



# How to insulate your basement

## Why weatherize?

Most homes in Vermont can benefit from more insulation and air sealing. You'll save energy by properly air sealing and insulating your home, and you'll stay more comfortable, year-round.

## Important considerations

- Items stored in the basement should be moved off the walls to allow access to work area.
- Use proper safety equipment (dust masks, gloves, long sleeves, safety glasses, lights, ladders).
- If working in a tight crawlspace make sure there is friend or family member that can help if needed.
- Call a professional if you see any of these:
  - Water and dampness in basements and crawlspace—these should be resolved first.
  - Buckling or structurally questionable foundation.
  - Old (knob and tube) or faulty unprotected wiring.
  - Asbestos insulation—usually appears as old pipe wrap with white covering.



## Materials checklist:

- Silicone, acrylic latex caulk and/or low-expansion foam for air sealing
- High-temperature (heat-resistant) caulk for sealing around flues and chimneys
- Appropriate board insulation products depending on project



## First things first: Air seal your home

Air comes in through leaks in the basement, gets sucked up through the house, and leaks out through the attic. This is called the “stack effect”. Plug those attic leaks and you’ll slow the air flow considerably—reducing drafts, saving energy, and allowing your insulation layer to work more effectively.

### Seal the big holes

- Missing, broken, or poorly fitting windows
- Bulkhead doors

### Seal the little holes

- Sill and rim joist seams
- Penetrations for water lines, fuel lines, etc.

Need more help?

View **how-to-videos** at [www.encyvermont.com/DIY](http://www.encyvermont.com/DIY)  
Contact our **help line** for trouble-shooting support at 888-921-5990



## Next: Install the insulation

Now that you've sealed up air leaks, check your insulation levels and add more if necessary.

R-15 is the minimum level of insulation the Vermont Energy Code calls for on foundation walls. This can be achieved in a variety of ways including the below:

Type of insulation	Material*	Depth (in inches)
Rigid board	Rockwool (R-4/in)	4"
	EPS (white) foam (R-4/in)	4"
	XPS (blue/pink/green) (R-5/in)	3"
	Polyisocyanurate (R-6/in)	2.5"

*\*Installations in certain locations require that foam insulation be covered with a fire protective covering equivalent to 1/2" drywall.*

## Band joist insulation

Cut pieces of board insulation to fit between joists and seal in place against wood rim joists.



## Basement wall insulation

Apply board insulation in large sheets glued and/or fastened to the wall. It's very important to seal the perimeter (top and bottom) of boards with caulk and seal their seams with building tape.\*



While some work can be done on your own, we recommend working with an Efficiency Excellence Network (EEN) contractor to air seal and insulate your entire home and reduce your bills as much as possible. They can also account for air quality and address other safety concerns.

**To find a qualified contractor near you,** visit [www.encyvermont.com/contractors](http://www.encyvermont.com/contractors)

For more information call us at **888-921-5990** or visit [www.encyvermont.com](http://www.encyvermont.com)

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