

INSTALLATION INSTRUCTIONS – SPIRTECH 400

Scope

These instructions apply to slated and tiled roofs which are not boarded with sawn softwood planks or continuous OSB, plywood, chipboard or similar. For use in other constructions or with alternative roof coverings (e.g. metal sheet) contact Technical Solutions (Tel. 08708 702595).

General – all roof constructions

The outer roof covering should be applied as soon as the installation of the underlay is complete. Any rips or tears in the underlay should be repaired using a proprietary tape.

Insulation at rafter level (Warm roof)

Spirtech 400 can be laid either directly onto insulation board or draped between rafters/counter battens above insulation.

The batten cavity above the Spirtech 400 and any small roof void between the underlay and insulation below need not be positively ventilated as long as the following conditions are met:

1. The slates/tiles are classified as air open when tested in accordance with BS 5534 – consult slate/tile manufacturer;
2. A vapour control layer is installed on the warm side of the insulation with laps of sufficient dimension adequately sealed – refer to insulation manufacturer for advice;
3. A well-sealed ceiling* is provided in accordance with BS 5250 below the vapour control layer.

If these conditions are not fulfilled then positive ventilation to the capacity of 25,000 mm²/m at low level and 5,000 mm²/m at high level must be provided to the batten cavity (if slates/tiles are not air open), or the small roof void between Spirtech 400 and insulation (if well sealed ceiling is not realised). In the latter case if a well-sealed ceiling is realised but vapour control layer omitted the small roof void must be ventilated to a capacity of 5,000 mm²/m at high level only.

Laying procedure – insulation boards above rafters (well-sealed ceiling and vapour control layer installed):

1. Ensure the fascia board is fixed at the correct height. The finished eaves detail must be such that the final course of slates or tiles lies in the correct plane and the underlay maintains a positive fall.
2. Clout nail the Underlay Support Tray to the top of the fascia board with the leading edge forming a drip into the gutter. Trays should be butted up against one another (not overlapped) and fixed at centres not greater than 300 mm.
3. Ensure the rear edge of the Underlay Support Tray rests on the insulation below the line of the first tiling batten. For plain tiles it will be necessary to remove the rear section of the tray by snapping or cutting along the score line. If Spirtech 400 is laid over counter-battens, ensure that these extend below the line of the first tiling batten in order to support the rear of the tray.

4. Roll out Spirtech 400 horizontally across the roof with the bottom edge in line with the top of the fascia.

5. Continue to lay Spirtech 400 ensuring that each course overlaps the one below by the correct amount, see table. When laying Spirtech 400 directly onto the insulation boards each underlay course must be secured before starting on the next.

6. At ridges and hips follow relevant ridge/hip details as per the Redland Book - A Guide to Roofing.

7. At verges and side abutments follow relevant verge/side abutment details as per the Redland Book - A Guide to Roofing.

8. At valleys follow relevant valley details for lead or GRP valleys, troughs or valley tiles as per the Redland Book – A Guide to Roofing.

Insulation at ceiling joist level (Cold roof)

Spirtech 400 must be laid with a minimum drape between rafters of 10 mm. The roof void below Spirtech 400 must be positively ventilated to a capacity of 5,000 mm²/m at high level when the following conditions are met:

1. The slates/tiles are classified as air open when tested in accordance with BS 5534 – consult slate/tile manufacturer;
2. A well-sealed ceiling* is provided as per BS 5250. If these conditions are not fulfilled then positive ventilation of the roof void below the Spirtech 400 must be increased to a capacity of 10,000 mm²/m at low level and 5,000 mm²/m at high level (Note: For roof pitches of 35 degrees or lower, or roof spans of 10 m or less the high level ventilation can be omitted so long as the roof is not a lean-to/monopitch roof and that 10,000 mm²/m ventilation is installed at low level).

Insulation at both rafter and ceiling joist level (Hybrid roof)

The roof void below Spirtech 400 must be positively ventilated to a capacity of 5,000 mm²/m at high level when the conditions of an air open roof covering and well-sealed ceiling* are met as described above.

If these conditions are not fulfilled then positive ventilation of the roof void below the Spirtech 400 must be increased to a capacity of 10,000 mm²/m at low level and 5,000 mm²/m at high level.

Headlap and Sidelap

The headlap of the Spirtech 400 should be in accordance with the following table taken from BS 5534. Sidelaps must be a minimum of 100 mm and should coincide with a rafter/counter batten line in order to secure the roll ends. Avoid laps above the same support in consecutive layers. Minimum headlap at given rafter pitch:

12.5 – 14.5	225	150
15 – 34.5	150	100
35 and above	100	75

* A well-sealed ceiling possesses an improved level of airtightness achieved by ensuring construction gaps/holes are avoided or sealed and that loft hatches, light fittings (including recessed light fittings (down lighters)) where installed meet certain minimum standards of airtightness as defined in BS 5250, Code of practice for control of condensation in buildings.