

ENGINEERED RADON PROTECTED FLOORS



- | Passive & Active Systems
- | Pre-Emptive Systems
- | Radon Ready Systems
- | World-Class VI Experts



 CUPOLEX®

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Radon Protected Floors

CUPOLEX® is the leading global manufacturer of concrete cast-in-place aerated floor forming solutions for radon mitigation systems. CUPOLEX® pioneered the use of passive and active aerated floor radon mitigation systems using our proprietary form-base methodology. CUPOLEX® mitigation designs provide a continuous void space below concrete floor slabs by manipulating the geometry of concrete – creating an aerated floor that provides better venting and protection at lower cost than traditional systems.

ADAPTABLE TO ANY APPLICATION OR FOUNDATION

CUPOLEX® can provide solutions to a variety of applications such as:

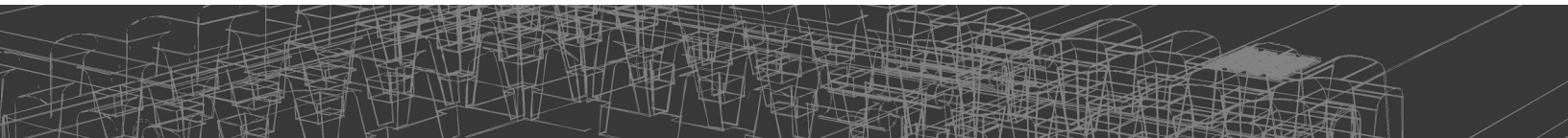
- Passive & Active Systems
- Pre-Emptive Systems
- Radon Ready Systems

And can be used in various types of foundations such as:

- Basements
- Slab-on-grade
- Crawl spaces
- Structural PT slab foundations
- Any combination of the above

FEATURES

- Provides a highly efficient under-slab void network for a more effective application of SSD, at a lower cost than the less efficient pipe and gravel venting layers.
- Provides a far more efficient, effective, and predictable medium for moving air than soil.
- Provides new opportunities for passive venting, with a network of open voids that allows air to move much more easily under natural thermal gradients or wind.
- Aerated floor system that rely on ventilation or depressurization (diverting and diluting the vapours) do not require membranes.
- Radon systems that result in the dilution of gases below the floor and whose performance can be monitored and controlled (e.g., through fan operation and pressure measurements) have the advantage of not allowing radon concentrations to build immediately below the building, which is not always the case with barrier systems.
- CUPOLEX® can provide cost effective pre-emptive mitigation control measures in new buildings and homes while saving concrete usage, reducing building cycle time, and minimizing engineered fill requirements.



MORE EFFECTIVE THAN TRADITIONAL SYSTEMS

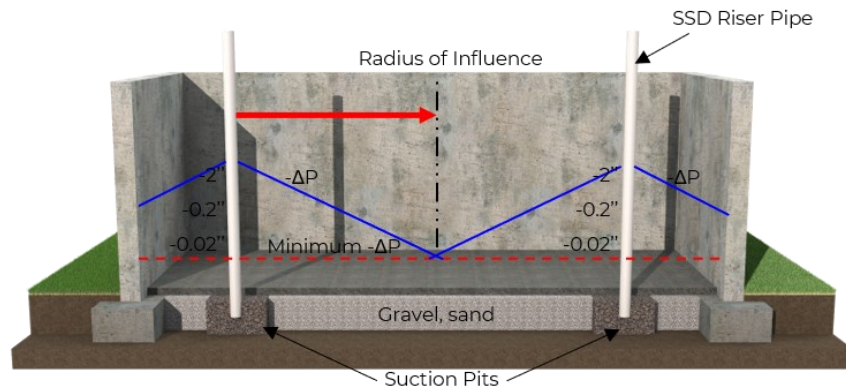
Traditional radon systems have been around for decades and haven't changed much in that time. Electric fans need to run continuously to pull enough air through the soil below a slab to maintain negative pressures. Because of the resistance of the soil below the slab to air flow, negative pressures decrease rapidly with distance and even modest vacuums are difficult to achieve across the entire slab.

CUPOLEX® aerated floors are the modern systems that use open space rather than soil to vent the slab, resulting in highly efficient transmission of vacuum and air flow. As a result, homeowners or regulators can be sure that a vacuum is present anywhere below the building and that radon concentration below the slab will be far lower than with traditional systems.

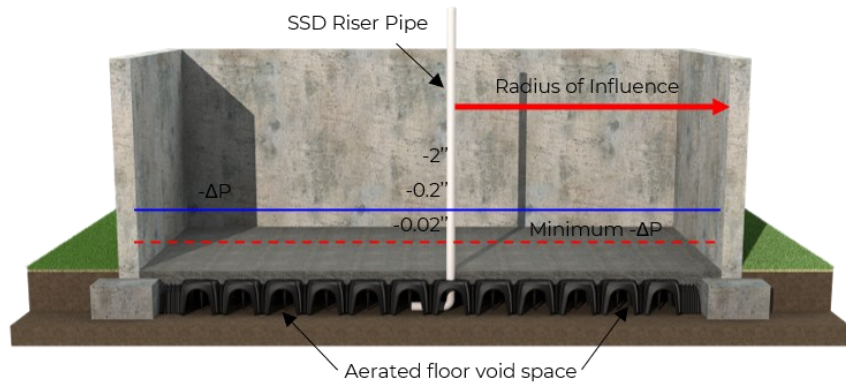
A CUPOLEX® system will provide your project a more sustainable and cost-effective solution. Our engineered aerated floors are an order of magnitude more effective than traditional slab-on-grade systems, without the need for expensive liners.

While there are numerous reasons why the CUPOLEX® system outperforms the standard liner or gravel layer SSV system, there are three critical factors that make the CUPOLEX® system the superior system for your project:

- More effective venting
- Constructability
- Minimal long-term maintenance costs



Conventional Gravel System



CUPOLEX® Aerated Floor

Radon gas released to atmosphere through riser

Optional fan for active SSV

Radon in occupied spaces remain at safe level

Polypropylene formwork and concrete slab provide additional barrier

Collection of radon gas through ventilation or depressurization

How a CUPOLEX® Floor Protects Homes



Leading the Way

We deliver value engineered and cost-effective radon mitigation design solutions for protecting homes. From coast to coast, we lead the industry with the most aerated floor systems designed, installed, and operating efficiently.

CUPOLEX® is a proprietary patented plastic concrete forming system manufactured by Pontarolo Engineering Inc. The concrete forms are part of a design package provided by CUPOLEX®. Our engineers design the aerated floor slab using CUPOLEX® structural dome technology. We select the type and size of CUPOLEX® forms that will provide the ultimate performance for your specific project. CUPOLEX® supplies the forms to contractors to assemble the system as to the design and specifications provided by the CUPOLEX® design engineers.

The resulting product is an engineered sealed concrete slab foundation capable of providing any required design load-bearing capacity. CUPOLEX® concrete slab foundations can be designed at various depths to suit any site conditions or radon mitigation requirements.

With thousands of commercial, industrial, and residential buildings mitigated using CUPOLEX® within the last 20 years, our professional CUPOLEX® engineers know where to find cost-saving opportunities while maintaining or improving system effectiveness.

Radon

CUSTOMIZED DESIGN PACKAGE

- **Design**
CUPOLEX® mitigation designs provide creative ways to build homes. We design passive or active systems to reduce operating costs and we offer real-time system monitoring.
- **Value Engineering**
One step for evaluation of radon control options, including remediation, mitigation, and institutional controls. CUPOLEX® engineers review each project, provide value engineering and identify the type and size of CUPOLEX® for every project. When mitigation is necessary, we use focused designs to minimize the system footprint and energy use, reduce iterative system testing, and lower overall life cycle costs.
- **Preliminary drawings**
Design coordination, , cost estimate conceptual designs, sections and details provided to environmental consultants and real estate developers.
- **Engineered design drawings**
Expert design of CUPOLEX® sub-slab depressurization, sub-slab venting, and other systems such as pre-emptive and “Radon Ready” mitigation systems. PE stamped design drawings and specifications issued for construction (IFC)
- **CUPOLEX® installation shop drawings**
Issued to contractor with detailed CUPOLEX® formwork and venting system installation procedures
- **On-site Support**
Construction training, monitoring and inspections
- **Testing, reporting & monitoring**
Diagnostic testing to improve design efficiency and effectiveness with certification and reporting for regulatory compliance where required, ongoing system operation, maintenance, and monitoring.