EcoWall

The Ultimate EC Fan Retrofit Solution

**Custom Engineered
Thermal Management Solution for Fan System Upgrade**

Product Description

EcoWall by Air$_2$O is one of the most robust, efficient, and effective fan array system on the market today designed with a plug-and-play fan array system, agnostic for all OEM's. Ensuring to provide quick installation, minimum downtime efficient performance, minimal maintenance, and a high degree of reliability. It significantly reduces energy consumption while offering a compact footprint, making it ideal for various applications.

The design offers a vast range of fan manufacturers, and all EcoWall products are custom-tailored to meet the specific requirements of each project.

Plug-and-Play Design
☐ Customized for different air flow capacities.
☐ Allows for easy interchange of fans within the system.
☐ Easier maintenance for for individual modules.
☐ Factory pre-balanced fan motor assembly.

Intelligent Control Options
☐ Manual speed and operation control via potentiometer and HOA (HAND/OFF/AUTO) switch.
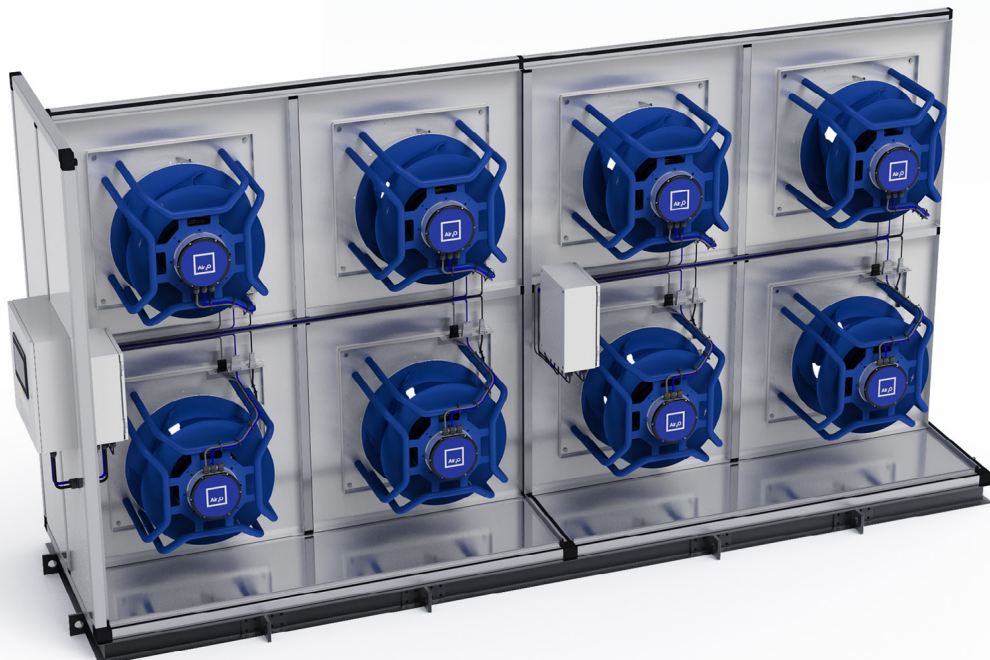☐ Automatic control through an advanced controller compatible with BACnet and Modbus systems.

Rapid Installation
☐ Pre-wired plug-and-play design allows anyone to install the system in hours, without specialized technicians with the provided installation guide.
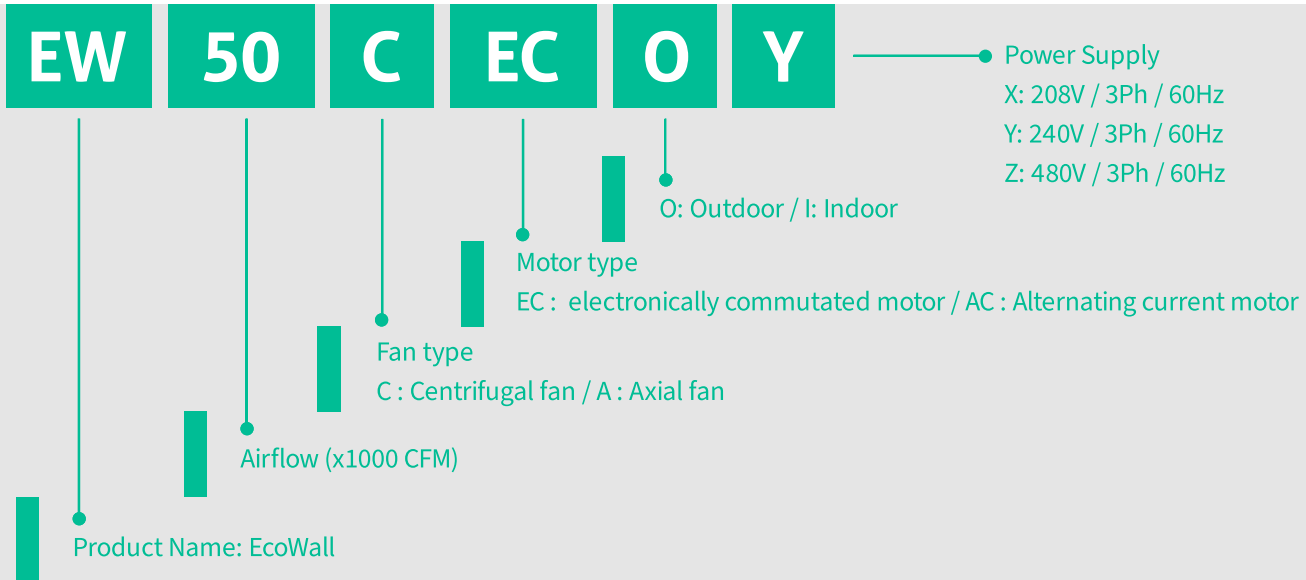
EcoWall is ideal for fan upgrade or replacement in commercial buildings, industrial settings, retrofits where access restrictions apply, and data centers where reliable, efficient supply air system and minimum shutdown period is critical.

Features and Benefits

■ **Reliable Performance**

■ **High Efficiency Motors (up to IE5)**

■ **Modular Fan Arrays**

■ **Quick Installation**

■ **Customizable**

■ **Quiet & Compact**

■ **Plug-and-Play Design**

■ **Outdoor Durability**

■ **Quick Connect Box**

■ **Compact System**

■ **Smart Integration**

■ **Integrated Protection**

■ **Tailored Designs**

■ **Limited or 5-year extended warranty**

Product Model Name Convention

EW	50	C	EC	O	Y

Power Supply
X: 208V / 3Ph / 60Hz
Y: 240V / 3Ph / 60Hz
Z: 480V / 3Ph / 60Hz

O: Outdoor / I: Indoor

Motor type
EC : electronically commutated motor / AC : Alternating current motor

Fan type
C : Centrifugal fan / A : Axial fan

Airflow (x1000 CFM)

Product Name: EcoWall

Control Packages

■ *Certified Quality:*
Control panel is UL Certified.

Basic Control Package:

■ **Essential Features:**

- Manual/Automatic speed control for fan arrays.
- Start/stop functionality for the entire system.
- Feedback monitoring for system performance.

■ **Easy Integration:**

- Seamlessly connects with building automation systems via BACnet (IP or MSTP) or Modbus (IP or serial).

■ **Key Components:**

- Motor Starter Protectors (MSP): Protects fan motors against overcurrent and overload.
- Fused/Non-Fused Disconnect Switch: Enables quick and safe power control.
- 7 or 10-inch HMI Display: Intuitive interface for system monitoring and configuration (Optional).

Advanced Control Package

■ **Additional Features:**

- Includes a power meter for real-time monitoring of voltage, current, and energy consumption. (Optional)
- Provides actionable insights for proactive energy management.
- Remote Access & Smart Alerts.
- Surge & Emergency Protection. (Advanced circuit protection, emergency stop button, and phase monitoring ensure system stability and safety)
- Redundant Power Backup (Optional).

■ **Panel Design:**

- Power meter included in control panel. (Optional)
- Airflow monitoring using Piezo meter. (Optional)
- Vertical Backdraft Damper. (Optional)
- Customizable HMI Interface.

■ **Shared Features:**

- Retains all features and components of the Basic Package, including its simplified plug-and-play wiring system.

EcoWall

System Components

Indoor Quick Connection Box

This box is the central hub for electrical connections, ensuring seamless installation and safe operation

- Protects fans with motor starter protectors (MSPs).
- Provides easy connectivity with terminal blocks for control and power signals.
- Uses pre-wired connectors to streamline fan installation and swapping.
- Features robust grounding for electrical safety.
- One internal connection box for every 8 fans.

Outdoor or Indoor Control Panel

A durable, feature-rich control hub for the entire fan array system

- Modbus/BACnet-compatible controller handles system automation and communication.
- An industrial-grade HMI touchscreen displays operational data and alerts.
- Includes an HOA switch for manual or automatic operation and a potentiometer for precise fan speed adjustments.
- Features a disconnect switch for easy power isolation during servicing.
- Can be integrated to existing controls.

Plug and Play Fans

Pre-wired plug-and-play design easy to be installed without the need for professional help

- **Fast Setup:** Pre-wired harnesses allow quick, tool-free installation.
- **Effortless Maintenance:** Fans can be swapped without rewiring, reducing downtime.
- **Safe & Secure:** Eliminates miswiring risks and enhances connection reliability.
- **Expandable Design:** Standardized plug-and-play connections allow easy system upgrades.
- **Control & CFM:** Power, Control & CFM Monitoring using Piezo ring with built-in pressure transducer.
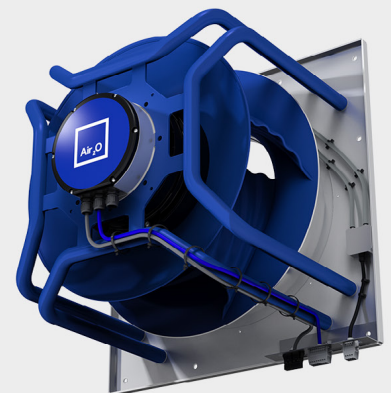
OUR SERVICES

Comprehensive Startup and on-time delivery

Air$_2$O provides seamless delivery and startup support to ensure successful implementation.

24/7 Maintenance Support

Air$_2$O can provide 24/7 maintenance support to ensure optimum operation and reliability of your equipment.

Local and Remote Monitoring

Air$_2$O's advanced monitoring solutions ensure consistent uptime and optimal system performance by tracking your HVACD systems on-site or remotely.

Predictive Analysis Software

Our cutting-edge software enables real-time detection of potential issues, alerting you to problems before they escalate into costly failures.

Advanced Performance Prediction Software (DEN)

Our proprietary DEN software enables accurate forecasting of HVACD system performance, ensuring the design is efficient low-energy and sustainable.

Robust Supply Chain

Our extensive network of international suppliers guarantees the availability of components, minimizing delays and disruptions.


ISO 9001 Certified

As an ISO 9001 certified design and manufacturing organization, Air$_2$O maintains a QMS that addresses each of the eight ISO 9001 sections.

☐ Scope

☐ Normative reference (e.g. QMS fundamentals)

☐ Terms and definitions

☐ General QMS requirements

☐ Management responsibility

☐ Resource management

☐ Product realization (design excluded)

☐ Measurement, analysis and improvement

Air$_2$O Operations & Supply Chain

Suppliers/Projects

Offices/Operations
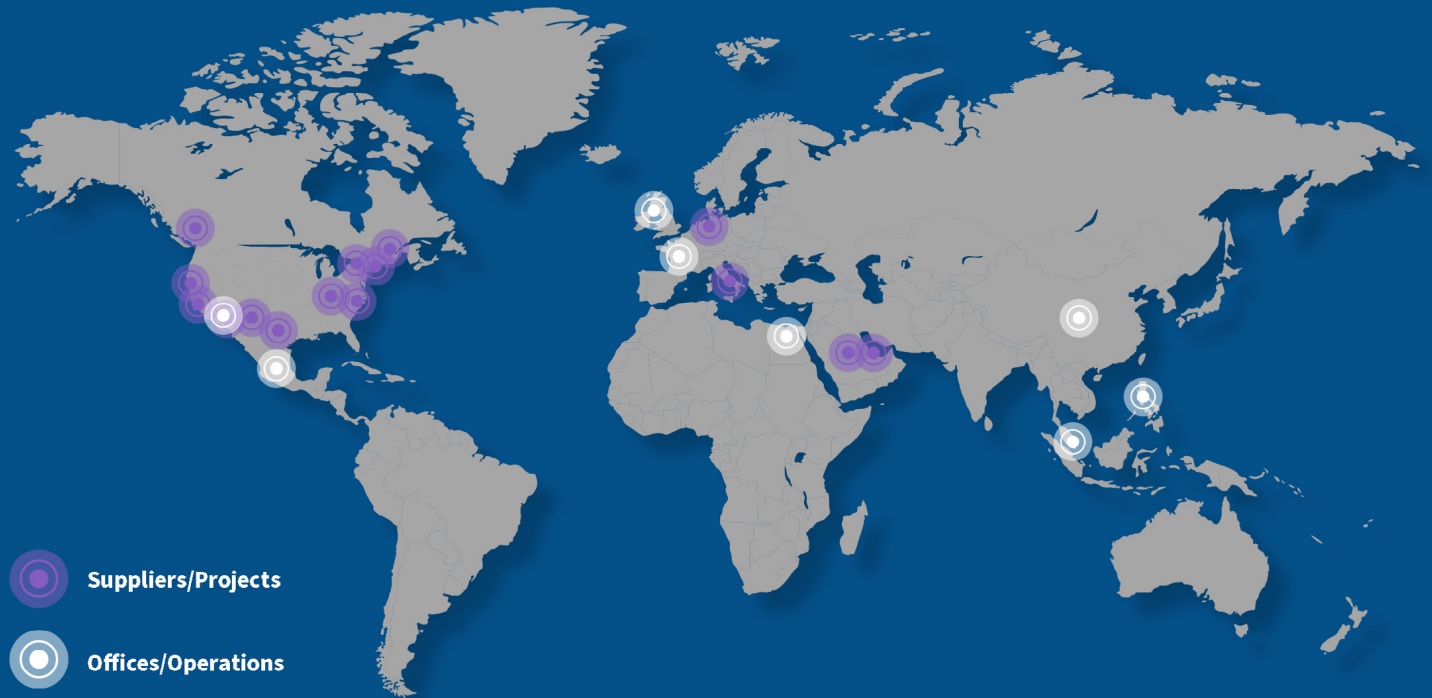
Air$_2$O sources the highest quality components from vendors worldwide for a consistent flow of products that ensures your project is completed on time and on budget, even during supply chain disruptions.

☐ Faster time to completion

☐ Minimize risk of project disruption

☐ Adjust quickly as requirements change

Air₂O | Thermal Management Innovation

an Eren Groupe Company

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