

Installation Instructions

VAPORMAT™ 1-16

Radon, Moisture and Vapor Intrusion Mitigation System

VAPORMAT™ 1-16 is an open-matrix geotextile that is installed as strips under a concrete slab or flexible plastic membrane as part of a soil depressurization system. It can be installed alone or in combination with aggregate or sand to provide a gas permeable layer to collect soil gasses and direct them to a vent stack and out through the roof. VAPORMAT 1-16 comes in 45 ft rolls that are 16-inch wide.

- Rolls can be cut with a utility knife or scissors.
- Strips should be placed with the green fabric side down.
- Joints are made by tucking under the top fabric and butting up close to the edge of the adjacent mat.
- Secure with ground staples.

Layout

Determine the location of the vent stack. A single vent stack can mitigate up to 1600 ft². Multiple stacks are needed for larger footprints. A section of the VAPORMAT 1-16 layout must traverse under the vent stack.

Looped

A typical layout follows the perimeter of the foundation walls (within 18 inches). See figure 1. Cross strips are also added for larger footprints.

Branched

In crawl spaces or under concrete slabs with aggregate, VAPORMAT 1-16 can also be installed in a root-like design. See figure 2. Strips are placed within 10 ft to 15 ft apart from each other.

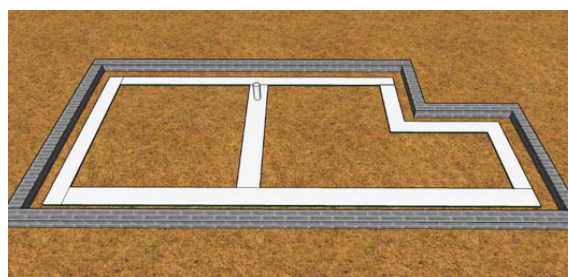


Figure 1: Looped Layout

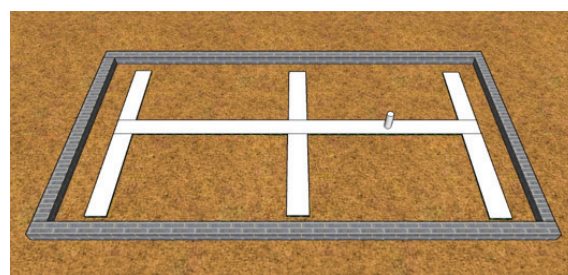


Figure 2: Branched Layout

Vent Stack

Typically a 3" or 4" PVC pipe is stubbed through the concrete or membrane. The pipe can be installed before the slab is poured (as shown in figure 3), or after the slab is cast by cutting a hole through the slab, sheeting and top fabric of VAPORMAT 1-16.

Be careful not to dead head the vent stack end into the soil. VAPORMAT 1-16 is very adaptable and can be combined with the vent stack in many ways. It is recommended to dig a suction pit below it and fill with aggregate or short strips of VAPORMAT 1-16. See figure 3. Special PVC fittings that improve the flow can also be used.

Cut a hole in the top fabric to allow the soil gasses to easily pass.

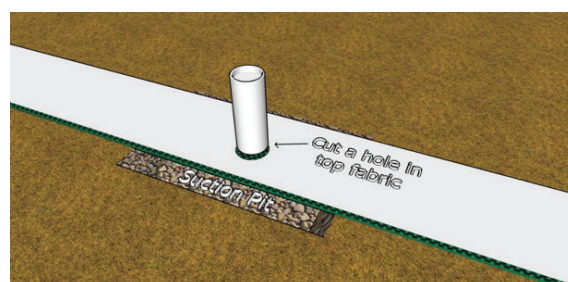


Figure 3: Vent Stack Installation

Further Construction Considerations

At minimum, a 6 mil or 3 mil cross-laminated flexible sheeting shall be placed on top prior to casting the slab or placing the floor assembly.

Typical entry routes for soil gasses into a home are through floor openings, concrete joints, sumps, foundation walls. Air handling units, ducts and crawl spaces accesses. Care should be taken to properly seal these entry points. The vent stack shall extend at least 12-inches above the roof and at least 10 ft from any window or other opening to conditioned space. Routing the vent stack through heated space of the house creates a natural driving force to the soil depressurization system. Route the PVC pipe through and exiting the home following local fire codes.

Provide an electrical outlet in the attic space within 6 ft of the vent stack to allow for a fan to be added to the system if necessary.



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