SIEMENS

Lab Demand Control Ventilation AQGARD™

Purpose-driven ventilation for **healthy, sustainable buildings**

Today's **Megatrends**

Transformative changes are reshaping the world around us and are having an impact on how Life Sciences and Critical Environments operate. Today's megatrends present challenges, but more importantly, they offer new opportunities to intelligently reduce operating costs, create long-term resilience, establish safe and healthy environments, reduce carbon footprints, and more.

Resilience

Increasing energy costs, new technologies, and ESG principles / priorities drive focus on energy efficiency, green labs, sustainability, and resilience

Health + Safety

Building technologies create safer, healthier work environments that protect employees, customers, partners, and research

Digitalization

Real-time information and advanced analytics improve operations and efficiencies, while improving innovation and time to market

Resilience

Adapt quickly to disruption and market changes while maintaining continuity

Key Factors

A culture of digital innovation allows life science organizations to anticipate, plan for, and respond to market dynamics as well as:

- Corporate + administrative goals
- Carbon taxes
- Electrification
- Utility incentives
- Environmental, social, and governance initiatives

Health + Safety

Make rooms and buildings as safe, healthy, and comfortable as possible

Key Factors

Prioritize employee wellbeing through:

- Indoor air quality (IAQ)
- Ventilation
- Attracting and retaining talent
- AI and analytics

Digitalization

Life science customers take advantage of digitalization to gain a competitive edge

Key Factors

Integrate digital technology into all areas of the life science operation to:

- Energy and operational efficiency
- Monitoring and compliance
- Create transparency
- Predict downtime and improve availability
- Improve lab quality and productivity

AQGARD™ at the intersection of IAQ and sustainability

Industry-leading platform for ventilation management

- **Deep energy savings (as much as 60%)**
- **Address environmental goals + mandates**
- **Accurate IAQ for the life of the building**
- **Sustainable, optimized ventilation control**
- **Actionable, data-driven insights**
- **Powerful occupant communications**

How it **works**

Intelligent, accurate ventilation is at the heart of any Smart Lab design. AQGARD™ helps to create an energy efficient, safer, and healthier work environment by having a positive impact on indoor air quality – which has been proven to improve cognitive function, reduce sick days, and protect occupants from airborne hazards / particulates.

1 Air Samples
Air packets are drawn from individual test areas through the air data router

2 Routing
Air packets are routed sequentially to the sensor suite

3 Analysis
The sensor suite analyzes each air sample

4 FeedBack Loop
Smart signals are sent to the lab / building management system for ventilation control

AQGARD™: Purpose-driven ventilation for healthy, sustainable buildings

Accurate for life of your building
Sensors swapped every 6 months | True differential sensing
Assurance program for all components | Zero owner maintenance responsibility

Active control
More than simply collecting data | Smart ventilation signal
Seamless BMS integration | Energy efficiency | Carbon footprint improvements

Smart communication
Simple / powerful IAQ and energy savings | Analytics for building operators
Confidence for occupants | API integration available

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