

# Algas-SDI™

*...Innovative liquid vaporizing and gas mixing solutions*

ISO 9001  
Certified

## POWER-AA®

*Anhydrous Ammonia Vaporizer Series - Models P150AA through P1200AA*



- Safely and efficiently vaporizes anhydrous ammonia for commercial, industrial and utility SCR applications.
- Multiple core designs consist of the proven P-Series electric vaporizer, factory connected in parallel to provide greater vaporization capacity.
- Waterless electric vaporizer
  - No corrosion or rust.
  - No refilling.
  - No sediment.
  - No burned out heater elements.
- Two safety devices to ensure dry superheated ammonia.
- The vaporizer requires only 40-50 seconds to reach operating temperature from a cold start.
- Complete with all safeties and controls - requires no additional remote mounted controls for operation.
- Available in explosion proof or nonincendive configurations.
- DCS Interface.
- Designed to meet the demands of the industrial process industry.
- 100% Turndown - can operate in dry condition.

# Specifications

	MODEL	P150AA	P200AA	P300AA	P400AA	P600AA	P800AA	P1000AA	P1200AA
<b>*Vaporization Capacity</b>	Lbs/hr	150	200	300	400	600	720	840	950
	kg/hr	68	91	136	181	272	327	382	432
<b>Heat Exchanger Surface Area</b>	ft <sup>2</sup>	5.5	7.1	11.0	14.2	21.3	28.4	35.5	42.6
	m <sup>2</sup>	.51	.66	1.02	1.32	1.98	2.64	3.3	3.96
<b>Pressure Vessel Design Pressure</b>	psig	250	250	250	250	250	250	250	250
	kg/cm <sup>2</sup>	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
<b>Pressure Vessel Test Pressure</b>	psig	350	350	350	350	350	350	350	350
	kg/cm <sup>2</sup>	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6
<b>Pressure Vessel Liquid Capacity</b>	U.S. gallons	1.9	2.3	3.8	4.6	6.9	9.2	11.5	13.8
	liters	7.3	8.7	14.6	17.4	26.1	34.8	43.5	52.2
<b>Operating Temp. Range</b>	°F	194-203	194-203	194-203	194-203	194-203	194-203	194-203	194-203
	°C	90-95	90-95	90-95	90-95	90-95	90-95	90-95	90-95
<b>Shipping Weight</b>	lbs	175	240	600	730	1100	1360	1725	1990
	kg	80	109	273	331	499	617	782	902

\*Vaporization capacity ratings at 100 F (37.8 C) saturated liquid ammonia inlet, 15° superheated ammonia outlet. Higher pressures or lower temperatures may decrease capacity.

**For more information, contact your ASDI distributor or factory Customer Service (USA) representative.**

## Electrical

	MODEL	P150AA		P200AA		P300AA		P400AA		P600AA		P800AA		P1000AA		P1200AA	
VOLTAGE	PHASE	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS
<b>380</b>	3	30	45.4	40	60.5	60	90.8	80	122	120	182	160	243	200	303	240	365
<b>415</b>	3	35	49.6	40	55.5	70	99.2	80	111	120	167	160	222	200	278	240	334
<b>440</b>	3	30	39.3	40	52.5	60	78.6	80	105	120	157	160	210	200	262	240	315
<b>480</b>	3	35	42.9	40	48	70	85.8	80	96.2	120	144	160	192	200	241	240	289
<b>575</b>	3			40	40.1			80	80.3	120	120	160	160	200	200	240	240

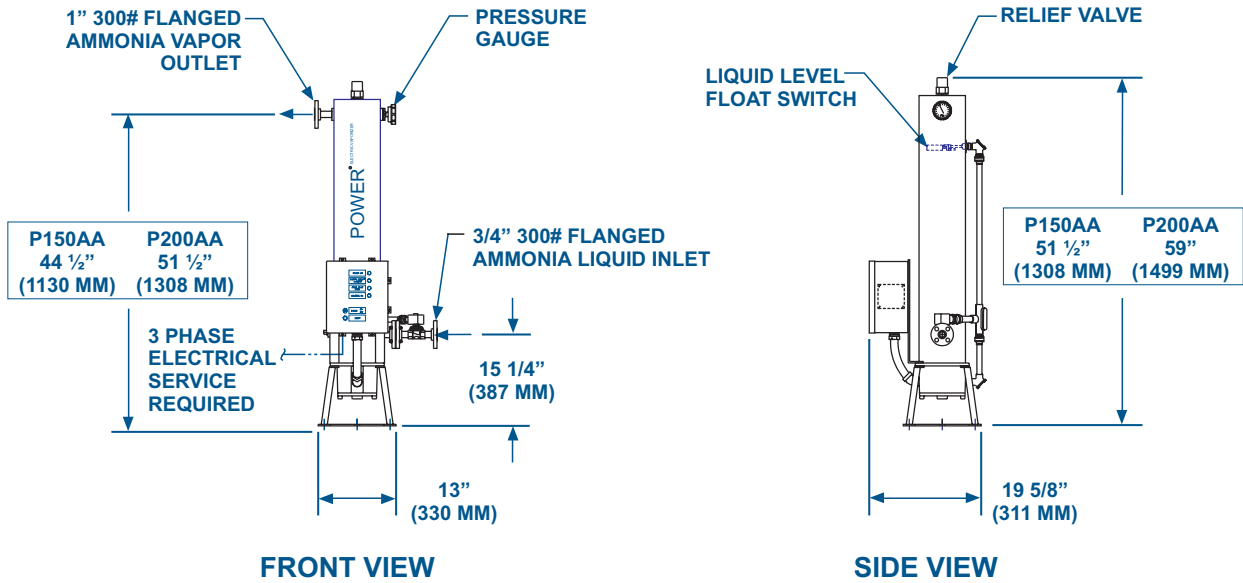
## Features

- ◆ Meets Class I, Division 2, Group D requirements specified in NFPA Pamphlet 70.
- ◆ Thermal efficiency exceeds 97%.
- ◆ 100% Turndown capability.
- ◆ Pressure vessels designed to ASME specifications.
- ◆ ASME and UL stamped external relief valve for each core: 250 psig (17.6 kg/cm<sup>2</sup>).
- ◆ State-of-the-art microprocessor based control system with digital indicator for status/problem code display.
- ◆ Rain-tight NEMA 4X enclosure protects electrical control components.
- ◆ Easily accessible control housing allows simple maintenance.
- ◆ Float activated high liquid level safety.
- ◆ Two independent, direct monitoring, high-temperature safety shutdown devices.
- ◆ Flanged stainless steel inlet safety solenoid valve.
- ◆ Minimum 15 F (8.4 C) superheat at 100% capacity.
- ◆ Vinyl coated cross linked polyethylene insulation jacket.
- ◆ Pressure balanced NH<sub>3</sub> supply/delivery operation.
- ◆ Wide range of available voltages: 380, 415, 440, 480, 575, 50/60hz.
- ◆ Complete with all operating and safety controls.
- ◆ Ready to connect to plant facilities.
- ◆ Automatic restart after electric power interruption.

## Options

- ◆ Explosion proof electrical configuration (Class I, Division 1, Group D).
- ◆ Economy operation.
- ◆ Feed Back.
- ◆ Remote alarm output.
- ◆ Remote control panel.
- ◆ 350 PSIG pressure vessel rating.
- ◆ Air actuated inlet ball valve.

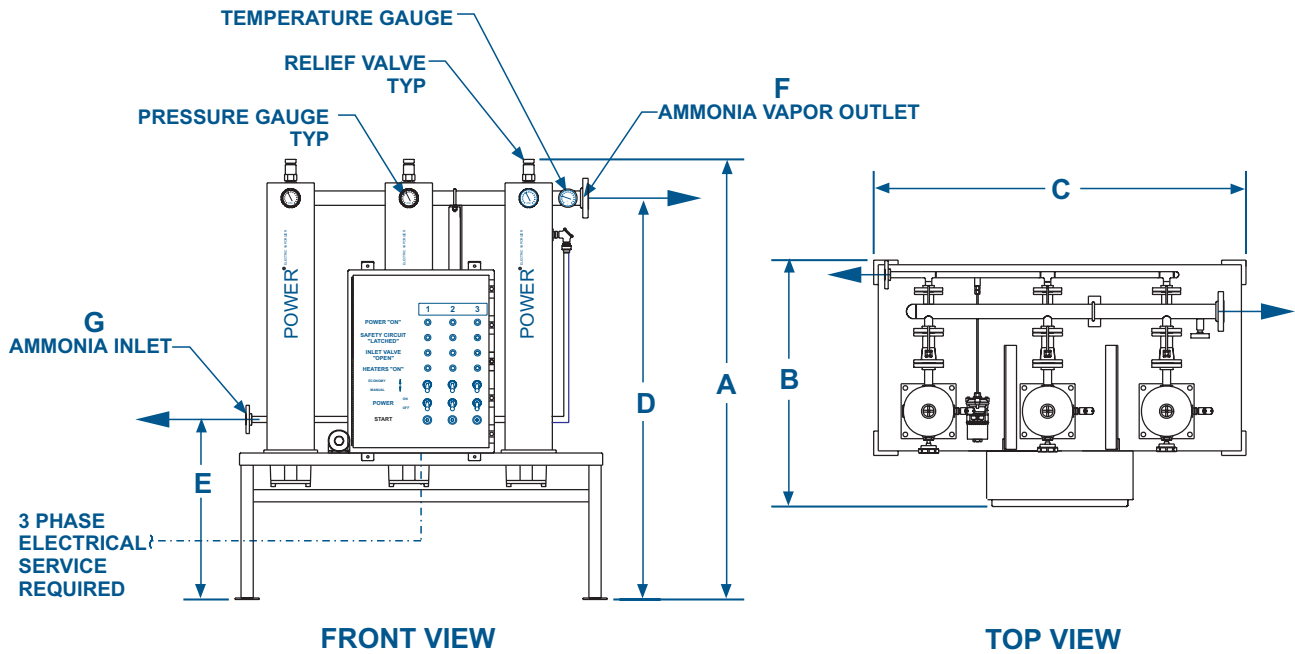
# Dimensions



FRONT VIEW

SIDE VIEW

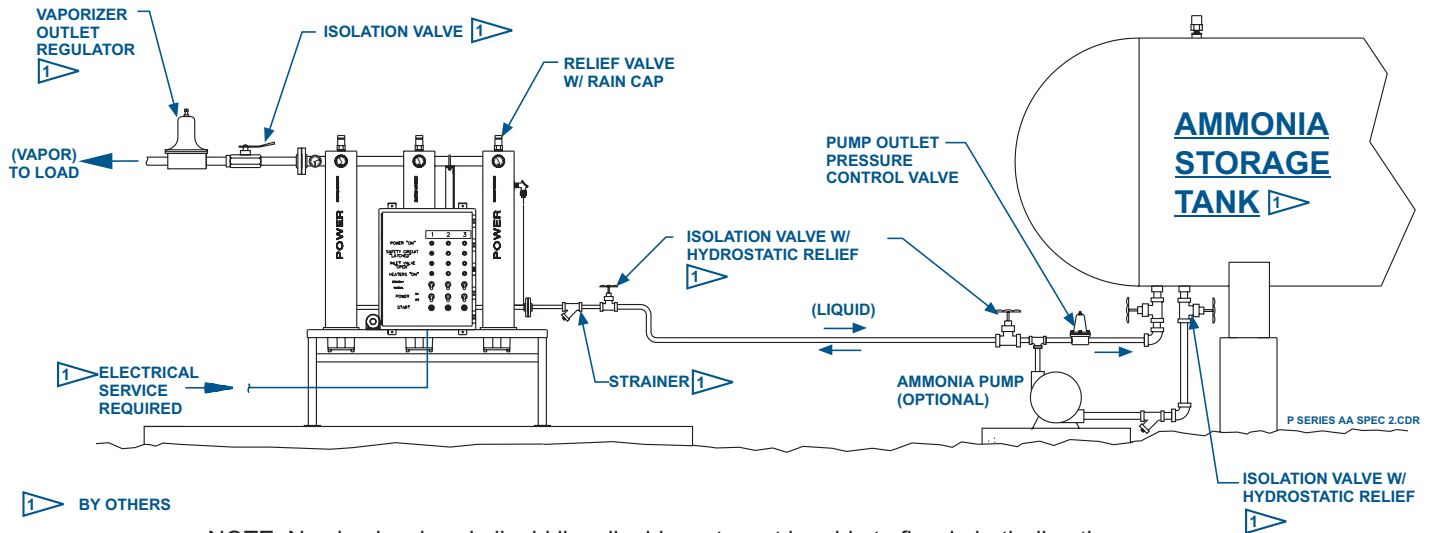
MODEL	P300AA	P400AA	P600AA	P800AA	P1000AA	P1200AA
<b>A</b>	64 1/2" 1638 mm	72" 1828 mm	72" 1828 mm	78" 1981 mm	78" 1981 mm	78" 1981 mm
<b>B</b>	41" 1041 mm	41" 1041 mm	41" 1041 mm	41" 1041 mm	41" 1041 mm	41" 1041 mm
<b>C</b>	40" 1016 mm	40" 1016 mm	61" 1549 mm	72" 1830 mm	86" 2185 mm	100" 2540 mm
<b>D</b>	58 1/2" 1486 mm	66" 1676 mm	66" 1676 mm	72" 1828 mm	72" 1828 mm	72" 1828 mm
<b>E</b>	29 1/2" 750 mm	29 1/2" 750 mm	29 1/2" 750 mm	29 1/2" 750 mm	29 1/2" 750 mm	29 1/2" 750 mm
<b>F</b>	2" - 300# FLG	2" - 300# FLG	2" - 300# FLG	2" - 300# FLG	2" - 300# FLG	2" - 300# FLG
<b>G</b>	1" - 300# FLG	1" - 300# FLG	1" - 300# FLG	1" - 300# FLG	1" - 300# FLG	1" - 300# FLG



FRONT VIEW

TOP VIEW

Product improvement is a continuing goal at Algas-SDI. Designs and specifications are subject to change without notice or obligation.



NOTE: No check valves in liquid line; liquid must be able to flow in both directions.

## Properties of Ammonia

	Anhydrous Ammonia
<b>Chemical Formula</b>	<b><math>NH_3</math></b>
<b>Molecular Weight</b>	<b>17.031</b>
<b>Latent Heat of Vap @ Boiling Point &amp; 1 ATM, BTU/lb</b>	<b>589.3</b>
<b>Ignition Temperature, °F</b>	<b>1562</b>
<b>Flamability Limits (Percent In Air, By Volume)</b>	<b>16-25%</b>
<b>Boiling Point, °F (1 ATM)</b>	<b>-29</b>
<b>Specific Gravity of Gas (Air=1.00)</b>	<b>.588</b>
<b>Specific Gravity of Liquid (Water=1.00)</b>	<b>.618</b>
<b>Lbs. Per Gallon of Liquid at 60°F</b>	<b>5.15</b>
<b>Cubic Ft. of Vapor at 60°F/Gallon of Liquid at 60°F</b>	<b>114.9</b>
<b>Cubic Ft. of Vapor at 60°F/lb. of Liquid at 60°F</b>	<b>22.3</b>



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POWER<sup>®</sup> is a registered U.S. trademark of Algas-SDI.

ECLIPSE<sup>™</sup>  
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