
FYI - IDEAL BATH FAN SYSTEM

- An ideal system for removing humid air from the living space starts with the fan itself. The fan should be sized for the area being vented and have an air flow rating (measured in CFM) which allows the fan to exhaust the humid air in a reasonable timeframe
- The fan should be controlled by a timer. The timer should be set to run for 10-15 minutes after the shower or bath has ended, giving time for the humid air to be fully exhausted.
- The ideal ductwork for this fan is either 4" solid aluminum or flexible aluminum ducting. Avoid cheap plastic ducting.
- The ductwork should lead directly to the exterior by way of a flapper style vent on the roof.
- Pointing the ductwork at or into a roof vent is not the best solution for a few reasons:
 1. The roof vents are screened to prevent bugs and pests from entering the attic. I have seen these screens completely plugged with dust and debris from the bath fans and when this happens, very little of the highly humid air is leaving the attic. When the humid air can't leave through these vents, it pools up around the vent and the roof sheathing is soon dripping with moisture and black with organic growth. Soon after that, the wood begins to decay and once that process begins, it can not be reversed.
 2. This is not the designed purpose for roof vents, and by filling the available space in the roof vent with ducting, the attic ventilation itself suffers. New standards for attic ventilation requires low and high ventilation and have a much higher requirement for each type of vent. When these vents are restricted in any way, the structure will slowly fail (or quickly fail if enough moisture is trapped inside the attic which can't escape)
- The ductwork should be as short a run as possible. This creates the least amount of resistance to the airflow as it is carrying the heavy moist air to the exterior.
- The ductwork should be fully insulated. This prevents the warm air entering the attic space from condensing on the inside of the ducting when meeting cool air in the attic and dripping back into the fan housing, usually rusting out the fan motor and causing damage to the ceiling around the fan.
- The only tape which should be used for the joints and the attachments is reinforced foil tape. This has a peel away backing and is designed for this purpose. "Duct tape" is the absolute wrong tape to use for several reasons:
 1. Duct tape does not actually stick well to galvanized or aluminum.
 2. Duct tape dries out quickly from heat and loosens and falls off the duct. Again, reinforced foil tape is the only tape which should be used for ductwork.

