**Efficient HVAC: Insulating Your Home**

Insulating Your Home: Why is it necessary?

With over 50% of your home’s energy costs dependent on healing and cooling costs, insulating your home is a great way to reduce your energy bills. Whether it’s the heat of summer or the cold of winter, energy is moving through parts of your house, like walls, ceilings, and floors. During the winter months, the heat your heating unit is producing is escaping from your home if not properly insulated.

How does heat escape?

Air flows from a warmer area to a colder area. So the heat that is in your house is trying to move towards the colder air outside. Through exterior walls, your attic, and basement, air can easily transfer. Since insulation is resistant to heat flow, it helps contain the air inside your home, allowing the temperature in your home to be more consistent. This means that your HVAC unit does not have to work as hard, reducing your electricity costs.

Where to Insulate Your Home?

Attics

The easiest ways to better insulate your home starts in the attic. Since heat rises, most of your heat will flow towards the attic. Sealing the access point to the attic reduces airflow significantly. You also want to seal off any air leaks to the outside. These include around plumbing stack and chimneys, through recessed lighting and exhaust fan housing, around interior partitions, and through attic hatches. Then you want to add insulation to the floor and walls of your attic. Types of insulation include fiberglass, cellulose, rigid foam board and spray foam. The amount of insulation to add depends on any existing insulation. A good thickness for insulation is from 6 to 12 inches, and different materials have different insulating power.

However, you also want to allow for ventilation by making sure insulation does not block soffit vents. If your attic is floored, blown-in insulation is best for insulating the space between the attic floor and the ceilings of the rooms below.

Doors and Windows

Doors and windows also need proper sealing and insulating. You can use weather-stripping and caulking around windows and doors. To further insulate the windows, adding window insulation film, which is transparent, will decrease the flow of air through the window. Adding storm windows and doors add more insulation as well. Another way to help reduce airflow through the windows is utilizing insulating curtains. Most insulated curtains have multiple layers, which include a decorative layer, a high-density foam, reflective vapor barrier, and a reflective film.

Chimney & Fireplace

Installing a glass door to your fireplace is an excellent way to prevent the wanted air in your home from escaping up the chimney. Replacing your old flue damper with a rubber seal-creating damper helps air leakage. Using a top-sealing damper is another way to keep wanted air in and unwanted air out.

You can also use a chimney balloon, which is a plastic balloon that goes inside the chimney’s chute under the flue, further blocking the transfer of air through the chimney.

Electrical Outlets and Plumbing Fixtures

To insulate your electrical outlets, you can use foam-insulating gaskets. These are a cheap solution to saving money on your energy costs. Foam-insulating gaskets are placed behind the faceplate. Since faceplates are plastic, they do not provide much resistance for airflow, whereas the foam-insulating gaskets do.

Adding caulking around plumbing fixtures help to seal off cracks and opens that air can leak through.

By adding insulation throughout your home, you not only reduce your energy costs, but also in the long run extend the life of your heating and cooling units. Your HVAC unit(s) is not overworked by the inconsistent temperatures in the house. Your home’s energy efficiency and comfort relies on air sealing and proper insulation. To further you energy efficiency, consider looking into energy efficient HVAC equipment.

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