



ARMOR
ROOFING
PROTECTING YOUR HOME FROM THE OUTSIDE IN™

**CHOOSING
THE BEST
INSULATION
FOR YOUR
HOME**



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Introduction

Insulating your home can result in significant benefits ranging from personal comfort to tremendous energy savings. In this guide, we'll share some of the latest research and product information and we'll help you determine whether or not your home needs an insulation overhaul.

We'll also discuss the different types of home insulation that are available today -- from AttiCat Expanding Blown-In Insulation to standard blown-in insulation to radiant heat barriers -- and help you decide what type of insulation might be right for your particular project.

Finally, we'll help you determine whether or not insulating your home is a DIY project or if you should rely on a professional. Should you decide to leave your insulation up to the pros, we'll help you determine what to look for in a contractor.

-- From the Armor Roofing Team
Protecting your home from the outside in.

DOES MY HOME NEED INSULATION?

Heating and cooling accounts for approximately half of a household's total energy use, making it the largest energy expense for most homes ([U.S. Department of Energy](#)). The DOE goes on to estimate that a well-insulated home can save homeowners anywhere from 10-50% off annual heating and cooling bills.

Unless your home was built very recently, with energy efficiency as one of its defining features, then it's a safe bet that insulation can save you a bundle! In fact, most homes in the United States don't have enough insulation ([ENERGY STAR](#)). To get a complete picture of the state of your home's insulation, hire a certified energy auditor to conduct a [complete home energy assessment](#). If you don't want to invest in a home audit, take matters into your own hands and determine where your home is (and isn't) insulated. For maximum savings, your home should be well-insulated from attic to foundation.

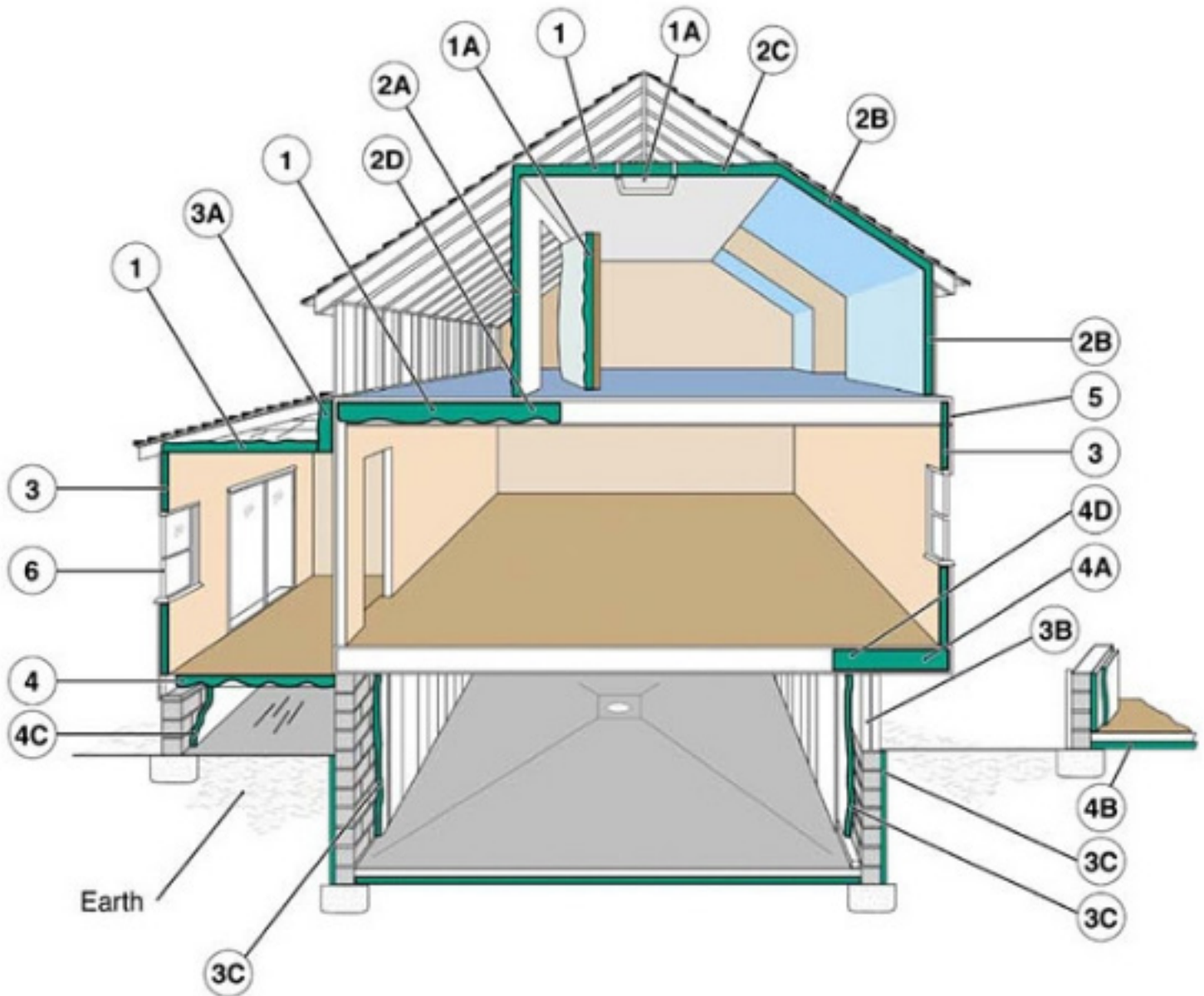
Next, ascertain what kind of insulation your home has and what its thermal resistance, or [R-value](#), is. The higher the R-value, the better job of insulating your home it does. Professional installation installers can also provide insight into the state of your home's insulation.

COMMON SYMPTOMS OF A POORLY INSULATED HOME:

- Drafty rooms
- Excessive street noise
- Hot or cold ceilings or walls
- Temperature variation among rooms
- High HVAC bills
- Dramatic spikes in energy use
- Icicles or ice dams

GREAT REASONS TO INSULATE:

- Reduce energy bills by up to 50%
- Reduce wear and tear on heating and cooling systems
- Minimize intrusive noises from outside
- Improve your indoor air quality by reducing allergens
- Eliminate damaging ice dams



Examples of where to insulate. 1. In unfinished attic spaces, insulate between and over the floor joists to seal off living spaces below. If the air distribution is in the attic space, then consider insulating the rafters to move the distribution into the conditioned space. (1A) attic access door 2. In finished attic rooms with or without dormer, insulate (2A) between the studs of “knee” walls, (2B) between the studs and rafters of exterior walls and roof, (2C) and ceilings with cold spaces above. (2D) Extend insulation into joist space to reduce air flows. 3. All exterior walls, including (3A) walls between living spaces and unheated garages, shed roofs, or storage areas; (3B) foundation walls above ground level; (3C) foundation walls in heated basements, full wall either interior or exterior. 4. Floors above cold spaces, such as vented crawl spaces and unheated garages. Also insulate (4A) any portion of the floor in a room that is cantilevered beyond the exterior wall below; (4B) slab floors built directly on the ground; (4C) as an alternative to floor insulation, foundation walls of unvented crawl spaces. (4D) Extend insulation into joist space to reduce air flows. 5. Band joists. 6. Replacement or storm windows and caulk and seal around all windows and doors. Source: Oak Ridge National Laboratory

WHAT ARE MY INSULATION OPTIONS?

There are a number of different insulation options available to modern homeowners. We'll break it down, room by room, to help you determine the best insulation on the market for your home.

ATTIC

Start by measuring the thickness of your insulation, if less than R-30, which translates to about a foot of fiberglass or rock wool or 8 inches of cellulose, then you could benefit by adding more. Seal any leaks and make necessary repairs before adding new insulation ([U.S. Department of Energy](#)).

For attics, [AttiCat loose-fill insulation](#) and installing a radiant heat barrier can be incredibly effective solutions. AttiCat is a fast, straightforward solution. The AttiCat Expanding Blown-In Insulation System conditions and fluffs insulation by breaking it apart and adding millions of powerfully insulating air pockets into the material. One of the great benefits of AttiCat is that the insulation won't settle and will retain its energy-saving R-value for years to come. Because it's a quick, low-mess, and low-dust solution, AttiCat is an extremely popular option.

Radiant heat barriers are great for Tennessee's hot, sunny summers. "Radiant barriers are installed in homes -- usually in attics -- primarily to reduce summer heat gain and reduce cooling costs. The barriers consist of a highly reflective material that reflects radiant heat rather than absorbing it. They don't, however, reduce heat conduction like thermal insulation materials. Most common insulation materials work by slowing conductive heat flow and -- to a lesser extent -- convective heat flow. Radiant barriers and reflective insulation systems work by reducing radiant heat gain ([U.S. Department of Energy](#))."

DUCT INSULATION

If your ductwork is located in an unconditioned area of your home, be sure to seal and insulate them. If you're considering building a new home, follow best practices and locate your ducts in conditioned spaces to minimize energy waste.

Exterior Wall Insulation

If you have your attic sealed and well-insulated, but you're still feeling the chill, it may be time to invest in standard blow-in insulation. This method is great for hard-to-reach places that were never insulated in the first place or were insufficiently insulated. Generally speaking, this is a project best left to the professionals. In existing homes, large pieces of fiberglass insulation are blown-in through holes that are carefully drilled through the exterior of the house. After the insulation process has been completed, all holes are carefully sealed and the siding or finish materials are replaced.

FOUNDATION AND BASEMENT INSULATION

A properly insulated foundation, basement, and crawl spaces not only keeps energy costs down but it also helps protect your home for insects, rodents and radon and moisture infiltration -- all concerns for many Tennessee families. However, finding the right insulation for your specific space and conditions is critical. We recommend working with an insulation professional to find a product that best fits your structure's unique needs.

IS INSULATION A DIY PROJECT?

As with all home improvement projects, deciding whether or not to hire a professional contractor or undertaking the project on your own can be a tough decision. Naturally, the honest (but unsatisfying) answer to that question is: it depends!

ATTIC INSULATION

Many capable and experienced homeowners find that the AttiCat system is pretty simple to master. Although the actual process of insulating approximately 1000 square feet at R-30 may take approximately four hours, prepping and sealing your attic may take considerably longer. Be prepared to set aside at least two days for the project. You'll also find that it'll go more smoothly if you enlist a partner to help out!

First, pull back any existing insulation and use expanding spray foam or caulk to seal around pipes, wires, holes and other perforations. Next, make sure your vents are clean and working well. If you don't have vent chutes or a working exhaust fan, but sure to take the time to install them. Be sure to insulate your access door with a big, pillow sheet of insulation -- you don't want all your hard work to escape through the hatch. Finally, determine the amount of insulation that your attic requires and mark the level on the trusses to ensure even and adequate coverage. At this point, pick up your materials, rented blower, and have at it.

Bottom line: if you have the time, are comfortable with your DIY skill level and don't mind hard, hot, and sweaty work, then go for it! Be sure to wear a breathing mask, safety glasses, gloves, and a long-sleeved shirt to protect your lungs, eyes, and skin. However, if time is at a premium and you're not entirely confident of your capabilities, contact a reputable contractor. Homeowners with respiratory problems should rely on a professional.

STANDARD BLOWN-IN INSULATION

Adding blown-in fiberglass can be a tremendous benefit to your home's energy efficiency. Simply put, using blown-in insulation to insulate walls and floors is more complex than insulating your attic. Unless you're comfortable drilling holes into your walls and repairing them to withstand the elements, it's a job best left to the professionals. "Most experts advise homeowners to contact a professional to complete the job, especially if they are uncomfortable with the process or have no prior experience. Insulating walls and floors with blown-in insulation is also different than insulating an attic in terms of maximum achievable R-value ([HomeAdvisor](#))."

RADIANT HEAT BARRIER

As the efficiency of a radiant heat barrier is highly dependent on proper installation, rely on a professional for this one.

FINDING A CONTRACTOR

Once you've decided to take the plunge and invest in making your home a cozier and more energy-efficient space, be sure to find the contractor that's right for you. Here is a quick checklist for finding a professional contractor to insulate your home:

- Ask friends and neighbors for recommendations
- Read reviews and check the company's [Better Business Bureau](#) rating
- Meet in-person and ask lots of questions
- Ask about product options
- Consider how responsive the contractor is
- Get several estimates
- Consider costs, but not at the expense of quality -- if a company comes in with an extremely low estimate, there's probably a reason!
- Ask for recommendations from the contractor you're considering hiring
- Get everything in writing

For more information about insulation, roofing, siding, or window installation, contact [Armor Roofing](#) today.

