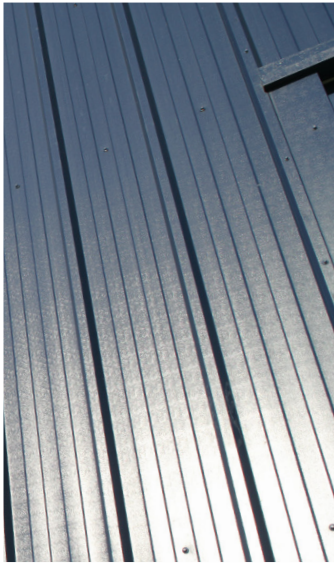
Insulated Roof & Wall Panels
UK & Republic of Ireland

Protected by Kingspan QuadCore® Assured

QuadCore® KS1000RW Wall Panel Installation Guide



Factory Applied Weather Seal (FAWS) to side laps only

Vertical Installation

This installation guide is also applicable to QuadCore KS1000 RW LEC Wall Panel

QuadCore™ LEC
LOWER EMBODIED CARBON SOLUTIONS

Kingspan®

QuadCore® KS1000RW Wall Panel

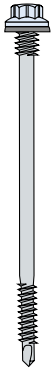
Vertical Installation

Components

QuadCore® KS1000RW Wall Panel

Profiled filler

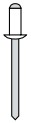
Primary / main fastener



Secondary / stitching screws

Please contact our Tech-eXchange team for recommended stitching screw reference and supplier

Rivet



B1 Fire rated canister foam

Non-setting gun-grade butyl sealant

Rigid insulation board

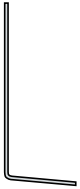
Timber packer

Zed support

External corner flashing

Internal corner galvanised support

Galvanised drip support



Drip flashing

Internal galvanised closure flashing

Cordless screw driver

Depth locator

Film backed butyl tape

PVC foam tape (SGV15P 20X9 PVC)

Butyl tape sealants

9 x 3mm 4mm Ø

Please contact our Tech-eXchange team for recommended butyl sealant reference and supplier

This installation guide should be read in conjunction with the 'project specific' design drawings and method statements.

QuadCore® KS1000RW Wall Panel

Vertical Installation

Note

This installation guide provides generic guidance on installation methods however should be read in conjunction with project specific specifications and construction details. For further information please contact our Tech-eXchange team.

Ensure steelwork is suitably lined, levelled and within tolerance.

Panels must be installed in a tiered sequence only.

Gun-grade sealant type - non-setting butyl sealant.

End lap 4mm Ø butyl tape sealant.

Zed support 9 x 3mm butyl seal.

Fasteners to suit QuadCore® panel specification requirements: Stainless Steel or Carbon steel subject to project requirements.

Side lap FAWS (Factory Applied Weather Seal), including 4mm Ø butyl tape sealant for closing off 4mm Ø butyl tape sealant end lap.

Install fasteners with recommended screw gun speed selection for type of steel, use correct socket and drive bit, including depth - locating nose piece, unless fastener has feature to prevent overdriving, in line with fastener manufacturers & NFRC Guidance Note GN01 recommendations.

Protective film to be removed from external weather face of panel & internal liner, where applicable, prior to installation.

Clean swarf off panels immediately when created.

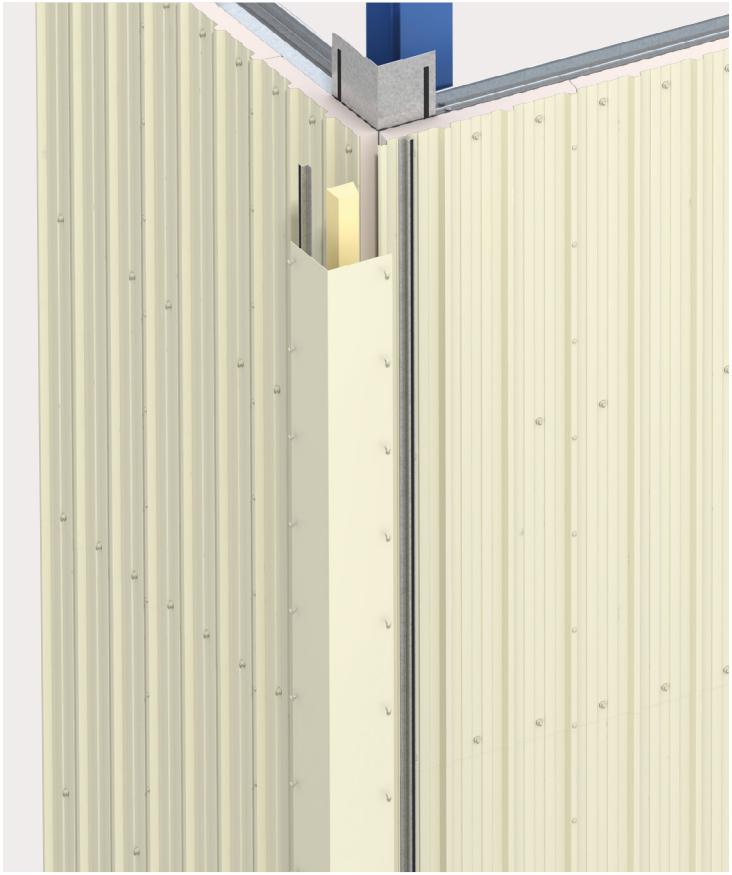
For high humidity, hygiene internal environments, etc, please contact the Kingspan Tech-eXchange team for specification guidance.

For many years sealant suppliers have advised caution when using sealants in temperatures less than +5°C.

We recommend the use of mechanical handling systems for the movement & lifting of panels into position.

This installation guide is also applicable to QuadCore KS1000 RW LEC Wall Panel

QuadCore LEC
LOWER EMBODIED CARBON SOLUTIONS



QuadCore® KS1000RW Wall Panel

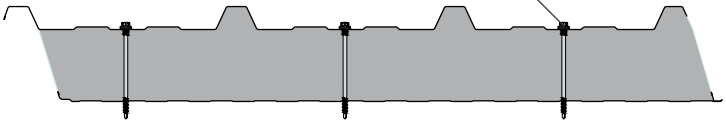
Vertical Installation

Fastener Layouts

Main Fastener Layout

Panel Ends

Minimum 3No self-drilling self-tapping primary fixings located 1 per valley with minimum 16mm diameter non-ferrous EPDM backed washer. Colour to suit panel

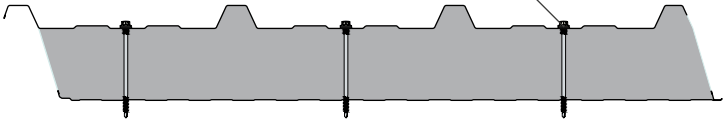


Intermediate Support Locations

Minimum 2No self-drilling self-tapping primary fixings located 1 per outside valley with minimum 16mm diameter non-ferrous EPDM backed washer. Colour to suit panel

End Lap Locations

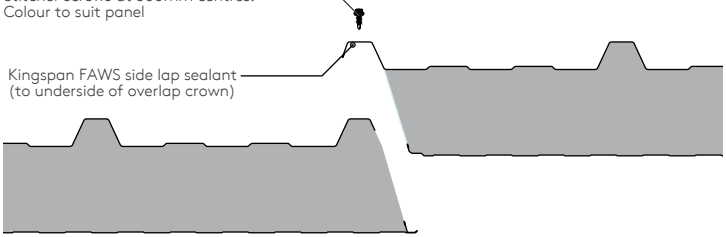
Minimum 3No self-drilling self-tapping primary fixings located 1 per valley with minimum 16mm diameter non-ferrous EPDM backed washer. Colour to suit panel



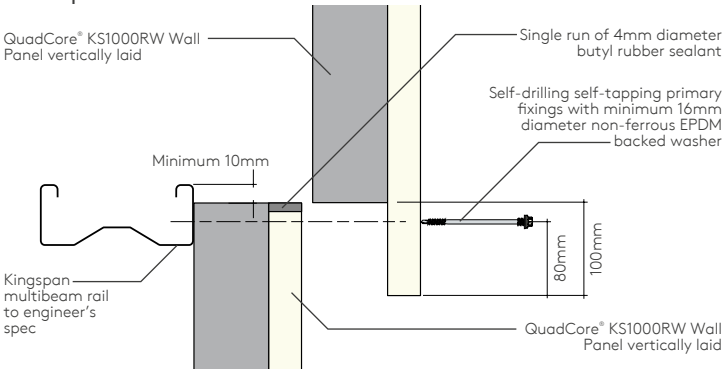
Side Lap

Stitcher screws at 500mm centres. Colour to suit panel

Kingspan FAWS side lap sealant (to underside of overlap crown)



End Lap



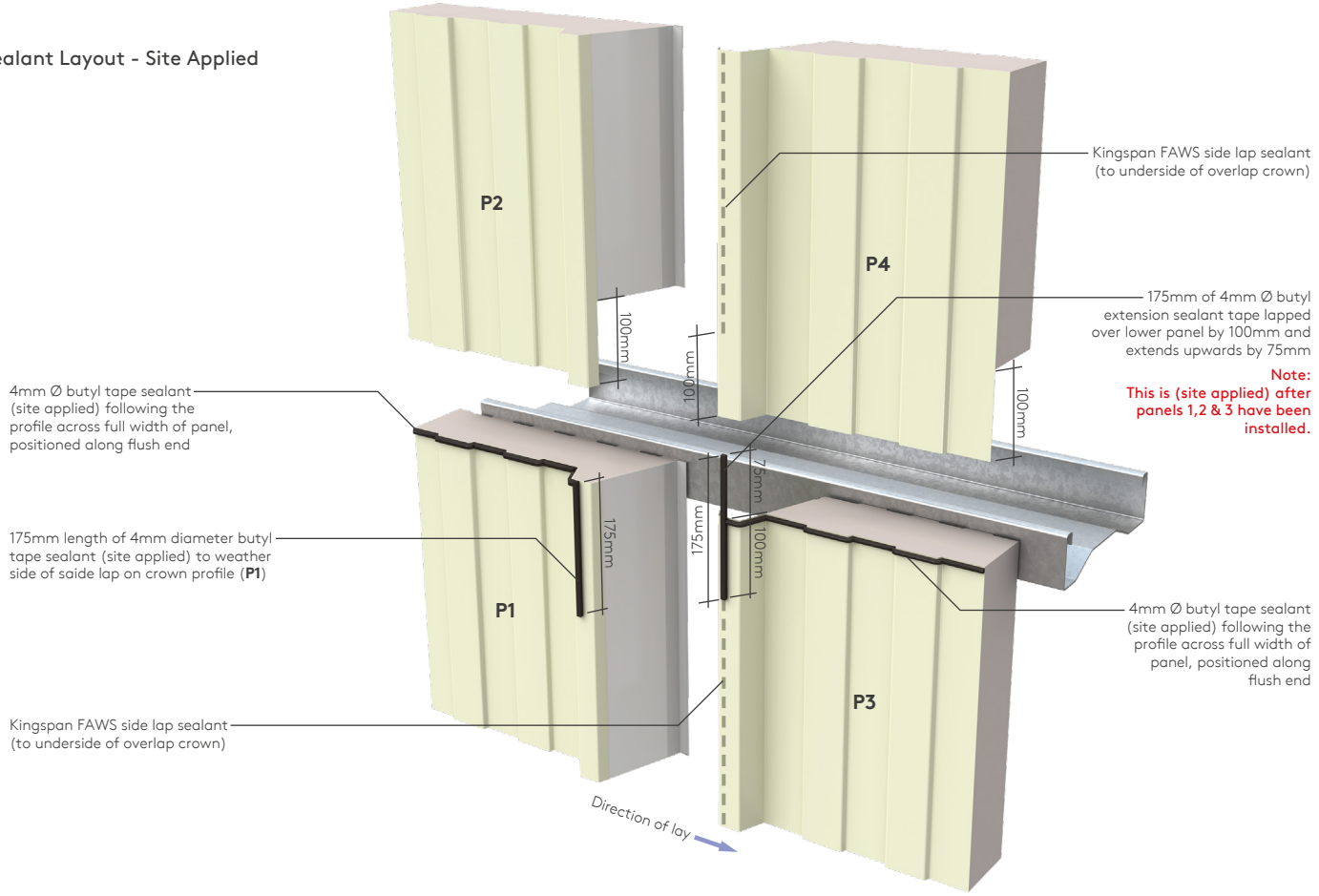
Note: Minimum number of fasteners as illustrated. Good practice would recommend that a wind load calculation be carried out for each project, to determine whether additional fasteners are required to meet local wind uplift requirements.

The fixing pattern shown is the minimum requirement only based on air and weather testing. For fixing patterns for LPCB certification or FM approval as well as project specific wind loading guidance, please contact Kingspan Insulated Panels Technical department (0800 587 0090).

QuadCore® KS1000RW Wall Panel

Vertical Installation

Sealant Layout - Site Applied



QuadCore® KS1000RW Wall Panel

Vertical Installation

5

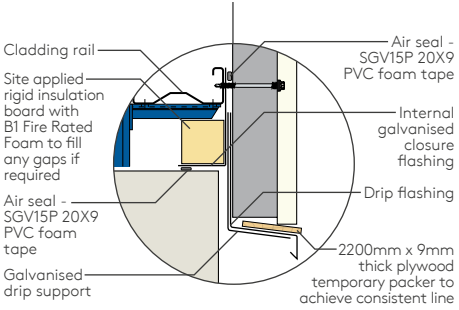
Apply SGV15P 20X9 PVC foam tape to the top rail and face of bottom closure flashing, to provide an air seal between back of panel and closure flashing

3

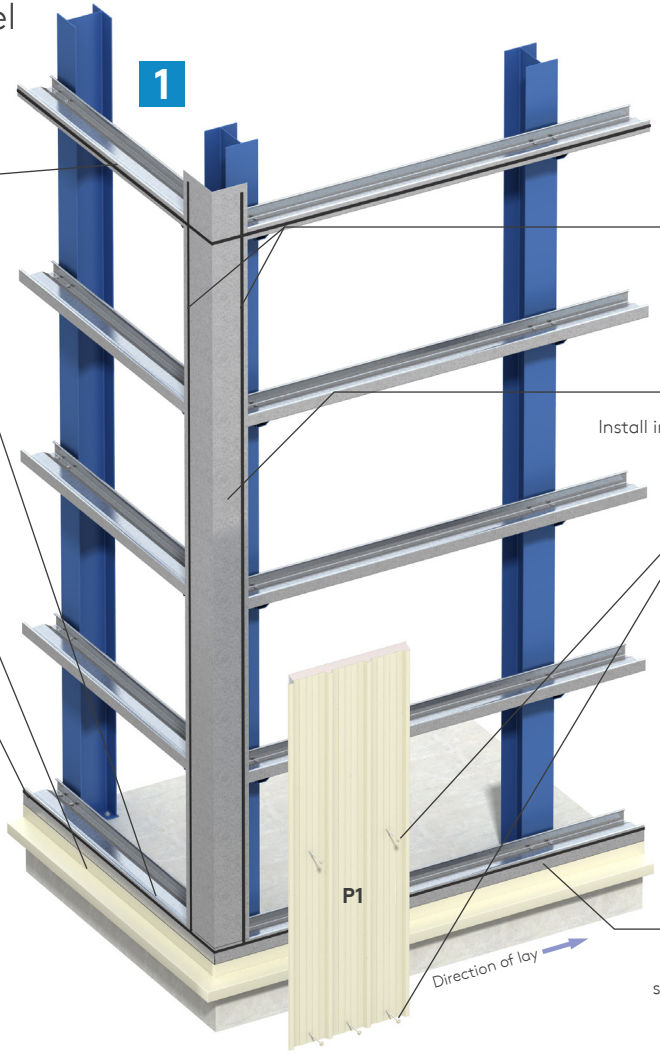
Line, level and fix drip flashing using low profile fasteners. Joints in the drip flashing to incorporate butt straps sealed with two runs 4mm Ø butyl tape sealant

1

Install internal galvanised closure flashing using low profile fasteners. An air seal consisting of SGV15P 20X9 PVC foam tape is required between internal closure flashing and floor, for gaps outside of this parameter. Please contact our Tech-Exchange team



Note: A timber packer may be used to ensure panel does not sit on drip flashing



Note: The steelwork at the top in these illustration are not indicative of any interface, purely left open. Our intension is to illustrate the drip, Panel end lap, top of panel air seal termination & external corner

6

Air seal – Apply SGV15P 20X9 PVC foam tape to both sides of the internal corner galvanised support angle ensuring it meets the previously installed air seals

4

Install internal corner galvanised support angle with low profiled fasteners

7

Locate and install first panel (**P1**) ensuring it is correctly positioned lined and levelled and a minimum of 5mm above the drip flashing. Fix first panel (**P1**) with 3No. main fasteners per cladding rail (minimum) at panel ends & 2No. at intermediate locations subject to wind loadings

2

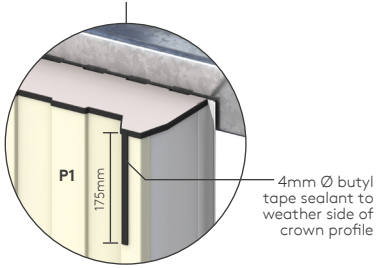
Line, level and fix galvanised drip support using low profile fasteners

QuadCore® KS1000RW Wall Panel

Vertical Installation

9

Apply 175mm length of 4mm Ø butyl tape sealant onto the weatherside of the crown profile on (**P1**) as illustrated. Ensure it is tightly abutted with the 4mm Ø butyl tape end lap seal

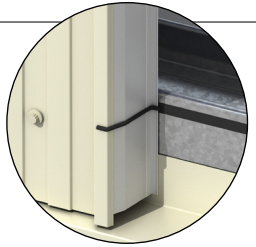


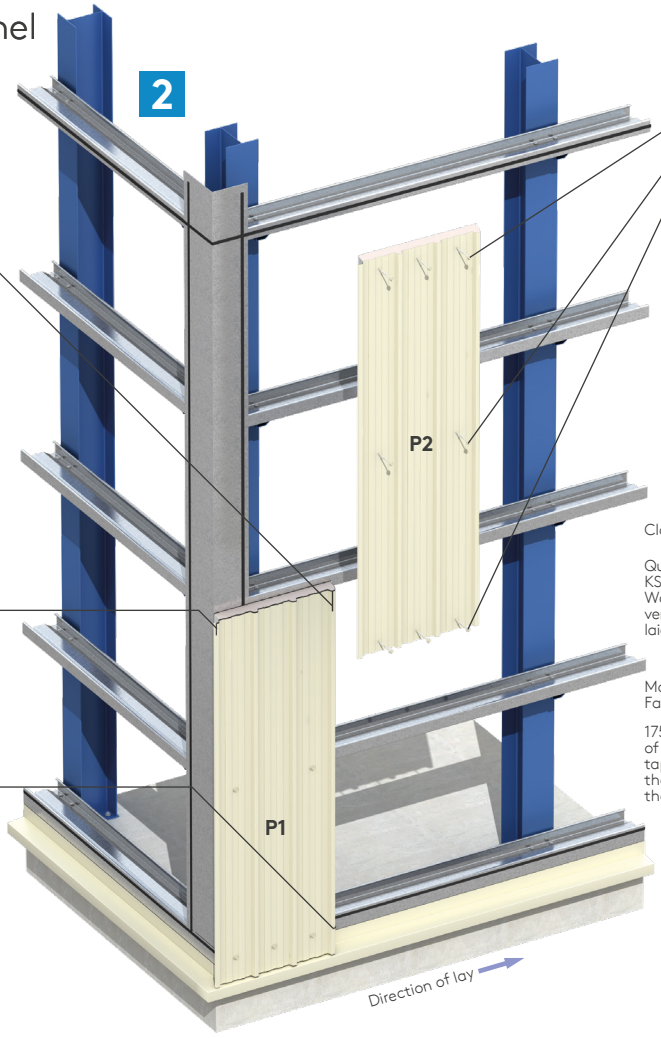
8

Apply 4mm Ø butyl tape sealant following the profile across full width of panel, positioned along the flush end. Extend this 100mm down the trailing edge side lap (**P1** only) as illustrated

11

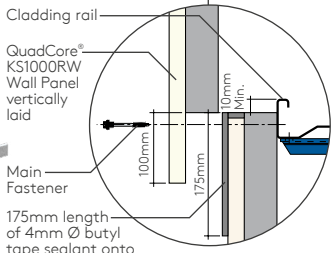
Apply 6mm Ø gun-grade butyl air seal to the side joint, from the internal air seal to the side lap weatherside





10

Locate and install second panel (**P2**) ensuring it is correctly positioned lined and levelled. Fix second panel (**P2**) with 3No. Main fasteners (minimum) at end lap location. Fasteners positioned approximately 80mm up from the end lap (main fastener to penetrate both upper and lower panel). 3No. (minimum) per cladding rail at panel ends & 2No. at intermediate locations subject to wind loadings

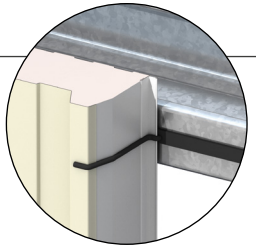


QuadCore® KS1000RW Wall Panel

Vertical Installation

12

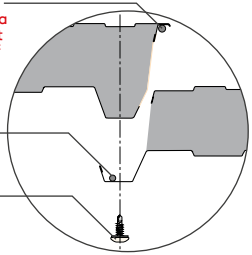
Apply 6mm Ø gun-grade butyl air seal to the panel side joint, from internal air seal to the side lap weather seal

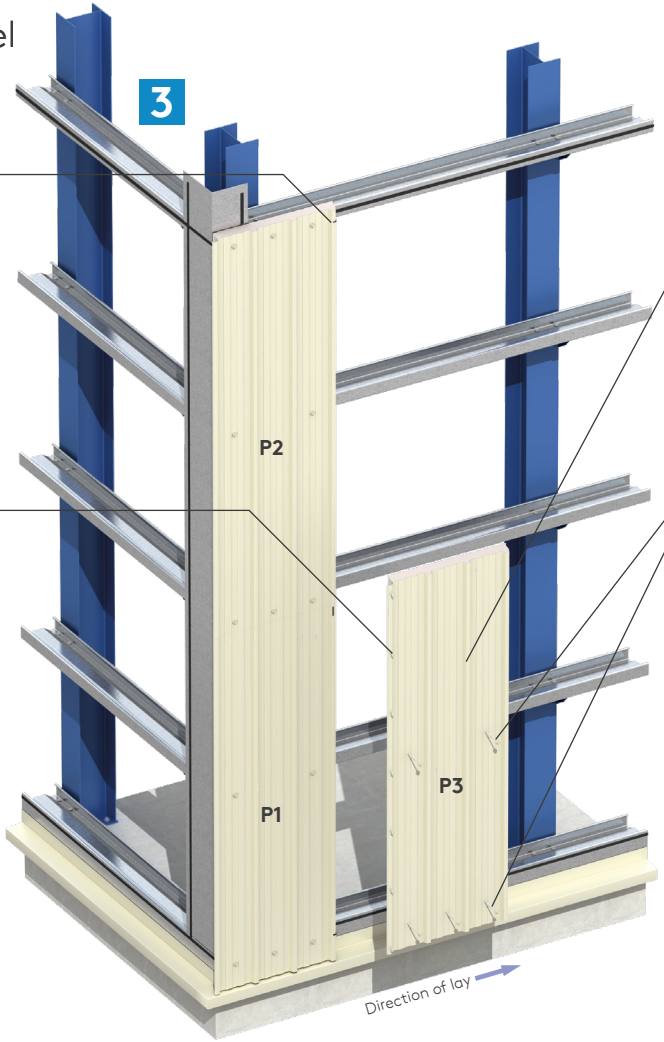


14

Install side lap stitching screws at 500mm centres commencing 50mm from panel end

Note: There may also be a requirement for applying a 6mm Ø butyl tape sealant vapour seal at the base of the side joint, dependent on project specification (see detail)





13

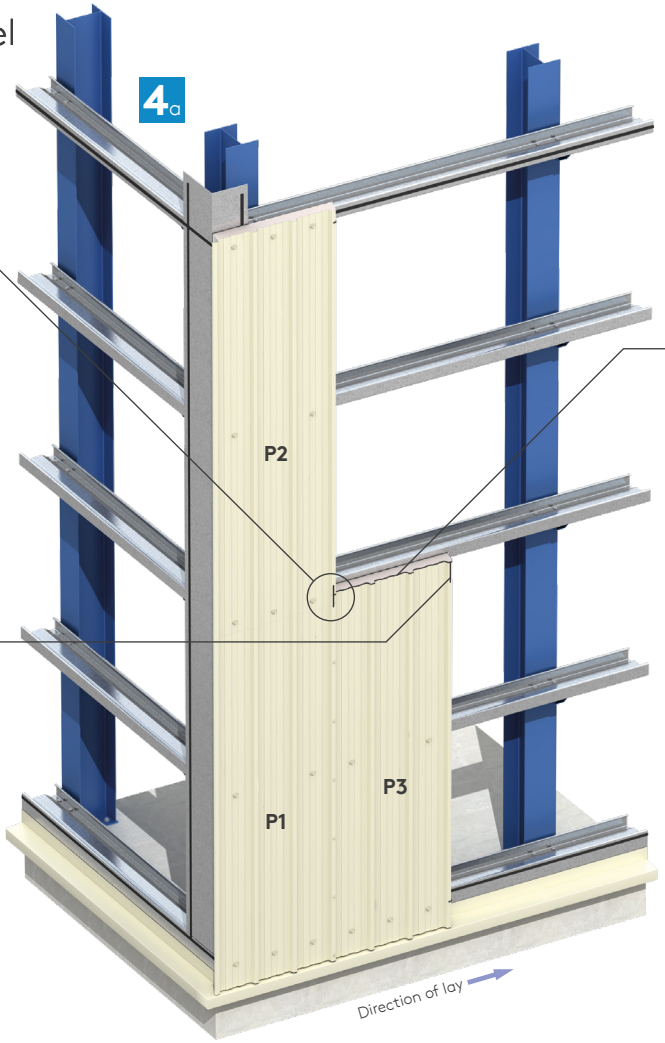
Locate and install third panel (**P3**) ensuring it is correctly positioned lined and levelled and a minimum of 5mm above the drip flashing.

Ensure side joint on (P3) is pulled tight to P1 to close any gaps

Fix third panel (**P3**) with 3No. main fasteners per cladding rail (minimum) at panel ends & 2No. at intermediate locations subject to wind loadings

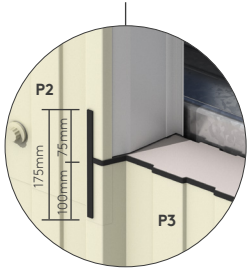
QuadCore® KS1000RW Wall Panel

Vertical Installation



16

Additional 175mm length of 4mm Ø butyl tape sealant from (**P3**) onto (**P2**) as illustrated. Ensure this is tightly butted with the 4mm Ø butyl tape end lap seal

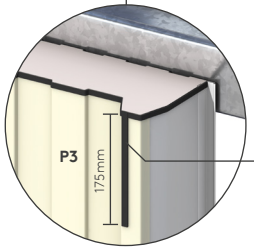


15

Apply 4mm Ø butyl tape sealant following the profile across full width of panel (**P3**), positioned along the flush end

17

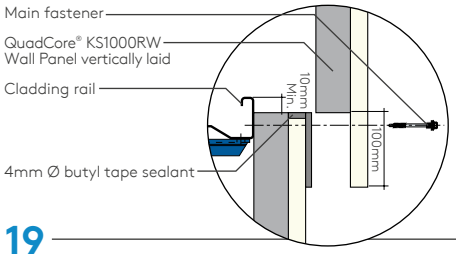
Apply 175mm length of 4mm Ø butyl tape sealant onto the weatherside of the crown profile on (**P3**) as illustrated. Ensure it is tightly abutted with the 4mm Ø butyl tape end lap seal



4mm Ø butyl tape sealant to weather side of crown profile

QuadCore® KS1000RW Wall Panel

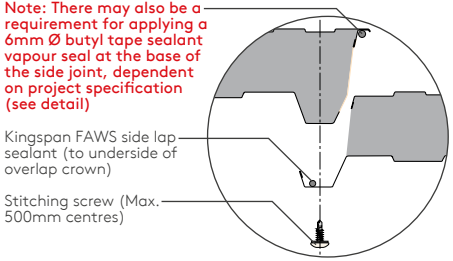
Vertical Installation



19

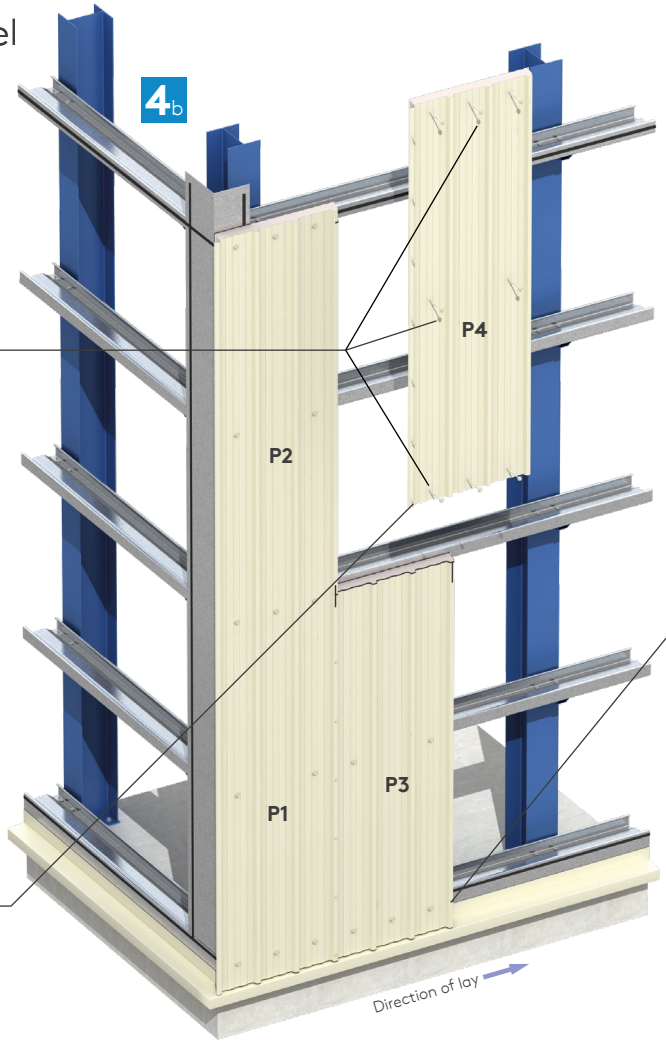
Locate and install forth panel (**P4**) ensuring it is correctly positioned lined and levelled. Ensure side joint on (**P4**) is pulled tight to (**P2**) to close any gaps. Fix second panel (**P4**) with 3No. main fasteners (minimum) at end lap locations. Fasteners positioned approximately 80mm up from the panel end lap (main fastener to penetrate both upper and lower panel). 3No (minimum) per cladding rail at panel ends & 2No. at intermediate locations subject to wind loadings

Note: There may also be a requirement for applying a 6mm Ø butyl tape sealant vapour seal at the base of the side joint, dependent on project specification (see detail)



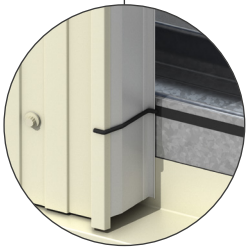
20

Install side lap stitching screws at 500mm centres commencing 50mm from panel end



18

Apply 6mm Ø gun-grade butyl air seal to the side joint, from the internal air seal to the side lap weatherside

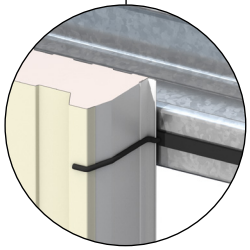


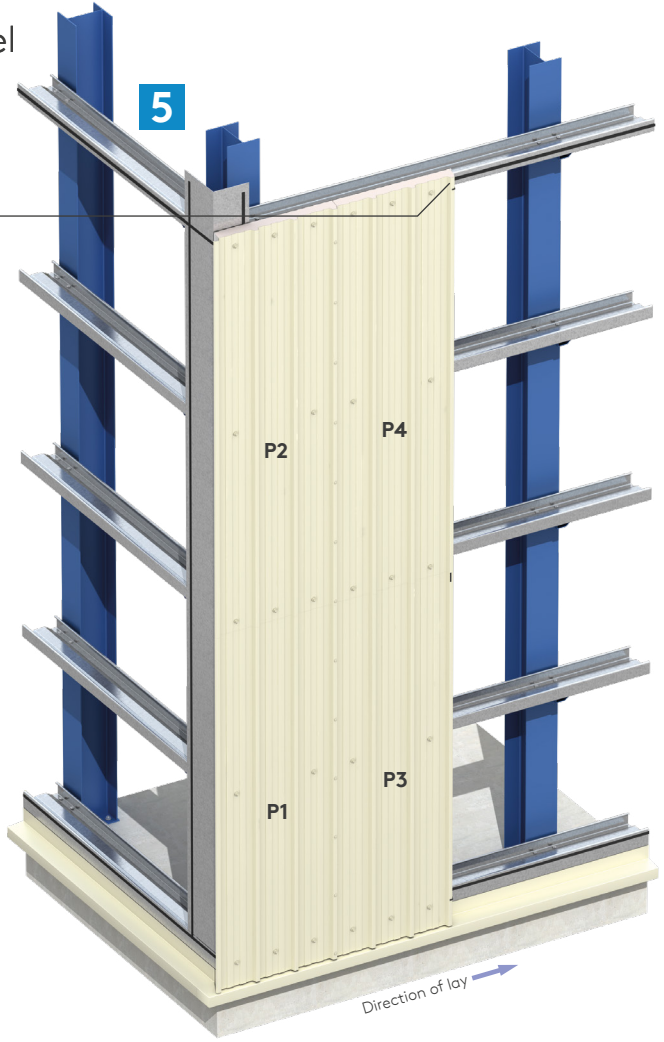
QuadCore® KS1000RW Wall Panel

Vertical Installation

21

Apply 6mm Ø gun-grade butyl air seal to the panel side joint, from internal air seal to the side lap weather seal

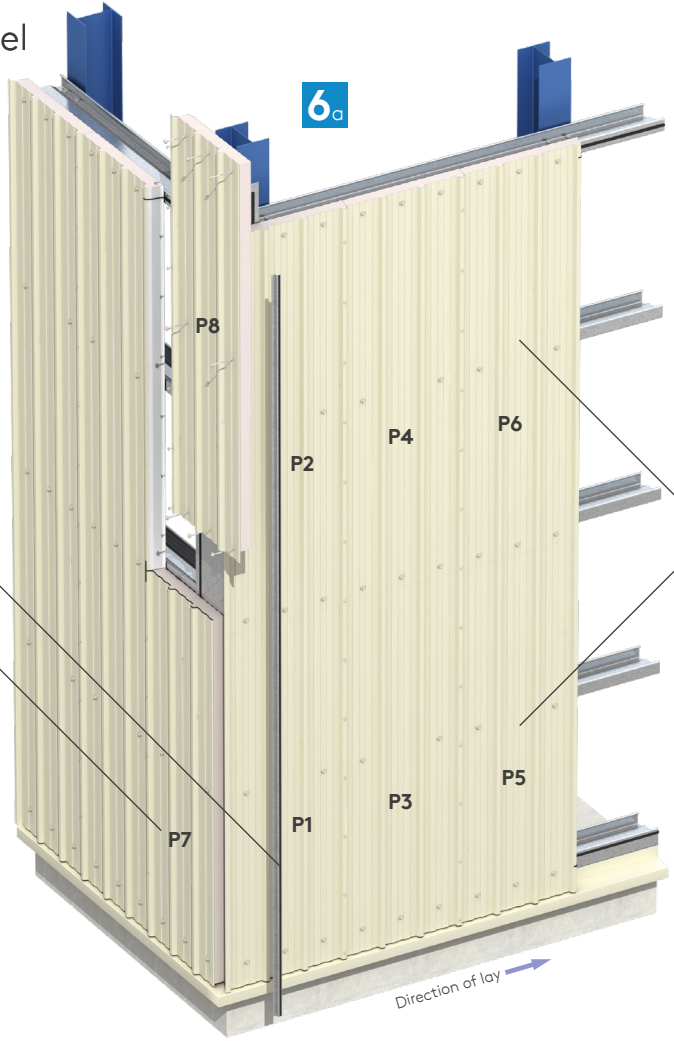




QuadCore® KS1000RW Wall Panel

Vertical Installation

Note: Do not use abrasive wheel cutter. All cutting to be done at ground level



23

Apply 9 x 3mm butyl tape sealant to the top and bottom flange on the support zed. Zed support lapped 100mm at joints. Fix support zed to panel at 450mm centres

24

Cut panel (**P7**) to size using an Evolution type circular saw, ensuring it meets the outside edge of (**P1**). Locate panel (**P7**) ensuring it is correctly positioned lined and levelled and a minimum of 5mm above the drip flashing.

Ensure side joint on (P7) is pulled tight to the previously installed panel to close any gaps.

Fix panel (**P7**) with 3No. main fasteners per cladding rail (minimum) at panel ends & 2No. at intermediate locations subject to wind loadings

22

Repeat process **1** to **21** to complete elevations

QuadCore® KS1000RW Wall Panel

Vertical Installation

Note: Do not use abrasive wheel cutter.
All cutting to be done at ground level

26

Cut panel (**P8**) to size using an Evolution type circular saw, ensuring it meets the outside edge of (**P2**).

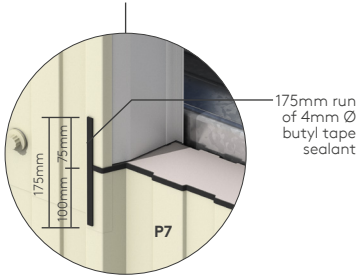
Locate and install panel (**P8**) ensuring it is correctly positioned lined and levelled.

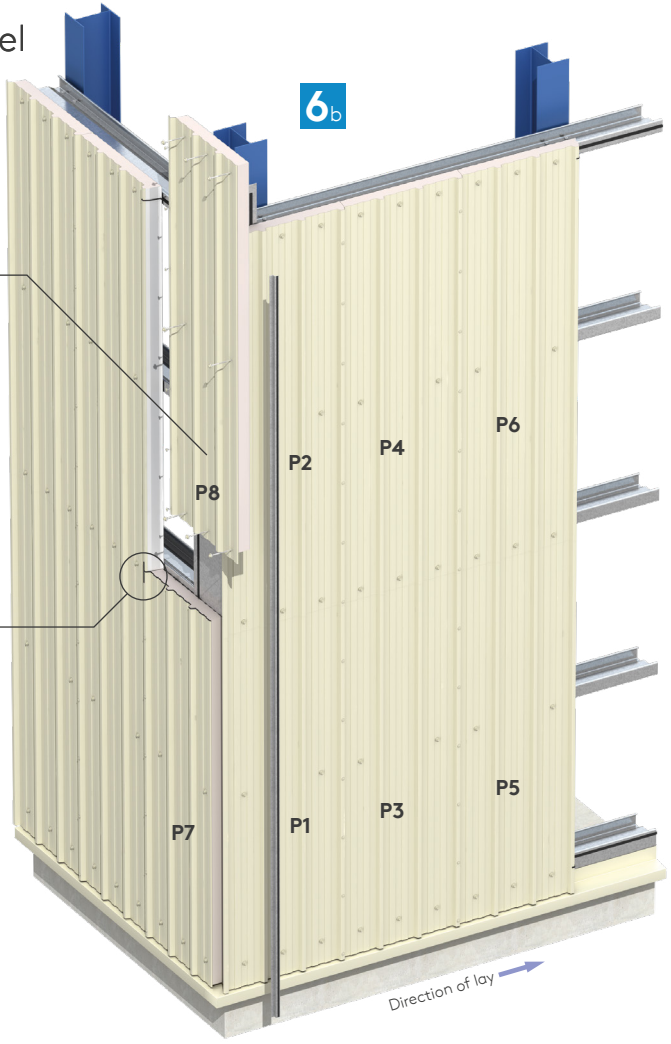
Ensure side joint on (P8) is pulled tight to previously installed panel to close any gaps.

Fix panel (**P8**) with 3No. main fasteners (minimum) at end lap locations. Fasteners positioned approximately 80mm up from the panel end lap (main fastener to penetrate both upper and lower panel). 3No (minimum) per cladding rail at panel ends & 2No. at intermediate locations subject to wind loadings

25

As per processes **1** to **21** ensure the additional 175mm length of 4mm Ø butyl tape sealant from (**P7**) onto previously installed panel as illustrated. Ensure this is tightly abutted with the 4mm Ø butyl tape end lap seal





QuadCore® KS1000RW Wall Panel

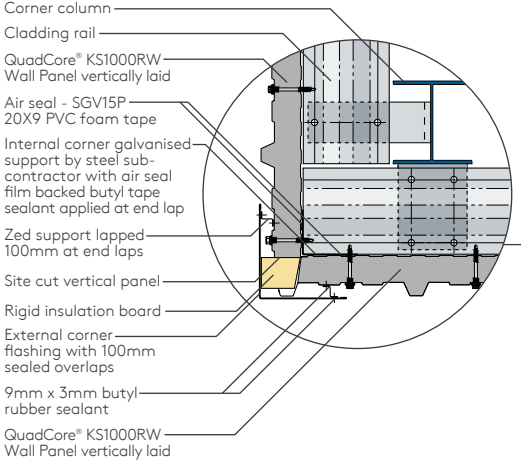
Vertical Installation

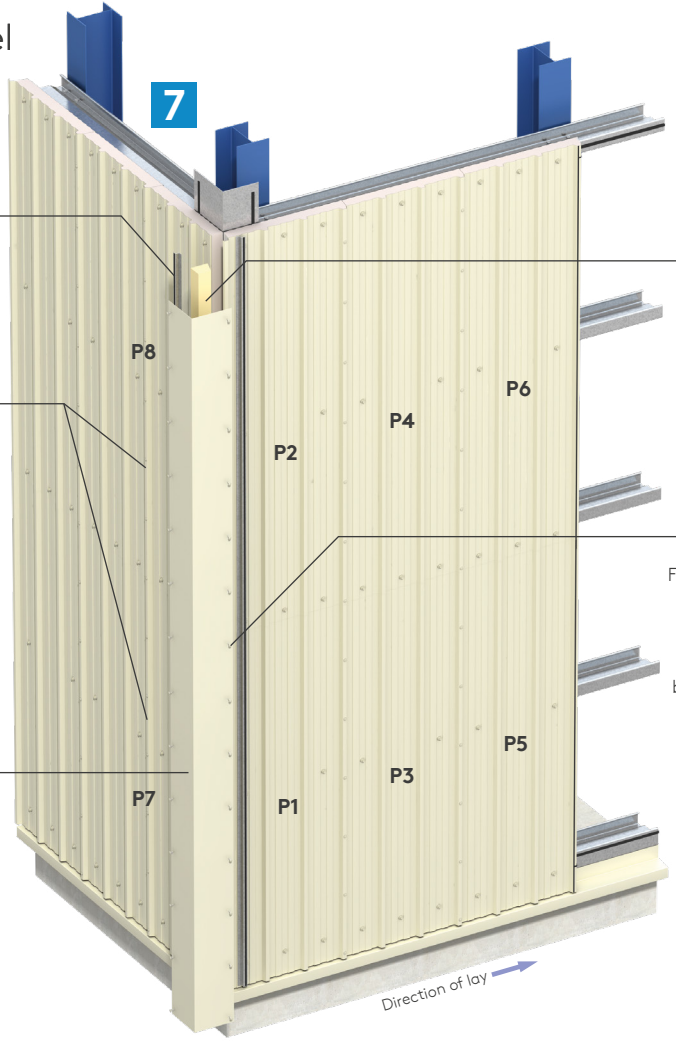
28

Apply 9 x 3mm butyl tape sealant to the top and bottom flange on the support zed. Zed support lapped 100mm at joints. Fix support zed to panel at 450mm centres

27

Install side lap stitching screws at 500mm centres commencing 50mm from panel end





29

Install site-applied rigid insulation board and gun applied B1 fire rated canister foam to fill the gap between panels to ensure continuity of insulation

30

Fix external corner flashing to zed supports with stitching screws at max. 450mm centres. Joints in the corner flashing should be lapped or butt strapped 100mm sealed with 2No. Runs of 4mm Ø butyl tape sealant

Notes

Installation guides are available for most of Kingspan insulated roof and wall panels.
Please call Kingspan Tech-eXchange team on the numbers below.

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