

Insulated Panel Systems
North America



IMP + Concrete Stacked Walls Systems Solution Guide

Insulated Wall Panel Systems



POWERED BY
QuadCore[®]
TECHNOLOGY


Kingspan[®]

Construction Solutions

Insulated metal panels (IMPs) and concrete (tilt-up, pre-cast or masonry) are two of the most commonly used materials for constructing building envelopes. Both materials offer unique advantages, making a hybrid approach beneficial in many applications. By combining concrete and IMPs, designers can enhance the aesthetics, functionality, and sustainability of both new and retrofit buildings.

These wall construction solutions are designed to fully comply with relevant building codes, regulations, and standards (structural, thermal, fire, acoustic, and resilience), and to meet ASHRAE 90.1 Continuous Insulation & Air Tightness Requirements.



Insulated Metal
Wall System with
Pre-cast Concrete



Construction Solutions



Insulated Metal Wall
System with CMU
Blockwork



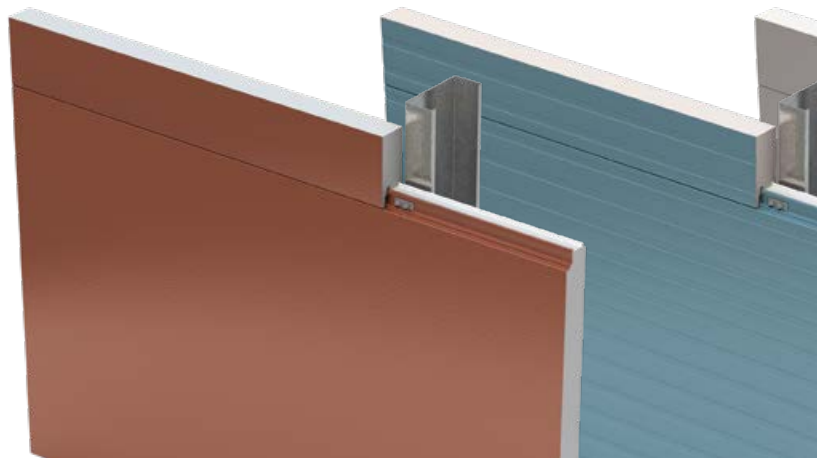
Insulated Metal Wall
System with Pre-cast
Loading Docks



Design Flexibility

In addition to providing water, air, vapor, and thermal control, IMPs are available in a wide range of profiles, colors, and finishes, offering enhanced design flexibility to meet both performance and aesthetic goals.

This flexibility is particularly valuable in stacked wall construction, where IMPs can be used to visually elevate and complement concrete structures, and where the mixing of metal and masonry materials can help create a balanced, cohesive, and refined architectural appearance. The result is a building envelope that performs at a high level while delivering a modern, intentional, and visually compelling design.





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:

- Exceptional 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

Exceptional thermal efficiency

QuadCore® Technology is certified as one of the most thermally efficient closed-cell insulation cores on the market.

Lifetime performance and value benefits

- The highly efficient 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

- GREENGUARD Gold certified
- Environmental Product Declaration (EPD)



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.



Making Strides Towards Our Sustainability Targets

At Kingspan, our mission is to accelerate a net-zero emissions future-built environment with people and planet at its heart. Planet Passionate is our ambitious Group-wide environmental sustainability program that sets several aggressive targets across four focus areas: **carbon**, **energy**, **circularity** and **water**.

Planet Passionate touches every aspect of Kingspan's business, from our material suppliers and employees to our customers and the communities in which we work. We're committed to working together to address the material impacts we have on our environment and community by setting robust, specific targets like those outlined below and pursuing an accelerated pace for progress.

Our 2030 Targets



CARBON

Reduce Our Carbon
Footprint

- 65% reduction in scope 1 & 2 GHG emissions_{1,2} from 2020
- 15% reduction in carbon intensity of key raw materials from 2020
- ≥90% zero emissions company cars₃ (annual replacement %)



ENERGY

Increase the Use of
Renewable Energy

- 60% renewable energy consumption
- ISO 50001 certification for large sites₄
- Solar PV systems on all wholly owned sites

¹ Excluding biogenic emissions. Scope 2 GHG emissions calculated using market-based methodology.

² GHG emissions were recalculated due to acquisitions that occurred in 2021 through to 30th September 2025.

³ Kingspan defines a "zero emissions car" as a vehicle with zero tailpipe emissions. The boundary does not include the energy used to power the vehicle or the embodied emissions from manufacturing.

⁴ Large sites: Sites with ≥5GWh annual energy use during the prior year 2024.

⁵ 90% reduction of waste to landfill in Kingspan manufacturing, R&D and assembly facilities from 2020 base year.

Learn More at
Kingspan's Sustainability
Resource Center



planetpassionate.kingspan.com



CIRCULARITY

Increase Recycling and
Lower Waste

- Zero waste to landfill₅
- 1.5 million tons recycled and renewable raw materials used annually
- Facilitate 20 product takeback and recycling schemes



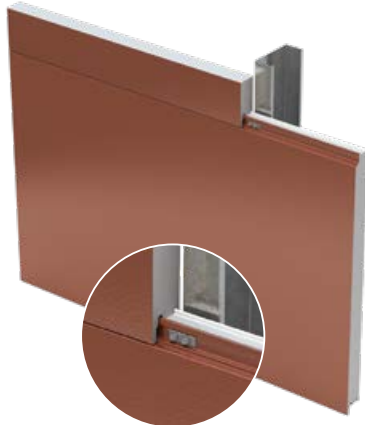
WATER

Harvest Rainwater and
Support Ocean Clean-up

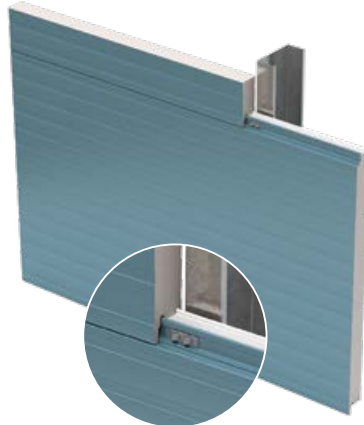
- Harvest 100 million liters of rainwater annually

Products at a Glance

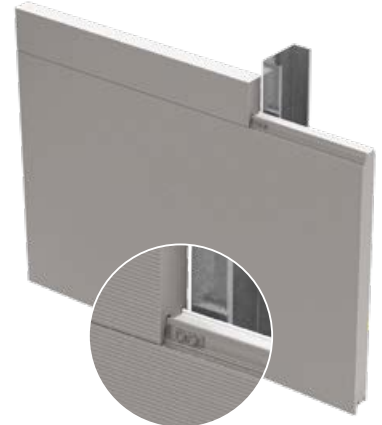
Wall – Vertical and Horizontal Application



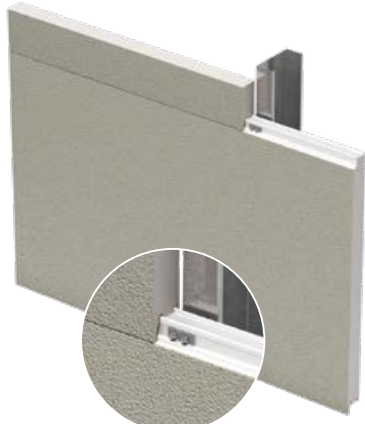
KS Azteco™



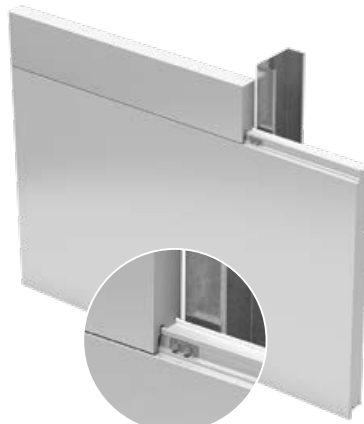
KS Shadowline



KS Mini Micro-Rib



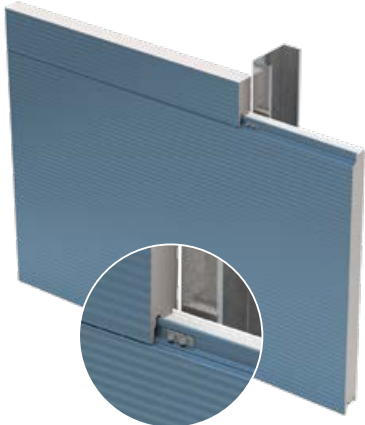
KS Granitstone®



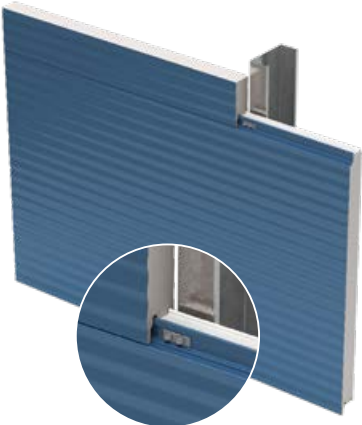
Optimo®



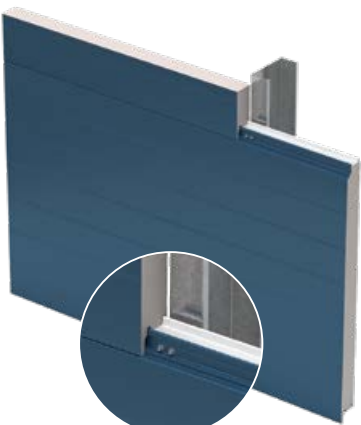
K-Roc® FX



KS Micro-Rib



KS Mini-Wave



KS Vektra®



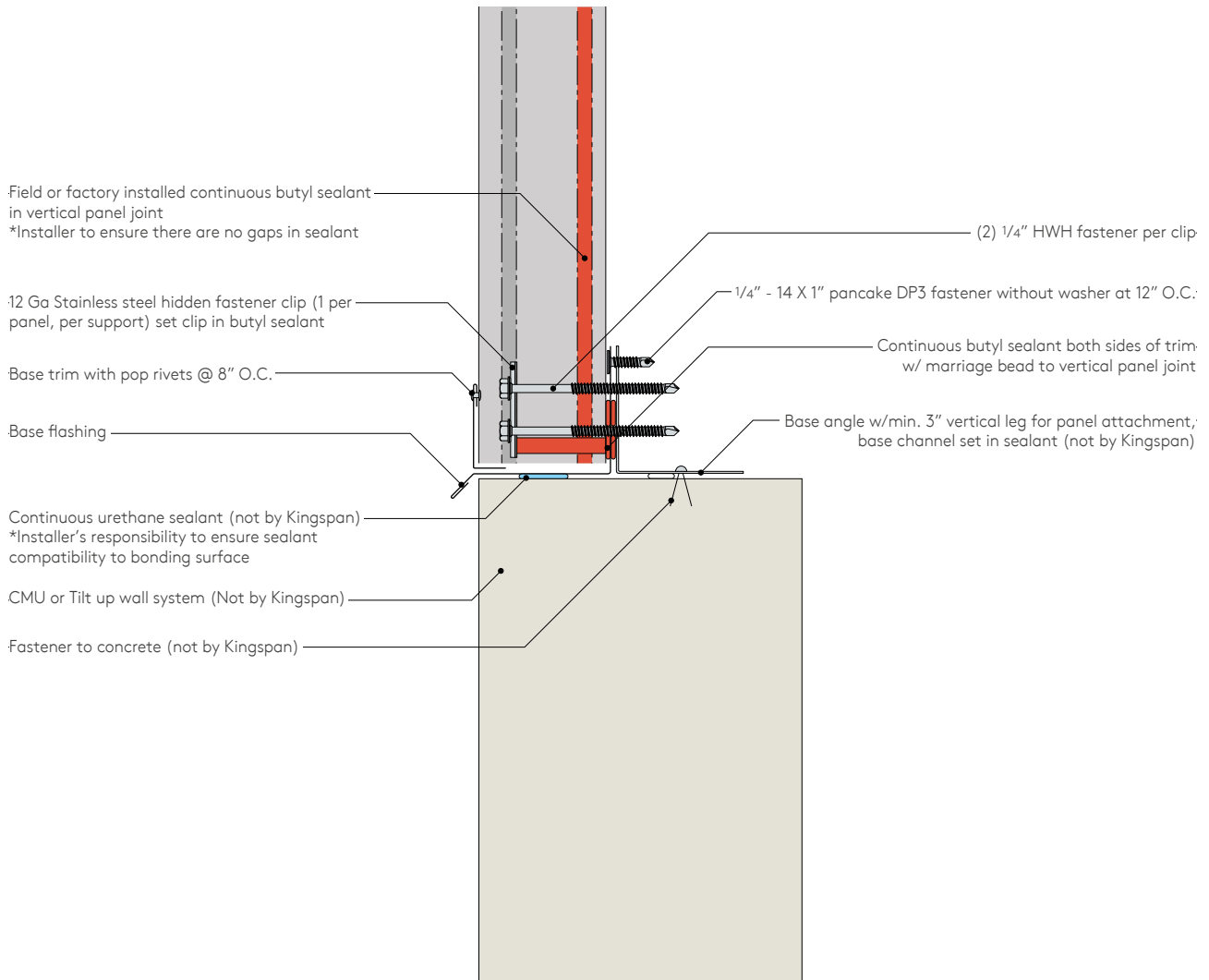
QuadCore® B Vale®

Construction Details

Wall Panel Base to Tilt Up or CMU Wall



Wall Panel Base to Tilt Up or CMU Wall



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For the product offering in other markets please contact your local sales representative or visit our website.

To ensure you are viewing the most recent and accurate product information, please visit www.kingspanpanels.us or www.kingspanpanels.ca.

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