

TATA STEEL



Trisomet®

External roof and wall panel system



Storage

In addition to the guidelines above, the bundles should be stored on level ground (eg, a floor slab). The packs should never be stacked more than two high. There should be adequate separation between stacks to provide access and to avoid end damage.



1. Do not stand uncovered stacks in the open. Store under cover and away from open doorways.



2. If stacks cannot be stored under cover, erect a simple scaffold around them and cover it with a waterproof sheet, tarpaulin or polythene. Leave space between the cover and stacks to allow air to circulate.



3. Store stacks off the ground and on a slope, so that if rain penetrates the cover, the water will drain away.



4. Inspect the storage site regularly to ensure that moisture has not penetrated the stack.



5. Do not store sheets where people will walk across them.

Pre-erection checks

A secondary support structure is required to support the cladding system at the necessary positions and transfer all loads imposed on and by the cladding system back to the primary structure.

Before any work starts, a full survey or inspection should be carried out to ensure that the support steelwork and any other associated materials, is correctly positioned and within tolerance so that Trisomet® can be fixed correctly. Any obvious problems should be immediately reported to the main contractor to enable remedial work to be undertaken before installation of the cladding.

Tata Steel recommends the allowable variation in the outer flange level of the purlin/rail with respect to the datum line is $L/400$ (where L is the rail spacing).

Further guidance on steel work tolerance can be found in a Steel Construction Institute publication P346: *Best Practice for the specification in installation of metal cladding and secondary steelwork*.

Handling

Wherever possible, manual handling should be avoided and mechanical handling equipment should be used. Mechanical handling provides health and safety benefits, shorter installation times, smaller installation teams and less risk of panel damage.

Recommended suppliers

GGR Cladding

T: +44 (0) 161 683 2580

4 Cladding Services

T: +44 (0) 870 7417600

Cutting

For making small cut-outs, openings and cuts that are not straight, use a jigsaw or a reciprocating saw. For longer straight cuts we recommend using a circular saw that produces a cold cut with a fine-tooth metal cutting blade (ie, not a grinding blade, as this hot cut will damage the coating). All cutting should be undertaken at ground level.



Roof installation

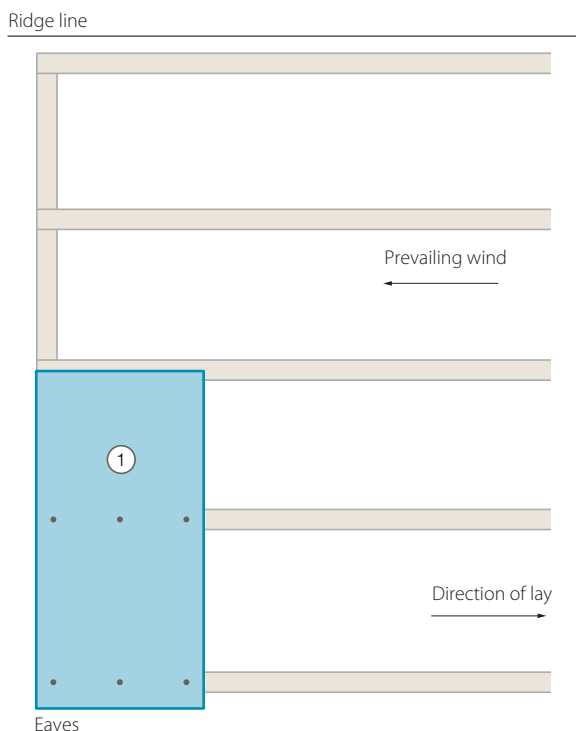
Installation: Roof Panel

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. An extended list of construction details is available from Tata Steel, and advice can be given via our technical department on any bespoke details that may be required.

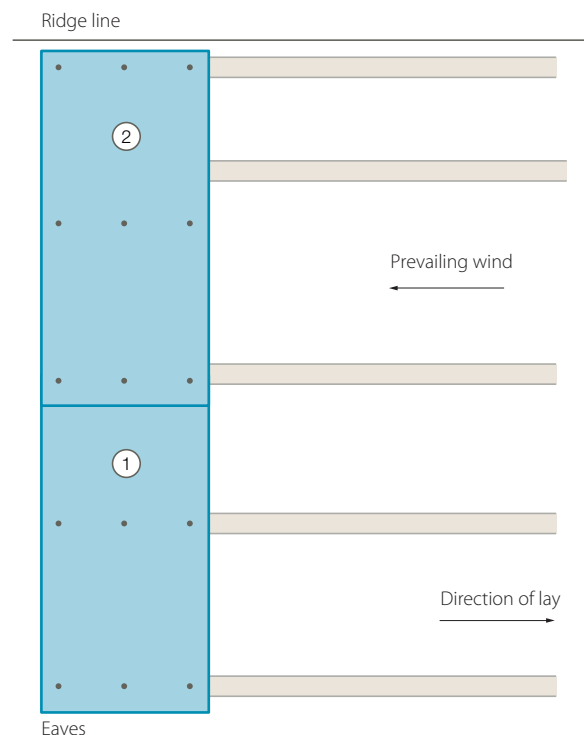
The following steps apply to a roof made up of multiple panels with end lap joints. Wherever practical, panels of the same length from ridge to eaves should be used to avoid end laps. This provides a cleaner finish and a more economical installation.

1. Carry out preparation work on internal ridge, internal eaves, trims, etc, and ensure that these are lined and levelled 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 side laps facing away from the prevailing wind (see Figure 1). Fix the panel using primary fasteners in the trough of the trailing edge. Make sure the fasteners are not over tightened and clean away drilling swarf to avoid rust marks.
3. Ensuring that the top of the lower panel (panel 1) 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.

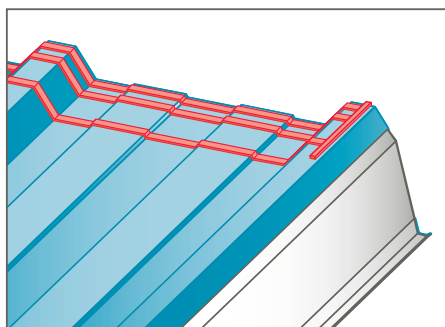
First panel laid



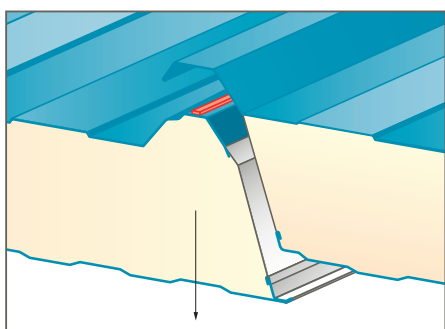
Second panel laid



End lap with three rows of sealant

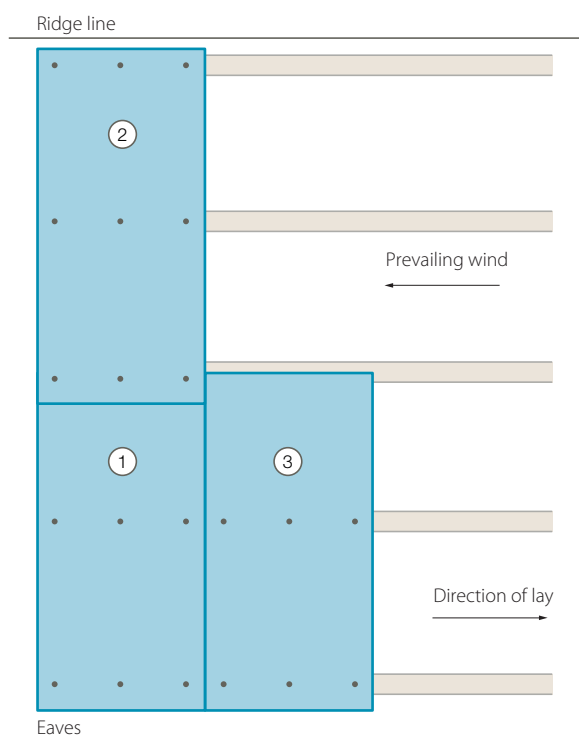


Side lap

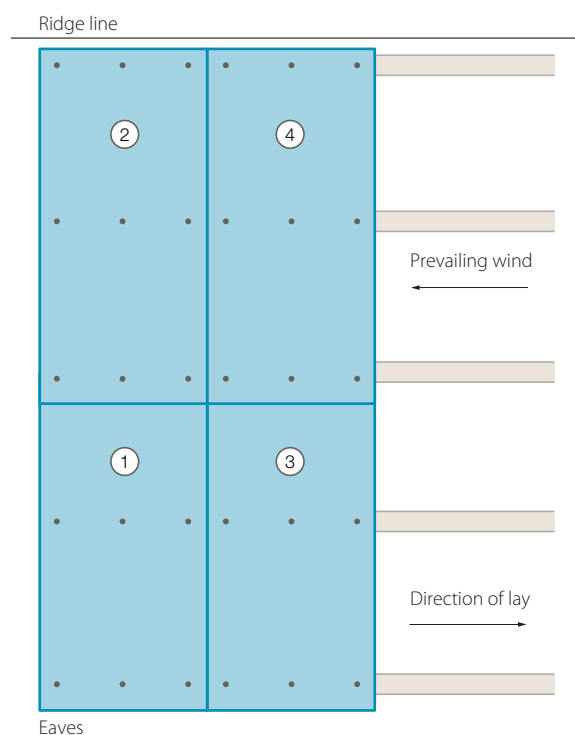


4. Ensure that the cutback of panel 2 is clean and dry before positioning the panel over panel 1. Be careful not to disturb the seals. Align the profiles of the two panels before securing at specified fastener layout.
5. Run the side lap seal continuously from ridge to eaves ensuring this is placed to the weather side of the side lap. Side lap 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 Side lap as before. Ensure that the profiles of the two panels are aligned before securing into the purlins. Secure the side lap using sealed rivets or stitching screws at a minimum of 450mm centres.
8. Continue steps 5, 6 and 7 until the elevation is complete. Seal and position profile fillers at ridge and fit the external flashings and ensure they are sealed as specified.

Third panel laid



Fourth panel laid



Wall installation

Installation: Wall panel

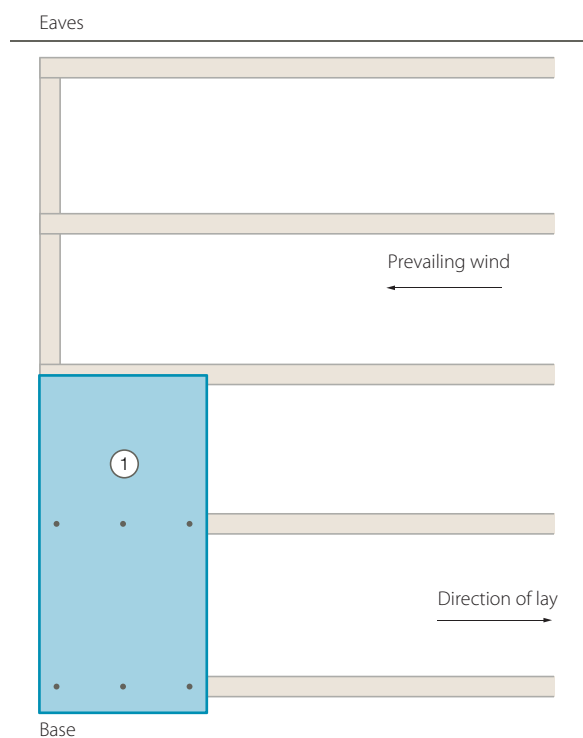
The steps given below are instructions for a typical construction and should be used only as a guide. Specific technical details, method statements and site-specific risk assessments should be produced and applied for each building. An extended list of construction details is available from Tata Steel and advice can be given via our Technical Department on any bespoke details that may be required.

The following steps apply to a wall made up of multiple panels with one end lap joint. Wherever practical panels of the same length from base level to eaves should be used to avoid end laps. This provides a cleaner finish and a more economical installation.

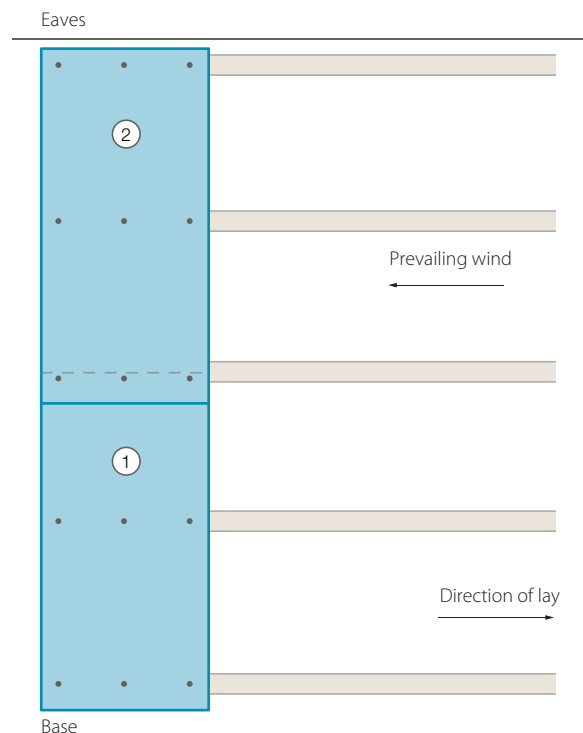
Vertical wall installation

1. Checks should be carried out to make sure that the bottom rail is adequately supported and level along its full length before commencing installation work.
2. Carry out preparation work on sill trims and the base support angle for the first panel, and ensure these are lined, levelled and sealed as specified (see page 30 of construction details).
3. Hoist the first panel and position on the support angle with the overlap edge adjacent to the corner. Before inserting the fasteners, ensure that:
 - a. The setting out dimensions are observed. Failure to comply with these dimensions may lead to problems later in the section.
 - b. The panel is plumb using a plumb line.
 - c. The position of the panel relative to the bottom and top or intermediate rails is correct. Check this with the erection drawings.
4. Fix the panel using primary fasteners as specified. Make sure the fasteners are not over tightened, and clean away drilling swarf to avoid rust marks.
5. Ensure that the top of the lower panel (ie, panel 1) is clean and dry, and then apply the two rows of sealant across the panel width in positions as shown. The first seal should be placed above the fixing line, the second between 10 mm from the end of the specified lap (75 mm recommended). The seal should be carefully applied to ensure coverage in the corners of the profile.

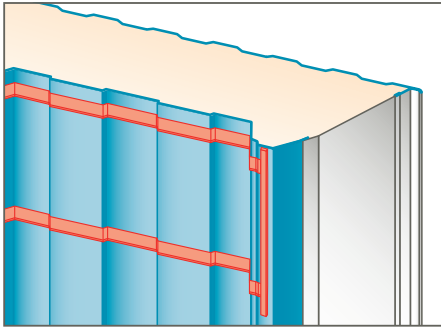
First panel laid



Second panel laid



End lap with three rows of sealant



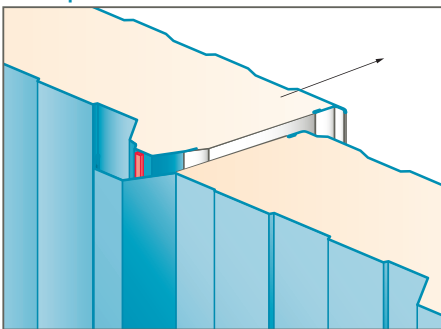
6. Ensure the cutback of panel 2 is clean and dry before positioning the panel over panel 1, as shown. Be careful not to disturb the seals. Align the profiles of the two panels before securing.

7. Run the side lap seal continuously from eaves to base ensuring this is placed to the weather side of the side lap. Side lap panel 3 and secure with specified number of fasteners.

9. Ensure that the cutback of panel 4 is clean and dry. Position the end of panel 4 over panel 3 and side lap as before. Ensure that the profiles of the two panels are aligned before securing into the rails. Secure the side lap using sealed rivets or stitching screws at a minimum of 600 mm centres.

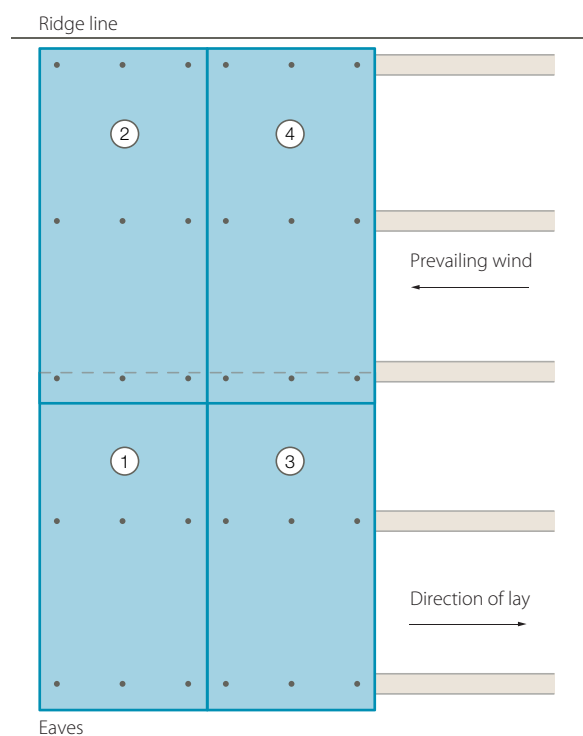
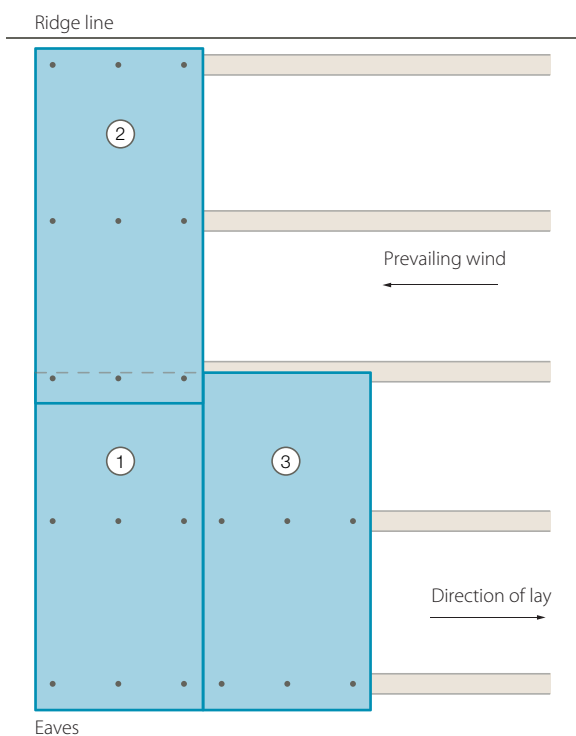
10. Continue steps 5 to 9 until the elevation is complete. Fit the external flashings and ensure they are sealed as specified.

Side lap



8. Apply the end-lap seals to panel 3 as shown.

Third panel laid



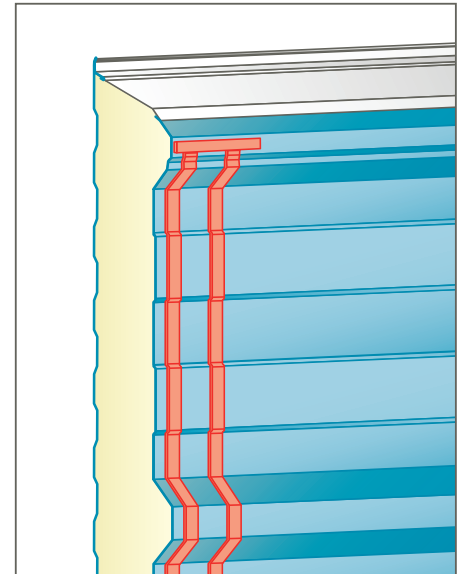
Wall installation continued

Horizontal wall installation

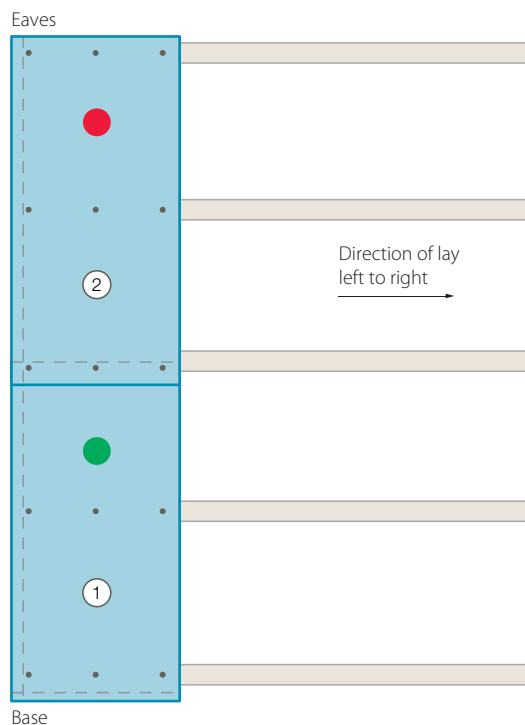
The following steps apply to a wall made up of multiple panels with one end lap joint between the corners of the elevation. For elevations containing more than one end lap ensure that each horizontal level of panels is complete before starting the row above.

When running panels horizontally on a wall elevation, care must be taken when ordering the handing of the product. The standard vertically laid left-to-right handed panels will run right-to-left when installed horizontally as shown below.

1. Carry out preparation work on sill trims. Ensure that these are lined, levelled and sealed as specified (see page 35 of construction details).
2. Temporarily support base panel and secure with one fastener. Recheck level and the bearing dimensions, on vertical supports, are correct before fully securing with specified number of fasteners. Ensure the fasteners are not over tightened, and clean drilling swarf from the rib ledge to avoid rust marks.
3. Ensuring that the end of the first panel is clean and dry, apply two rows of gun-grade silicone sealant across the full width of the panel in positions as shown. The first seal should be placed behind the fixing line, and the second 10 mm from the end of the specified lap (50 mm recommended).

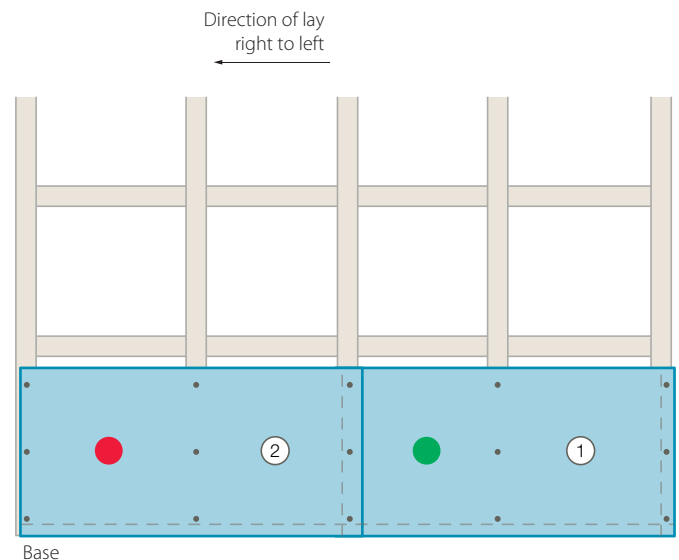


First and second panel laid – Vertical wall



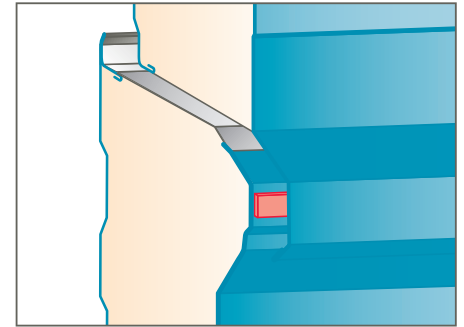
NB. Care must be taken when ordering product handing for horizontal wall installations.

First and second panel laid – Horizontal wall



4. Ensure the cutback of panel 2 is clean and dry before positioning the panel over panel 1. Ensure that the profiles of the two panels are aligned before securing them to the vertical cladding rails using the recommended number of fasteners.
5. Run the side lap seal continuously to the bottom row of panels ensuring this is placed to the weather side of the side lap. Side lap panel 3 and secure with specified number of fasteners.
6. Apply the end-lap seals to panel 3 as shown.
7. Ensure that the cutback of panel 4 is clean and dry. Position the end of panel 4 over panel 3 and side lap as before. Ensure that the profiles of the two panels are aligned before securing into the rails. Secure the side lap using sealed rivets or stitching screws at a minimum of 600 mm centres.
8. This procedure should be continued along the full width of the elevation before starting the second row of panels. Continue row by row until the elevation is complete. Fit the external flashings, and ensure they are sealed as specified.

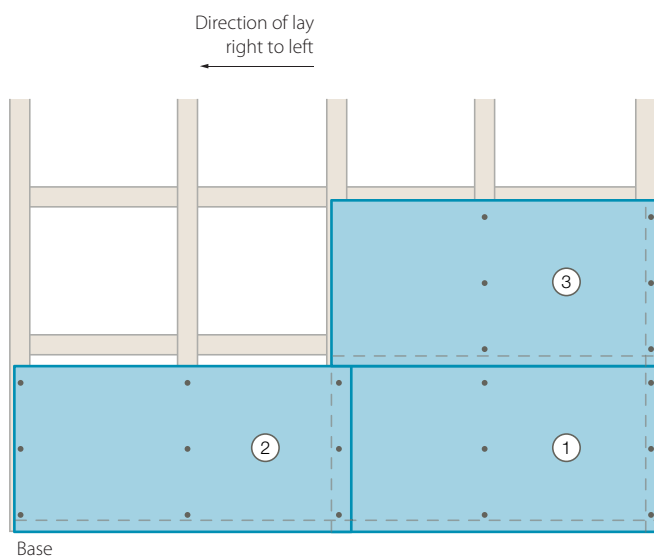
Side lap



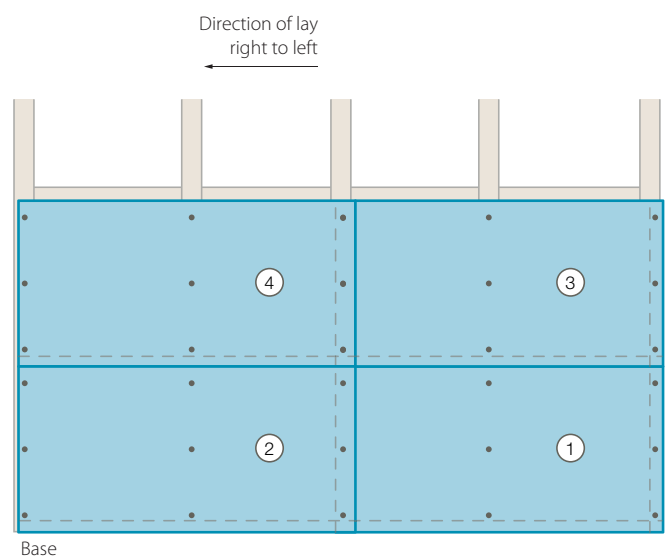
Removal of protective film

Trisomet® can be supplied with protective film on the external face. This is designed to provide additional protection during manual handling and site fixing. The film has a limited shelf life and must not be exposed to sunlight for long periods because it is susceptible to ultraviolet degradation. This makes the film difficult to remove and may result in adhesive residue that causes dust and dirt to adhere to the decorative finish. To ensure easy, clean removal, remove the film within one month of panel delivery to site.

Third panel laid



Fourth panel laid



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