CI/SfB (47) Nh2
September 2008

Insulated Wall & Facade Systems

Architectural Wall, Flat Panels & Facade Systems

Approved to LPS 1181
Certificate No 260a & 186a

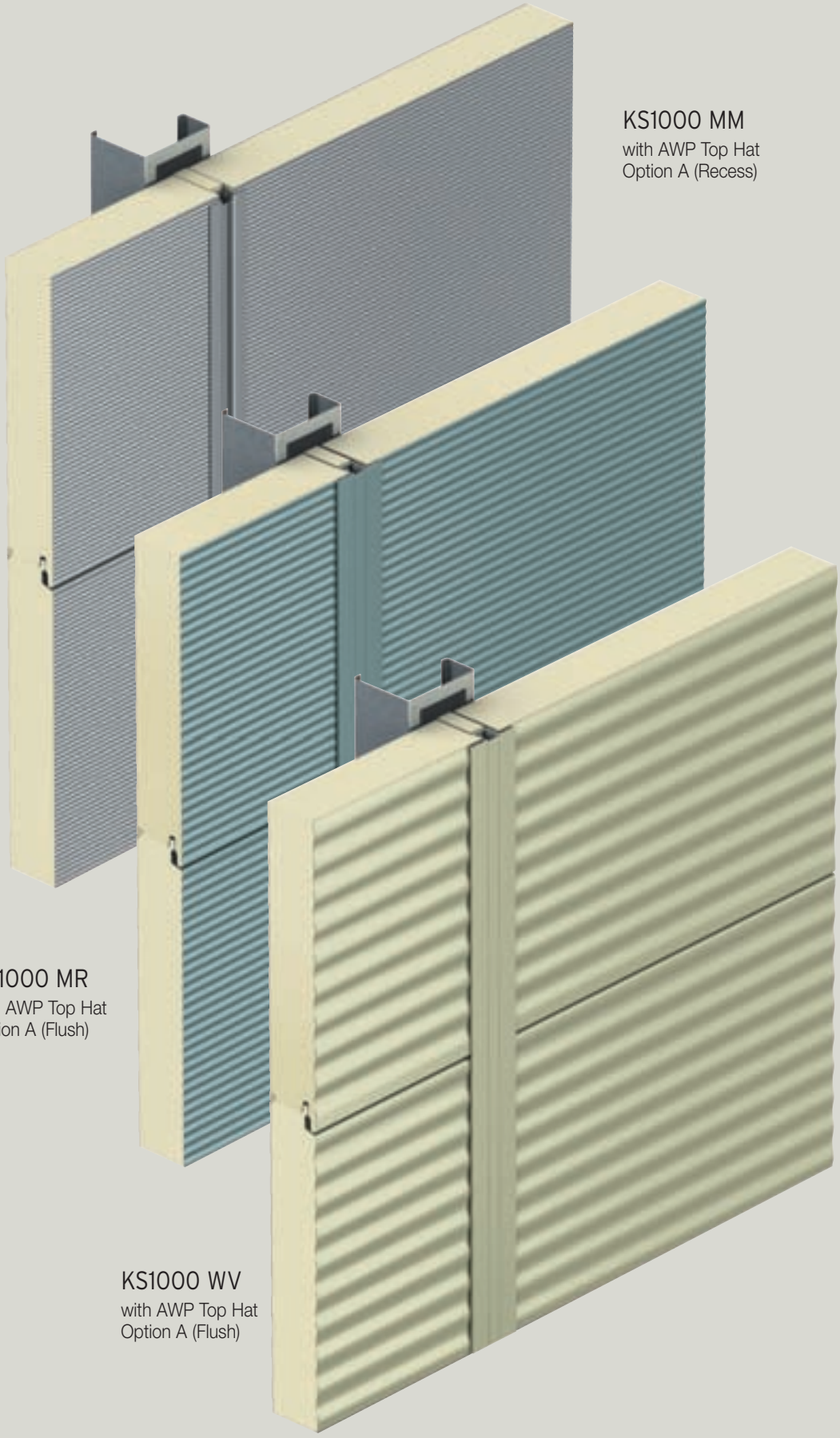
APPROVED

Insurer Approved FIRE*safe* Systems

Insulated Panels to the Power of

Kingspan®

Creating the Right Impressions



KS1000 MM
with AWP Top Hat
Option A (Recess)

KS1000 MR
with AWP Top Hat
Option A (Flush)

KS1000 WV
with AWP Top Hat
Option A (Flush)

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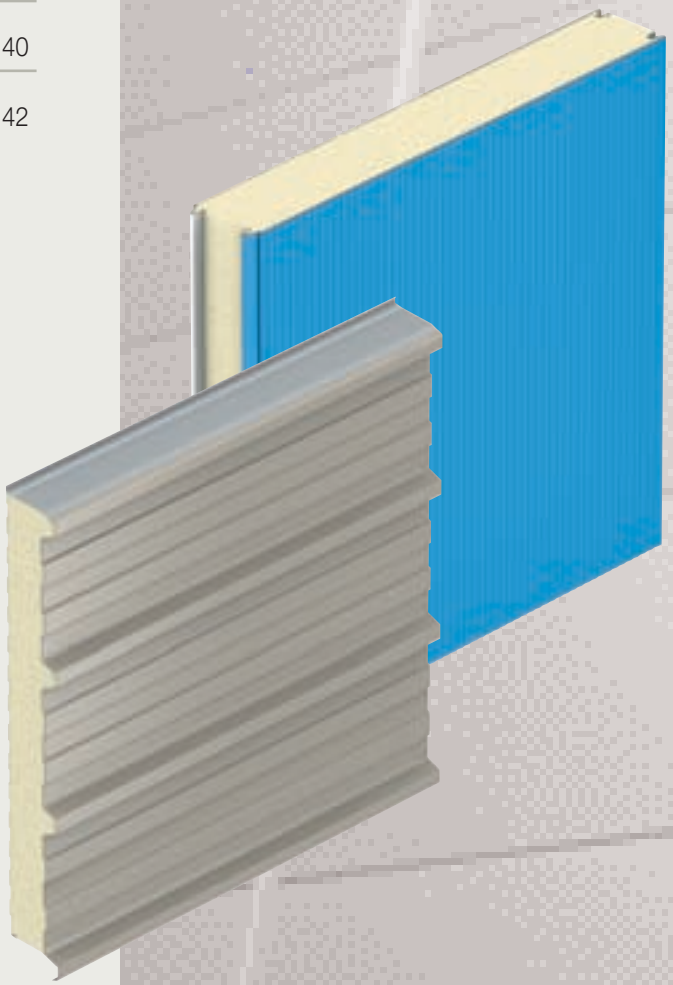

Introduction

Features

- Provides distinctive architectural concepts.
- Suitable for horizontal and vertical applications, creating visual expression variety.
- Creative freedom for designers and simple integration with doors, window and louvres etc.
- Wide choice of colours.
- Concealed secret fix joint.
- Architecturally enhancing ancillary package.
- Can incorporate extruded aluminium or steel top hat features.
- FIBREfree insulated panel systems.

Regulation Compliance

- Fully complies with Part L2 (England & Wales) and Part J (Scotland) Thermal Regulations and Standards and current Regulations Part L in Ireland.
- Property & Business Protection - Loss Prevention Certification Board (LPCB) LPS 1181 certified insurer approved FIREsafe systems deliver certainty of performance and insurability.
- Complies to BS476 Part 22 specifications.
- Unlimited height for FM approval.

Off-site Construction - Quality Guaranteed

- Complies with HSE and CDM safety requirements.
- Non-deleterious materials.
- Guaranteed U-value lifecycle.
- Reliable low air leakage - 5$m^3/hr/m^2$.
- 100% reliable thermal performance and insulation continuity, no cavities, no gaps, no cold bridges or interstitial condensation risk.
- Pre-engineered - single component - single fix installation reduces build time by up to 50%.
- Pre-engineered BS EN IS0 9001 quality approved product.
- Guaranteed long term performance with up to 25 years to first maintenance and overall life expectancy of up to 40 years.

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Kingspan provide a project specific design and construction solution service

A Flexible Approach in a Demanding World

Modern building design puts demands on architects to add greater creativity to their concepts, whilst balancing superior construction quality, fast build methods and reliable extended lifecycle performance.

The System Approach

The system includes a full range of accessories and integrated components including standard and feature type flashings, gutters, louvres and framing arrangements to facilitate doors, windows and glazing.

Kingspan architectural wall systems provide a range of solutions that offer distinctive architectural statements which express aesthetic proportions through the use of horizontal or vertical geometry. These features combined with a wide choice of colours and facings, architectural enhancing joints, junctions and individually sculptured ancillaries allows the architect to produce bespoke wall solutions to the highest specification and performance standards.

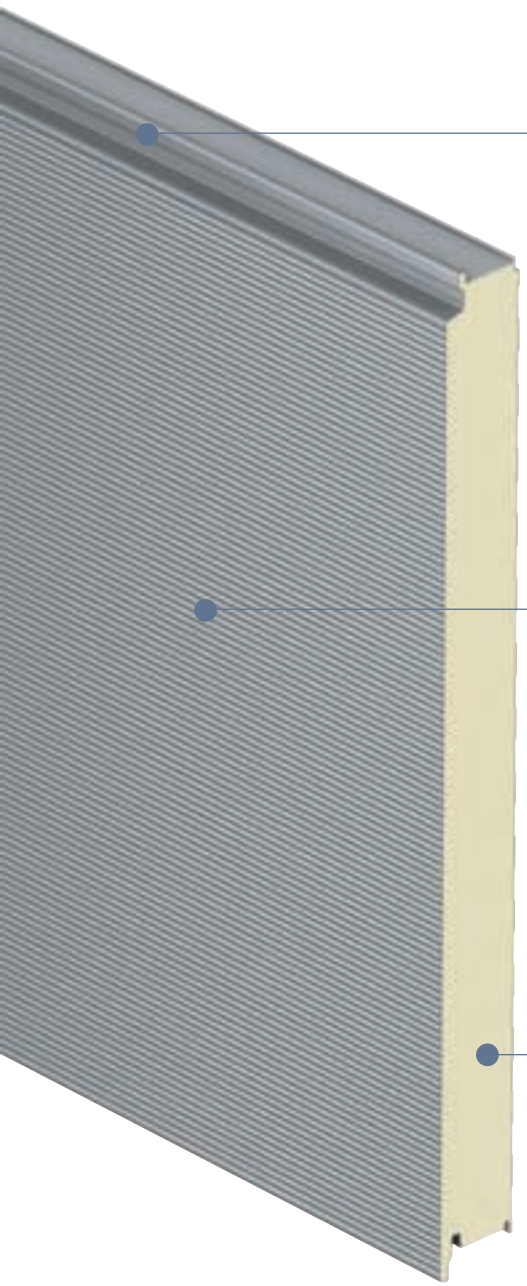
Compliance Built-in

Kingspan's factory pre-engineered manufacturing process provides a product range which is produced to controlled and precise dimensional tolerances, that can be reliably constructed on site providing an "as built" low air leakage performance wall system which fully complies with the latest Building Regulations Part L2 (England & Wales) and Part J (Scotland) requirements and Part L in Ireland.

All Kingspan steel-faced wall systems are available with LPCB and FIRE*safe* insurer approved insulation. By specifying Kingspan architectural wall systems you can ensure compliance to the building regulations and building insurance requirements.

Kingspan®

Kingspan's Insulated Wall & Facade systems protect business & property with FIREsafe insurer approved systems



FIREsafe

Insurer Approved

Protecting business and property through full compliance with Insurers requirements, LPCB and other international fire safety regulations.

Certified & Approved

Complies with Building Regulations and Standards Parts L2 and J.

Airtightness

Overall airtightness for complete envelope down to $2m^3/hr/m^2$ at 50Pa.

100% Thermal Reliable

No cavities, ingress of moisture, cold bridges, interstitial condensation or missing insulation.

Fast Build Speed

Single fix single component system cuts site installation by up to 50% compared with site assembled built-up systems.

Environment

Global Warming risk reduced with lower Carbon Dioxide (CO_2) emissions, through enhanced energy efficiency and environmentally sustainable solutions.

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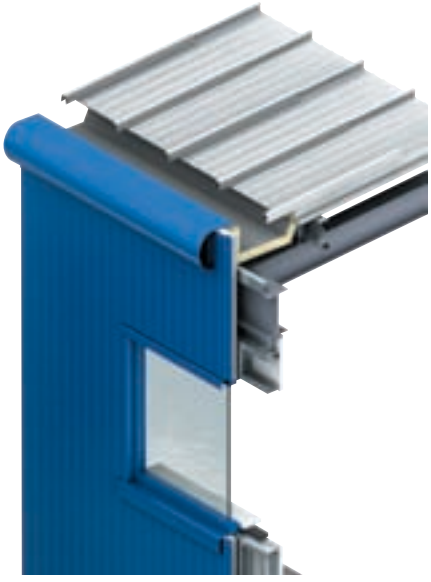
Kingspan's modern facilities enables the manufacture of high performance and quality wall and facade systems

Architectural



Designer

Trapezoidal

Architectural Elegance

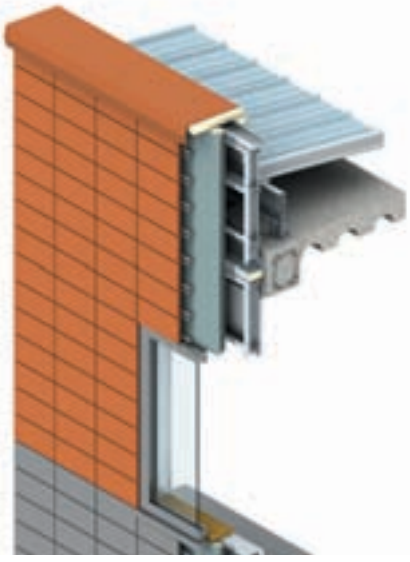
The benefits of Kingspan's architectural wall systems are already well recognised by designers and constructors and have been successfully used across the European construction industry on retail, distribution, commercial, leisure, industrial, hospital and school buildings.

Kingspan Powers Design, Quality & Construction Performance

As market leader in the manufacture of superior quality architectural insulated wall systems, Kingspan recognises the design, performance and build factors architects require. Kingspan has applied its global experience to create a range of products, services and design solutions that facilitate the design teams architectural objectives whilst also providing real "bottom-line" performance, construction and in use benefits.

LongSpan

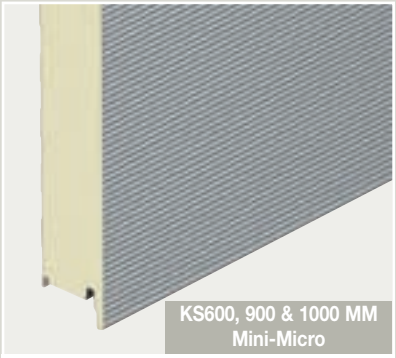
Insulated Facade System



Wall & Facade Systems allow the designer creative freedom and visual flexibility

KS600, 900 & 1000 WV Wave

Designer
Horizontally & Vertically laid

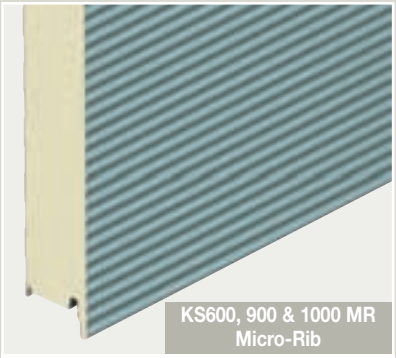


KS600, 900 & 1000 MM Mini-Micro

Designer
Horizontally & Vertically laid

KS600, 900 & 1000 CX Convex

Designer
Horizontally & Vertically laid



KS600, 900 & 1000 MR Micro-Rib

Architectural
Horizontally & Vertically laid

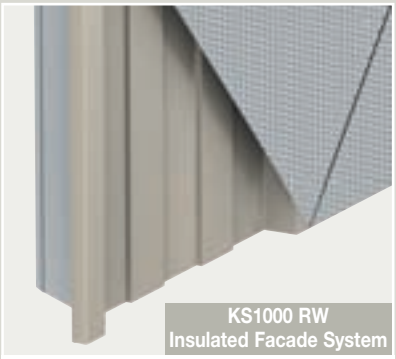
KS600, 900 & 1000 FL-S Flat (Stucco)

Architectural
Horizontally & Vertically laid

KS600, 900 & 1000 EB Euro-Box

Architectural
Horizontally & Vertically laid

Insulated Facade Systems



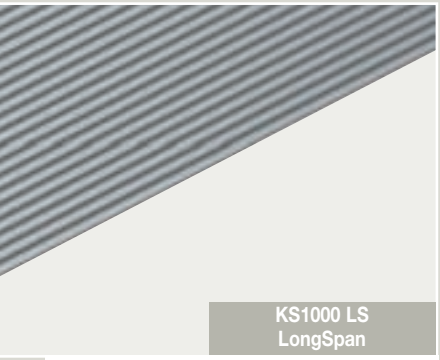
KS1000 RW Insulated Facade System

KS1000 MR Insulated Facade System

KS1000 RW
Trapezoidal

Trapezoidal

Horizontally & Vertically laid



KS1000 LS
LongSpan

LongSpan

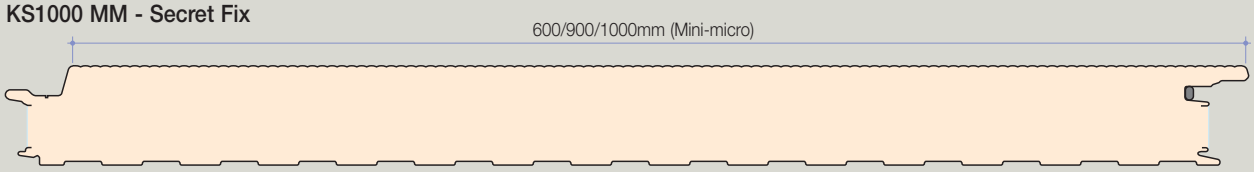
Horizontally laid

Distinctive Visual Variety

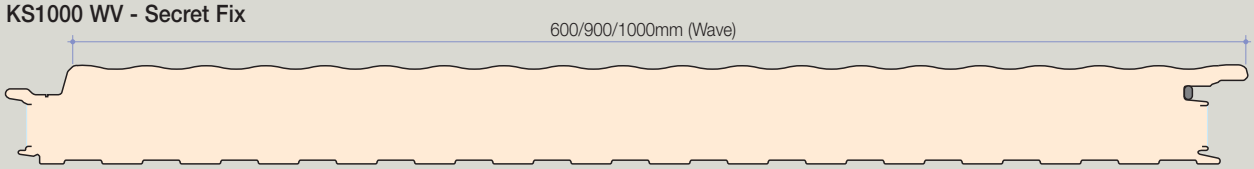
The KS1000 architectural wall systems product range is available in a wide range of external profiles, widths, thicknesses, colours and finishes. These quality products are factory manufactured, delivered to site ready for immediate and rapid assembly.

Product Range

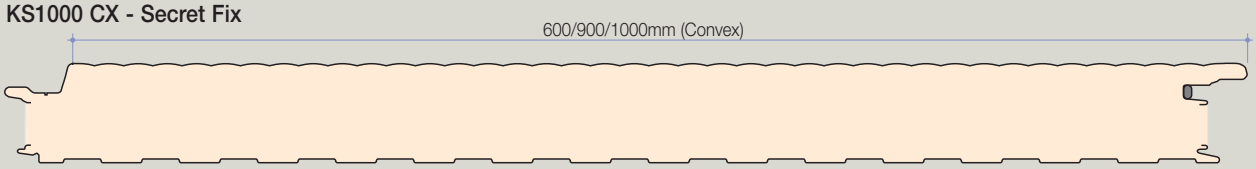
KS1000 MM - Secret Fix



KS1000 WV - Secret Fix



KS1000 CX - Secret Fix



Product	External Coating	Internal Coating	Insulation Core	Thickness (mm)	Thermal Performance W/m²K England Wales/Scotland	Thermal Performance W/m²K Ireland	Air Leakage	Weight (kg/m²)
ARCHITECTURAL WALL Secret Fix KS600/900/1000 MR/EB/FL-S/MM/CX/WV	Plastisol	Lining Enamel	PIR	45‡	0.44	0.44	10	11.5
	PVDF	Plastisol		60‡	0.33	0.33	10	12.1
	Celestia	Stelvetite		70*‡	0.35	0.28	10	12.5
	Silicone Polyester	Hygiene		80**‡	0.30	0.24	10	12.9
	Granite HDX			100**‡	0.23	0.20	10	13.7
TRAPEZOIDAL WALL Through Fix KS1000 RW	Plastisol	Lining Enamel	PIR	40‡	0.43	0.43	10	9.9
	PVDF	Plastisol		50‡	0.35	0.35	10	10.3
	Celestia	Stelvetite		60*‡	0.35	0.30	10	10.7
	Silicone Polyester	Hygiene		70**‡	0.30	0.28	10	11.0
	Granite HDX			80**‡	0.25	0.23	10	11.5
				100**‡	0.20	0.19	10	12.3
LONGSPAN WALL Secret Fix KS1000 LS	Plastisol	Lining Enamel	PIR	80‡	0.30	0.30	10	15.4
	PVDF	Plastisol		100‡	0.23	0.23	10	16.2
	Celestia	Stelvetite		120‡	0.17	0.17	10	17.0
	Silicone Polyester	Hygiene		140‡	0.15	0.15	10	17.8
	Granite HDX							

*These panel thicknesses comply with Part L2 (England & Wales) **These panel thicknesses comply with Part J (Scotland)

‡These panel thicknesses comply with Part L (Ireland)

THERMALsafe FIREsafe

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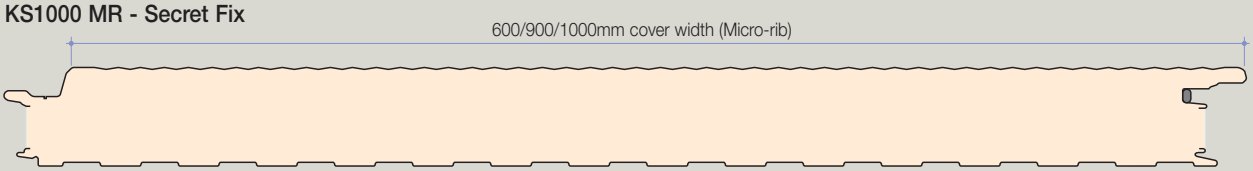
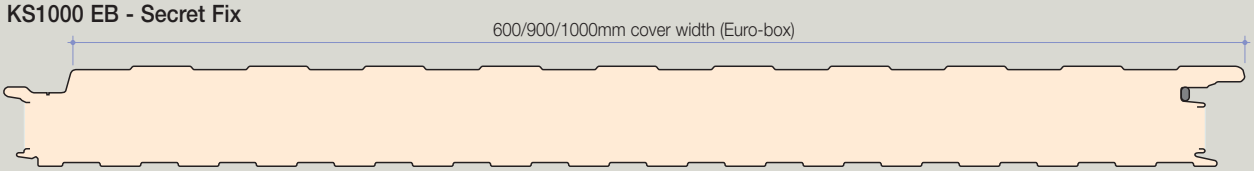
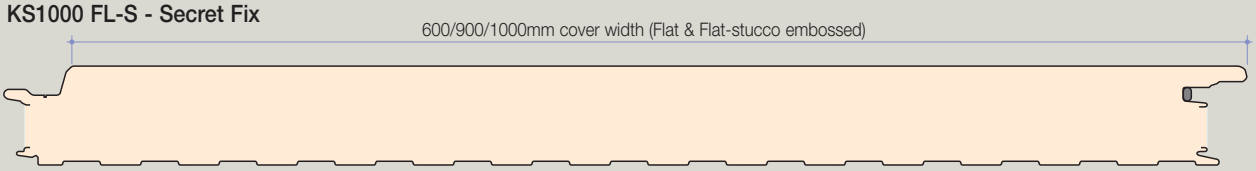
KS1000 MR - Secret Fix



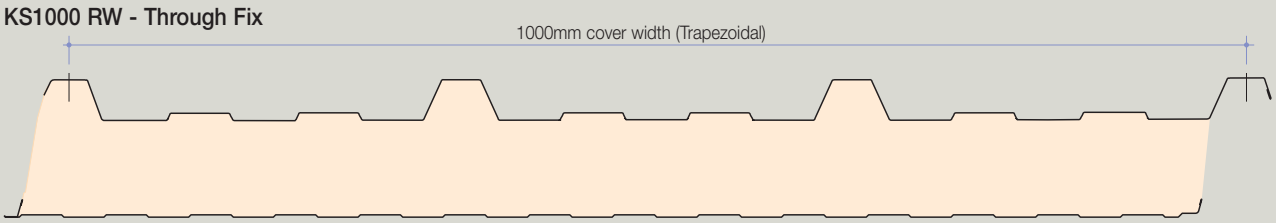
KS1000 EB - Secret Fix



KS1000 FL-S - Secret Fix



KS1000 RW - Through Fix



KS1000 LS/MR - Secret Fix

Product Application Selector

	INTERNAL ENVIRONMENT								
Product	Standard Environment	Temperature Control	Hygiene	High Humidity	Low Temperature	Fire Resistance LPCB	Fire Resistance FM	Enhanced Acoustics	Refurb
KS1000 MR/EB/ FL-S/MM/CX/WV	✓	✓	✓	✓	N/A	✓	✓	✓	✓
KS1000 RW	✓	✓	✓	✓	✓	✓	✓	✓	✓
KS1000 LS	✓	✓	✓	✓	N/A	✓	●	✓	✓

● Contact Kingspan Technical Design Bureau.

Market Sectors

COMMERCIAL

Matford, Exeter

RETAIL

Birstall Retail Park

RETAIL

Currys, Galways Retail Park

LEISURE

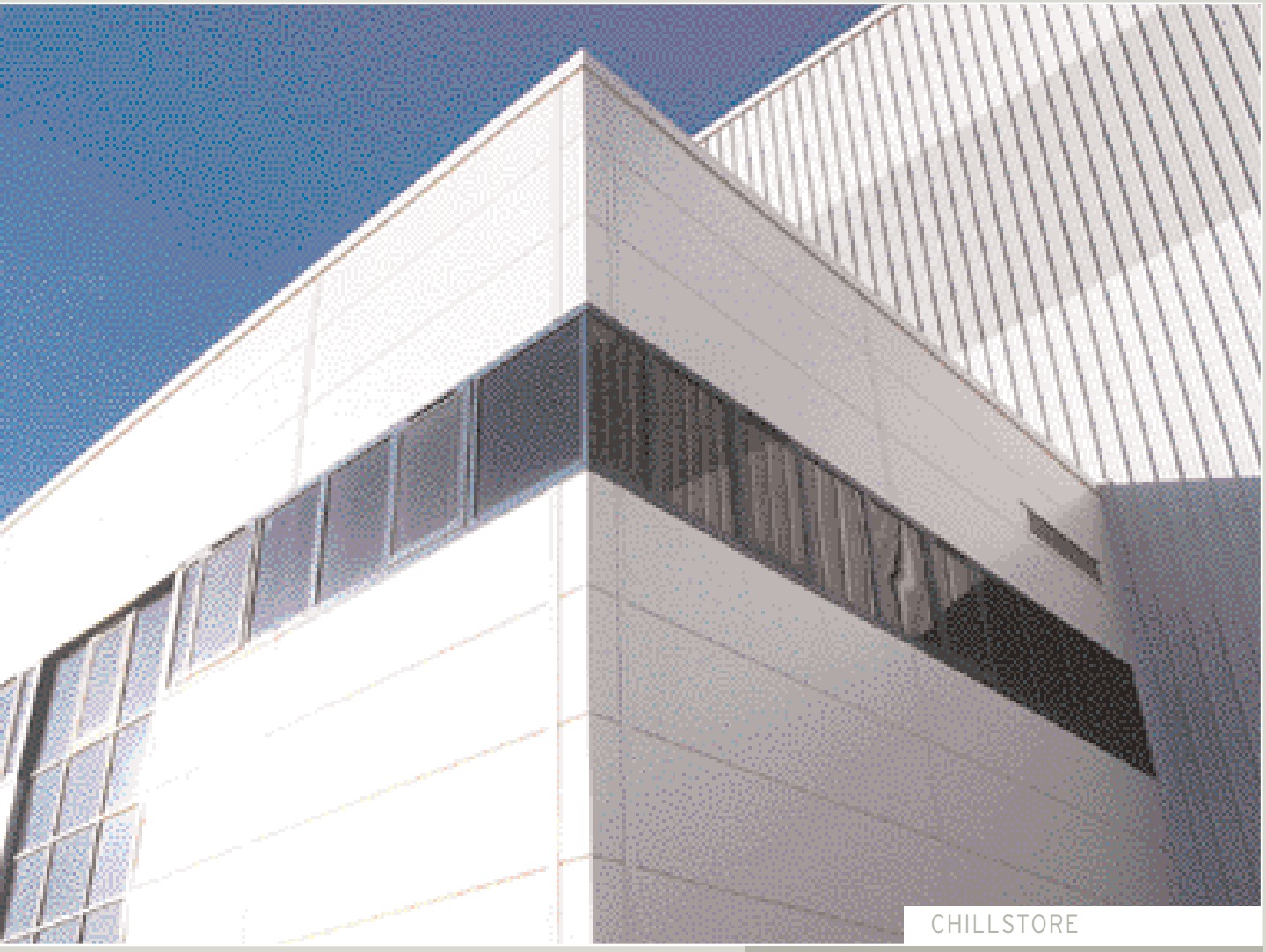
Cardiff Millennium Stadium

LEISURE

Virgin Active

REFURBISHMENT

Sunderland University



CHILLSTORE

LM Solutions

EDUCATION

Bradford University

EDUCATION

London Metropolitan University

HEALTHCARE

Elan

HEALTHCARE

Veterinary Hospital

SINGLE LIVING

Mill Street Student Accommodation, Leeds

RESIDENTIAL

Rotterdam

TECHNOLOGY

Training Centre, Bristol

TECHNOLOGY

Connaught House

ELECTRONICS

Samsung, Cleveland

ELECTRONICS

Phototronics Ltd, Manchester

LOGISTICS

Aldi

INDUSTRIAL

Merlin Park

MANUFACTURING

Finlays

MANUFACTURING

M:Tek

CAR SHOWROOMS

Monarch Mercedes Showroom

CAR SHOWROOMS

HA Fox Jaguar

CAR SHOWROOMS

Greypaul Ferrari Garage

Horizontal or Vertical Wall Systems

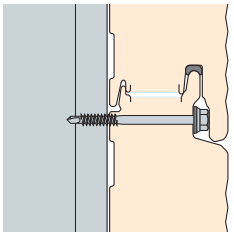
The KS1000 architectural range is a lightweight wall system available in a wide range of profiles, widths, thicknesses, colours and finishes for high quality architectural applications. It can be horizontally or vertically laid which provides designers with a further range of visual effect and construction solutions at a range of costs to fit project budgets.

External Facings

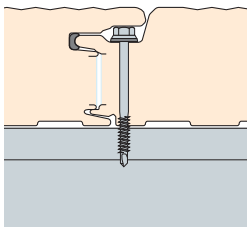
Available in Micro-Rib, Euro-Box, Flat, Flat-Stucco, Mini-Micro, Convex and Wave profiles allowing the architect design and visual flexibility, at even the most subtle of aesthetic levels.

All profiles feature identical joint details, allowing architects the freedom to integrate different profiles for a contemporary look.

Horizontal Secret Fix Joint



Vertical Secret Fix Joint



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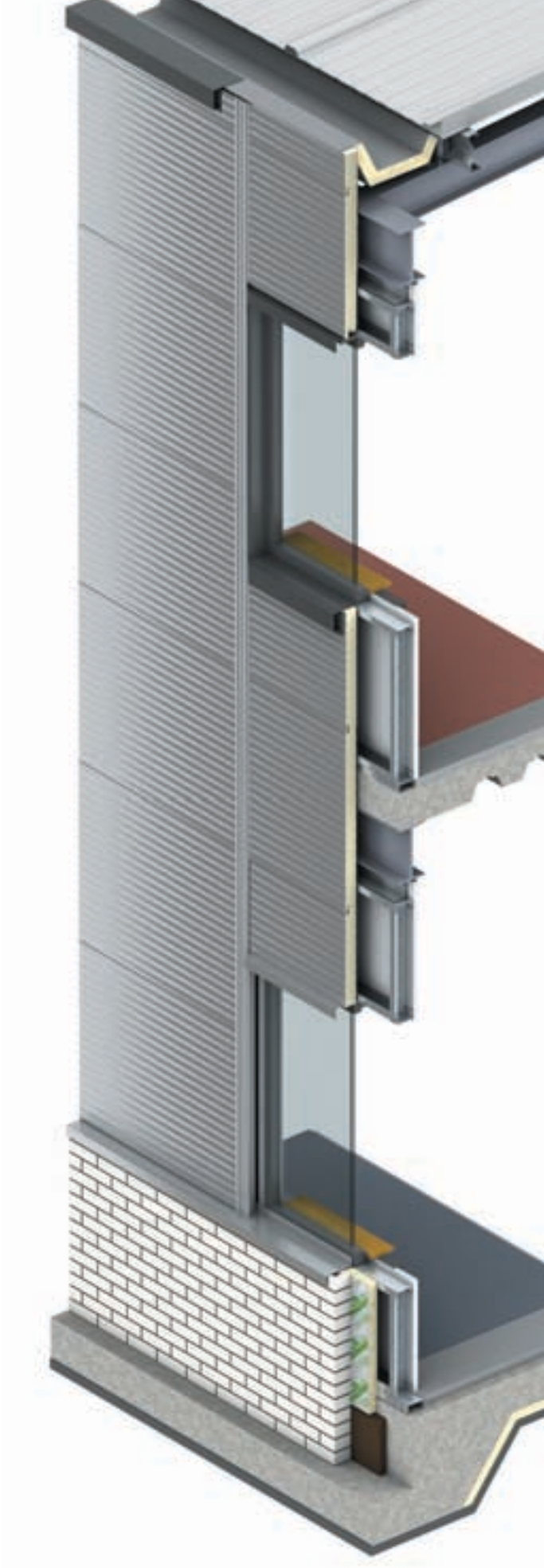
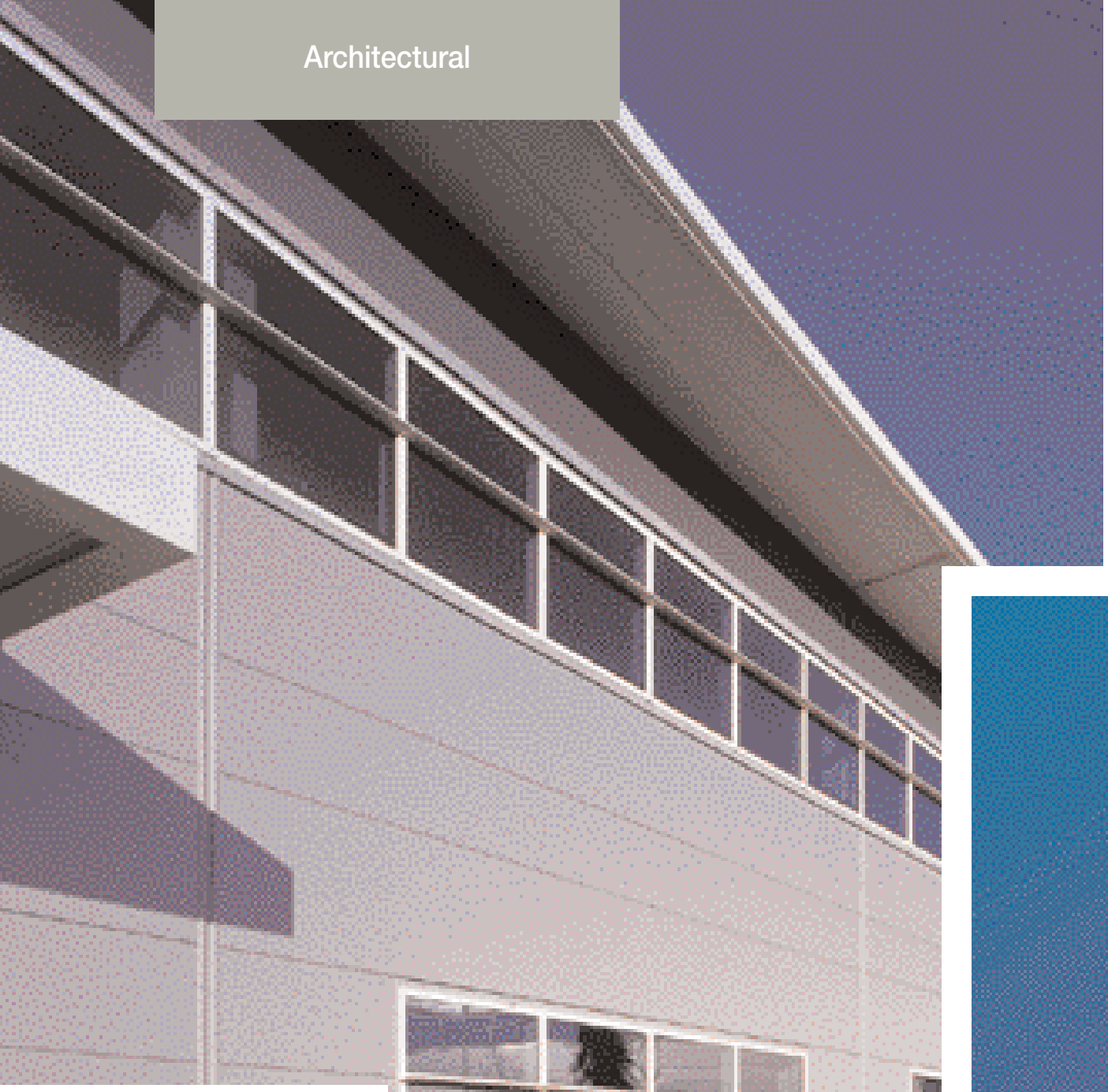


Integrated Design & Construction

Kingspan wall systems are easily integrated with the side rail support system, traditional materials, glazing, doors, windows and other ancillary components.

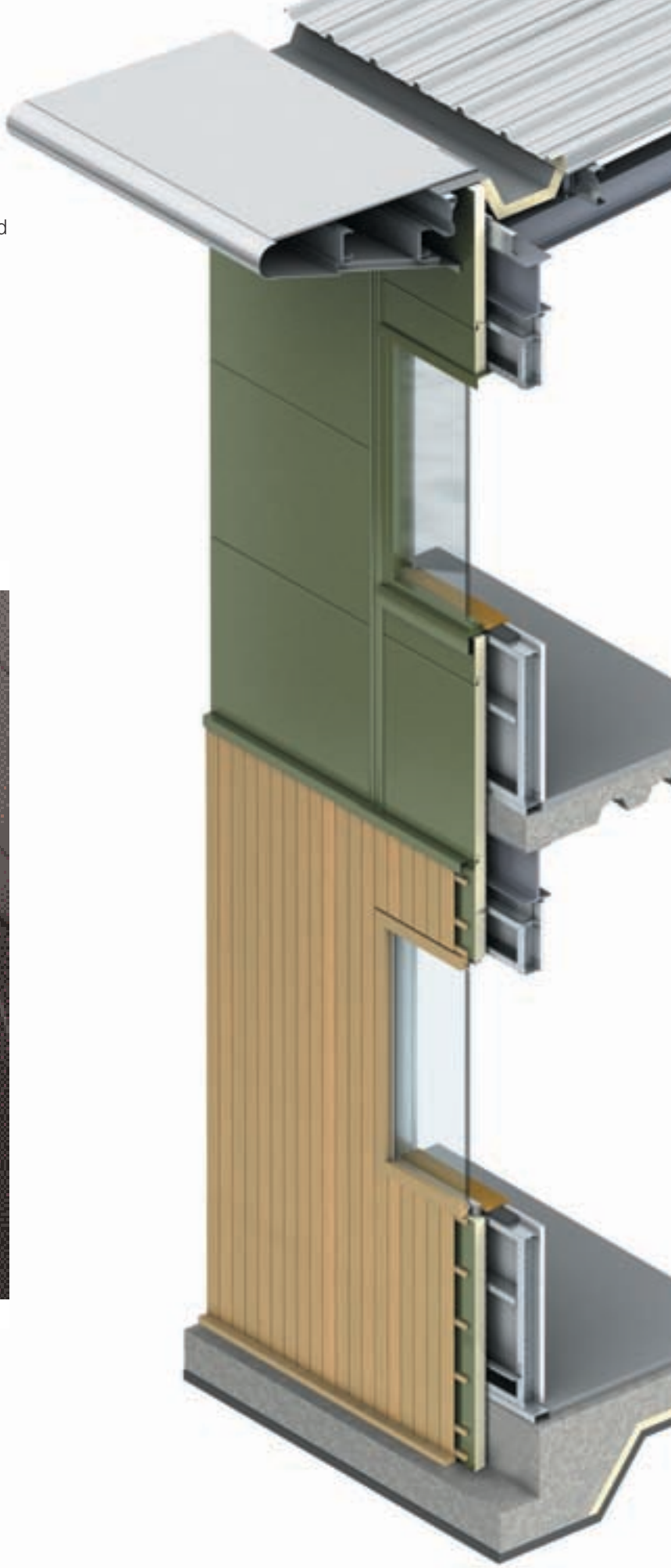
Kingspan have available a complete range of integrated design and construction solutions which provide best practice performance, simplicity of site installation and value engineered cost benefits.

Architectural



A Fitting Solution

Vertically installed Kingspan wall systems offer integrated design simplicity through from main frame and side rails which enables an extremely cost-effective side wall system to be constructed at optimum site construction speed. Designers can easily integrate traditional materials, at the same time incorporating any doors, windows, curtain walls and accessory elements. Architectural enhancing trim/flashings and accessories can be incorporated to meet client and designer's preferences.

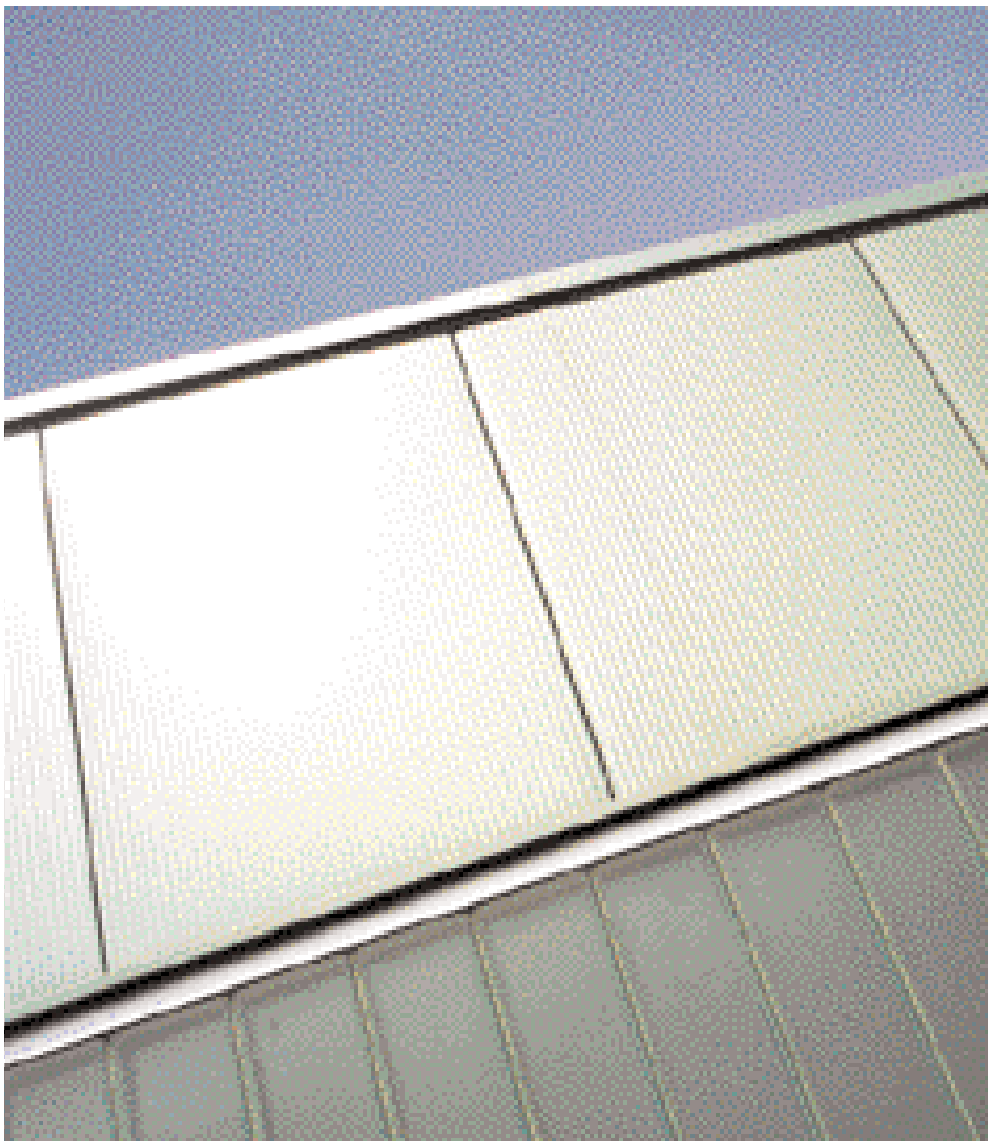


Focal Point

Architects can use Kingspan's wall cladding systems to architecturally focus attention on specific areas of the building or to introduce a clients corporate imagery.

Integration Solutions

As well as enhancing creative freedom for architects Kingspan wall systems simplify the design and construction process at the interface and junction area between the main/secondary structure, civils and with the integration of other elements such as gutters, doors, windows, brick/stonework and glazing.

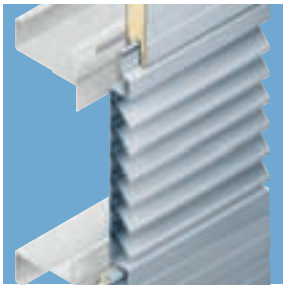


The Complete Architectural Solution

A range of purpose designed angular or curved geometrical shapes are available which allows the designer to express individual aesthetic statements of choice.

Design Integration

Kingspan's extensive library of proven standard and bespoke integrated design details and construction solutions are available to designers and constructors on any project. Kingspan have a dedicated Technical Design Bureau able to discuss your design requirement in detail and provide advice and solutions.

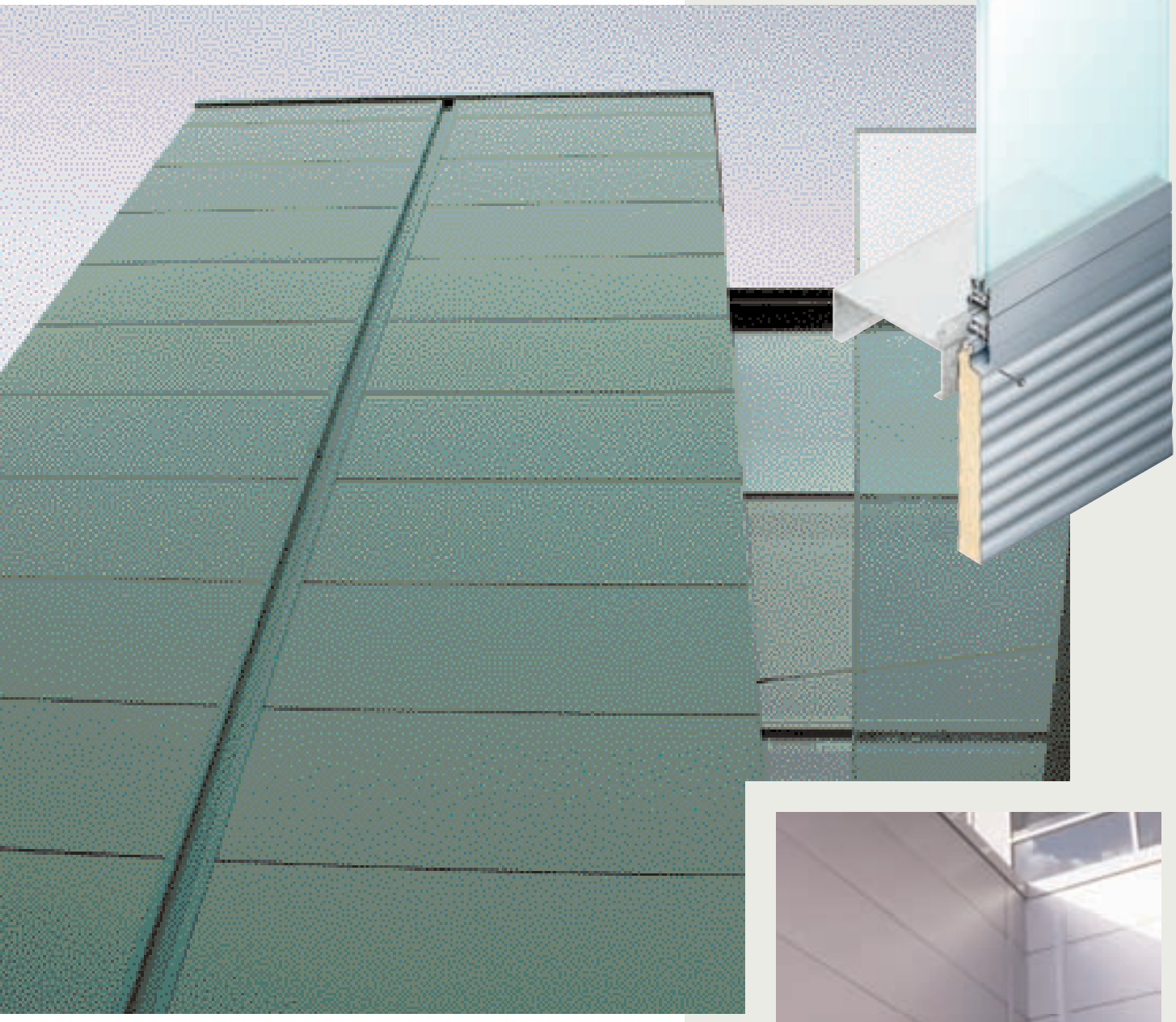


Top Hat Features

Finishing Touches

When vertical junction expression is required, pressed steel or extruded aluminium top hat options are available in matching or contrasting colours.

A wide range of standard or bespoke flashings and accessories can be incorporated to enhance the building's architectural features.

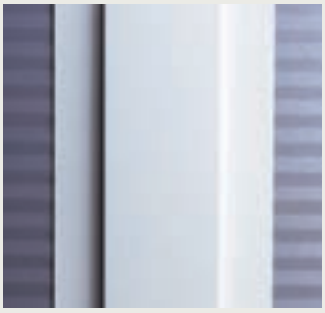


Pressed Steel Top Hats

Option A - flush
Pressed steel top hat with a snap-on flush cover flashing.

Option A - recessed
Pressed steel top hat with a snap-on recessed cover flashing.

Option B
Top hat option from a single piece of pressed steel, with recessed groove.



Option C
Top hat option from a single piece of pressed steel providing a shadow line feature flashing.

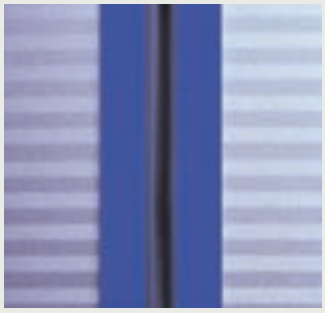
Kingspan pressed metal flashings can be supplied in steel with a PVDF, Kingspan Spectrum™, Kingspan XL Forté™ or HPS200 Ultra finish to match or contrast with panels. Flashings can also be supplied as pressed aluminium in colours to match panels.

Aluminium Top Hats

Option D
Aluminium extruded top hat with a recessed aluminium insert.

Option E
Aluminium extruded top hat with a flush aluminium insert.

Option F - flush
Aluminium extruded top hat section with flush snap-in aluminium cover.



Option F - gasket
Aluminium extruded top hat section with top hat infill EPDM rubber gasket.

Kingspan aluminium sections are supplied mill finished as standard or can be specified polyester powder coated to BS or RAL colours.

Trapezoidal

Trapezoidal Wall System

The KS1000 RW wall system can be installed vertically or horizontally and is widely used as an economic solution for new build and refurbishment applications, particularly on industrial/warehouse type buildings.

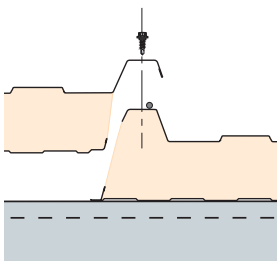
The system provides extremely fast site installation on projects which involve large scale areas of wall cladding which can accept a more industrial level of architectural appearance.

KS1000 RW/EXT-A and EXT-A30 FIRE*safe* wall system complies with BS 476 - Part 22 for 2 hours integrity.

Joint Detail

KS1000 RW/FW side and end lap joints are supplied factory pre-engineered to allow rapid site installation.

Side Lap



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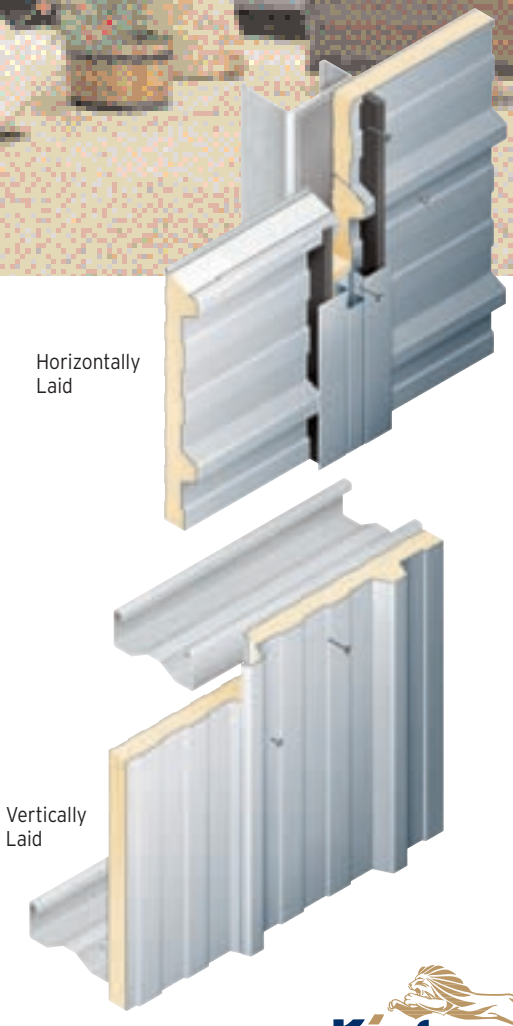
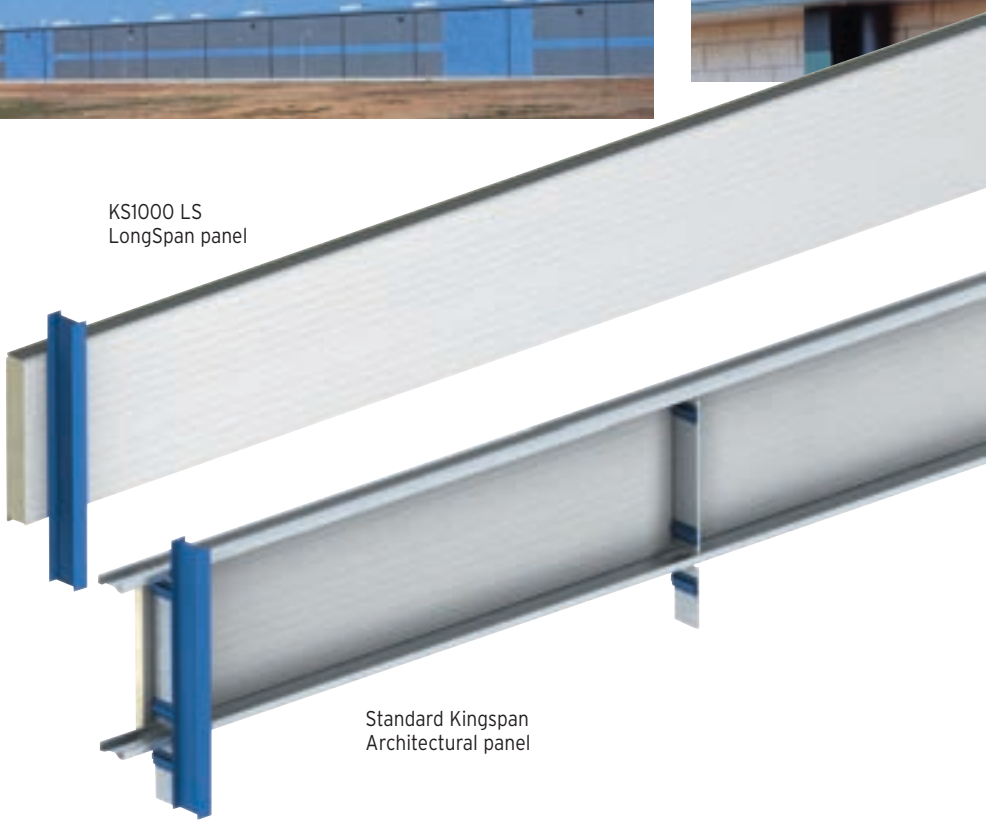

Horizontally
Laid
Vertically
Laid

LongSpan is a frame to frame wall system which eliminates side rails and internal linings



KS1000 LS
LongSpan panel

Standard Kingspan
Architectural panel

KS1000 LS LongSpan is an architectural wall system from Kingspan, which removes the need for secondary steelwork, such as sheeting rails. It has been designed to address the construction industry's ever increasing concern with issues of speed, quality and lifecycle costs. The panels are available in the AWP profiles of Micro-Rib, Euro-Box, Flat-Stucco (Flat-Flat), Mini-Micro, Convex and Wave.

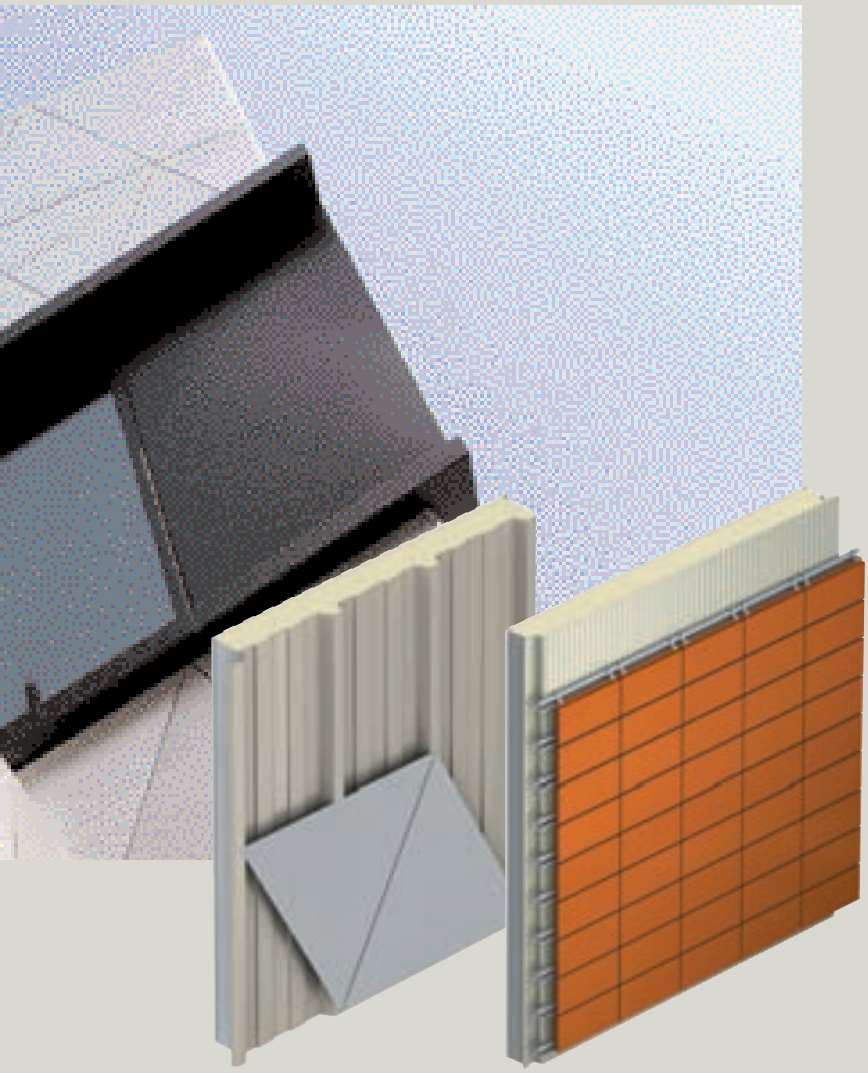
LongSpan is manufactured from thicker gauge steel and the core depths are 80mm or over, to provide the structural support needed for the wall systems.

Facade Support

Kingspan Insulated Panels perform a vital role in ensuring the weatherproofing and watertightness of the structure when used as a insulated facade system to support a range of decorative finishes.

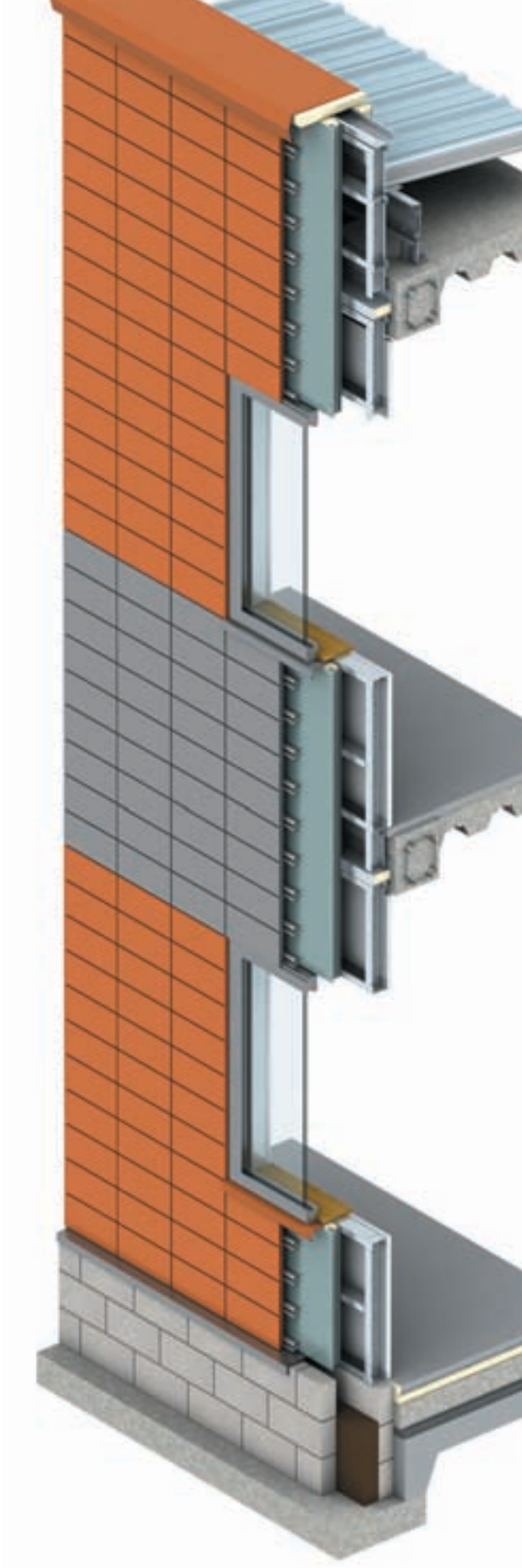
Kingspan insulated facade systems can be used as an airtight, weathertight and weatherproof inner skin, upon which ceramic or metal tiles and wood can be hung to enhance the aesthetics and texture of a building. It guarantees a reliable thermal performance and insulation continuity with no cavities, gaps, cold bridges or interstitial condensation.

Kingspan insulated facade systems are currently undergoing a regime of testing for fire, weather and durability. Kingspan offer the insulated facade system solution on a project by project basis. Please contact Kingspan Technical Design Bureau for more details.



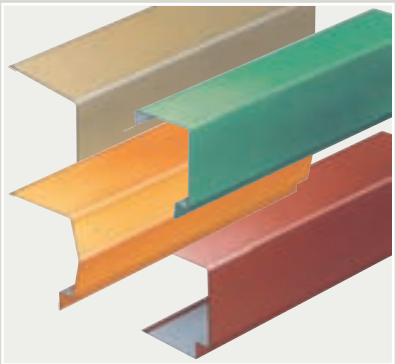
KS1000 RW
Insulated Facade System

KS1000 MR
Insulated Facade System

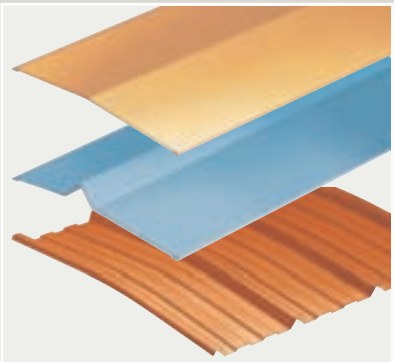


Ancillaries

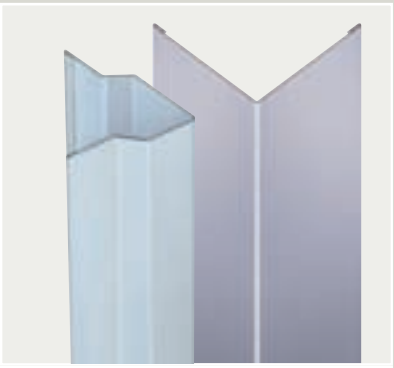
Kingspan manufacture and supply an extensive range of standard and bespoke ancillary components, which can be used to enhance the architectural imagery of the building. Kingspan's Technical Services and ancillary manufacturing operation provide designers and constructors with a total service package, both at design and through the construction process.



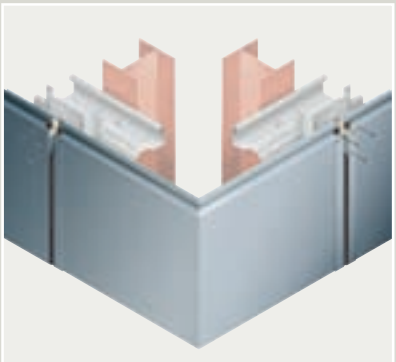
Verge Flashings



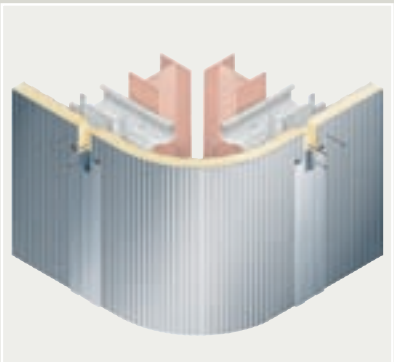
Ridge Cappings



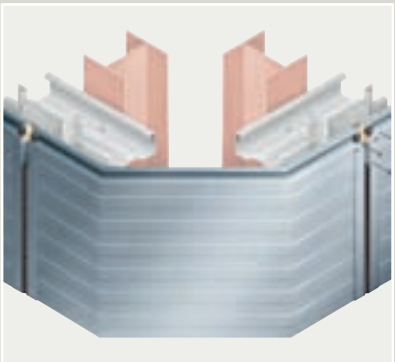
Corner Flashings



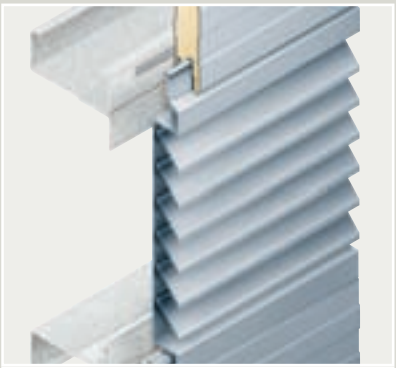
Pre-Formed Insulated Panels
Corner



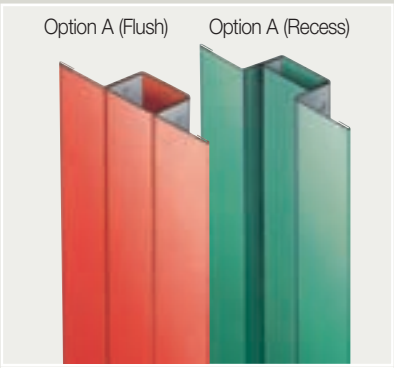
Pre-Formed Insulated Panels
Curved



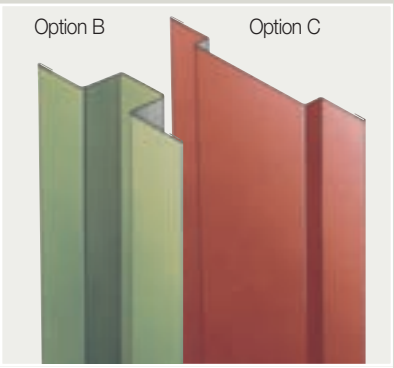
Pre-Formed Insulated Panels
Chamfered



Louvre Systems

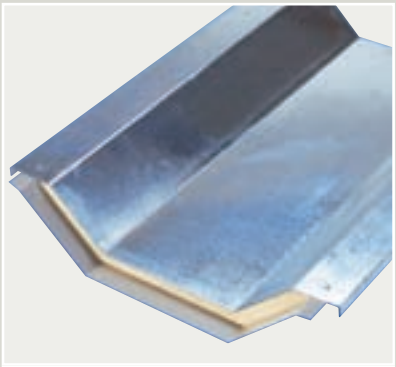


Top Hat Sections
Vertically Joint Details

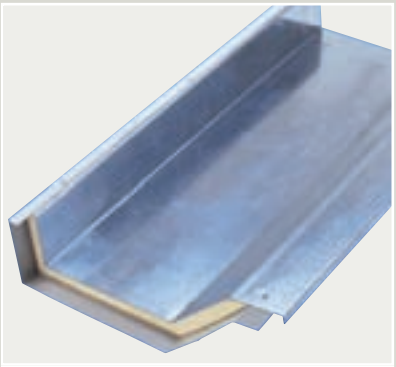


Top Hat Sections
Vertically Joint Details

Aerofoil & Bullnose Features

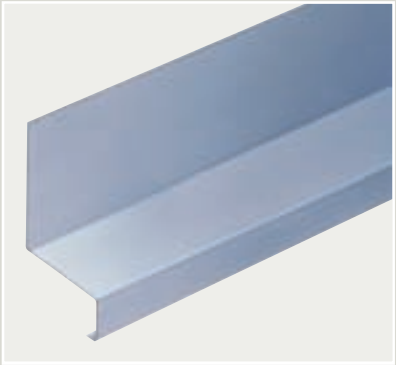


Insulated Valley Gutters
(Membrane lined)

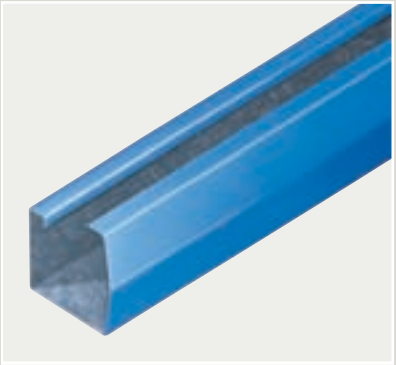


Insulated Boundary Wall Gutters
(Membrane lined)

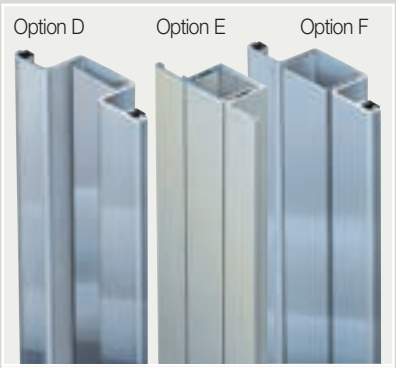
Rooflights



Drip Flashings



Facia Gutters



Designer
Vertically Joint Details

Accessory Materials & Finishes

- Substrate - Steel/Aluminium
- Finishes - PVDF - Kingspan Spectrum™ - Kingspan XL Forté™
  - HPS200 Ultra - Powder Coated to BS and RAL Colours

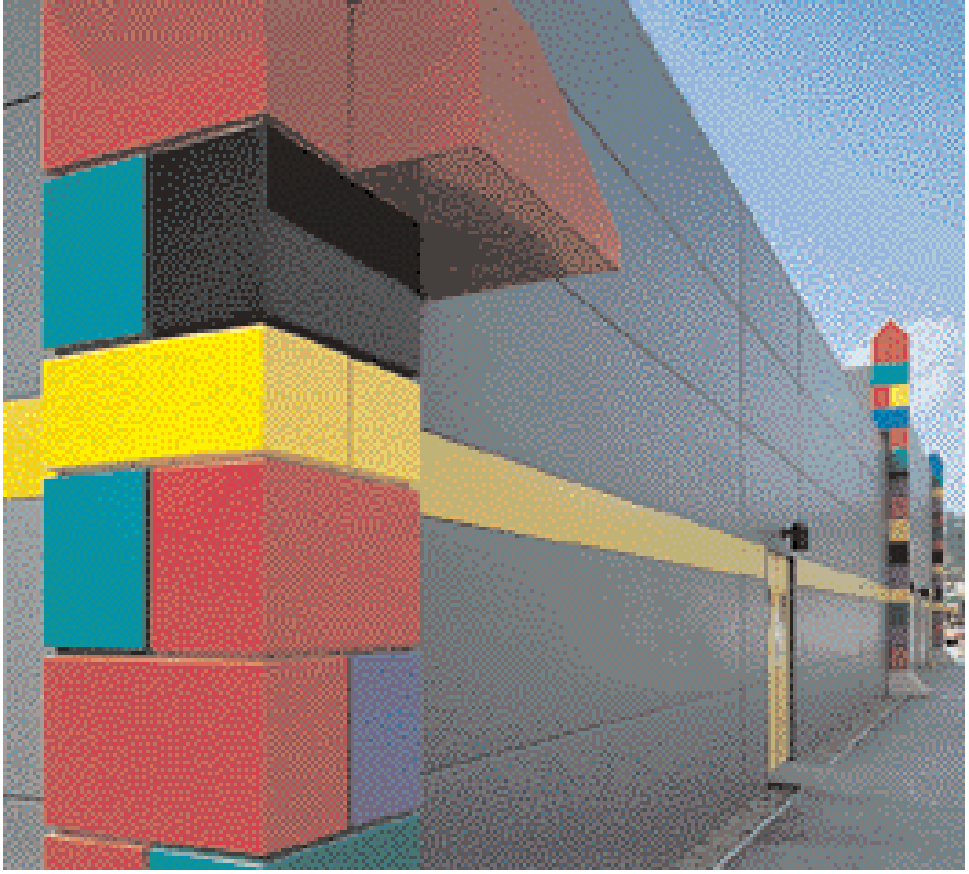
For full specification and application details of all ancillaries please refer to our Kingspan Design Manual, Interactive CD ROM or Interactive Web Site.
www.kingspanpanels.com

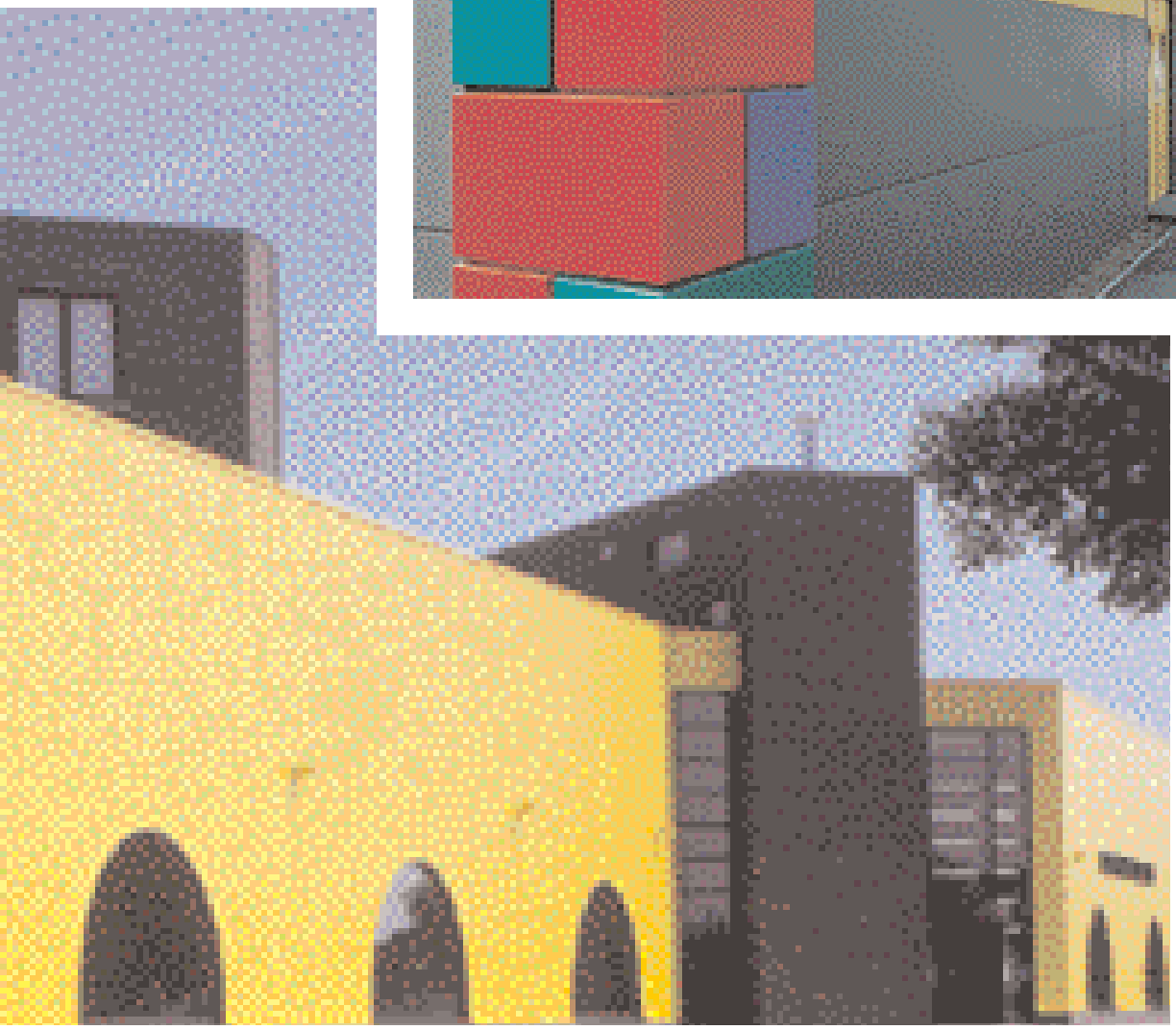
Colour Range

Kingspan provide a wide range of external coating systems and specifications in British Standard and RAL colours. Within this colour range we stock a significant quantity of standard colours which meets a high percentage of designers requirements which are available on short lead time deliveries. Additionally we have a whole spectrum of finishes and colours which are available for individual project requirements.

Guarantees and Warranties

Kingspan and their steel suppliers provide coating and product warranties and guarantees on an individual project basis.





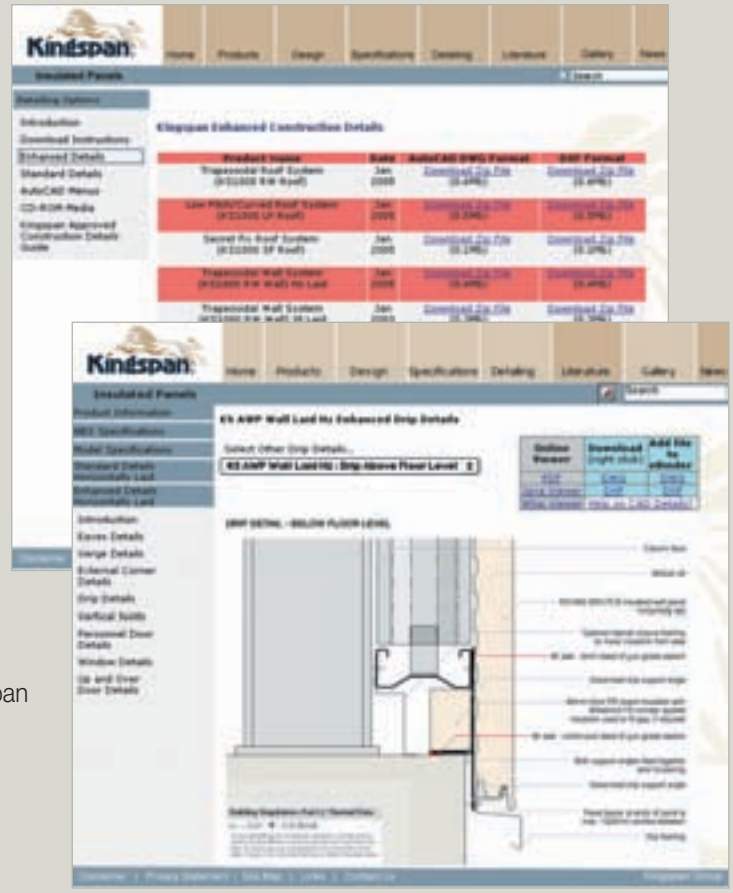
The printed colours are as accurate as possible and are for guidance purposes only.

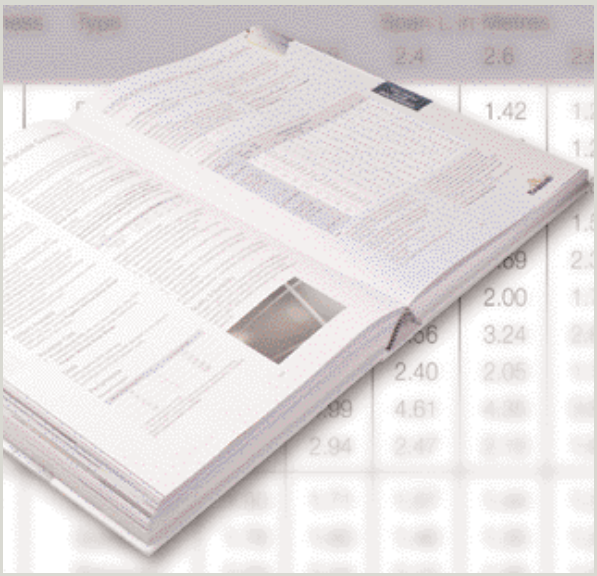
Please contact Kingspan for actual colour swatches to evaluate accurate colour selection.

Total Service for a Complete Solution

Kingspan supports specifiers and contractors at all project stages. We provide a comprehensive technical advisory service through our Technical Design Bureau with its highly trained personnel contactable by email, phone and faxback.

- Kingspan's 'Architects and Designers Guide to Construction and Good Practice' is an invaluable reference guide. This has been newly updated for the changes to Building Regulations and Standards.
- A Kingspan CD Rom is also available. This contains all CAD details in dwg, dwf and dxf formats, suitable for all IT systems, together with model specifications in both pdf and Microsoft Word format to allow you to personalise to your project. The CD Rom also contains electronic versions of all up-to-date Kingspan literature in pdf format. This includes order forms, product brochures and the Design and Construction Guide itself.
- This interactivity is also reflected in the Kingspan website www.kingspanpanels.com - allowing users to keep their CD ROM constantly up-to-date by downloading new information.





Our Technical Design Bureau staff support investors, designers and contractors with industry leading experience, knowledge and expertise in providing best practice construction solutions input and advice on any project.

This includes all construction performance and building physics issues, working details, model specifications, lifecycle, siteworks/build method information, roof drainage, U' value and windload calculations.

Our team of regionally based Sales Managers are available to provide immediate customer and project assistance.

Superior Quality and Performance

Kingspan's wall panel systems and ancillary components are manufactured from high performance specification materials and coating systems on state-of-the-art manufacturing facilities to ISO EN 9001 quality standards. During manufacture all products are subject to a rigid quality inspection regime to ensure that they fully comply with the appropriate performance standards.

The product range has been designed and tested to comply with British, European and other international codes of practice and standards.

Pre-engineered factory manufactured construction products and systems provide superior build quality and reliable lifecycle performance for building investors, occupiers, designers and contractors. Kingspan's wall systems conform with these requirements and as the industries market leader our customers can be confident of our total support in terms of product quality, fitness for purpose and lifecycle performance.

FM APPROVED

LPCB Approved to LPS 1181 Certificate No 260a & 186a

Insurer Approved FIRE*safe* Systems

Kingspan®

Kingspan Insulated Roof, Wall & Facade Systems

Roof Systems

KS1000 RW
Trapezoidal

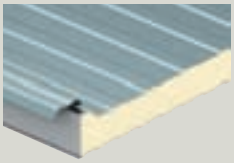
KS1000 SF
Secret Fix

KS1000 TS
Tile Support

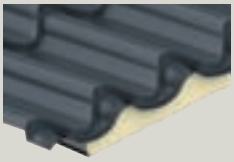
KS500/1000 ZIP
KingZIP®

KS1000 LP
Lo-pitch

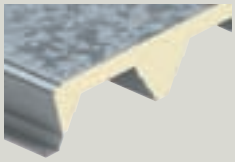
KS1000 CR
Curved



KS1000 RT
Roof Tile



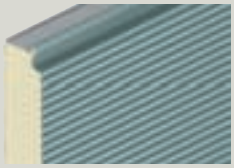
KS1000 XD
X-dek®



Wall & Facade Systems

KS600, 900
& 1000
Optimo™

KS600, 900
& 1000 MR
Micro-Rib



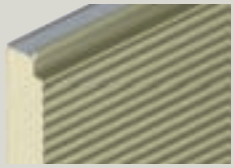
KS600, 900
& 1000 EB
Euro-Box

KS600, 900
& 1000 FL-S
Flat (Stucco)

KS1000
Facade System

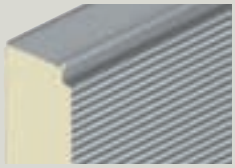
KS600, 900
& 1000 MM
Mini-Micro

KS600, 900
& 1000 CX
Convex



KS600, 900
& 1000 WV
Wave

KS600, 900
& 1000 LS
LongSpan



KS1000 RW
Trapezoidal

Controlled Environment Systems

KS1100 CS-Rib

KS1100 CS-FL

KS1100 CS-MR

Kingspan Limited

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Ireland: Telephone: +353 (0) 42 96 98500 Fax: +353 (0) 42 96 98572 Email: sales.ire@kingspanpanels.com

Details for the following countries; Australia, Belgium, China, Czech Republic, Germany, Hungary, Netherlands, Poland, Singapore can be found by visiting our website **www.kingspanpanels.com** or our group website **www.kingspan.com**