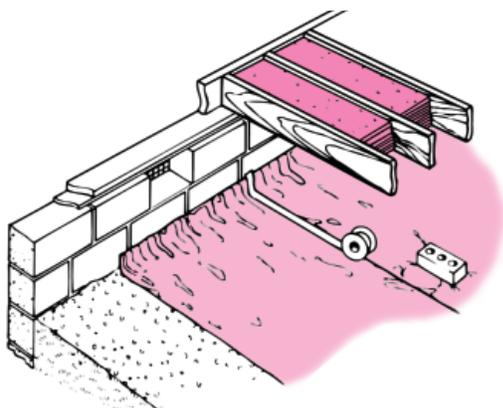


## Crawl Space

Many homes lose a great deal of energy efficiency in the crawl space. Insulating your home's crawl space can be a wise investment. The best way to do the job varies, depending on whether the crawl space is ventilated or unventilated.

### Insulating a Ventilated Crawl Space

Seal holes in the floor above with expanding foam or caulk, especially the openings where plumbing and ductwork enter the conditioned part of the house.



Insulate between the floor joists with R-19 batt insulation, making sure the air barrier is touching the underside of the floor, and that the insulation extends snugly against the band joist. In regard to paper-faced batts, the pink side should face toward the ground.

Make sure to install a sheet of 10 mil plastic over the dirt floor as a vapor barrier with 6 inches turned up onto the walls and sealed with adhesive. The plastic on the inside walls needs to be above outside ground level. All seams should be taped. A typical dirt crawl space releases 12 gallons of moisture per day. Damp air is more difficult

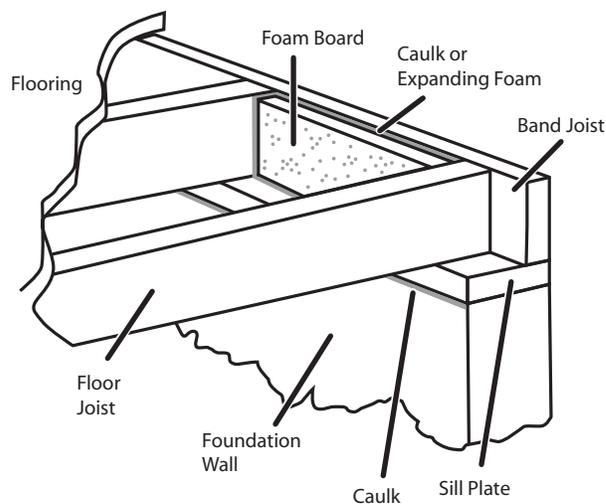
to heat and cool and puts an extra load on the HVAC system.

### Insulating an Unventilated Crawl Space

The best approach is to insulate the foundation walls rather than the subfloor. That keeps the ducts within the house's conditioned area and reduces the strain on the heating and cooling system. Again, make sure to seal around pipes, ducts and openings into the living area. Also, seal around openings that come through the exterior walls.

For safety, make sure that combustion furnaces and water heaters located in the crawl space are sealed-combustion units.

Install a termite shield between the band joist and the masonry foundation. This is a strip of metal, bent down at the edges and placed between the foundation of a house and a timber floor, around pipes, and other places where termites can pass.



Another key step is to seal the band joist. The band joist is the wooden beam just above the home's foundation. It sits atop the entire perimeter of the foundation. It's a major beam that all the first floor joists are connected to.

To do the job, cut 1- or 2-inch thick foam board pieces to insert between the floor joists, just above the foundation. Then seal the edges of the foam board pieces on all four sides with a bead of caulk or expanding foam.

Access doors to a crawl space should be insulated and made as air-tight as possible.

Install rigid foam board along all the walls, leaving a 3-inch gap at the top of the foam board to allow monitoring of any termite activity.

Each home is unique, but most homeowners can realize great gains in energy efficiency by sealing the crawl space beneath their house.

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