

FLASHINGS KEEP WATER OUT

A flashing is a folded length of metal that provides a weathertight cover at junctions in and between walls and roofs. Getting them right is a good start towards constructing a weathertight building.

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Flashings are designed to stop water entering the building and should be designed to deflect water away. They are most commonly folded out of a coil or flat sheet of 0.55 mm base metal thickness (BMT) in the same material and paint finish as the roof. The colour can either match or contrast with the roof or wall.

On larger projects above 200 m², it is normal to order the flashing coil at the same time as the roofing coil, which ensures coatings and colours match.

The steel flashing coil has a tensile strength of 300 MPa, which allows the metal to bend without splitting, whereas the steel roofing coil has a higher tensile strength of 550 MPa.

Folding flashings

Roofing manufacturers, installers and plumbers all use folders to bend the shapes of the flashings. Flashings are folded to customer orders and requirements. They are not stocked as their shapes are difficult to store and are prone to damage. Most shapes can be folded up, provided the shape has a dimension not tighter than 10 mm. Typically, tighter folds require the shorter 2.4 m brake press folder.

Plumbers commonly make flashings from flat sheet supplied in 2.4 m long by 1.2 m wide sheets, which suit the shorter 2.4 m long folders. Roofing manufacturers cut off a coil strip in 6 m or 8 m lengths and usually 1.2 m wide to suit the longer folders of 6 and 8 m.

Flashing use

Flashings are needed in any situation where the cladding has been cut or terminated, including:

- barges and ridges
- around roof edges
- as aprons under cladding on an upper storey that comes out over a lower roof
- to seal pipe penetration holes through a roof
- walls around door and window heads, sills and sides



Junctions where flashings are required.

Folded ridges are used along the centre ridge of a building when rib heights of the roof profile are higher than 30 mm, typically on larger commercial roofs.

Using wide or long flashings

Longer lengths minimise end joints in flashings. Lengths need to be sealed together with neutral-curing silicone sealant and fixed together with rivets. Under E2/AS1, allowances for thermal expansion and contraction must be made in lengths over 18 m, or 12 m long where darker colours or aluminium have been used.

Where flashings require a total girth over 1.2 m wide, the pieces must be lapped and sealed together on site. Care is needed handling these larger widths as damage increases with the wider, more complex shapes. Wider flashings installed horizontally must also be installed over a solid support to prevent the flashing deflecting and holding water.

Quality installation, quality building

Widths of flashings vary depending on their location, and the minimums are outlined in New Zealand Building Code Acceptable Solution E2/AS1, Table 7. Typically, they all cover two

ribs down the roof or a minimum 130 mm along the top of the sheet in a medium wind zone.

Edges are either hooked out to deflect water, turned back under as a hem in a barge situation or can be manufactured with soft edging crimped on. Profiles with higher rib heights are scribed and cut on site around the profile ribs.

Cut edges must avoid contact with concrete or plaster work by use of a separation strip such as closed-cell foam or butynol.

Computer-driven folders

A new generation of folders, called RAS folders, are now available. The shapes and dimensions to be folded are loaded into the computer of the machine, a flat sheet cut to the required girth is loaded, and the folder automatically folds the intricate shape that has been loaded.

This new technology eliminates any human error in the measurement of the folds and is hands-free. It allows manufacturers to fold any shape accurately, removes the limits on shapes imposed by traditional folders and is all performed safely. ◀