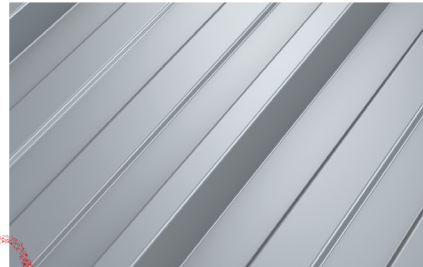
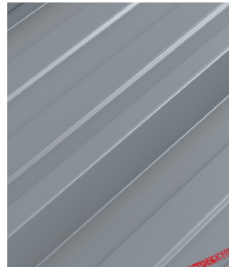
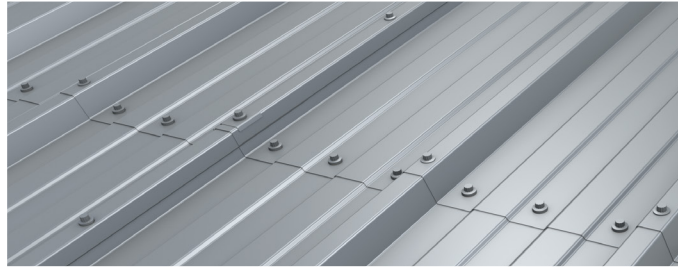


K-Clad Roof Panel Installation Guide

Multiple Panels Eaves to Ridge
75mm End Lap



Factory Applied Weather Seal
(FAWS) to side laps only



K-Clad Roof Panel

Multiple Panels Eaves to Ridge
75mm End Lap

Components

K-Clad Roof Panel

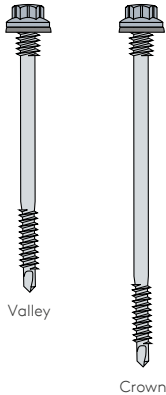


Profiled ridge filler (Code: 3RWFill)



Primary / main fastener

(Carbon Steel)
(Not by Kingspan)



Valley

Crown

Secondary / stitching screws with washer

(Carbon Steel)
(Not by Kingspan)



Panel

Fire rated canister foam

(Not by Kingspan)



Neutral cure gun-grade sealant

(Not by Kingspan)



Storm washer



Storm 35-23 (K-Clad)

Butyl tape sealant

(Code: SEXT)



6x4mm

Cordless drill

(Not by Kingspan)



Depth locator

Butyl co-laminate tape sealant



50x6mm butyl tape with PE foam co-laminate centre

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

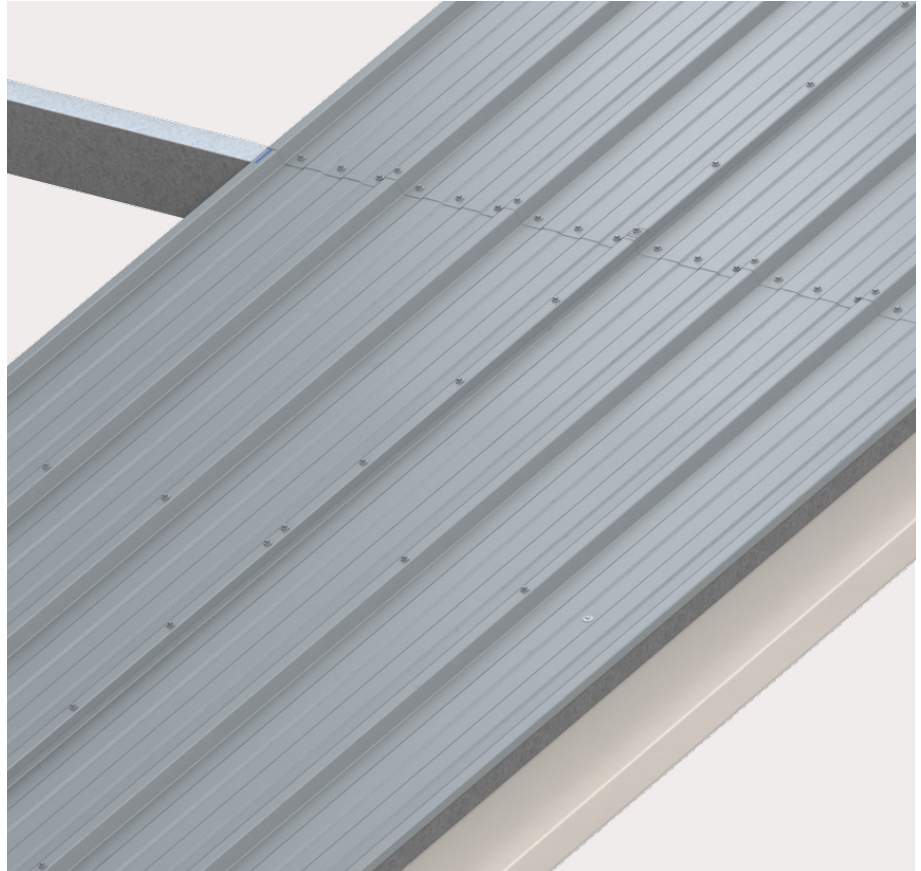
Although this installation guide is deemed to be correct at the time of publication, Kingspan reserve the right to amend the information at any time in the future. Installation Guides are available for the full range of Kingspan Insulated Roof, Wall and Facade Systems.

K-Clad Roof Panel

Multiple Panels Eaves to Ridge 75mm End Lap

Notes

- Ensure steelwork is suitable for panels and is within tolerance.
- Ensure lower panel is bearing on to purlin by a minimum of 50mm.
- A factory Applied Weather Seal (FAWS) is applied to all panel side laps.
- Apply 6mm x 4mm butyl air seal to ridge, verge & eaves positions.
- Gun-grade sealant referred to is: – neutral cure gun-grade sealant.
- Please contact Kingspan Technical Services Department for guidance
 - Internal air seals
 - High humidity & hygiene internal environments
 - Project specific advise
- End lap air seal 50 x 6mm butyl tape with PE foam co-laminate centre.
- All sealants to suit project specification requirements.
- Protective film to be removed from external weather face of panel & internal liner, where applicable, prior to installation.
- Colour of sealants within this installation guide are for illustration purposes.
- K-Clad Roof Panel can be turned up at the ridge.
- Penetrations larger than 300mm x 300mm must be framed out with structural steel.
- Clean swarf off panels immediately when created.
- Ensure panel joints are pulled tight to adjacent panels to close any gaps as works progress.
- This installation guide provides generic guidance on installation methods, however, should be read in conjunction with project specific specifications and construction details.
- 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.



K-Clad Roof Panel

Multiple Panels Eaves to Ridge

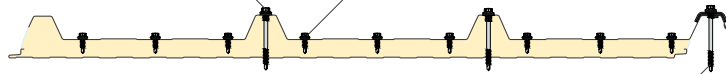
75mm End Lap

Fastener Layouts

End / Side Lap

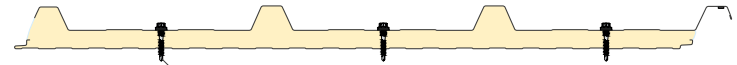
Self-drilling self-tapping primary crown fasteners with minimum $\text{\O}19\text{mm}$ washer 40mm upslope from panel end. Colour to suit panel

End lap stitching screws (6.3mm \O x 28mm long) with minimum $\text{\O}14\text{mm}$ washers 3 per valley, 40mm upslope from panel end. Colour to suit panel



Additional self-drilling self-tapping primary crown fastener with $\text{\O}19\text{mm}$ washer and saddle washer at 3 & 4-way lap joints only, 40mm upslope from panel end. Colour to suit panel.

Ridge



Self-drilling, self tapping primary valley fasteners with minimum 19mm \O non-ferrous EPDM backed washer, 1 at each valley at each support

Standard Intermediate, Eaves, Ridge & Side Lap

Side-lap stitching screws with minimum $\text{\O}8\text{mm}$ washer at 450mm centres. Colour to suit panel



Self-drilling self-tapping primary crown fasteners with minimum $\text{\O}19\text{mm}$ washer. Colour to suit panel

Verge



Self-drilling, self tapping primary fasteners with minimum 19mm dia non ferrous EPDM backed washer. 1 in the valley, 2 in the crown at each support

**Note: Minimum number of fasteners as illustrated.
Number of fasteners must be calculated on the project specific spans and wind loads.**

K-Clad Roof Panel

Multiple Panels Eaves to Ridge 75mm End Lap

1

Apply 6x4mm butyl sealant or neutral cure gun-grade butyl sealant to provide perimeter air-seal

Internal ridge flashing with 150mm overlaps sealed with neutral cure gun-grade sealant

Air seal – 6x4mm butyl tape or non-setting neutral cure gun-grade butyl sealant

Internal ridge flashing with 150mm overlap sealed with air seal, film backed butyl tape or neutral cure gun-grade sealant

Air seal – 6x4mm butyl tape or non-setting neutral cure gun-grade butyl sealant

2

The K-Clad roof panel must bear a min of 50mm on the purlin

Position first panel (P1) with a minimum bearing of 50mm onto the purlin. Fix first panel (P1) with 2No. primary crown fasteners and 1No. primary valley fastener per purlin (minimum) at eaves and intermediate locations subject to wind loadings

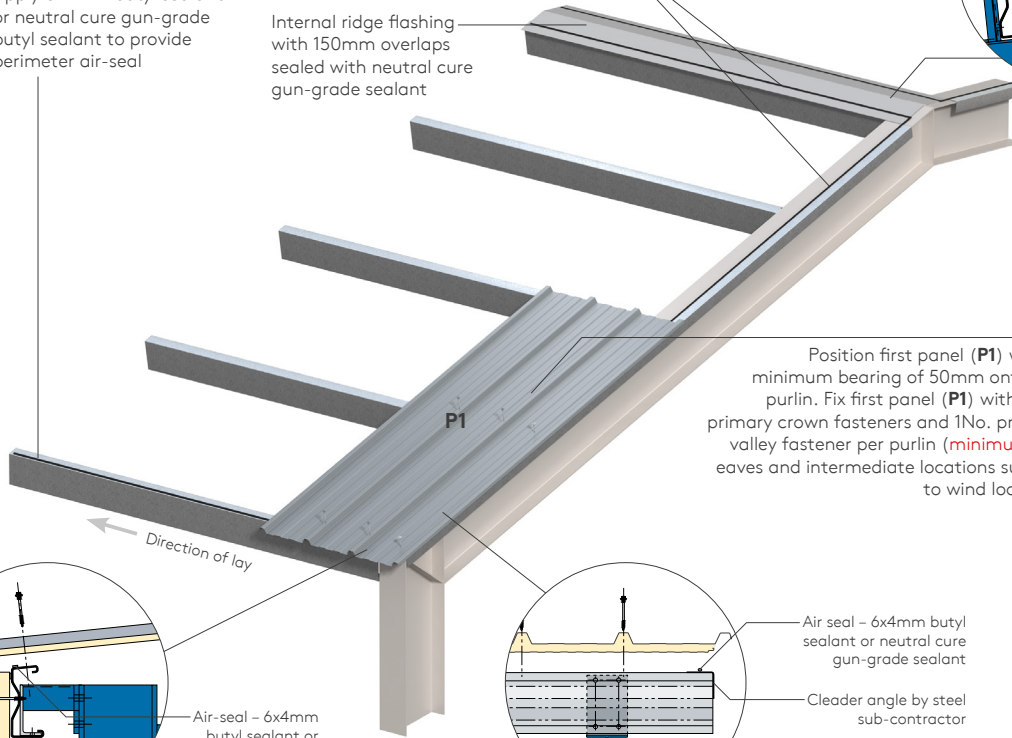
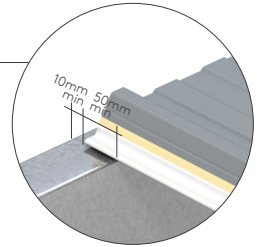
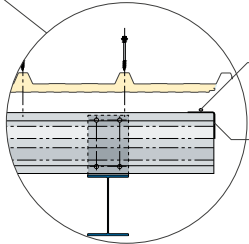
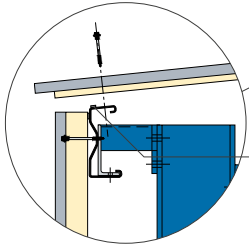
10mm
50mm
min

Direction of lay

Air-seal – 6x4mm butyl sealant or neutral cure gun-grade sealant

Air seal – 6x4mm butyl sealant or neutral cure gun-grade sealant

Cleader angle by steel sub-contractor



K-Clad Roof Panel

Multiple Panels Eaves to Ridge 75mm End Lap

3

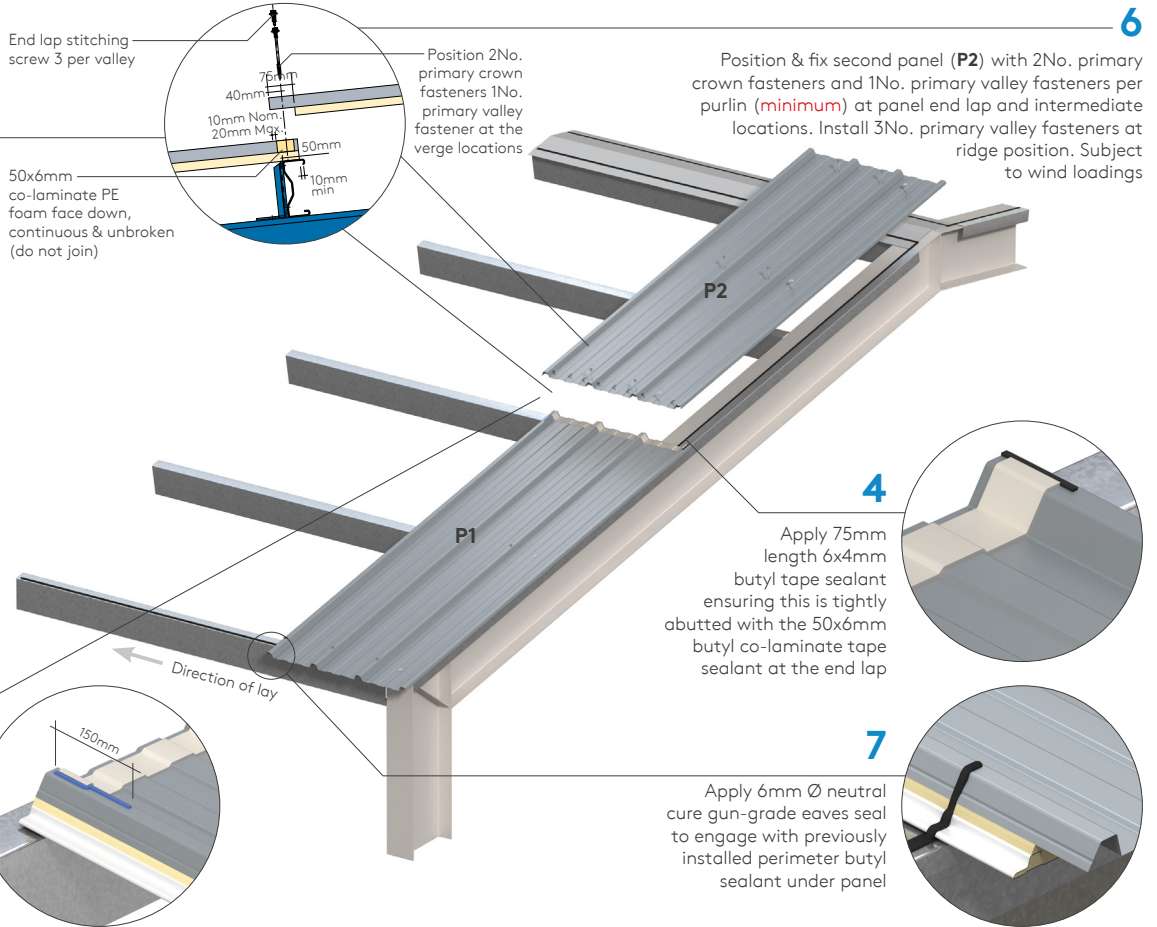
Apply 1 strip of 50x6mm co-laminate butyl tape sealant horizontally across the end lap. The strip sealant should be positioned 10mm nominal up from the end lap edge and should commence / terminate either end leaving sufficient area to apply a 6x4mm butyl tape sealant in order to complete the end lap detail.

Care should be taken to ensure the butyl tape sealant is not stretched and is firmly placed into the corners of the trapezoidal profile before removal of the release paper

5

Apply 150mm length of 6x4mm butyl tape sealant formed to end of 50x6mm butyl co-laminate tape sealant onto the weatherside of the crown profile on (P1) as illustrated.

Ensure this is tightly abutted with the 50x6mm butyl co-laminate tape sealant



End lap stitching
screw 3 per valley

50x6mm
co-laminate PE
foam face down,
continuous & unbroken
(do not join)

Position 2No.
primary crown
fasteners 1No.
primary valley
fastener at the
verge locations

6
Position & fix second panel (P2) with 2No. primary crown fasteners and 1No. primary valley fasteners per purlin (minimum) at panel end lap and intermediate locations. Install 3No. primary valley fasteners at ridge position. Subject to wind loadings

4

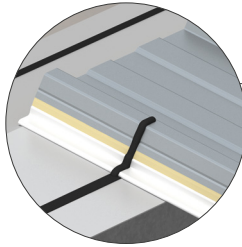
Apply 75mm
length 6x4mm
butyl tape sealant
ensuring this is tightly
abutted with the 50x6mm
butyl co-laminate tape
sealant at the end lap

7

Apply 6mm Ø neutral
cure gun-grade eaves seal
to engage with previously
installed perimeter butyl
sealant under panel

K-Clad Roof Panel

Multiple Panels Eaves to Ridge
75mm End Lap

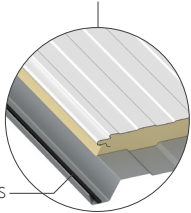


8

Apply 6mm Ø neutral cure gun-grade ridge seal to engage with previously installed perimeter butyl sealant under panel

10

Position third panel (P3) with a minimum bearing of 50mm onto the purlin as item 2. Fix third panel (P3) with 3No. primary crown fasteners per purlin (minimum) at eaves & 3No. primary fasteners at intermediate locations subject to wind loadings. **Panel sidelap with FAWS (Factory Applied Weather Seal)**

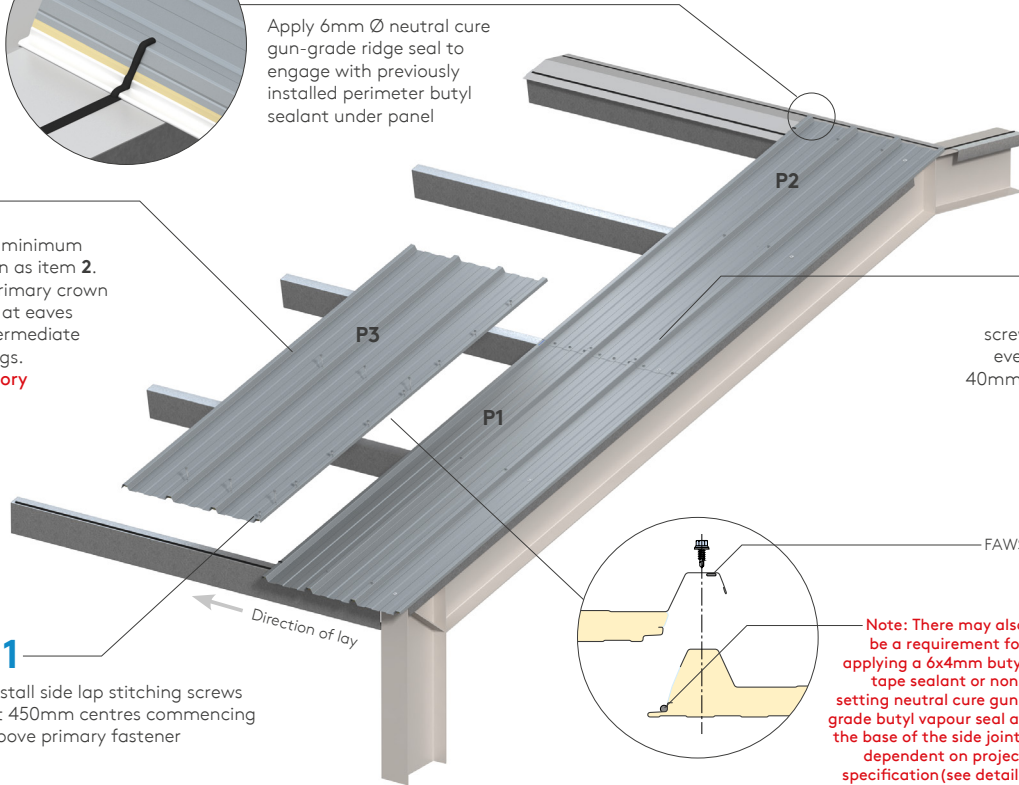


FAWS

11

Install side lap stitching screws at 450mm centres commencing above primary fastener

Direction of lay



9

Install End lap stitching screws, 3 per valley and 1 in every crown, commencing 40mm up from the panel end

FAWS

Note: There may also be a requirement for applying a 6x4mm butyl tape sealant or non-setting neutral cure gun-grade butyl vapour seal at the base of the side joint, dependent on project specification (see detail)

K-Clad Roof Panel

Multiple Panels Eaves to Ridge
75mm End Lap

12

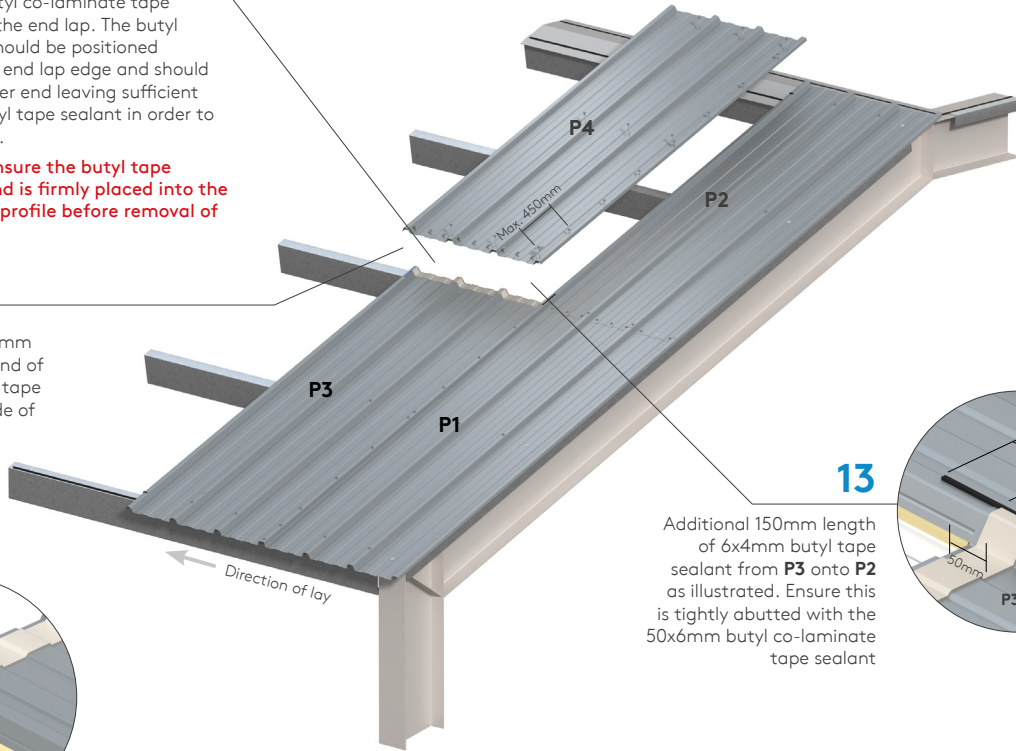
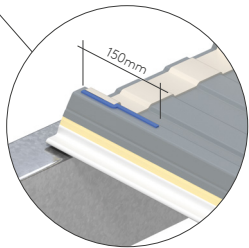
Apply 1 strip of 50x6mm butyl co-laminate tape sealant horizontally across the end lap. The butyl co-laminate tape sealant should be positioned 10mm nominal up from the end lap edge and should commence / terminate either end leaving sufficient area to apply a 6x4mm butyl tape sealant in order to complete the end lap detail.

Care should be taken to ensure the butyl tape sealant is not stretched and is firmly placed into the corners of the trapezoidal profile before removal of the release paper

14

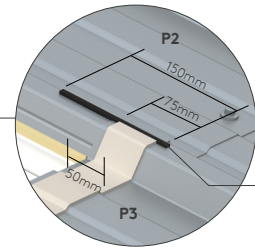
Apply 150mm length of 6x4mm butyl tape sealant around end of 50x6mm butyl co-laminate tape sealant onto the weatherside of the crown profile on (P1) as illustrated.

Ensure this is tightly abutted with the 50x6mm co-laminate end lap seal



13

Additional 150mm length of 6x4mm butyl tape sealant from P3 onto P2 as illustrated. Ensure this is tightly abutted with the 50x6mm butyl co-laminate tape sealant



150mm run of 6x4mm butyl tape sealant

K-Clad Roof Panel

Multiple Panels Eaves to Ridge

75mm End Lap

15

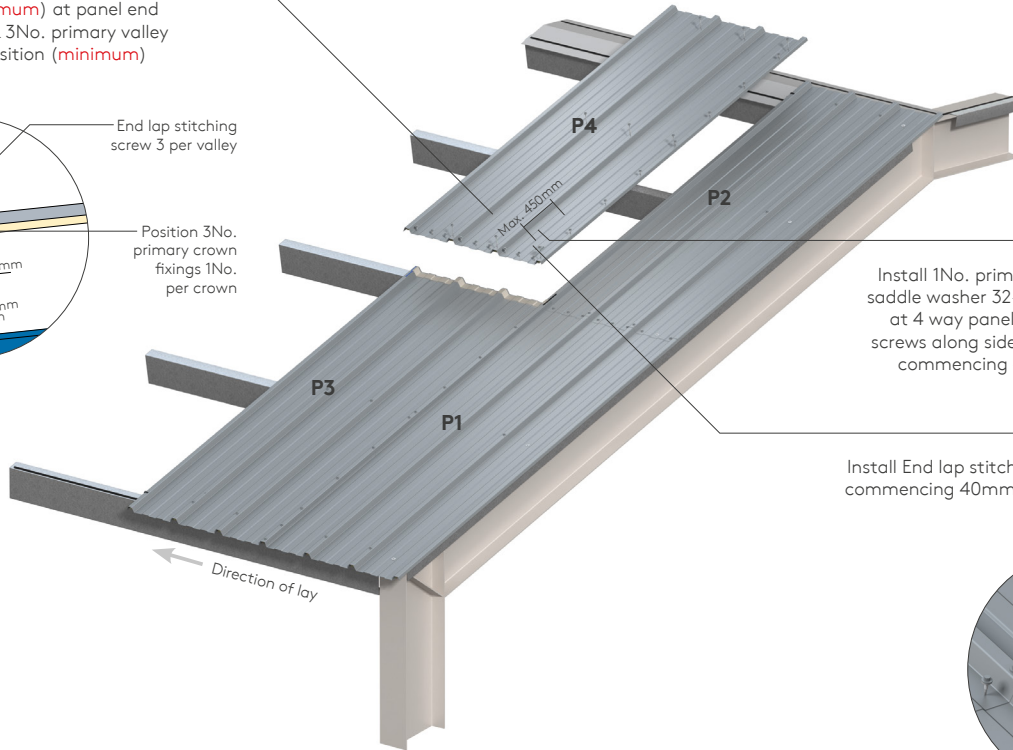
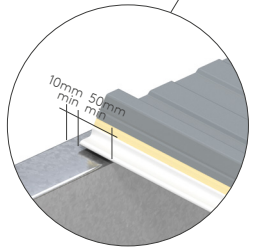
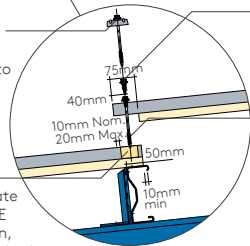
Position & fix fourth panel (**P4**) with 3No. primary crown fasteners per purlin (**minimum**) at panel end lap and intermediate positions & 3No. primary valley fasteners into valleys at ridge position (**minimum**) subject to wind loadings

Position of 1No. including 32x25 saddle washer to crown at 3 & 4 way lap only

End lap stitching screw 3 per valley

Position 3No. primary crown fixings 1No. per crown

50x6mm butyl co-laminate tape sealant, PE foam face down, continuous & unbroken (do not join)

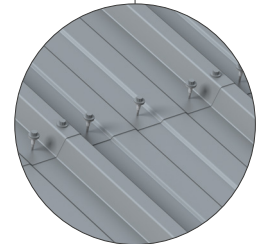


16

Install 1No. primary crown fastener and saddle washer 32-25 to crown into purlin at 4 way panel position. Add stitching screws along side lap at 450mm centres commencing above primary fastener

17

Install End lap stitching screws 3 per valley, commencing 40mm up from the panel end



K-Clad Roof Panel

Multiple Panels Eaves to Ridge

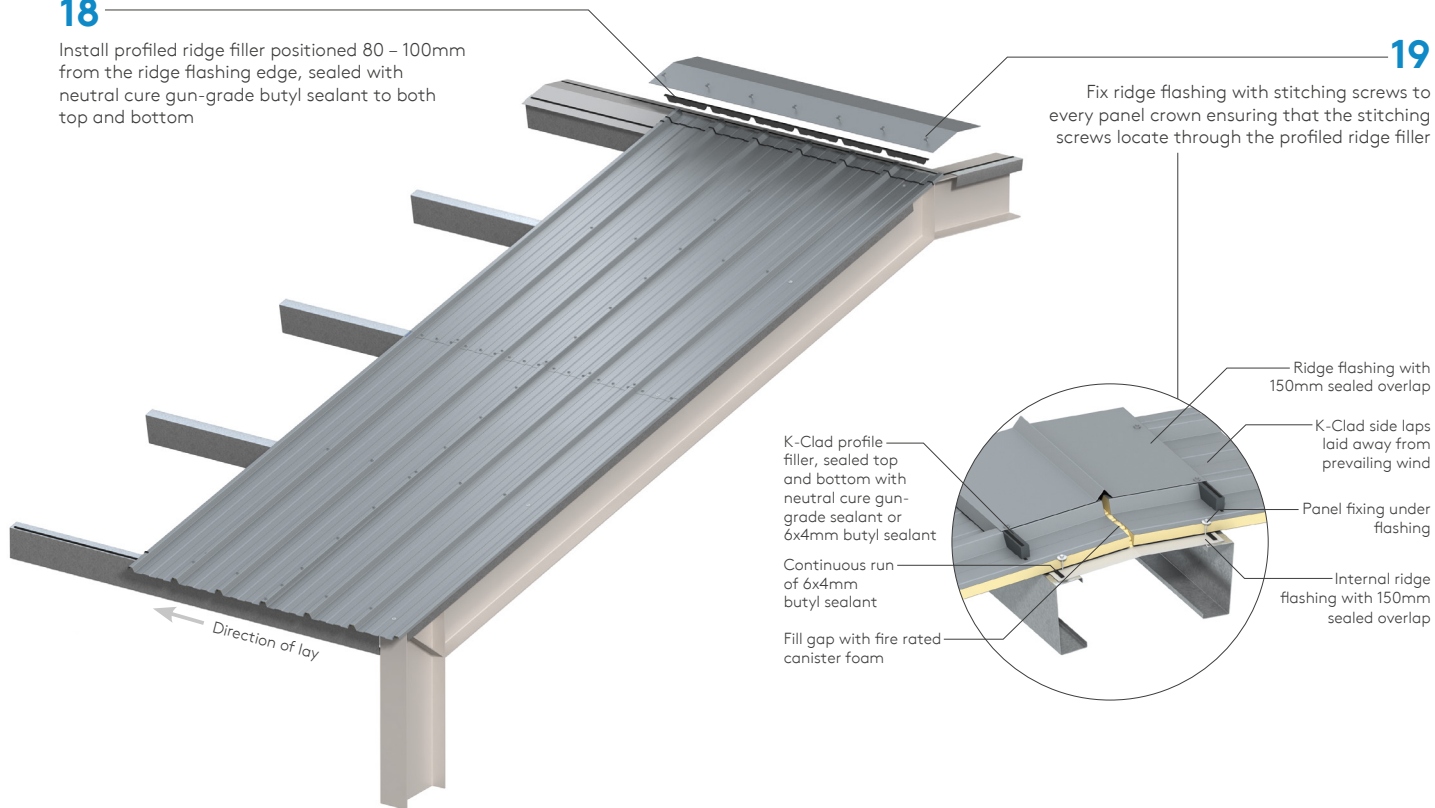
75mm End Lap

18

Install profiled ridge filler positioned 80 - 100mm from the ridge flashing edge, sealed with neutral cure gun-grade butyl sealant to both top and bottom

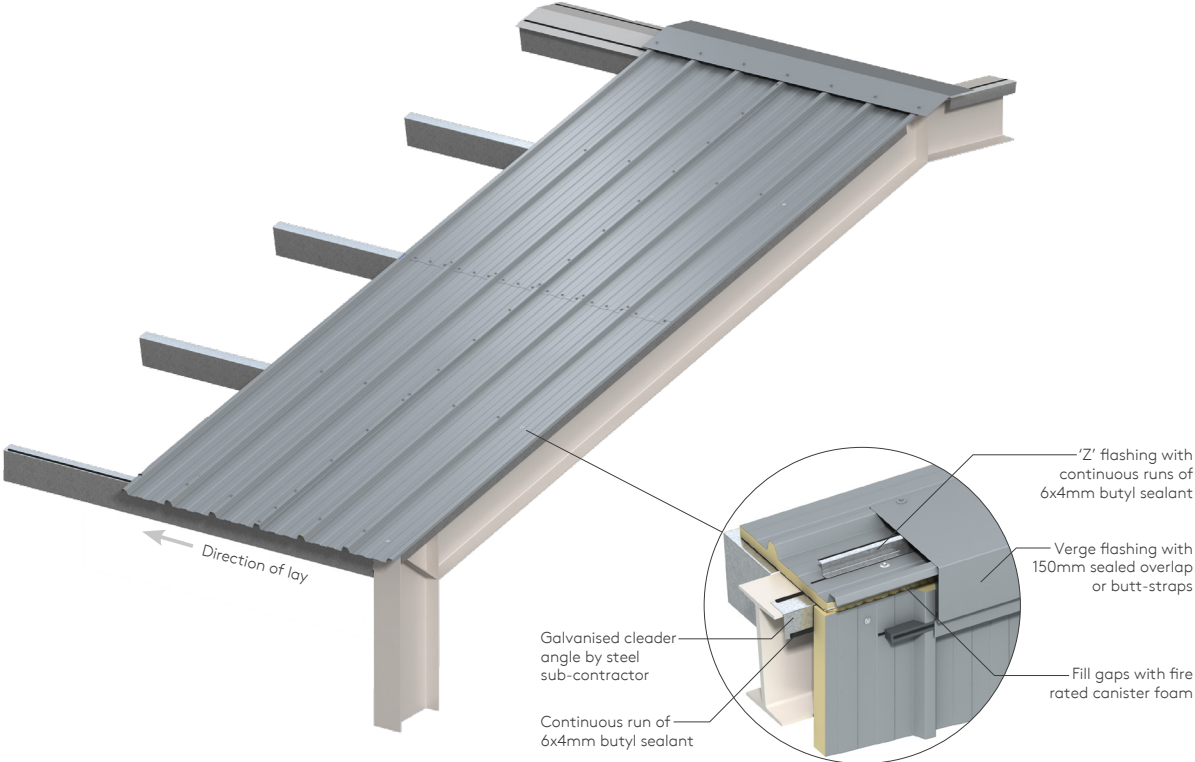
19

Fix ridge flashing with stitching screws to every panel crown ensuring that the stitching screws locate through the profiled ridge filler



K-Clad Roof Panel

Multiple Panels Eaves to Ridge
75mm End Lap



Panel Handling

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

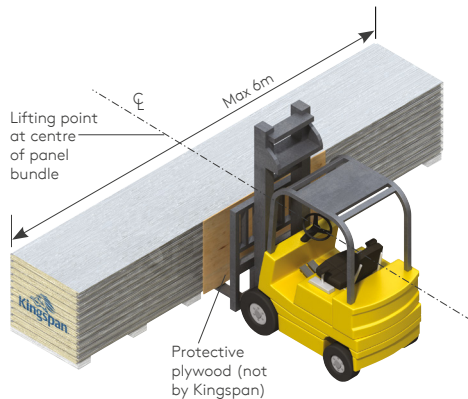
Individual panels should always be lifted from a pack and not dragged over others.

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

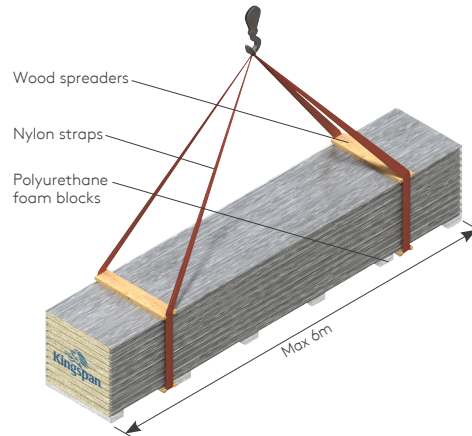
For larger panels the contractor would normally arrange to use appropriate material installation equipment to help lift the panels into position.

Protecting Film

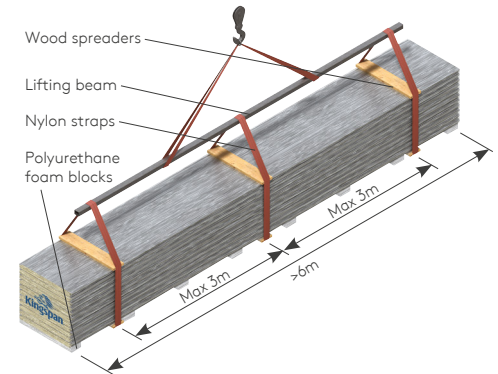
When panels are supplied with a plastic protective film this should be removed during site installation.



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 no more than or equal to 6m can be handled with a crane by using nylon straps and wood spreaders as shown.



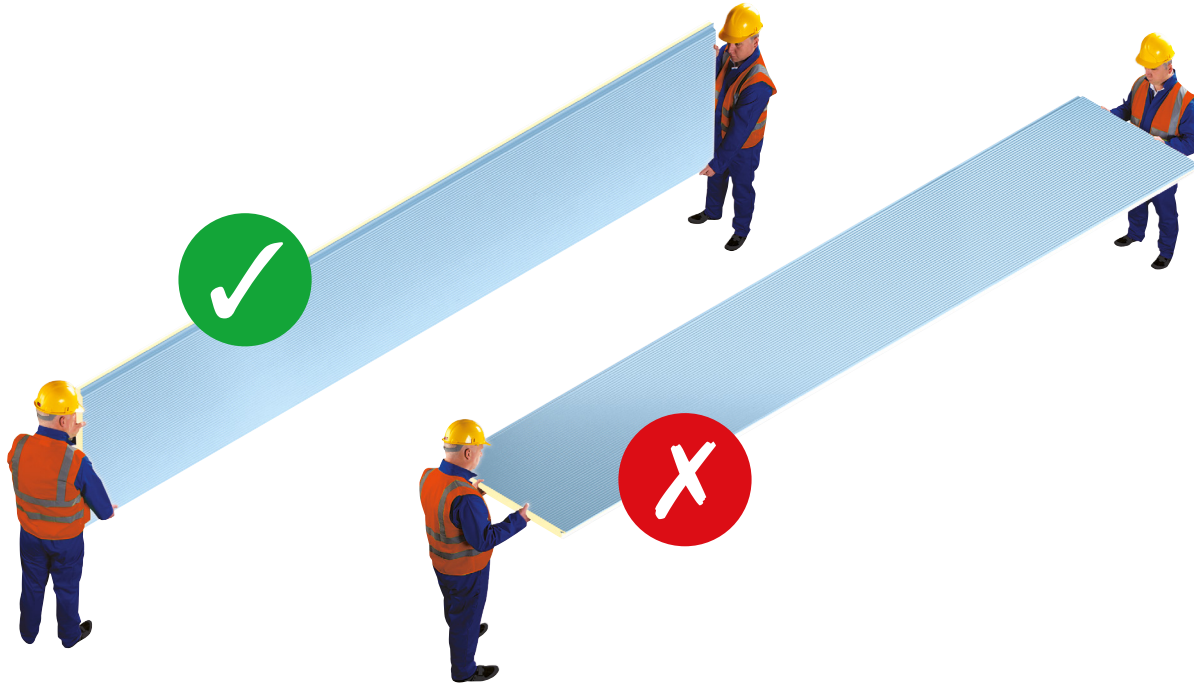
The recommended lifting method for bundles more than 6m, by crane, is by using three points of support. To prevent damage from nylon straps, use wood spreaders at top and bottom at lifting locations as shown.

Panel Handling

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.



Installation guides are available for most of Kingspan insulated roof and wall panels.
For the most up to date version of this Installation guide please [click here](#) or scan the QR code below.
Alternatively, please call Kingspan on:

AUS: +61 2 8889 3000
www.kingspanpanels.com.au



For the product offering in other markets please contact your local sales representative or visit www.kingspanpanels.com

Care has been taken to ensure that the contents of this publication are accurate, but Kingspan Insulated Panels and its subsidiary companies do not accept responsibility for errors or for information that is found to be misleading. Suggestions for, or description of, the end use or application of products or methods of working are for information only and Kingspan Insulated Panels and its subsidiaries accept no liability in respect thereof.

First Issue | 27/06/2024

