

Air Seal For Greater Efficiency

The cold weather has arrived and we've all been using our heating systems to keep warm. The warm air produced by these heating systems can bring to light air sealing issues in our homes that diminish comfort and increase electricity costs.

Air leaks into and out of our homes constantly; this is called air infiltration. While some air exchange between the inside and outside is a positive thing because it brings fresh air into the home, it's a good idea to keep it to a minimum in order to promote energy efficiency and comfort. The best way to limit air infiltration is by air sealing key areas.

Air Infiltration Basics

In order for air to leak into or out of your home's living space, two things are required: a hole and a driving force. The hole can be a gap around

an entry door, an unsealed plumbing penetration, or an un-caulked window. A driving force can be anything that moves air like a range fan, a heating and air conditioning system, or even wind. Plus, air moves within our homes naturally by the stack effect.

The stack effect works like this: When air is heated by HVAC equipment, a gas fire place, the sun, or any heat source, it becomes more buoyant and rises. The void left by the heated air rising is filled by cooler air being pulled into the home by the currents created by the warm, rising air. This is an endless cycle called the stack effect and is analogous to a chimney or smoke stack exhausting warm air and smoke. The constant heat loss associated with the stack effect can increase your energy bill and decrease indoor comfort. Air sealing can minimize the negative effects caused by infiltration.

Tips for Finding and Sealing Leaks

The objective is to seal the big leaks first. Apply caulk around windows where gaps exist between the frame and wall. Insure all exterior doors close tightly and apply weather strip-



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ping around door frames if light is visible between the frame and the door when it's closed.

In the attic, use fire resistant recessed light covers to seal around can lighting. Also, make sure your attic access door or scuttle hole seals tightly and is insulated. Plumbing penetrations are a problem area as well. Gaps around these pipes make it possible for air to be pulled from the crawlspace into the living space. Make sure any penetrations are sealed with expanding foam. The objective is to keep what's in the crawl space, in the crawl space.

By employing air sealing strategies like these, you put yourself in the best position to save money and remain comfortable during the winter season.



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