

Roof penetrations

The reticulation of services throughout a modern building often require certain penetrations to be made through the roof cladding. Where these vents are fabricated from copper or similar incompatible materials, they must be post painted with an appropriate coating system to prevent the migration of copper ions to the roof surface. The deposition of copper ions will lead to accelerated attack of the ZINCALUME® steel and COLORBOND® steel roof sheeting.

Today the majority of roof penetrations are effectively sealed with a flexible EPDM or silicone rubber flanged sleeve, which can be obtained for flashing penetrations up to 600mm in diameter. The metal flange around the base of the sleeve should be contoured by hand to match the sheeting profile, before it is sealed and fastened to the sheeting. This allows drainage of water run-off down the trays or valleys each side of the penetration. The sleeve tapers up from the flange to a water tight fit around the penetration. While using these rubber sleeves care must be taken not to block any valleys or trays which would prevent water draining from the high side of the roof penetration. Ponding in such areas will cause deterioration of the sheet coating which will lead to perforation.

However, if the roof penetration can be located closer to the ridge capping or other flashing units, an alternative flashing method would be to fit a simple flat tray water shed, over the top of the sheeting profile. This should extend from under the flashing or capping down to the sleeve around the penetration thus preventing the ponding of run-off water. Often specialist flashing is required around roof penetrations such as chimneys, skylights and other architectural features. On low pitched roofs any penetration through sheeting large enough to block one or more of the sheet drainage channels or deck pans will require special attention to the lashing around the penetration. This can be achieved by diverting run-off water from the blocked channels by fitting a head gutter on the high side of the penetration. Run-off water from the roof area immediately above the blocked channels is then discharged into clear channels either side of the penetration. It should be noted that the sheeting on the high side has to be stopped clear of the penetration to allow a suitable space for installation of a head gutter which can be flashed under and sealed, to the upper sheet.

Further details pertaining to appropriate flashing methods at roof penetrations are covered in Australian Standard SA HB39.

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