



**FANWALL TECHNOLOGY®**

# A KEY CUSTOMER SOLUTION FROM NORTEK AIR SOLUTIONS

FANWALL TECHNOLOGY® for air handlers and packaged DX equipment is a key customer solution from Nortek Air Solutions. More than just a fan array, FANWALL® systems create a fully integrated and engineered system of state-of-the-art fans, motors, cabinetry, controls, and accessories that can be easily combined to match new construction and retrofit application requirements.

As one of the most significant advances in airflow management, Nortek Air Solutions invented FANWALL TECHNOLOGY and is the leader in the advancement of fan array solutions. Utilizing a modular design, FANWALL arrays accommodate a wider range of air handler aspect ratios with unmatched design flexibility for indoor/outdoor applications. This results in a reduced footprint by as much as 33%; leading to more interior space for other uses.

## Ideal for Retrofit and Replacement Jobs

- FANWALL arrays can be less expensive to install and improved system efficiency.
- Easy to retrofit old fans in hard-to-reach places
- FANWALL cubes can fit through most hallways, doorways, or elevators
- Improved system performance and energy savings enhances payback
- Expensive cranes or building structural modifications nearly eliminated
- Maximum 27" wheel diameter size and modular fan cells ease handling requirements
- No fan re-balance required
- Vaneaxial systems are ideal for FANWALL retrofit
- Static pressure reduction with removal of old sound attenuators





## Matched Horsepower Motors

Expanded horsepower increments that closely match required brake horsepower and reduce connected load, wire sizing, transformer and switchgear costs for the building. Fan and motor components are kept to a manageable size for service, reduction of residual imbalance, reduction of system effect and the lowering of the fan acoustical signature.

## Near Zero System Effect Backdraft Damper

An integral part of System Optimization Controls for FANWALL® systems. Optimizes fan on/off controls by preventing backflow in idled cubes. Imposes near zero system effect and low leakage when compared to conventional damper devices when a fan is disabled.

## System Optimization Controls

Provides the most efficient system configuration to meet airflow requirements by varying the speed and number of enabled fans and motors at any given point in the operating range to maintain optimum efficiency.



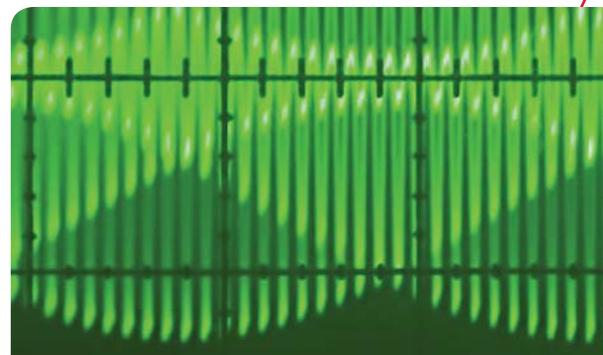
## Variable Frequency Drives

Available for optimized FANWALL configurations, enables individual on/off and speed control of fans to maintain peak static efficiency and pressure over the air handler's operating range. A dedicated VFD for each fan and motor combination provides the electrical means for on/off fan and motor speed control.



## Active Noise Control

Ideal for retrofit applications by providing most compact option for added control of inlet sound. Provides up to 22 dB reduction in sound power at the blade pass frequency in lower octave bands.



## Coplanar Silencer®

A patented enclosure for FANWALL® cubes. The cubes are lined with perforated aluminum and acoustic insulation to provide up to an 18 dB reduction in discharge sound power. Eliminates the need for sound attenuators and their associated static pressure penalty, and costly concrete inertia pads in specific instances.

## Sound Performance and Acoustics

FANWALL systems produce significantly lower vibration and sound through a variety of measures that are incorporated directly into the system design. Smaller direct drive fans and motors, and the patented Coplanar Silencer, reduces much of the fan and motor noise to provide quiet operation. (Unit isolation is often not required due to the low vibration characteristics of FANWALL systems.)

## Energy Efficiency

Efficient motors with individual on/off and speed control of fans to maintain peak static efficiency and pressure over the air handler operating range. Multiple fan wheel diameters and widths available to match performance requirements and optimize operation efficiency.

## Fans

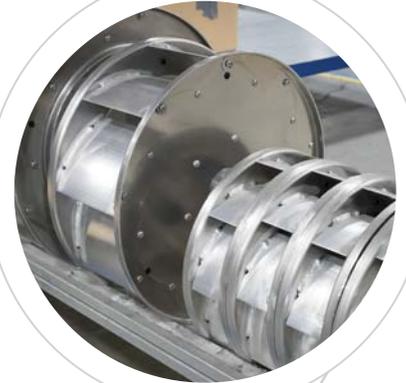
State-of-the-art, high-performance aluminum or aluminum fan wheels have an aerodynamic shaping of the blades, shroud, and cones, and are constructed with materials that provide damping to reduce sound tones from the impeller and motor. Aluminum or polymer construction available in multiple sizes to efficiently meet system performance or application requirements.

## Multi-Drive Options

Multiple motors with a single point of control for system simplicity and efficiency.

## Poly Wheel/ECMi Motor

Next generation FANWALL design incorporates high-performance polymer fans with the ECMi motors, and are available as an option on FANWALL. The fan wheel features an integrated electronically commutated permanent magnet motor that provides industry-leading benefits such as optimized airflow efficiency, redundancy and minimized turbulence.



Specifications and illustrations subject to change without notice and without incurring obligation.

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