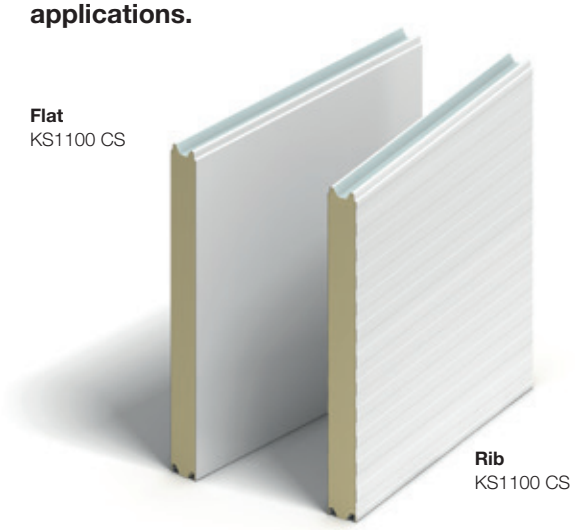
Rand Refrigerated Logistics, Melbourne, Australia.

Nagel Langdons Distribution Centre, Motherwell, UK

Kingspan Controlled Environment panel systems are designed for use within temperature controlled and hygiene safe environments such as food processing, freezers, cold / chill stores and clean rooms for bio-technology and pharmaceutical industries.

FIRE*safe* and FIBRE*free*, these panel systems are suitable for internal and external walls and ceilings including 'box within a box' applications.

Flat
KS1100 CS



Rib
KS1100 CS

FIRE*safe* FIBRE*free*

Temperature Controlled Systems

Ideal for temperature ranges of between -40ºC to +80ºC, these enhanced panel systems feature an innovative joint system designed to withstand high pressure washes and regular cleaning; preventing water ingress and minimising potential bacteria growth.

Providing increased energy efficiency and reduced CO_2 emissions combined with an extended life expectancy, Kingspan FM Approved Controlled Environment panel systems offer superior fire performance.

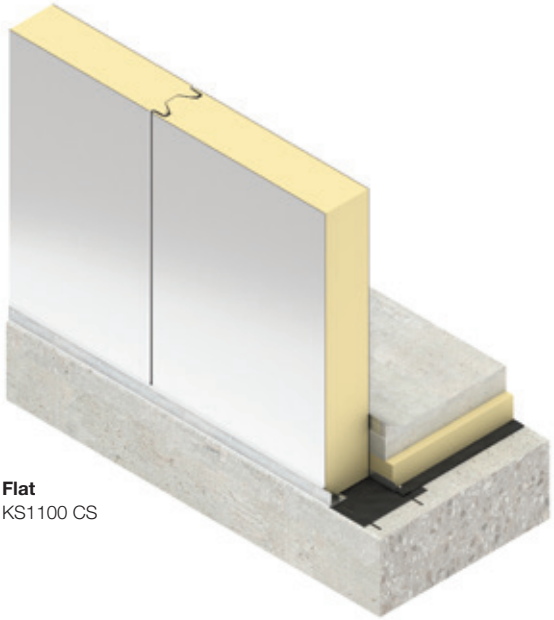
Product Features KS1100 CS

Profile:	Ribbed, Flat
Metal type:	Steel
Application:	Suitable for internal and external roof and wall applications
Lengths:	From 2m to 13.7m*
Cover width:	1100mm
Thickness:	From 50mm to 200mm
Environmental rating:	Global GreenTag CERT TM LCARate Gold GreenRate Level A
Fire rating:	FM approved
Seals:	Factory applied anti-condensation sealant

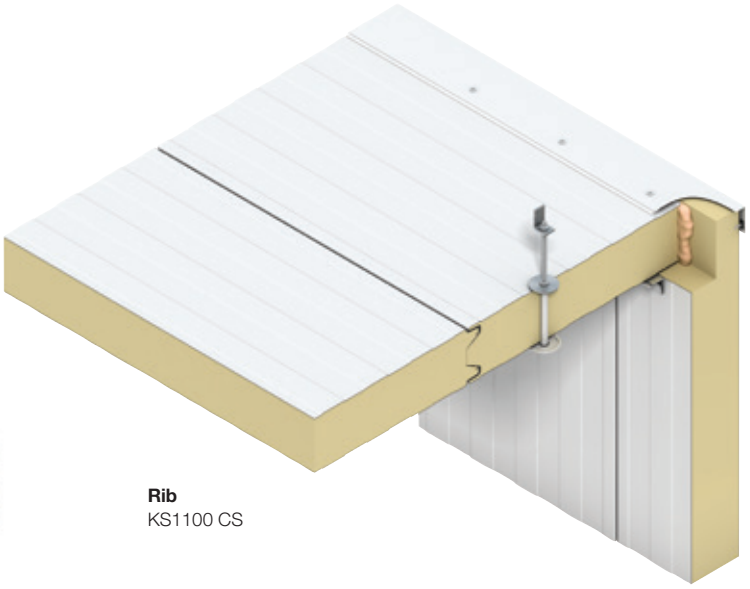
* Please be aware that for orders outside Australia maximum lengths are 11.8m. Maximum length for panels transported by rail is 12m.

Controlled Environments

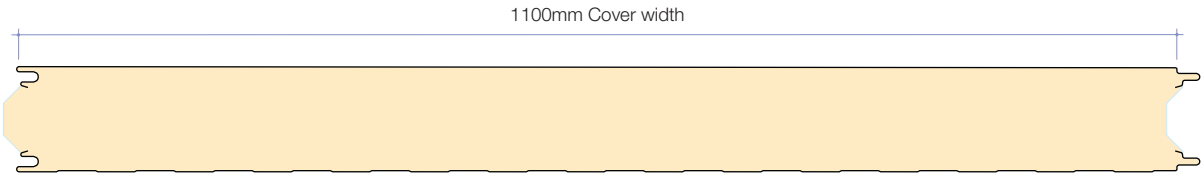
Temperature Controlled Systems



Flat
KS1100 CS



Rib
KS1100 CS



Dimensions, Weight and Thermal Performance

Panel Properties and Thermal Performance						
Core Thickness (mm)	**50**	**75**	**100**	**125**	**150**	**200**
R-value (m^2K/W)	2.65	3.90	5.15	6.40	7.65	10.15
U-value (W/m^2K)	0.38	0.26	0.19	0.16	0.13	0.10
Weight (kg/m^2) 0.5 steel / 0.5 steel	10.0	11.0	12.0	13.0	14.0	16.0
Internal Wall and Ceiling Spans						
Wall Max. Height (m)*	6.2	8.2	10.0	11.6	13.1	15.9
Ceiling Span (m)*	3.0	4.6	6.1	7.5	8.8	10.6

The R-values / U-values have been calculated using the method required by the appropriate National Building Regulations.

*Typical spans for internal walls and ceilings with no temperature difference across the panels. For other temperatures or internal conditions contact Kingspan. Imposed loads are in accordance with the requirements of AS / NZS 1170.

Kingspan® ENERGY

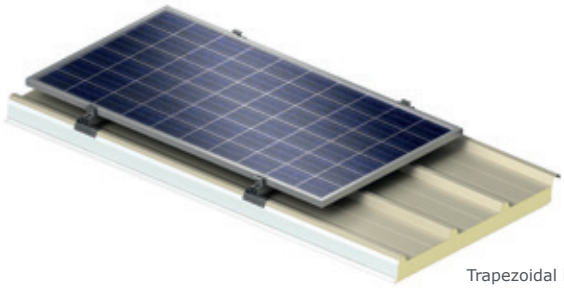
Fully-funded rooftop solar photovoltaic solutions for industrial and commercial buildings, offering businesses low carbon energy generation with no upfront capital investment.

ROOF MOUNTED PV SYSTEM

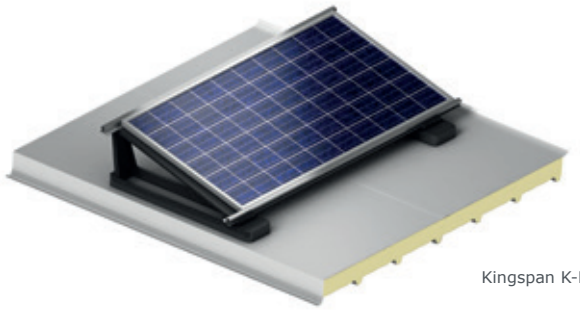
Roof Mounted PV System from Kingspan Energy is a versatile solar photovoltaic system that is suitable for pitched and flat roof applications on new build, retrofit or refurbishment projects.

System Benefits:

- Reduces the energy consumption of the building;
- Provides protection against rapidly increasing electricity prices;
- Increases asset and rentable value of a building;
- Aids Carbon Reduction Commitment cost offset;
- Generates zero CO_2 emissions;
- Is the only viable renewable technology for the urban environment.



Trapezoidal Roof



Kingspan K-Dek

PRODUCT FEATURES

The PV modules can be mounted onto a range of Kingspan insulated roof panels:

- Trapezoidal Roof
- Lo-Pitch
- Kingspan K-Dek
- BENCHMARK Envirodek

The PV system has been structurally tested in conjunction with all of the above insulated panel profiles. It is a top sheet mounted system, negating the need for through fixing, therefore eliminating cold bridging and protecting your warranty.

On flat roofs with an incline of up to 3º, a lightweight, non ballasted mounting system is also available. The A-frame system requires no module row connectors, allows for effective roof drainage and is quick and easy to install. The system is patch welded to the existing membrane thus negating the requirement for through fixing or heavy weight ballasting.

A-frame mounting system on Kingspan K-Dek

100% FUNDED PACKAGE

Kingspan Energy offers business and building owners the opportunity to maximise the use of their roof space to generate power for their own benefit.

Our funded package allows end clients to reduce their energy costs and enhance the value of their property without the need for any upfront capital outlay.

Effectively, in return for lease of the roof space (up to 25 years), Kingspan Energy will provide 100% capital funding, and will design, project-manage, install and maintain a bespoke optimised Roof Mounted PV System.

The electricity generated by the system will be available to the host company at lower rates than would otherwise be supplied from the grid.

As a result, the client will have the advantage of a fixed electricity cost indexed to RPI (Retail Price Index) rather than having exposure to the volatile annual utility inflation rates.

SERVICE PACKAGE

Kingspan Energy provides an end-to-end service package.

In-house consultancy, detailed design, specification and business value proposition are all part of our service offering. Kingspan Energy provides a full turn-key EPC (Engineering, Procurement & Construction) project delivery, including:

- Project management;
- Principal contractor;
- Leading technology partners;
- Health & Safety.

With Kingspan Energy's expertise in sustainable energy solutions, customers can be assured that we not only have the expertise to design a system that will suit their requirements but also the capacity to fulfil every aspect of their renewable energy project, from design and procurement to installation, commissioning and maintenance.

BENCHMARK
By Kingspan

BENCHMARK is an architectural range of façade and roof systems that has been designed using insulated panel technology. BENCHMARK brings together all the elements of the building envelope to help create stunning architectural façades and roofs in exciting colours, textures and finishes, whilst meeting clients' expectations in terms of costs, speed and energy performance.

The whole range has been fully tested and is backed by the BENCHMARK Guarantee.

FAÇADE & ROOF SYSTEMS

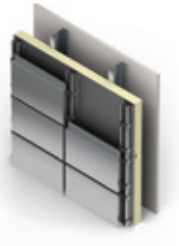
BENCHMARK
ENGINEERED FAÇADE SYSTEMS

BENCHMARK Engineered Façade Systems comprises two engineered systems that have been designed to display a large range of metallic and non-metallic façade options.

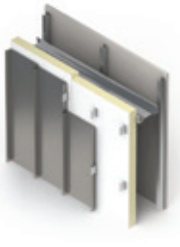
Engineered Systems: the range comprises two pre-engineered insulated panel systems, BENCHMARK Karrier and BENCHMARK Wall Liner, both of which utilise the same advanced insulated panel technology to deliver high performance envelopes. Once the panel systems are installed the building is fully weathertight, allowing internal fit-out to commence and removing the façade from the critical path. The relevant secondary support/railing system required for the chosen façade is fixed directly to the outer skin of the panel systems, removing all risk of cold bridging. Both systems will vary in span, railing systems and façade options.

Façade Options: BENCHMARK offers a wide choice of façades in colours and textures. The product range includes metallics, ceramic granites, ceramic tiles, HPL and timber. BENCHMARK offers stylish façade options combined with high performance to deliver complete façade solutions.

BENCHMARK
Karrier



BENCHMARK
Wall Liner



BENCHMARK
INTEGRATED FAÇADE SYSTEMS

BENCHMARK is proud to present its latest and most innovative product within its range, BENCHMARK Kreate, a fully integrated façade solution using insulated panel technology. Fully bespoke and completely inspirational, BENCHMARK Kreate is made to order to the specifier's free design.

It is the first integrated insulated panel and aluminium façade system of its kind, offering a world of benefits compared to traditional rainscreen systems. Each high performance insulated panel is made of multiple cassettes with smooth rounded corners that are cleverly integrated into each panel. The façade's design is truly bespoke, in terms of the amount of cassettes, their arrangement along with their individual size and colour. The cassettes are finished in a post-powder coating, which is available in any BS or RAL colour (chromide-free finish with Qualicoat assurance).

BENCHMARK
Kreate ■

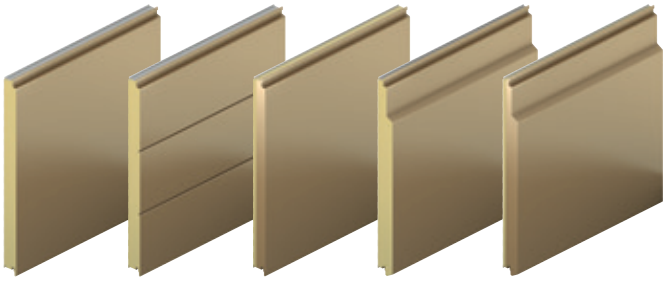
■ Manufactured in UK.

BENCHMARK
DESIGN WALL SERIES

BENCHMARK Design Wall Series comprises a range of premium flat insulated panels (BENCHMARK Evolution) with distinctive features, textures, colours and an impressive range of architectural joint details.

The range comprises:

- BENCHMARK Evolution Axis: The original premium, flat insulated panel system.
- BENCHMARK Evolution Multi-Groove: The premium flat panel that can have up to three grooves engineered into the surface of the panel.
- BENCHMARK Evolution Recess: The panel with a folded edge detail and a recessed rubber gasket, creating a 3D joint effect.
- BENCHMARK Evolution Reveal: The premium flat panel with a 50mm, 100mm or 150mm reveal along the panel.
- BENCHMARK Evolution Reveal Recess: A panel that has a combination of a variable reveal and 3D joint effects.

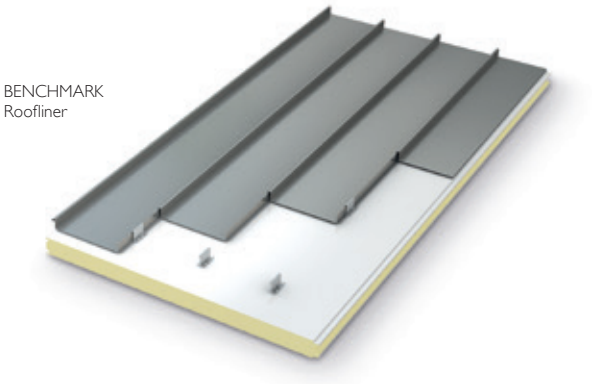


BENCHMARK Evolution Axis ▲ | BENCHMARK Evolution Multi-Groove ■ | BENCHMARK Evolution Recess ■ | BENCHMARK Evolution Reveal ■ | BENCHMARK Evolution Reveal Recess ■

BENCHMARK
ROOF SYSTEMS

BENCHMARK offers the following roof system:

- BENCHMARK Roofliner: An insulated roof panel that is ideal for standing seam finishes.The panels are specifically designed for zinc, stainless steel and aluminium standing seam waterproofing systems and single-ply membranes.



BENCHMARK Roofliner

Manufactured in: ▲ Australia, ■ UK.

Colour Range

The Kingspan Colour Range consists of a strong, bold and enticing palette of industry inspired colours, designed by architects for architects, providing premium protection to the building envelope.

Kingspan Insulated Panels

Colour Range

Standard

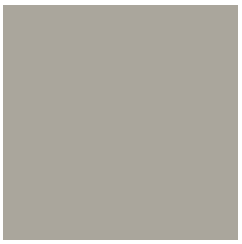
Off White ▲■

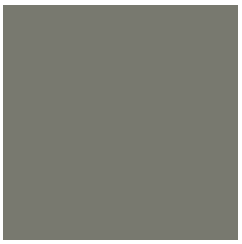
Classic Cream™

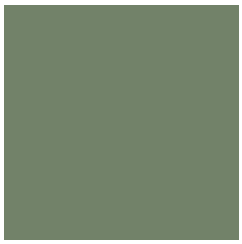

Sandbank®*


Evening Haze®

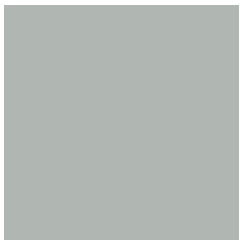

Stone*


Dune® ▲■

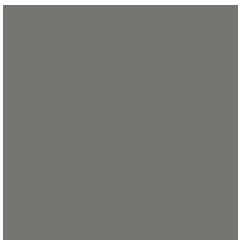

Bushland®*


Pale Eucalypt®


Cottage Green®


Shale Grey™ ▲■

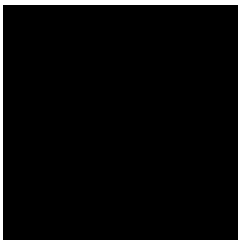

Windspray®


Wallaby®


Basalt®


Woodland Grey®


Monument® ▲■


Night Sky® ■


Ironstone®


Deep Ocean®


KI Blue*


Loft®*


Manor Red®


Mandarin*

Colorbond®

General

▲ Stocked KS1000 RW

■ Stocked KS1000 AWP

*KI Blue, Bushland, Loft, Sandbank, Mandarin and Stone - extended lead times apply. Please contact Customer Services.

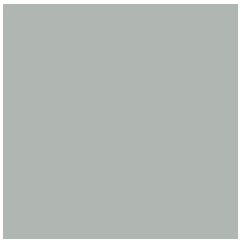
The printed colours are as accurate as possible but are for guidance purposes only.
Please request a swatch sample from a Kingspan Area Sales Manager to view accurate colour and texture prior to specification.

Kingspan Insulated Panels

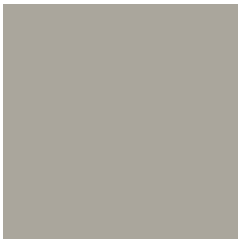
Colour Range

High Performance

Off White

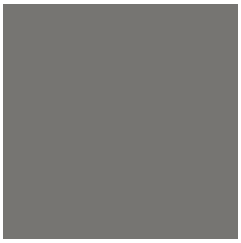


Shale Grey™



Dune®

Windspray®



Wallaby®

Woodland Grey®

Monument®

Colorbond®

Colour Range

Please note the High Performance range are non-stocked colours and are subject to extra lead time and surcharges based on volume ordered.
Please refer to page opposite.

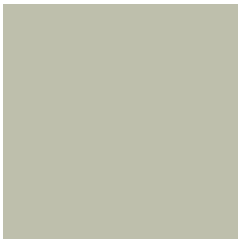
The printed colours are as accurate as possible but are for guidance purposes only.
Please request a swatch sample from a Kingspan Area Sales Manager to view accurate colour and texture prior to specification.

Kingspan Insulated Panels

Colour Range

Metallic

Galactic™


Rhea™


Axis®


Cortex®

Cosmic™


Citi®


Astro™


Silversmith


Façade®


Celestian™


Skybridge®


Copper Penny ■


Aries™

Colorbond®

General

■ Stocked KS1000 AWP

Please contact Kingspan Technical Services for information on availability of the Metallic Range for Trapezoidal KS1000 RW.

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

Colour Range

The Katsumata Centre, Geelong, Victoria, Australia.

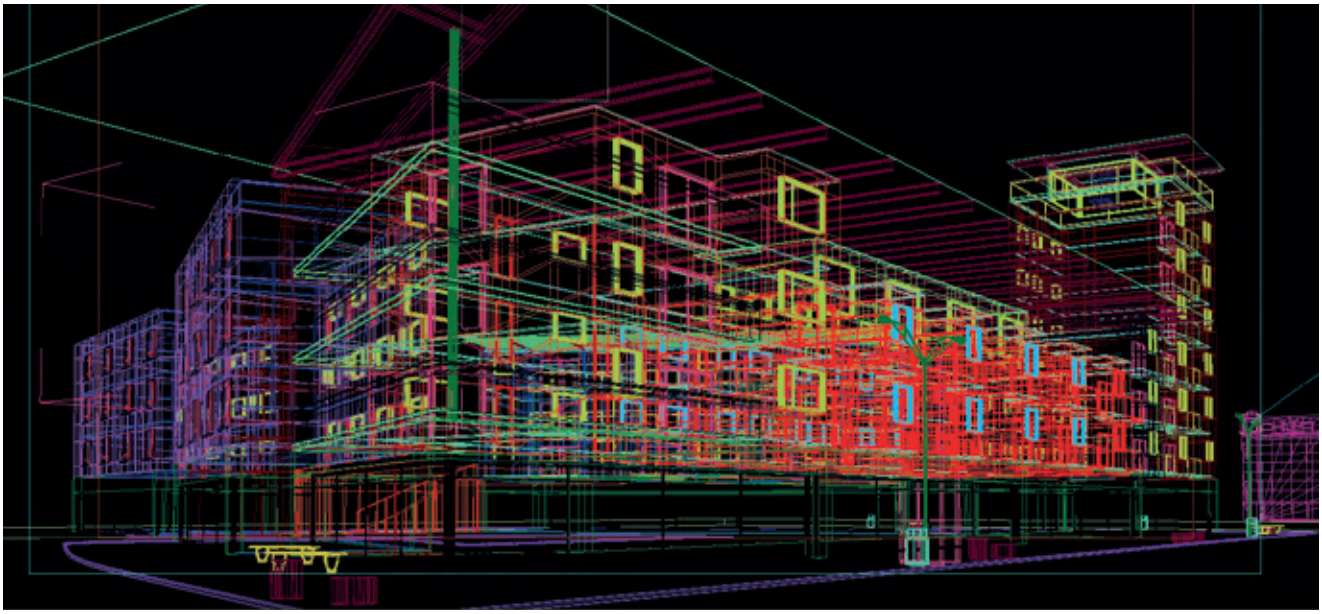
Majura Park, Canberra, Australia.

Craigieburn Central Shopping Centre, Victoria, Australia

The COLORBOND® steel colours shown here have been reproduced to represent actual product colours as accurately as possible. However, we recommend checking your chosen colour against an actual sample of the product before purchasing as varying light conditions and limitations of the printing process may affect colour tones. COLORBOND®, BlueScope and ® colour names are registered trade marks of BlueScope Steel Limited. ™ colour names are trade marks of BlueScope Steel Limited.

Customer Services & Support

Another hallmark of our success is the focus on consistently offering the best service to our customers. We offer high levels of customer support, including technical services at the design phase through to product training and after-sales support.



Technical Support

One of our strengths is the degree of technical support that is available to customers, right down to the finest detail.

The degree of technical support available to customers goes right down to the finest detail. We offer technical advice and support throughout the design and construction process. From the provision of project specific details through to the creation of project specific specifications, Kingspan Technical Services can help to ensure that your building performs and complies with building regulations.

Today, achieving energy efficiency and savings are primary factors in modern building design. The Kingspan Technical Services team uses different technologies to advise customers on how to comply with current regulations, provide recommendations on the use of renewable technologies and calculate optimum panel thickness and air leakage requirements to achieve the desired results.

Customer Service

Customers are at the heart of everything we do. It is the pursuit of continued excellence in customer service which drives performance and improvements.

Teams of customer service personnel are represented in all locations, from frontline co-ordinators to detailers. Each department sees an order right through from start to finish, including dealing with transportation and after-sales care.

The various challenges to be found across the globe in terms of culture, pace and expectations are met with the same customer first approach, with best quality as a benchmark and the focus firmly on delivering what the customer wants.

Specifications Manager & Area Sales Manager

Available to assist you in the appropriate selection and specification of our range of products, Specifications Managers and Area Sales Managers can provide you with a local and responsive service.

Customer Services & Support

Field Service & Training

We place high emphasis on customer staff training to facilitate proper installation. We recognise that this is the key to getting maximum performance from our products, and it offers peace of mind when supported by our guarantees.

Our training sites have special facilities and equipment, which allow full demonstrations of the different products to be carried out. Training is comprehensive, following the whole procedure from the safe off-loading, storing and handling of products, through to installation and fixing.

Each course covers as much as possible to provide best value for the customer. The team will also provide training on customers' own premises. All training is recorded and all participants are issued with certificates of completion and compliance to prove that they have the required skills to install Kingspan Insulated Panels products.

The Kingspan Field Service team will carry out follow up assessments on site, checking that the training has been assimilated and that installations are being carried out correctly.

Marketing Support

Our marketing team aims to provide a fast turnaround on standard sample and literature requests, eliminating delays with planning and client approval of material, so that projects begin on time.

Case studies, installation videos and animation sequences are all available on the websites at **www.kingspanpanels.com.au** **www.kingspanpanels.co.nz**

Kingspan Insulated Panels

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11/2015