

# VENTILATION DETAILS

## Ventilation Guidelines

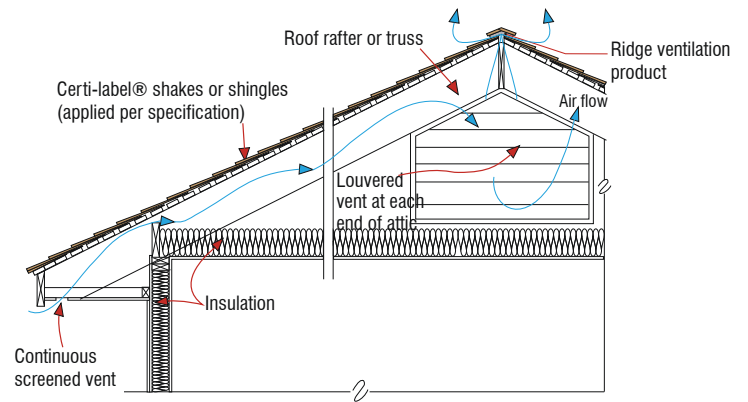
Shakes and shingles may be applied over spaced sheathing. The importance of good attic ventilation beneath the roof cannot be overemphasized. Such movement of air will prevent or inhibit condensation of moisture on the undersurface of the Certi-label® shakes or shingles or on the roof decks. Vents should be provided at the soffits (eaves) as well as at gable ends (screened to prevent ingress of insects), on roof by using attic roof ventilation or preferably the ridge lines with cross ventilation desirable. A rule of thumb for adequate ventilation is that the ratio of total net free ventilation area to the area of the attic should not be less than 1:150, with compensation made for screens over vent apertures. In the case of a balanced system a 1 square foot per 300 square feet of floor area may be adequate ventilation, for normal installation. However if a barrier system of any type is used above the roof deck, the attic ventilation shall be a minimum of 1:150.

If spray foam or foam boards are required to be applied to the bottom of the solid plywood sheathing (not spaced sheathing), it is strongly recommended to consult a building envelope specialist for potential issues of condensation and ultimate biodegradation of the solid plywood sheathing.

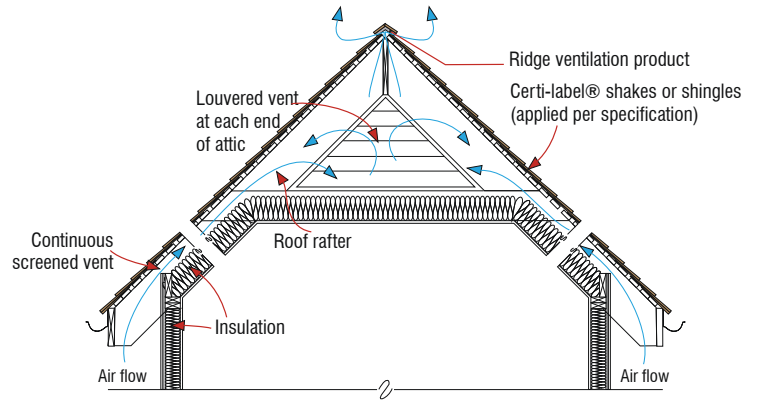
Check with your local building code official. Attic fans may be beneficial by supplying additional movement of air in attic spaces. Several roof ventilation construction techniques are shown in **Figures 15a-15c**.

Any modification to the vapor barrier system or addition of a vapor barrier system should only be done after consulting with your local building code official and a building envelope specialist. In some areas, building envelope specialists are regulated by government.

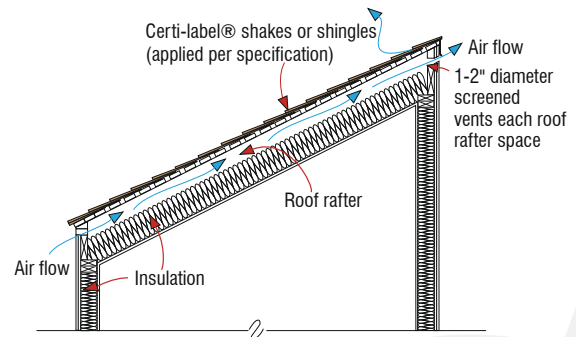
**Figure 15a: Gable Roof With Attic**



**Figure 15b: Cathedral Ceiling With Partial Attic**



**Figure 15c: Shed Roof**



**NOTE:**

Do not cover the entire deck with non-permeable barrier (including non-permeable underlayment). See CSSB technical bulletin "Asphalt-Saturated Organic Felt".

The CSSB recommends installing over plywood panel or dimensional lumber sheathing. If other sheathing materials are approved for use by your local building code official, the holding power of the fasteners should also be considered carefully. Contact local building code official for substrate (plywood) attachment fastener detail.