PowerAire's Micro-Combined Scalable Cooling, Heat and Power System for Commercial, Industrial or Home Applications

Continuous Independent Power with a PowerAire Trigeneration Unit

The PowerAire system offers continuous power generation powered by natural gas or propane. With its built-in inverter and battery bank, it can also take advantage of solar and wind inputs to augment the system. A major benefit is the unit’s ability to independently handle both cooling and heating loads, as part of the system. Because it offloads the HVAC demand from the electrical grid and also serves as a scalable electricity generator – it’s set apart from anything else in the commercial or residential market. PowerAire is manufactured by M-Trigen and distributed by OHM International.

PowerAire units may be scaled up to 1 MW by placing them in series

PowerAire Features

- PowerAire trigeneration plus solar equals greater efficiency.
- Powered from natural gas, LNG or propane, with an on-board battery bank, ensures uninterrupted power for electricity, heating, cooling and refrigeration
- Installs within existing HVAC infrastructure and electrical panels. Grid becomes back-up
- Whisper Quiet- Operates between 59-63 dB
- Scalable – from small form packages to parallel installations to over 1 MW
- AC/DC – Inputs and Outputs
- Strong 5-year limited warranty
- Supports latest ultra-high efficiency A/C VRF (Variable Refrigerant Flow) technologies
- Redundant electric & engine driven compression
- Engine heat to refrigerant heat exchanger allowing heat pump operations to -15 degrees Fahrenheit
- Inverter Based Variable Speed Power Generation
- Additional water loop engine heat distribution for boilers or hydronic systems
- On board heat dump

Contact your local OHM representative today to learn about PowerAire products in your area.

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“By utilizing its built-in UPS battery system and inverter to cycle on and off as needed, it does not need to run constantly to produce power. Instead it runs only long enough to recharge the battery bank, which is only run to 80% before automatically kicking in the power system to recharge and run again. It also uses the thermal heat produced during the operation of the engine to feed the heating and hot water systems. The PowerAire trigeneration unit can be connected to run using natural gas, propane or LNG, with solar or wind power being its first source of power. The unit can also sell excess power back to the grid or be networked to share excess load with nearby buildings. The multiple modes of operation are all controlled through smart devices or a building automation system such as BACnet, giving the facility director added peace of mind and ease of operation.” — M-Trigen Chief Engineer

PowerAire is the only regulatory-approved, micro combined cooling, heating, and power system in the world.
Commercial Applications

Customer:  
- Great American Business Products

Location:  
- Houston, TX

Building:  
- 30,000 sq. ft. (2,787 sq. mtrs.)

Equipment/Energy:  
- 24 PowerAire installed producing  
  - 144 kW of electricity  
  - 600 kW (170 tons) cooling/heating  
  - 150 kWh battery UPS storage  
  - 144 Kw solar

Electrical Utility Displacement:  
- Nearly 1 MW

Great American Business Products, a Houston based e-commerce company, came to M-Trigen to contribute to their goal of developing their own self-sustaining micro-grid.

With PowerAire’s ability to simultaneously produce electricity, heating and cooling, integrate renewables and provide net metering, Great American Products chose M-Trigen as their partner. The distributed nature of the build out provides multiple redundancies in the event of equipment downtime.

The building’s energy is supplied through a combination of 24 natural gas fired mCCHP (micro combined cooling, heating & power) units and a 144kW solar array displacing nearly 1 MW of electricity. The system also provides continuous automatic backup power in case of a utility power outage.

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Residential Applications

PowerAire Units may also be used in Residential Applications for combined Cooling, Heat and Power solutions with the ability to operate the entire home independent of the grid.

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