

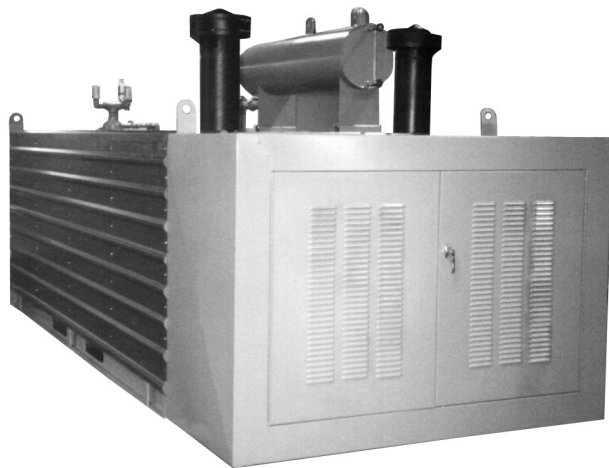
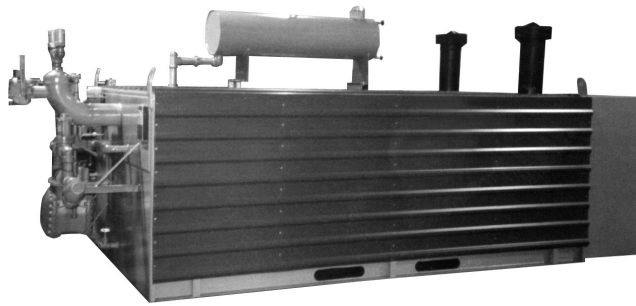
# Algas-SDI™

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

ISO 9001  
Certified

## Aquavaire-AA

*Anhydrous Ammonia Horizontal Waterbath Vaporizer; Models: Q2500HAA through Q11000HAA*



- *Pressure balanced waterbath vaporizer safely and efficiently vaporizes anhydrous ammonia for SCR, SNCR, and FGC systems as well as other NH<sub>3</sub> consumption applications.*
- *Heavy duty Eclipse industrial modulating burner requires no adjustments, even at high elevations. Simple push button start - no hassle operation.*
- *Push to prime feature added for cold-start days.*
- *Designed for extreme weather conditions. Proven reliability to -40°F.*
- *Built-in separation chamber - prevents clogging of regulators and other downstream devices.*
- *Best in class, double protected cabinet - powder coating over heavy duty sheet steel.*
- *DCS Interface.*
- *Natural gas or propane fired burner.*

# Specifications

	MODEL	Q2500HAA	Q3300HAA	Q5000HAA	Q6600HAA	Q8200HAA	Q11000HAA
<b>Vaporization Capacity *</b>	lbm/hr	2,500	3,300	5,000	6,600	8,200	11,000
	kg/hr	1,135	1,500	2,270	2,995	3,720	4,990
<b>Heat Exchanger Surface Area</b>	ft <sup>2</sup>	171	231	313	482	581	830
	m <sup>2</sup>	15.8	21.5	29.1	44.8	54.0	77.1
<b>Heat Exchanger Design Pressure **</b>	psig	250	250	250	250	250	250
	kg/cm <sup>2</sup>	17.6	17.6	17.6	17.6	17.6	17.6
<b>Heat Exchanger Test Pressure</b>	psig	375	375	375	375	375	375
	kg/cm <sup>2</sup>	26.3	26.3	26.3	26.3	26.3	26.3
<b>Gas Pressure Required</b>	psig	1	1	1	1	1	1
	kg/cm <sup>2</sup>	.07	.07	.07	.07	.07	.07
<b>Waterbath Operating Temperature (Adjustable)</b>	°F	170	170	170	170	170	170
	°C	76.6	76.6	76.6	76.6	76.6	76.6
<b>Waterbath Volume</b>	U.S. gallons	1,080	1,190	1,444	2,450	3,500	4,550
	liters	4,088	4,522	5,487	9,310	13,300	17,290
<b>Firetube Surface Area</b>	ft <sup>2</sup>	191	284	369	512	673	825
	m <sup>2</sup>	17.7	26.4	34.3	47.6	62.5	87.2
<b>Burner Fuel Input</b>	BTU/hr	1,960,000	2,520,000	3,800,000	4,700,000	6,050,000	8,250,000
	kcal/hr	493,920	635,040	957,600	1,184,400	1,527,800	2,078,600
<b>Shipping Weight</b>	lbs	9,000	11,000	15,000	18,000	21,000	28,000
	kg	4,086	4,994	6,810	8,172	9,534	12,712
<b>Operating Weight</b>	lbs	18,400	21,400	27,600	39,300	51,400	67,600
	kg	8,354	9,716	12,530	17,842	23,336	30,690

\*Vaporization capacity ratings at 15 psig (7.0 kg/cm<sup>2</sup>) and at 0°F (-17.8°C) liquid NH<sub>3</sub>.

\*\*Higher design pressures available. Contact factory.

†460V Available 3 phase only

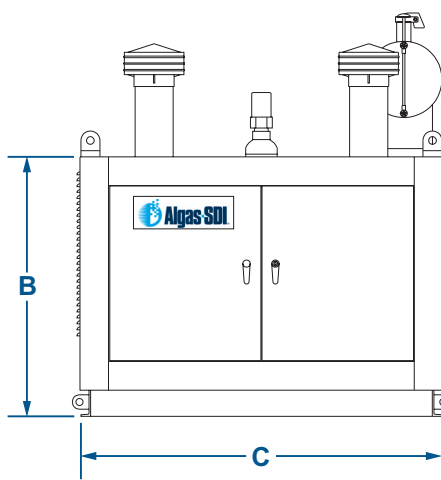
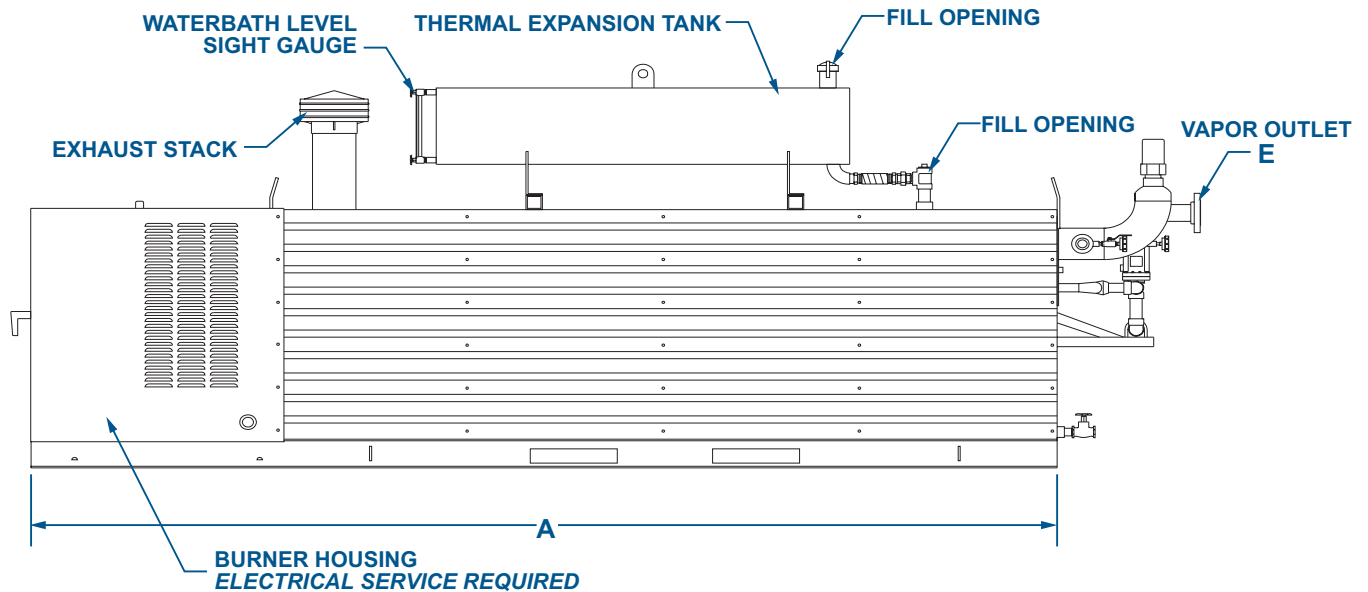
## Features

- Meets ANSI K61.1 requirements.
- All wiring, controls, electrical components, and their installation comply with recognized standards defined in NFPA 70.
- Heat exchanger is fabricated in accordance with ASME Pressure Vessel Code, Section VIII, Division 1 and “U” stamped.
- NH<sub>3</sub> pressure vessel design rating: 265 psig at 650°F (18.6 kg/cm<sup>2</sup> at 343°C).
- ASME or UL approved relief valve: 265 psig (18.6 kg/cm<sup>2</sup>).
- Multi-header, multi-pass heat exchanger assures optimum velocity for complete vaporization and provides superheat to the vapor at rated capacity.
- Minimum 15° F [8.4° C] superheat @ 100% capacity.
- Galvanized thermal expansion tank with water level sight gauge assures heat exchanger protection.
- High quality forced draft power burner provides fast response to load changes.
- Electronic flame safeguard assures positive and safe ignition.
- Combustion efficiency of 80% minimum.
- Two electrically operated main fuel shutoff valves in the burner gas train.
- Float activated high NH<sub>3</sub> liquid level shutdown switch.
- First Out Annunciator Display Points:
  - Flame failure
  - High NH<sub>3</sub> level
  - Low water level
  - High water temperature
  - High gas pressure
  - Power Off/Reset
  - Spare display points for connection to mixing system, etc.
- Water circulation pumps eliminate thermal stratification and increase heat transfer.
- Removable burner enclosure for maintenance access.
- Complete with all operating and safety controls. Ready to connect to plant facilities.
- All exterior metal surfaces are mechanically cleaned, primed, and painted.
- Factory tested, packaged, and mounted on lengthwise beams with lifting lugs and forklift access holes.\*\*

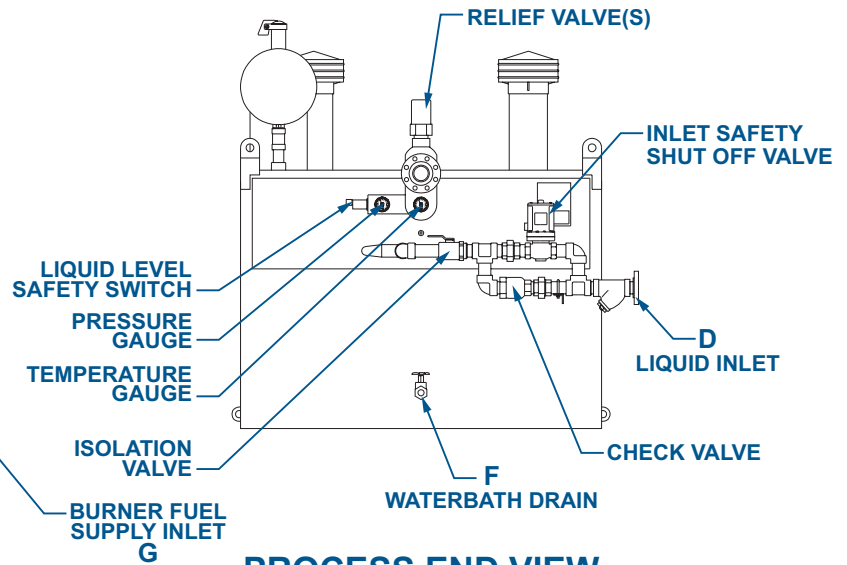
\*\* Forklift access on Q2500H, Q3300H, & Q5000H only

# Dimensions

## SIDE VIEW



**BURNER END VIEW**



**PROCESS END VIEW**

MODEL	A	B	C	D	E	F	G
<b>Q2500HAA</b>	183" 4648 mm	45" 1143 mm	57" 1448 mm	1 1/2" 300# FLG	2" 300# FLG	1 1/4" NPT	2" NPT
<b>Q3300HAA</b>	180" 4572 mm	54" 1372 mm	60" 1524 mm	1 1/2" 300# FLG	2 1/2" 300# FLG	1 1/4" NPT	2" NPT
<b>Q5000HAA</b>	176" 4470 mm	54" 1372 mm	76" 1930 mm	2" 300# FLG	3" 300# FLG	1 1/4" NPT	2" NPT
<b>Q6600HAA</b>	243" 6172 mm	57" 1448 mm	79" 2007 mm	2" 300# FLG	4" 300# FLG	1 1/4" NPT	2 1/2" NPT
<b>Q8200HAA*</b>	282" 7163 mm	57" 1448 mm	78" 1981 mm	2" 300# FLG	4" 300#FLG	1 1/4" NPT	2 1/2" NPT
<b>Q11000HAA*</b>	240" 6096 mm	97" 2464 mm	91" 2311 mm	2 1/2" 300# FLG	6" 300# FLG	1 1/2" NPT	3" NPT

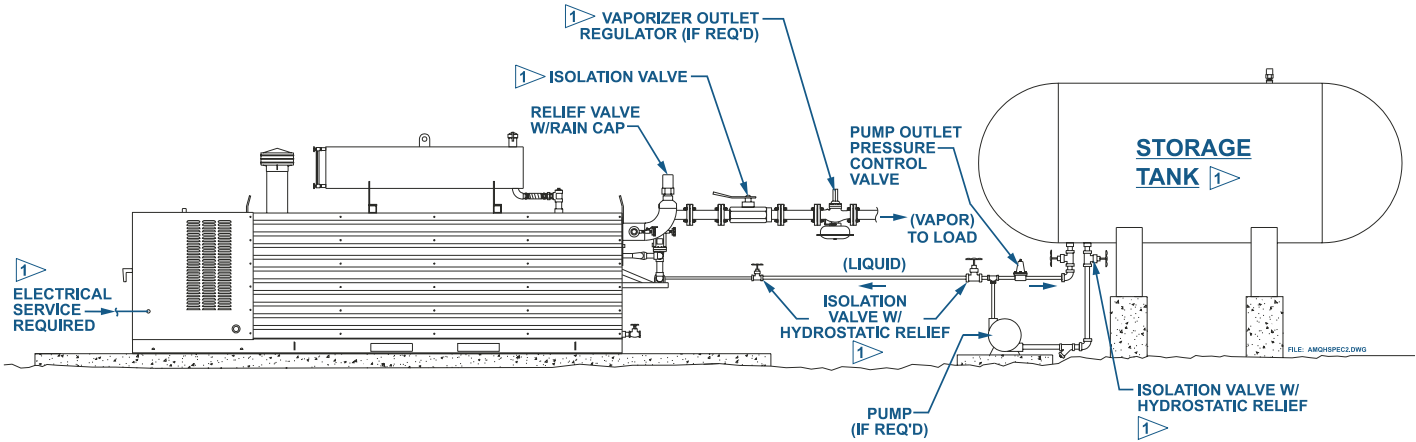
Product improvement is a continuing goal at Algas-SDI.

Designs and specifications are subject to change without notice or obligation.

\* Approximate dimensions for these models.

**NOTES:**

- 1 BY OTHERS.
2. INSTALL SYSTEM PER NFPA 70, ANSI K61.1, AND OTHER APPLICABLE CODES.
3. NO CHECK VALVES IN LIQUID LINE; LIQUID MUST BE ABLE TO FLOW BOTH DIRECTIONS.



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



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Certified

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**Your ASDI distributor:**



Form: QHAA0401