

CORROSION-RESISTANT, HIGH-STRENGTH,  
CLASS 1 UNDERGROUND HVAC DUCT

# GroundGuard

VPC's Underground FRP Duct



## OVERVIEW

VPC Fiberglass offers an underground duct system designed with corrosion-resistant, high-strength FRP. Built to withstand harsh environments, **GroundGuard** provides a durable and efficient solution for air distribution in demanding settings. [GroundGuard is approved for direct burial.](#)

## KEY FEATURES

### Corrosion Resistance

Engineered to endure moisture, chemicals, and harsh conditions, making it ideal for applications such as wastewater and industrial facilities, and other applications like labs and pools.

### High Strength

Constructed with reinforced fiberglass, offering superior durability while remaining easy to install.

### Class 1 Fire Rating

Meets NFPA 90 standards for flame spread, ensuring safety in critical environments. Smoke rating can also be met as required.

### Efficient Airflow

The smooth interior surface minimizes pressure drop, enhancing overall system performance.

### Versatile Design

Available in single-wall and double-wall configurations, with custom shapes to meet project specifications.

### Easy Installation

Designed for direct burial without the need for concrete encasement, reducing installation time and costs.

## VERSATILE, CODE-COMPLIANT SOLUTIONS



### **SINGLE-WALL DUCT**

VPC Fiberglass' Class 1-rated single-wall duct can meet ASTM E-84 25/50 flame and smoke requirements, approved for wastewater and industrial applications.



### **DOUBLE-WALL DUCT**

VPC Fiberglass' Class 1-rated double-wall duct reduces thermal losses. With standard 1" insulation, it offers a minimum R-value of 6. Other options are available.

OUR EXPERT  
ENGINEERS ARE HERE  
TO PROVIDE A  
DETAILED QUOTE  
**FOR YOUR CUSTOM  
FRP DUCT PROJECT.**

Visit our website to  
request a custom quote.

[www.vpcfiberglass.com](http://www.vpcfiberglass.com)

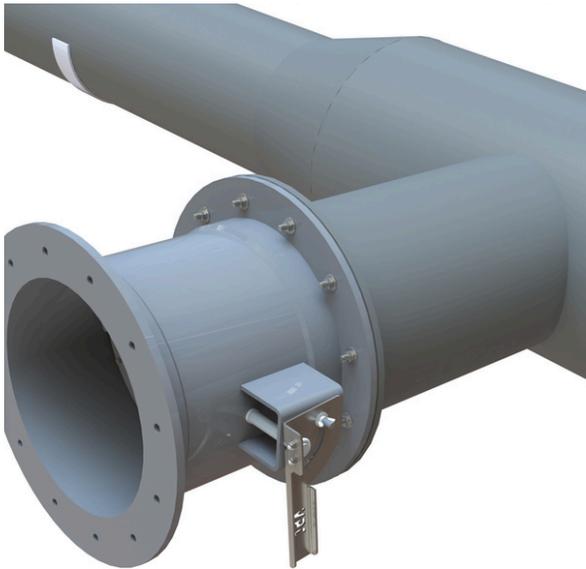
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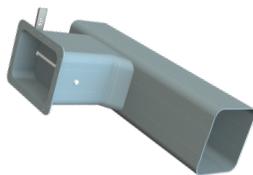
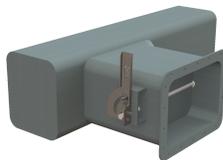
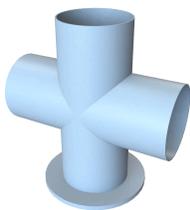


# FRP CONFIGURATION

Round and rectangular are the standard shapes for filament-wound construction at VPC Fiberglass. Upon request, custom shapes can be accommodated. Our experienced team is available to design projects that require non-standard construction.



## OUR FRP DUCT



- **Corrosion & Pressure Resistant:** Designed for harsh environments and static pressure.
- **Precision Manufacturing:** Filament-wound process meets SMACNA standards.
- **Best in Industry Lead Times**
- **Size Range:** Standard sizes 2" to 72" diameter.
- **Versatile Applications:** Suitable for industrial & commercial use.
- **Custom Options:** Configurable to project needs.
- **Expert Support:** Engineering assistance for material & component selection.

# INSTALLATION, BURIAL GUIDELINES

VPC Fiberglass' **GroundGuard** product should be installed in a graded trench with proper drainage, supported by a 4" bed of pea gravel. A minimum of 4" of compacted fill is required between the top of the duct and the slab, with a recommended maximum of 6". If deeper burial is necessary, the duct can be custom-designed to accommodate it.

Concrete encasement is not required for round **GroundGuard**. Once fiberglass is securely installed and sealed, simply cover the duct with recommended fill or pea gravel and proceed with pouring the floor slab.

Our duct is constructed with a resin-rich veil on the interior and exterior to resist water infiltration in areas prone to groundwater exposure. Field joints should be sealed using the wet lay-up method as specified in our installation guidelines.

*(Note: A leak test should be conducted before backfilling.)*



*FRP can be designed for burial to any depth without concrete encasement.*

## **4" Minimum Distance**

Between duct and bottom of slab.

## **Positioning**

Duct should be positioned at a 1% slope towards the largest diameter.

## **Minimum Fill**

Thickness of 4" around all duct.

## **Minimum Trench**

Width must be 1.5x diameter of duct to be laid.

# GroundGuard.

## VPC's Underground Insulated Duct

Our underground fiberglass duct offers corrosion resistance, durability, superior insulation, and easy installation, making it the ideal choice for long-lasting, efficient HVAC systems.

[www.vpcfiberglass.com](http://www.vpcfiberglass.com)

**(585) 735-9668**

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for a Custom Quote!

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