

OPEN PROTECTED RIDGE INSTALLATION GUIDE

OPEN PROTECTED RIDGE SYSTEMS

Efficient ventilation is important in the design of an agricultural building. The open protected ridge ventilation system is specifically designed for livestock buildings, as it supports animal welfare by reducing moisture levels which can carry bacteria and disease.

The open protected ridge ventilation system provides optimum ventilation at the apex of the ridge using the stack effect and is therefore particularly efficient at removing moisture saturated air from within the building.

As air flows up the outside slope of the roof it hits the upstand of the ridge deflecting the air upwards, creating negative (low) air pressure helping to draw the air through the opening at the apex of the roof between the top sheets.

This does not only help the ventilation of the internal airspace, but also the airflow blows away rainfall from the opening in the apex, and can help stop rain from entering the building.



RECOMMENDED FIXING PROCEDURE

The critical factor to efficient open protected ridge ventilation is the air gap. In accordance with HSG 33 guidance, the open ridge should have a maximum gap of 300 mm, the ventilation gap labelled Y should be calculated by the number of animals that will be housed in the building, to a maximum gap of 250 mm. We recommend that you seek advice from our technical team to help calculate this for you.

The open ridge is protected by a fibre cement weatherboard unit 300 (W) x 2400 (L) mm bridged at 750 mm centres by galvanised metal straps manufactured to suit the pitch of the roof/width of airgap etc. The straps are fixed at an angle of 5° from the horizontal plane of the building and then bolted to the straps to form a protective cover.

The cover must be positioned at least 20 mm below the top of the upstands of the ridge pieces. Each unit is overlapped to the next along the right line of the roof approx 90 mm.

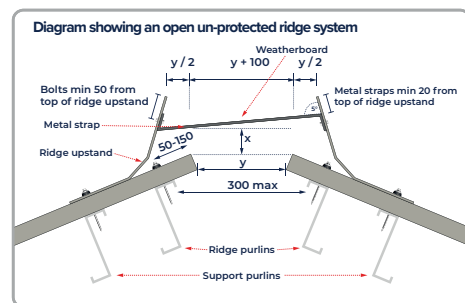
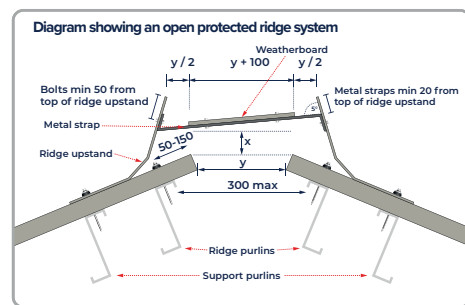
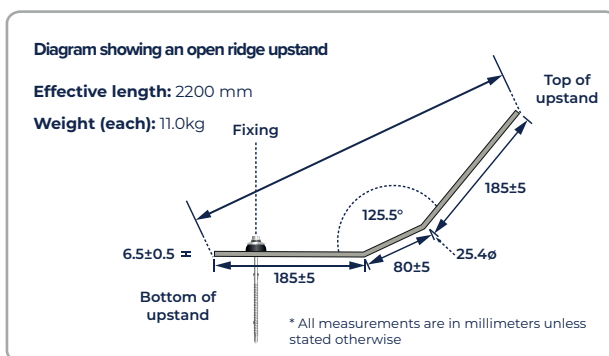
	Weight when laid
Open protected ridge system	15.22 Kg/m2
Open un-protected ridge system	10.77 Kg/m2

OPEN UN-PROTECTED RIDGE SYSTEMS

An open un-protected ridge system has the same concept as an open protected ridge system, however with this, the weatherboard is removed therefore creating a higher volume of airflow out of your structure.

This is one of the preferred ridge systems for increasing ventilation out of your structure, especially if you are looking to house livestock in the building.

Whilst maximising the airflow out of the structure, it is recommended that if your design incorporates using an un-protected open ridge system, care must be taken on the internal layout. For example, animal bedding areas (such as cow cubicals) should not be placed directly underneath the ridge line otherwise the rainfall that may fall through the open area may ruin the bedding. On the other hand, it would be perfectly acceptable over a passage way.



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