

Insulated Roof & Wall Panels
UK & Republic of Ireland

Kingspan Topdek KS1000 TD Insulated Single Ply Roofdeck Installation Guide



September 2020

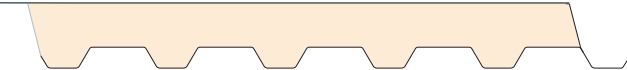


Kingspan Topdek (KS1000 TD)

Insulated Single Ply Roofdeck

Components

Kingspan Topdek (KS1000 TD)



514cw
50mm wide
acrylic tape



Butyl rubber
tape sealants



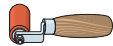
TRIAC S
hot air tool



SFS
fastener



40mm wide
silicone
pressure roller



40mm nozzle
for lap welding



20mm nozzle for
lap welding and
intricate detailing



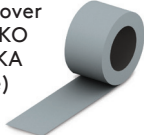
SFS drive
bar



Ejot drive
bar



1.5mm PVC
membrane cover
strip. (min: IKO
150mm or SIKA
200mm wide)



Ejot
fastener



Hot air
welder



Penny
pressure
roller



Wire brush



PVC foam tape
(SGV15P 20x9
PVC)



Seam probe



10" scissors



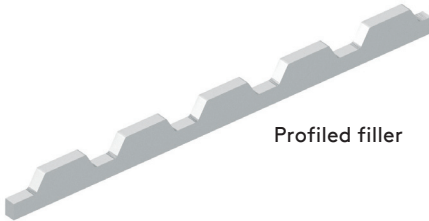
Non-setting
gun-grade
sealant



Fire-rated
canister
insulation



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 reserves the right to amend the information at any time in the future. Installation guides are available for most of Kingspan insulated roof and wall panels.



Profiled filler

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Note: Only fully trained and certified operatives should install Kingspan Topdek and heat weld the relevant membrane.

Ensure steel work is suitable for panels and is within tolerance.

Ensure the lower panel 60mm cutback is bearing on to upper purlin by a minimum of 60mm.

Gun-grade sealant type - non-setting butyl rubber sealant is recommended.

Panel sequence installed in tiers not coursed.

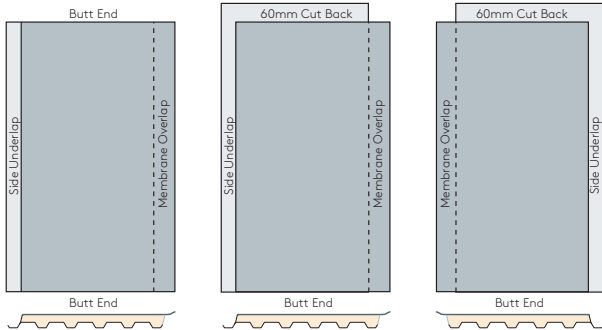
Profiled fillers required at eaves, panel butt joint and ridge.

This product cannot be used in high humidity or hygiene internal environments.

PVC membrane options are: IKO Armourplan or Sika Trocal.

Kingspan Topdek can be used on building applications with a minimum finished roof pitch after deflection of 1:80 (0.72°) to avoid ponding. It is also suitable for curved roof applications with a convex curve (45m radius) and concave curve (50m radius).

As an alternative to using butyl air sealants, a PVC foam tape (SGV15P 20x9 PVC) can be used for an air seal.



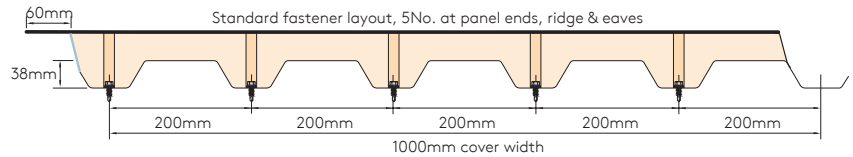
Panel Type TDP
(Left or Right hand)

Panel Type TDX
(Laying Right to Left)

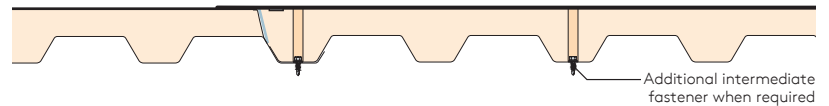
Panel Type TDY
(Laying Left to Right)

Note: 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

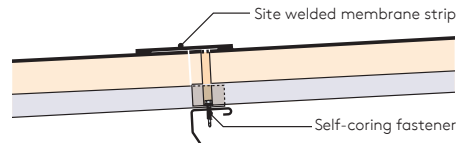
Fastener Layout



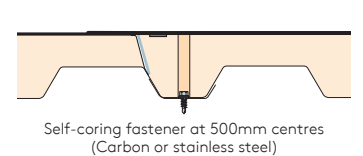
Standard Fastener Layout for Intermediate Panels



End Laps



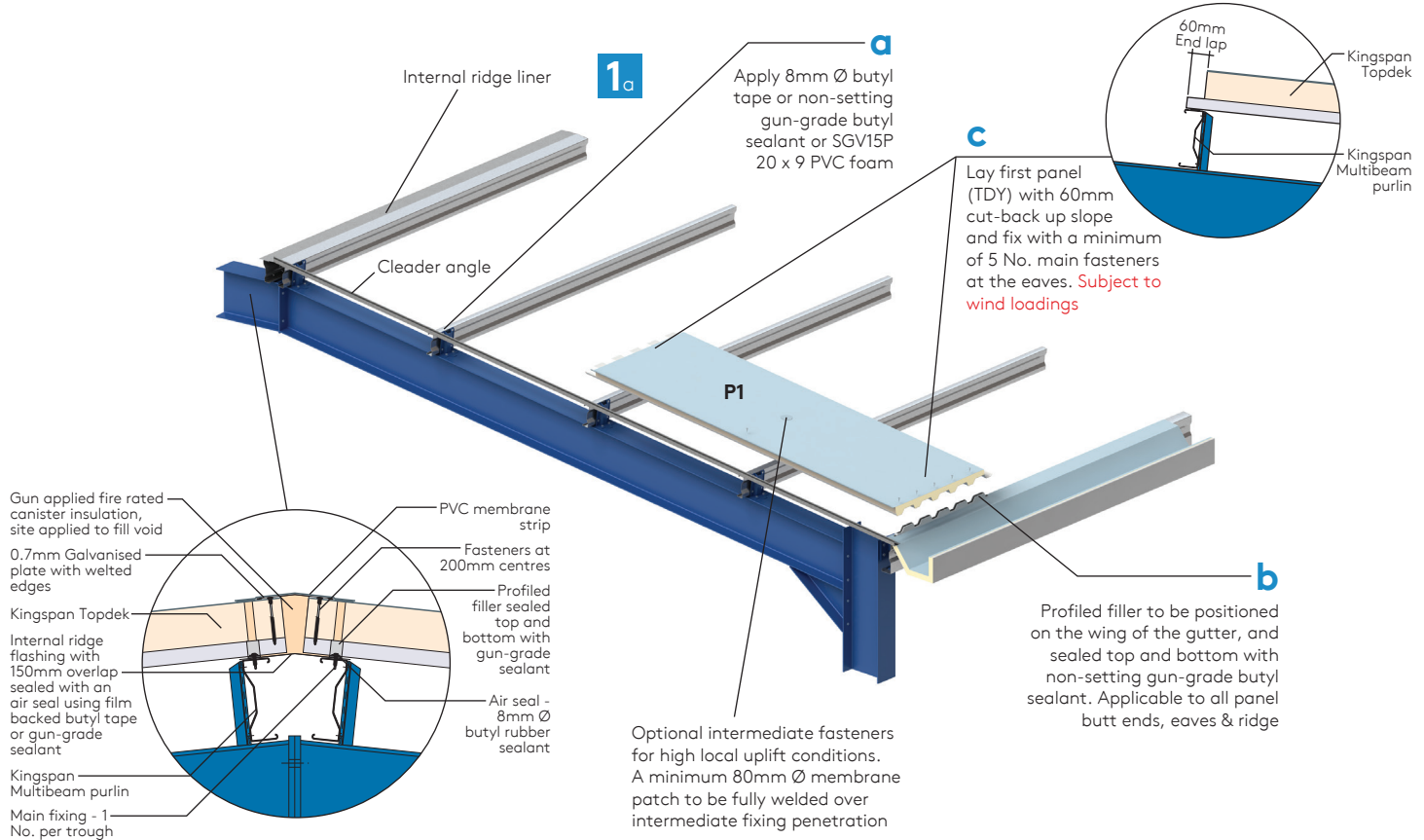
Side Laps



Note: For FM Core panel Specification there is a requirement for 5No main fasteners at intermediate locations subject to wind loads. Contact Kingspan Technical Services for further information.

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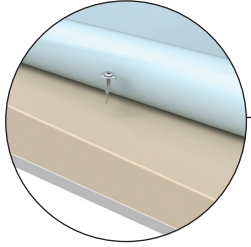
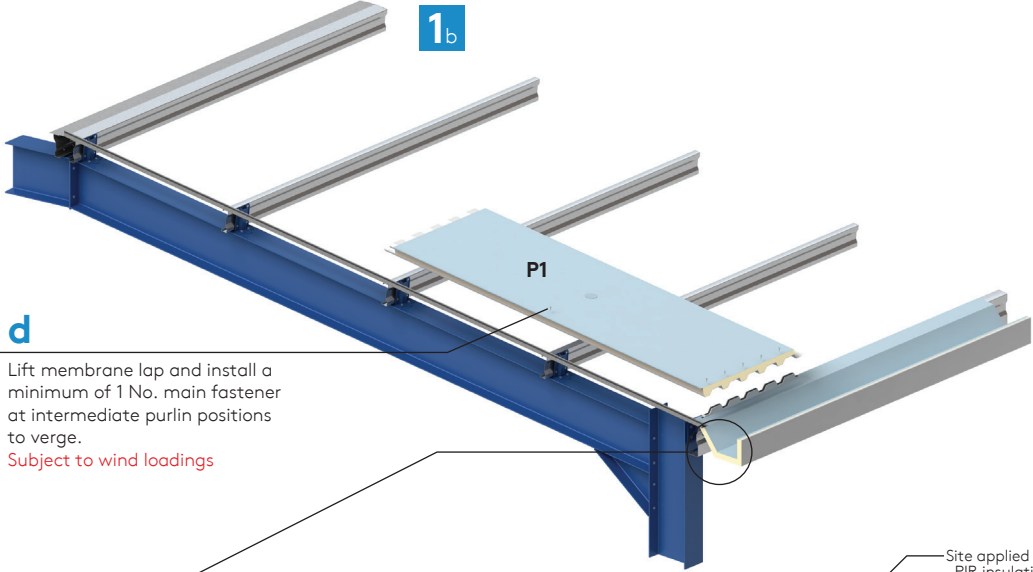
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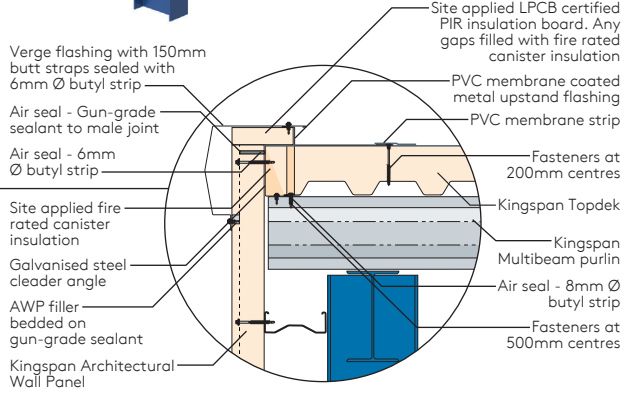
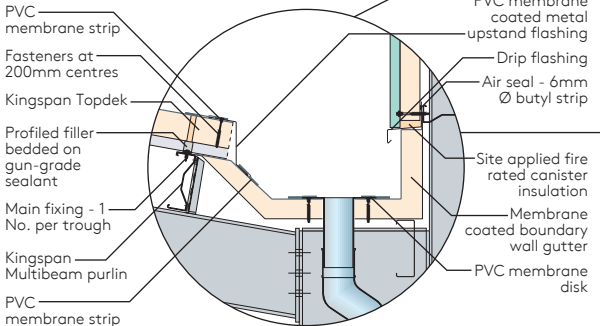
Kingspan Topdek (KS1000 TD)

Insulated Single Ply Roofdeck

1b

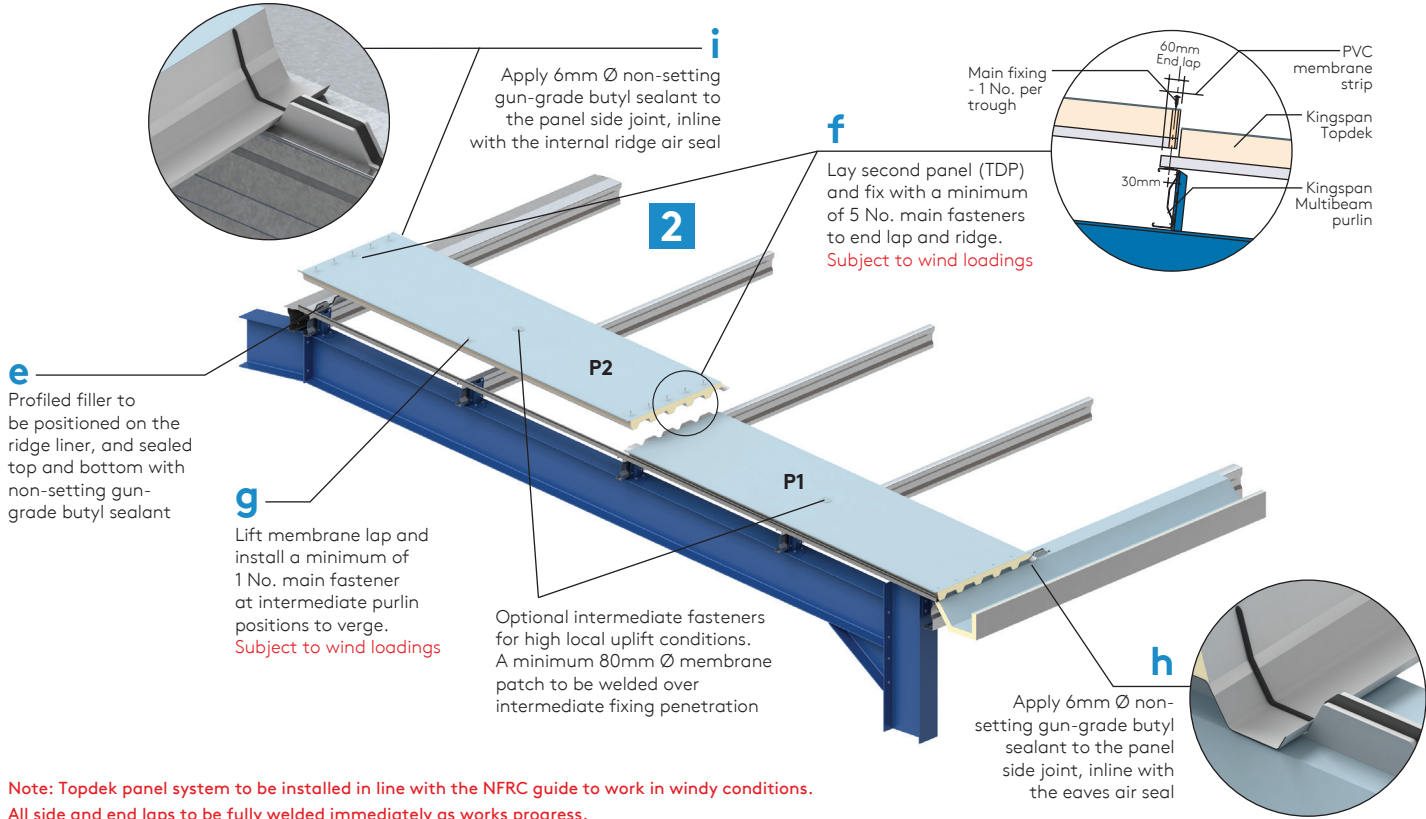


d Lift membrane lap and install a minimum of 1 No. main fastener at intermediate purlin positions to verge.
 Subject to wind loadings



Kingspan Topdek (KS1000 TD)

Insulated Single Ply Roofdeck



Note: Topdek panel system to be installed in line with the NFRC guide to work in windy conditions.

All side and end laps to be fully welded immediately as works progress.

Kingspan recommend works are planned to ensure that areas of Topdek panels are only installed when they can be fully completed the same day. Topdek roof areas should be inspected during and at the end of the working day to make sure that loose membrane lap materials are not left unsecured to prevent wind damage.

Membrane lap strip to overlap a minimum of 50mm past all fasteners to enable 30mm minimum weld width

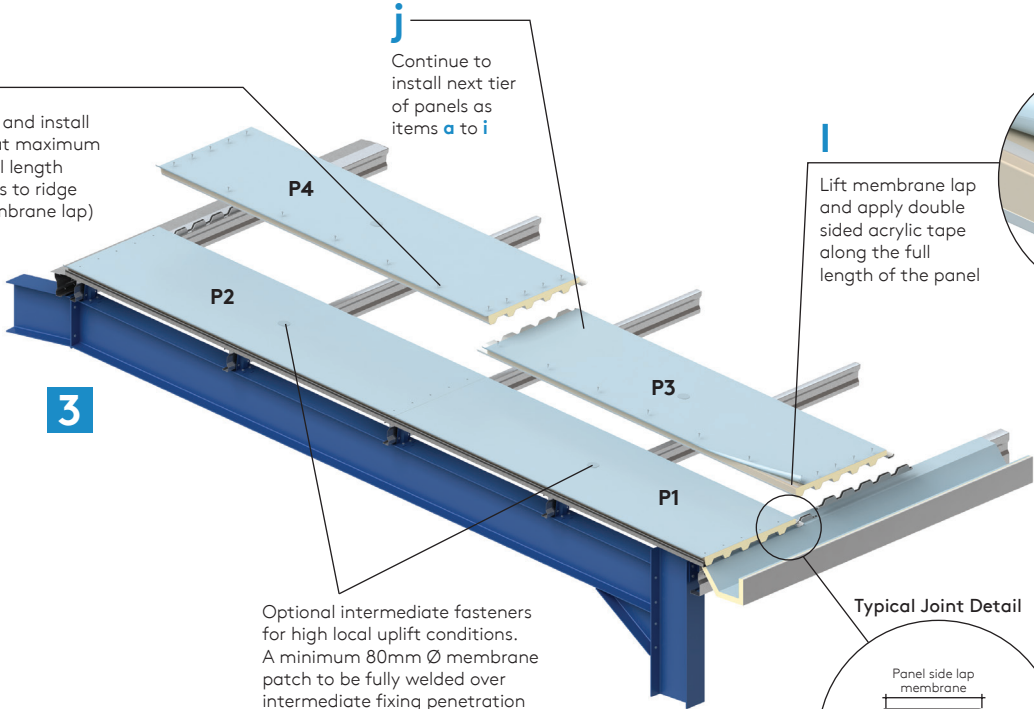
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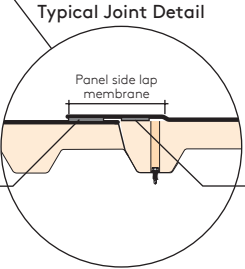
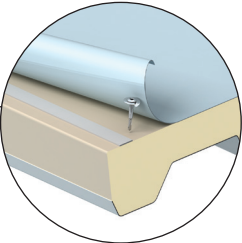
k
Lift membrane lap and install side lap fasteners at maximum 500mm centres full length of panel from eaves to ridge (concealed by membrane lap)

j
Continue to install next tier of panels as items **a** to **i**

l
Lift membrane lap and apply double sided acrylic tape along the full length of the panel



Optional intermediate fasteners for high local uplift conditions. A minimum 80mm Ø membrane patch to be fully welded over intermediate fixing penetration

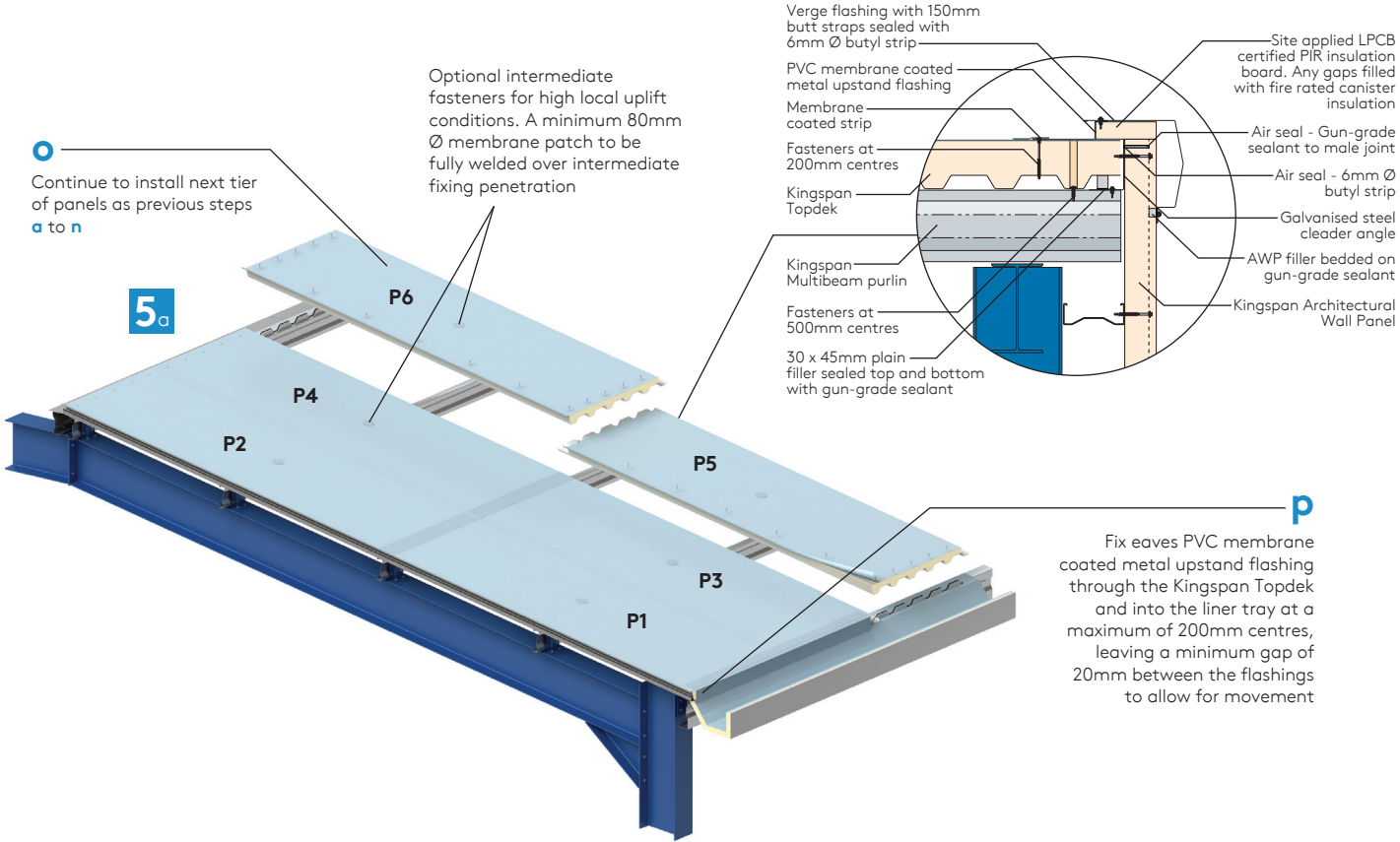


Welded 30mm minimum weld width

514cw 50mm wide double sided acrylic tape

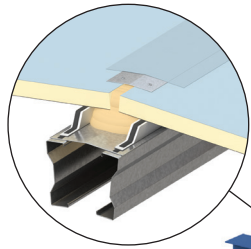
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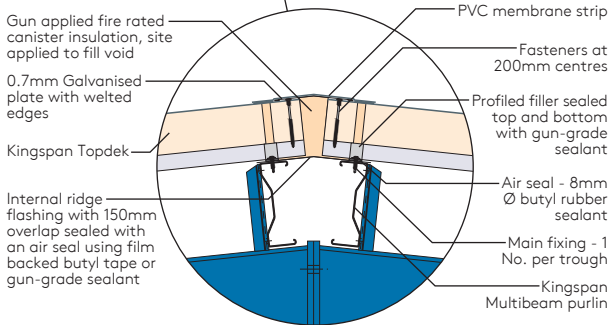
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5_b

Fix galvanised ridge flashing through the Kingspan Topdek insulated roof panel and into the liner tray at a maximum of 200mm centres, leaving a minimum gap of 20mm between the flashings to allow for expansion. Install and weld reinforced ridge membrane lap strip with recommended hot air welding equipment.

Membrane overlap 50mm minimum, with a 30mm minimum weld width. All joints to be checked for security with a probe, when cool after welding. All in accordance with the relevant PVC membrane manufacturers' recommendations



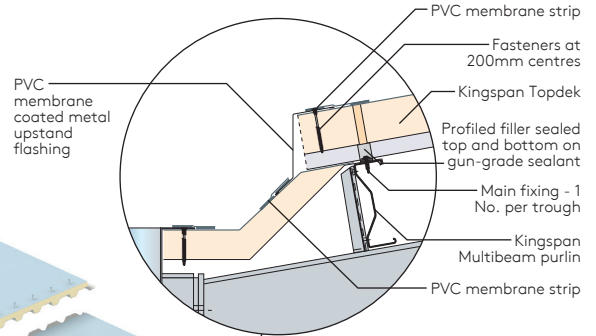
Gun applied fire rated canister insulation, site applied to fill void

0.7mm Galvanised plate with welged edges

Kingspan Topdek

Internal ridge flashing with 150mm overlap sealed with an air seal using film backed butyl tape or gun-grade sealant

PVC membrane strip
Fasteners at 200mm centres
Profiled filler sealed top and bottom with gun-grade sealant
Air seal - 8mm Ø butyl rubber sealant
Main fixing - 1 No. per trough
Kingspan Multibeam purlin



PVC membrane coated metal upstand flashing

PVC membrane strip
Fasteners at 200mm centres
Kingspan Topdek
Profiled filler sealed top and bottom on gun-grade sealant
Main fixing - 1 No. per trough
Kingspan Multibeam purlin
PVC membrane strip

Note: Progress with remainder of roof and repeat installation procedures to suit project design layout

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Install reinforced PVC membrane lap strips to the top, bottom and butt joints of the eaves PVC membrane coated metal upstand flashing. Weld membrane lap strips with recommended hot air welding equipment. Membrane overlap 50mm minimum, with a 30mm minimum weld width. All joints to be checked for security with a probe when cool after welding. All in accordance with the relevant PVC membrane manufacturers' recommendations

Installation guides are available for most of Kingspan insulated roof and wall panels.

Please call Kingspan Technical Services on:

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