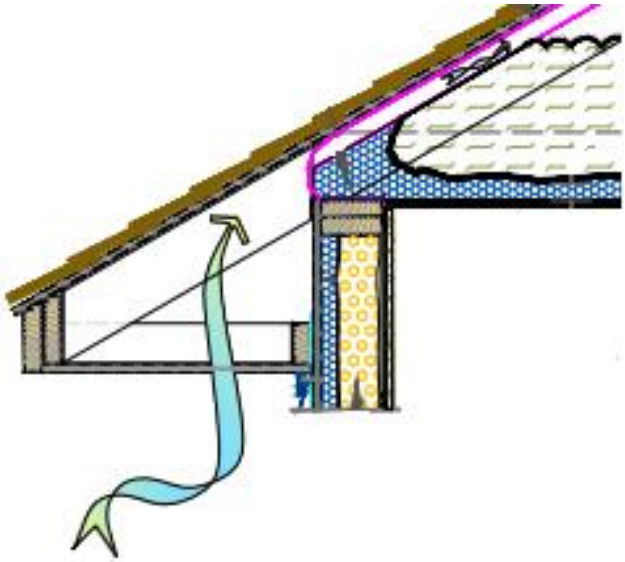
PRO TIPS

A Baffle-ing problem

By Cole Fletcher, CSFI Technical Service Representative

Vented attics need to breathe, and unvented attics need to be sealed up tightly. But when almost every house under construction today is designed for attic ventilation through the soffit area, spray foam applicators need to understand how to properly seal an area that was designed to encourage air flow.



The soffit is any finishing material installed to cover the underside of a roof overhang. The soffit area usually runs most of the perimeter of the building but not always. Apart from aesthetic purposes like covering the exposed rafters making up the underside of your roof's overhang, soffits provide attic ventilation through perforations or vents in the material.

Spray foam applicators need to completely seal this area with spray foam insulation when creating an unvented attic. But as you can see in the picture above, this area is typically exposed to the outside with no backing material or substrate to spray to. Depending on how the roof line height corresponds to the height of the exterior wall, this opening can vary from 3.5” up to a couple of feet in some cases. Building up enough spray foam to bridge these gaps is not practical or recommended.

Spray foam applicators turned toward cardboard baffle vents to overcome this installation challenge. Baffle vents primarily channel air flow from the exterior soffit vents up into the attic space, but they also prevent loose-fill insulation, like blown-in cellulose or fiberglass, from clogging up the soffit vent. For spray foam applicators, pre-cut cardboard baffles that are installed and stapled in place provide a cost-effective substrate for spray foam insulation. In this installation method, spray foam covers the baffle’s air discharge area, which leaves an air gap of approximately 1.5” between the backing of the cardboard baffle and the roofline. This is our recommended installation method. However, it’s the lower flap of the baffle that often creates installation problems.

In a typical cardboard baffle installation, the installer often staples the lower baffle flap to the interior edge of the top plate. What may seem like a good practice incidentally causes a break in a sealed attic. The gap between the lower flange and the baffle can be 1/8-1/4”, which is enough to allow air into the conditioned space as shown below.

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Fortunately, this is an easy problem to solve. Simply make sure that lower flange of the cardboard is installed as far back as possible, or our preferred approach, just attach the baffle to the outside of the wall.

About the author

Cole Fletcher is Carlisle Spray Foam Insulation's Technical Service Rep. Based in Florida and supporting the Southeastern U.S., Cole has been spraying foam for over 10 years and has experience working for insulation contractors, distributors, and spray foam equipment manufacturers. With a passion for teaching, Cole is often found offering tips, tricks, how tos, troubleshooting, and more to anyone who wants to improve their business or install a better product.