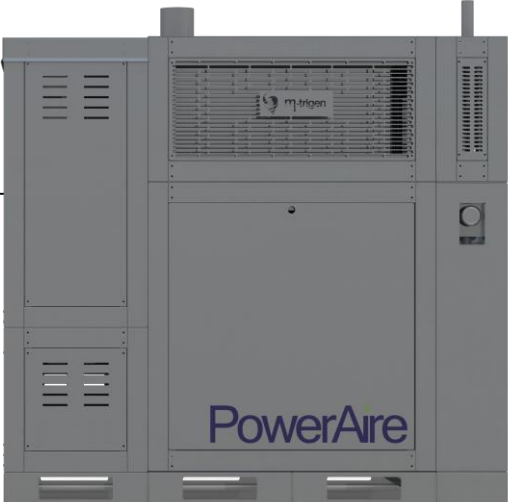


PowerAire

Cool  Heat  Power  Save



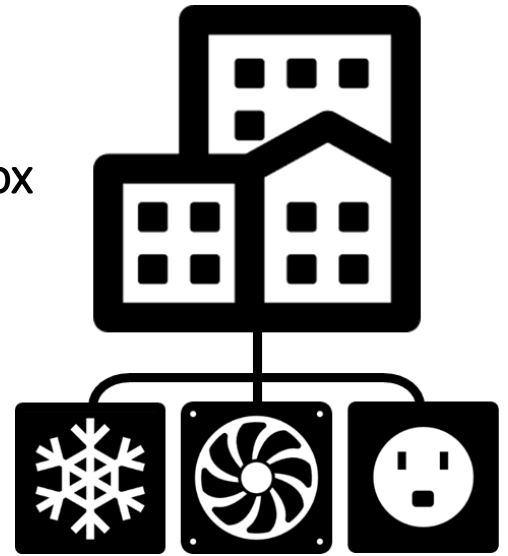
Your own personal
micro-grid.

PowerAire

Cooling, heat and power - all from one box

Higher efficiency than furnaces, boilers, air-conditioners and the electric grid means lower utility bills for you.

Oh, and it backs up your building in case of a power outage.



Cooling, heat and power – the basics needs of any building – are brought together in one design: PowerAire.

By combining the benefits of an air conditioner, boiler, water heater and backup generator, PowerAire brings more value at a comparable cost. PowerAire provides a unique return on investment that can pay for itself in a matter of years.

- Provides power, heat and cooling
- Designed for hot/humid and cold/dry climates
- Prime source of power
- Interconnects to electric grid for back up power and to sell excess power
- Controls all power sources including grid, solar or wind
- Runs on natural gas or propane
- Uninterruptable power supply
- Surge, spike and electric noise protection for appliances and electronic equipment
- Ability to integrate multiple units
 - Single phase: up to 12 units / Three phase: up to 9 units
- Reduces carbon footprint

By producing cooling, heat and power simultaneously, PowerAire increased the efficiency of the fuel that is used. And by running on natural gas or propane, it's clean, dependable and inexpensive. This leads to two to three times greater efficiency than the electrical grid and 20-70% savings off utility bills.

And with the ePowerCore – a smart battery / inverter / surge suppression module – customers can sell excess power back to the grid, tie solar panels and have a whole house UPS (uninterruptable power supply) that never lets the lights go dark or sensitive electronics become damaged. Solar panels can be added as well as electric vehicles, making this a gateway to a home or commercial building's energy system.

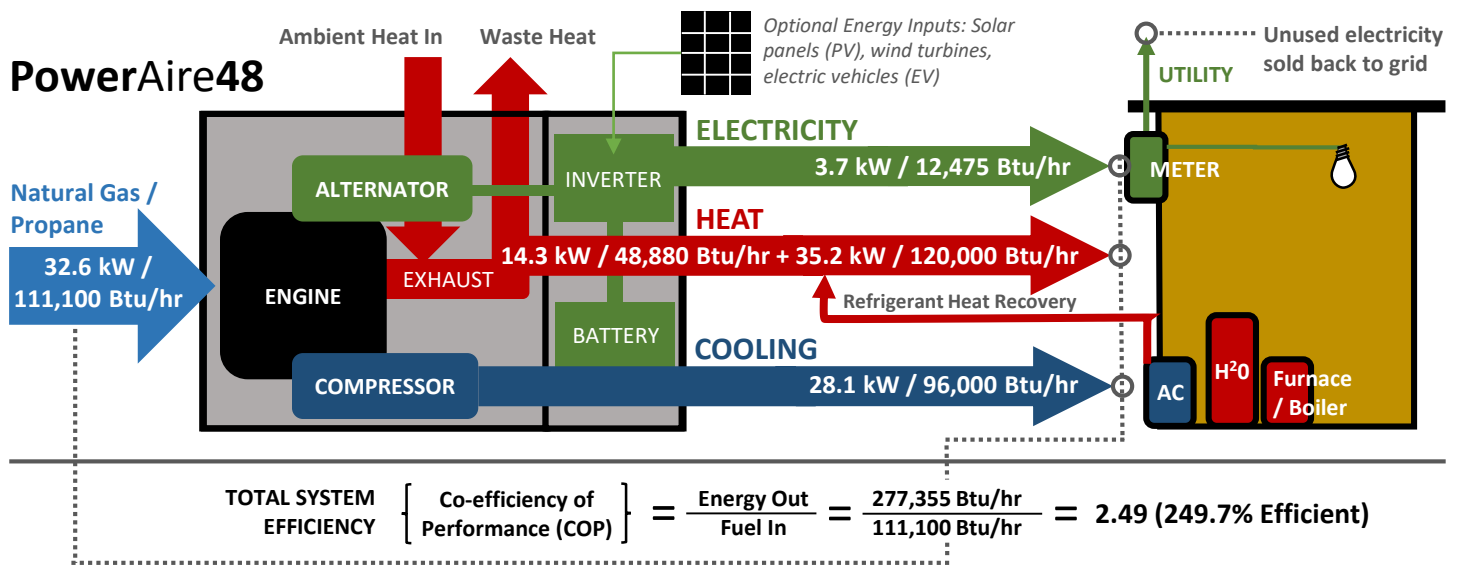


PowerAire

It's the high-efficiency, renewable adaptable, adjustable, all-in-one HVAC and power machine.

HOW IT WORKS

PowerAire makes the most efficient use of fuel by producing cooling, heat and power at the point of use allowing the home or business owner to benefit from distributed power and maximum efficiency in energy generation. This process is typically two to three times more efficient as a centralized electrical utility grid. The result is lower energy bills.



POWER

- Functions as a continuous power source – producing electricity to use or sell back to the grid
- Provides uninterruptable power when the grid goes down

COOLING

- The natural gas engine drives a compressor which cools just like an electric air conditioner but more efficiently using variable refrigerant flow (VRF)

HEATING

- The natural gas (or propane) engine creates heat, which is recovered for water and space heating
- With the Air Source heat pump, additional heat is captured from outside air. Combined with the engine heat, the operating range of the heat pump can be extended to low ambient temperatures

EFFICIENCY

- Offers the lowest operating cost of any heating / cooling systems
- Fully programmable inverter allows for time-of-day and peak shaving, interfaces with solar or wind power, sells back to the grid and integration with multiple units

CUSTOMERS

- Medium to large homes
- Small to medium businesses



PowerAire

Cooling, heat and power - all from one box

It's like your own micro-grid.

PRODUCT SPECIFICATIONS

Model	PowerAire 45	PowerAire 48	PowerAire 410	PowerAire 65	PowerAire 68	PowerAire 85
Power Output AC (kW)	3.4	3.4	3.4	6.0	6.0	8.0
Cooling Output (tons)	5	8	10	5	8	5
Power Output DC (kW / BTU/h)	3.7 / 12,474	3.7 / 12,474	3.7 / 12,474	7.7 / 26,246	7.7 / 26,246	8.6 / 29,351
Cooling (kW / BTU/h)	17.6 / 60,000	28.1 / 96,000	35.2 / 120,000	17.6 / 60,000	28.1 / 96,000	17.6 / 60,000
Engine Heat Recovery (kW / BTU/h)	13.0 / 44,402	14.3 / 48,881	18.2 / 62,017	16.7 / 56,898	18.0 / 61,377	21.5 / 73,441
Refrigerant Heat Recovery (kW / BTU/h)	22.0 / 75,000	35.2 / 120,000	44.0 / 150,000	22.0 / 75,000	35.2 / 120,000	22.0 / 75,000
Total Energy Output (kW / BTU/h)	56.3 / 191,876	81.3 / 277,355	101.1 / 344,491	64.0 / 218,144	89.0 / 303,623	69.7 / 237,792
Fuel Consumption (kW / BTU/h)	29.6 / 100,914	32.6 / 111,094	41.3 / 140,948	37.9 / 129,313	40.9 / 139,493	48.9 / 166,911
Efficiency (Output / Consumption)	190.1%	249.7%	244.5%	168.7%	217.7%	142.5%
Communications	Remote system monitoring / Networking					
Inlet Water Temperature	120 - 160°F					
Outlet Water Temperature (optional)	140 - 180°F					
Hot water flow range	2 - 4 gal/min					
Output power (continuous) - Watts @ 25°C (77°F)	3,400	3,400	3,400	6,000	6,000	8,000
Overload 30 min - Watts @ 25°C (77°F)	4,400	4,400	4,400	8,500	8,500	9,000
Output Frequency (selectable)	50 / 60 Hz					
Output Voltage	L-N: 120V +/- 3% - L-L: 240V +/- 3%					
Voltage phase	1Ø (3Ø capable when installed in groups of three)					1Ø / 3Ø
Total Harmonic Distortion (THD) at rated power	<5%					
Idle consumption search mode	<8W					
Power factor corrected	0.98					
Battery bank range	100 - 1,000 Ah					
Compatible battery types	Gel / AGM / LiON					
AC Input						
AC 1 (grid) input current (selectable)	3 - 60A (60A default)					
AC 1 (generator) input current (selectable)	3 - 60A (60A default)					
Auto transfer relay rating / transfer time	60A / 8 ms					
AC input voltage limits (bypass / charge mode)	L-N: 78 - 140V (120V nominal) / L-L: 160 - 270V (240V nominal)					
AC input frequency range (bypass / charge mode)	55 - 65 Hz (default) / 52 - 68 Hz (allowable)					
Engine	0.9 L					
Engine RPM	1600 - 3600 variable speed					
Fuel Type	Natural Gas / Liquid Propane					
Sound level	58 - 62 dBA					
Dimensions (L x W x H)	60" x 30" x 70" (152 cm x 76 cm x 177 cm)					
Weight	1,500 lbs (680 kg) * without batteries					
Warranty	5 Years					

Meets industry safety standards

Your local m-Trigen Dealer:



To learn more about PowerAire, find a dealer or become a dealer, visit mtrigen.com

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Specifications subject to change without notice.