

# Engineered Solutions for High and Low Voltage Cabinet Purification

BreatheSafe designs and manufactures high pressure filtration solutions that provide cabinets with optimal protection from corrosive dust ingress.

The High Pressure Filtration System generates positive pressure inside the cabinet with variable speed brushless motors and assists in maintaining a clean environment, maintaining ambient temperatures whilst extending filter life. Combined with an OnGuard controller, the temperature sensor monitors cabinet temperature levels effectively.

The system's design eliminates the need for additional cleaning during maintenance, reducing the risk of hazardous particulates from entering, and service crews can work within the cabinet without the need for precleaning. The system removes dust from the air before introducing it to the cabinet, ensuring all air inside the cabinet is free from particulates. This safeguards against dust and vapor contamination, crucial for maintaining the integrity and functionality of sensitive electronics. Fault finding becomes easier with reduced dust interference, enhancing the overall visibility of critical components and troubleshooting efficiency.



## Custom Solution

VoltAire is designed to be a complete solution that includes the variable speed pressuriser and an OnGuard or VoltAire controller with custom mounting and sealing.



### Variable Speed Pressuriser

The pressuriser system precleans and utilises a high-capacity, variable speed, brushless DC motor and is fitted with a high efficiency particulate filter (individually tested to EN1822 and serialised).



### Custom Install Kit

Custom-made components are designed to optimise airflow while effectively sealing the cabinet from dust and hazardous particles, maximising overall system performance.



### OnGuard Controller

Controls air quality with advanced monitoring, real-time alerts, and secure remote connectivity. It records internal conditions locally for staff access, alerts, and remote maintenance inspections.



### VoltAire Controller

Automatically adjusts pressuriser speed for optimal cabinet pressure control, maximising both filter and motor life.

# Key Features of the OnGuard™

## Real-Time Air Quality Data

Displays complete air quality and system performance parameters, including pressure, particulate matter monitoring, CO<sub>2</sub> concentration, temperature, humidity, and more.

## Date and Time

Displays and logs the current date and time in your timezone for accurate data management.

## Main Unit

Manages data storage, processing and communications.

## Alert Notification

Shows current alert details and possible solutions to the operator.

## Faster System Response Rate

Optimises control to intelligently adjust the pressuriser motor speed.

## Pressure Control

Automatically adjusts the pressuriser fan speed to maintain the target pressure and increase the filter lifecycle.

## High Temperature and Particulate Concentration Flush

Detects elevated particulate levels or high temperature. Intelligently increasing the fresh air supply to reduce temperature and flush excess particulate. These levels are configurable.

## Data Communication

Provides local and networked, wireless and wired data access capability. Database download via web interface, HTTP web requests, MQTT.

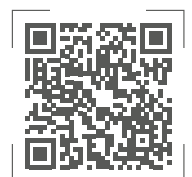


## Data Management

Gain comprehensive visibility into your air quality system with OnGuard's intuitive dashboard. Displaying real-time data through color-coded dashboards and detailed graphs to provide a clear view of air quality conditions to maintain a safe environment.

Get access to:

- Live and historical system performance and air quality data. Measure pressure, CO<sub>2</sub> concentration, particulate count and mass concentration, motor load, humidity and temperature, alert times, severity, and details.
- Access remotely from a web-based interface and change cabin pressure, conduct pressure testing, set alarms, recalibrate sensors, and more.
- Historical data analysis: Review and analyse up to 6-years of stored data making it easy to understand system performance and air quality trends, saving lives and protecting equipment.
- Easily integrates with PLCs and condition monitoring systems.



Controller Animation

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