

Vapor Pin®

Standard Operating Procedure

Installation of the Vapor Pin® Capsule using Body Weight

Scope & Purpose

Scope

This standard operating procedure describes how to use and install the Vapor Pin® Capsule.

Purpose

The purpose of this procedure is to assure good quality control in field operations and uniformity between field personnel in the use of the Vapor Pin® Capsule. The Vapor Pin® Capsule is used to house the Waterloo Membrane Sampler (WMS™-VP) to passively collect sub-slab soil-gas.

Equipment Needed

- Vapor Pin® Sampling Device
- Vapor Pin® Sleeve
- Vapor Pin® Cap
- Vapor Pin® Capsule
- Vapor Pin® Extensions (optional)
- Waterloo Membrane Sampler (WMS-VP) Kit
- Installation/Extraction Tool
- Rotary Hammer Drill
 - 5/8 - Inch (16mm) diameter hammer bit
 - 1 1/2 - Inch (38mm) diameter hammer bit for flush mount applications
- 3/4- Inch (19mm) diameter bottle brush
- Wet/Dry Vacuum with HEPA filter (optional)
- 3/4" diameter closed cell foam rod to seal the hole prior to applying patching material
- VOC-free hole patching material (hydraulic cement) and a putty knife or trowel
 - This is for repairing the hole following the extraction of the Vapor Pin® Sampling Device

How to House your Waterloo Membrane Sampler (WMS™-VP)

1. Assemble your Vapor Pin® Sampling Device as seen in (Figure 1).

Figure 1



2. Screw the Vapor Pin® Capsule into the base of the Vapor Pin® Sampling Device as seen in (Figure 2).

Figure 2

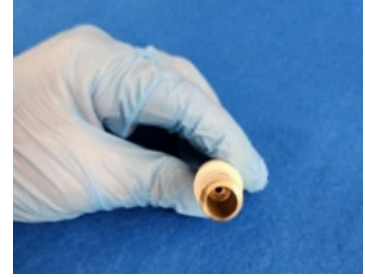


Standard Operating Procedure

Installation of the Vapor Pin® Capsule

3. Your Vapor Pin® Capsule (VPC) cap will be shipped already unthreaded. Once you have the VPC screwed into your Vapor Pin® Sampling Device, inspect the interior of the Capsule for potential blockages (Figure 3).

Figure 3



4. For the following instructions please handle the Waterloo Membrane Sampler (WMS™- VP) per manufactures specifications.
5. Remove your WMS™-VP from the packaging. Place the WMS™-VP vial into the Vapor Pin® Capsule. Make sure that the membrane end is facing the open end of the Vapor Pin® Capsule. Re-thread the Vapor Pin® Capsule cap to finger level tightness (Figures 4, 5 & 6). If extensions are required per sampling plan/slab thickness/state or local guidance, thread extensions onto the Vapor Pin® Sampling Device prior to threading on the Vapor Pin® Capsule



Figure 4



Figure 5



Figure 6



Figure 7



Figure 8

6. Once Vapor Pin® Capsule has been fully configured with the Vapor Pin® Sampling Device, “pull down” the Vapor Pin® Sleeve to the bottom of the third barb (Figure 7). To achieve this while maintaining finger tightness of the Vapor Pin® Capsule to the Vapor Pin® Sampling Device, be sure to rotate the Vapor Pin® Sleeve in a clock-wise direction.
7. Thread the assembled Vapor Pin® Device and Capsule into the coupling of the I/E Tool. When threading the assembly into the coupling of the I/E Tool, make sure that the bottom of the threads of the Vapor Pin® Sampling Device are flushed with the bottom of the coupling (Figure 8). This is to ensure that when you are applying your body weight during the installation, you’ll feel the coupling of the I/E Tool hit the concrete, affirming that the assembly is fully inserted.

Standard Operating Procedure

Installation of the Vapor Pin® Capsule

How to Install the Vapor Pin® Capsule Assembly via. Body Weight



Figure 9



Figure 10



Figure 11

8. Place the bottom of the assembly into the 5/8" diameter hole in the slab and engage the Vapor Pin® Sleeve with the concrete (Figure 9).
9. Once you feel the Vapor Pin® Sleeve catch, push down on the I/E Tool with both hands using your body weight while keeping a steady balance. Keep pushing until you notice the coupling hit the concrete, then unthread the I/E Tool from the handle (Figure 10). **NOTE:** Prior to leaving site, be sure your Vapor Pin® has a Vapor Pin® Plastic Cap on.
10. Post passive sampling of two to three weeks, use the Installation/Extraction Tool to remove the Vapor Pin® Sampling Device (Figure 11). Use the Spanner tool first if you are using a Flush-Mounted configuration With the Stainless Steel Secure Cover. and retrieve your WMS™-VP to send it back off to the lab. Please follow all handing instructions, per manufactures specifications, when retrieving and packaging up the WMS™-VP.