

# BENCHMARK

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by Kingspan



Product Portfolio

Insulated Panels  
Facades

North America

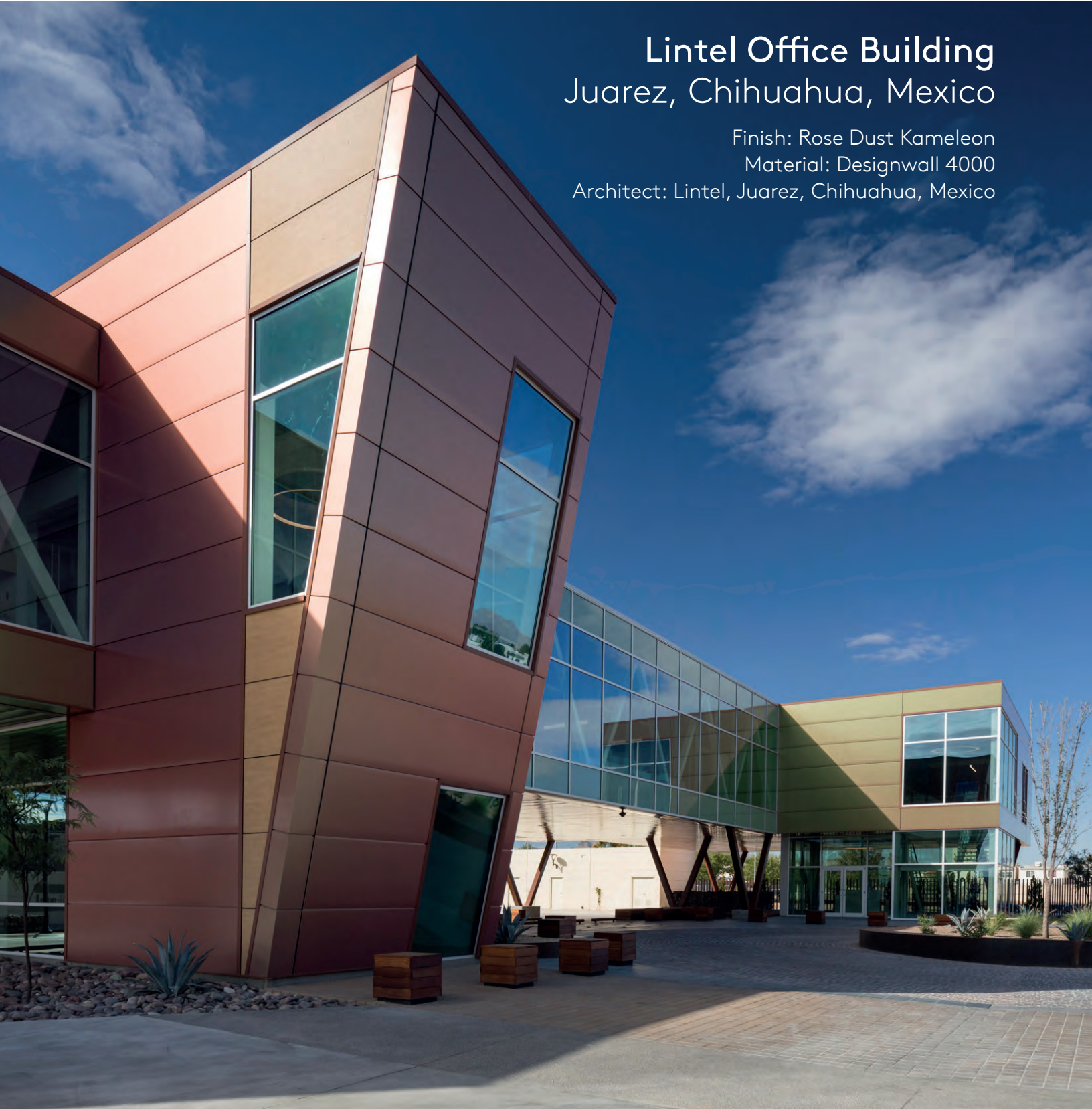


# Lintel Office Building Juarez, Chihuahua, Mexico

Finish: Rose Dust Kameleon

Material: Designwall 4000

Architect: Lintel, Juarez, Chihuahua, Mexico



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## Express Park Bridgwater, UK

Product: Benchmark Facade System  
Material: Porcelain Stone  
Architect: Oxford Architects, UK

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Together we have the opportunity to make our built environments more energy efficient, attractive, adaptable, environmentally sensitive and productive. The way we build can be more effective and reach higher standards than ever before.





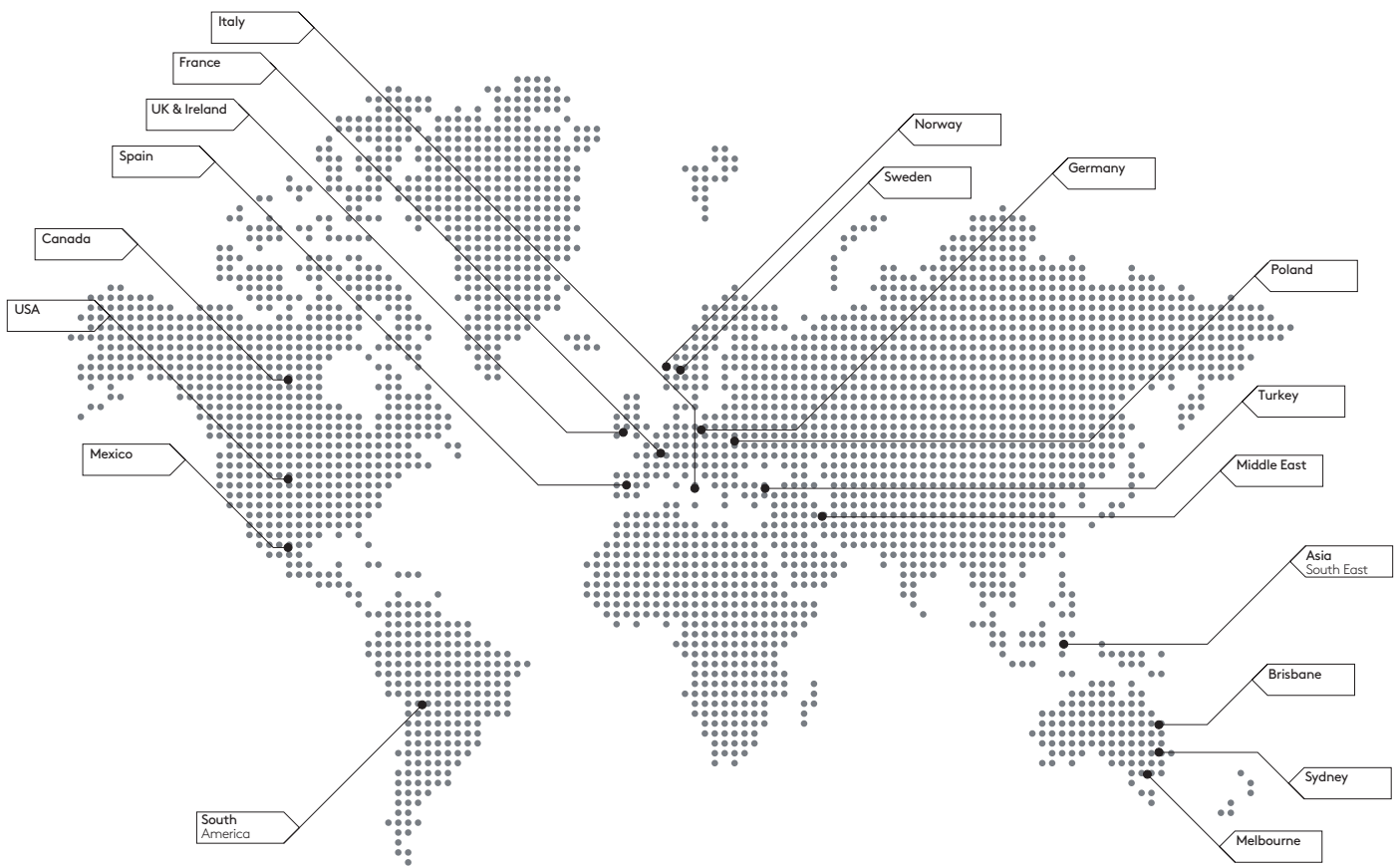
“We can make our buildings really work for us; consuming and generating energy smartly to become real investments in our future.”

Gene M. Murtagh, CEO, Kingspan Group.

# Your Global Partner

Kingspan is a global leader in the design, development and delivery of advanced building envelope products and solutions.

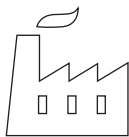
60+  
countries



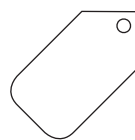
13  
regional R&D  
centers



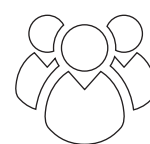
100+  
manufacturing  
sites worldwide



4.3  
billion USD  
revenue in 2017



11,000+  
employees  
worldwide





At Kingspan Insulated Panels, we are pioneering better technologies and methods of building for a low carbon world. Improving building performance, construction methods and ultimately people's lives – that's what drives our people across the world. Energy efficiency is at the heart of our innovation, from making the industry's most thermally efficient core for our insulated panels, to producing the most airtight interfaces, to providing technical and field-service support on how to build optimally.

As the world demands more from buildings in terms of energy efficiency, fire safety, weather resilience, health and aesthetics, we have expanded beyond insulated panels in recent years to encompass high-end facades, smart LED lighting, integrated PV and structural steel solutions.

Together with the learnings from our ongoing research into better building design, these enhanced Kingspan envelopes will take our built environment to the next era of efficiency and wellbeing.



Higher Building Performance  
with Kingspan

# It's all in the gray cells

QuadCore™ Technology is Kingspan's next generation of self-blended hybrid insulation core. Across the world of insulated panels, this innovation with its distinctive gray microcells powers the industry's highest combined performance:

- Unrivalled thermal efficiency
- Superior fire protection
- Unmatched health & wellness certification
- 30-year thermal warranty

QuadCore™ Technology, together with our end-to-end services and whole building design know-how, takes Kingspan buildings to a higher level of lifetime performance, and delivers the ultimate protection for our partners, their buildings, and the environment for future generations.



POWERED BY  
**QuadCore**™  
TECHNOLOGY



# 1

## Unrivaled Thermal Efficiency

QuadCore™ Technology is certified as the most thermally efficient closed-cell insulation core on the market.

### Lifetime performance and value benefits

- The class-leading R-value of R-8.0 per inch has the potential to reduce HVAC size, and lower both energy consumption and carbon emissions.
- QuadCore™ Technology is a more streamlined solution relative to other insulation materials with associated benefits in interior space optimization, for specific transport, and ease of handling during construction.

# 2

## Superior Fire Protection

The hybrid nature of QuadCore™ Technology delivers a range of improvements in fire performance which surpass all other insulated panel systems incorporating closed-cell insulation materials.

### Lifetime performance and value benefits

- For any building owner that wants the best protection against the impact of fire, the unique low smoke characteristics of QuadCore™ Technology provide the optimum solution.
- QuadCore™ Technology also delivers improved fire resistance ratings leading to more cost-effective installations due to economies in steelwork and fixing, in certain applications.

# 3

## Unmatched health & wellness certification

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

### Lifetime performance and value benefits

- None of the chemical ingredients present in Kingspan's QuadCore™ foam are included on the ILFI Declare Red List.
- C2C Silver material health certified
- Greenguard Gold certified

# 4

## 30-year thermal warranty

The inimitable science behind QuadCore™ Technology and comprehensive independent third-party testing has delivered the industry an unparalleled 30-year thermal performance warranty.





## Hospital / Healthcare

Riverside Hospital, Columbus, OH

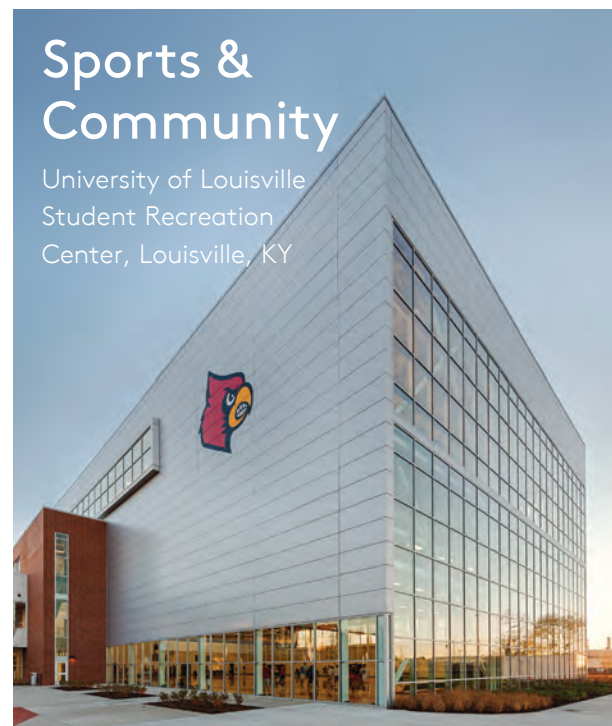
## Multipurpose

IBEW Local Union 1186,  
Kahului, Maui, HI



## Sports & Community

University of Louisville  
Student Recreation  
Center, Louisville, KY







## Education

Kankakee Community College, Bradley, IL



## Office

170 Tracer Lane, Waltham, MA



## Retail

Friars Walk, Newport, Wales, UK



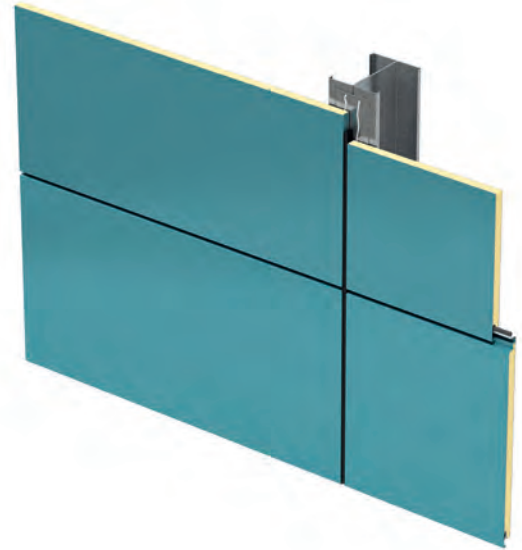
# Designwall 1000

Insulated Panel





Combining high-end architectural features with a value engineered price, Designwall 1000 meets both design and budgetary needs. Designwall 1000's 1 1/8" thickness, with polyisocyanurate core, is lightweight and easy to install. Custom finishes and substrates are available.



### Product Specifications

<b>Profile</b>	Exterior: Flat Interior: Flat
<b>Embossing</b>	Exterior: Stucco, shadowline or non-embossed Interior: Stucco or non-embossed
<b>Gauge</b>	Exterior: 22, 20 ga Interior: 24 ga
<b>Width</b>	12" – 30"
<b>Thickness</b>	1 1/8"
<b>Length</b>	2' – 24'
<b>Reveal Options</b>	1/16" or 1/2"
<b>Orientation</b>	Vertical or horizontal
<b>Post Fabrication</b>	Longitudinal bend, transverse bend, trimless ends, beveled edge, tapered edge, full wrap end, modified edge, curves along width, curves along length (Manufacturing limitations apply. Please contact us for detailed information)
<b>R-Value</b>	4.3 per ASTM C518 and thermal modeling of 30" wide panel. For R-Values of other widths, please contact Kingspan Technical Services.
<b>Production method</b>	Structurally bonded



# Designwall 2000

Insulated Panel





The ultimate in design flexibility, Designwall 2000 allows for complete creative freedom. With horizontal and vertical application capability, the Designwall 2000 joint provides maximum thermal efficiency while creating a double barrier against air and water penetration. Custom widths, finishes and integrated options, including BENCHMARK By Kingspan's Flushglaze window systems, make Designwall 2000 the perfect fit for any project.



### Product Specifications

<b>Profile</b>	Exterior: Flat Interior: Flat
<b>Embossing</b>	Exterior: Stucco, non-embossed or shadowline Interior: Stucco or non-embossed
<b>Gauge</b>	Exterior: 22, 20 ga Interior: 24, 22, 20 ga
<b>Width</b>	24" – 42"
<b>Thickness</b>	2", 2.5", 3", 4"
<b>Length</b>	2' – 24'
<b>Reveal Options</b>	1/16" – 6"
<b>Orientation</b>	Vertical or horizontal
<b>Post Fabrication</b>	Longitudinal bend, transverse bend, curve, trimless end, beveled edge, tapered edge, full end wrap (Manufacturing limitations apply. Please contact us for detailed information)
<b>R-Value</b>	≈ 7 per inch per ASTM C1363
<b>Production method</b>	Structurally bonded



Designwall 4000  
Insulated Panel



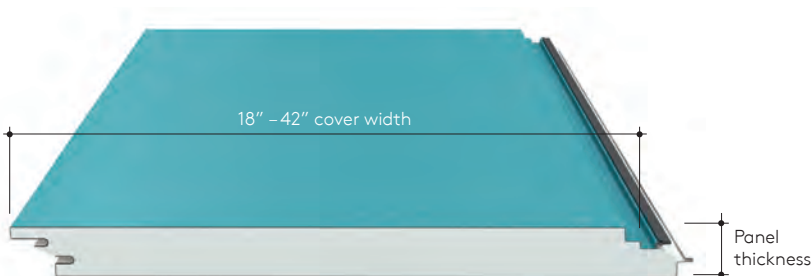


Designwall 4000 is the go-to choice for large scale projects. This foamed-in-place architectural wall panel has reveal options ranging from 1/8" to 6", allowing for the creation of shadows and accents. Available in either embossed or non-embossed, Designwall 4000 is uniquely equipped for finest design ingenuity.



### Product Specifications

Insulation Core	QuadCore™ Technology
Profile	Exterior: Flat Interior: Flat
Embossing	Exterior: Stucco or non-embossed Interior: Stucco or non-embossed
Gauge	Exterior: 22, 20 ga Interior: 24, 22 ga
Width	18" – 42"
Thickness	2", 2.5", 3", 4"
Length	2' – 24'
Reveal Options	1/8" – 6"
Orientation	Vertical or horizontal
Post Fabrication	Transverse bend, trimless end, block spline (Manufacturing limitations apply. Please contact us for detailed information)
R-Value	8 per inch per ASTM C518 @ 75°F 9 per inch per ASTM C518 @ 35°F
Production method	Continuous production line



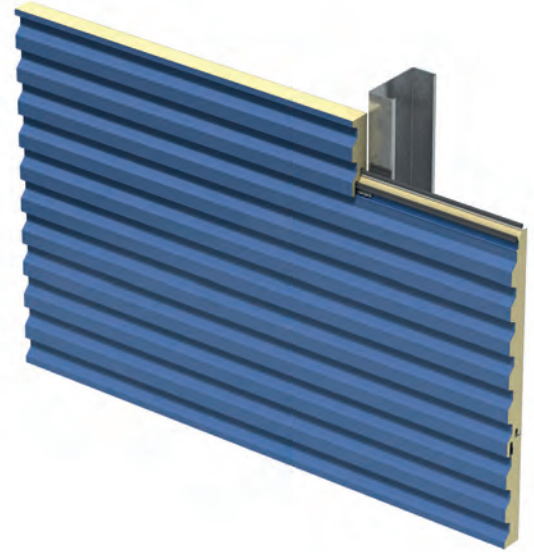
POWERED BY  
**QuadCore™**  
 TECHNOLOGY

# Designwall R Series Insulated Panel





Designwall R Series, a profiled, accent version of Benchmark Designwall 2000 with ribs at 7/8" deep. The asymmetrical profile is designed for horizontal or vertical application. The R Series panel adds a bold, profiled look to commercial construction. Designwall R Series interfaces and engages with other Designwall horizontal panel profiles.

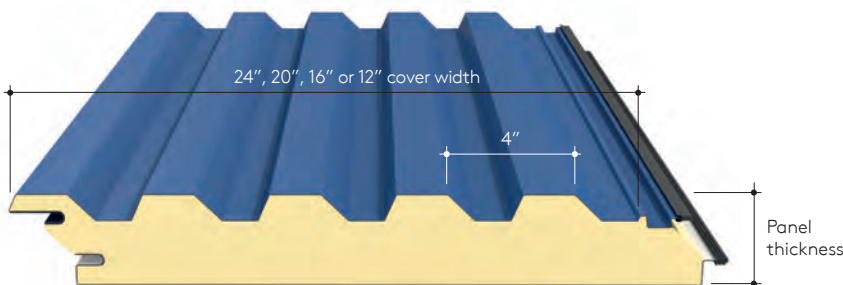


### Product Specifications

<b>Profile</b>	Exterior: Ribbed Interior: Flat
<b>Embossing</b>	Exterior: Stucco or non-embossed Interior: Stucco or non-embossed
<b>Gauge</b>	Exterior: 22 ga Interior: 24, 22 ga
<b>Width</b>	12", 16", 20", 24"
<b>Thickness</b>	2.5", 3", 4"
<b>Length</b>	2" - 24'
<b>Reveal Options</b>	N/A
<b>Orientation</b>	Vertical or horizontal
<b>Post Fabrication</b>	Transverse bends, end caps
<b>R-Value</b>	≈ 7 per inch based on low cell thickness per ASTM C1363
<b>Fabrication method</b>	Structurally bonded

All panel thickness options engage with BENCHMARK Flushglaze 4500 and 7500 integral window system as well as Benchmark integrated louver system.

Various profile options are available. Please consult your Regional Sales Manager.



Insulated Panels & Facades

# Designwall 3000

Non-Insulated Panel





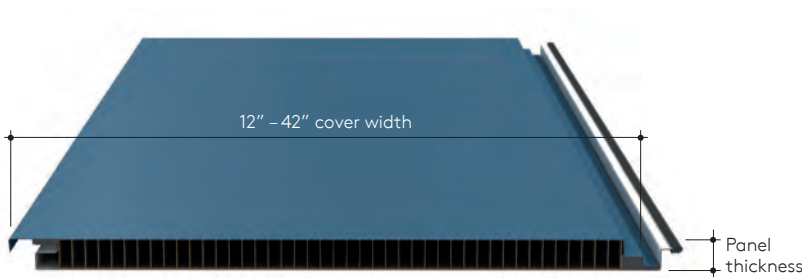
This lightweight 1 1/4" thick panel features a honeycomb core between smooth or embossed skins of steel or aluminum. The uninsulated core allows uniform thermal expansion of the face and liner sheet, resulting in exceptional panel flatness under extreme temperature variations.



### Product Specifications

<b>Profile</b>	Exterior: Flat Interior: Flat
<b>Embossing</b>	Exterior: Stucco or non-embossed Interior: Stucco or non-embossed
<b>Gauge</b>	Exterior: 22, 20 ga Interior: 24, 22 ga
<b>Width</b>	12" - 42"
<b>Thickness</b>	1 1/4"
<b>Length</b>	2' - 24'
<b>Reveal Options</b>	1/16" - 1/2"
<b>Orientation</b>	Vertical or horizontal
<b>Post Fabrication</b>	Longitudinal bend, transverse bend, trimless end, beveled edge, tapered edge, modified edge (Manufacturing limitations apply. Please contact us for detailed information)
<b>R-Value</b>	N/A
<b>Production method</b>	Structurally bonded

The Designwall 3000 is offered with a Kraft paper honeycomb core or an optional aluminum core for use where non-combustible wall construction is required.



# ACM / MCM Facade System





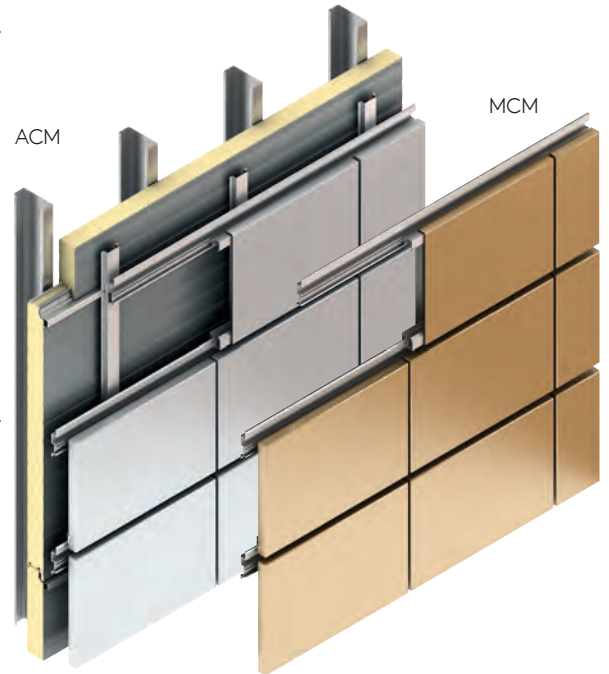
BENCHMARK's ACM and MCM Facade Systems provide a striking finish that gives buildings a modern stylized appearance which is virtually maintenance free.

ACM is a lightweight composite material, consisting of two aluminum cover sheets and a fire rated core. It is a simple and versatile product which delivers a weather resistant, unbreakable and shock resistant facade which is very easy to install.

ACM is available in a wide range of colors to provide your project with eye catching designs.

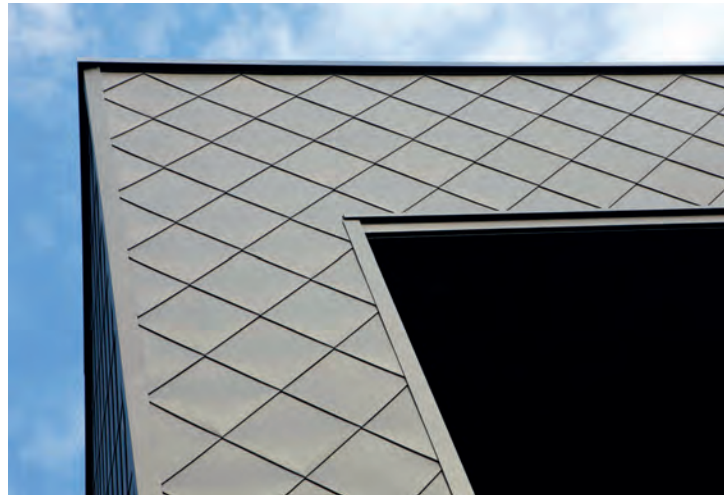
MCM (Metal Composite Material) consists of two metal cover sheets and a fire rated core. The commonly used metals are zinc, stainless steel, or copper, but other specialty metals are available.

MCM comes in a nearly limitless array of colors, finishes, reveals, and sizes to customize your building exactly to your design intent.



1. BENCHMARK By Kingspan Insulated Metal Panel (barrier wall)
2. BENCHMARK By Kingspan KarrierRail
3. Aluminum Composite Material (ACM) panel rout and return edge
4. Aluminum Composite Material (ACM) spline
5. Aluminum Composite Material (ACM) continuous extrusion
6. Aluminum Composite Material (ACM) clip

# Plate Facade System



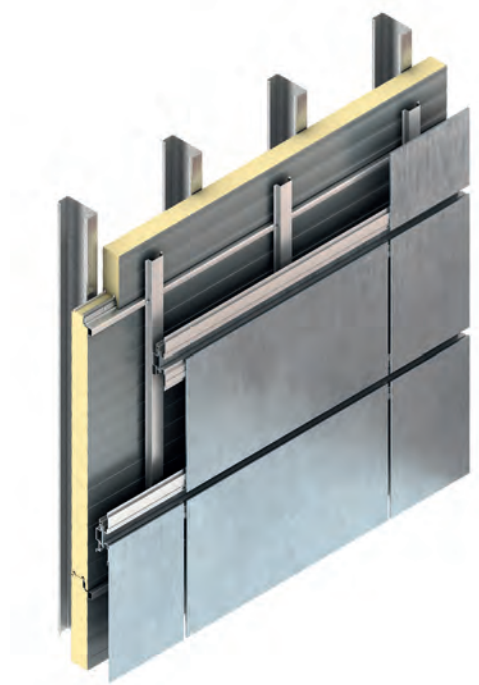


BENCHMARK By Kingspan's Plate Facade System provides a colorful range of options.

Not just aesthetically pleasing, this building facade system has been engineered to be extremely durable and highly resistant to impact damage.

Also built with flexibility in mind, BENCHMARK's Plate can easily be installed horizontally or vertically as well as integrated with traditional construction methods and building systems.

- Variations in joint width, depth, pattern, and materials
- True radius panels a design option
- Route reinforcement incorporated at all panel bend locations
- Shallow vs. deep full perimeter extrusion framework options
- Rivetless and concealed fastener options



1. BENCHMARK By Kingspan Insulated Metal Panel (barrier wall)
2. BENCHMARK By Kingspan KarrierRail
3. Plate panel rout and return edge
4. Plate panel spline
5. Plate panel continuous extrusion
6. Plate panel clip



# Extruded Plank Facade System

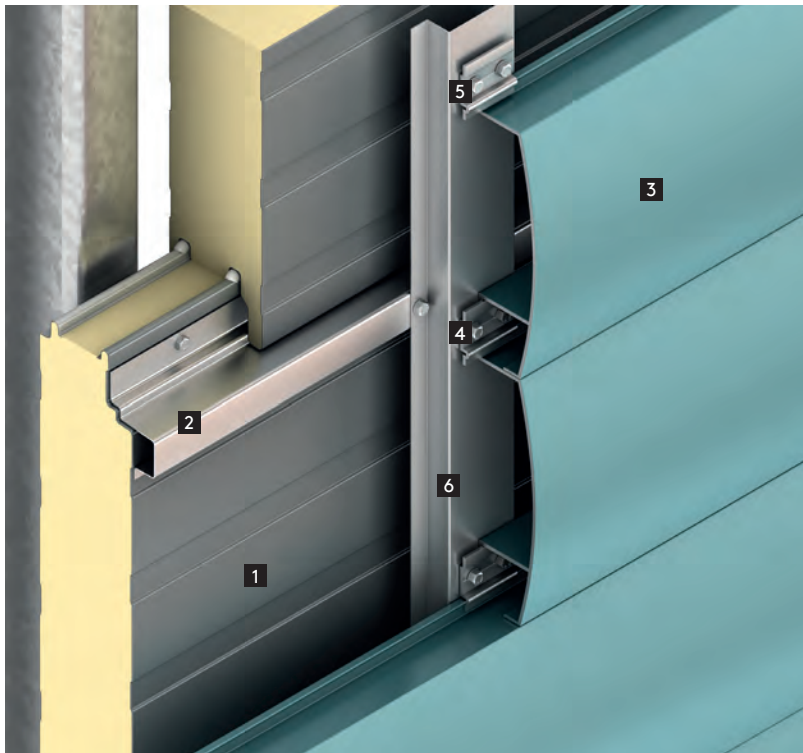




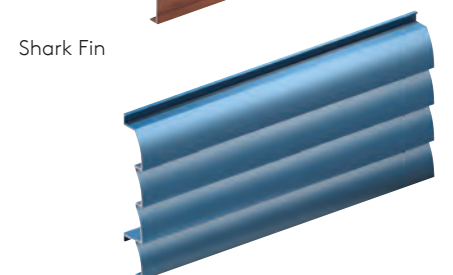
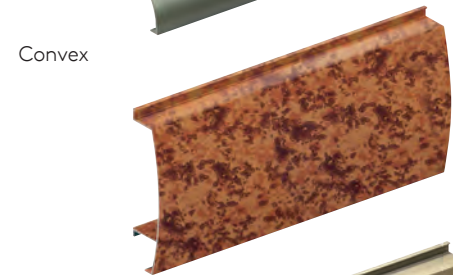
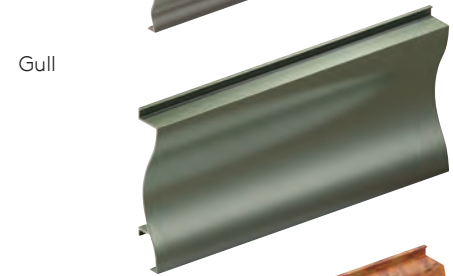
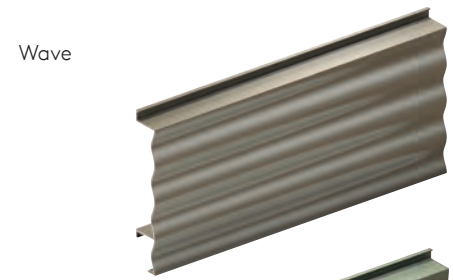
BENCHMARK's Extruded Plank Facade System is highly attractive, durable, and versatile in its applications, delivering a very modern finish while being able to integrate seamlessly with traditional architectural looks.

Plank is also available in 6 standard profiles each available in a wide range of colors, finishes, and sizes. This system has been designed to provide a quicker and easier installation process, with a simple clip fastening system allowing for rapid installation.

The truly unique aspect of Extruded Plank is the ability to design your own Plank specific to your project. This enables you to create a design that will be exclusive to your project for a truly one of a kind aesthetic experience.



1. BENCHMARK By Kingspan Insulated Metal Panel (barrier wall)
2. BENCHMARK By Kingspan KarrierRail
3. BENCHMARK By Kingspan extruded plank facade
4. BENCHMARK By Kingspan extruded plank clip
5. Fastener
6. Subgirt secondary rail





# Thin Brick Facade System



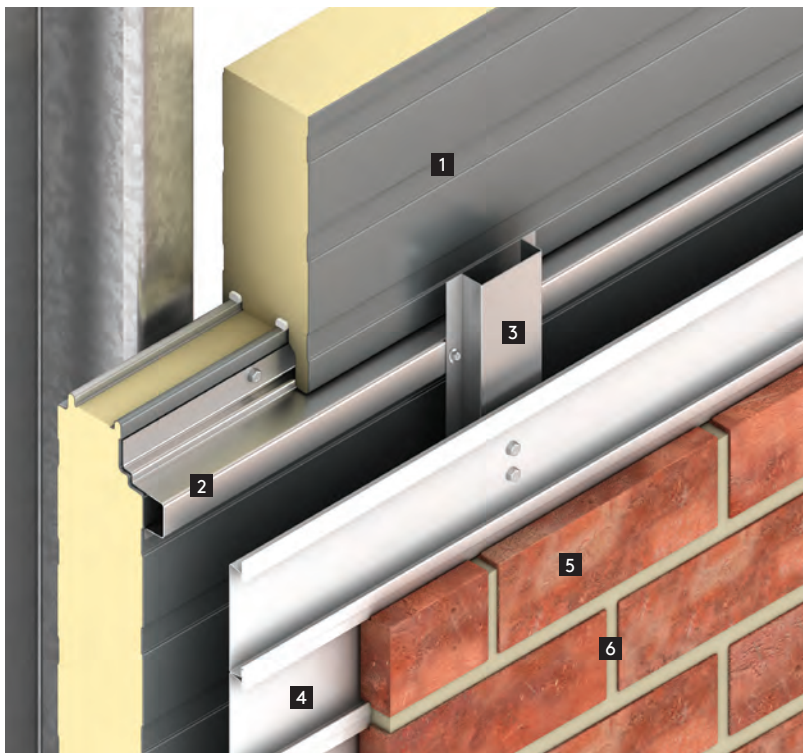
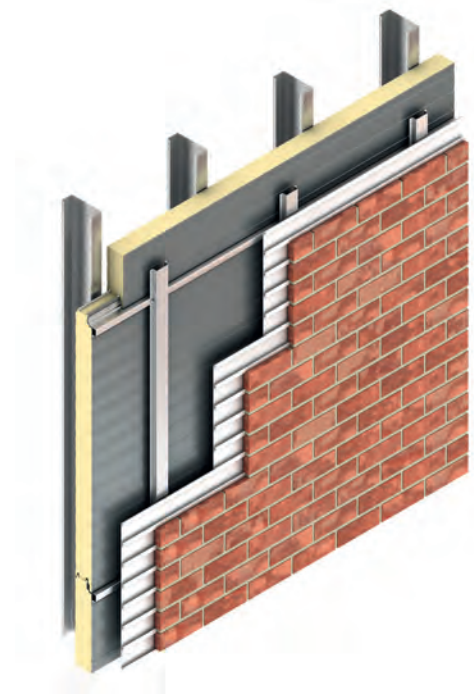


BENCHMARK's Thin Brick Facade System is a modern interpretation of a classic look utilizing eye catching finishes to create uniquely styled buildings.

This facade system combines the classic and timeless brick appearance with the superior performance and durability of insulated metal panels.

Both the bricks and the mortar, are available in a wide range of colors, textures and finishes as well as the ability to match custom colors. The light weight system is faster and easier to install than a traditional brick system as well as decreasing a building's overall demand for energy.

- Design flexibility: various profiles, textures, colors, mortars
- Horizontal and vertical application
- Fast and simple installation process
- Bricks are held in place by steel rails to form permanent mechanical bond
- Bricks requires no adhesives to be held in place
- Bricks are produced in the same manner as traditional building brick



1. BENCHMARK By Kingspan Insulated Metal Panel (barrier wall)
2. BENCHMARK By Kingspan KarrierRail
3. Subgirt secondary rail
4. Thin Brick holding rail
5. Thin Brick
6. Thin Brick mortar

# Porcelain Stone Facade System



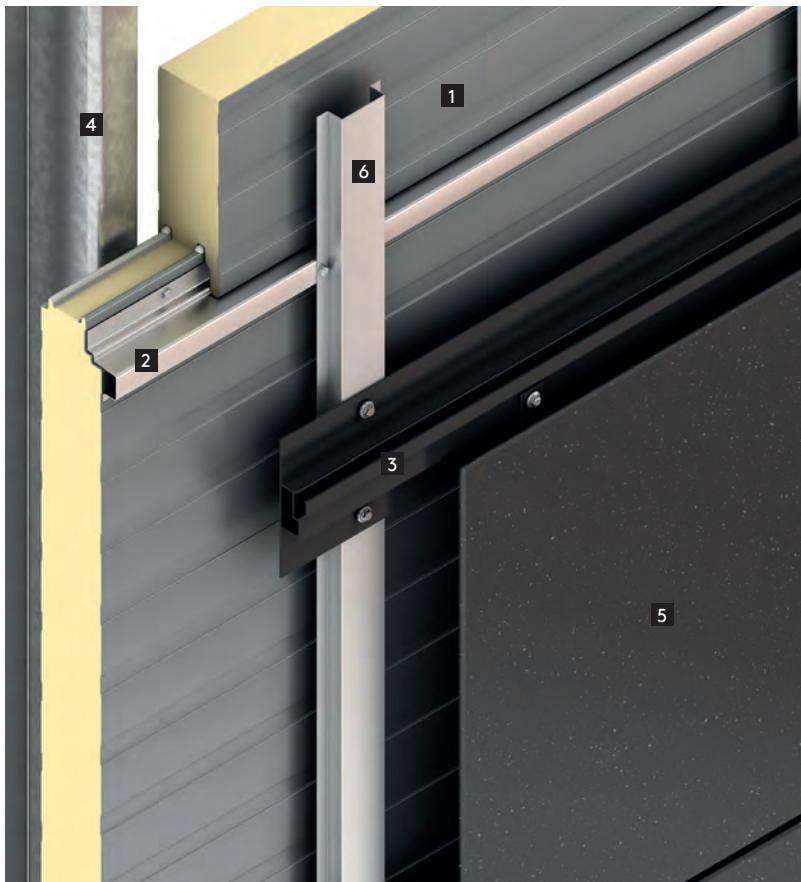


BENCHMARK Porcelain Stone Facade System delivers the beauty and variation of natural stones like granite, marble, and limestone without the long term maintenance concerns of a traditional stone system.

Unlike traditional stone, Porcelain Stone is exceptionally lightweight.

Tailor made to your project, the porcelain stone facade system offers a striking finish that gives buildings a modern stylized appearance. The porcelain stone facade system comes as a single package system that combines the energy efficiency of Kingspan Insulated Panels with the unique KarrierPanel system.

- Fast to install – ensures air and watertightness as soon as installed
- Easy to integrate – flexibility for unique design
- Fully guaranteed – for total peace of mind
- Single sourced solution – consistency and less coordination
- Standard maximum finished size = 1198mm x 598mm



1. BENCHMARK By Kingspan Insulated Metal Panel (barrier wall)
2. BENCHMARK By Kingspan KarrierRail
3. BX horizontal rail
4. Structural framing
5. Porcelain Stone facade panel
6. Subgirt secondary rail



Insulated Panels & Facades

# Flushglaze Integrated Window Systems





BENCHMARK By Kingspan Flushglaze building window systems offer a modern look while providing design flexibility for architects and designers.

### Flushglaze 4500

Flushglaze 4500 satisfies an ever increasing need to integrate architectural window systems with horizontal panel joinery. The 4-1/2" or 6" deep storefront design system is ideal for continuous run fixed "strip" windows that are flush with the plane of the panels. Designed to preserve and maintain the same weather proofing principles as insulated metal panels.

- Thermal breaks in all components
- Positive water barrier and drainage
- Concealed splice plates
- Front set glass pocket
- Snap-lock frame connectivity
- Window systems are reglazable without dismantle of insulated metal panel system
- Integrates with Designwall 2000/4000 and Designwall R Series
- Operable vents available per specific application



### Flushglaze 7500

Flushglaze 7500 provides integration with curtainwall type window construction for "thru-tube" applications. Includes a wide array of panel adapter extrusions, curtainwall components and modified panel edge options to suit specific window / panel applications. Designed to preserve and maintain the same weather proofing principles as insulated metal panels.

- Versatile system that readily adapts itself to different construction needs
- All components are thermally broken
- Well suited for steel thru-tube "clad-over" applications as well as aluminum thru-tubes
- No secondary flashings or additional sight lines
- Window systems are reglazable without dismantle of insulated metal panel system
- Integrates with Designwall 2000/4000 and Designwall R Series
- Operable vents available per specific application





# Sunscreens

Integrated Solutions





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BENCHMARK By Kingspan offers sunscreens. The durable, rust-resistant aluminum sunscreens and grills allow designers to create a custom aesthetic appearance while reducing a building's energy consumption.

Sunshade design is carefully tailored to suit specific functional and artistic applications. The sunscreens and grills are easy to install and are available in a variety of finish options.

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#### Material Options

- Tube frame
- Airfoil profiles
- Bull nose fascia
- Suspension rods
- Circular tube
- Clad fascia
- Outrigger arm

#### Blade Options

- Extruded or formed aluminum
- Horizontal or vertical
- Welded or fastened connection for structural integrity
- Spacing
- Angles

#### Finish Options

Available in a variety of finishes and colors including:

- Hylar 5000 / Kynar 500 painted aluminum
- Anodized aluminum



# Column & Beam Covers

Integrated Solutions





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BENCHMARK By Kingspan offers column and beam covers which enhance the overall aesthetics of a building by converting unfinished I-beams into attractive metal features.

The column and beam covers create a durable, high-tech look for any building, entrance, or interior application and allow designers to achieve unlimited radius and height by sectioning columns.

Column covers and aluminum plate beams are available in round, square, rectangular or oblong sections, and design options include tight joint, reveals, cap channels, or rod and sealant joints.

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#### Material Options

- Aluminum plate
- Metal composite materials
- Stainless steel

#### Manufacturing Capabilities

- Available in continuous lengths up to 14 feet
- 5 inch minimum radius
- Standard and custom horizontal joint designs

#### Finish Options

Available in a variety of finishes and colors including:

- Hylar 5000 / Kynar 500 painted aluminum
- Anodized aluminum
- Stainless steel in a #4 brushed and #8 mirror finishes





# Design Louvers

Integrated Solutions



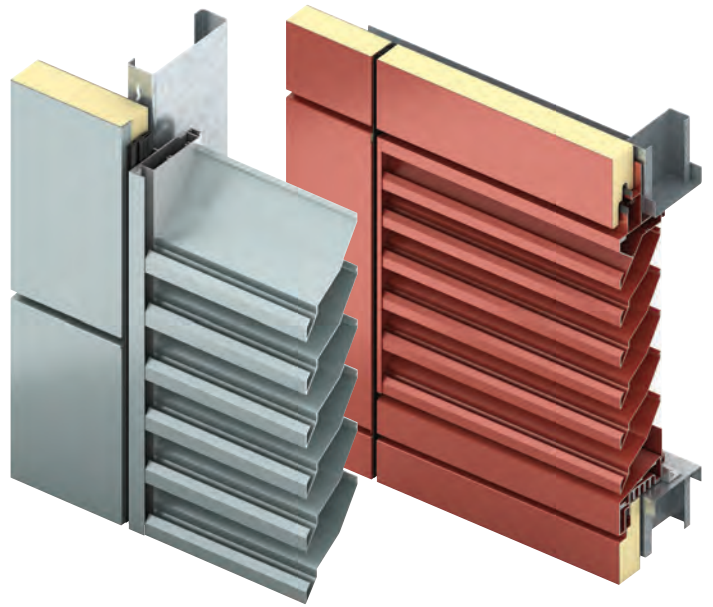


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Fully integrated design louvers with high performance extruded aluminum construction, satisfy the HVAC requirements of the building, without the need for field cuts, flashings or exposed fasteners.

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- Integrates with Designwall 2000/4000 and Designwall R Series
- Designed for horizontal panel integrations
- Extruded aluminum
- Anodized aluminum
- 70% Kynar 500 PVF Finish System
- Factory assembled
- "Fixed" with drainable, non-drainable or wind driven rain
- Listed performance ratings to suit HVAC requirements
- AMCA Certified



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# Service and Support – An Integrated Approach

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## 1. Concept Creation



We offer technical advice to make your design a reality, including design calculations, specifications, product application and integration assessment.

Our Business Development Team will work with design professionals to provide the best design solution.

## 2. Quotations



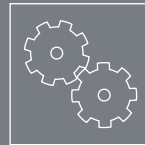
Our Regional Sales Managers and Estimating Team work closely with suppliers to provide a detailed quotation for your design including pricing and lead times.

## 3. Customer Approval and Order Placement



Our dedicated Customer Support Team is highly trained specifically on BENCHMARK By Kingspan products and provides focused customer service for all commercial pre- and post-order administration, delivery scheduling, and installer support, ensuring a seamless, coordinated customer experience.

## 4. Production



Once project drawings and details are approved, we rapidly create your order and submit it for production, keeping you updated on the progress.

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



## 5. Delivery



We work with you to quickly provide a professional delivery plan to suit your project needs. Our Customer Support Team will ensure deliveries are made on time, in full and in immaculate condition.

## 6. Field Service Support



Our Field Services Team provides off- and on-site installation training and support in order to guide our installers to deliver 'in-place' products that fulfill customers' requirements and expectations. We offer a site inspection service throughout the construction process as well as advice on mechanical handling solutions.

## 7. Completion and Handover



On completion, we will give you all the relevant documentation at handover of your project, including comprehensive warranty and maintenance manuals that ensure you get the best from BENCHMARK By Kingspan.

## 8. In-Use



Our service continues on after the project is complete. With proven performance for a long and durable service life, backed by our system warranty, you can rest assured you have chosen the ultimate cladding solution.

## Benchmark Support

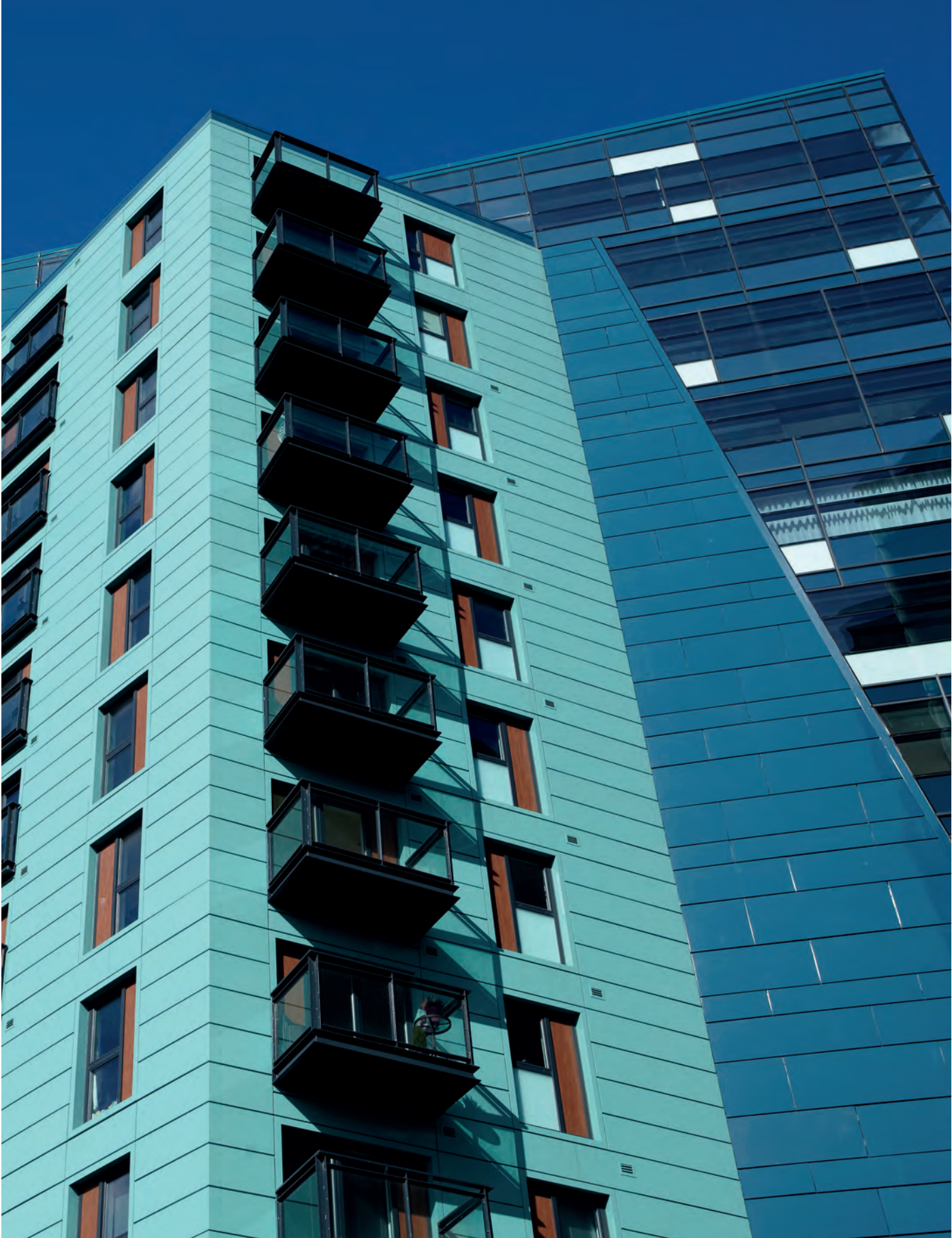
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