

Warm and cold roof build-ups

Basic requirements

VMZINC must not only be installed according to our recommendations but also designed to them as well. VMZINC can be installed on non-vented warm roof build-ups as well as on vented cold roof build-ups. For standing seam build-ups a roof would have a slope of no more than 70° (Compact roof 60°); above this slope it should be considered wall cladding. All wall cladding should be ventilated. VMZINC will only give a warranty for recommended build-ups and details. The minimum slope for zinc roofs is 3° as built.

Definition of warm roof in the UK

Warm non-ventilated and cold ventilated roofs are two terms which do not always denote the same ideas to all building professionals. In order to put the warm non-ventilated roof system into context, we will refer to it as a roof where there is absolutely no vented space within the roof build-up and furthermore the entire roof structure is on the warm side of the insulation. In the UK this means that the roof structure is entirely below the insulation.

Fundamental elements of the system:

- VMZINC PLUS must be used on all warm roof build-ups
- VMZINC Membrane must be used (breather membrane)
- The substrate must be continuous and even and the correct fixing clips must be used
- A fully supported continuous vapour barrier must be installed (bitumen-backed aluminium foil). Polythene films are not acceptable
- For humidity class 5 (swimming pools) the Compact roof with Foamglas must be used. This build-up, as with the Structural roof, carries a BBA certificate



Definition of cold roof in the UK

In order to put the cold ventilated roof system into context, we will refer to it as a roof where there is a continuous air space of at least 50mm between the substrate supporting the zinc and the insulation. This air space must be a vented space with openings generally at the eaves and the ridge.

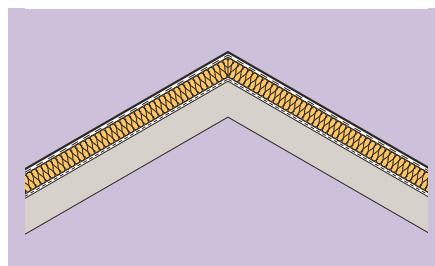
Hybrid roofs are not recommended by VMZINC and can result in the whole roof including the zinc failing.

Fundamental elements of the system:

- VMZINC PLUS must be used on plywood whereas VMZINC is acceptable on open-gap softwood boards
- VMZINC Membrane can be used to protect the insulation
- The substrate must be continuous and even, and the correct fixing clips must be used

Linear air vents must be at least 10mm wide and are commonly protected by insect mesh. It is always good practice to include a vapour control layer in the build-up and this should be installed on the warm side of the insulation. The system is covered by the Code of Practice 143-5: 1964.

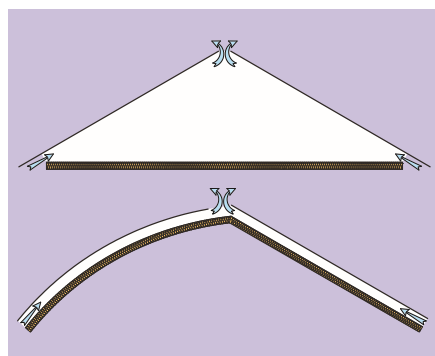
For further information please see our brochures on facades and the standing seam system



Warm Roof: Continuous layer of insulation covering a fully supported vapour barrier.



Result of using a hybrid roof.



Cold Roof: Air inlets and outlets are generally linear (at least 10mm wide) but can be individual. The ventilation must correspond to BS 5250: 2002.

Wall build-up

Basic requirements Fully supported traditional systems such as standing seam cladding are covered by Code of Practice 143-5:1964. Substrates should consist of 18mm plywood or soft wood open gap boarding and must be vented with a cavity at least 38mm deep. Air inlets and outlets with an open dimension of at least 10mm must be included at the base and head of the cladding. If the vents are covered with insect mesh the size of the opening must be increased accordingly. For warm wall build ups please consult us.

Typical standing seam panel system construction

- 1 VMZ standing seam panels in VMZINC PLUS
- 2 Fixing clip
- 3 18mm plywood
- 4 Battens creating a vented 38mm airspace
- 5 Insulation protected by VMZ Membrane

Fundamental elements of the system

VMZINC PLUS must be used if fitted directly onto plywood. On vertical surfaces it is possible to use VMZINC and VMZ Membrane on plywood. VMZINC can be used on soft wood boarding.

In areas where impact risk is low the substrate does not have to be continuous but must allow for the clips to be securely fastened.

The use of a single lock seam is recommended for cladding as this allows the panels to sit flatter.

Panels should be fixed with 5 fixed clips placed at the top of vertical panels or the middle of horizontal panels, further clips should be sliding with all clips fixed as per the diagram on page 8.

