

FLOOR INSULATION

Kentucky Home Performance MINIMUM REQUIREMENT

Kentucky Home Performance (KHP) Incentives

KHP offers incentives of 20 percent of the total installation cost for a maximum rebate of \$2,000 per home for eligible improvements.

- or -

A low-interest rate loan at 6.99 percent is also available for eligible improvements.

Other Incentives

State and federal tax credits may apply.

Some additional local utility and manufacturer rebates may be available in your area.



Floor insulation contributes to energy savings by reducing conductive heat transfer between your home's floor and an unheated crawl space or basement. It also enhances the comfort inside a home and helps reduce the size of HVAC equipment needed. When installed properly, floor insulation can save an average homeowner up to \$100 a month, particularly in older homes.

How much floor insulation should I add?

Insulation levels are specified by R-Values that measure the insulation's ability to resist heat flow. The higher the R-Value, the better the thermal performance of the insulation. The Department of Energy recommends an R-Value range of R-19 to R-25 in moderate climates such as Kentucky.

What kind of floor insulation should I install?

Floor insulation can be installed in homes built over basements, crawlspaces, or slabs. The appropriate type of floor insulation for your home depends on your home's foundation type. Generally, batts are used between floor joists in basements and crawl spaces and rigid foam board (polystyrene) is used for slabs. Insulation works best when air is not moving through or around it, so it is very important to air seal the floor before installing insulation to maximize its performance.

Do I need a ground vapor barrier in my crawlspace?

Yes. A ground vapor barrier will prevent moisture from entering your crawl space through the ground and condensing on floor and duct insulation underneath your house. Condensation will damage insulation and its effective R-Value. In addition, damp floor insulation can harbor mildew and damage the structure of your house. A properly installed ground vapor barrier will also prevent soil gases from entering the crawl space. Installing a ground vapor barrier will protect your house from moisture, make it more durable, and improve the air quality within your home.

KHP Minimum Requirements

• Air Sealing:

attic plane

crawl space

basement

house-to-garage connections

rim joist

• Duct Sealing:

Holes and disconnects

High pressure areas

Supply take-offs

Joints, seams and boots

• Ceiling Insulated R-19; if not R-19 at test-in, must improve to R-38

• Attic access and Rim/Band Joists are R-10. Hatches must be air-sealed.

• Floor insulated to R-11; if not R-11 at test-in, must improve to R-19

• Working CO monitor

• BPI Health and Combustion Safety Requirements

Standards for Floor Insulation

Floors over unconditioned space must be insulated to R-11 at test-in. If not, insulate to R-19 observing the standards below.

Preparation Standards for Floor Insulation

- Air seal all cracks and gaps through the floor, including bathtub and shower drains, before installing insulation.
- Provide at least 3 inches of clearance between floor insulation and heat dissipating devices for safety.

Installation Standards for Floor Insulation

- Install batts in direct continuous contact with the subfloor so there is no air space between the insulation and the subfloor.
- Install batts in direct continuous contact with the floor joists and other adjoining batts so there are no visible voids in the thermal barrier.
- Install insulation vapor barrier on the “winter warm side” to avoid trapping moisture in the insulation.
- Hold batt insulation firmly in place about every 2 feet with rust-proof wire staves or pushrods.
- Split batts neatly around any bridging, blocking, cross-bracing, pipes, or other obstructions in the floor framing.
- Install insulation in a reasonably uniform thickness.
- Do not compress or crush insulation which reduces its effective R-value.
- For a home built on a slab, most heat loss occurs at the edges, so rigid foam board (polystyrene) is generally recommended on the exterior. Installation may require excavation to allow for the 2 feet of vertical coverage needed.
- If the under floor is open to the exterior:
 - Install a vapor permeable air barrier, such as house wrap, under the entire floor area for support, protection, and to prevent wind washing.
 - Install polyethylene (a minimum of 6 mil) from the perimeter floor joists inward 2 to 3 feet to protect the insulation from water damage.



www.KYHomePerformance.org
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