



Fan Wheel and Motor Solutions

for Optimum Performance in
Fan Arrays

EXPERTISE IN AIR MOVEMENT

The air movement experts behind the patented FANWALL TECHNOLOGY® air handling systems continue their legacy of fan array innovation by adding more fan wheel and motor offerings.

These designs offer enhanced benefits for patented FANWALL® air handling systems while continuing their industry-leading benefits such as optimized airflow efficiency, redundancy and minimized turbulence.

Enhanced Benefits

- Higher energy efficiency
- Lower sound levels
- Multiple motor combinations

HPF-P200 Fan Wheel

Fan wheel and cone for use with standard internal rotor motors

- Premium efficient, quiet fan due to the improved aerodynamic shaping of blades, shroud and cones
 - Material provides damping to reduce sound tones from impeller and motor
- Tested to AMCA 210 for air performance and AMCA 300 for sound performance
- Increased fan efficiency by up to 7% on certain fan sizes
- Typical sound reduction of 5 dB of fan blade passage frequencies on inlet and discharge
- Available in 7 wheel diameters: 10, 12, 14, 16, 18, 20 and 22
- Approved for UL 1995
- Wheel operating temperature range of -31°F (-35°C) to 176°F (80°C)



The polymer fan wheel is available on FANWALL air handling systems from Nortek Air Solutions.



The aluminum impeller fan (HPF-A100) is available for FANWALL® air handling systems with high fan static pressure operating requirements.

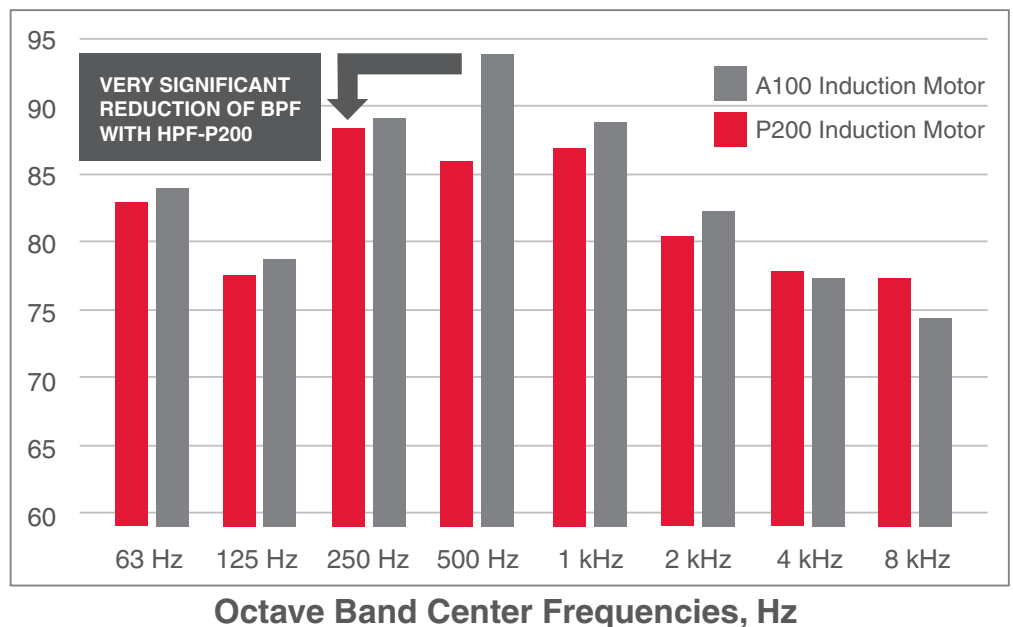


HPF-P200-ECMi Fan

Fan wheel with integrated electronically commutated permanent magnet motor

Includes all the polymer wheel and cone design advantages of the HPF-P200 impeller and adds the benefits of permanent magnet motors

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- Integrated ECMi drive
 - designed for reduced motor tones
 - eliminates wiring from motor to drive
- Improved turndown efficiencies over induction motors
- External rotor motor provides opportunities for compact applications
- Integrated drive UL Listed E481280
- Permanently lubricated ball bearings
- Continuous wide range of speed control
- Isolated shaft for mitigation of arcing across bearings
- Modbus® communication option
- Motor designed for IP54 protection and a thermal class of THCL 155
- Voltage input of 380-480V AC 3-Phase 50/60Hz.
- Tolerances on power source are $\pm 10\%$ on voltage and 50 Hz - 3% / 60 Hz +5% on frequency
- Built-in active thermal management



MOTOR CHOICES FOR FANWALL® SYSTEMS

Flexibility in Motor Performance

Motors are a major factor in the efficiency of fan systems. The air handler brands of Nortek Air Solutions offer multiple motors to meet your specific fan system performance requirements.

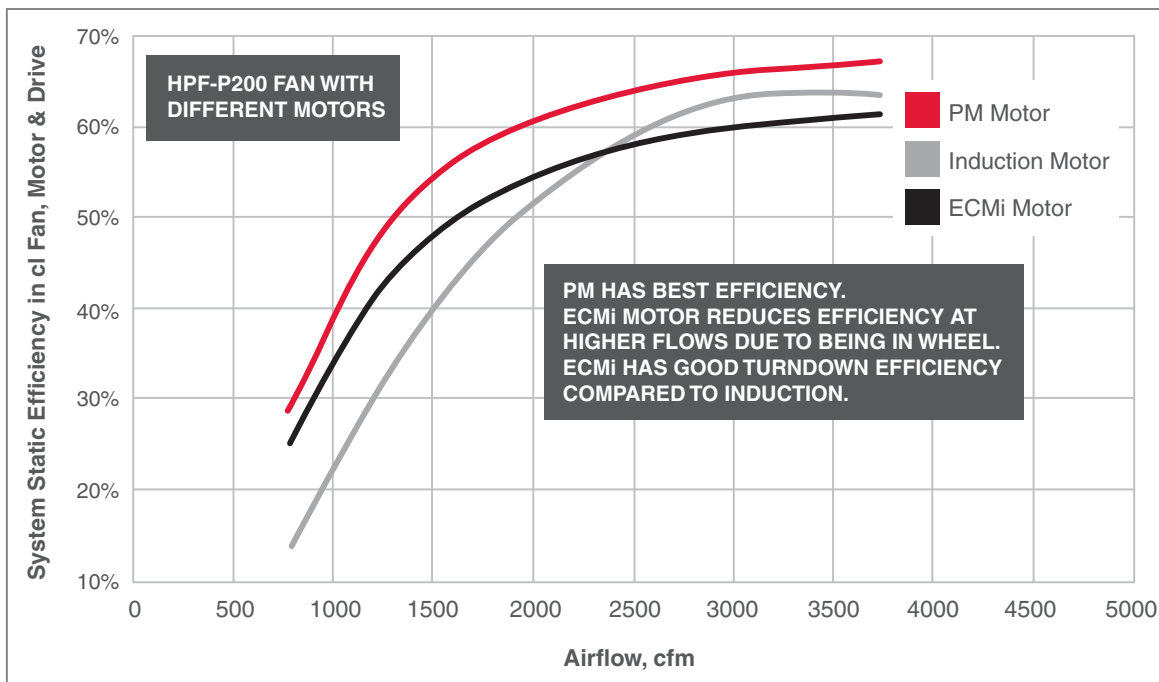


Motor	Typical Comparative Efficiency*
Induction	Good/Better
Electronically Commutated Permanent Magnet (ECMi)	Better
Permanent Magnet (PM)	Best

* Efficiency depends on specific application and system operating range.

FANWALL Air Handler System Available Motors		
Wheel Model	Description	Motors
HPF-P200	Polymer Wheel	AC Induction
		Permanent Magnet (PM)
HPF-P200 ECMi	Polymer Wheel	Electronically Commutated Permanent Magnet Motors (ECMi)
HPF-A100	Aluminum Wheel	AC Induction
		Permanent Magnet (PM)

System Efficiency Down System Curve Starting at Peak Static Efficiency



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