

Slating & Tiling

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ventilation slates

On almost every new slate roof you will find at least one ventilation slate that is connected to a soil pipe or extractor fan, or that is installed to control condensation. Due to plastic designs, the majority are now flush with the surface of the roof, making them more inconspicuous.

Vent slates come in two generic types: those that lap under the adjacent slates, and those that do not. Generally, those that have hoods or mushroom caps on the top surface do not have side flanges/channels, while most of those that have flush-fitting grills do have them.

Flanges/channels

The flush-fitting grills require the bulk of the vent to be located below the surface of the slate, and therefore the duct tends to take up most, if not all, of the width of the raised central section of the vent. The flanges/channels down either side of this section serve two purposes: they help to hold down the slate at the leading edge, and they provide additional side lap to the slate below, which has been cut to allow the vent duct to pass through it.

The thickness of the flanges/channels causes the adjacent slates to kick up by their thickness, which is about 2mm on average. Also, the flanges/channels are 25mm-50mm wide, so pass under the nail hole position of the adjacent slate, forcing the nail fixing to be driven through the flanges/channels, or a new nail hole to be punched further from the edge of the adjacent slate.

The raising of the adjacent slate also reduces the penetration of the fixing nail by the same amount. With fibre cement slates, the copper disc rivet fixing in the adjacent slate will either cause the slate to bend slightly, or there will be less of the rivet pin bent over the top surface – neither of which is desirable.

Many of the vent slates with flanges/channels are designed for use with natural slates. With FC slates there is a need to provide a copper disc rivet fixing to hold the

leading edge of the slates in the course above. Because the rivet needs to pass under the two adjacent edges of the slates below, this is not always possible, as the flange/channel being moulded into the vent slate removes one of the two edges.

Opening up the side gap to accommodate the copper disc will affect the coursing of the slates, and leave the rivet unstable and able to rotate and pull out from under the adjacent slate. Cutting off half the copper disc rivet eliminates one of these requirements but not the other, so is also not acceptable. Notching the rivet into the side of the adjacent slate and punching a new hole in the tail of the slate above is a slightly better option, but weakens the edge of both slates.

The best option is to use a vent slate specifically manufactured for FC slate that has a slot built into it for locating the copper disc rivet. Having flanges/channels down each side makes it impossible to cut the vent slate to fit any other size of slate than that which it has been manufactured for.

Butt edge

Vent slates with no flanges/channels down each side tend to have hoods or mushroom caps on the top surface and a smaller duct through the underside, making the side lap distance greater.

Butting up to the adjacent slates stops them kicking up, provided that the overall thickness of the vent slate is the same as – or less than – the adjacent slates. Also, there should be no interference with the adjacent slate nail fixing, and the copper disc rivet for the slates above should be accommodated without modification. With no side flanges/channels, the leading edge of the vent slate should be held down with a copper disc rivet or a slate hook, to prevent wind uplift (regardless of the type of slate).

Sizes

The majority of vent slates are designed to suit both 600mm x 300mm and 500mm x 250mm

slates. While some natural slates in the UK are supplied in these sizes, most are likely to be one of the 28 imperial sizes, making some vent slates difficult or impossible to install with natural slates. They would therefore be more suitable for use with FC slates, provided the thickness is correct.

Colour and texture

Plastics, when new, can be produced to closely match the natural or FC slate colour and texture, but they will never be the same, as the materials will weather differently over time. Often, if they start off different, the colour and texture may blend in better after a few years.

The precise finish, colour and texture of the plastic vent slates – relative to the adjacent slates – is almost impossible to predict, so colour and texture variations should be expected. Placing vent slates in inconspicuous locations is therefore always a good idea.

Installation

All good vent slates will come with a set of fixing instructions, which should be adhered to. They should always be laid to the correct half bond with the surrounding slates. This may be difficult with some designs where the exposed surface of the vent extends up over two courses.

If the duct on the underside coincides with the rafter or counter-batten position, the vent slate may have to be installed in the course above. This may not always be possible where the

rafter centres are at below 450mm. If this is the case, a vent slate with a narrow duct could be used, or the coursing of the slates on the roof can be adjusted to ensure the vent slate is positioned at the mid point between two rafters. For a very small variation, it may be possible to trim the edges of the slate or the vent slate (if it does not have side flanges/channels), so long as it does not affect the minimum side lap or the structure of the vent slate.

Where the slates on the course above and below are cut to accommodate the duct on the underside, and the grill on the top surface, the cuts should be as close to duct and grill as possible without lapping over them and reducing the ventilation capacity.

Where the grills on the top surface are raised, lapping onto the grill will cause the cut slates to kick up, and may affect the nail or copper disc rivet fixing. Vent slates should never be installed close to the perimeters of any roof slope. The closer they are to the centre of the roof slope the better.

Tips

- Vent slates with side flanges/channels need a disc rivet slot when used with FC slate.
- Use a vent slate with a narrow duct where the rafter centres are less than 450mm.
- The leading edge of the vent slate needs to be held down to prevent wind suction damage.



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