

Evolution Panelised Façade

Axis, Recess, Multi-Groove

Installation Guide

Vertically Laid



Evolution Panelised Façade - Horizontally Laid



Evolution Axis

Evolution Axis is an unprofiled insulated panel system; the perfect solution if you are looking to achieve a minimalist facade on buildings with large, flat surface areas.

Length: 2.0-7.0m

Widths: 900/1000 mm

Evolution Recess

Evolution Recess features depth and dimension through the folding of the panel edge and the insertion of a 10mm or 20mm gasket between the panels, creating a unique 3D effect.

Length: 2.0-7.0m

Widths: 900/1000 mm

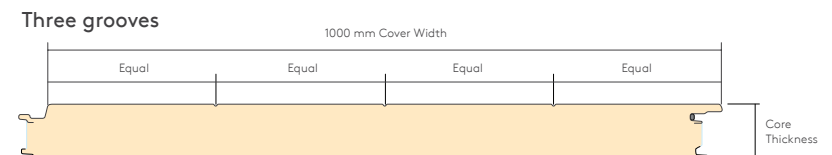
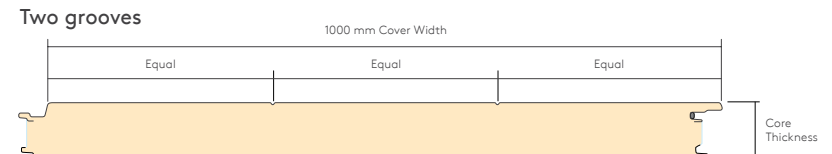
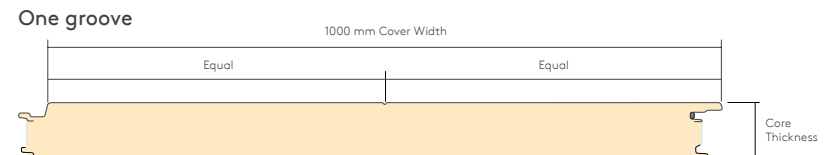
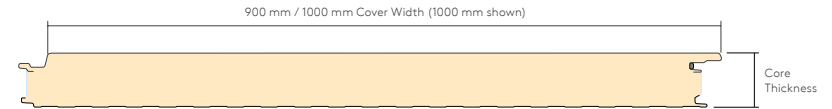
Evolution Multi-Groove

Evolution Multi-Groove has one, two or three grooves engineered into its surface, creating subtle shadow lines on the building's facade and an illusion of smaller panel widths without the installation time constraints.

Length: 2.0-7.0m

Width: 1000 mm only

Note: Dimensions are nominal. Actual dimensions will vary due to manufacturing tolerances. Precise dimensions must always be measured from actual samples. All measurements in mm.



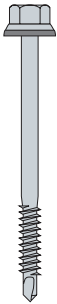
Evolution Panelised Façade - Vertically Laid

Components

Evolution Panelised Façade



Primary fastener with washer
(Carbon Steel with minimum 16mm washer type 4)
NOT BY KINGSPAN



Push-In EPDM bubble gasket
(for Evo Recess only)



Butyl tape sealant
(Code: SEXT)



6x4mm

Gun-grade sealant
NOT BY KINGSPAN
Butyl Mastic or neutral cure silicone



Canister applied fire-rated PU foam
NOT BY KINGSPAN



Secondary/Stitching screw
(Carbon Steel)
NOT BY KINGSPAN



AWP filler
(Code: 3FILL)



Roller - gasket installation



This installation guide should be read in conjunction with the 'project specific' design drawings and Kingspan standard details.

Although this installation guide is deemed to be correct at the time of publication, Kingspan reserve the right to amend the information at any time in the future. Installation Guides are available for the full range of Kingspan Insulated Roof and Wall Systems.

Evolution Panelised Façade - Vertically Laid

Notes

This is a generic Evolution Panelised Façade installation guide. Details may differ from project to project. Project specific construction details must be used unless those details are contrary to the principles of the Kingspan details; in which case specific instruction should be sought.

Sequence

The panels are laid either 'Right to Left' or 'Left to Right'. The panels can not be back-laid.

Support Structure

Ensure steelwork is suitably plumb, level and within tolerance before starting the installation of the panels. If the panels have horizontal joints then check the bearing width, location and straightness of the structural support at that location for both upper and lower panel.

The minimum bearing face for intermediate supports is 60mm.

The support must provide a full bearing surface for the panel

Install

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

When practical, cut panels on ground prior to installation. Clean any swarf from the panel immediately

The protective film is to be removed from the external weather face of panel & internal liner before to installation.

Gun-grade sealant is butyl sealant for air seals and neutral cure silicone for weather seals.

Fixings

The number of fasteners must be calculated based on spans, wind loads and fastener capacity.

All fasteners to be minimum Class 4 Carbon steel with coloured heads (if visible), refer to the specification. Check that the fixing thread and drill tip is correct for connection to the structure.

Install fasteners with the recommended screw gun speed selection. Use correct socket and drive, including depth-locating nose piece to prevent over driving. Refer to the fastener manufacturer's recommendations.

Contact Kingspan Technical Services for project specific advice on High Humidity buildings and cyclonic regions.



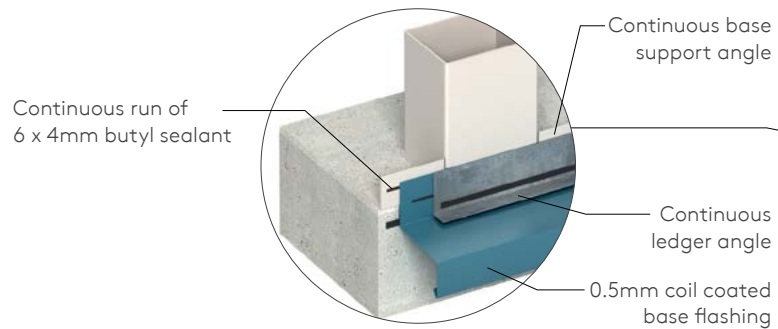
**Note: Ensure steelwork is suitable for panels and is within tolerance
Min. bearing face for intermediate support is 50mm**

2

Apply 6x4mm butyl sealant or
gun grade sealant

1

Line, level and fix base flashing using low
profile fasteners. Joints in the base flashing
to incorporate 150mm overlap or butt straps
sealed with two runs of gun-grade sealant



3

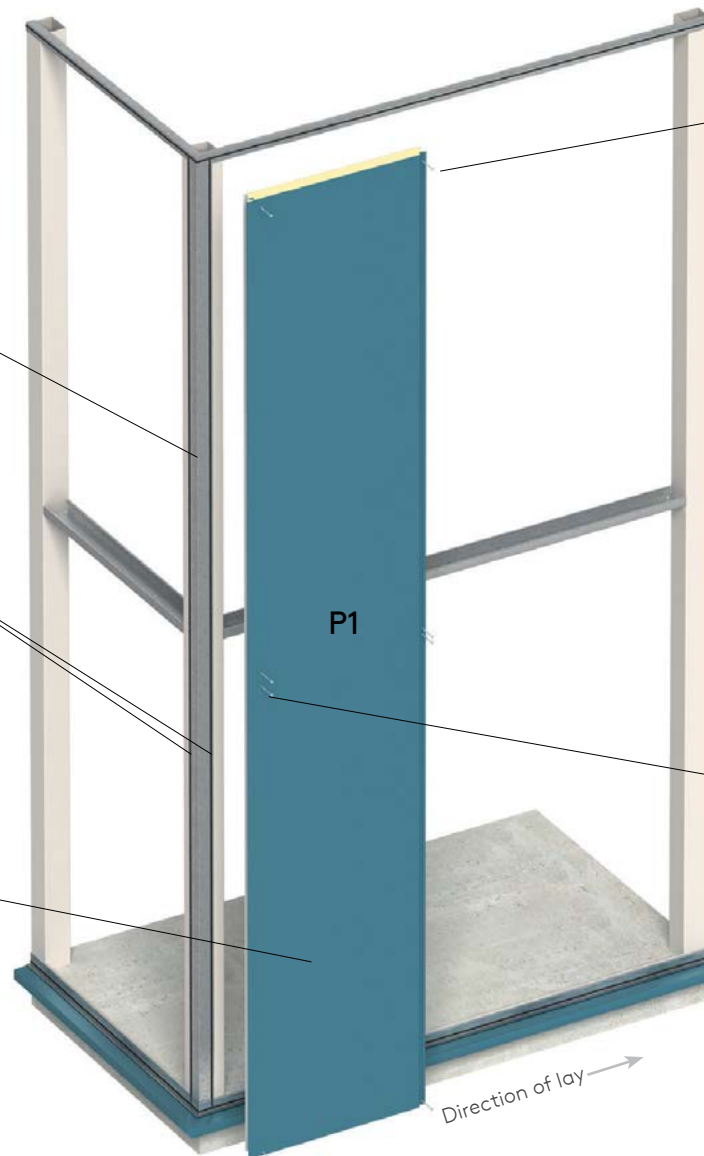
Install internal corner flashing with low profile fasteners

4

Apply 6x4mm butyl sealant or gun grade sealant

5

Locate first panel (P1) ensuring it is correctly positioned lined and levelled



6

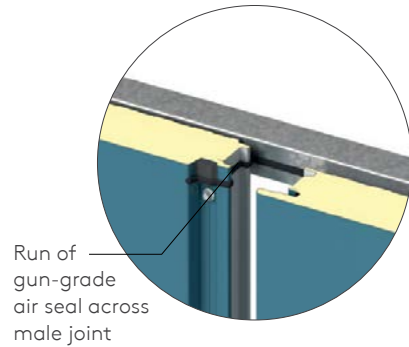
Install min. 1 No. main fastener through the male joint at the top and bottom, and min. 2No. main fastener at intermediate locations

Note: Some installations may require additional fasteners depending on wind loadings/specification. Check project specific details

7

At corner positions through fix min. 2 No. main fasteners at the female panel joint side at each horizontal rail location

Note: Main fasteners to be suitably located to ensure they are covered by external corner flashing



Run of gun-grade air seal across male joint

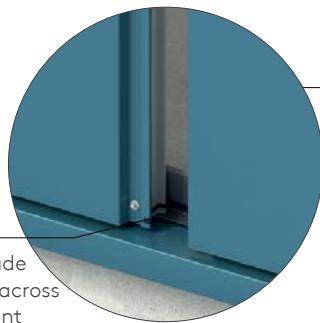
9

AWP filler at top of panel only, run a gun-grade air seal across male joint ensuring it meets previously installed air seal

Note: Position of AWP filler at top of panel

11

Repeat processes 8 to 10 to complete elevation

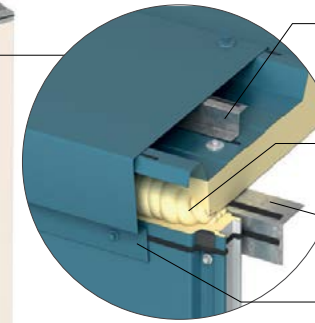
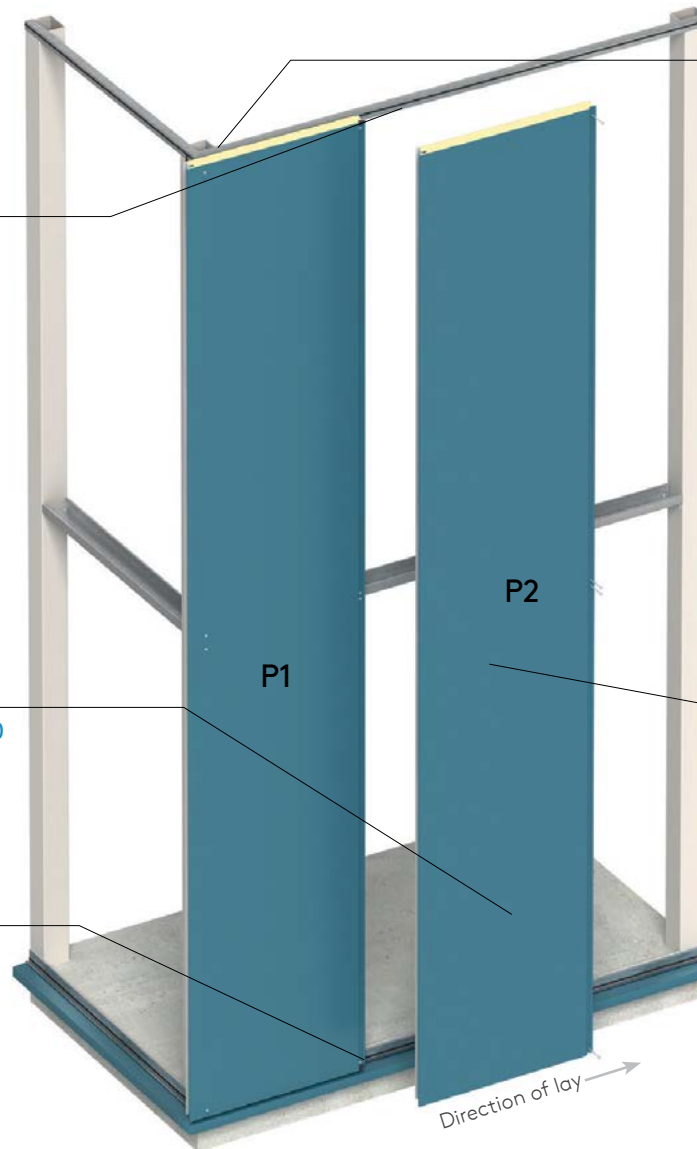


Run of gun-grade air seal across male joint

8

Run a gun-grade air seal across male joint ensuring it meets previously installed air seal

Do not apply AWP filler



'Z' flashing with continuous runs of 6x4mm butyl sealant

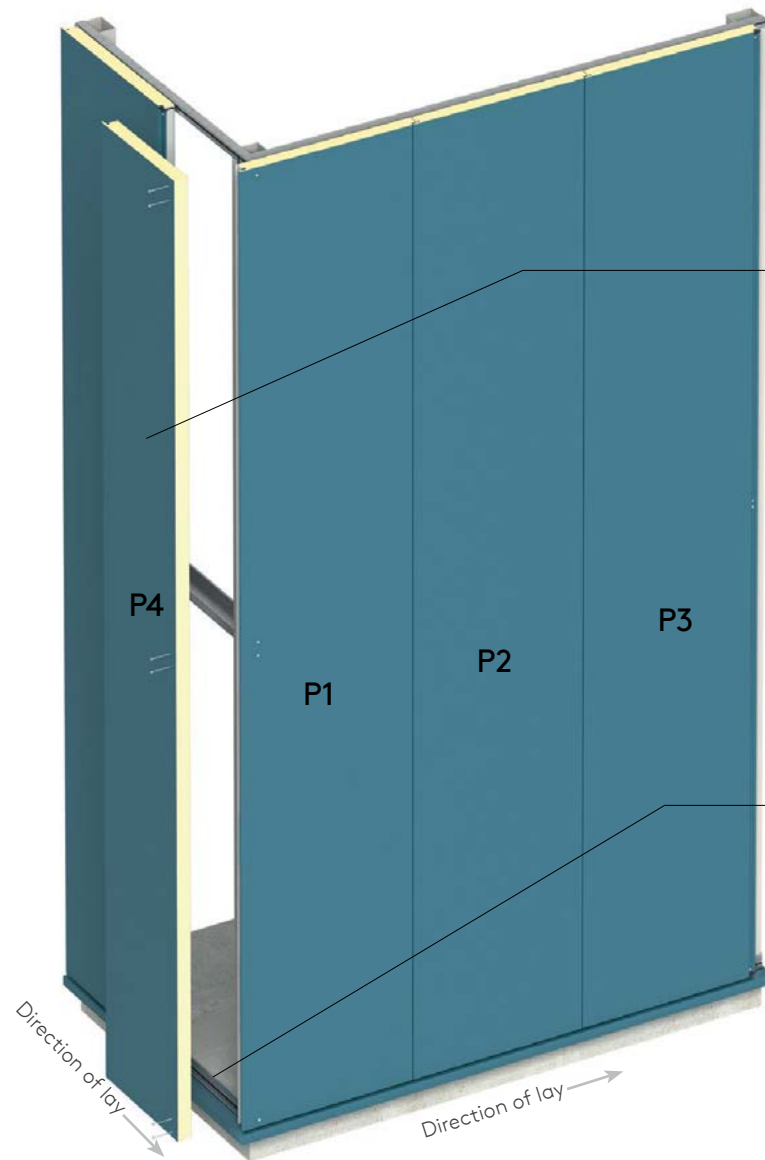
Fill gaps with FR canister insulation

Galv cleader angle by steel contractor

0.5mm coil coated verge flashing with 150mm sealed overlap or butt-straps

10

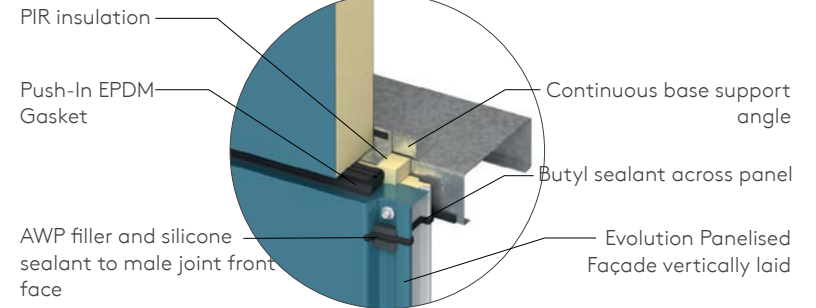
Locate next panel (P2) into position ensuring that the factory applied weather seal is compressed and that the AWP filler remains in position. Ensure panel is lined and levelled correctly in line with adjacent panel and fix as per item f



12

Locate panel (P4) into position ensuring factory applied weather seal is compressed and AWP filler remains in position

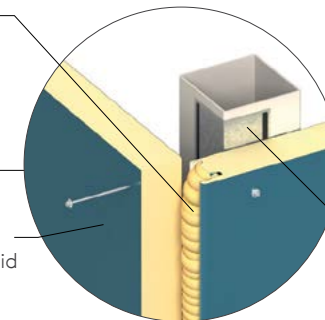
Panel Stack Joint
(EVO Recess only)



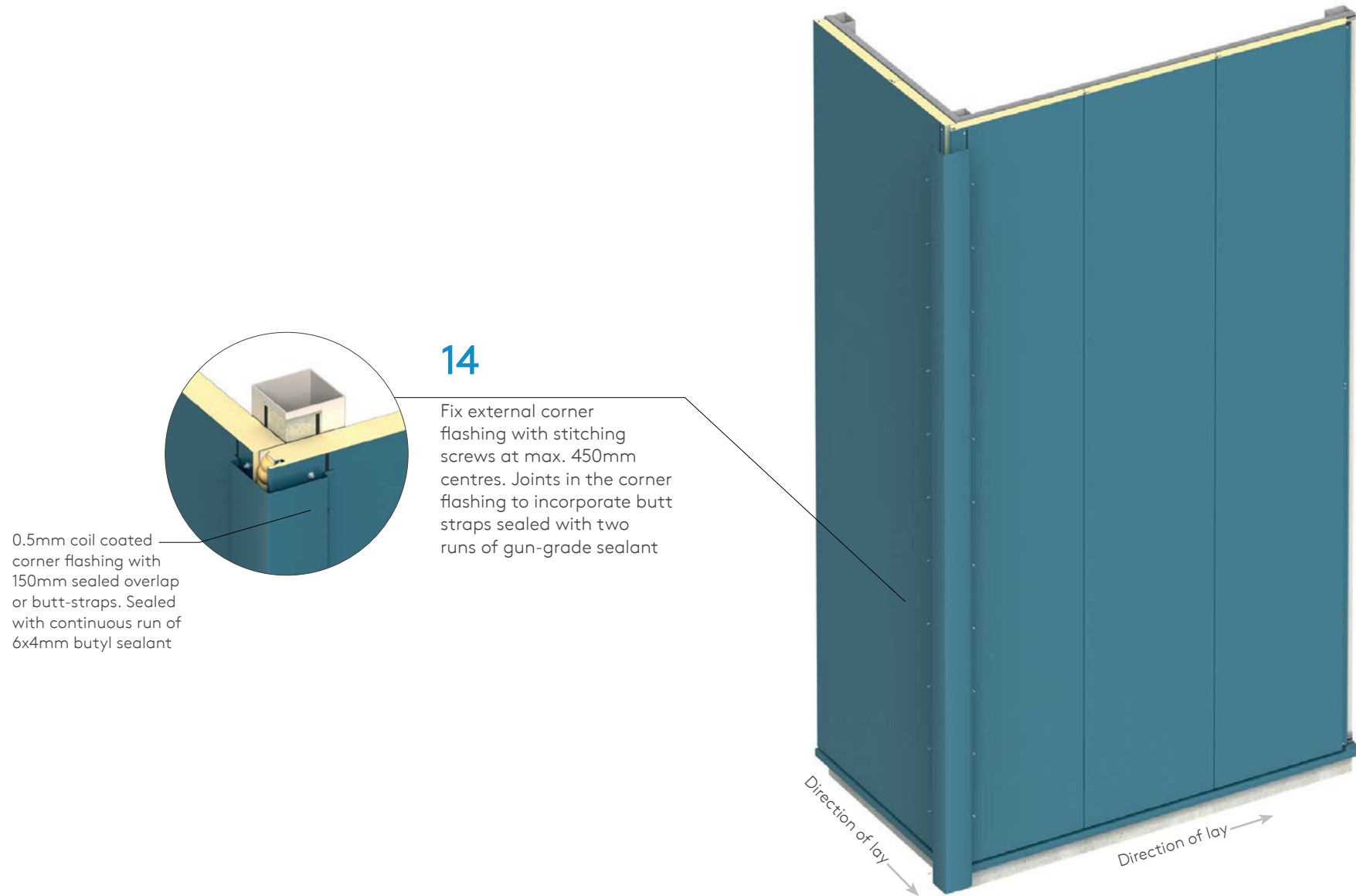
13

Fill gaps with FR foam filler

Evolution Panelised Façade vertically laid



Internal flashing with 150mm sealed overlap or butt-straps. Sealed with continuous run of 6x4mm butyl sealant



Evolution Panelised Façade - Vertically Laid

Panel Handling

Lift only one bundle at a time. Do not stack more than two bundles high

Appropriate personnel protective equipment should always be worn to avoid cuts and abrasions to installers and panels.

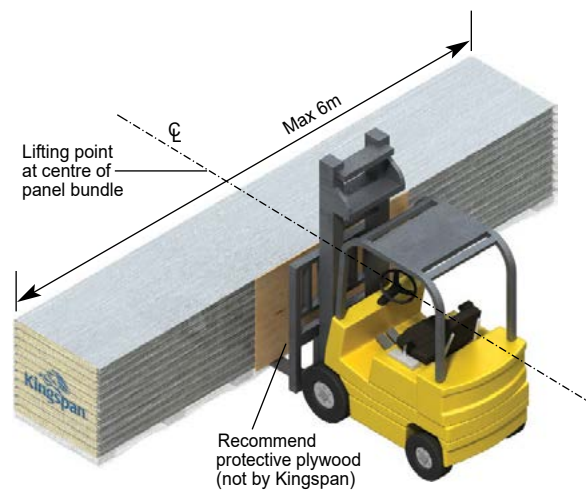
Individual panels should always be lifted from a pack and not dragged over others.

The weight of individual panels for lifting can be determined from the information on the packing slip.

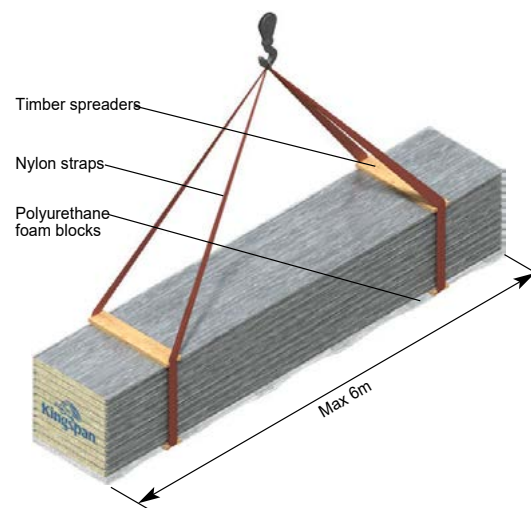
For larger panels the contractor would normally arrange to use appropriate material installation equipment to help lift the panels into position.

Protecting Film

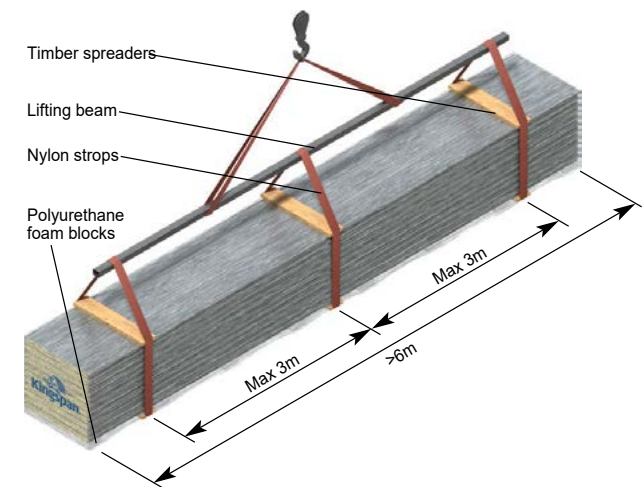
When panels are supplied with a plastic protective film this should be removed prior to site installation.



The recommended loading/unloading method for bundles less than or equal to 6m is to use a single forklift with widely spaced forks placed under the centre of the bundle as shown.



The recommended lifting method for bundles more than or equal to 6m can be handled with a forklift spreader or a crane by using nylon straps and timber spreaders as shown.



The recommended lifting method for bundles more than 6m, by crane, is by using three points of support. To prevent damage from nylon straps, use wood spreaders at top and bottom at lifting locations as shown.

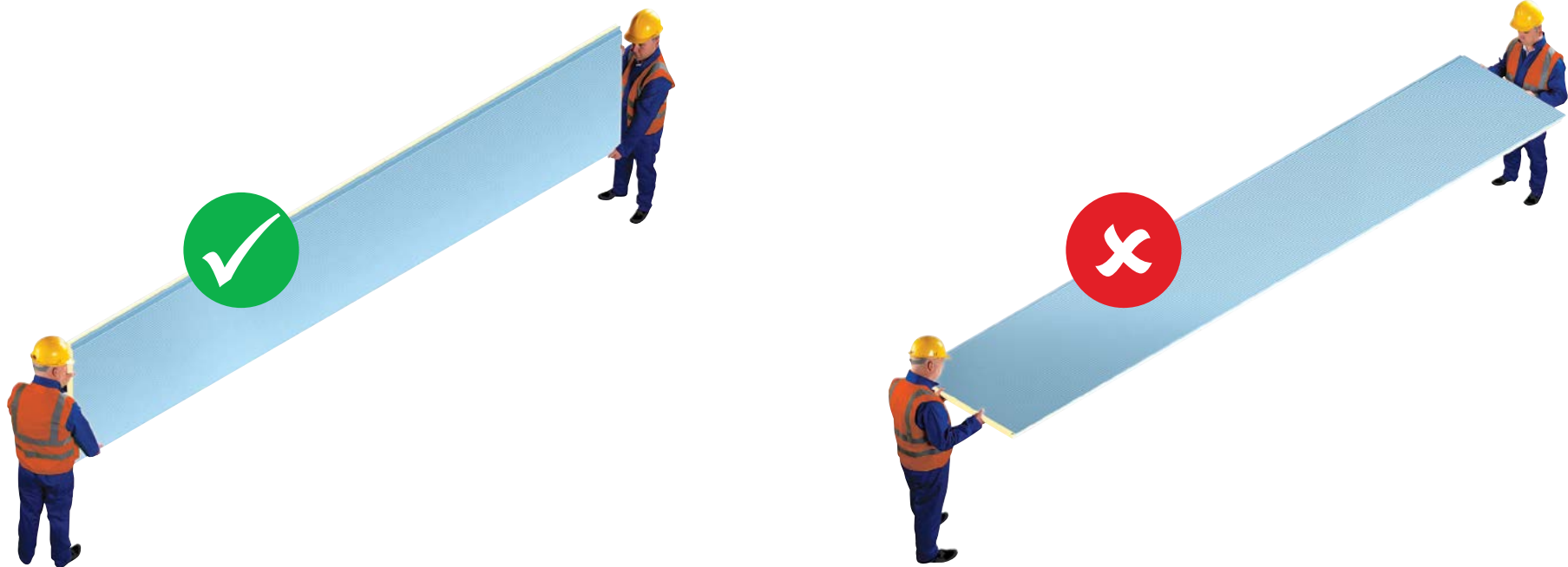
For illustration purposes only

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Correct and Incorrect Panel Handling

Caution

Individual panels should never be moved in a flat position as excessive flexing may result. Excessive flexing ruptures a panel's core, permanently distorts the facings and may lead to thermal blistering. When moving a panel, it must be turned on its edge first, then supported at each end with as many men as necessary to safely handle.



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