

BENCHMARK

by Kingspan

Product Portfolio

Insulated Panels
Façades

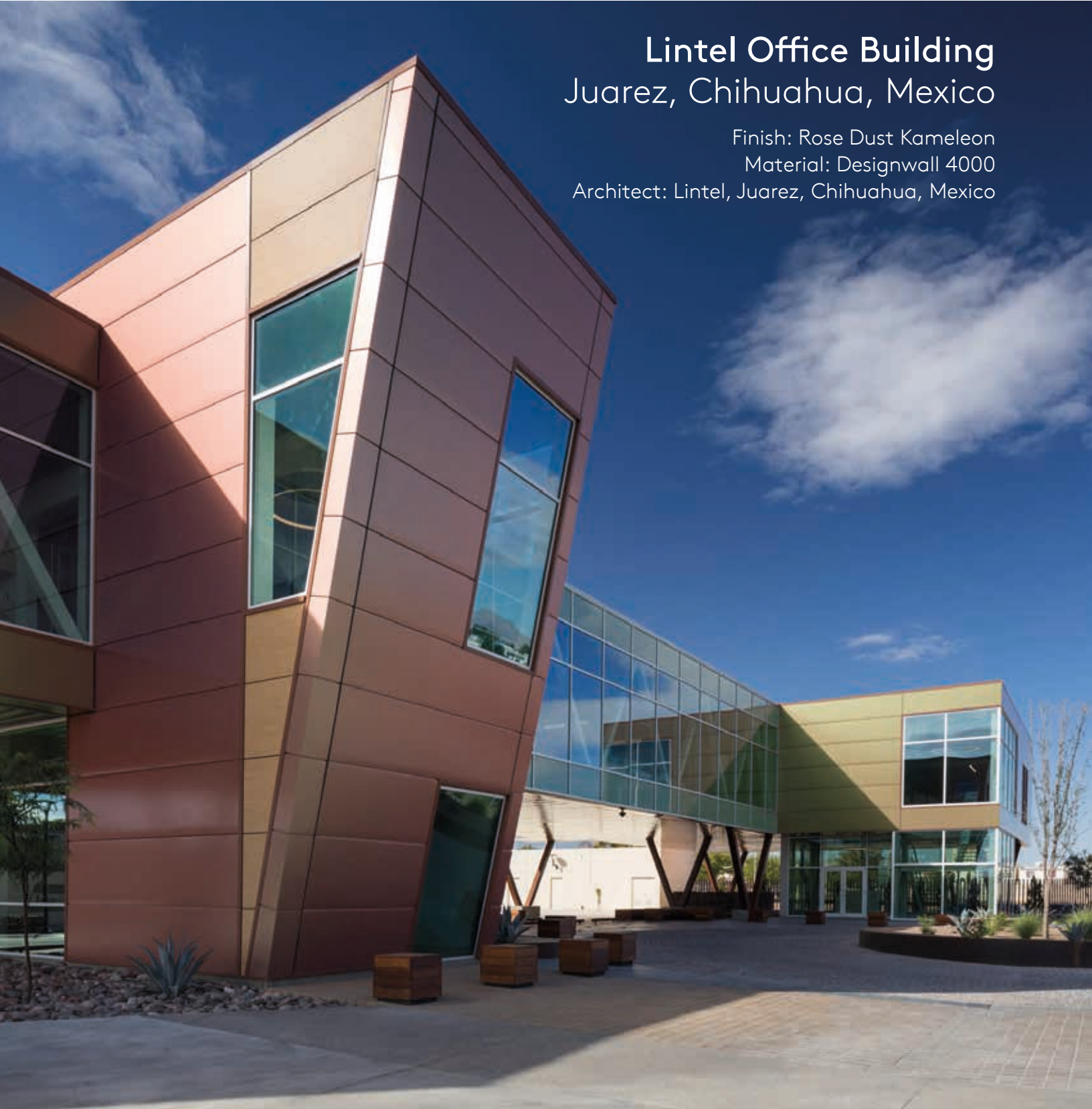
North America

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 Façade System

Material: Porcelain Stone

Architect: Oxford Architects, UK

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.



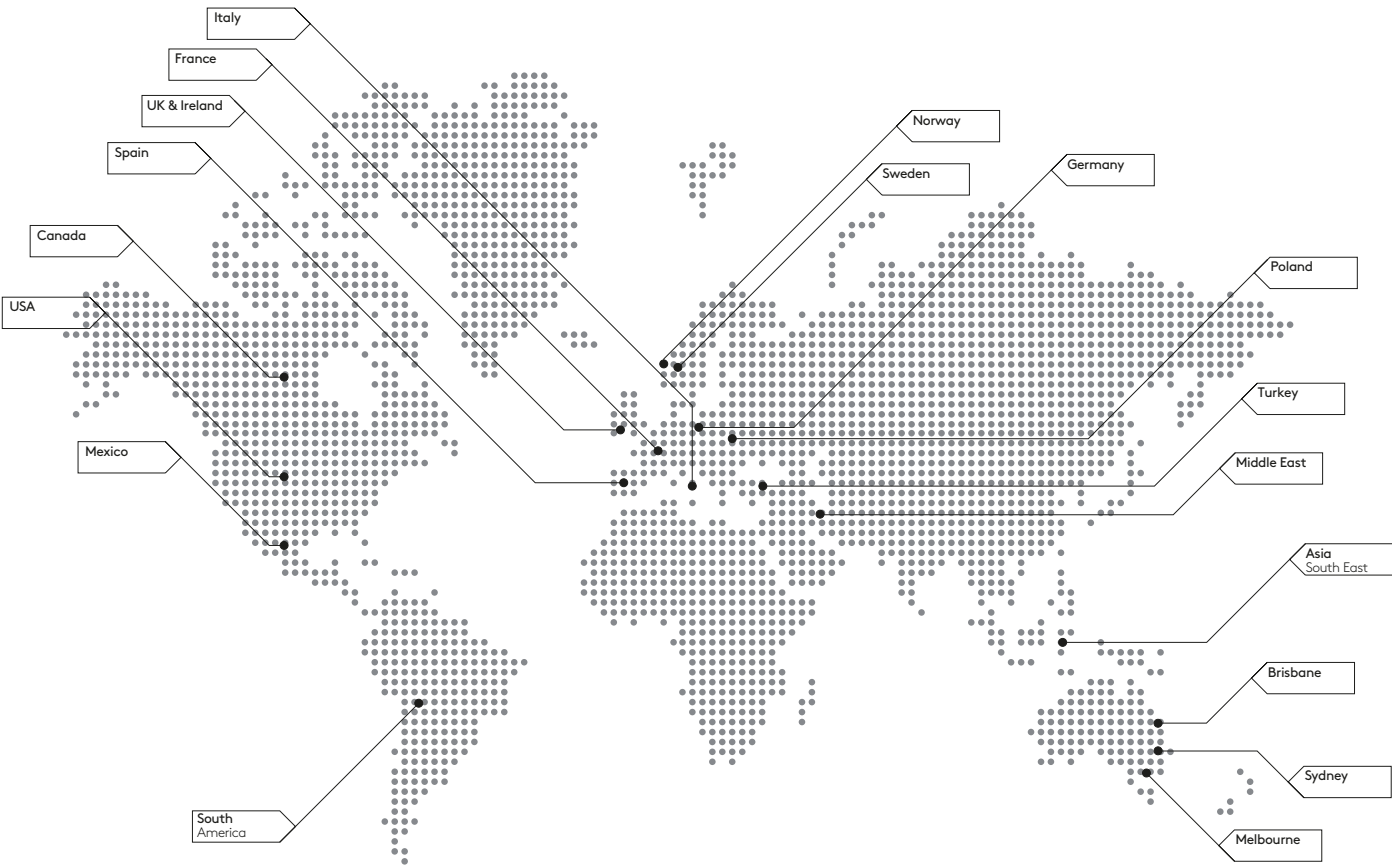
"We can make our buildings really work for us; consuming and generating energy smartly to become real investments in our future."

Gene M. Murtagh, CEO, Kingspan Group.

Your Global Partner

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

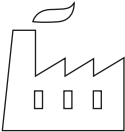
92
business locations
worldwide



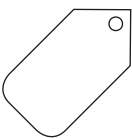
13
regional R&D
centers



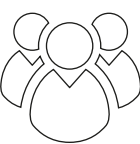
101
manufacturing
sites worldwide



3.2
billion USD
revenue in 2016



10,000+
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.



Where We Are

BENCHMARK By Kingspan is located in Columbus, Ohio; Modesto, California and Caledon, Ontario.

Regional Sales Managers are located across the U.S. and Canada. Call Kingspan direct or visit www.kingspanpanels.com and select your location to identify your nearest Regional Sales Manager.



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Lot E, Airport Technology Park,
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Columbus, OH 43207
USA



USA

Kingspan Insulated Panels

726 Summerhill Drive
DeLand, FL 32724
USA



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
- Enhanced environmental credentials
- Longest performance guarantee

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.

360°
Services

Whole
Building
Design

Warranty

POWERED BY
QuadCore[™]
TECHNOLOGY

1

Unrivalled 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 aged lambda value of 0.18 W/m²K 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, also improved spans, in certain applications.

3

Enhanced Environmental Credentials

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 and structural panel guarantee

Complete QuadCore roof, wall or façade systems – where Kingspan has supplied the panel and all system ancillaries – have the additional security of a single-source system warranty from Kingspan.



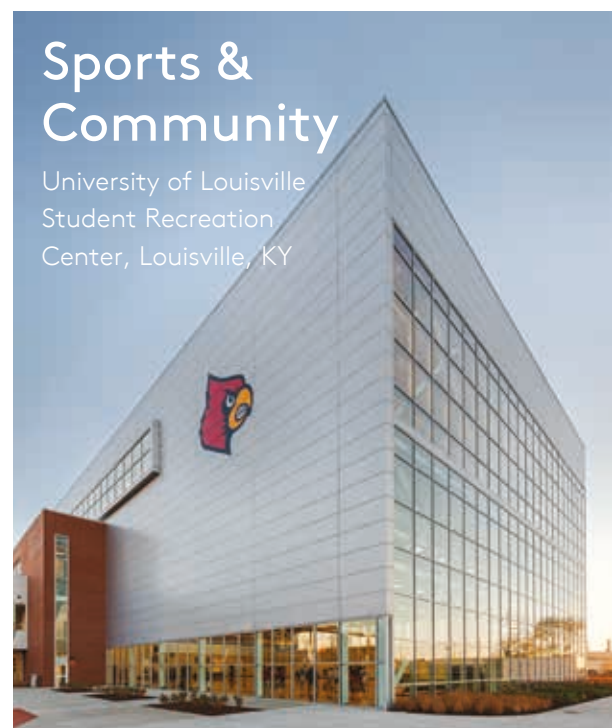
Hospital / Healthcare

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 500

Insulated Panel

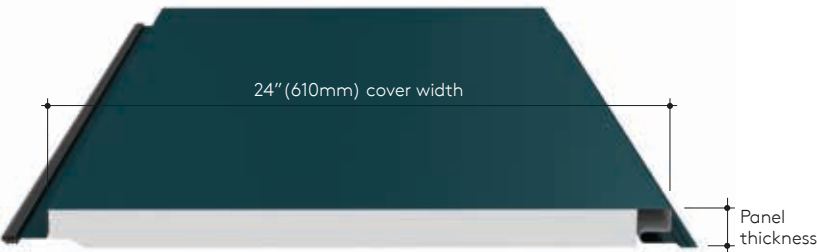


Designwall 500 can provide a fresh look to old, worn down buildings. This economical, structurally bonded panel is the perfect fit for retrofit projects, as well as soffits, parapets and low-rise facades. While similar to Designwall 1000 in specification, Designwall 500 features a reinforced plastic backer in place of an interior metal skin. Preformed longitudinal bends and field curved outside corners help provide an elegant appearance.



Product Specifications

Exterior Profile	Flat with stucco embossing (optional non-embossed or shadowline)
Interior Profile	Plastic backer
Exterior Gauge	22
Interior Gauge	N/A
Widths	8" to 24"
Lengths	1' to 18'
Thickness	1 1/8"
Reveal Options	1/16" to 1/2"
Post Fabrication	Longitudinal bend, transverse bend, trimless ends, beveled edge, tapered edge, modified edge, curves along width (in field only), curves along length (in field only)
R-Value	2.8 per thermal modeling
Orientation	Vertical



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 standard expanded polystyrene (EPS) or optional polyisocyanurate (ISO) core, is lightweight and easy to install. Custom finishes and substrates are available.



Product Specifications

Exterior Profile	Flat with stucco embossing (optional non-embossed, shadowline or Granitstone)
Interior Profile	Flat with stucco embossing (optional non-embossed)
Exterior Gauge	22 or 20 ga
Interior Gauge	24 ga
Widths	8" to 30"
Lengths	4" to 24' (18' for non-embossed)
Thickness	1 1/8"
Reveal Options	1/16" to 1/2"
Post Fabrication	Longitudinal bend, transverse bend, trimless ends, beveled edge, tapered edge, full wrap end, modified edge, curves along width, curves along length
R-Value	30" module with EPS Core: 3.1 24" module with EPS Core: 2.8 Polyisocyanurate Core: 4
Orientation	Vertical or horizontal



Designwall 2000

Insulated Panel

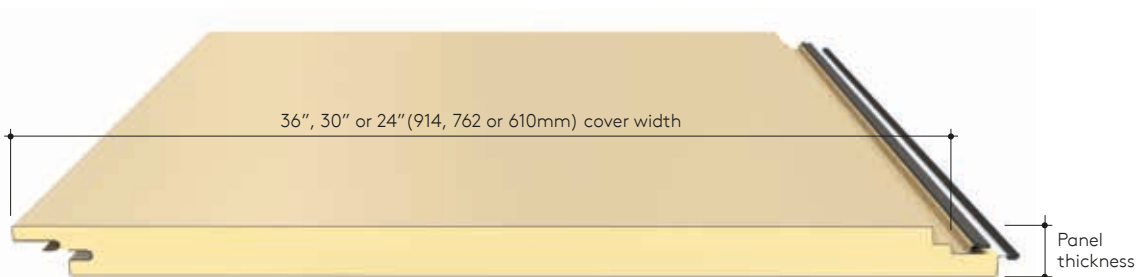


The ultimate in design flexibility, Designwall 2000 allows for complete creative freedom. With horizontal and vertical application capability, the Designwall 2000 joint provides maximum thermal efficiency while creating a double barrier against air and water penetration. Custom widths, finishes and integrated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



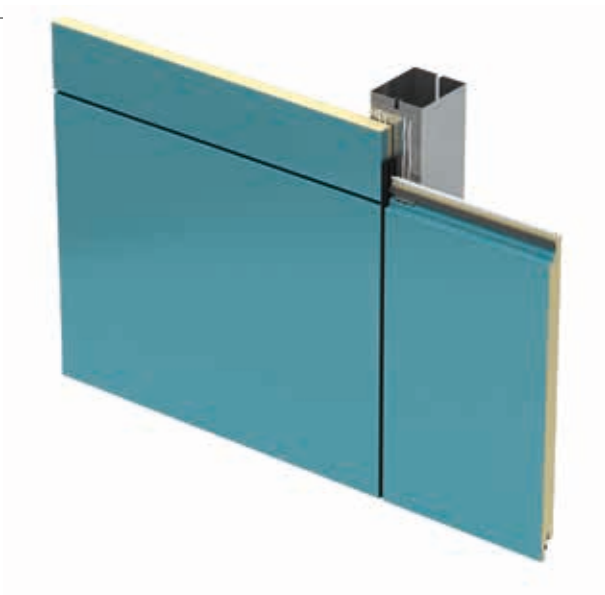
Product Specifications

Exterior Profile	Flat with stucco embossing (optional non-embossed, shadowline or Granitstone)
Interior Profile	Flat with stucco embossing (optional non-embossed)
Exterior Gauge	22, optional 20 ga
Interior Gauge	24, optional 22 or 20 ga
Widths	8" to 46"
Lengths	4" to 30' (24' for non-embossed)
Thickness	2", 2.5", 3" or 4"
Reveal Options	1/16" to 6"
Post Fabrication	Longitudinal bend, transverse bend, curve, trimless end, beveled edge, tapered edge, full end wrap
R-Value	7 per inch per ASTM C1363
Orientation	Vertical or horizontal



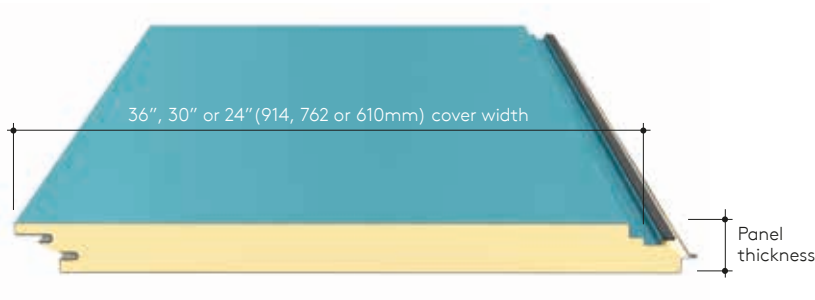


Designwall 4000 is the go-to choice for large scale projects. This foamed-in-place architectural wall panel has reveal options range from 1/16" tight to 6" allowing for the creation of shadows and accents. Available in either embossed, non-embossed or Shadowline, Designwall 4000 is uniquely equipped for finest design ingenuity.



Product Specifications

Exterior Profile	Flat with stucco embossing (optional non-embossed, shadowline or Granitstone)
Interior Profile	Flat with stucco embossing (optional non-embossed)
Exterior Gauge	22 or 20 ga
Interior Gauge	24 ga
Widths	18" to 42"
Lengths	9" to 24'
Thickness	2", 2.5", 3" or 4"
Reveal Options	1/16" to 6"
Post Fabrication	Transverse bend, trimless end, beveled edge, tapered edge, modified edge
R-Value	7 per inch per ASTM C1363
Orientation	Vertical or horizontal



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.

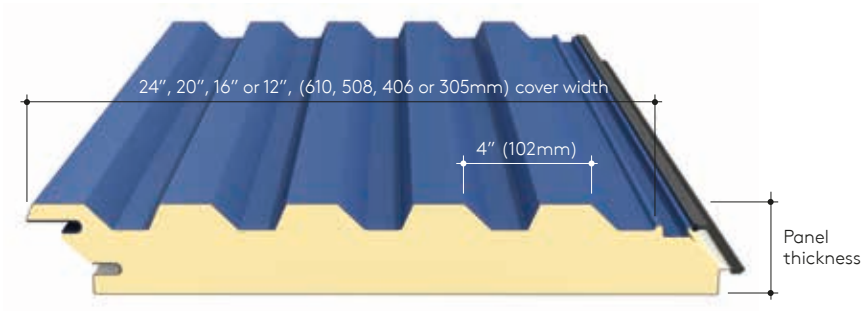


Product Specifications

Exterior Profile	Ribbed with stucco embossing (optional non-embossed or Granitstone)
Interior Profile	Flat with stucco embossing (optional non-embossed)
Exterior Gauge	22 ga
Interior Gauge	22 or 24 ga
Widths	12", 16", 20" or 24"
Lengths	4" to 24'
Thickness	2.5", 3" or 4"
Reveal Options	N/A
Post Fabrication	Transverse bends, end caps, curves
R-Value	7 per inch per ASTM C1363
Orientation	Vertical or horizontal

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.



Designwall Wave

Insulated Panel



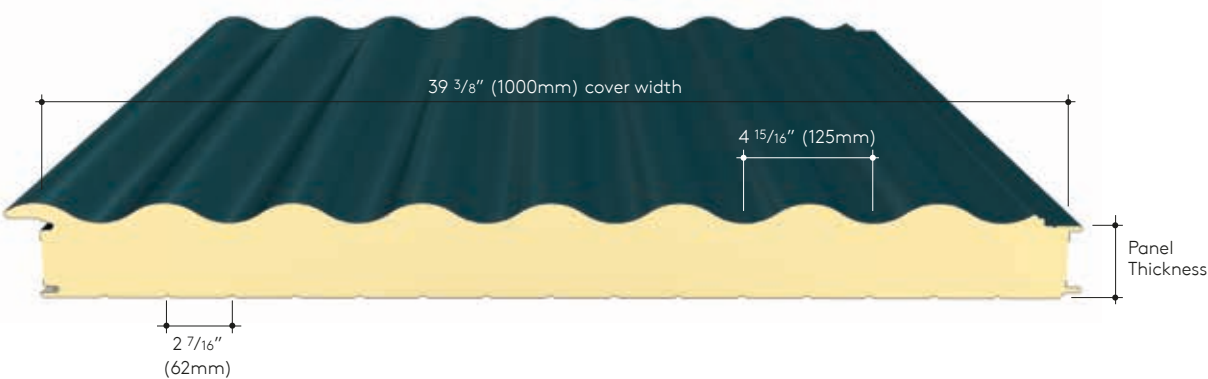
Designwall Wave portrays a continuous sweeping profile that creates beautiful shadowing effects. With a distinct joint design, Designwall Wave allows for horizontal and vertical installation with exceptional foam-to-foam contact. A wide variety of colors and finishes are available including metallics and micas.



Product Specifications

Exterior Profile	Wave with stucco embossing (optional non-embossed)
Interior Profile	V-groove with stucco embossing
Exterior Gauge	22 ga
Interior Gauge	26, optional 24 or 22 ga
Widths	39-3/8" (1 meter)
Lengths	8' to 52'
Thickness	2", 3" or 4"
Reveal Options	N/A
Post Fabrication	N/A
R-Value	≈ 7.2 per inch (at low cell) per ASTM C518 @ 75°F
Orientation	Vertical or horizontal

Available in 2", 3" or 4" thickness, Designwall Wave can provide an interesting architectural accent while providing excellent thermal performance.



Insulated Panels & Façades

Designwall 3000

Non-Insulated Panel



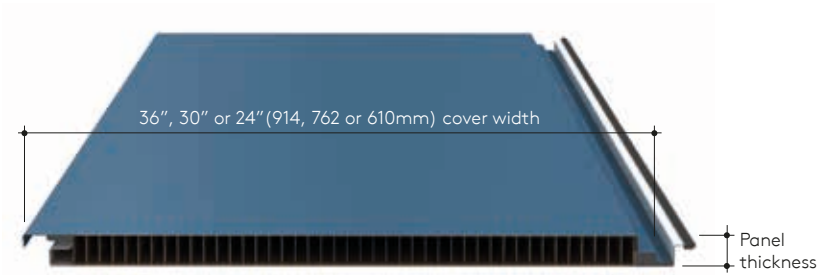
This lightweight 1 1/4" thick panel features a honeycomb core between smooth or embossed skins of steel or aluminum. The uninsulated core allows uniform thermal expansion of the face and liner sheet, resulting in exceptional panel flatness under extreme temperature variations.



Product Specifications

Exterior Profile	Flat with stucco embossing (optional non-embossed or Granitstone)
Interior Profile	Flat with stucco embossing (optional non-embossed)
Exterior Gauge	22 or 20 ga
Interior Gauge	24 or 22 ga
Widths	8" to 46"
Lengths	1' to 24'
Thickness	1 1/4"
Reveal Options	1/16" to 1/2"
Post Fabrication	Longitudinal bend, transverse bend, trimless end, beveled edge, tapered edge, modified edge
R-Value	N/A
Orientation	Vertical or horizontal

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 Façade System



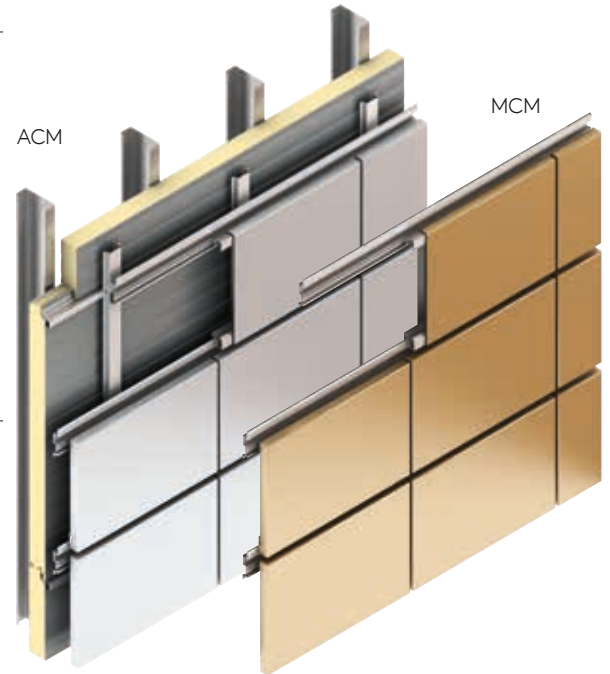
BENCHMARK's ACM and MCM Façade Systems provide a striking finish that gives buildings a modern stylized appearance which is virtually maintenance free.

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 façade 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.

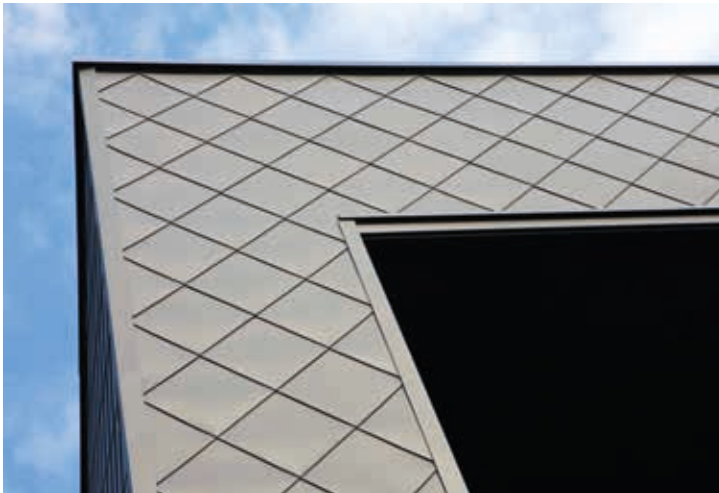
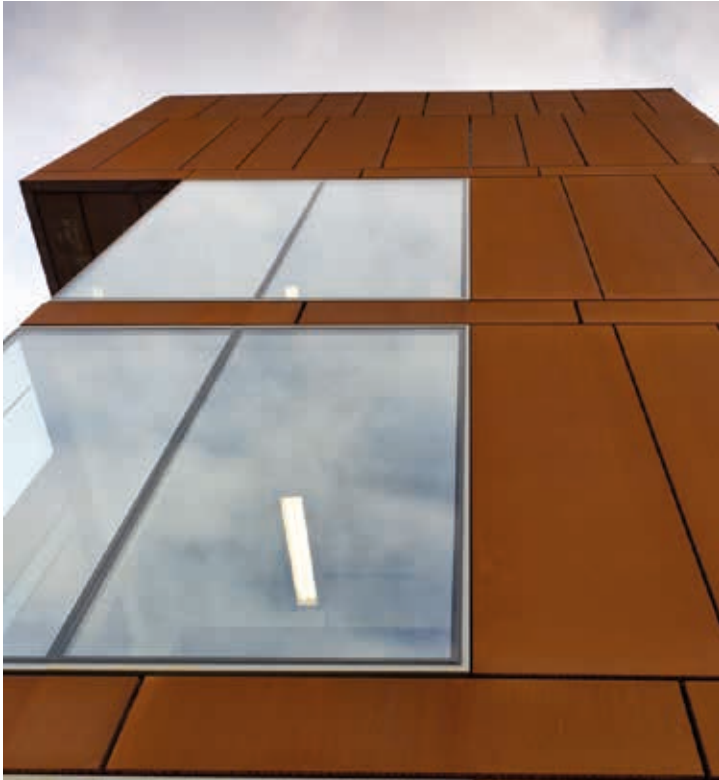
MCM comes in a nearly limitless array of colors, finishes, reveals, and sizes to customize your building exactly to your design intent.



1. BENCHMARK By Kingspan Insulated Metal Panel (air and vapor 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
Façade System

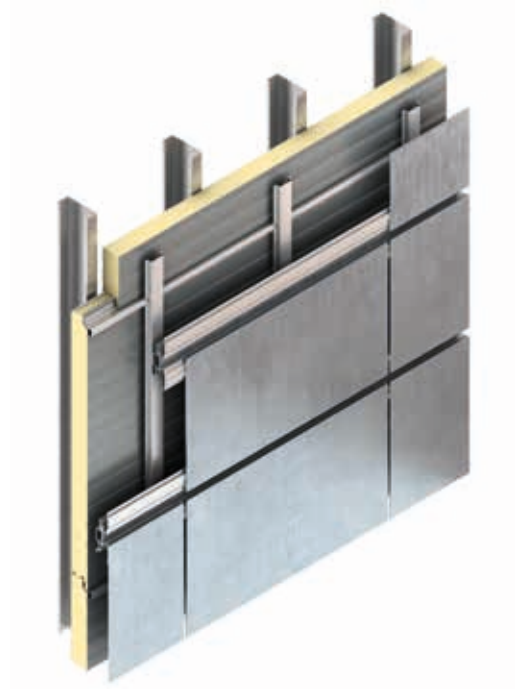


BENCHMARK By Kingspan's Plate Façade System provides a colorful range of options.

Not just aesthetically pleasing, this building façade system has been engineered to be extremely durable and highly resistance 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 (air and vapor 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

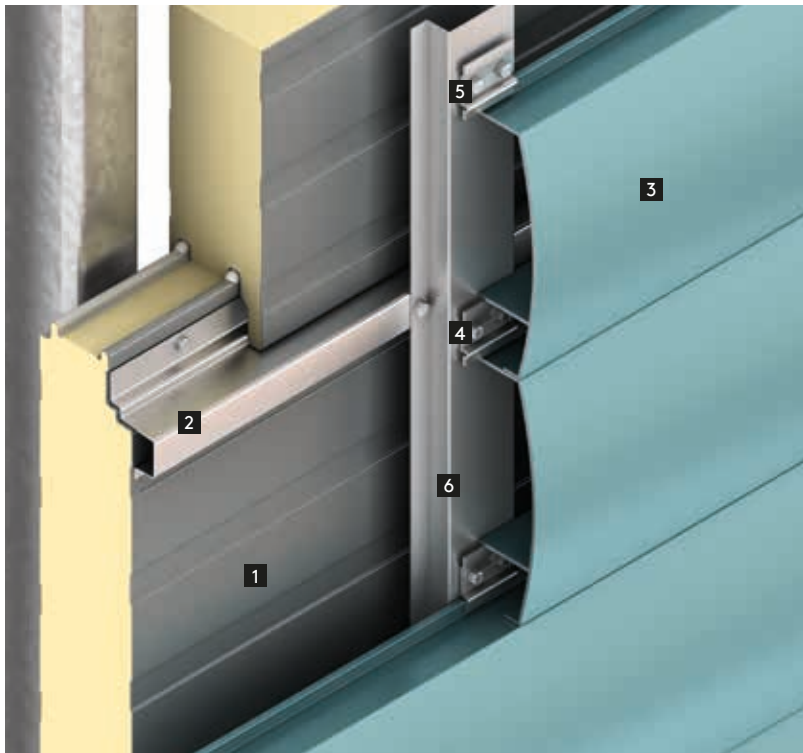
Extruded Plank Façade System



BENCHMARK's Extruded Plank Façade 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 (air and vapor barrier wall)
2. BENCHMARK By Kingspan KarrierRail
3. BENCHMARK By Kingspan extruded plank façade
4. BENCHMARK By Kingspan extruded plank clip
5. Fastener
6. Subgirt secondary rail

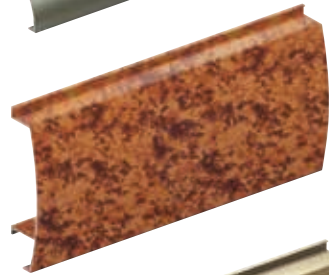
Wave



Gull



Convex



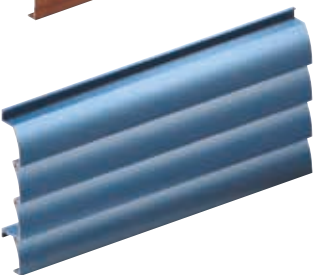
Concave



Flat



Shark Fin

BENCHMARK
By Kingspan
Plank Clip

Thin Brick Façade System

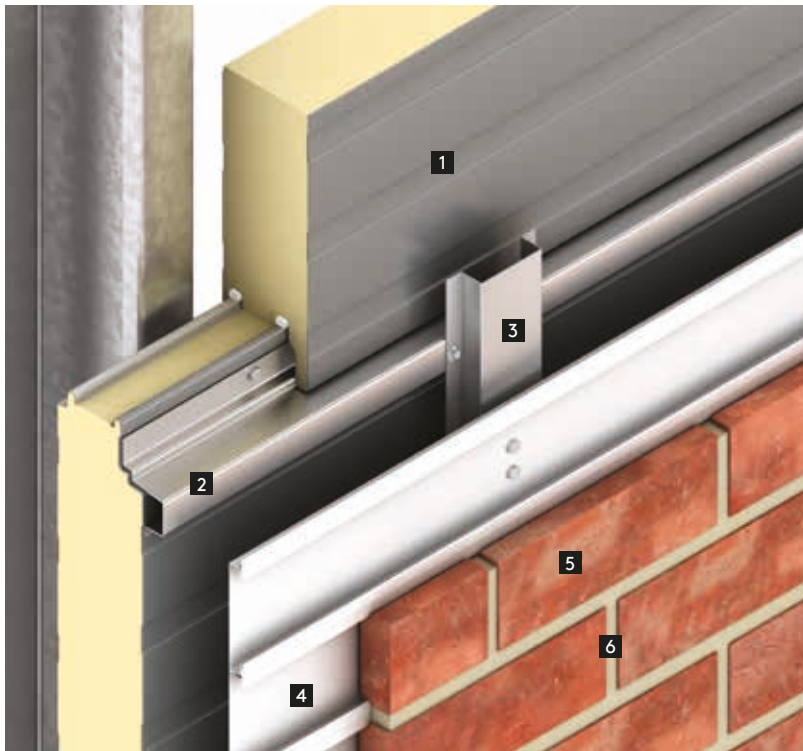
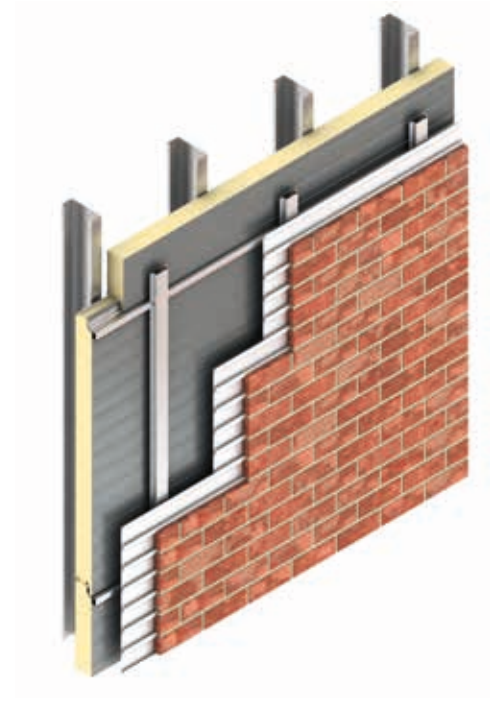


BENCHMARK's Thin Brick Façade System is a modern interpretation of a classic look utilizing eye catching finishes to create uniquely styled buildings.

This façade 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 (air and vapor 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 Façade System

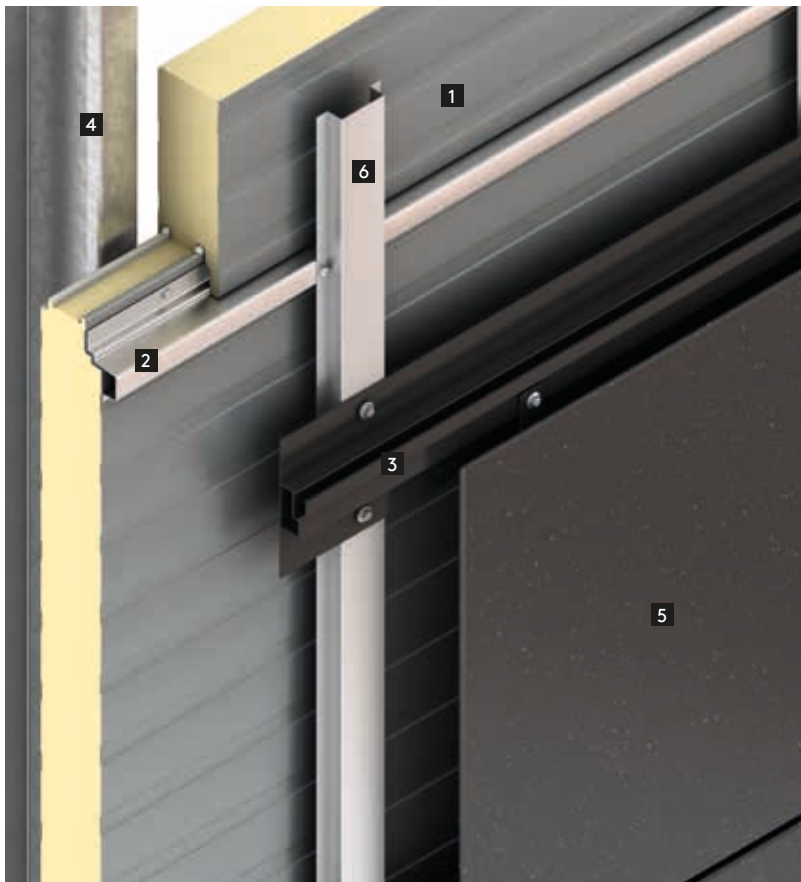


BENCHMARK Porcelain Stone Façade System delivers the beauty and variation of natural stones like granite, marble, and limestone without the long term maintenance concerns of a traditional stone system.

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 (air and vapor barrier wall)
2. BENCHMARK By Kingspan KarrierRail
3. BX horizontal rail
4. Structural framing
5. Porcelain Stone façade 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



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.

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



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.

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



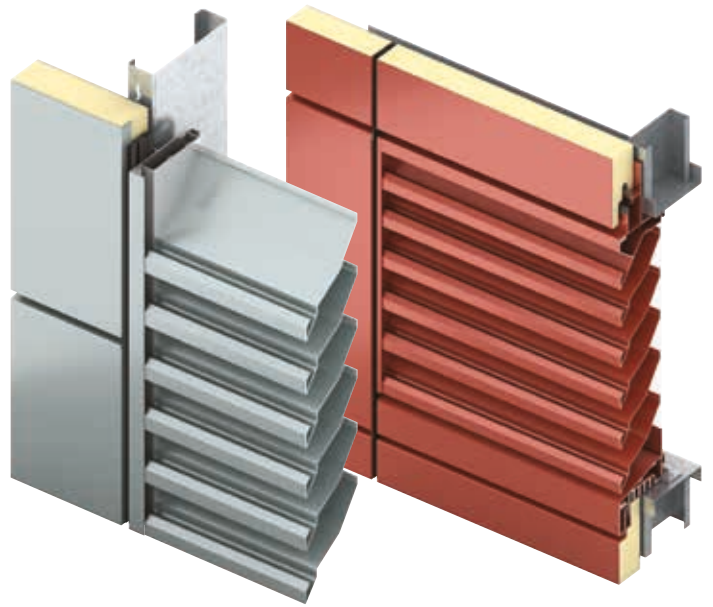
Design Louvers

Integrated Solutions



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.

- 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



Service and Support – An Integrated Approach

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



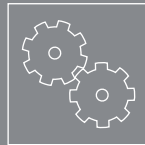
Our Regional Sales Managers and Estimating Team work closely with suppliers to provide a detailed quotation for your design including pricing and lead times.

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.



BENCHMARK
by Kingspan

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