

PRODUCT DESCRIPTION

RIDGE VENT CONSIDERATIONS

No.: PD-193-1 FOR ARCHITECTURAL METAL ROOFING

Although a ridge vent is a very clean solution to attic space venting, and preferred by architects over turbine vents and other cumbersome looking roof ventilators, it creates a primary concern regarding water infiltration; as much so as valley and mechanical penetrations.

For this reason, Berridge does not currently advocate the use of ridge vents as a whole. Other architecturally acceptable forms of roof vents including dormer vents, cupolas and gable louvers are available. Berridge does, however, accept the architect's specification of ridge vents, with the use of certain preformed ridge vent materials that limit water infiltration by wind driven rain.

Various materials, such as a plastic insert with a hollow vented core by Cor-A-Vent (Model V300/CS), Inc. (1-800-837-8368) or equal are available. Because these products represent an

reduce air conditioning energy consumption. Another consideration that architects must be concerned about is when warm conditioned air meets cold outside air within the roof envelope, and the dew point is reached to form trapped condensation within the roof envelope.

The good news is that because vented attic air flowing upward from the soffit to ridge is the same or near same temperature as outside air, there is no temperature change at the roof envelope, and therefore no possibility for condensation at the underside of the metal roof. Although condensation may occur in summer with the location of warm and cold air reversed, vapor retarding design is generally based on winter conditions, which are the most adverse except for tropical locations.

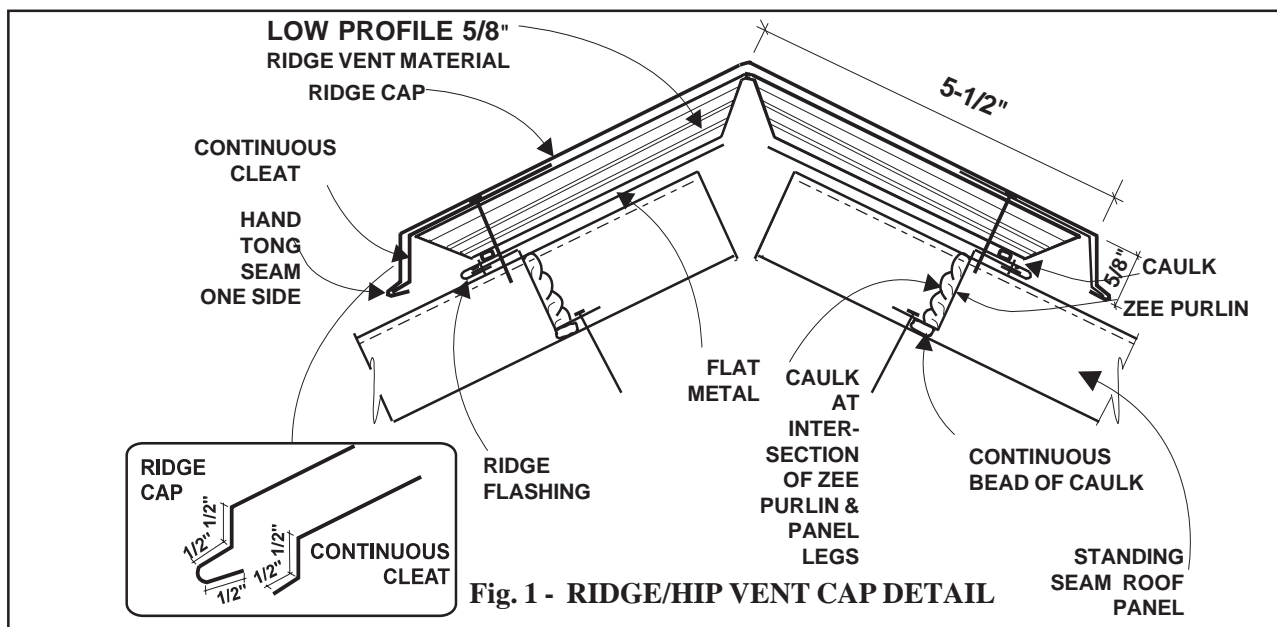


Fig. 1 - RIDGE/HIP VENT CAP DETAIL

acceptable method of ridge ventilation of attic areas, Berridge has developed a ridge vent section detail (fig. 1) for enclosing the ridge venting assembly.

While a properly designed ridge vent with water shielding material is of vital importance, of equal concern is that the architect design for proper air flow; otherwise the ridge vent will not function. Positive, outward air flow from a ridge vent is based on the fact that warm air rises and that there is adequate incoming air at the attic low point. The Berridge perforated Vee Panel or FW-12 Panel may be used for this purpose. The entire soffit area need not be vented. A ratio of 1:300 soffit vs attic area and 60:40 ridge vs soffit vent square footage is recommended.

With properly designed attic ventilation, wind driven rain will not have a tendency to move into the ridge vent and down into the attic, or across the vent and out the other side. It is to the installer's advantage to check that the ridge vent has adequate air movement and to inform the architect if it does not.

One more point concerning ridge vents: Venting of the attic space is basically a method of removing trapped heated air to

Insulation in vented attic space is, therefore, located above the ceiling line of conditioned space below the attic floor. The vapor retarder is attached at the underside of the insulation, which will keep moisture from following the air as it cools to the unconditioned space, and avoiding trapped condensation within the attic floor.

PROPER HIP VENT DETAILING

Water infiltration through hip vents due to wind-driven rain is of greater concern than with ridge vents, therefore the following precautions need to be taken: (1) Verify how much attic ventilation is required: One square foot of ventilation per 300 sq. ft. of attic space is generally acceptable. (2) Ensure a 60:40 ratio of ridge/hip exhaust area vs soffit vent intake area. (3) Terminate the hip line vent opening slot three feet up from the top of the wall line.

