

# Insulated Roof & Wall Panels

KarrierPanel™



Universal Barrier  
Wall Solution

# KarrierPanel™

Is a cost effective universal barrier wall alternative solution to traditional multi-component wall systems. Comprising of a KS Series panel and integrated rail, KarrierPanel™ is the ideal barrier wall to support secondary rainscreens systems such as metal or brick façades.

KarrierPanel™ is suitable for all building types in any climate, and combines the thermal benefits of lightweight insulated metal panels with the aesthetics of multiple façades.

KarrierPanel™ offers a simple more time efficient alternative to traditional multi-part façades, allowing the structure to be quickly insulated to ensure air and watertightness as soon as possible. Once installed the system provides 100% building envelope performance.

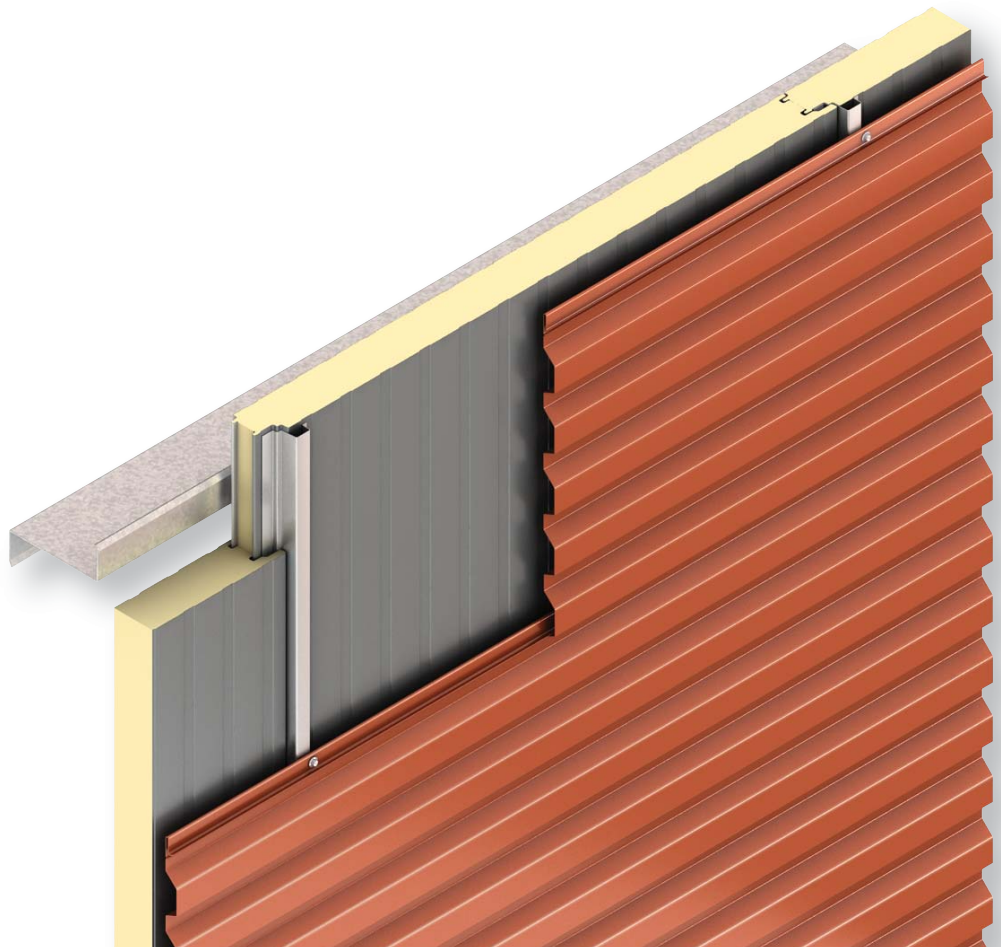
**For more information or to request a sample, email [karrier@kingspanpanels.com](mailto:karrier@kingspanpanels.com).**

**To view an animation of the KarrierPanel™ wall system, visit our YouTube Channel, Kingspan TV.**



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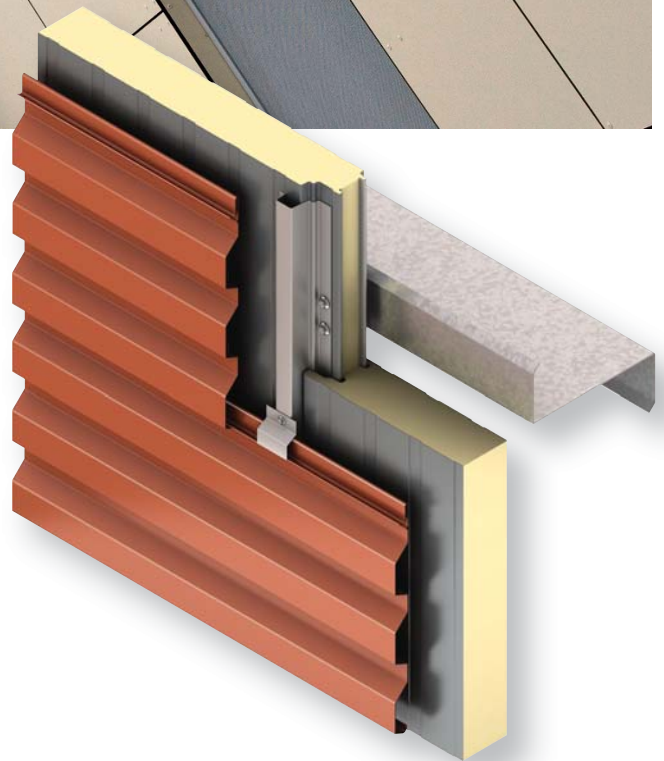
# KarrierPanel™

## Product Details



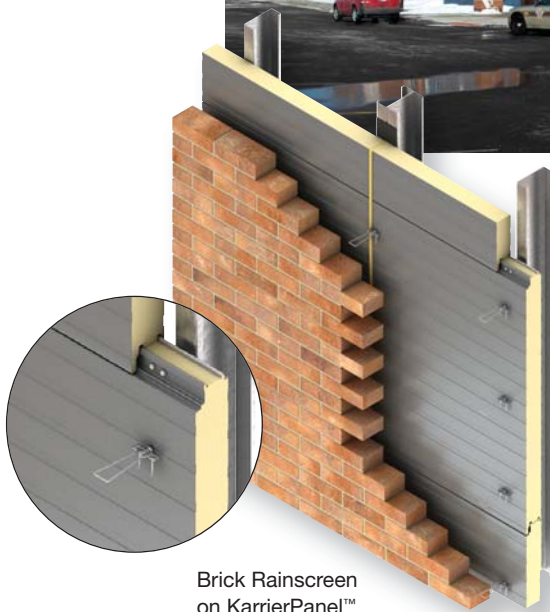
### Product Specification

Cover Widths:	24"	30"	36"	42" (Standard)		
Panel Thickness:	2"	2 1/2"	3"	4"	5"	6"
R-value:	7.5 per inch					
Panel Lengths:	6'-0" to 52'-0"					
Panel Joint:	Double tongue and groove interlocking rainscreen joint					
Reveal Choice:	3/8 reveal					
Exterior Face:	26, 24 or 22 Ga. Shadowline profiled embossed Galvalume® pre-painted steel					
Interior Face:	26, 24 or 22 Ga. Shadowline profiled embossed Galvalume® pre-painted steel					
Application:	Vertical and horizontal					
Rail:	Custom Kingspan KarrierRail™					

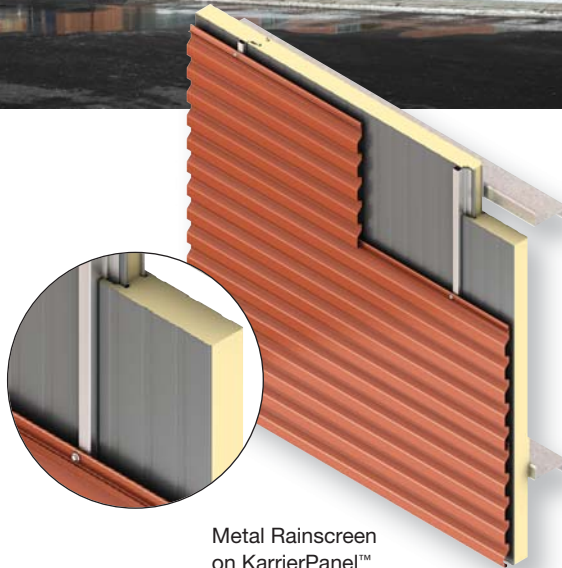


# Design Flexibility

**KarrierPanel™** can support a range of rainscreen finishes to compliment any architectural scheme.



Brick Rainscreen  
on KarrierPanel™



Metal Rainscreen  
on KarrierPanel™

## Unique KarrierRail™

KarrierPanel™ utilizes a Kingspan designed unique rail. This stable and secure structural rail safely transmits positive loads from the multiple façades to the structural supports behind the insulated panels.

Similarly, expansion fasteners (fab-loks) secure the exposed rail edge, ensuring that the system safely handles negative loads as well.

The rail has been developed to fully integrate with Kingspan's KS series panel joint. This rail system does not penetrate the air vapor barrier and enables multiple types of rain screens to be attached to the KarrierPanel™ rail such as brick, single skin metal, and various other systems.

Installation is quick, simple and easy, as the rail is installed during normal panel installation, and is secured using standard panel fasteners in a one step procedure.

The standard rail configuration is 16 gauge Galvalume®, 50 KSI steel. Available in various lengths with a 1, 2 and 3 inch bearing surface.

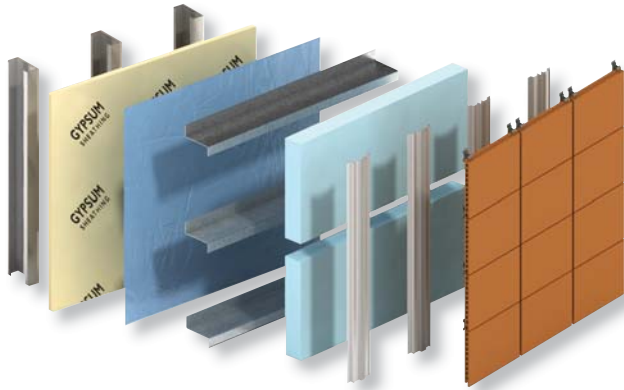




# Build Speed

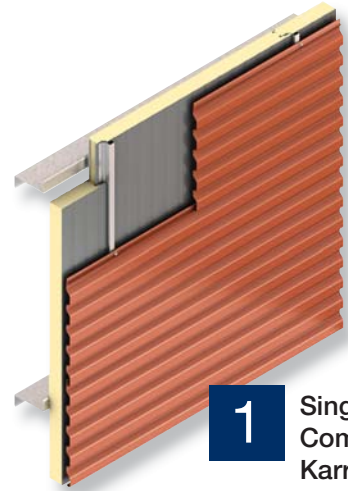
## Build Speed

KarrierPanel™ as a single component system increases speed of build, minimizes delays and the need for multiple trades.



Typical multi-part façade system

**Vs**

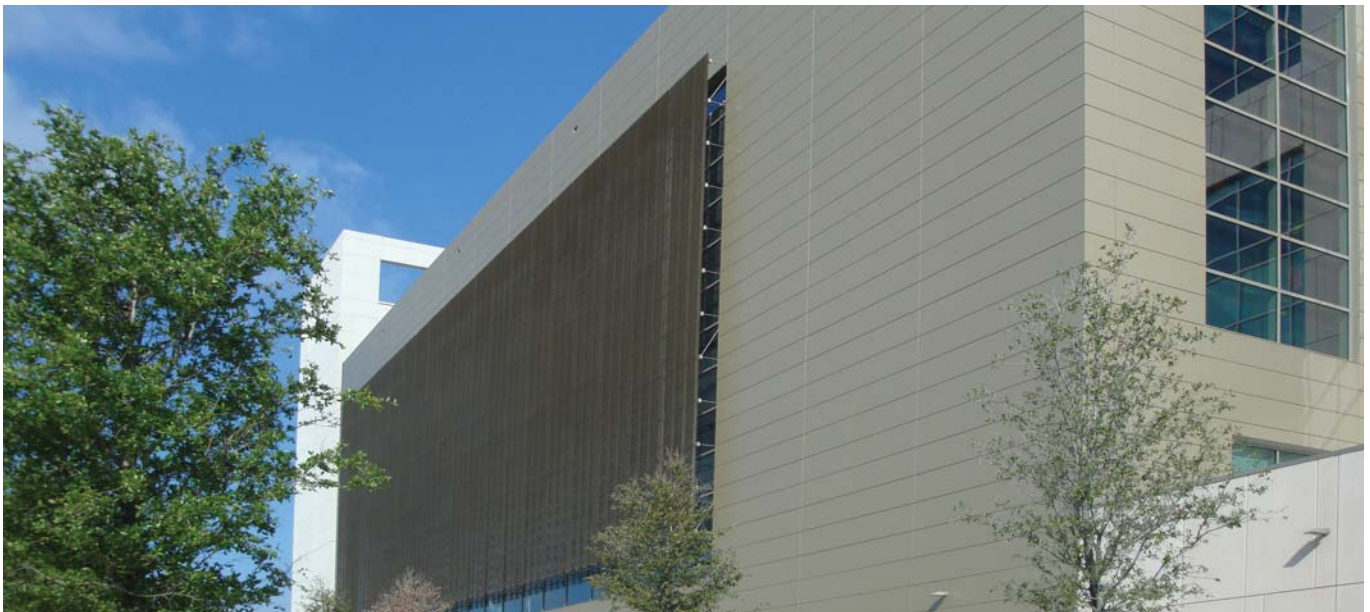


**1**

Single  
Component  
KarrierPanel™  
Wall System

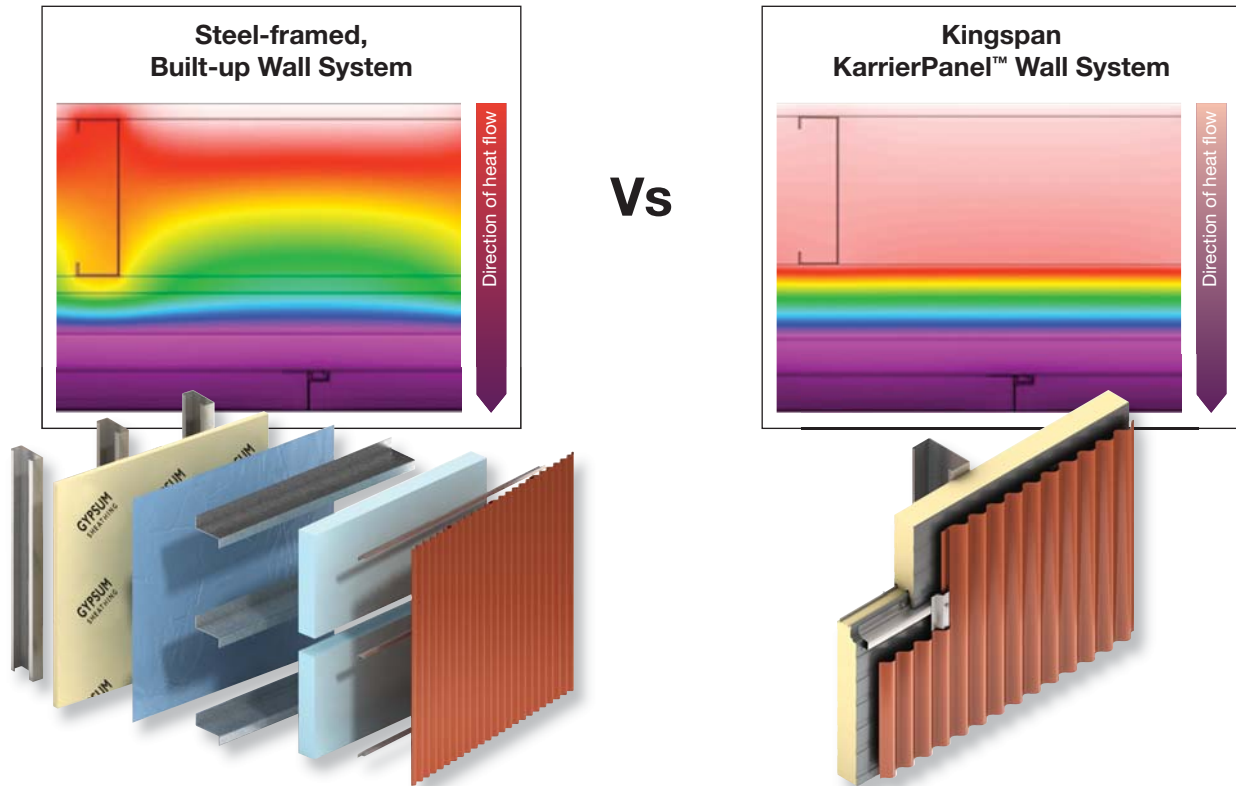
KarrierPanel™ System  
with Metal Single  
Element Rainscreen

- Faster close-in and dry-in for reduced building costs.
- The single component system results in less labor time on-site and construction waste.
- Reduces delays in construction experienced with scheduling multiple trades.
- Increase in build speed allows faster project completion and reduces business disruption.



# Thermal Performance

The insulated panel provides excellent thermal performance with high R-value and airtightness with an air, water and vapor barrier.



## Benefits of the KarrierPanel™ Wall System Vs Traditional Built-up Construction:

- The single component KarrierPanel™ wall system combines the superior thermal performance of IMPs with an air, water and vapor barrier.
- More uniform temperature distribution throughout the wall ensures moisture control.
- Eliminates energy losses associated with thermal-bridging cavity insulation.
- Eliminates concerns over UV exposure as compared to conventional rainscreen components.
- Eliminates the potential for compromising the Air, Vapor Barrier (AVB) and allows for visual inspection and testing of the AVB.
- Results in quicker ROI.



# Sustainability

**Building professionals and owners today share a newfound enthusiasm for building envelope performance. Driving this focus are mandates for green building, a focus on energy efficiency and recognized ROI.**

## EnvelopeFirst™

Kingspan's EnvelopeFirst™ is a design strategy for optimizing a building's performance and the first step towards NetZero energy.

The EnvelopeFirst™ approach to design focuses on enclosure performance, including durability, airtightness, and better moisture and thermal control.

Testing and field results show that insulated metal panels (IMPs) contribute to ROI and energy efficiency.

Start with the...



## Path to NetZero™

Kingspan's long-term mission will see all our facilities achieve NetZero energy consumption by 2020. NetZero Energy buildings, in the simplest terms, produce as much energy as they consume. Our insulated metal panels are a cost effective step to this high performance goal, offering a building envelope with functionality and design possibility.

Our Path to NetZero™ app is a unique tool for the building industry that simulates the process of achieving high performance and NetZero energy buildings. Results indicate estimated energy cost savings, CO<sub>2</sub>, ROI and contributions to LEED® points gained by using Kingspan Insulated Panels.



## LEED® Credits

Kingspan is committed to supporting green rating systems such as LEED® and Green Globes. Specification of effective systems and materials is key to achieving these certifications. With this in mind, Kingspan provides a LEED® credits guide to assist the building team on how IMPs contribute to overall building performance and ratings criteria.

Visit [www.kingspanpanels.us/sustainability/leedinformation](http://www.kingspanpanels.us/sustainability/leedinformation) to download Kingspan's LEED® statement for project submittals.





## EPD (Environmental Product Declaration)

Kingspan Insulated Panels North America, has been awarded the first of its kind UL certified ISO compliant Environmental Product Declaration (EPD). The EPD describes environmental manufacturing footprints from cradle to grave based on an ISO compliant Life Cycle Assessment (LCA).



### What is an EPD

An EPD is a third party verified, internationally recognized disclosure of a product's environmental impact, from cradle to grave based on an ISO compliant Life Cycle Assessment (LCA).

Kingspan's LCA calculates the environmental footprint at each stage of the supply chain, manufacturing processes, product use and end of life. All the significant environmental impacts associated with the product, including the impact on water, air, land and climate change are reported based on ISO LCA standards.



### Goal of an EPD

An EPD's goal is transparency. Knowing what's in the product you chose and its environmental impact. An important aspect of an EPD is to provide the basis of a fair comparison of products and services by its environmental performance. EPDs can reflect the continuous environmental improvement of products and services over time and are able to communicate and add up relevant environmental information along a product's supply chain.

### UL Certified

To add credibility to our findings, we engaged UL Environment to verify the results of our EPD. UL has been impartially assessing products since 1894 for safety and viability and have conducted numerous environmental evaluations. UL certified EPDs are based on ISO compliant standards.

**Our EPD indicates that raw materials are the dominant impact across our products life cycle, therefore we are consciously working with our suppliers to improve this.**

**This data confirms our company policy of utilizing more recycled and less virgin resources whenever possible.**



To learn about our sustainability journey and download the EPD or App, visit:

[www.pathtonetzero.com](http://www.pathtonetzero.com)

# Testing and Services

## Performance Requirements and Product Listings:

Kingspan insulated panels meet specific building envelope performance criteria and requirements stipulated by US and Canadian building codes. Panels are tested in accordance with UL, ULC, FM and ASTM approval standards, testing methods and procedures. Kingspan insulated panels are listed by FM Global and Warnock Hersey.



Test	Procedure	Results
Fire	FM-4880	Passed: Class 1 Fire Rating of Insulated Wall or Wall and Roof / Ceiling Panels, Interior Finish Materials or Coatings, and Exterior Wall Systems
	ASTM E84	Flame spread <25, smoke developed <450
	CAN/ULC-S101	Fire endurance tests: 10 min and 15 min stayed in place
	CAN/ULC-S102	Flame spread: 20, Smoke developed: 350 for panel with facings
	CAN/ULC-S127	Flame spread <500 for foam core
	CAN/ULC-S134	Passed: Standard method of test for fire of exterior wall assemblies
	ULC/ORD-C376	Passed: Fire growth of foamed plastic insulated building panels in a full scale room configuration
	NFPA 259	Tested for potential heat of building materials
	NFPA 268	Passed: Standard test method for determining ignitability of exterior wall assemblies using a radiant heat energy source
	NFPA 285	Passed: Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components.
Structural	FM-4881	Passed: Class +110/-154 Zone H Class +100/-140 Zone HM – LM
	ASTM E72	Vacuum chamber tested. Panel load / span and deflection tables are available
Thermal Performance	ASTM C518	R-value per inch = 7.5 h·ft <sup>2</sup> ·°F/Btu·in
Air Infiltration	ASTM E283	0.003 CFM/ft <sup>2</sup> of Panel Area at 6.24 psf
Water	ASTM E331	No uncontrolled water penetration at 20 psf differential pressure
	AAMA 501.1	Dynamic water pressure testing – no sign of water leakage at 15 psf
Fatigue Tests	Cyclic test to positive and negative wind loading to ± L/180 deflection	The panels exceeded 2 million alternate cycles without failure or damage
Bond Strength	ASTM D1623	Panels tested for tensile bond strength of metal to foam
		Sample placed in an autoclave device and pressurized to 2 PSI at 212 °F for 2½ hours
		No skin delamination with direct pull off pressure up to 1188 psf

The above tests were conducted on various Kingspan products, and not all products may comply with the tests shown. If you have any questions on a specific product and/or test, please ask a representative of Kingspan Technical Services. Kingspan does not assure compliance with any plans or specifications and it remains the responsibility of the customer to confirm compliance of the product with applicable local, state and national codes and other laws or regulations.

# Kingspan Service and Support

## Technical Service

Kingspan provides a comprehensive technical advisory service to assist architects, engineers, specifiers and installation contractors with building design, product application and site work installation training and challenges.

## Energy Service

Kingspan offers a performance energy modeling service on select projects to help design teams understand scenarios contributing to optimizing the energy efficiency of insulated metal panel assemblies based on meeting or exceeding ASHRAE 90.1 requirements.

## Customer Service

Our dedicated team provides focused customer service for all pre and post-order administration, delivery scheduling, and installer support, ensuring a seamless coordinated customer experience.

## Marketing Support

Our marketing team aims to provide a fast turnaround on standard sample and literature requests, eliminating delays with planning and client approval of material, so that your project begins on time.

Additional marketing support is provided through the use of project case studies.

## Field Service Support

Kingspan's Field Service Engineering Team offer customers free contractor training on the installation of new and existing products, site inspection services as well as advice on mechanical handling solutions.



## Sales Team

Our regionally based sales team can provide assistance on any project from the design stage through to site installation.

Find your local sales rep on our website.

Canada - [www.kingspanpanels.ca/findasalesrep](http://www.kingspanpanels.ca/findasalesrep)

USA - [www.kingspanpanels.us/findasalesrep](http://www.kingspanpanels.us/findasalesrep)

Email us:

### Technical and Energy Services:

[technicalservice@kingspanpanels.com](mailto:technicalservice@kingspanpanels.com)

### Installation:

[installation@kingspanpanels.com](mailto:installation@kingspanpanels.com)

### Marketing:

[marketingdept@kingspanpanels.com](mailto:marketingdept@kingspanpanels.com)

### Samples:

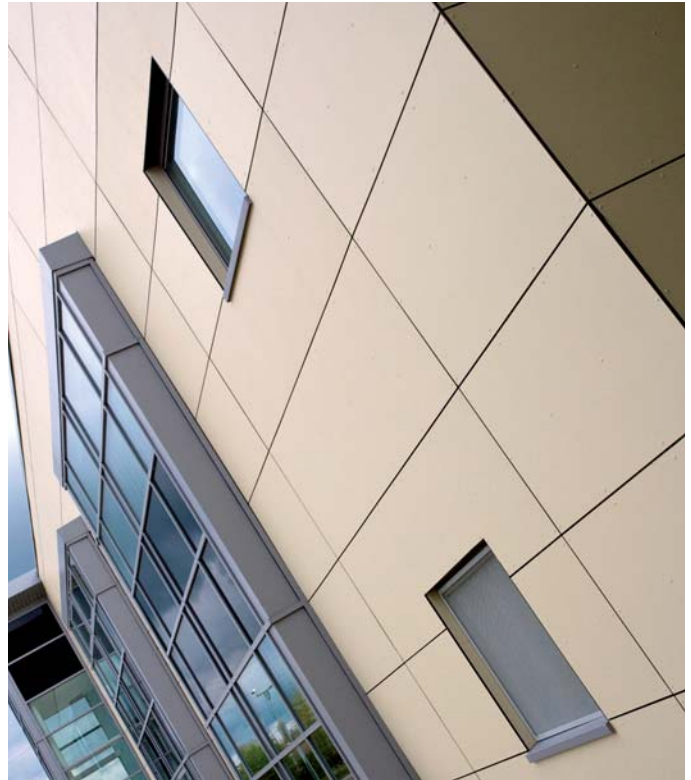
[samplesdept@kingspanpanels.com](mailto:samplesdept@kingspanpanels.com)

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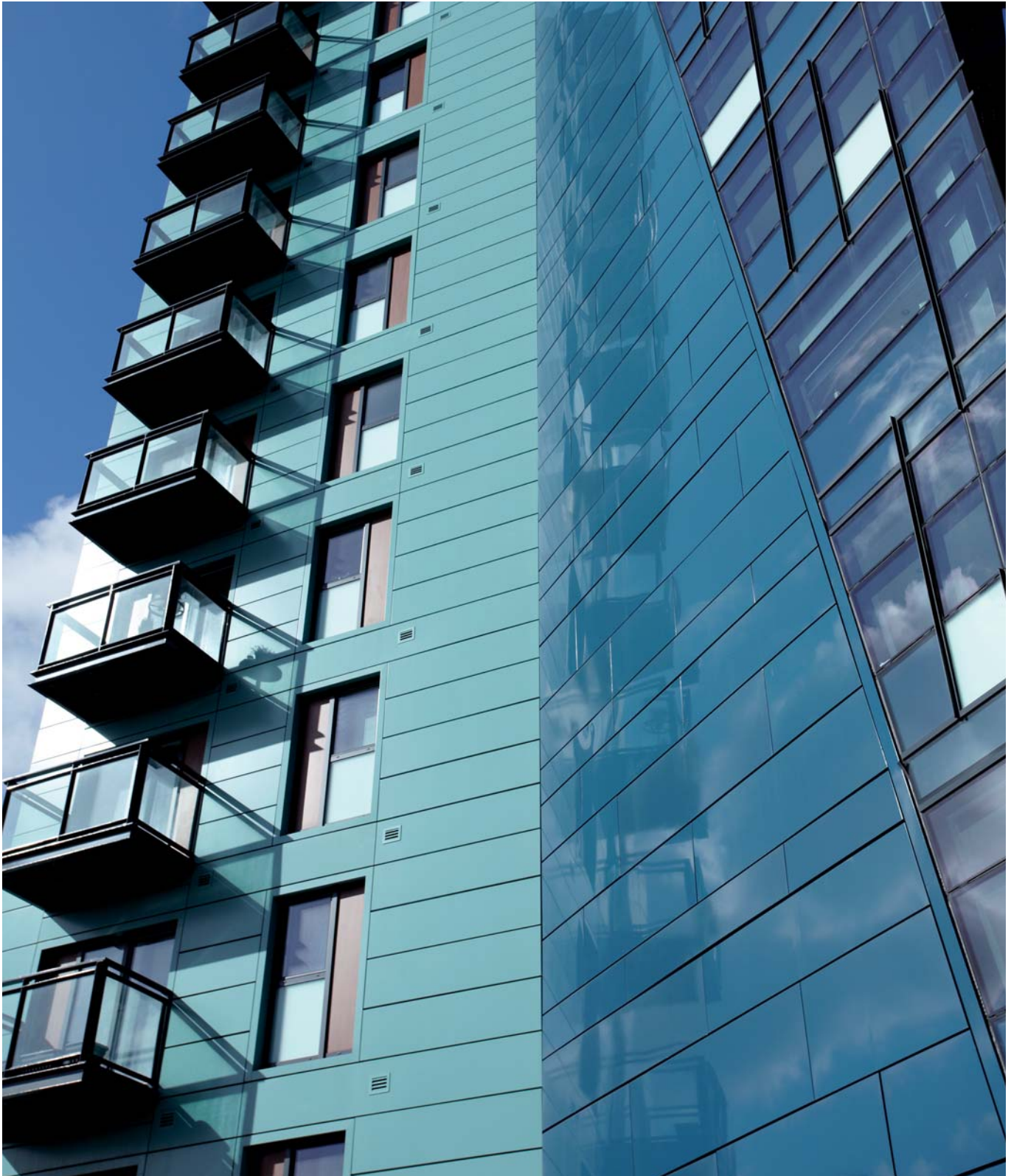




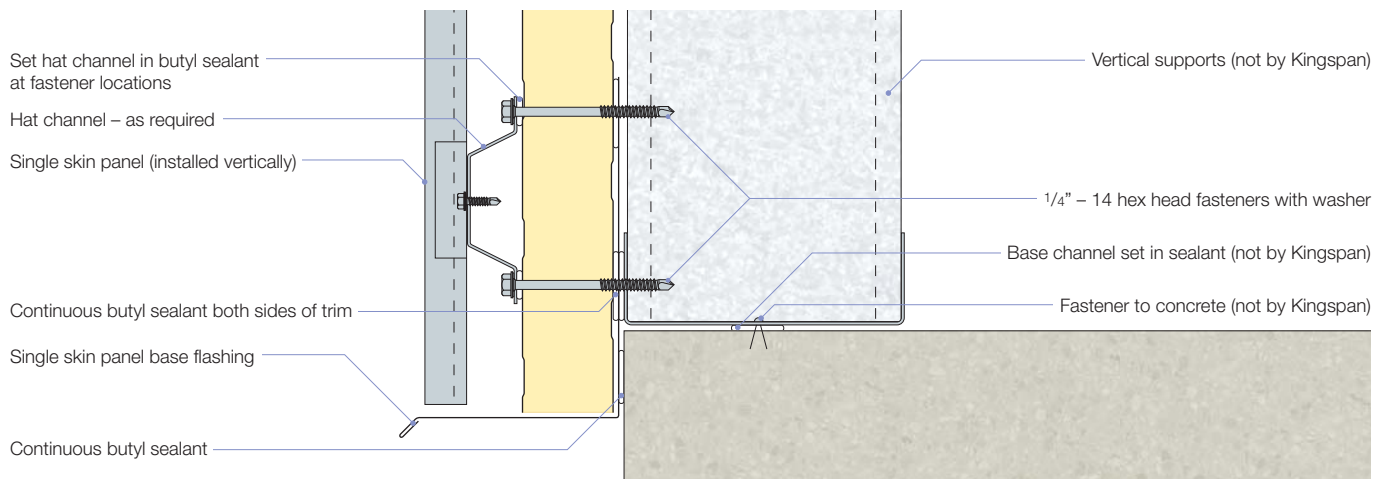
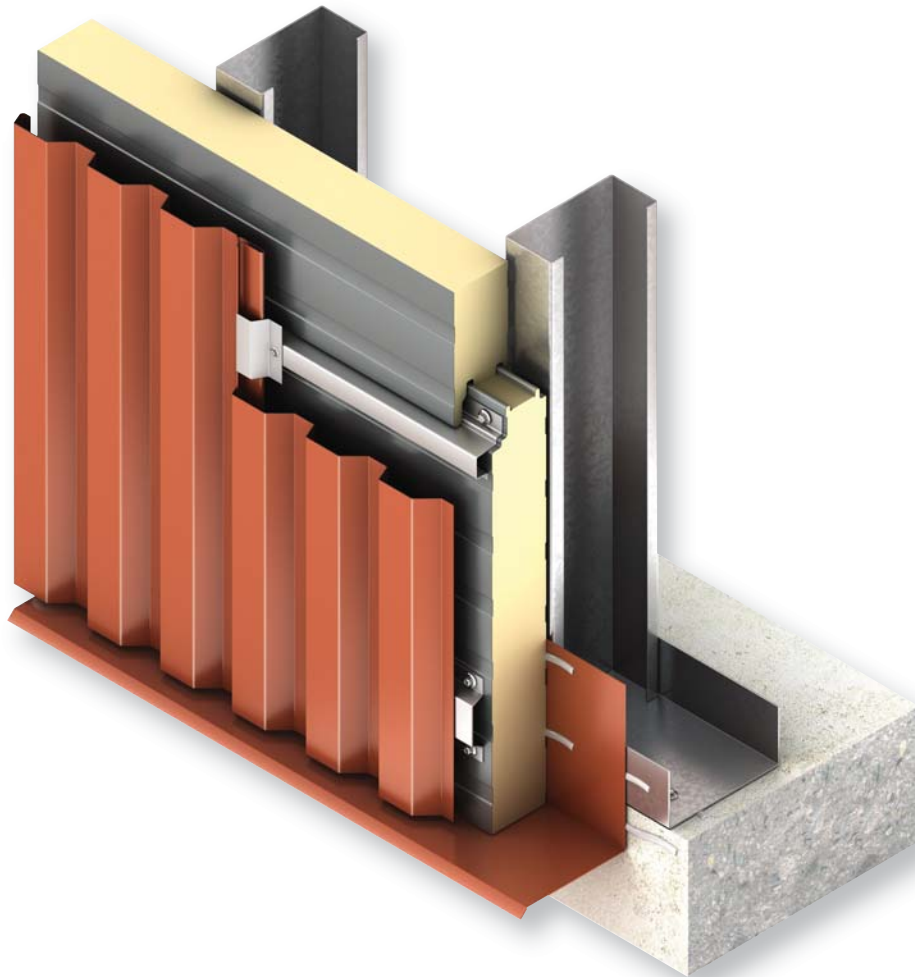
# KarrierPanel™ Projects





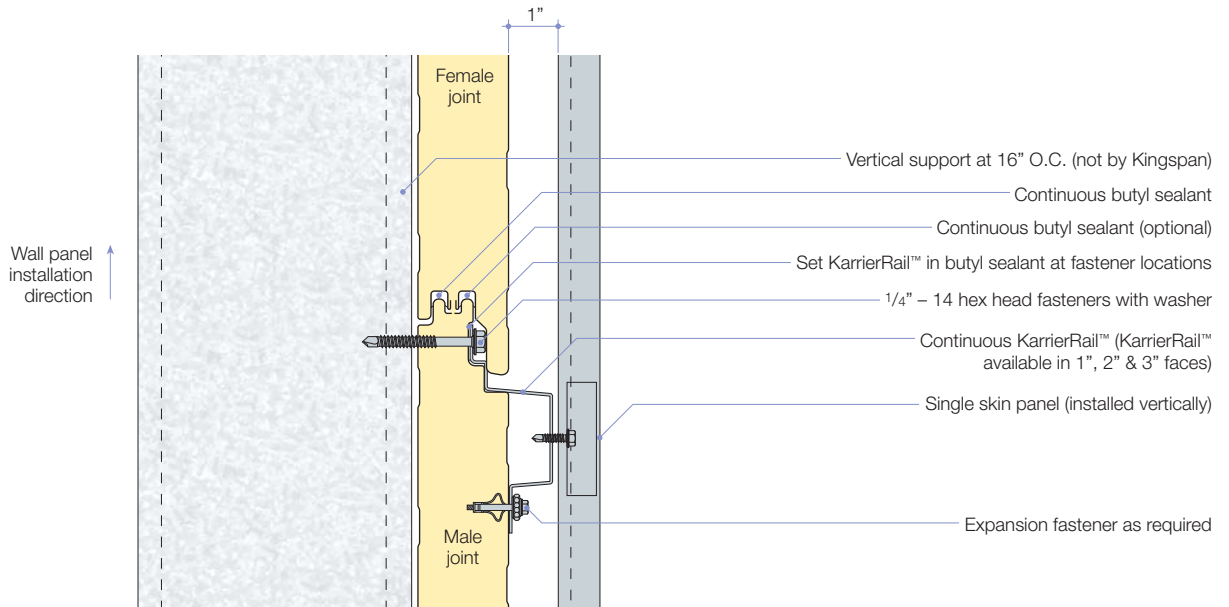
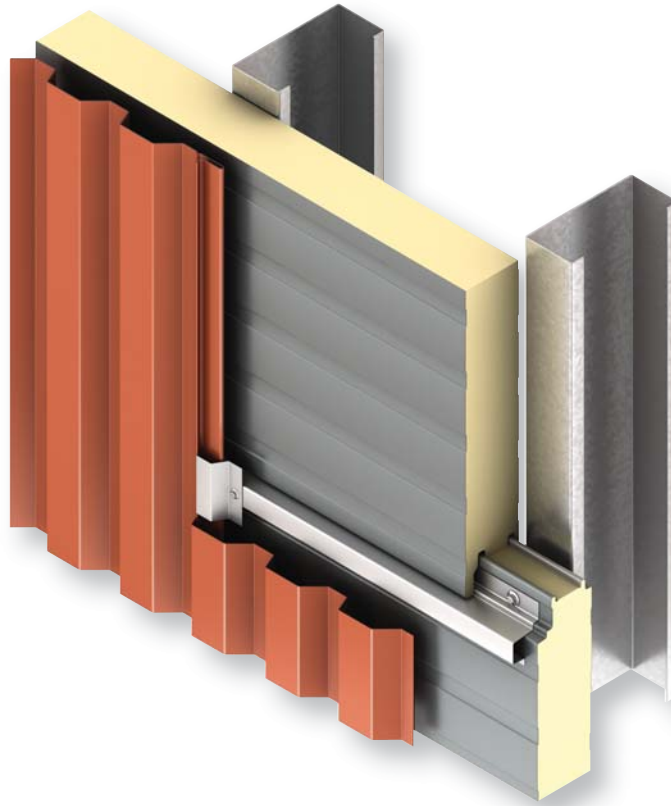


## Base at Overhang – Horizontal IMP Vertical Rainscreen

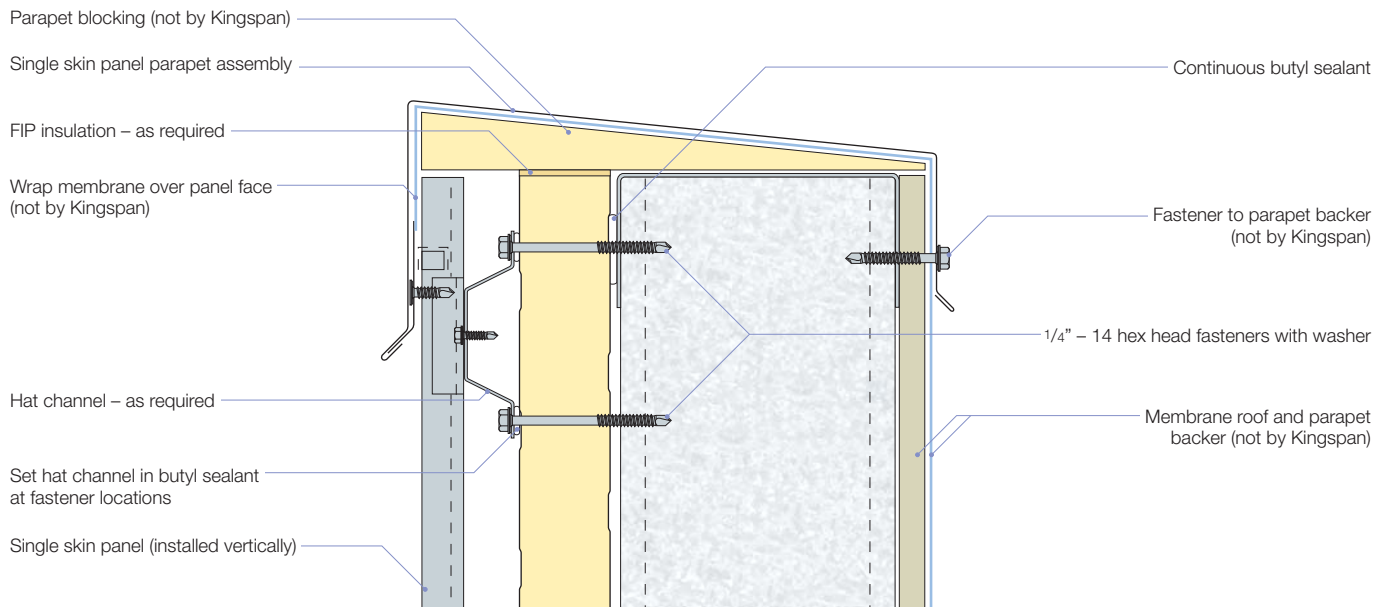
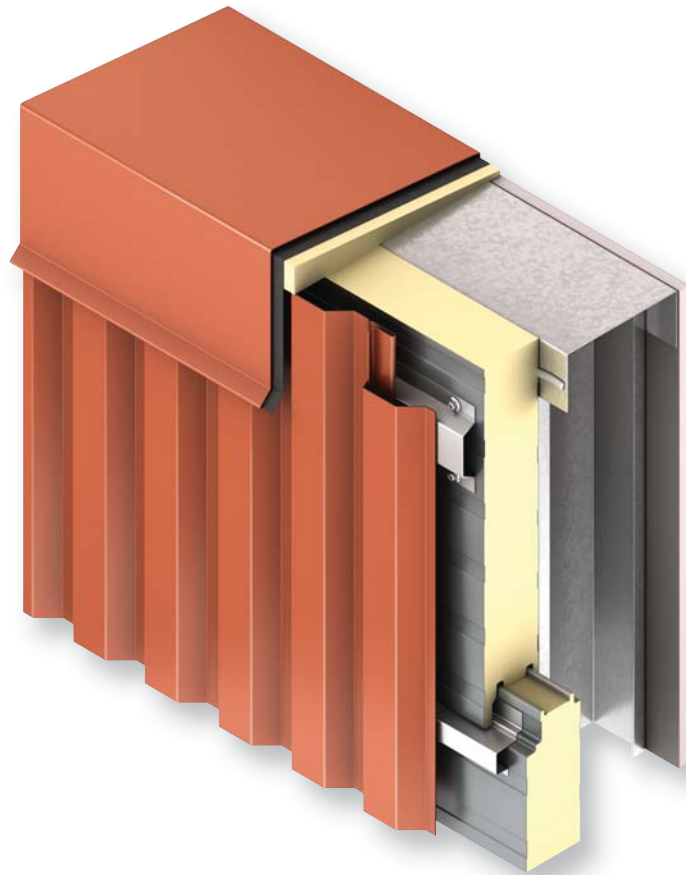




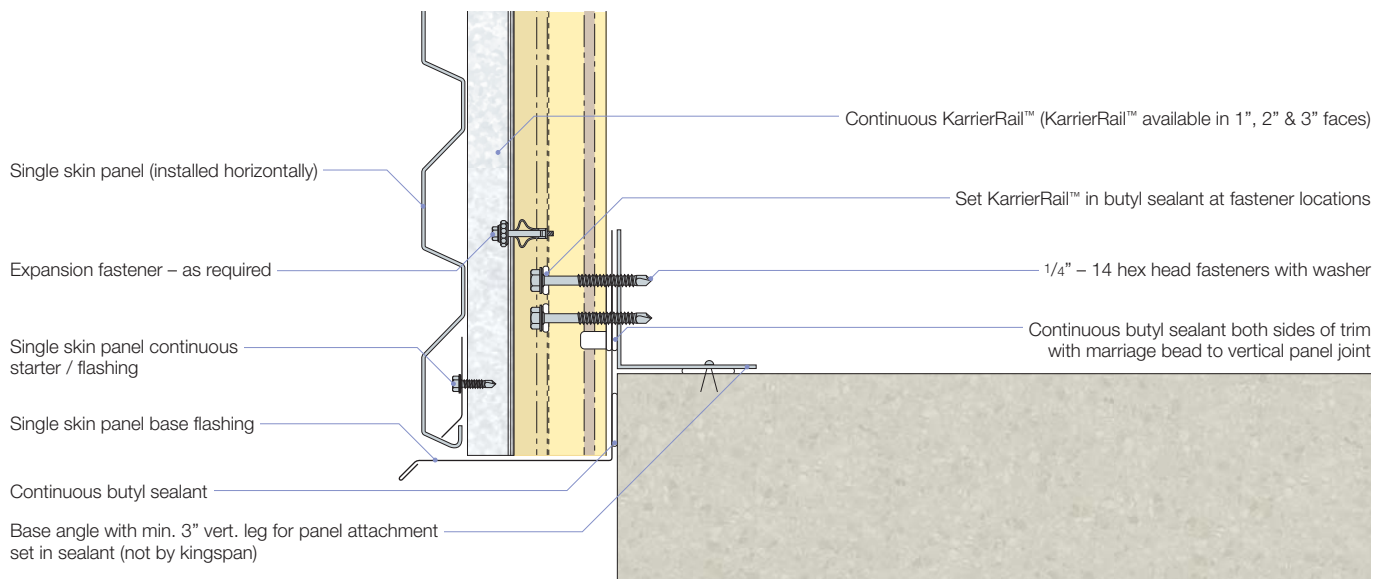
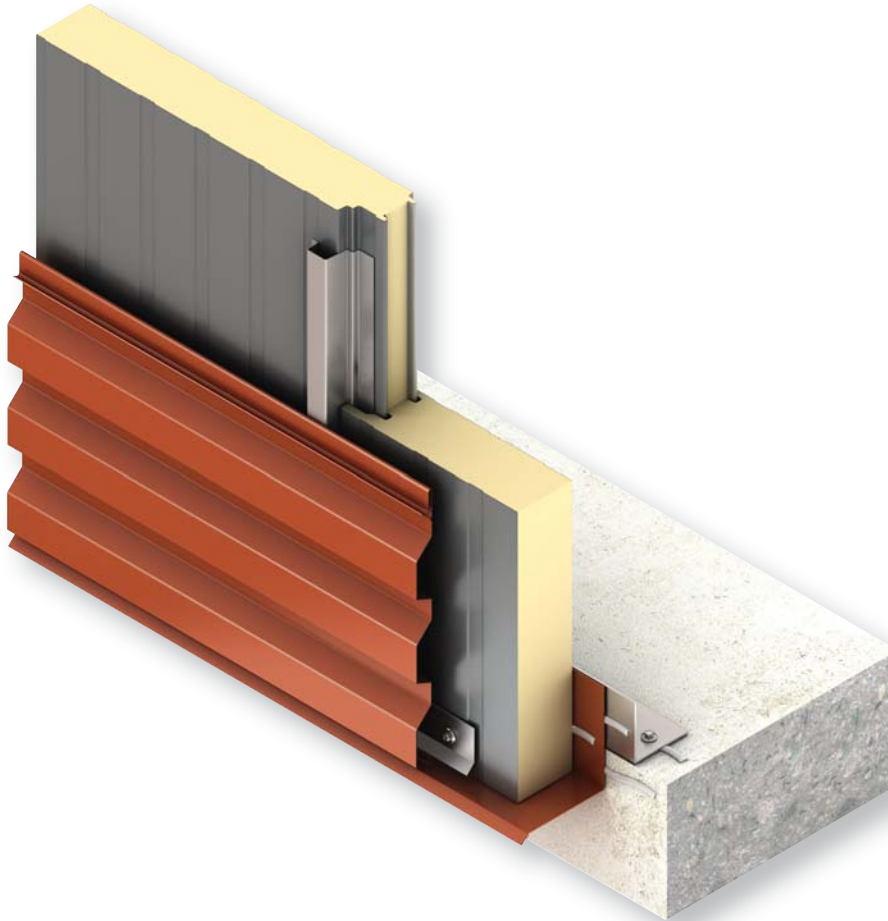
## Intermediate Support – Horizontal IMP Vertical Rainscreen



## Parapet Detail – Horizontal IMP Vertical Rainscreen

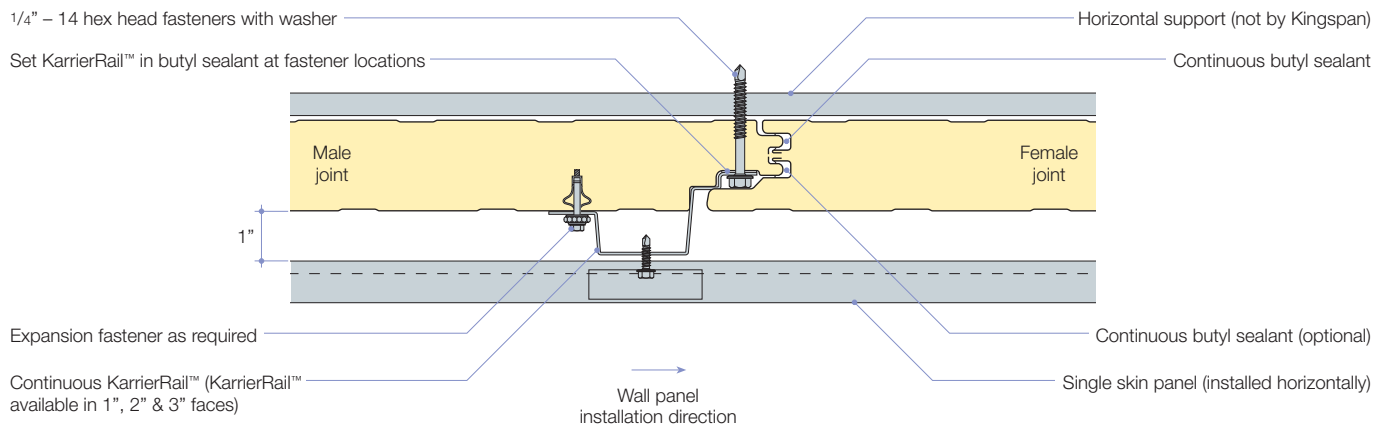
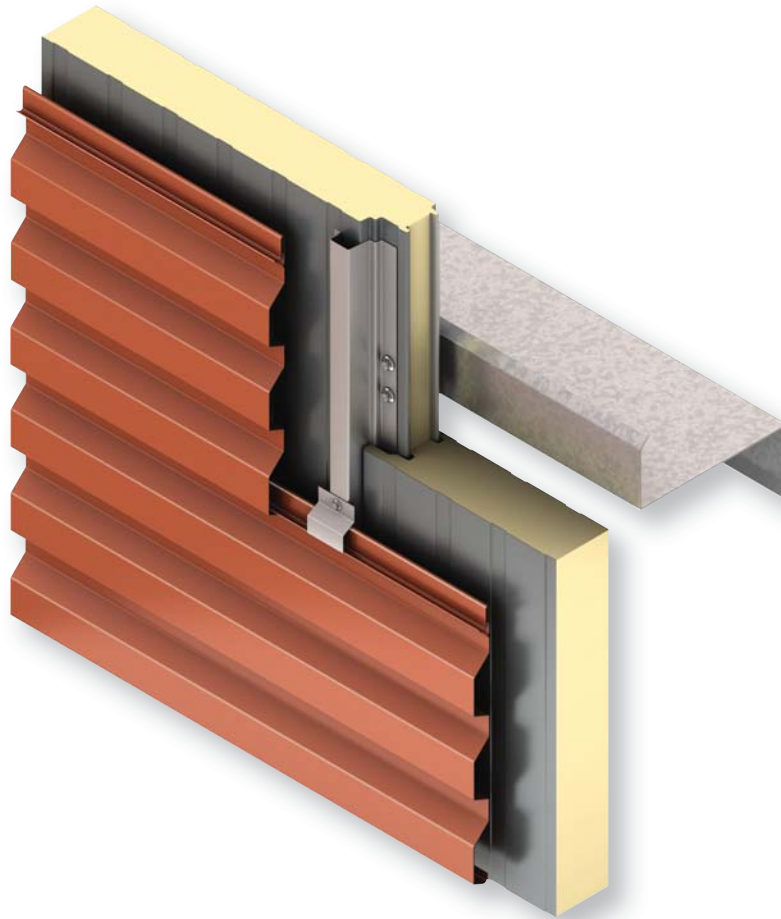


## Base Detail - Vertical IMP Horizontal Rainscreen

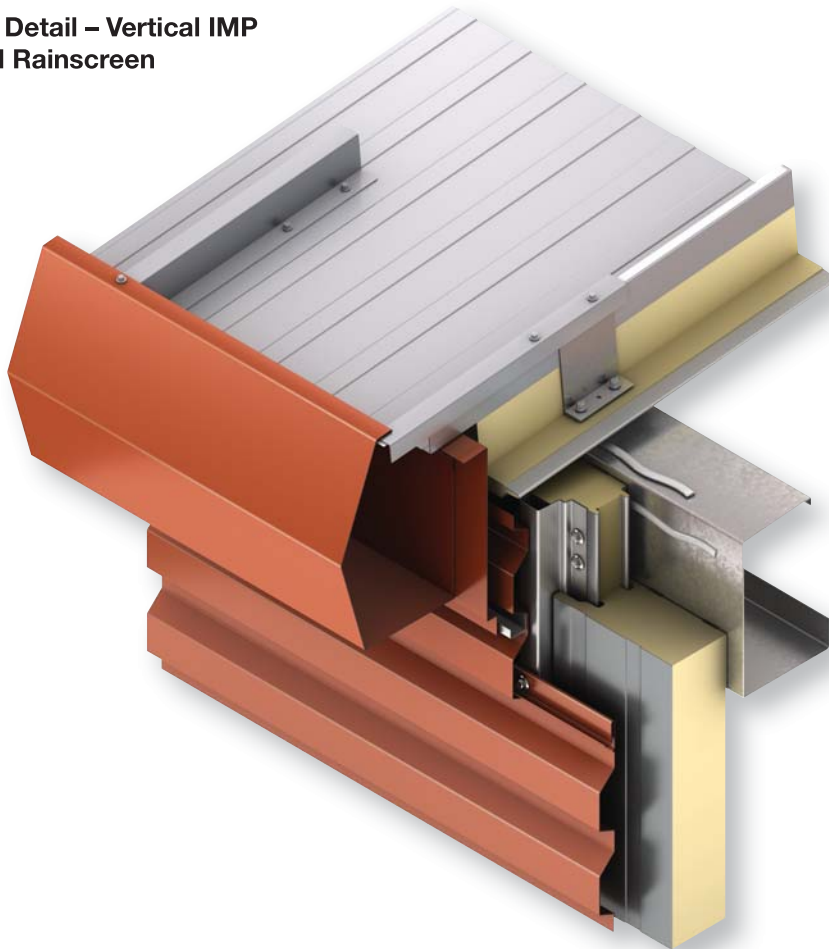




## Intermediate Support – Vertical IMP Horizontal Rainscreen



## Low Eave Detail – Vertical IMP Horizontal Rainscreen



Refer to 900/1000 series roof panel details for additional information

FIP insulation – as required

1/4" – 14 hex head fasteners with washer

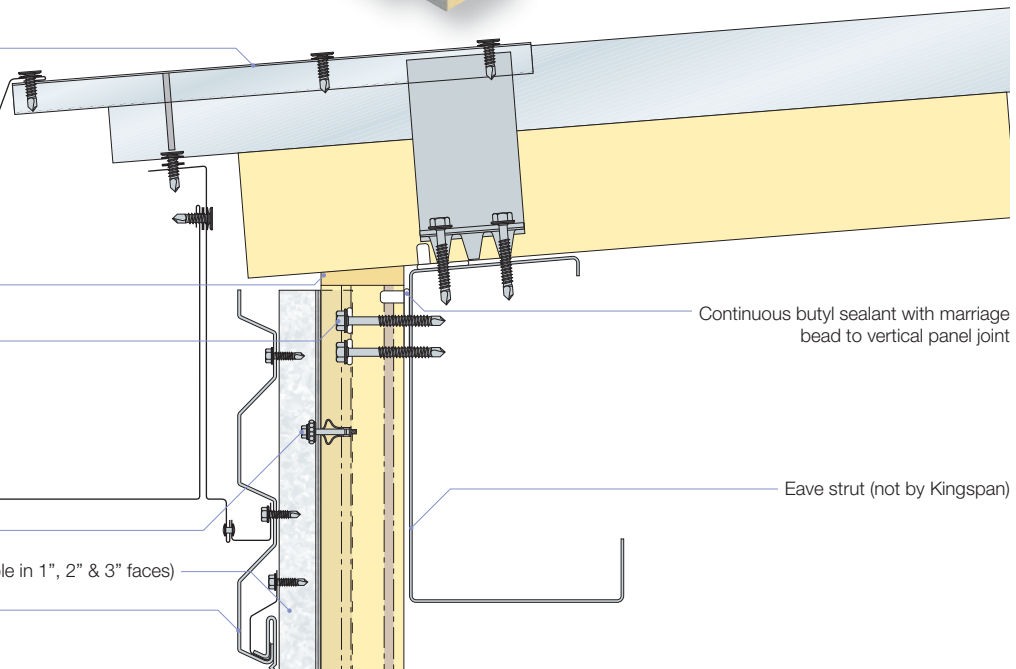
Expansion fastener – as required

Continuous KarrierRail™ (KarrierRail™ available in 1", 2" & 3" faces)

Single skin panel (installed horizontally)

Continuous butyl sealant with marriage bead to vertical panel joint

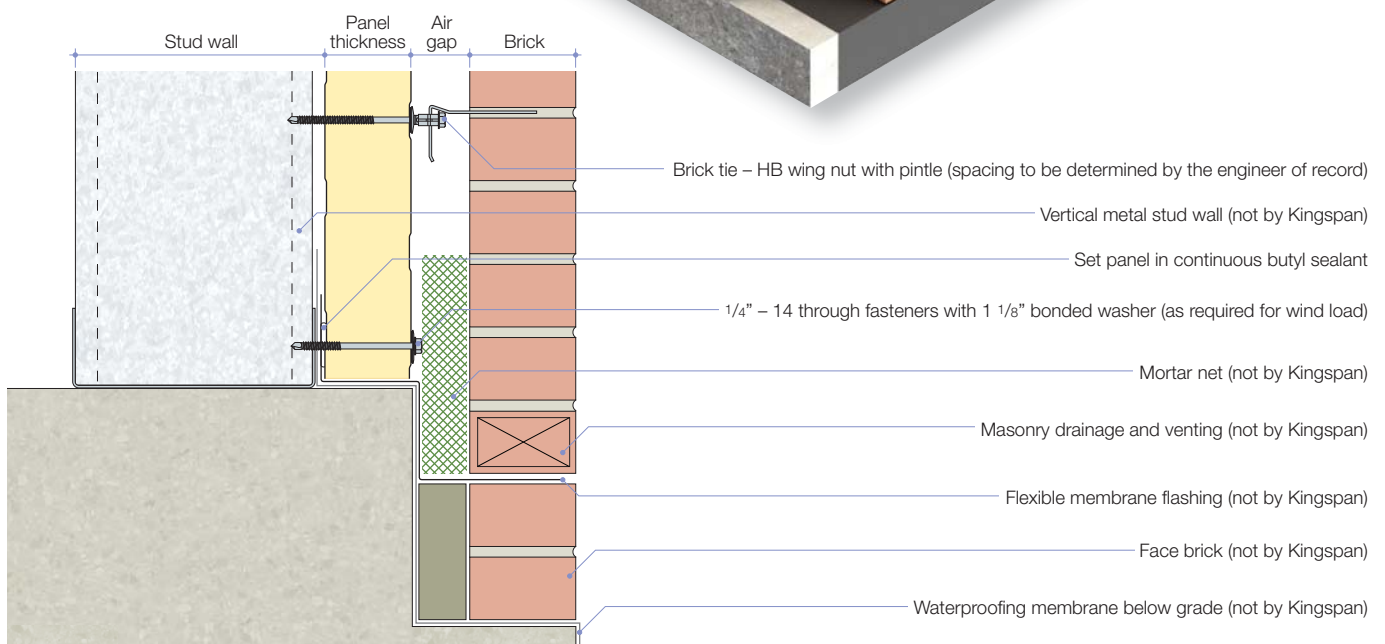
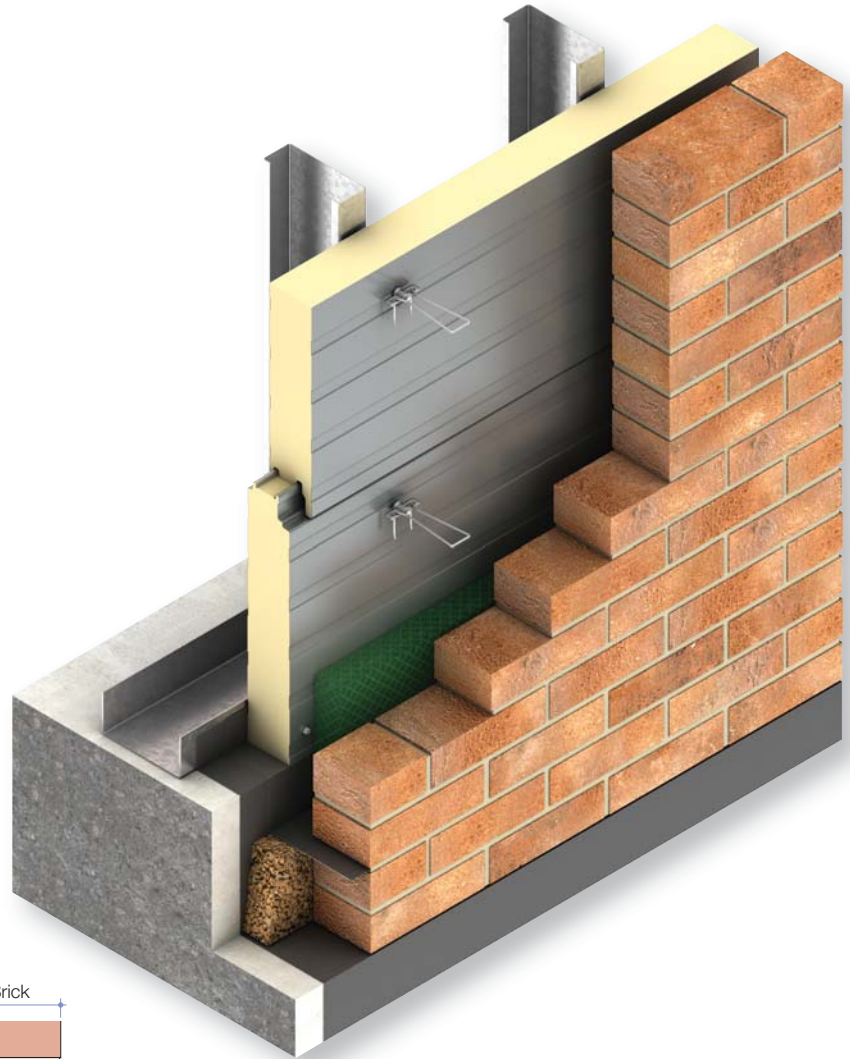
Eave strut (not by Kingspan)



## Construction Details

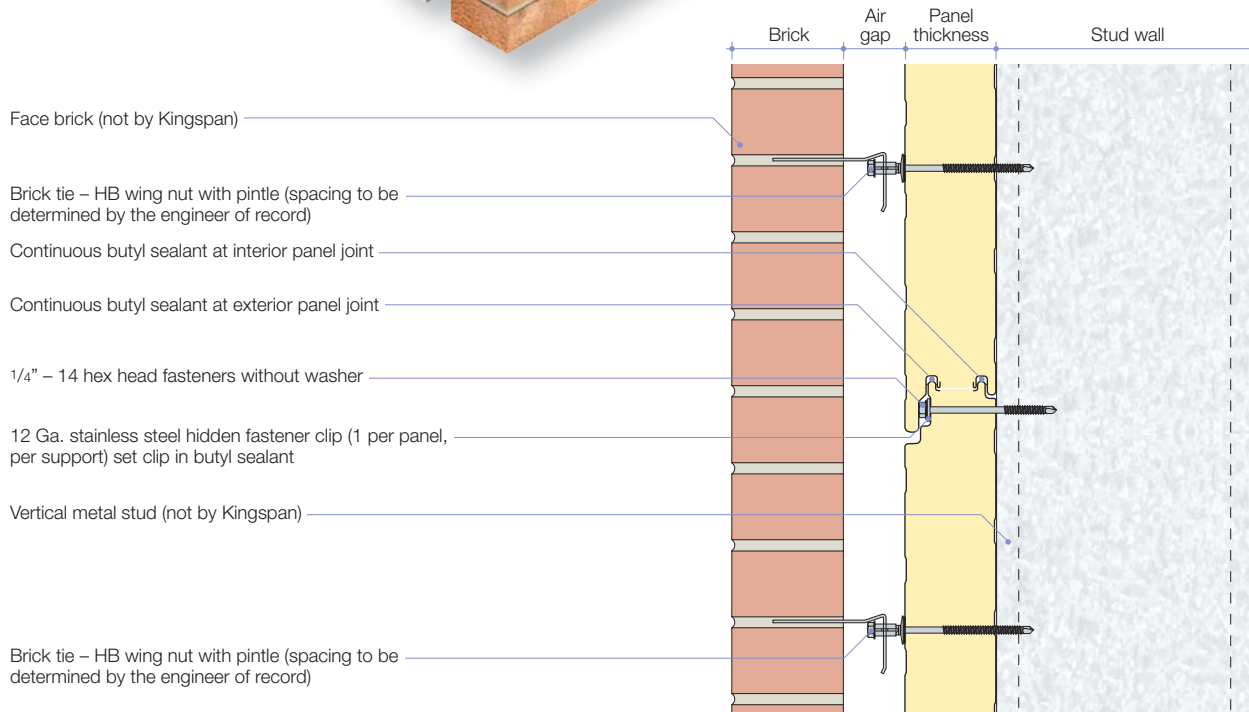
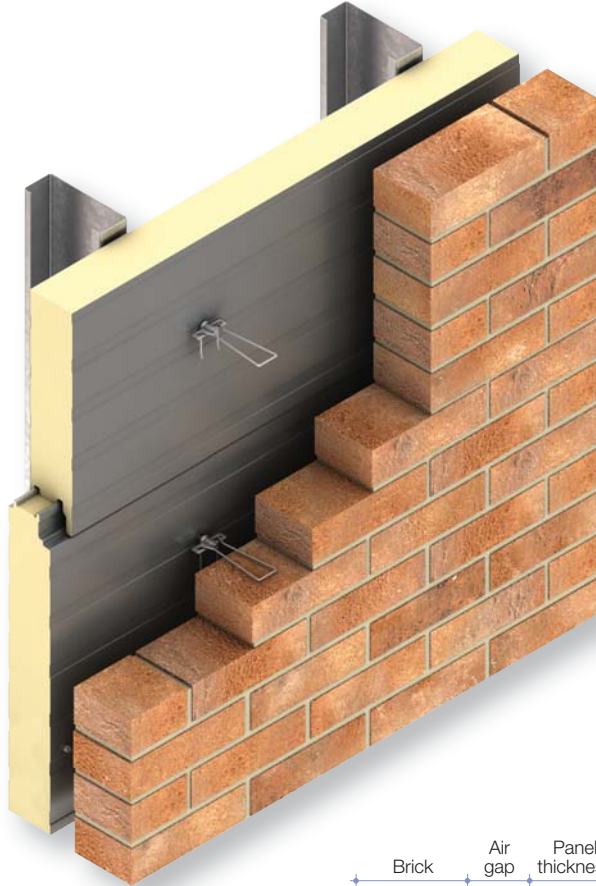
## KarrierPanel™ with Brick

### Base Detail – Horizontal IMP

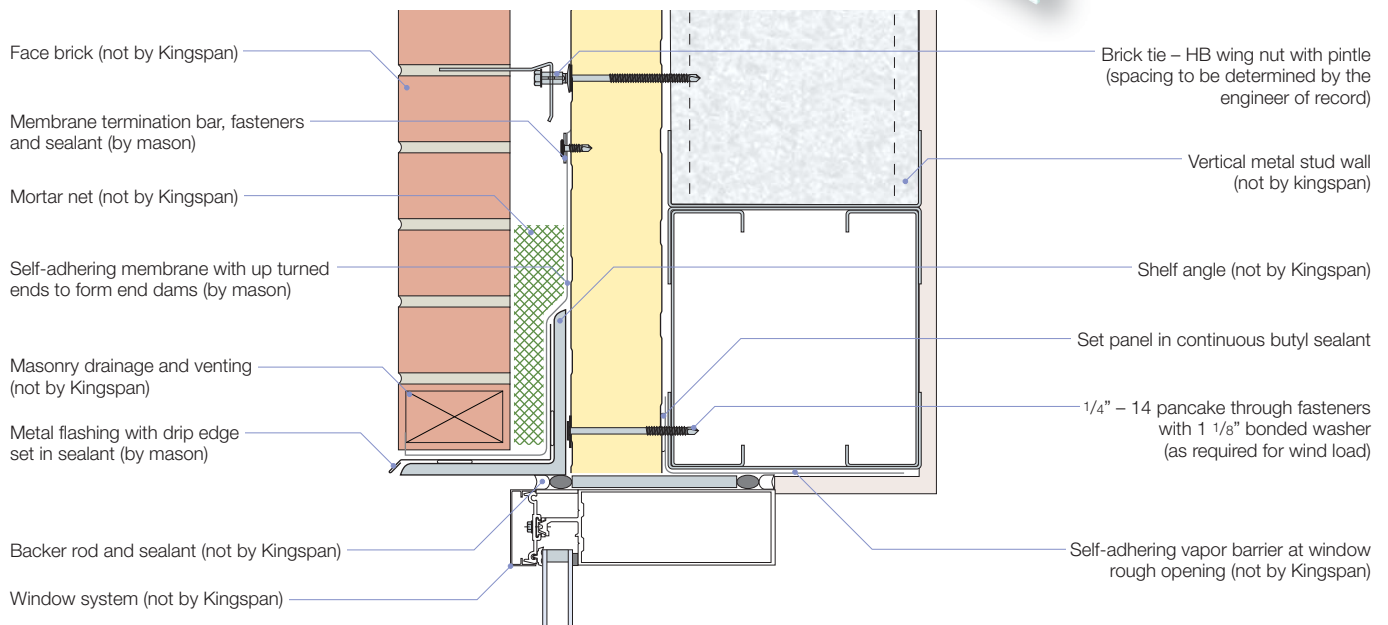
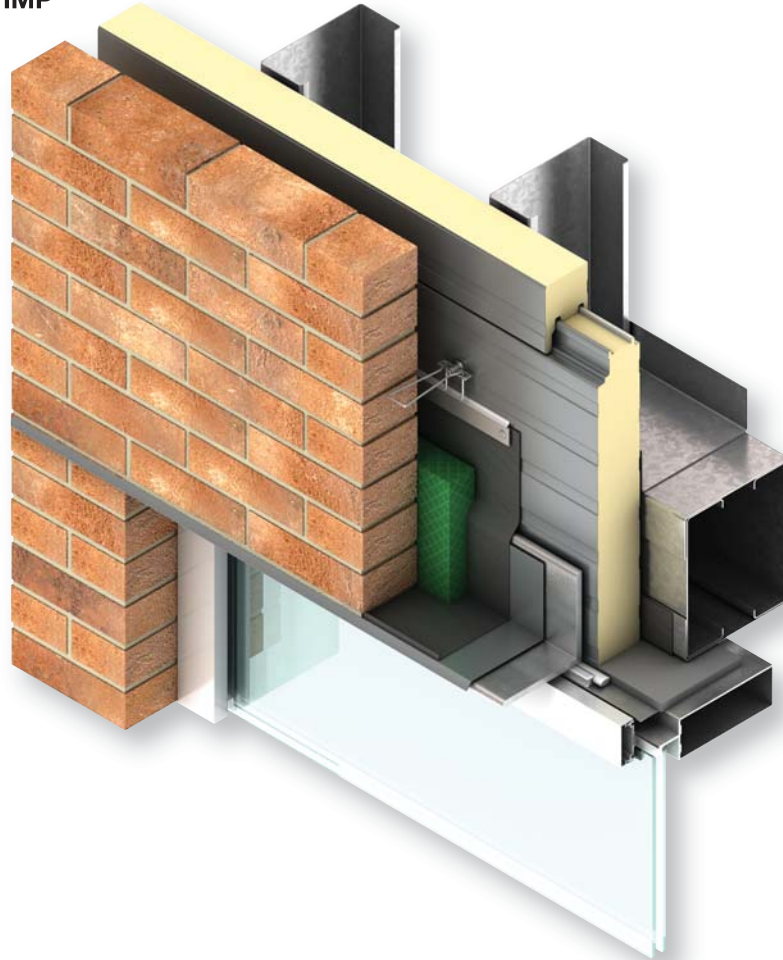




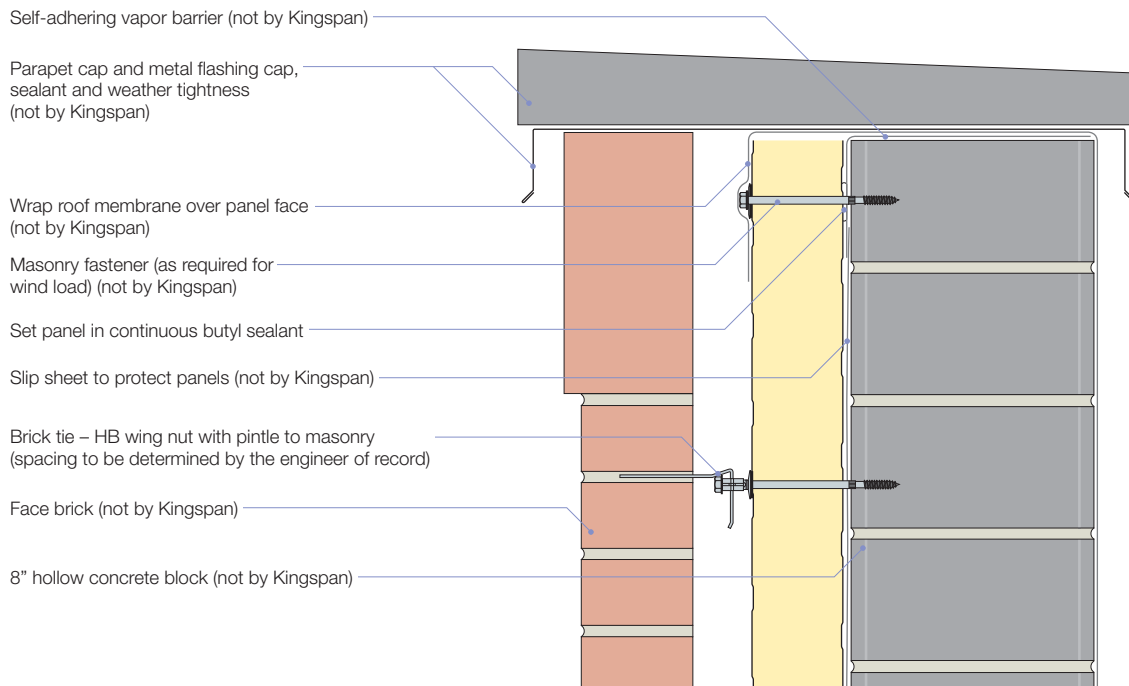
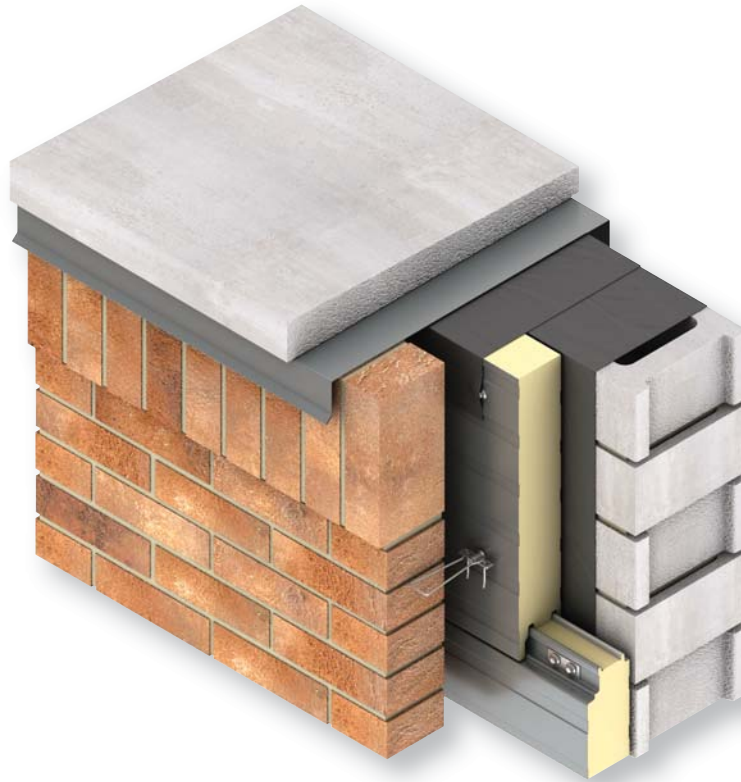
## Engaged Panel Detail – Horizontal IMP



## Framed Opening – Horizontal IMP



## Framed Opening – Horizontal IMP





#### Kingspan USA

Deland, FL : 386-626-6789

Modesto, CA : 209-531-9091

[www.kingspanpanels.us](http://www.kingspanpanels.us)

#### Kingspan Canada

Caledon, ON : 905-951-5600

Langley, BC : 604-607-1101

[www.kingspanpanels.ca](http://www.kingspanpanels.ca)

For the product offering in other markets please contact your local sales representative or visit [www.kingspanpanels.com](http://www.kingspanpanels.com)

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