

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
*Vaporization Capacity	Lbs/hr	150	200	300	400	600	720	840	950
	kg/hr	68	91	136	181	272	327	382	432
Heat Exchanger Surface Area	ft ²	5.5	7.1	11.0	14.2	21.3	28.4	35.5	42.6
	m ²	.51	.66	1.02	1.32	1.98	2.64	3.3	3.96
Pressure Vessel Design Pressure	psig	250	250	250	250	250	250	250	250
	kg/cm ²	17.6	17.6	17.6	17.6	17.6	17.6	17.6	17.6
Pressure Vessel Test Pressure	psig	350	350	350	350	350	350	350	350
	kg/cm ²	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6
Pressure Vessel Liquid Capacity	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
Operating Temp. Range	°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
Shipping Weight	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
380	3	30	45.4	40	60.5	60	90.8	80	122	120	182	160	243	200	303	240	365
415	3	35	49.6	40	55.5	70	99.2	80	111	120	167	160	222	200	278	240	334
440	3	30	39.3	40	52.5	60	78.6	80	105	120	157	160	210	200	262	240	315
480	3	35	42.9	40	48	70	85.8	80	96.2	120	144	160	192	200	241	240	289
575	3			40	40.1			80	80.3	120	120	160	160	200	200	240	240

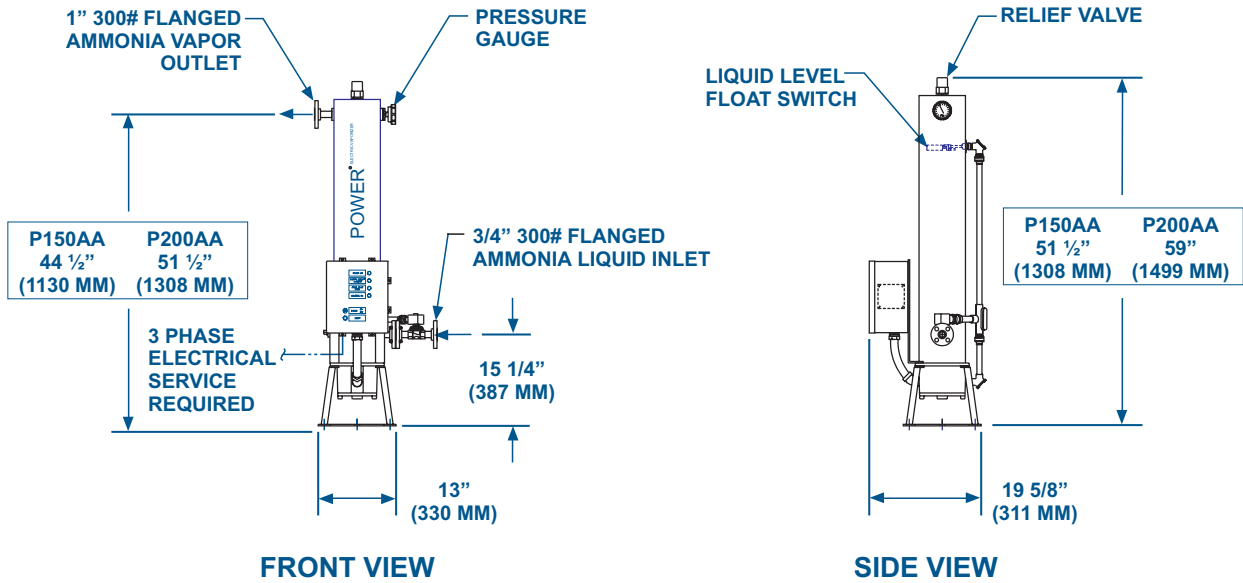
Features

- ◆ 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/cm²).
- ◆ 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 NH₃ 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.

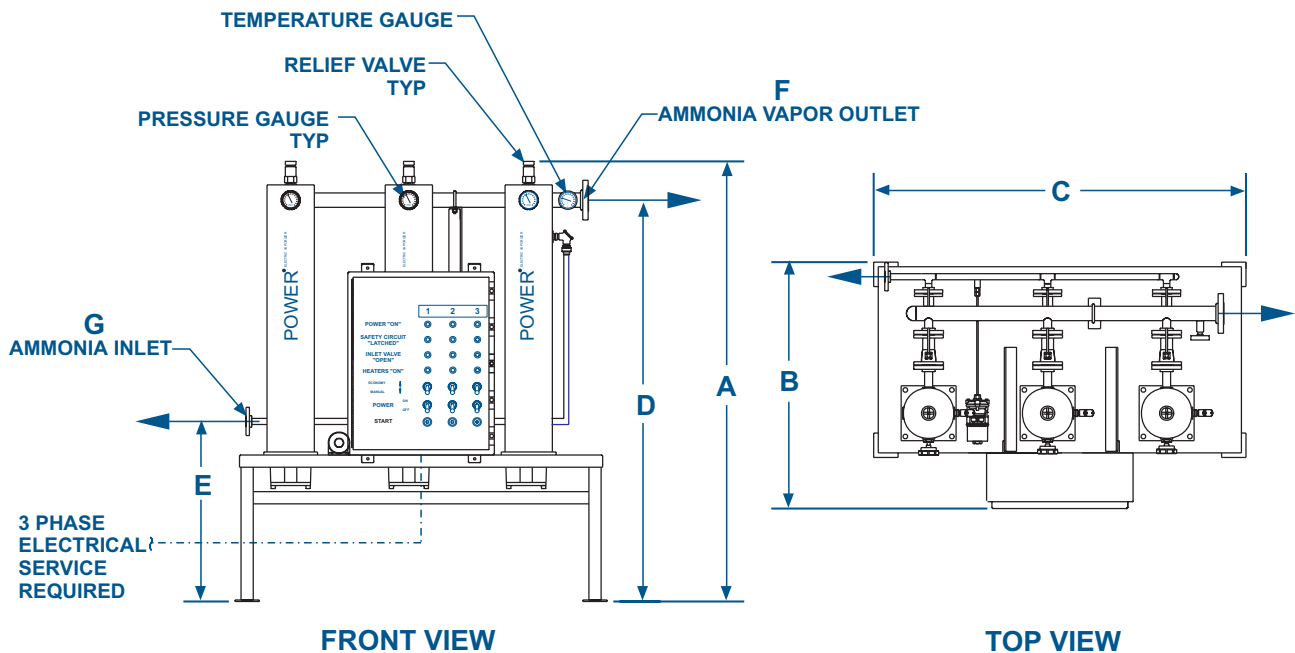
Dimensions



FRONT VIEW

SIDE VIEW

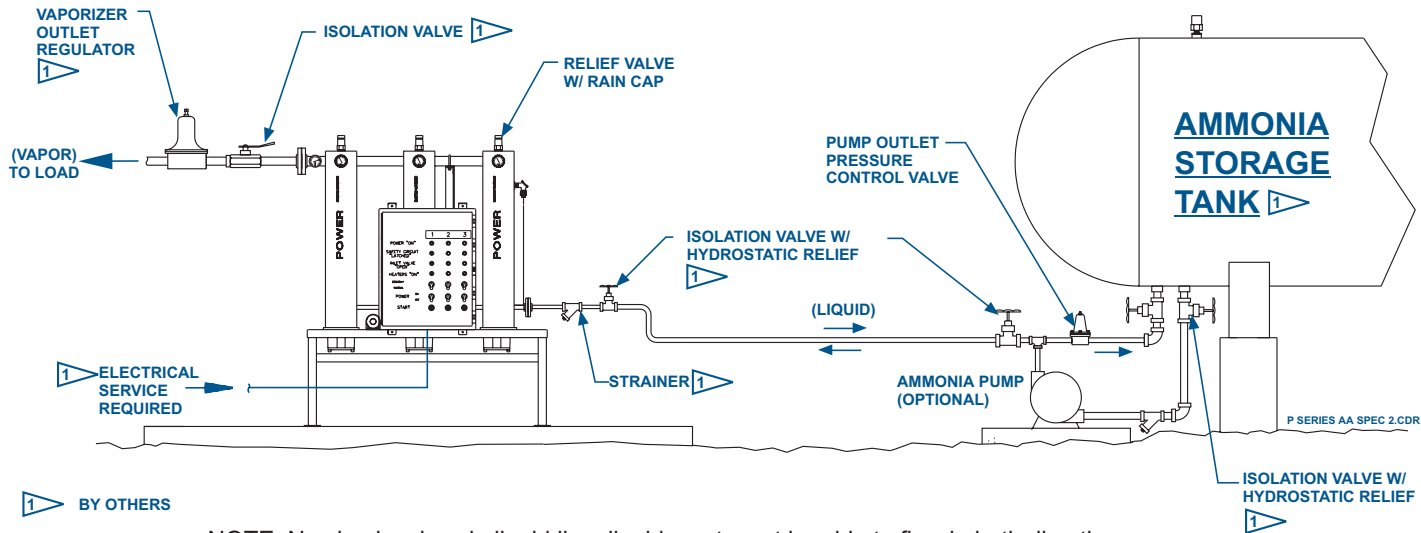
MODEL	P300AA	P400AA	P600AA	P800AA	P1000AA	P1200AA
A	64 1/2" 1638 mm	72" 1828 mm	72" 1828 mm	78" 1981 mm	78" 1981 mm	78" 1981 mm
B	41" 1041 mm	41" 1041 mm	41" 1041 mm	41" 1041 mm	41" 1041 mm	41" 1041 mm
C	40" 1016 mm	40" 1016 mm	61" 1549 mm	72" 1830 mm	86" 2185 mm	100" 2540 mm
D	58 1/2" 1486 mm	66" 1676 mm	66" 1676 mm	72" 1828 mm	72" 1828 mm	72" 1828 mm
E	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
F	2" - 300# FLG	2" - 300# FLG	2" - 300# FLG	2" - 300# FLG	2" - 300# FLG	2" - 300# FLG
G	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
Chemical Formula	NH₃
Molecular Weight	17.031
Latent Heat of Vap @ Boiling Point & 1 ATM, BTU/lb	589.3
Ignition Temperature, °F	1562
Flamability Limits (Percent In Air, By Volume)	16-25%
Boiling Point, °F (1 ATM)	-29
Specific Gravity of Gas (Air=1.00)	.588
Specific Gravity of Liquid (Water=1.00)	.618
Lbs. Per Gallon of Liquid at 60°F	5.15
Cubic Ft. of Vapor at 60°F/Gallon of Liquid at 60°F	114.9
Cubic Ft. of Vapor at 60°F/lb. of Liquid at 60°F	22.3



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POWER® is a registered U.S. trademark of Algas-SDI.

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Form: PAA0401