

WHY ATTIC INSULATION?

Insulation is just as important in the summer as it is in the winter. A well-insulated house will be cool in summer and warm in winter. Most homes absorb heat through the roof, so insulating the attic floor stops heat from reaching the rest of the house.

Properly insulated homes can use 30 to 50 less energy than homes without insulation. Lining your "thermal envelope" - adding materials that don't readily allow heat to leak through your walls, ceilings, floors, from around your home's foundations and its ductwork - saves energy by keeping heat in during the winter and keeping heat out during the summer.

The effectiveness of a piece of insulation is measured by its [R-value](#). The R-value in insulation designates its resistance to heat flow. The higher the R-value, the greater the insulating ability - the more effective it is. Generally speaking, each time you double the R-value of insulation, you cut your conduction heat loss in that area in half.

Adding insulation to an **uninsulated** attic is the most cost-effective, energy-saving measure you can do. Most older houses were built with little or no insulation. In Illinois, the minimum recommended R-value is R-49 for an uninsulated attic, R-5 to R-6 for uninsulated wood frame walls, R-25 for uninsulated raised floors.

Fiberglass Insulation

Fiberglass insulation is inert, ages well and is extremely difficult to ignite. However, once fiberglass insulation has been ignited, it may burn fast, hot and could emit toxic gases. Also, fiberglass insulation should be kept away from, light fixtures, chimneys or exhaust flues to reduce heat build-up and potential fire hazards. Fiberglass insulation's main drawback is its inability to block air from passing through it. This may not sound like a big deal until you realize that 20%+ of your heat or air conditioning can pass through the fiberglass insulation.

Cellulose Insulation

Cellulose insulation is treated for fire retardancy. If a fire occurs, the blown in cellulose insulation, combined with its fire retardants, can slow the fire from spreading and can create a "2-hour firewall". Scientists at the National Research Council report that, blown in cellulose insulation increases fire resistance by 22%-55%. When Blown in Cellulose insulation does burn, it generally doesn't emit toxic chemicals. Densely packed cellulose limits air movement and prevents drafts much better than fiberglass insulation. This is well documented by the [University of Colorado](#) in their 1990 evaluation of identical homes insulated with fiberglass and cellulose. The results of their study showed cellulose reduced air leakage by 38% and required 26% less money to heat and cool than the fiberglass home. Fiberglass can naturally break down after its useful life unlike Cellulose which does not. Six inches of blown in Cellulose is all it takes to prevent the loss of heat due to air convection versus Fiberglass alone.



BLOWN IN BLANKET SYSTEM

If you want your insulation to achieve higher R-Values and save you money, look no further. The Blown In Blanket System provides a uniform density, eliminates settling and shifting, and fills costly air gaps, voids and seams. Unlike traditional cellulose blown insulation, this product will not settle. Blown in Blanket System is a dry installation that requires no adhesive and is guaranteed against settling because the fibers are packed in so firm that they cannot shift. "It won't settle because of the density". A Blown in Blanket installation has no chemical treatments, so it will not offgas or release harmful chemicals into the air like some treated cellulose products. It is completely inert and will not support moisture, fungal growth, or provide food for insects or animals. It is non-corrosive and will not contribute to the rusting or deterioration of pipes or studs. It is fire resistant and provides superior sound control. Blown In Blanket is the most cost-effective; sustainable upgraded insulation system available providing the highest thermal and acoustical performance and air infiltration recognizing it as the preferred premier insulating system according to BIBCA (Blown In Blanket System Association).

WET SPRAY AND DENSE PACK

Wet spray and dense pack insulation are commonly used in areas where space is an issue and the maximum R-value is desired in a relatively thin layer. This makes their use ideal for walls and cathedral ceilings. They are rarely used in attics because space for extra insulation thickness is not an issue. See our Walls brochure for more info.

Even if you have existing fiberglass installed in your attic, you can improve its performance by providing a "cap" of cellulose insulation.

If your attic has enough insulation and proper air sealing, and your home still feels drafty and cold in the winter or too warm in the summer, chances are you need to add insulation to the exterior walls. You may also need to add insulation to your crawlspace or basement.

Contact **Illini Home Improvements** for a **FREE ESTIMATE!**