

Vapor Pin®

Standard Operating Procedure

Drilling Guide & Secure Cover

Scope & Purpose

Scope

This standard operating procedure (SOP) describes the methodology to use the Vapor Pin® Sampling Device Drilling Guide and Secure Cover to install and secure a Vapor Pin® Sampling Device in a flush mount configuration.

Purpose

The purpose of this SOP is to detail the methodology for installing a Vapor Pin® Sampling Device and Secure Cover in a flush mount configuration. The flush mount configuration reduces the risk of damage to the Vapor Pin® Sampling Device by foot and vehicular traffic, keeps dust and debris from falling into the flush mount hole, and reduces the opportunity for tampering.

Equipment Needed

- Vapor Pin® Sampling Device Secure Cover (Figure 1)
- Vapor Pin® Sampling Device Drilling Guide (Figure 2)
- Rotary Hammer Drill
 - 5/8-Inch (16mm) diameter hammer bit
 - 1½-Inch (38mm) diameter hammer bit for flush mount applications
- Assembled Vapor Pin® Sampling Device
- #14 Spanner Wrench
- Wet/Dry vacuum with HEPA filter (optional)
- Personal Protective Equipment (PPE)



Figure 1



Figure 2

Installation Procedure

1. Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.
2. Set up wet/dry vacuum to collect drill cuttings.
3. While wearing PPE, drill a 1½-inch (38mm) diameter hole into the concrete slab to a depth of approximately 1¾-inches (45mm). Pre-marking the desired depth on the drill bit with tape will assist in this process.
4. Remove cuttings from the hole and place the Drilling Guide in the hole with the conical end down (Figure 3). The hole is sufficiently deep if the flange of the Drilling Guide lies flush with the surface of the slab. Deepen the hole as necessary but avoid drilling more than 2 inches (50.8mm) into the slab, as the threads on the Secure Cover may not engage properly with the threads on the Vapor Pin® Sampling Device.
5. When the 1½-inch (38mm) hole is drilled to the proper depth, replace the drill bit with a 5/8-inch (16mm) bit, insert the bit through the Drilling Guide (Figure 4), and drill through the slab. The Drilling Guide will help to center the hole for the Vapor Pin® Sampling Device and keep the hole perpendicular to the slab.
6. Remove the bit and drilling guide, clean the hole, and install the Vapor Pin® Sampling Device in accordance with the SOP "Installation and Extraction of the Vapor Pin® Sampling Device."
7. Screw the Secure Cover onto the Vapor Pin® Sampling Device and tighten using a #14 Spanner Wrench by rotating it clockwise (Figure 5). Rotate the cover counterclockwise to remove it for subsequent access.

Standard Operating Procedure

Drilling Guide & Secure Cover

8. For flush mount installations, cover the Vapor Pin® with a flush mount cover, using either the plastic cover or the optional Stainless Steel Secure Cover (Figure 4).
9. Allow 20 minutes or more (consult applicable guidance for your situation) for the sub-slab soil-gas conditions to re-equilibrate prior to sampling.



Figure 3



Figure 4



Figure 5

Limitations

On slabs less than 3 inches thick, it may be difficult to obtain a good seal in a flush mount configuration with Vapor Pin® Sampling Device. But a perfect alternative for that would be our Mini Vapor Pin®!