

Ask Jon Eakes

SHOULD I ADD VENTILATION TO A FLAT TOP OR BASIN TYPE ROOF?

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Be careful, we are still learning how to deal with these difficult structures after adding roof space insulation. The problem is that the air volume and its flat thin shape do not efficiently dry out the roof space as does the large vertical air space of a peaked roof. The cardinal rule is to inspect the roof space and inspect it regularly. If you have no moisture accumulation problem -- don't start making problems just because your neighbors put some fancy ventilators on their roof. Make no changes to your present roof and inspect two or three times each winter. If moisture is found in one localized place -- seal the source of the moisture leak from the house. You may still not need to ventilate. There is a growing body of experience that indicates that no ventilation at all is the best policy in the cramped quarters of flat top and basin type roof spaces. If you have done all possible to seal leaks from the house and you still have a moisture accumulation problem in the roof space then consider the following:-- If the only space available for insulation is the joist space between the ceiling and the roof; fill it all up with insulation, leaving no air space and seal off all air leaks through the roof. Don't try to ventilate but try to stop all air movement. (search keyword "attic" for the title "MYTH: THE MORE ATTIC VENTILATION IN WINTER THE BETTER.")-- If the space available allows for reasonable insulation (at least RSI-3.5, R-20) plus five to ten centimeters (4 inches) of air space, then carefully leave the air space and provide a couple of static goose neck ventilators. They will be very inefficient but over the spring and summer should succeed in drying out the attic -- inspect it regularly. Do not use power ventilators nor wind assisted ventilators.-- If you have a foot or more of air space above the insulation before falling into the compartments of the roof beams, then a gravity feed cross current of air flow should be established. Goose neck static ventilators should be installed at the highest points of the roof (downwind side of the house if possible) and wall mounted intake vents should be mounted on the opposite side of the house just above the insulation. The goose necks should be taller than normal snow accumulations. Goose necks by themselves do almost no good (where is the air supposed to come from that goes out the goose neck?) but contractors usually have to be forced to install the lower wall mounted intake vents. Inspect that in fact the contractor cuts all the way through the wall into the roof space when installing the intake vents -- it's common practice to slap them on the side of the house to keep you happy but they don't even go through the wall into the roof space.-- Power ventilators, turbine and other wind assisted ventilators are even worse ventilators in the cramped space of a narrow flat top roof space than they are on an ordinary roof. The vacuum effect of these exhausts are concentrated on the ceiling directly below the vent (drawing moisture from the house or even straining the air barrier). They have been known to suck loose fill insulation that is near the vent right out of the roof space. They have little effect further away because of the shape of the thin spread out air space, so they don't even ventilate very well. (search keyword "attic" for the title "CONFUSION: POWER ATTIC VENTILATORS ARE NOT RECOMMENDED FOR WINTER USE. WHY?")-- If increasing proper ventilation does not solve a moisture problem then you are not effectively sealing off the moisture source. If you cannot seal off the moisture source any better, then try restoring to sealing shut the roof -- no winter ventilation at all. (search keyword "attic" for the title "MYTH: THE MORE ATTIC VENTILATION IN WINTER THE BETTER.") Seal up the vents and caulk all the cracks air tight. Leave a weather-stripped inspection door to check on the results.

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