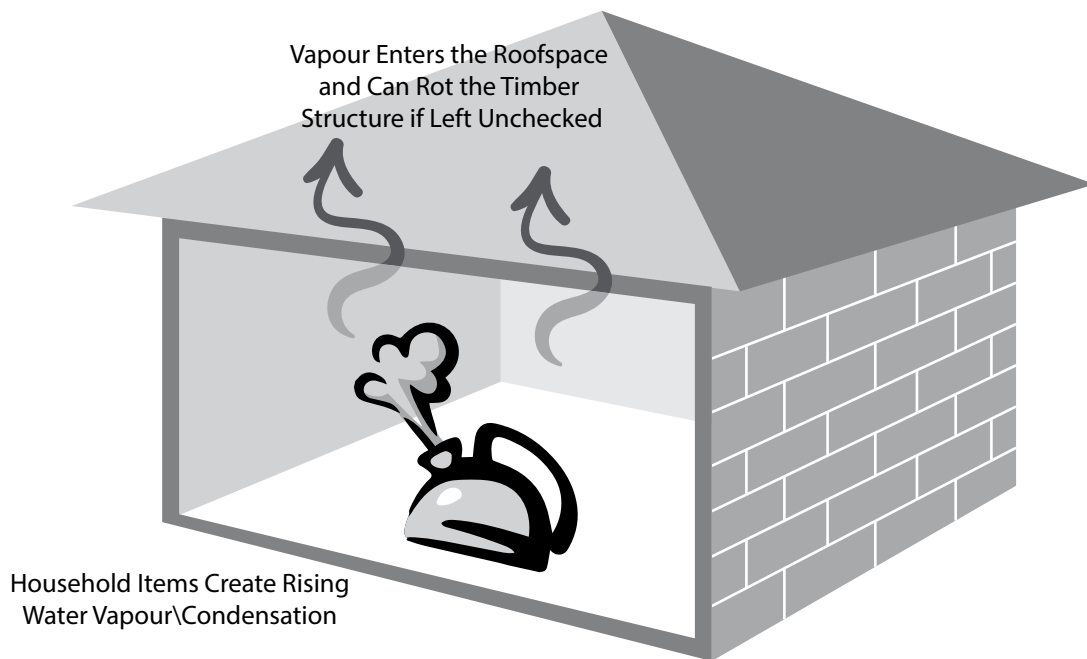


- Ventilation -

British Standard (BS) 5250

BS 5250 stipulates guidelines with regards roofing ventilation and condensation. Its primary concern is to eradicate condensation, which is mainly generated from within the home, from reaching and destroying the roof structure timber. Even when timber is not used in the roof construction, the vapour still needs to be properly extracted to prevent it from affecting other parts of the dwelling place.

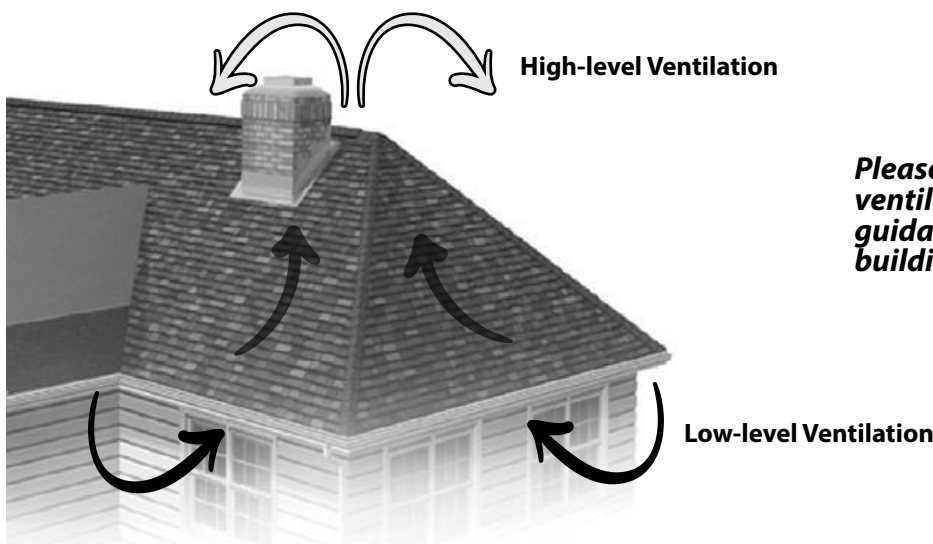
As with many other roof coverings, TapcoSlate Classic is classified as an **“Insufficiently Air Open”** product, meaning that water vapour cannot vent to atmosphere directly through the tiles, and so provision must be made to ventilate the roof space to move the water vapour from **inside to outside** the property. Proper ventilation is an **essential** part of modern-day roofing.



Standard Roof Ventilation

BS 5250 requires all roof structures to be **ventilated** at both **low-level** (air moving into the roof), which is typically at the eaves or soffit and at **high-level** (air moving out of the roof), which is typically at the ridge/hip, abutment, or with the use of fixed ventilation units.

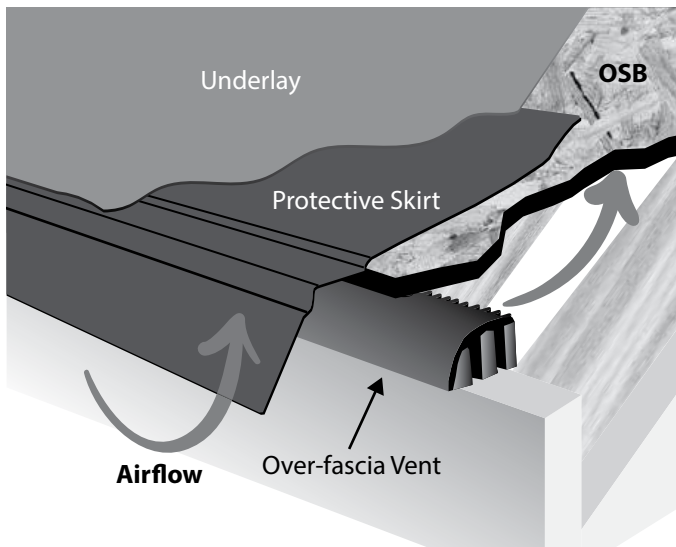
Obstructions such as dormers, valleys, roof windows, compartment walls, fire barriers and changes in pitch create **separate voids** below the roof slope. Ventilation openings should be provided to **each void** at high and low level.



Please note that this chapter on roof ventilation is purely manufacturers guidance and should not supersede local building authority recommendations.

Guidelines for Low-level Roof Ventilation

Tapco Eaves Ventilation Kits are recommended for low-level roof ventilation in both warm roof and cold roof construction. On a **warm roof** a 50mm void following the line of the rafters should be maintained and on a **cold roof** the loft space needs to be ventilated. These kits achieve this while keeping debris and insects from blocking the airflow. The **TEVK10** and **TEVK25** Eaves Ventilation Kits install continuously along the eaves and provide ventilation openings of **10,000mm²/m** (cold roof) and **25,000mm²/m** (warm roof) respectively. This kit consists of 10mm or 25mm over-fascia vents and eaves skirts in a 6-linear-metre pack. The **TEVK10** (10mm kit) also consists of a 300mm x 6m **Rafter Ventilation Roll** since most cold roof installations are felt & batten construction. Note that the **TEVK25** (25mm kit) does not include a Rafter Ventilation Roll, but this will be required to purchase separately if using felt & batten construction.

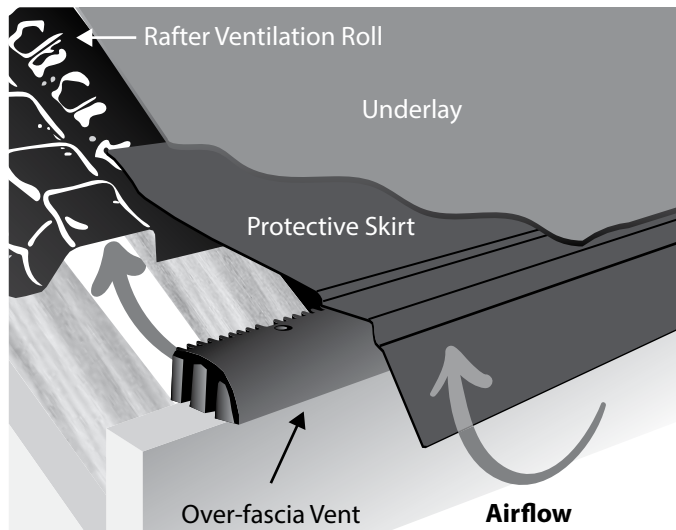


Fully-Boarded Roof

The **over-fascia vent** is fixed onto the fascia board and sits underneath the OSB or ply. The **protective skirt** covers the vent and roofing membrane is then laid on top of the skirt and the rest of the roof. Airflow comes in from the underneath of the vent and flows up the roof underneath the OSB/ply.



TVK25 Eaves Ventilation Kit
(Warm Roof Application)



Felt & Batten Roof

The **over-fascia vent** is fixed onto the fascia board and the **protective skirt** fits on top to protect the vent. For felt & batten installations we advise fitting a **Rafter Ventilation Roll** along the span. The roofing membrane sits on top and battens can then be fixed.



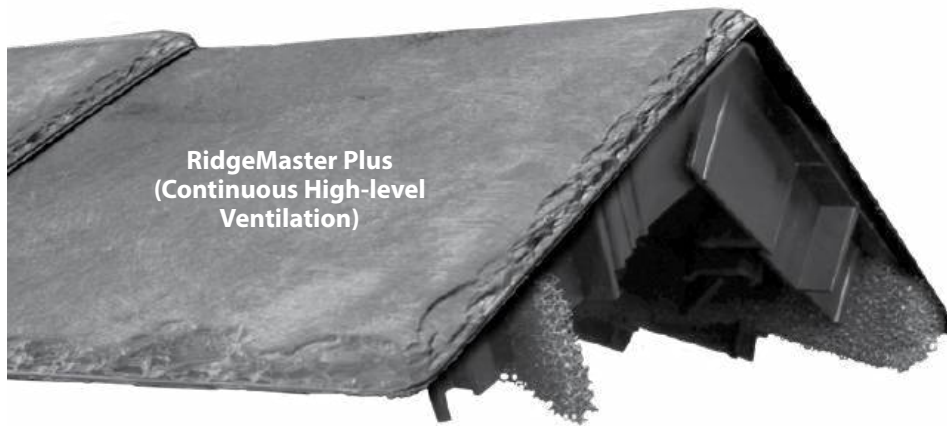
Rafter Ventilation Roll
(Felt & Batten Roof Construction)



TVK10 Eaves Ventilation Kit
(Cold Roof Application)

Guidelines for High-level Roof Ventilation

High-level ventilation is needed for the low-level airflow to exit and vent water vapour to atmosphere. Cross-flow ventilation (low-level to low-level) has been shown to be inadequate as standard air pressure is too low to adequately vent water vapour in this way. The use of the **RidgeMaster Plus** ridge ventilation system and/or **HipMaster** hip ventilation system is recommended in both warm roof and cold roof construction when installing TapcoSlate Classic. The **Tapco Abutment Ventilator** is again recommended in both scenarios for roofing abutments (such as lean-to roofs).



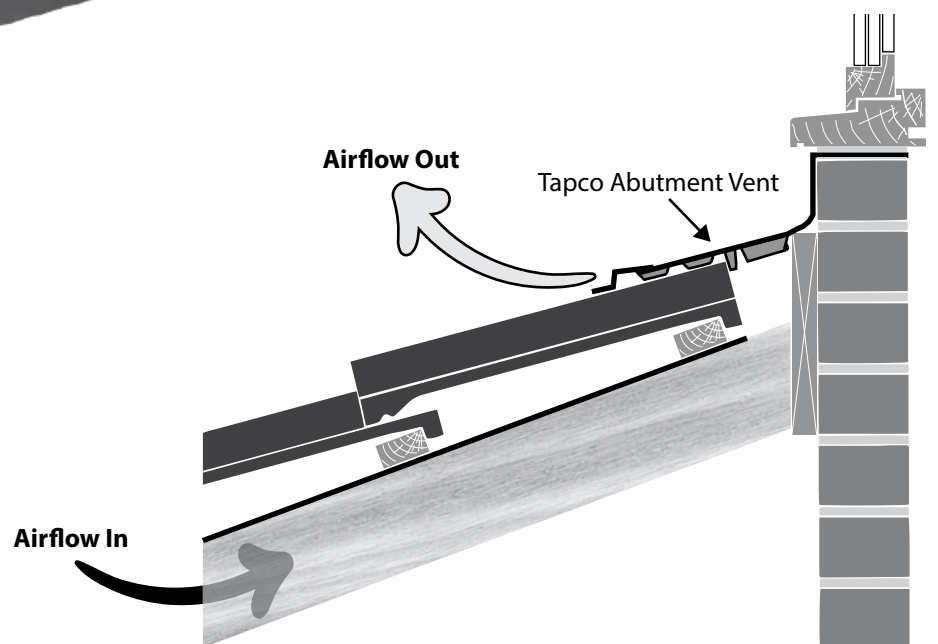
RidgeMaster Plus & HipMaster

The **RidgeMaster Plus** and **HipMaster** ventilation systems are manufactured specifically to fit underneath our **TapcoSlate Classic Ridge & Hip Caps** for continuous ridge and/or hip ventilation. These units provide **10,000mm²/m** high-level airflow and are easily fixed in place by nailing or screwing directly through the markers on our ridge & hip caps. Each unit covers 1.2 linear metres, is unobtrusive when fixed and contains baffles to prevent debris and insects.



Tapco Abutment Ventilator

The **Tapco Abutment Ventilator** provides unobtrusive **5000mm²/m** high-level ventilation in conjunction with lead roll details on slate roofs. It is particularly useful in top edge abutment details where there is limited vertical clearance. The ventilator provides full compliance with **BS 5250 Control of Condensation in Buildings**, the primary means to comply with **Building Regulations** in the UK as well as providing driving rain and large insect resistance.



Tapco Inline Ventilator

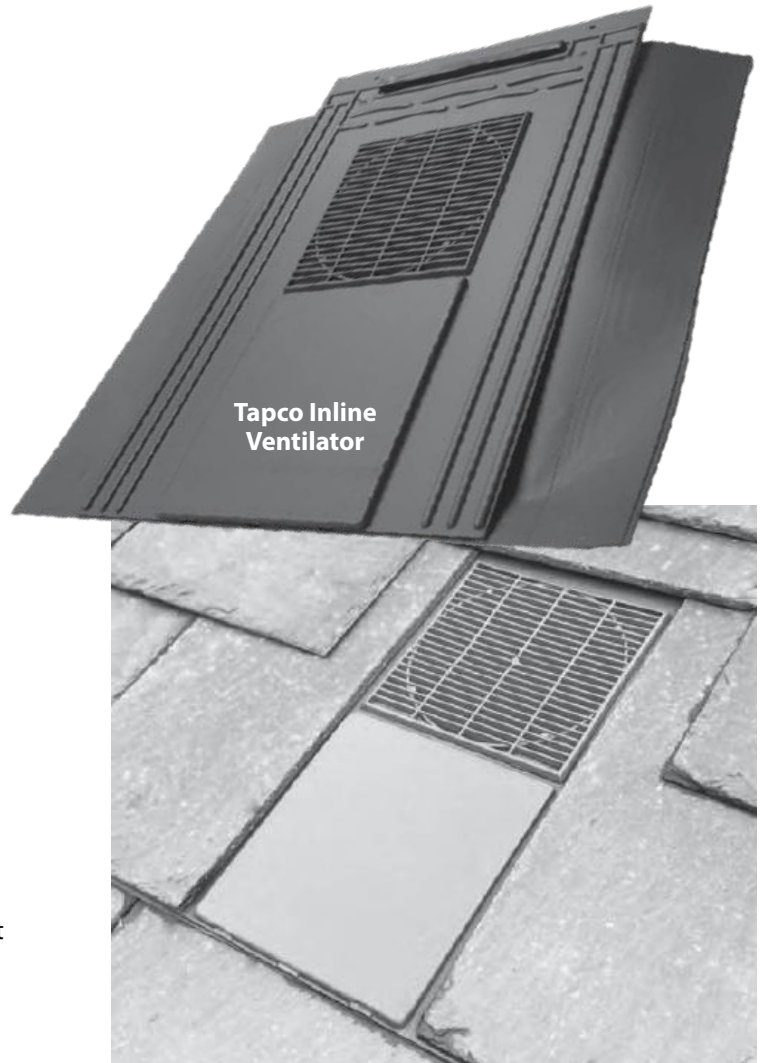
Tapco Inline Slate Ventilators have been designed to provide an aesthetic and unobtrusive solution to roof space ventilation. They can be used at low or high level where the roof construction does not allow eaves or ridge ventilators to be used, or where complex roof shapes do not allow effective cross ventilation. **Inline Slate Ventilators** are suitable for roof pitches from 20° to 90°, and provide **10,000mm²/m** airflow.

Warm Roof

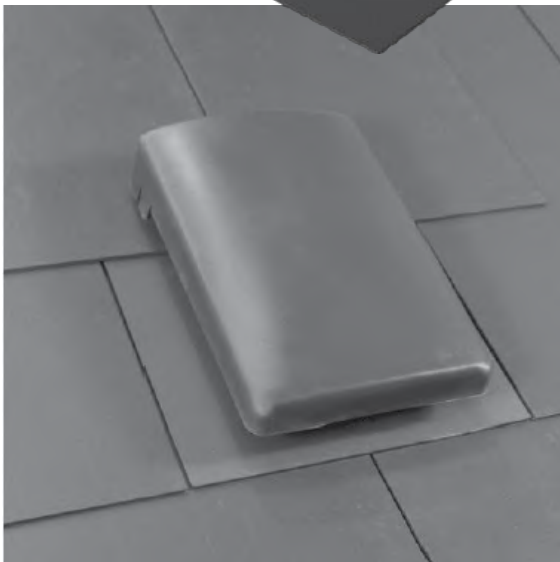
High-level ventilation to the equivalent of **5000mm²/m** is required for warm roof structures. This can be achieved by installing inline slate ventilators spaced at 2m centres. There must be provision for sideways movement of air in this scenario (the ventilation terminals may require additional finishing to ensure the airpath is not restricted by the insulation below).

Cold Roof

Inline or **Cowl Slate Ventilators**, providing **10,000mm²/m** free area and spaced at 1m centres, or alternatively **Cowl Vents** providing **20,000mm²/m** (20k) free area spaced at 2 metre centres, can be used as high-level ventilation. For roof pitches greater than 35 degrees or spans (wallplate-to-wallplate) greater than 10m, providing high-level ventilation to the equivalent of **5,000mm²/m** is required. This can be achieved by installing inline or cowl slate ventilators spaced at 2m centres.



Tapco Cowl Ventilator



Tapco Cowl Ventilator

Tapco Cowl/Soaker-style Slate Ventilators are designed to ventilate through the roof slope and form an integral part of a slate or tile roof covering. They can be used at low or high level where the roof construction does not allow eaves or ridge ventilators to be used, or where complex roof shapes do not allow effective cross ventilation. **Cowl Slate Ventilators** are suitable for roof pitches from 15° to 90°. They are available in **10,000mm²/m** and **20,000mm²/m** airflow units.

Pipe Adapters

Pipe Adapters are also available to allow **Inline** or **Cowl Ventilators** to be used in conjunction with a standard round vent pipe. This converts the vent to a soil pipe fitting and/or mechanical extract terminal.



Inline Vent Pipe Adapter



Cowl Vent Pipe Adapter