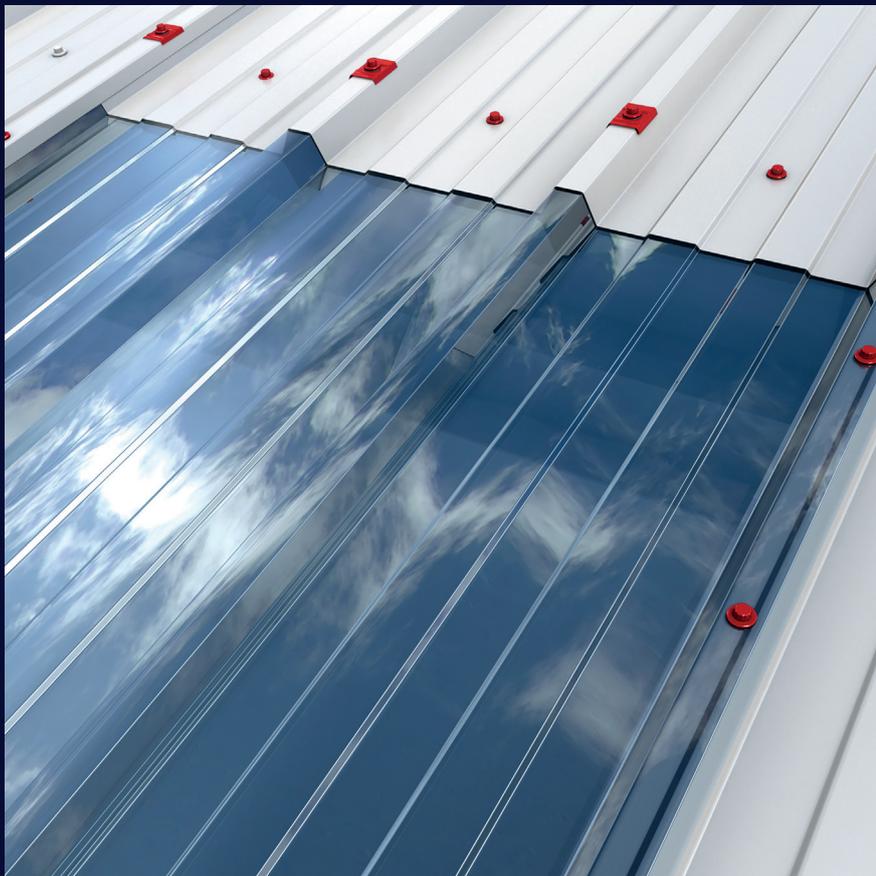


**Fabrications, Safety
& Lighting Solutions**

Lighting



Lighting

Kingspan Day-Lite Polycarbonate Systems
& ZerO Energy Lighting Solutions



Red Scar Business Park, Preston, UK.

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Fabrications, Safety & Lighting Solutions, a sub-division of Kingspan Insulated Panels, offers a comprehensive range of high performance and aesthetic insulated gutters and flashings, personal and collective fall protection systems, superior-quality natural daylighting products and intelligent LED luminaires.

The Kingspan Day-Lite range offers a quality of daylight management unrivalled within the industry, whilst still providing architects with maximum design flexibility and industry-leading guarantees. Our comprehensive portfolio of translucent polycarbonate daylighting solutions delivers the optimum balance between energy efficiency requirements and the use of natural and artificial lighting:

- Kingspan Day-Lite Trapezoidal and Trapezoidal Plus are trapezoidal-profiled rooflights designed to integrate with our Trapezoidal Roof panel;
- Kingspan Day-Lite Upstand is an upstand rooflight designed to integrate with our Lo-Pitch, KingZip IP, Trapezoidal Roof, Trapezoidal Secret-Fix and Roof Tile panels;
- Kingspan Day-Lite Vault is a new barrel vault rooflight designed to integrate with our Topdek panel;
- Kingspan Day-Lite Architectural is a flat-profiled wall light panel designed for integration with our Architectural Wall Panel range and Optimo panel;
- Kingspan Day-Lite Klick is a flat-profiled wall light panel designed for standalone use or integration with a range of building materials.

ZerO Energy Lighting

Extending our daylighting range, and continuing a tradition of sustainable innovation, we are now able to complement our translucent polycarbonate solutions with a range of intelligent LED lighting systems.

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 integrated technology is what makes ZerO Energy Lighting an attractive and solid business proposition, that goes beyond energy savings to create future-proofed, sustainable buildings with safe, pleasant and productive working environments.

Kingspan Benefits

Guarantee

All products are covered by the Kingspan Guarantee.

Quality & Durability

All products in the Kingspan Lighting range are manufactured from the highest quality materials using state-of-the-art production equipment to rigorous quality control standards; ensuring long-term reliability and service life. All products are fully compliant with ISO 9001 (Quality), ISO 14001 (Environmental) and OHSAS 18001 (Health & Safety).

Lighting

Our Kingspan Day-Lite range of polycarbonate rooflights allows superior levels of natural light to flow into buildings, contributing to reductions in overall energy consumption.

"Independent research proves conclusively that rooflights can save energy in many applications, and the greater the rooflight area the greater the potential saving. The amount of energy needed to light a building artificially is often much greater than the amount of energy used to heat it, and is often the greatest single energy use in operating the building. When used in conjunction with automatic lighting controls, to turn the electric lights down or off, rooflights can have a major impact on the overall energy consumption of a building.

Rooflights are usually less well insulated than the surrounding opaque areas of the roof but have very little effect on the total energy required for heating, as the beneficial effects of passive solar gain compensates for the poorer insulation. Electricity used for lighting is much more expensive in terms of CO₂ than the gas used for heating, so including large areas of rooflights is one of the single most effective ways of improving the environment."

The exceptional durability and resistance to UV degradation offered by polycarbonate ensures tangible and quantifiable energy savings over the lifetime of a building when compared to alternative daylighting systems.

Polycarbonate also has a scrap value, potentially rendering the process of removing and disposing of the panel, at end of life, cost neutral / positive. The use of a 100% recyclable polycarbonate rooflight therefore has both environmental and economic benefits.

Reduction in CO₂ Emissions

Research carried out by De Montfort University's Institute of Energy and Sustainable Development shows that rooflights can provide a projected reduction in CO₂ emissions of around 26%.*

"Using rooflights to provide a bright, naturally-lit interior will save money, provide a more pleasant environment people want to spend time in and contribute to the government's target to reduce emissions of CO₂."

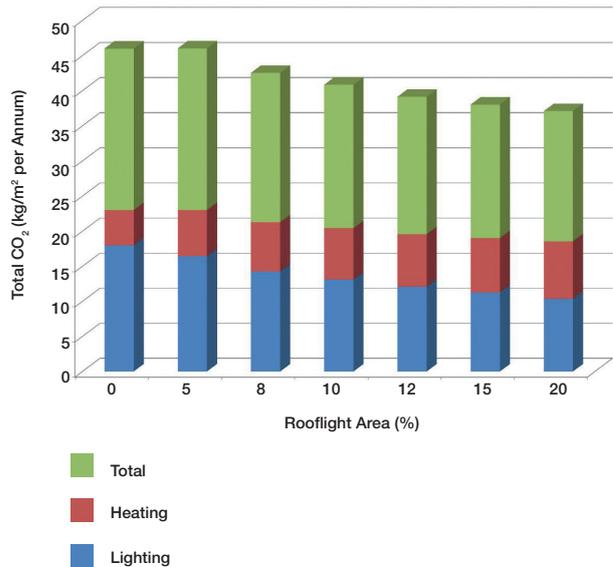
Notes:

* Source: NARM Technical Document NTD01 2009: Natural Daylight Design through Rooflighting.

Benefits of Polycarbonate

Projected CO₂ Emissions

The graph below demonstrates the projected CO₂ emissions against increases in rooflight area (assuming that some degree of automatic lighting control is used).



Light Transmission

The longevity of light transmission provided by our polycarbonate daylighting systems enables the true benefit of daylight harvesting to be realised. Some other traditional rooflight options tend to yellow with age and reduce the benefit over the life of the building.

Polycarbonate, however, retains an exceptional level of light transmission throughout its lifetime. The comparison in light transmission performance between Kingspan Day-Lite polycarbonate rooflights and other traditional rooflight products is clear to see.



Kingspan Day-Lite Trapezoidal 1.6

Light Transmission	65% to BS EN 410
Loss of Transparency (after 13 years)	2%
Yellowness:	
New	Delta 2.4
Aged (after 13 years)	Delta 5.4
UV-resistance	Excellent

Kingspan Day-Lite Trapezoidal

Introduction

Kingspan Day-Lite Trapezoidal, KS1000 DLTR, polycarbonate rooflights are designed to allow high levels of natural light into buildings. This range of translucent polycarbonate systems provides superior resistance to UV degradation, resulting in excellent long-term light transmission, thermal and structural performance.

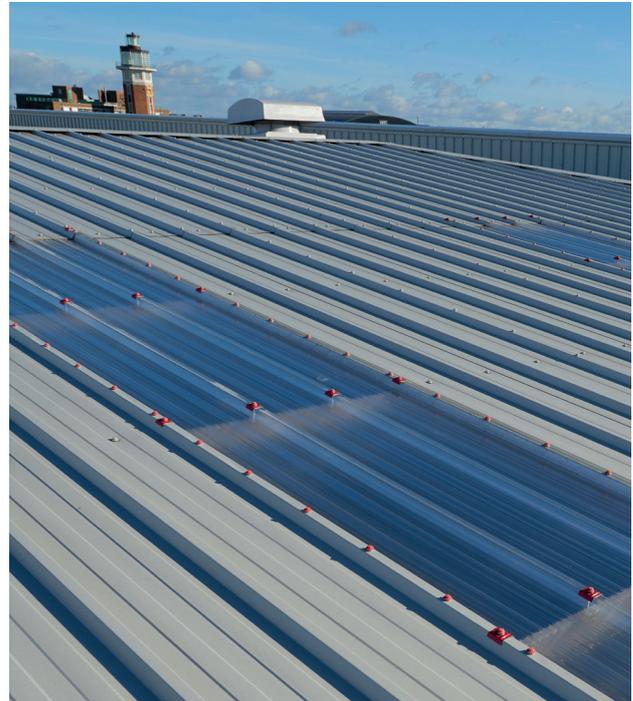
Designed to be an integral part of the Trapezoidal Roof panel system, Kingspan Day-Lite Trapezoidal is a range of co-extruded, multi-wall polycarbonate rooflights with two thicknesses offering U-values of 1.6W/m²K and 1.0W/m²K.

Also available is Kingspan Day-Lite Trapezoidal Plus, a premium range of polycarbonate rooflight systems, with U-values of 1.3W/m²K and 0.8W/m²K, that have been designed specifically for quick and simple installation and feature a flush fixing for an enhanced internal finish.

Kingspan Day-Lite Trapezoidal and Trapezoidal Plus allow installation of a high proportion of rooflights without significantly affecting the overall thermal performance of the roof, thus improving energy efficiency and sustainability.

Features & Benefits

- U-values ranging from 1.6W/m²K to 0.8W/m²K - fully compliant with the appropriate National Building Regulations.
- Excellent light transmission - up to 65% when new, with minimal deterioration over time, to BS EN 410. Please refer to table on p.7 for product specific data.
- Low Solar Heat Gain Coefficient - limiting local temperature increases behind the rooflight. Please refer to table on p.7 for product specific data.
- High degree of colour fastness means product will not discolour over a guaranteed period.
- Available in lengths up to 6m (1.3 and 0.8), 6.76m (1.0) and 8m (1.6), please refer to product data sheets for product specific details.
- Non-fragility performance - meets the requirements of ACR[M]001: 2014 Class B (500 joules test) when installed as per Kingspan details, and BS EN 14963: 2006 Class SB1200 (1200 joules test), when fitted to Trapezoidal Roof panel following Kingspan installation details. Non-fragility compliance over product lifetime significantly reduces the risk of falls to both construction and maintenance personnel.
Note: It is never recommended to allow persons to walk across any rooflight.
- Superior air tightness and weatherability performance compared to traditional rooflight systems.
- Precision extruded production technique ensures excellent fit with Trapezoidal Roof panel.



- Kingspan Day-Lite products fully satisfy the requirements of the National Building Regulations achieving Euro Class B internally and National Class AA and Euro Class BROOF(t4) externally. All Kingspan Day-Lite Trapezoidal and Trapezoidal Plus (clear finish only) products achieve a classification of B-s1,d0 when tested to EN 13501-1: 2007.
- Suitable for roof pitches of 4° or more after deflection.
- Fully recyclable at end of life, with minimal impact on the environment.
- Guaranteed for structural, thermal and UV-resistance for up to 25 years.
- Lightweight and durable.
- Colour options include Clear, Opal, White (0.34 SHGC), Infra-Red Green and Infra-Red Blue (refer to page 22).
- Quick and efficient installation; simple to fix with no glazing experience necessary.
- Flexible intermediate fixing positions can be set on site so exact purlin locations are not required at order stage, thus eliminating the need for ledger plates in the event of out-of-balance structural steelwork. (Excludes Kingspan Day-Lite Trapezoidal Plus).
- Factory-applied barrier tapes reduce the risk of condensation and prevent ingress of moisture and insects during transportation and delivery, keeping rooflights clean and optimising performance.

Kingspan Day-Lite Trapezoidal

Product Overview

Applications

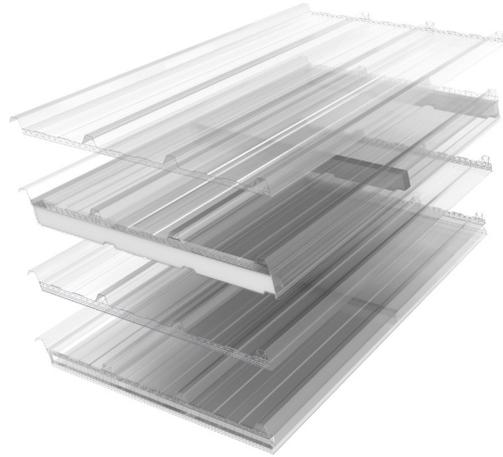
Kingspan Day-Lite Trapezoidal is suitable for all building applications with a roof pitch of 4° or more after deflection, except where the occupants or processes add significant quantities of water to the air, or where there are internal environments with low temperatures.

Available Lengths

DLTR 1.6	1.8m - 8m
DLTR PLUS 1.3	1.8m - 6m
DLTR 1.0	1.8m - 6.76m
DLTR PLUS 0.8	1.8m - 6m

Notes:

Longer lengths are available upon request. Additional costs and transport restrictions may apply for non-standard lengths. All lengths may change for export (outside of UK).



Dimension, Weight & Performance

Product Reference	Thickness (mm)	Weight (kg/m ²)	U-value (W/m ² K)	Light Transmission (%)*	Solar Heat Gain Coefficient
KS1000 DLTR 1.6	24	3.3	1.6	65	0.65
KS1000 DLTR PLUS 1.3	to suit panel	5.17 [†]	1.3	56	0.58
KS1000 DLTR 1.0	40	6.0	1.0	42	0.45
KS1000 DLTR PLUS 0.8	to suit panel	6.23 [†]	0.8	36	0.41

Notes:

[†] Based on an 80mm panel thickness with spacers at 1.8m centres.

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

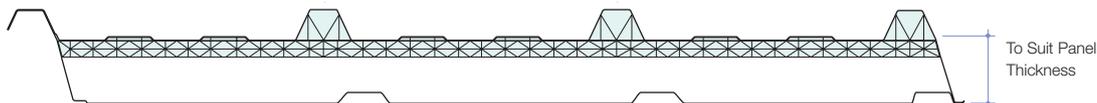
* Based on a clear polycarbonate finish. Light transmission, according to BS EN 410, is as measured on 600mm x 600mm samples.

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 range of Kingspan Day-Lite colours, White (0.34 SHGC) is also available offering an enhanced SHGC performance. Please contact the Kingspan Technical Services Department for more information.

Kingspan Day-Lite Trapezoidal, KS1000 DLTR 1.6 (U-value 1.6W/m²K)



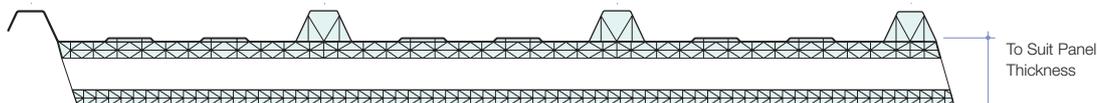
Kingspan Day-Lite Trapezoidal Plus, KS1000 DLTR PLUS 1.3 (U-value 1.3W/m²K)



Kingspan Day-Lite Trapezoidal, KS1000 DLTR 1.0 (U-value 1.0W/m²K)



Kingspan Day-Lite Trapezoidal Plus, KS1000 DLTR PLUS 0.8 (U-value 0.8W/m²K)



Kingspan Day-Lite Upstand

Kingspan Day-Lite Upstand, KS1000 DLU, is a translucent polycarbonate flat-profiled rooflight panel that allows high levels of natural light into buildings, providing excellent long-term light transmission, thermal and structural properties.

Kingspan Day-Lite Upstand can be integrated with our Trapezoidal Roof, Trapezoidal Secret-Fix, KingZip IP, Roof Tile and Lo-Pitch roof panels. This factory-fitted daylighting system is a co-extruded, multi-wall, UV-resistant upstand rooflight offering a U-value of 1.8W/m²K.

Kingspan Day-Lite Upstand allows installation of a high proportion of rooflights without significantly affecting the overall thermal performance of the roof, thus improving energy efficiency and sustainability.

Features & Benefits

- U-value of 1.8W/m²K - fully compliant with the appropriate National Building Regulations.
- Excellent light transmission - up to 61% when new, with minimal deterioration over time, to BS EN 140.
- Low Solar Heat Gain Coefficient - limiting local temperature increases behind the rooflight.
- High degree of colour fastness means product will not discolour over a guaranteed period.
- Available in lengths up to 5m, set within standard panel length of 2m to 11m (500mm above and below rooflight).
- Non-fragility performance - meets the requirements of ACR[M]001: 2014, Class B. Non-fragility compliance over product lifetime significantly reduces the risk of falls to both construction and maintenance personnel.

Note: It is never recommended to allow persons to walk across any rooflight.

- Kingspan Day-Lite products fully satisfy the requirements of the National Building Regulations achieving Euro Class B internally and National Class AA and Euro Class BROOF(t4) externally. All products achieve a minimum classification of B-s2,d0 when tested to EN 13501-1: 2007.

Introduction



- Suitable for roof pitches of 1.5° or more after deflection.
- Compatible with Trapezoidal Roof, Trapezoidal Secret-Fix, KingZip IP, Roof Tile and Lo-Pitch roof panels.
- Fully recyclable at end of life, with minimal impact on the environment.
- Guaranteed for structural, thermal and UV-resistance for up to 25 years.
- Lightweight and durable.
- Colour options include Clear only (refer to page 22).
- Quick and efficient installation; simple to fix with no glazing experience necessary.
- Factory-assembled and integrated with insulated roof panel to facilitate fast installation.
- Factory-applied barrier tapes reduce the risk of condensation and prevent ingress of moisture and insects during transportation and delivery, keeping rooflights clean and optimising performance.

Kingspan Day-Lite Upstand

Product Overview

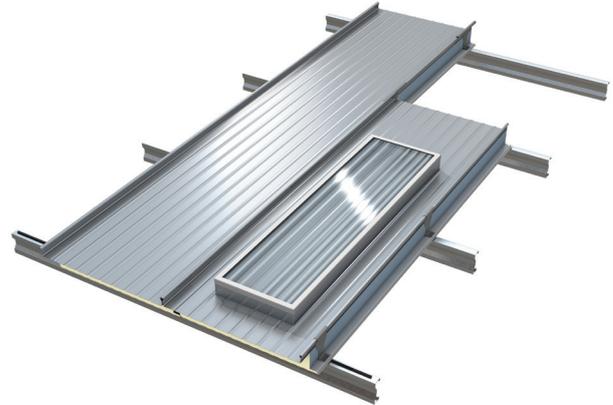
Applications

Kingspan Day-Lite Upstand is a factory-assembled polycarbonate upstand rooflight integrated into an insulated roof panel, which can be used 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. This upstand rooflight is suitable for applications where the roof slope is:

- 1.5° or more with Lo-Pitch, KingZip IP or Trapezoidal Secret-Fix;
- 4° or more with Trapezoidal Roof;
- 12° or more with Roof Tile.

Available Lengths

Standard lengths for insulated panels range from 2m to 11m. The polycarbonate rooflight section ranges from 1m to 5m in length.



Dimensions, Weight & Performance

Product Reference	Overall Height (mm)	Weight (kg/m ²) [†]	U-value (W/m ² K)	Light Transmission (%)	Solar Heat Gain Coefficient
KS1000 DLU	199	variable	1.8	61	0.64

Notes:

[†] Weight is dependent upon the amount of daylighting and the panel specification, and can be calculated on an individual project basis.

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. Please contact the Kingspan Technical Services Department for more information.

Kingspan Day-Lite Upstand, KS1000 DLU - Application with KS1000 RW



Kingspan Day-Lite Vault

Introduction

Kingspan Day-Lite Vault, KS1000 DLVLT, is a translucent polycarbonate barrel vault rooflight for flat or low-pitch roofs, that allows high levels of natural light into buildings, providing excellent long-term light transmission, thermal and structural properties.

Kingspan Day-Lite Vault is designed specifically to integrate with our Topdek roof deck, and offers a UV-resistant daylighting system with a U-value of 1.1W/m²K.

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

- Factory assembled unit (FAU);
- Barrel vaults;
- End caps.

Insulated / non-insulated kerb profiles and associated ancillaries are also required but are not supplied as standard. These items can be ordered and supplied by Kingspan upon request, please contact the Kingspan Technical Services Department for more information.

Features & Benefits

- U-value of 1.1W/m²K - fully compliant with the appropriate National Building Regulations.
- Excellent light transmission - up to 41% when new, with minimal deterioration over time, to BS EN 140.
- Low Solar Heat Gain Coefficient - limiting local temperature increases under the rooflight.
- High degree of colour fastness means product will not discolour over a guaranteed period.
- The FAU is available in lengths of 6m maximum, and barrel vaults are supplied in 1m lengths. Any specified length can be achieved with a continuous run of FAU, barrel vault and end cap assemblies.
- Non-fragility performance - meets the requirements of ACR[M]001: 2014, Class B. Non-fragility compliance over product lifetime significantly reduces the risk of falls to both construction and maintenance personnel.

Note: It is never recommended to allow persons to walk across any rooflight.

- Kingspan Day-Lite products fully satisfy the requirements of the National Building Regulations achieving Euro Class B internally and National Class AA and Euro Class BROOF(t4) externally. All products achieve a minimum classification of B-s2,d0 when tested to EN 13501-1: 2007.



- Suitable for flat and pitched roofs above 0.72° after deflection.
- Compatible with Topdek roof deck.
- Fully recyclable at end of life, with minimal impact on the environment.
- Guaranteed for structural, thermal and UV-resistance for up to 25 years.
- Lightweight and durable.
- Colour options include Clear and Opal (refer to page 22).
- Quick and efficient installation; simple to fix with no glazing experience necessary.
- Factory-applied barrier tapes reduce the risk of condensation and prevent ingress of moisture and insects during transportation and delivery, keeping rooflights clean and optimising performance (applies to FAU only).

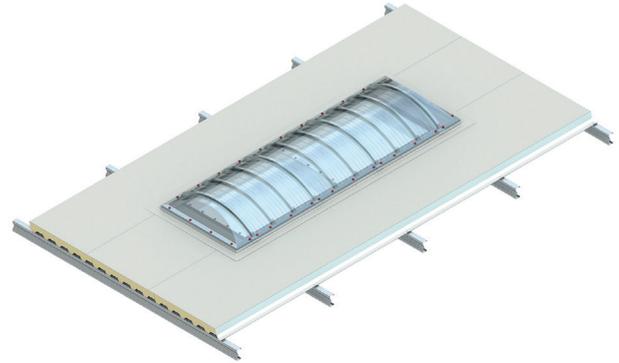
Kingspan Day-Lite Vault

Product Overview

Applications

Designed to be an integral part of the Topdek roof deck system, Kingspan Day-Lite Vault is a translucent polycarbonate rooflight offering a standard U-value of 1.1W/m²K.

Kingspan Day-Lite Vault is suitable for all building applications with a flat or pitched roof above 0.72° 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. The rooflight system is suitable for use in temperatures of between -10°C and +40°C.



Available Lengths

The FAU is manufactured to order, and is available in lengths of 6m maximum. Barrel vaults are available in 1m lengths. Any specified length can be achieved with a continuous run of FAU, barrel vault and end cap assemblies.

Dimensions, Weight & Performance

Product Reference	Height Above Panel (mm)	Weight (kg/m ²) [†]	U-value (W/m ² K)	Light Transmission (%) [*]	Solar Heat Gain Coefficient
KS1000 DLVLT	300	variable	1.1 ^{**}	41	0.41

Notes:

[†] Weight is dependent upon the Topdek roof deck thickness specified. Please refer to the product data sheet for more information.

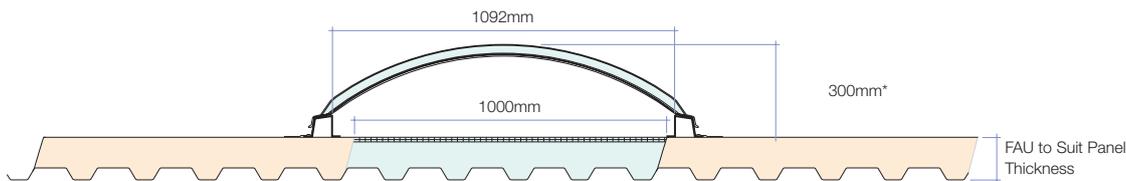
The U-value has been calculated using the method required by the appropriate National Building Regulations.

^{*} 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 1.35W/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.

Kingspan Day-Lite Vault, KS1000 DLVLT - Application with KS1000 TD



^{*} Based on standard kerb profile.

Kingspan Day-Lite Architectural

Introduction

Kingspan Day-Lite Architectural, KS1000 DLAWP, is a secret-fix, translucent polycarbonate wall light panel, allowing natural light into buildings whilst maintaining thermal efficiency and aesthetic appearance; offering designers and installers the freedom to create energy efficient buildings of distinction.

Kingspan Day-Lite Architectural is a co-extruded, multi-wall polycarbonate wall light offering excellent interior levels of natural light without compromising building performance. This helps to lower both energy bills and CO₂ emissions, whilst allowing occupants to enjoy high levels of daylight. The system is suitable for use as an alternative to traditional vertical daylighting systems, and need not restrict design options as it fully integrates with our Architectural Wall Panel (AWP) range and Optimo wall panel.

Features & Benefits

- U-value of 1.3W/m²K - fully compliant with the appropriate National Building Regulations.
- Excellent light transmission - up to 55% when new, with minimal deterioration over time, to BS EN 410.
- Low Solar Heat Gain Coefficient - limiting local temperature increases behind the wall light.
- High degree of colour fastness means product will not discolour over a guaranteed period.
- Available in lengths up to 8m.
- Tested for hard and soft body impact.
- Kingspan Day-Lite products fully satisfy the requirements of the National Building Regulations achieving Euro Class B internally and National Class AA and Euro Class BROOF(t4) externally. All products achieve a minimum classification of B-s2,d0 when tested to EN 13501-1: 2007.
- Suitable for vertical or horizontal application.
- Manufactured under controlled factory conditions to ensure excellent fit with AWP and Optimo insulated wall panels, with no additional structural framing required.
- Fully recyclable at end of life, with minimal impact on the environment.
- Guaranteed for structural, thermal and UV-resistance for up to 25 years.
- Available in the full Kingspan Day-Lite standard colour range (refer to page 22).
- Single component - leading to fast installation and accelerated build speed; simple to fix with no glazing experience necessary.
- Factory-fitted aluminium spacers to facilitate faster installation and reduce site waste.
- Factory-applied barrier tapes reduce the risk of condensation and prevent ingress of moisture and insects during transportation and delivery, keeping wall lights clean and optimising performance.



Applications

Kingspan Day-Lite Architectural is a secret-fix wall light system suitable for both vertical and horizontal applications. The system is fully compatible with all AWP and Optimo 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.

Available Lengths

Kingspan Day-Lite Architectural is available in standard lengths of 1.2m to 8m. Longer lengths are available upon request.



Dimensions, Weight & Performance

Product Reference	Thickness (mm)	Weight (kg/m ²)	U-value (W/m ² K)	Light Transmission (%)	Solar Heat Gain Coefficient
KS1000 DLAWP Clear	38	4.7	1.3	55	0.58
KS1000 DLAWP Opal	38	4.7	1.3	50	0.55
KS1000 DLAWP Blue	38	4.7	1.3	18	0.48
KS1000 DLAWP Green	38	4.7	1.3	43	0.51
KS1000 DLAWP Purple	38	4.7	1.3	13	0.48
KS1000 DLAWP Red	38	4.7	1.3	25	0.52
KS1000 DLAWP Orange	38	4.7	1.3	33	0.50
KS1000 DLAWP Yellow	38	4.7	1.3	55	0.56
KS1000 DLAWP IR Green	38	4.7	1.3	35	0.40
KS1000 DLAWP IR Blue	38	4.7	1.3	19	0.36

Notes:

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. Please contact the Kingspan Technical Services Department for more information.

Kingspan Day-Lite Architectural, KS1000 DLAWP



Kingspan Day-Lite Klick

Introduction

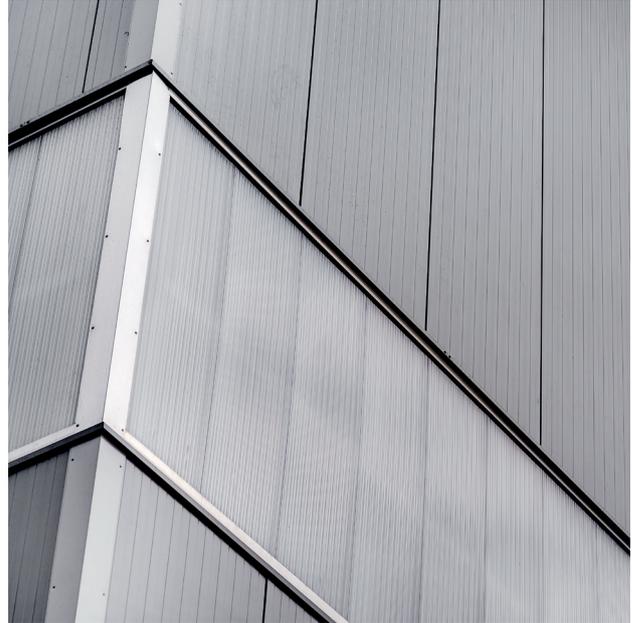
Kingspan Day-Lite Klick, KS500 DLKK, is a secret-fix, translucent polycarbonate wall light panel with a simple construction that offers designers and installers a more cost effective wall light solution, providing significant economic benefits on projects where large areas of polycarbonate cladding are 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, this flexible wall light system is designed for standalone use where no integration with insulated panels is required, and can also be combined with an extruded aluminium frame to allow for integration with a range of building materials including insulated panels, brick and render.

The Kingspan Day-Lite Klick system can be installed to the full height of a building's elevation, and can also be used as a feature rainscreen or backlit display, offering designers the flexibility to create interesting and bespoke wall light façades.

Features & Benefits

- U-value of 1.3W/m²K - fully compliant with the appropriate National Building Regulations.
- Excellent light transmission - up to 59% when new, with minimal deterioration over time, to BS EN 410.
- Low Solar Heat Gain Coefficient - limiting local temperature increases behind the wall light.
- High degree of colour fastness means product will not discolour over a guaranteed period.
- Available in lengths up to 6m.
- Tested for hard and soft body impact.
- Kingspan Day-Lite products fully satisfy the requirements of the National Building Regulations achieving Euro Class B internally and National Class AA and Euro Class BROOF(t4) externally. All products achieve a minimum classification of B-s2,d0 when tested to EN 13501-1: 2007.
- Suitable for vertical application.
- Fully recyclable at end of life, with minimal impact on the environment.
- Guaranteed for structural, thermal and UV-resistance for up to 25 years.
- Available in the full Kingspan Day-Lite standard colour range (refer to page 22).
- Simple aluminium fittings - leading to fast installation and accelerated build speed; simple to fix with no glazing experience necessary.
- Factory-applied barrier tapes reduce the risk of condensation and prevent ingress of moisture and insects during transportation and delivery, keeping wall lights clean and optimising performance.



Kingspan Day-Lite Klick

Product Overview

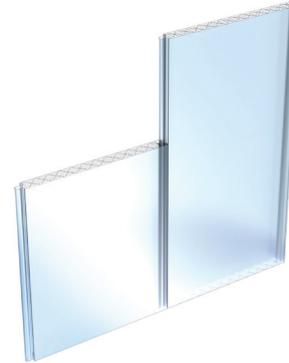
Applications

Kingspan Day-Lite Klick is a secret-fix wall light system typically suited for vertical applications.

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.

Available Lengths

Kingspan Day-Lite Klick is available in standard lengths of up to 6m. Longer lengths are available upon request.



Dimensions, Weight & Performance

Product Reference	Thickness (mm)	Weight (kg/m ²) [†]	U-value (W/m ² K)	Light Transmission (%)	Solar Heat Gain Coefficient
KS500 DLKK Clear	40	4.0	1.3	59	0.64
KS500 DLKK Opal	40	4.0	1.3	50	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
KS500 DLKK IR Green	40	4.0	1.3	38	0.40
KS500 DLKK IR Blue	40	4.0	1.3	23	0.37

Notes:

[†] A full system weight, including perimeter extrusions, will depend on project-specific design. Please contact the Kingspan Technical Services Department for more information.

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. Please contact the Kingspan Technical Services Department for more information.

Kingspan Day-Lite Klick, KS500 DLKK



ZerO Energy Lighting

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 building 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.

Scan the code below to watch our ZEL animation.



What Do We Offer?

Pay Back Proposal

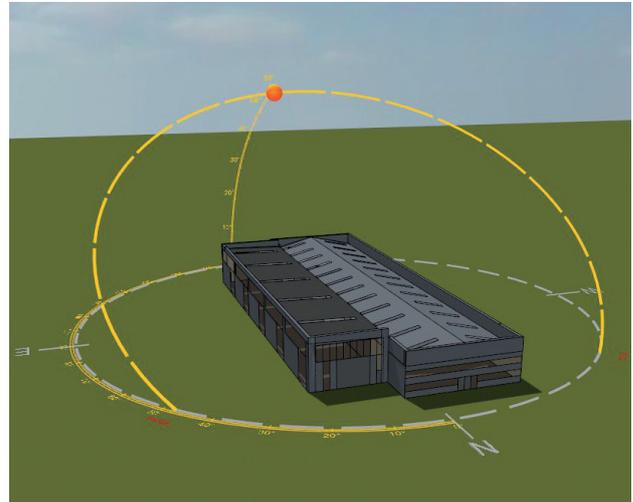
During the early design stage, a financial assessment of the project will be carried out (please see example on page 17), providing a preliminary analysis of the project and reporting on the following key parameters:

- Energy for lighting.
- Investment required.
- Pay back period on investment.*
- Annual electricity savings.*
- Carbon savings.*
- Return on investment, internal rate of return and net financial benefit over a given period.*

Notes:

* A base case is needed for comparison.

Eliminating Lighting Energy Costs



Funding

We offer a range of funding options, for both the individual elements of our ZEL solution or the package as a whole, including Power Purchase and Shared Saving Agreements. Please contact us for more information.

Holistic Modelling

Utilising advanced virtual environment modelling and expertise, we assess building operator and design team requirements, taking into account key parameters such as location, orientation, work activities and environment, in order to create the optimal, tailor-made lighting design.

We use sophisticated software to create a virtual model of the building and its environment, including the path of the sun throughout the year and typical historical weather data. With this knowledge, the performance and configuration of Kingspan Day-Lite rooflights can be assessed and optimised to meet the occupancy requirements of the building.

Following this, a Kingspan Smart-Lite intelligent LED lighting system is designed, complementing the natural daylight generated by our Kingspan Day-Lite systems and optimising the lighting energy demand.

Finally, the residual lighting energy demand is calculated and a Kingspan Energy Rooftop Solar PV array is designed accordingly.

For more information please refer to the ZerO Energy Lighting brochure.

Industrial

Project Type:

Manufacturing, Refurbishment & New Build

Installer:

Michael McMahon

Products Used:

- Kingspan Day-Lite Trapezoidal Roof System
- Kingspan Day-Lite Vault Roof System
- Kingspan Day-Lite Architectural Wall System
- Kingspan Smart-Lite High Bay LED Lighting System
- Trapezoidal Roof Panel
- Topdek Roof Deck
- Architectural Wall Panel, Micro-Rib
- Multibeam Structural System
- Membrane Lined Insulated Gutter



Industrial

Project Type:

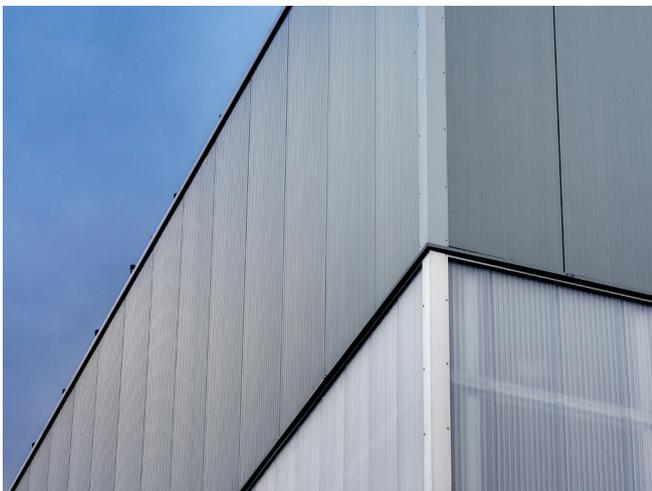
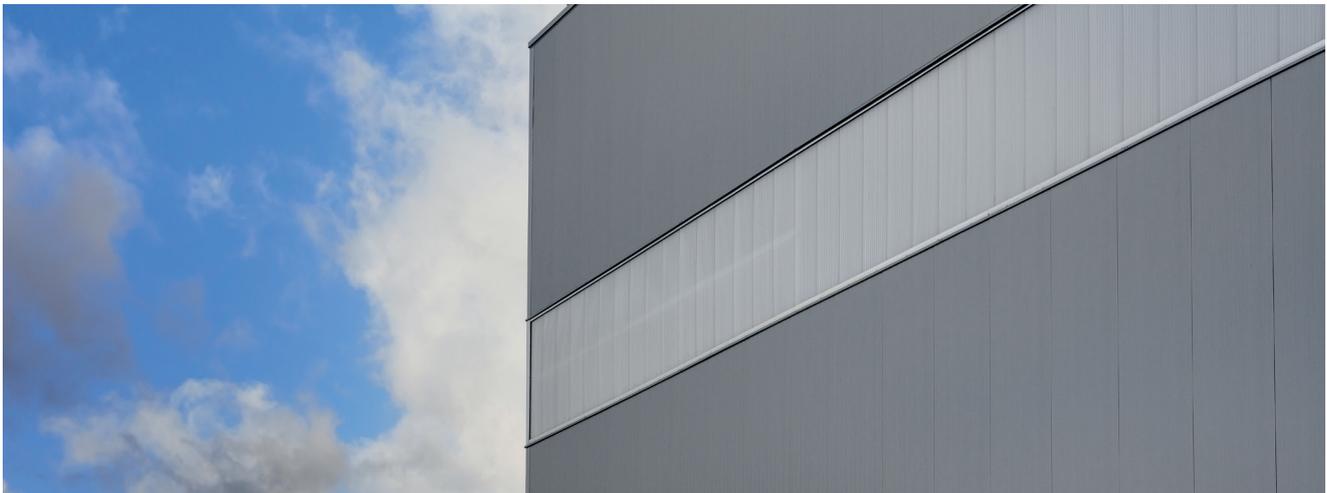
Waste Management Facility, New Build

Installer:

Rooftech

Products Used:

- Kingspan Day-Lite Klick Wall System
- Architectural Wall Panel, Eurobox
- Topdek Roof Deck



Red Scar Business Park Preston, UK

Case Study

Industrial

Project Type:

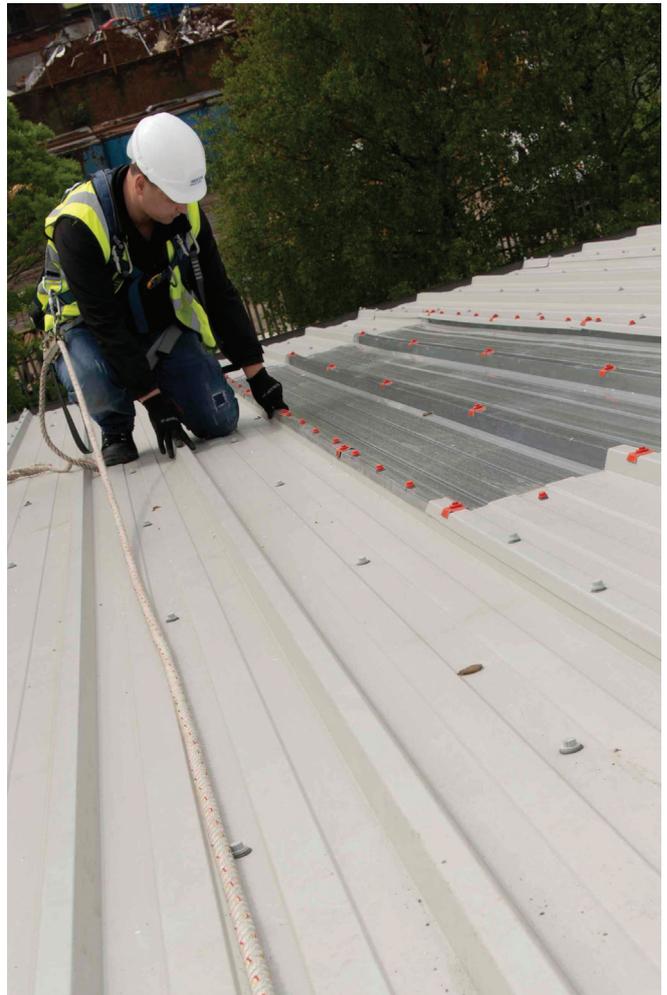
Commercial Units, New Build

Installer:

Valent Roofing

Products Used:

- Kingspan Day-Lite Trapezoidal Roof System
- Safetraxx Fall Protection System
- Trapezoidal Roof Panel



Kingspan Insulation Selby, UK

Case Study

Industrial

Project Type:

Production & Warehouse Facility, Refurbishment

Installer:

Kingspan Energy

Products Used:

- Kingspan Smart-Lite High Bay LED Lighting System
- Kingspan Day-Lite Trapezoidal Roof System
- Kingspan Energy Rooftop Solar PV
- Trapezoidal Roof Panel

"The combination of Kingspan Smart-Lite technology and an impressive solar PV array has made an instant impact at our Selby plant, significantly improving the lighting and generating an immediate reduction in energy consumption that will have huge financial benefits for the business. This is one of the best infrastructure improvements I have seen in 28 years!"
Sam Hindle, Operations Manager, Kingspan Insulation.





Kingspan Day-Lite

A range of colourful, translucent multi-wall polycarbonate for roof and wall applications, with UV protected layers that allow high levels of natural light to pass through.



Clear



Opal



Blue



Green



Purple



Red



Orange



Yellow



IR Green



IR Blue

Infra-Red (IR) Absorbing Lights

These two colours absorb greater levels of infra-red light which reduces solar gain. This can allow for greater control of ambient temperature within the building providing a possible reduction in HVAC usage.

Notes:

Kingspan Day-Lite Trapezoidal and Trapezoidal Plus are available in Clear, Opal, Infra-Red Green and Infra-Red Blue only as standard. White (0.34 SHGC) is also available, subject to minimum order quantities, offering an enhanced SHGC performance. Please contact the Kingspan Technical Services Department for more information.

Kingspan Day-Lite Upstand is available in Clear only.

Kingspan Day-Lite Vault is available in Clear and Opal only.

Kingspan Day-Lite Architectural is available in the full Kingspan Day-Lite standard colour range.

Kingspan Day-Lite Klick is available in Clear and Opal as standard, but other colours from the standard Kingspan Day-Lite range are available subject to stock.

For stock levels, minimum order quantities and/or lead times please contact the Kingspan Quotations Department.

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.

Lighting

Contacts



Technical Services

Our technical engineers are a key part of our design and development process, providing a wide range of technical support and working with customers on an individual project basis to ensure that the correct products are specified and ordered.

UK

Tel: +44 (0) 1352 716101 or 0800 587 0090 (freephone)
Email: technical@kingspanpanels.com

Ireland

Tel: +353 (0) 42 96 98529
Email: technicalkc@kingspan.net

Quotes

To receive a quote and expected lead times for your project requirements, please call one of our team on:

UK

Tel: +44 (0) 1944 712444
Email: daylight@kingspanpanels.com

Ireland

Tel: +353 (0) 42 96 98555
Email: quotationskc@kingspan.net

Marketing Support

Our marketing team aims to provide a fast turnaround on standard sample and literature requests, eliminating delays with material planning and client approval. Brochures, case studies and videos are all available on the website at www.kingspanpanels.co.uk.

UK

Tel: +44 (0) 1352 717251
Email: info@kingspanpanels.com

Ireland

Tel: +353 (0) 42 96 98540
Email: info@kingspanpanels.com

Field Service & Training

We recognise that customer staff training is key to maximising the performance of our products, therefore we provide extensive training on the whole procedure from safe off-loading and product handling through to installation.

Area Sales Managers

To find your nearest area sales manager, simply visit: www.kingspanpanels.co.uk/fsl/asm

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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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