



# Algas-SDI™

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

ISO 9001  
Certified

## PowerXP-AA

Anhydrous Ammonia Vaporizer Series - Models XP19AA through XP120AA



- *Safely and efficiently vaporizes anhydrous ammonia for commercial and industrial applications.*
- *Two safety devices to ensure dry, superheated vapor.*
- *100% Turndown - can operate in dry condition.*
- *Available with feed-forward or feed-back design.*
- *Requires less than one minute to reach operating temperature from a cold start.*
- *Designed to meet the precise control requirements of the industrial process industry.*
- *The standard for applications such as thermal DE-NO<sub>x</sub> systems.*
- *Class I, Division 1, Group D.*
- *Flanged connections - standard.*

# Specifications

	MODEL	XP19AA	XP38AA	XP75AA	XP120AA
<b>Vaporization Capacity *</b>	Lb/hr	19	38	75	120
	kg/hr	9	17	34	54
<b>Heat Exchanger Surface Area</b>	Ft <sup>2</sup>	2.9	2.9	2.9	4.3
	m <sup>2</sup>	.27	.27	.27	.40
<b>Pressure Vessel Design Pressure</b>	Psig	250	250	250	250
	kg/cm <sup>2</sup>	17.6	17.6	17.6	17.6
<b>Pressure Vessel Test Pressure</b>	Psig	375	375	375	375
	kg/cm <sup>2</sup>	26.3	26.3	26.3	26.3
<b>Pressure Vessel Liquid Capacity</b>	U.S. Gallons	.95	.95	.95	1.6
	liters	3.61	3.61	3.61	6.0
<b>Operating Temp. Range</b>	°F	160-175	160-175	160-175	160-175
	°C	71-79	71-79	71-79	71-79
<b>Shipping Weight</b>	lbs	100	100	100	130
	kg	45	45	45	59

\*Vaporization capacity ratings at 15 psig (1.0 kg/cm<sup>2</sup>) and 0°F (-17.8°C) at liquid inlet with full rated voltage. Higher pressures or lower temperatures will decrease the capacity accordingly. Vaporization capacity ratings vary relative to input and rated voltage.

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

# Electrical

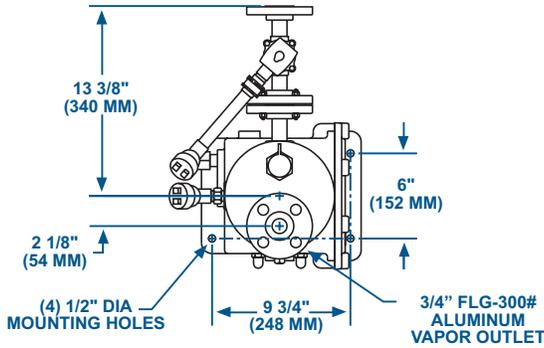
	MODEL	XP19AA		XP38AA		XP75AA		XP120AA	
VOLTAGE	PHASE	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS
120	1	3.9	32.5						
208	1	2.9	14.1		28.1		56.2		
	3			5.9	16.3	11.7	32.5	17.8	49.6
220	1	3.3	14.9		29.7		59.5		
	3			6.5	17.2	13.1	34.4	20.0	52.4
240	1	3.9	16.2		32.4	13.0	54.0		
	3			7.8	18.8	15.6	37.5	23.8	57.3
380	3			6.5	9.9	13.1	19.9	20.0	30.3
415	3			7.7	10.8	15.6	21.7	23.8	33.1
440	3					13.1	17.2	20.0	26.3
480	3					15.6	18.8	23.8	28.7

All models are 50/60 Hz.

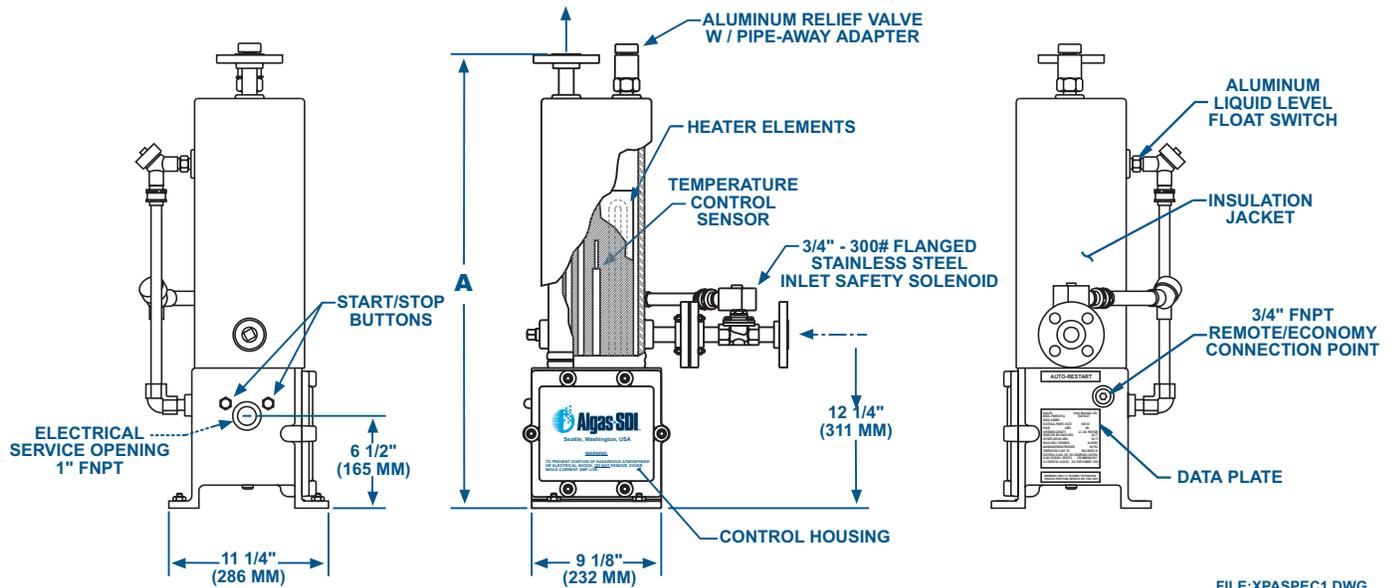
# Properties of Ammonia

	Anhydrous Ammonia
<b>Chemical Formula</b>	NH <sub>3</sub>
<b>Molecular Weight</b>	17.031
<b>Latent Heat of Vap @ Boiling Point &amp; 1 ATM, BTU/lb</b>	589.3
<b>Ignition Temperature, °F</b>	1562
<b>Flamability Limits (Percent In Air, By Volume)</b>	16-25%
<b>Boiling Point, °F (1 ATM)</b>	-29
<b>Specific Gravity of Gas (Air=1.00)</b>	.588
<b>Specific Gravity of Liquid (Water=1.00)</b>	.618
<b>Lbs. Per Gallon of Liquid at 60°F</b>	5.15
<b>Cubic Ft. of Vapor at 60°F/Gallon of Liquid at 60°F</b>	114.9
<b>Cubic Ft. of Vapor at 60°F/lb. of Liquid at 60°F</b>	22.3

# Dimensions



MODEL	XP19AA	XP38AA	XP75AA	XP120AA
A	32-1/4" 820 mm		39" 991 mm	



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## Features

- ◆ Explosion Proof configuration meets Class I, Division 1, Group D as defined by NFPA pamphlet 70.
- ◆ Pressure vessel designed to ASME specifications.
- ◆ NEMA 4 enclosure.
- ◆ ASME and UL stamped aluminum relief valve: 250 psig (17.6 kg/cm<sup>2</sup>).
- ◆ Meets ANSI K61.1, CGA pamphlet G-2.1.
- ◆ Thermal efficiency exceeds 98%.
- ◆ FM & CSA approved.
- ◆ 100% turndown capability.
- ◆ "Slide-in" PC board with quick connect fittings.
- ◆ Easily accessible control housing allows simple maintenance.

- ◆ Direct monitoring high temperature RTD sensors for operation and over temperature protection.
- ◆ Float activated high liquid level safety.
- ◆ Flanged stainless steel inlet safety solenoid valve.
- ◆ Vinyl coated cross-linked polyethylene insulation jacket.
- ◆ Pressure balanced NH<sub>3</sub> supply/delivery operation.
- ◆ Compact footprint size of approximately 1ft<sup>2</sup> [.09m<sup>2</sup>].
- ◆ Worldwide voltages available in 50/60 Hz.
- ◆ Complete with all operating and safety controls.
- ◆ Ready to connect to plant facilities.
- ◆ Factory tested.

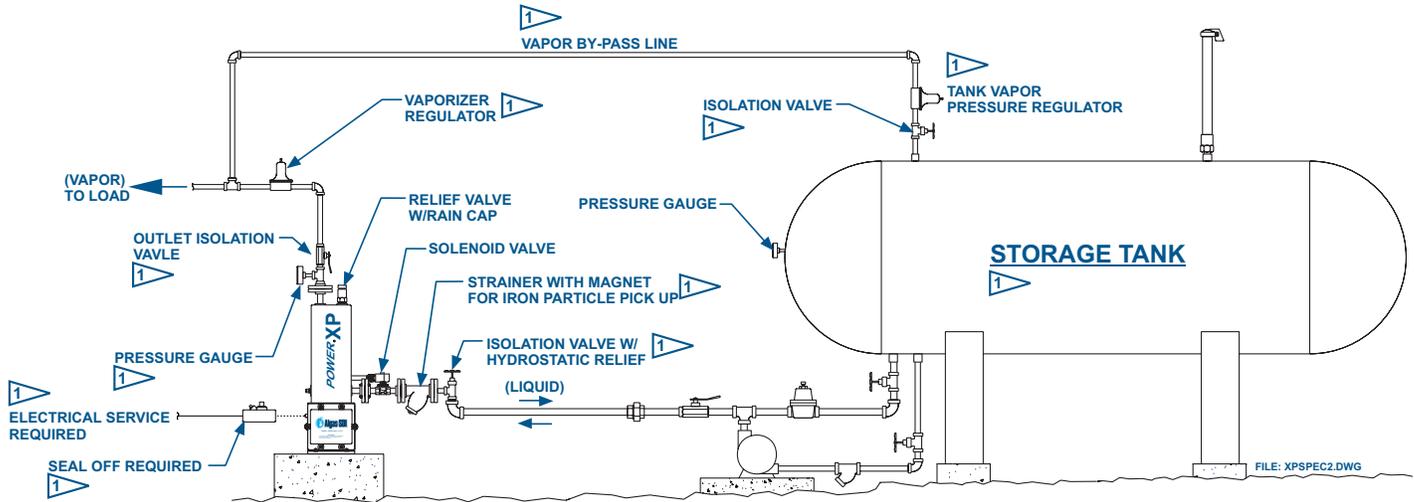
## Options

- ◆ Auto Restart.
- ◆ Economy Operation.
- ◆ Remote Control Panel.
- ◆ Spare Parts Kit.

**NOTES**

- 1) LIQUID PIPING LOSSES MOST NOT EXCEED THE HYDROSTATIC HEAD WHEN THE PUMP IS SHUT OFF.
- 2) NO CHECK VALVES IN LIQUID LINE; LIQUID MUST BE ABLE TO FLOW BOTH DIRECTIONS.

1 BY OTHERS.



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

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



Form: XPAA0401



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