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Installation Guide

Insulated EPS Panel



FASTENERS

The primary fasteners for securing the Insulated EPS roof panel to structural steel purlins have been purpose designed to facilitate speed of fixing, give this structural security with reduced risk of over compression, and have minimal thermal bridging.

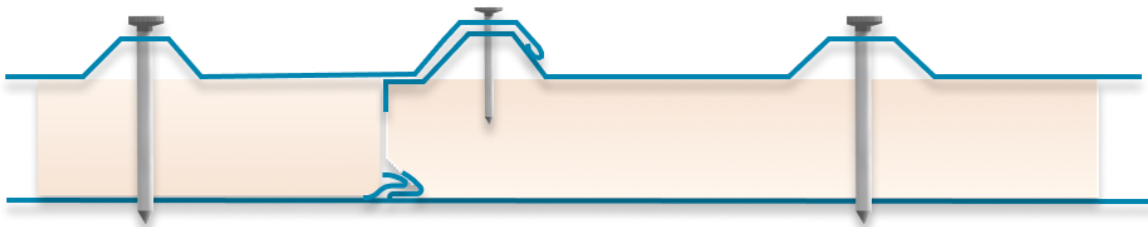
Time consuming pre-drilling of the panel or purlin is not necessary, as the high-thread fastener self-drills: the lower thread taps into the purlin and the higher thread taps into the outer skin, thereby clamping the panel securely in a single operation.

Side-lap stitching, should be at maximum of 450 mm centers. The stitcher can be a painted, sealed rivet, an integral nylon-colored fastener, or a powder-coated, headed, austenitic stainless steel self-drilling fastener.

Screw size recommendation:

50mm Panel: 120mm Screw

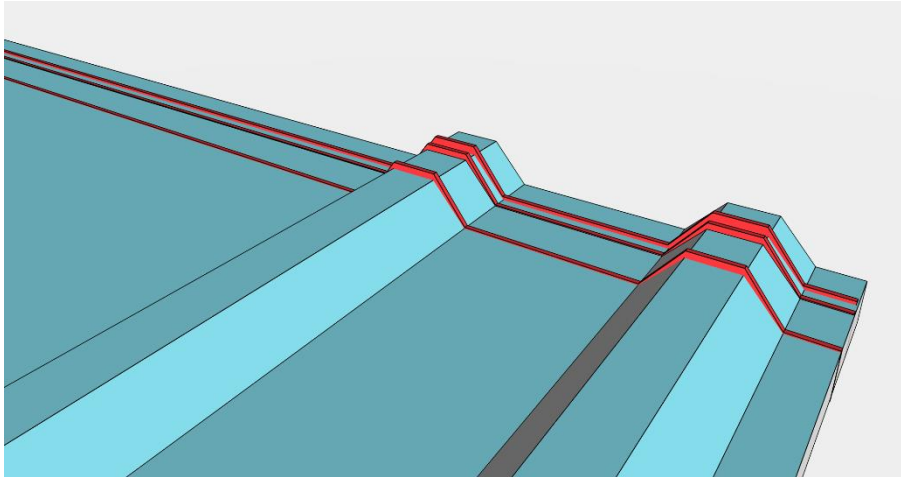
75mm Panel: 140mm Screw



CONNECTION AND SEALANTS

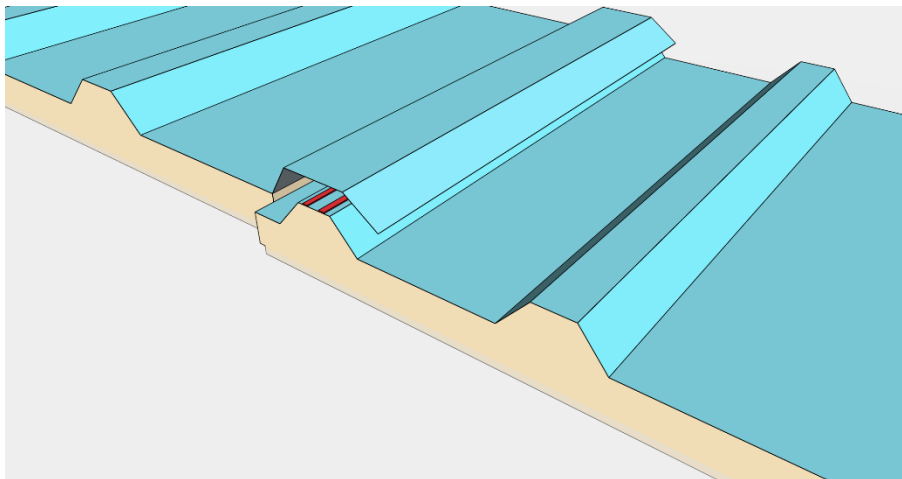
The length continue connection of Insulated EPS Panel requires butyl mastic. Position the sealant in straight, unbroken lines, following the profile, taking care to avoid any stretch. Ensure the continuity and the effectiveness of the seal, especially at corners of sheets.

The three lines of strip sealant must be placed between the sheets before fixing: three rows 10 mm from the sheet ends at the top and bottom of the lap.



Length Continue Connection

The width continue connection of the panel is sealed with the same sealant run continuously to weather side of the stitching fastener.



Width Continue Connection

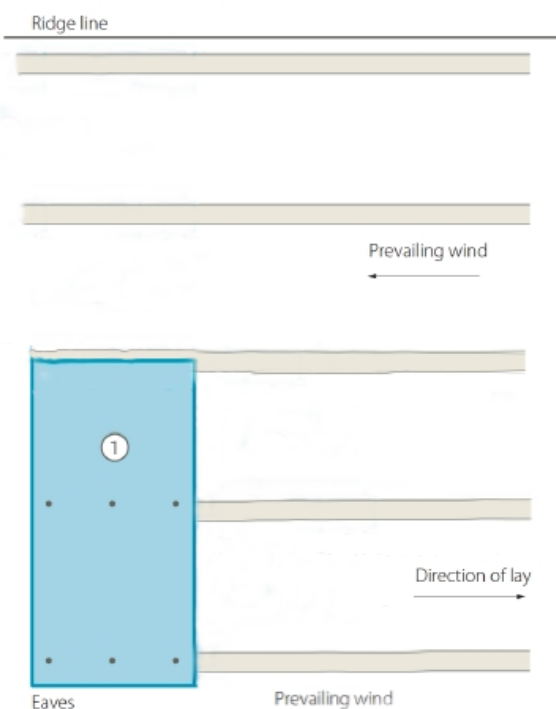
INSTALLATION: ROOF PANEL

The steps given below are instructions for a typical construction and should be used only as a guide. Specific technical details, method statements and site-specific risk assessments should be produced and applied for each building.

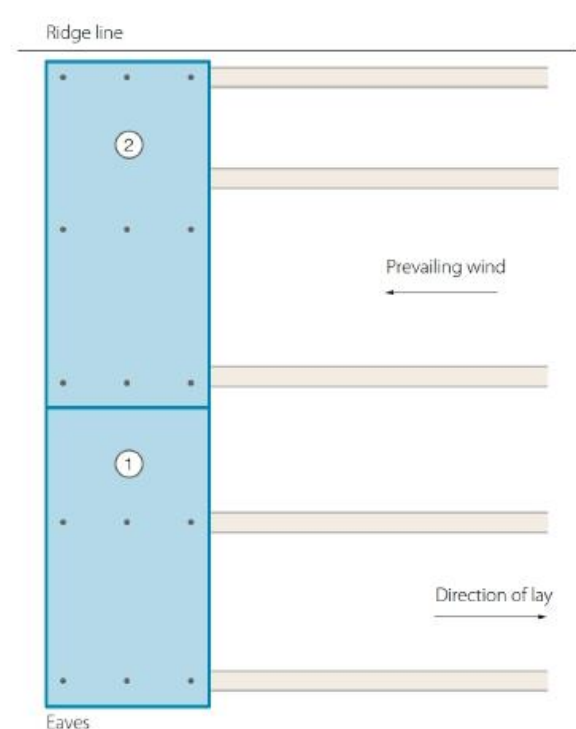
The following steps apply to a roof made up of multiple panels with length continue joints. Wherever practical, panels of the same length from ridge to eaves should be used to avoid length continue connections. This provides a cleaner finish and a more economical installation.

1. Carry out preparation work on internal ridge, internal eaves, trims, etc. Ensuring that these are lined and leveled and sealed as specified. Lay down air seals onto the top flange of the eaves beam and the ridge purlins.
2. Position the eaves (or bottom) corner panel, and ensure it is correctly aligned and lapping in the right direction. Wherever possible, the panels should be laid with the exposed joints of the width continue connections facing away from the prevailing wind. Fix the panel using primary fasteners in the trough of the trailing edge. Ensure the fasteners are not over-tightened, and clear away any drilling swarf to prevent rust marks.
3. Ensuring that the top of the lower panel (panel1) is clean and dry, apply three rows of sealant across the panel width with a strip of sealant at the underlap position as shown in the illustration on the next page. The first seal should be placed above the fixing line, the second directly below and the third 10 mm from the end of the specified lap (150 mm recommended). The seal should be carefully applied to ensure coverage in the corners of the profile.
4. Ensure that the cutback of panel2 is clean and dry before positioning the panel over panel1. Be careful not to disturb the seals. Align the profiles of the two panels before securing at specified fastener layout.

FIRST PANEL LAID

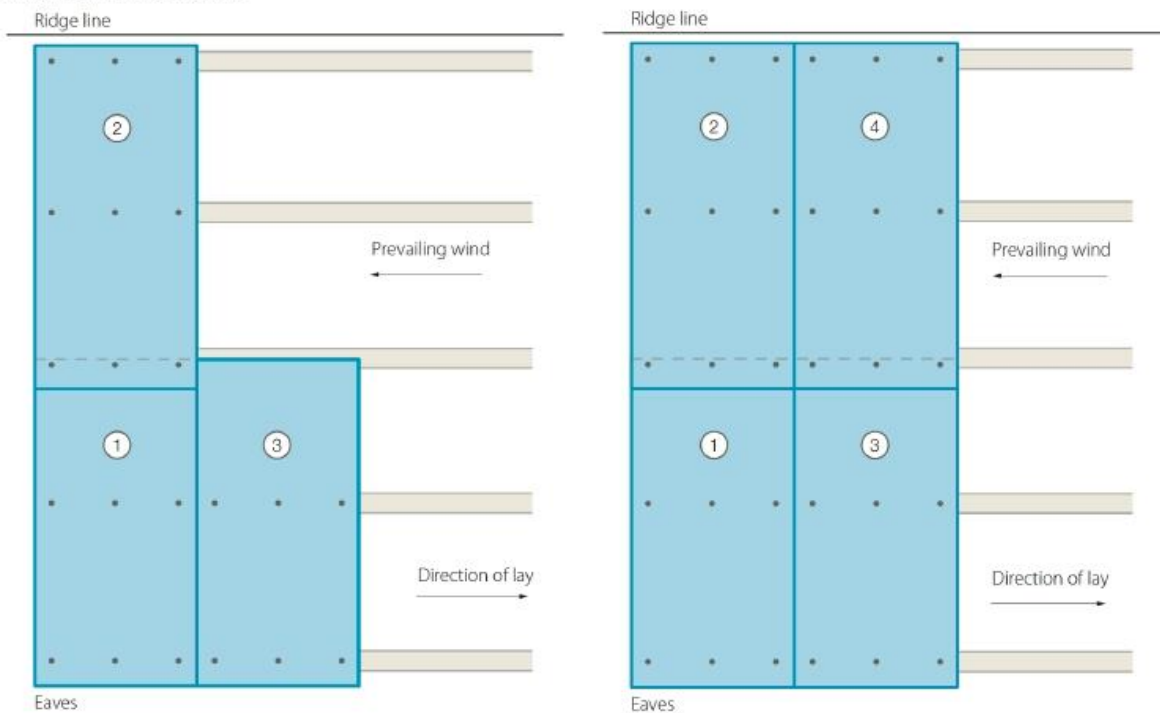


SECOND PANEL LAID



5. Run the width continue connection seal continuously from ridge to eaves ensuring this is placed to the weather side of the width continue connection. Width continue connection panel 3 by dropping panel into position and securing with specified fastener layout.
6. Apply the end-lap seals as described in step 3.
7. Ensure that the cutback of panel 4 is clean and dry. Position the end of panel 4 over panel 3 and drop down the Width continue connection as before. Ensure that the profiles of the two panels are aligned before securing into the purlins. Secure the width continue connection using sealed rivets or stitching screws at a minimum of 450mm centers.

THIRD PANEL LAID



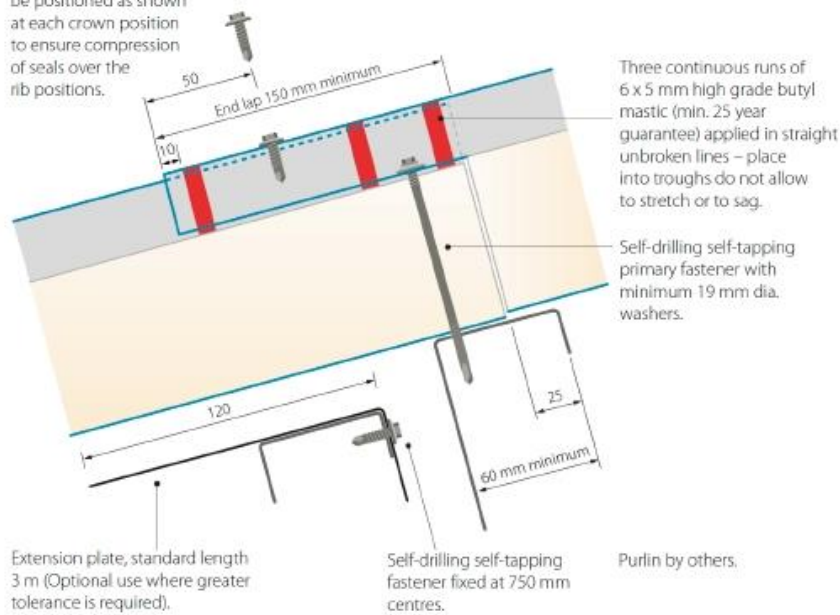
8. Continue steps 5, 6 and 7 until the elevation is complete. Seal at ridge and fit the external flashings and ensure they are sealed as specified.
9. Utilizing Barge Capping to cover the side edge of the panel enhances the overall performance of the project.

Connect the boards in Length Side

Three primary fasteners should be used at the end lap. Fasteners are positioned in the center of each trough. Tail stitches should be used at every crown 50mm from the end of the lap. Care must be taken to ensure the correct land on the purlin so that both panels' edges are supported and the fastener is able to be positioned through both panels as shown.

END LAP

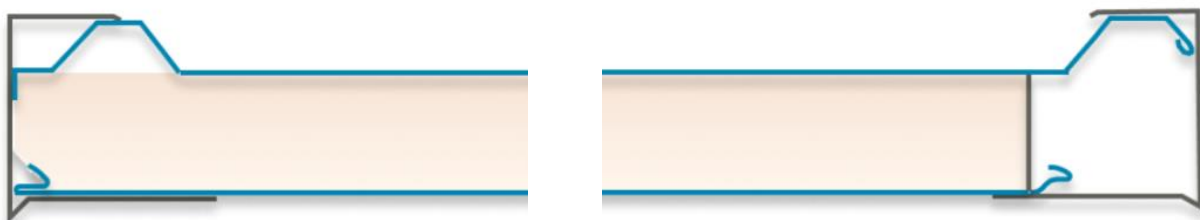
End lap stitchers to be positioned as shown at each crown position to ensure compression of seals over the rib positions.



Barge Capping Installation

Bighands Barge Capping is designed to cover both sides of the panel, enhancing its professional appearance. Use screws to secure the capping to the panel.

Specifications:

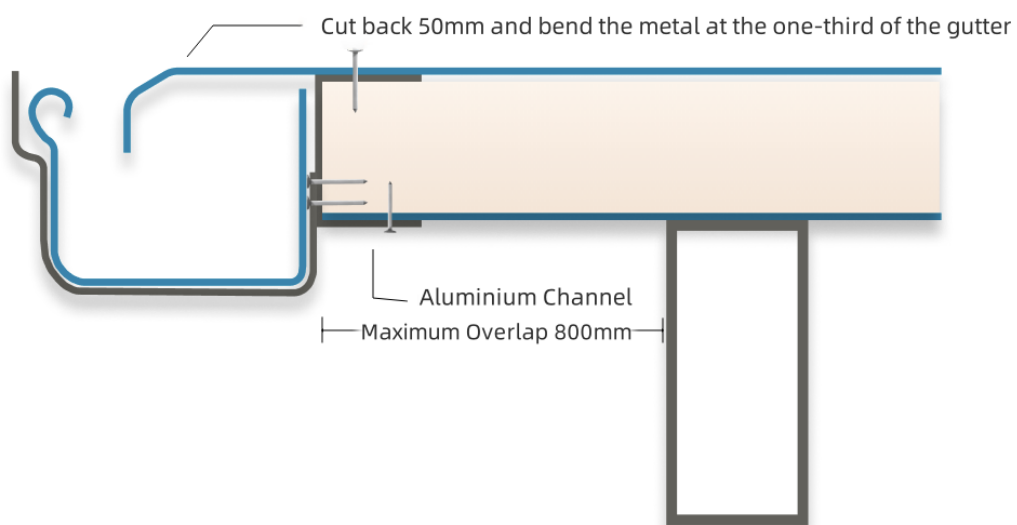


Gutter Installation

There are two ways to attach a gutter for the pergola:

1. If the panel overlaps by 0mm–800mm, attach the gutter to a designated channel surface created for this purpose.
2. If the panel does not overlap, attach the gutter to the aluminum beam and cover the edge with a drip line.

Gutter with Channel



Gutter with Drip Line

