



# BLOWER ASSISTED LPG/AIR BLENDING SYSTEM

## OPERATION

The **AQUA-AIRE™ AA Series** Blower Assisted LPG/Air Venturi Blending System is specifically designed for small to medium-large capacity 'base-load' applications and industrial Standby Systems requiring an LPG/Air blend compatible with natural gas. The system provides LPG/Air at a pressure higher than can be attained with a standard LPG/Air venturi. The design is based on a single skid configuration combining the **AQUA-GAS™** Vertical Gas Fired Waterbath and a blower enhanced **VAPOR-JET™** LPG/Air Venturi Blender.

During operation, an LPG fired atmospheric burner heats a glycol/water mix in the vaporizer. Liquid LPG enters the vaporizer's helical coil and is heated by the waterbath and induces vaporization. The LPG vapor then passes out of the vaporizer's heat exchanger area into the vaporizer's external vapor header. The vapor exits the header and passes to the venturi blender.

In response to the pressure of the LPG/Air in the surge tank, a solenoid valve opens allowing vapor to pass through the venturi assembly and inspirate the required volume of air to mix with the LPG vapor. Unlike a standard venturi which inspirates atmospheric air, the **AQUA-AIRE™** obtains blended air via the systems air surge tank. The system blower maintains a rock steady surge tank pressure, adequate for the required downstream LPG/Air pressure.

The system is safe, simple and proven. Calorific value of the LPG/Air and pressure are both easily adjusted. **AQUA-AIRE™** is a wildly popular choice for small to medium-large capacity applications where the LPG/Air pressure required exceeds that of a standard venturi.

## STANDARD FEATURES

- Steel tube LPG helical coil designed and manufactured per ASME Pressure Vessel Code, Section VIII, Division 1.
- LPG heat exchanger coil rating: 1.72Mpa at 343°C (250Psig at 650°F).
- UL stamped external relief valve: 1.72Mpa (250Psig).
- All wiring, controls, electrical components and their installation comply with (USA) NFPA Pamphlet 58 and NFPA Pamphlet 70.
- Explosion Proof configuration meets Class I, Division 1, Group D per NFPA Pamphlet 70.
- 100% Turndown Capability.
- Honeywell UV Scanner and Flame Safeguard
- High quality air blower and surge tank.

### Models:

*AA100V-204-1 to 1600V-4135-6*



- FM configured burner gas train is standard.
- Central Control Panel with First Out Annunciator.
- Float activated high liquid LPG level shutdown switch.
- Safety solenoid valve.
- Factory tested and packaged.

## OPTIONS

- Maintenance/Control House
- **Gravi-Blend** Calorimeter
- Venturi Silencers
- Spare Parts Kit

# AQUA-AIRE™ AA SERIES

# PACKAGED VENTURI BLOWER LPG/AIR SYSTEMS

## AA Series (Delivery Pressure: 15-18 PSIG)

Aqua-Modul-Aire™ Model No.	Capacity	Surge Tank	Ship Weight	
	Million BTU/HR	SCF M <sup>3</sup>	Lbs.	Kg
AA200V-4318-1-18	18	▲ 100	6,930	3,150
AA300V-327-2-18	27	2.83	7,820	3,555
AA400V-336-2-18	36	▼	7,820	3,555
AA500V-445-2-18	45		7,980	3,627
AA600V-454-3-18	54	▲	8,295	3,770
AA800V-468-3-18	68	↑	10,195	4,634
AA1000V-490-4-18	90	200	10,295	4,680
AA1600V-4112-5-18	112	5.66	10,495	3,579
AA1600V-4121-6-18	121	▼	10,645	4,839

- For larger capacities up to 200MMBTU/h - Contact Factory.
- Vaporization ratings at .62Mpa (90Psig) and -34°C (-30°F) with LPG of 100% Propane.
- Product improvement is a continuing goal at Ely Energy, Inc. Designs and specifications are subject to change without notice.

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