

## General Notes about Un-vented Attics

### Purpose:

One of the key steps in providing a comfortable, health, and durable interior environment in a hot-humid climate is minimizing the heat gain and moisture through the attic. Spray foam insulations provide excellent sealing characteristics and can easily achieve an un-vented attic. It also allows the HVAC equipment and ductwork to be located inside the thermal building envelope.

### Positive Impact on the HVAC System:

Because the latent load is reduced the HVAC system no longer needs to be oversized to handle the additional moisture that is introduced to the home under standard building practices. In addition, the sensible impact to the duct system, when located inside an un-vented attic, is greatly reduced by 40 – 50%. Duct leaks are not as critical when located inside of an un-vented attic. Proper sealing techniques of the duct system should still be utilized. Typically ducts do not sweat in an un-vented attic.

Building tight can never be too tight! However homes can be under-ventilated. The best way to go is build a tight building envelope and install controlled ventilation. Every home's ventilation requirements are different and a professional should analyze each home and properly design the ventilation system.

Proper installation of exhaust venting and training the end user on how to use the exhaust fans is very critical to maintaining good indoor air quality. It is a **must** that the exhaust fans be used to remove moisture from the building thermal envelope.

### Additional Considerations:

The following items are not as critical and really are no longer a negative factor when utilizing a properly designed and installed un-vented attic: Airtight recess cans, sealing top plate penetrations, sealing interior door headers, fireplace chase ceilings, insulating disappearing attic stair units, and knee wall insulation falling away from the wall, etc.

Another great selling point of an un-vented attic is that the attic can now be used for storing items that are sensitive to high heat.

Un-vented attics, if properly designed and installed, can be a huge advantage in a Hot-humid climates. However, it can also be a detriment to indoor air quality, mechanical equipment, and durability to the structure if the proper steps are not taken.