



A Vented Dirt Crawl Space Is A Very Bad Idea!

Nancy Videon, Clean USA, Inc.

The building code allows for vented dirt crawl spaces...so why are they now telling me to seal it up and put down a vapor barrier? As building science has progressed, engineers, building scientists and government agencies have realized that traditional crawl space construction has become one of the biggest housing epidemics of our time. A dirt crawl space under a home is a very bad idea. The main issue with dirt crawl spaces is the moisture from the dirt beneath the home. Whether your crawl space suffers from groundwater leakage or not, the earth is damp. The natural airflow in a house is from bottom to top. This sucks the moist air, and everything in it, up into the living areas of the home. A damp environment is very unhealthy, destructive and can lead to wood rot, mold growth and poor indoor air quality.

There are four basic steps to completely eliminating your vented dirt crawl space from having any negative effects on your home.

1. FIX THE GROUND WATER LEAKAGE.

There are various ways water gets into a crawl space. It can seep or leak under the footing, between the footing and walls, through the block walls and through cracks or openings. If your crawl space leaks when it rains, or water pools in low areas, then you need to control the groundwater.

2. ISOLATE THE HOUSE FROM THE EARTH.

The main issue with dirt crawl spaces is the moisture from the dirt beneath the home. Whether your crawl space suffers from groundwater leakage or not, water vapor from the ground evaporates and moves upward into your home. This can lead to rotted floor joists, mold growth and poor indoor air quality.

There are a few criteria to deciding on which approach to use. The solution must:

- Stop water vapor from flowing up from the soil.
- Stop water vapor from flowing through or off of the crawl space walls.
- Allow water to drain from the walls to the sump location.
- Not get ruined when someone crawls on it.
- Be durable, so it lasts as long as the house does.

3. SEAL THE VENTS AND OTHER OUTSIDE AIR LEAKS.

Previously, the tactic was to add vents to a crawl space, which were supposed to allow the moisture to dissipate. These vented crawl spaces, instead of becoming less damp, end up being more wet for several reasons.

Through a process called the stack effect, a house's natural tendency is to draw air in from the crawl space and lower levels, and then upward into the living spaces. This means that instead of letting moist air out, a house sucks more moist air in!

30% to 40% of the air that you breathe comes up through your crawl space.

This is a proven fact!

Another problem with venting a crawl space is that it allows all kinds of bugs and critters direct access to a home. Spiders, centipedes, termites, small animals and mice (dead and alive) are commonly found in dirt crawl spaces. They can make nests and cause damage to duct work, wiring and insulation. We even discovered three copperhead snakes nesting in a homeowner's dirt crawl space. No wonder most home owners never venture into their crawl space!

The biggest issue with adding vents is that it does not address the main problem – moisture from the dirt beneath a home – so venting a crawl space isn't even addressing the actual problem.

4. CONDITION OR DEHUMIDIFY YOUR CRAWL SPACE AIR.

Even after you have encapsulated your crawl space, dampness can collect below a home. Houses naturally draw air in from the lower levels, bringing in air from the outside through your crawl space. This is a huge problem in the more humid summer months. Every degree that air cools, it raises its relative humidity by 2.2%, so when warm air is pulled into your cool crawl space the additional moisture will condense on your air conditioning ducts and floor joists. Wood and water are a bad combination, since all it takes is a little moisture on an organic material for rot and mold to take over. To add to the problem, that humid air is also drawn up and into a home via the stack effect – and brings any mold or musty smell up into living areas with it.

**Mold, rot and fungus happen at
70% relative humidity.**

The CleanSpace® System meets all the criteria for fixing your dirt crawl space.

We were experiencing flooring and moisture problems with a new home we had completed on St. Simons Island. Installation of CleanSpace on the home eliminated condensation with the HVAC duct system, which was causing the problem. Once the system was completed, moisture levels in the crawl space dropped below 50% [relative humidity] and the cupping of the oak floors quickly subsided.”

- Doug S., Wexford Homes, LLC

“Robert offered a clear and concise plan to solve our specific problem. Others had not been able to do that.”

- Matt H. Statesboro, GA

TEN THINGS TO LOOK FOR WHEN SHOPPING FOR A CRAWL SPACE WATERPROOFER

- Do they specialize in crawl space waterproofing?
- Will the solution address the 4 basic steps to completely fix your dirt crawl space?
- Can the company provide references of satisfied crawl space waterproofing customers?
- Will a fully transferable, written warranty be provided with the system?
- How long is the warranty for the system– 5, 10, 25 years?
- Do they offer an annual maintenance service after your system is installed?
- How much more marketable and valuable will they make the home after it's waterproofed?
- Do they offer financing options for your project?
- Do they have a variety of products to design a system specifically for your crawl space?
- The Small Business Administration reports that 50% of contractors fail within the first year and 96% within the first five years. Will they still be in business when the customer needs them?



Clean USA is a member of the Basement Systems, Inc. Dealer Network. Information in this article is contained in Crawl Space Science by Lawrence Janesky. To schedule a free crawl space evaluation and receive a free copy of this book, please contact Clean USA at 912-927-7827 or visit www.cleanusainc.com.