

## Installation guide for Sandtoft Koramic VPM Classic & Super underlays

### General

- Sandtoft Koramic VPM Classic & Super underlays may be used for cold roofs (see Figs 1 and 2) and with ventilated or unventilated warm roofs with insulation installed in-line with the rafters (see Figs 3 and 4).
- In accordance with good building practice, Koramic VPM Classic & Super should be covered as soon as possible after installation and not more than one month after initial exposure. Within this period, when correctly installed, Koramic VPM Classic & Super will provide temporary protection against rain prior to installation of the slates or tiles. If the exposure period exceeds one month then advice should be sought from Sandtoft Technical department.
- Do not lay Koramic VPM Classic & Super in contact with any wet timber preservative (whether water or solvent based).
- Store rolls on a flat surface, protected from the weather.
- Fix Koramic VPM Classic & Super using extra large 20mm x 3.35mm clout nails of copper, aluminium alloy or galvanised steel.
- Koramic VPM Classic & Super can be easily cut with a sharp knife and remains flexible at all normal working temperatures.
- Lay Koramic VPM Classic & Super with minimum laps as shown in the table below:

Roof pitch	Horizontal lap	Vertical lap
15 to 34°	150 mm	100 mm
35° & over	100 mm	100 mm

### Cold roofs

If a ceiling is 'well sealed', as defined in BS 5250, condensation in dwelling-sized roofs can be controlled by the use of Koramic VPM Classic & Super and a reduced level of ventilation from that required with impermeable or 'Type HR' underlays. This should be either minimum 3,000 mm<sup>2</sup> per metre at eaves (or low level) or minimum 5,000 mm<sup>2</sup> per metre at ridge (or high level). In larger than dwelling-sized roofs the ventilation should be minimum 5,000 mm<sup>2</sup> per metre at eaves (or low level) and, in addition, minimum 5,000 mm<sup>2</sup> per metre should be provided at ridge (or high level).

If the ceiling is not well sealed (as is likely in re-roofing situations) then the ventilation should be at least 7,000 mm<sup>2</sup> per metre at eaves (or low level). Ideally, additional ventilation should also be provided at ridge level using a dry ridge system.

### Warm roofs

If the ceiling is 'well sealed', as defined in BS 5250, condensation can be controlled by the use of Koramic VPM Classic & Super with no additional ventilation. Koramic VPM Classic & Super can be laid draped (see Fig 3) or fully supported on insulation (see Fig 4). To ensure the integrity of a well sealed ceiling, a separate vapour control layer must also be used on the warm side of the insulation.

If there is any doubt about the ability to provide and maintain an effectively sealed vapour control layer then ventilation should be provided beneath the underlay of 25,000mm<sup>2</sup> per metre at eaves (or low level) and 5,000mm<sup>2</sup> per metre at ridge (or high level).

## Batten spaces

Koramic VPM Classic & Super contribute to condensation control by allowing water vapour to escape into the batten cavity and to the atmosphere through the roof covering. All Sandtoft clay and concrete tiles and slates are sufficiently air open to allow water vapour to escape without the need for extra ventilation.

If Koramic VPM Classic & Super are used with other roof coverings then confirmation should be sought from the roof tile manufacturer that ventilation into the batten cavity is not required. For roof coverings where it is necessary to ventilate the batten cavity, 25mm deep counterbattens must be fixed over the underlay and under the tile/slate battens. In this case, ventilation should be provided over the underlay of 25,000mm<sup>2</sup> per metre at eaves (or low level) and 5,000mm<sup>2</sup> per metre at ridge (or high level).

## Ventilation

Where roof space or batten cavity ventilation is required as detailed previously, this can be provided using the following Sandtoft ventilation and dry fix systems: -

- Profile Ridge dry ridge systems
- RollRidge dry ridge systems
- Multiversal dry ridge/hip system
- 10mm and 25mm eaves ventilation systems
- Concealed tile and slate ventilators.

## Installation

### Main roof areas

When laying Koramic VPM Classic & Super over counterbattens or rafters, allow the underlay to drape by no more than 10mm. This allows any moisture on the upper surface of the underlay to drain away safely under the tile/slate battens, preventing ponding behind or wetting of the battens. Where a horizontal lap does not coincide with a tile/slate batten either fix an extra batten over the underlay lap or increase the lap to coincide with the next batten.

### Eaves

Fit Sandtoft underlay support trays (available separately or with the eaves ventilation systems) at the eaves. Depending upon the roof design, if using eaves ventilators, fit the underlay support trays either over or under the eaves ventilators as appropriate; ie depending on whether the roofspace or batten cavity is being ventilated.

### Verge

Lap the underlay 25 to 50 mm onto the outer leaf of masonry, or onto the flying rafter for an overhanging verge.

### Ridges

When laying Koramic VPM Classic & Super to a ridge and where ridge or high level roof space ventilation is not required, or where ventilation into the batten cavity is required, lay the underlay from one side of the ridge to overlap the underlay on the other side by not less than 150mm.

For ventilation into the roof space; ie under the underlay, where a Sandtoft dry ridge system is being used, stop Koramic Classic & Super 30 mm short on each side of the apex.

### Valleys

For GRP valleys or valley tiles overlap the underlay at the centre line of the valley by not less than 300mm. Alternatively, lay a continuous strip of underlay not less than 600mm wide along the valley and lap the general underlay over this by not less than 300mm.

For lead-lined valleys cut the underlay to the rake and dress over tilting fillets to lap onto lead valley. Ensure that underlay is not laid under lead.

### Hips

Underlay from one side of the hip should overlap the underlay on the other side by not less than 150mm. Alternatively, lay a strip of underlay not less than 600mm wide over the general underlay.

## Low pitched roofs

When installing Koramic VPM Classic & Super on roof pitches below 22.5 degrees it is advisable to seal all laps using Sandtoft double sided tape and all junctions using Sandtoft Multi tape. All nail hole penetrations should be protected by laying Sandtoft butyl nail tape over the underlay, coinciding with all rafters and any other fixing points, prior to fixing the battens or counterbattens.

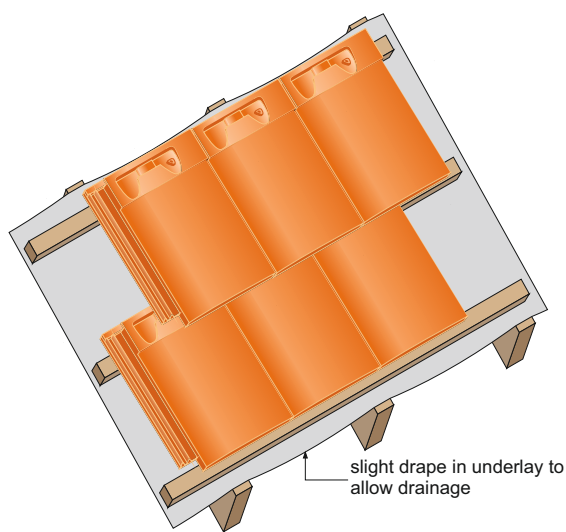


Fig 1: Cold roof, Koramic VPM Classic & Super laid directly over rafters

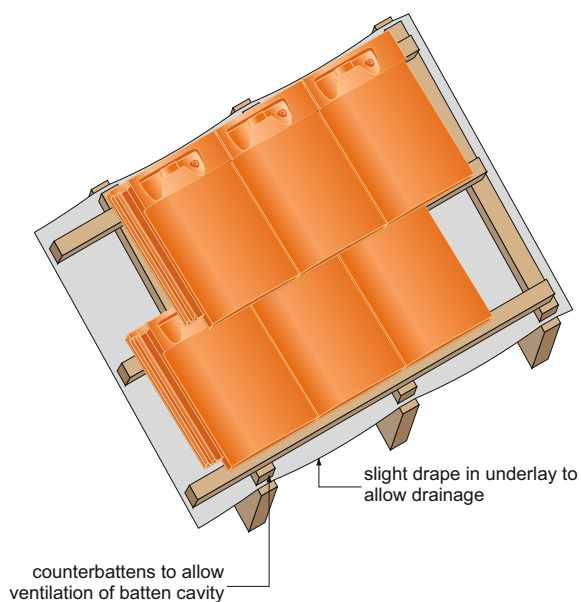


Fig 2: Cold roof, counterbattens fixed over Koramic VPM Classic & Super

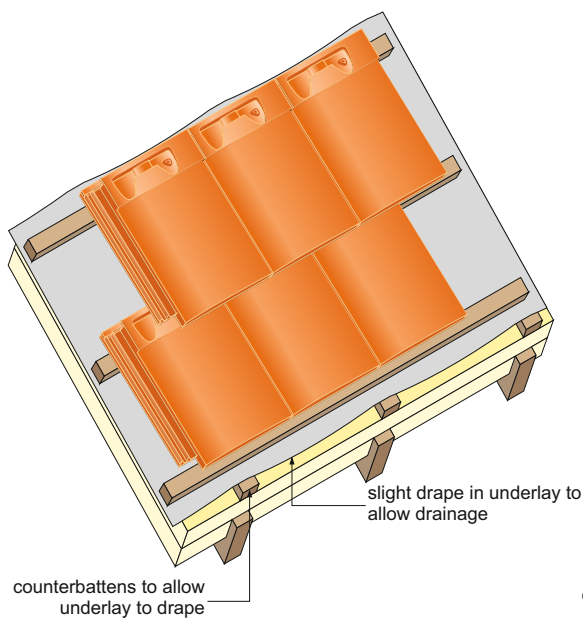


Fig 3: Warm roof, Koramic VPM Classic & Super laid over counterbattens

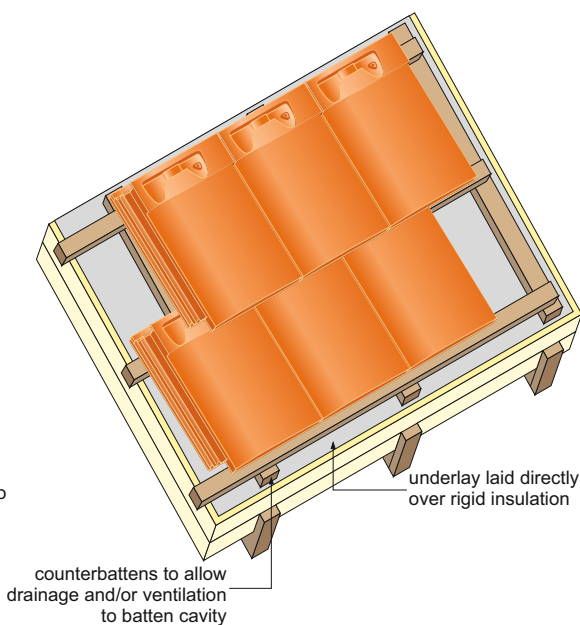


Fig 4: Warm roof, Koramic VPM Classic & Super laid directly over insulation