



JOIN US FOR A FREE INDOOR AIR QUALITY SEMINAR!



Addison Homes will be holding a free consumer seminar on "Indoor Air Quality and your home" at 6:30p.m. on Thursday, August 26th at Whole Foods Market in Greenville. This interactive seminar will cover the latest practices for improving and maintaining indoor air quality in new and existing homes. Space is limited - Please contact Addison Homes to register [by email](#) or call us at 864.848.2667.

Building

The Air You Breathe

Just as the human body has a respiratory system, so a house has specialized equipment to bring fresh air inside, filter it, distribute and 'exhale' it. The respiratory equipment in a house is often referred to as "HVAC," for "heating, ventilating and air conditioning."

As homebuilding has become more sophisticated, so have HVAC systems. From the days of a single source of heat, such as a woodstove, this vital function has expanded to include a variety of components that deliver and improve indoor comfort, air quality, and energy efficiency. Which system is appropriate depends on factors such as climate, house design, budget, fuel sources, and the personal requirements of those who suffer from allergies and asthma. The wide range of options gives the professional builder an opportunity to create exactly the best HVAC system for each home.

To help builders and owners evaluate the choices, HVAC products and systems are rated by their energy efficiency so that energy use and cost can be reduced. For example, the better a particular furnace may be in recovering, filtering, and reusing the conditioned (heated) air that it produces, the less fuel it needs to condition new air coming into the system. Today's top-of-the-line systems achieve 90 percent or more efficiency in this regard.

Air filtration components are also rated by their filtering efficiency, known as Minimum Efficiency Reporting Value, or "MERV" rating. Higher MERV ratings correspond to a greater percentage of particles captured on each pass, with a MERV 16 filter capturing more than 95% of particles over the full range. Most of today's systems can incorporate MERV 16 filter units or better, resulting in a wide variety of benefits to the homeowner, including less dust and the reduction of many household allergens.

Using high-performance equipment, a builder can design an HVAC system to heat, cool, ventilate, and filter specific zones of the house. Even in the best-built and insulated homes, some areas of a house will be warmer or cooler than others according to the time of year or time of day. This is especially true in homes with multiple levels and large open spaces. A "zoned" approach to HVAC design puts conditioned air only where it is needed. With a delivery system composed of a customized

Success 101

Q: What is in-floor radiant heating?

A: An in-floor radiant heating system is often a supplemental heating option within a home's overall HVAC system. Flexible water pipes or electric heating elements are embedded throughout a subfloor or concrete slab, typically where a tile or other masonry-based floor is to be installed. Then the pipes or heating elements are covered with the finished floor material. As hot water circulates through the pipes or energy is supplied to the heating elements, the temperature of the floor is raised, heating the entire room. Most practical applications of radiant floor heating for entire homes are found in cold climates.

network of air ducts, programmable thermostats, and additional equipment as required, a home will have no hot spots or cold corners regardless of season.

Of course, like any system in a home (or the human body), the HVAC system does not work alone. To be truly effective, each system requires a well-designed and constructed structural shell, together with regular maintenance, to maintain the desired level of performance. Optimum performance of any HVAC system requires high performance insulated windows and insulated framing cavities in the walls, floors, and ceilings. In addition, properly installed air sealing measures around the structural shell completes the package. In some cases, a well-built home enables the use of smaller and less expensive HVAC components. Homes which are built tighter and with improved insulation prevent uncontrolled leaks from allowing contaminated air into the home, resulting in improved filtration and ventilation efficiency of the HVAC system.

A good HVAC system is essential to the comfort and health of any new home, contributing in large part to the satisfaction of the owner. As professional homebuilders, we are conscious of our responsibility to design and install HVAC systems that deliver consistent indoor air quality and comfort while using as little energy as possible.

Warm regards,



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