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# Detailing profiled metal wall claddings

*Profiled metal claddings are a popular choice these days, but as with all claddings, care is still needed in the detailing, particularly the junctions.*

You will find profiled metal claddings on many modern buildings, run both horizontally and vertically. These claddings offer many advantages, such as:

- ease of installation
- relatively low maintenance
- ease of replacement if screw-fixed
- economy.

But care is still required when detailing the junctions.

## Run horizontally

There are both gains and losses in installing the profile horizontally.

Sheet lengths can be site-measured and factory-cut (across the profile) to the required lengths and then fitted between the flashings. Allowing for a fitting tolerance enables the sheets to be easily fitted on site. If no fitting tolerance is allowed sheet ends may have to be site-cut to fit, which leaves a ragged edge and wastes time.

Flashing details do not require the flashing to be fitted to the profile of the material used. A profiled sealing strip can easily be installed behind the cladding.

Thermal expansion and contraction must be allowed for — fitting a length of cladding tightly between a flashing or other element leaves no room for movement.

## Run vertically

Vertical installation brings a different set of problems.

Cover flashings must be measured on-site and made to suit the profile of the cladding to achieve sufficient cover and to accurately fit the profile used.

The vertical edge of the sheet can be left more or less exposed when back-flashing, depending on how the profiles end. The edge profile may be different on each side of the clad area

*External corner using a preformed flashing with horizontal corrugated steel.*

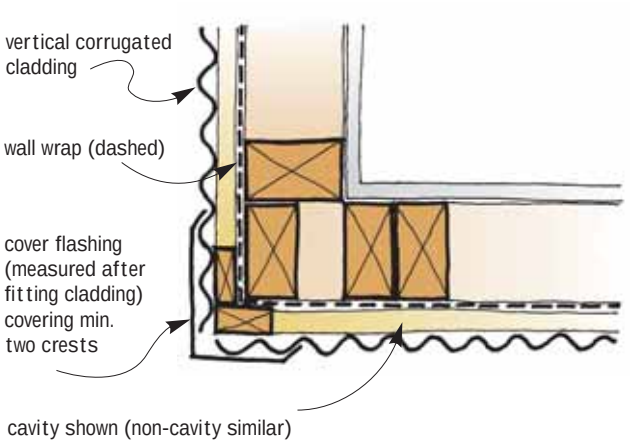


*Figure 1: Cover-flashed external corner with vertical corrugated steel.*

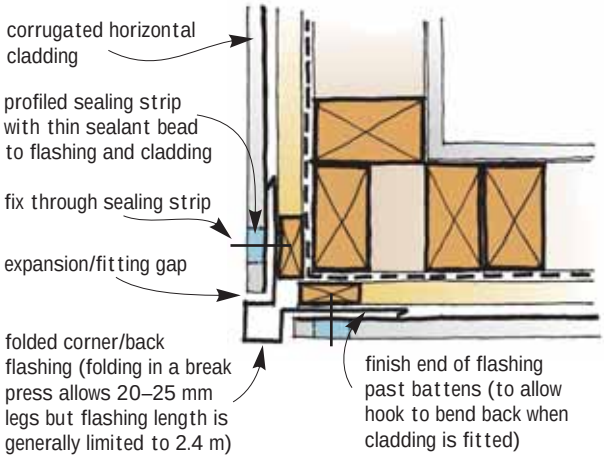


*Figure 2: Expressed external corner with horizontal corrugated steel.*

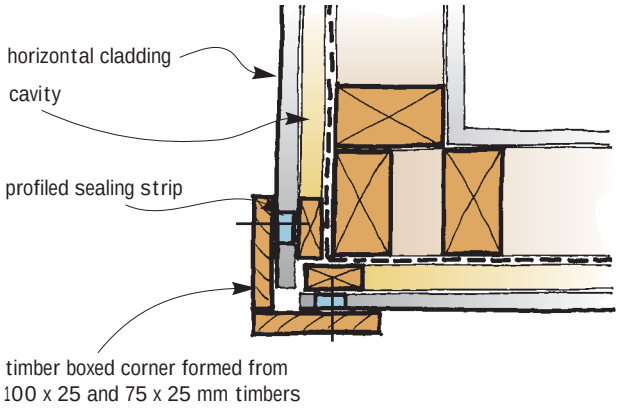


*Figure 3: Timber cover boards to external corner with horizontal corrugated steel.*

because of the sheet profiles at the lap. This is shown in Figure 1. Sealing behind the vertical edges can also be more difficult, again because of the way the profiles end.

Sheets cannot be factory-cut along the profile and site-cutting the sheet lengthwise to fit can produce ragged and sharp edges. Accommodating a site-cut edge is difficult where the sheet module has not been built into the design of the building.

Overlapping the cladding to the foundation to allow for thermal movement is easier as there are no edge constraints.

## External corners

There are some important requirements to remember when detailing external corners for either horizontal or vertical corrugated cladding.

Screw fix (using screws with sealing washers) the cladding and flashings for easy replacement. Provide a flashing cover of at least two crests.

Minimise the airflow behind the cladding with sealing strips designed to fit the profile of the cladding. This reduces the risk of water being drawn in behind the cladding sheets.

Figures 1–3 show options for detailing external corners in both vertically and horizontally installed profiled-steel cladding.

Avoid penetrations through the cladding wherever possible, as they are difficult to make weathertight. For pipe penetrations a boot flashing, as used for roof penetrations, can be installed but may not be the best solution aesthetically. ›‹