VPH-10000-2 Vaporizer

High Capacity, Intelligent, Dependable

The Hydro Instruments VPH-10000-2 is engineered for facilities that need reliable conversion of liquid Chlorine (Cl_2), Sulfur Dioxide (SO_2), or Ammonia (NH_3) into gas at demanding feed rates. The system combines a robust pressure chamber, capable heat transfer, and modern monitoring capabilities in a durable package built for the most critical treatment applications.

Performance That Meets Demand

Capacity

10,000 PPD (200 kg/h) Chlorine

8,000 PPD (160 kg/h) Sulfur Dioxide

2,500 PPD (50 kg/h) Ammonia

Heat Transfer

18 kW heater horizontally mounted into the bottom of the water tank

Gas Delivery

Superheat baffles enhance heat transfer before gas exits the pressure chamber

Long Heater Life

SCR heater control supports efficient power management and reduced cycling stress

Automatic Operation

Integrated water level control, heater setpoint control, and adjustable cathodic corrosion protection



Built-In Monitoring and System Integration

Gas temperature and pressure are measured electronically, allowing the controller to calculate superheat continuously. This real time intelligence supports alarm functions, remote indication, and emergency shutoff when relevant alarm conditions are present.

- Modbus, 4-20mA, and contact relay communication for control and monitoring
- Optional Profibus communication
- Connections for up to two (2) electrically actuated pressure reducing valves for duty/standby operation
- Electronic superheat monitoring with dedicated alarm capability

Designed for Durability and Safety

- ASME Section VIII certified pressure chamber with “L” certification
- Stainless steel water tank with 1.5 inch drain valve
- Construction aligned with The Chlorine Institute design guidelines
- Purpose built components for dependable operation in corrosive chemical environments

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Bulletin VPH-10000-2 Rev. 10/5/2026

Key Specifications at a Glance

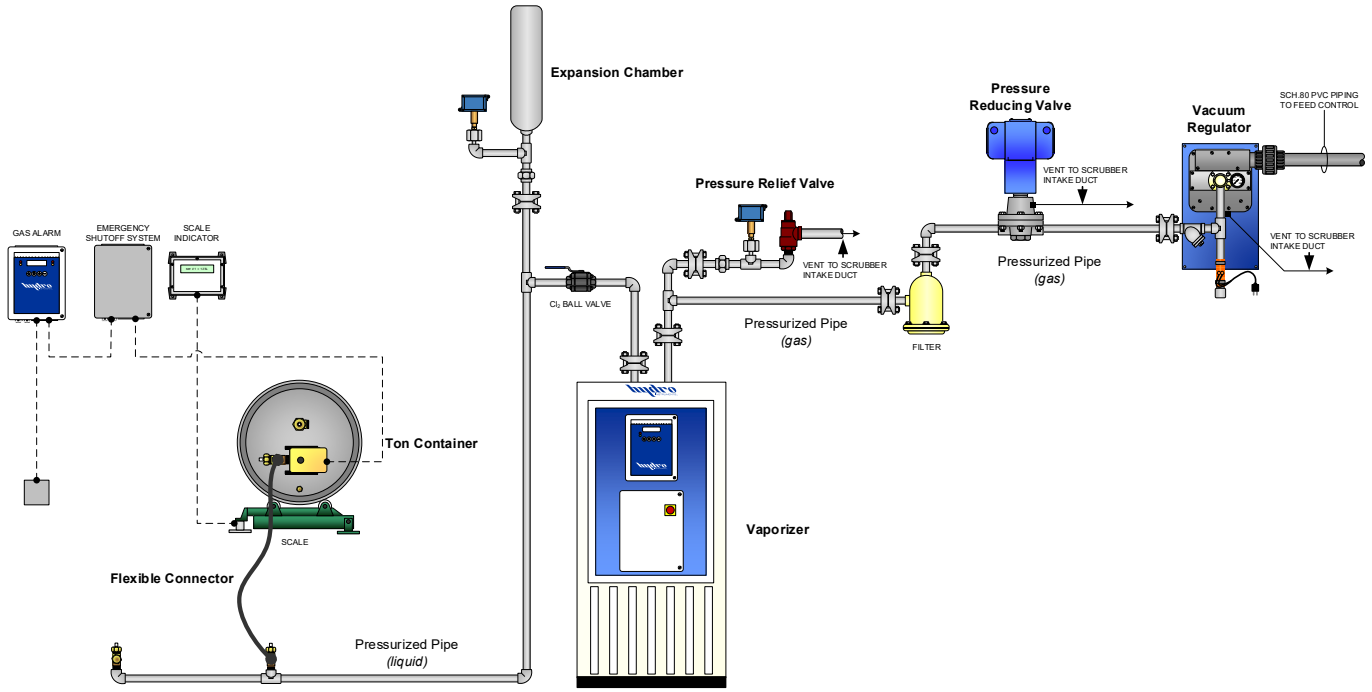
Specification	VPH-10000-2
Maximum Capacity	10,000 PPD (200 kg/h) Chlorine 8,000 PPD (160 kg/h) Sulfur Dioxide 2,500 PPD (50 kg/h) Ammonia
Heater Power	18 kW
Heat Transfer System	Heated water bath with heater horizontally mounted into the bottom of the water tank and superheat baffles
Control & Monitoring	Electronic temperature, pressure, and calculated superheat monitoring
Standard Communications	Modbus, 4-20mA, and contact relays
Valve Integration	Connections for up to two (2) electrically actuated pressure reducing valves
Pressure Chamber	ASME Section VIII certified with “L” certification
Water Tank	Stainless steel with 1.5 inch drain valve

How It Works

The inner pressure chamber is immersed in a heated water bath. Liquid chemical (e.g. Chlorine) enters the pressure chamber and vaporizes as it contacts the heated chamber walls. As gas demand changes, the liquid level automatically rises or falls to adjust the available heat transfer area—helping the vaporizer respond naturally to changing process requirements.

Excellent for High Demand Chlorination Systems

Well suited for municipal drinking water, wastewater and industrial water treatment installations requiring a high capacity chlorine gas supply and communication with facility monitoring systems.



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Ordering Information

Model No.	VPH-10000-2-A-B-C-D-E-F	
Position	**Feature**	**Description**
A. Gas Type	A	Ammonia (NH_3)
	C	Chlorine (Cl_2)
	S	Sulfur Dioxide (SO_2)
B. Heater Voltage	1	240 VAC 50/60 Hz, 3 Ph.
	2	380 VAC 50/60 Hz, 3 Ph.
	3	480 VAC 50/60 Hz, 3 Ph.
	4	Other (Consult Hydro Instruments)
C. Heater Power	1	18 kW (10,000 PPD Cl_2 / 200 Kg/h max.); (8,000 PPD SO_2 / 160 Kg/h max.); (2,500 PPD NH_3 / 50 Kg/h max.)
D. Pressure Reducing Valve Voltage	0	None (Power to the PRV will not be supplied by the vaporizer.)
	1	120 VAC 50/60 Hz, 1 Ph.
	2	240 VAC 50/60 Hz, 1 Ph.
E. Pressure Reducing Valve Arrangement	1	Single pressure reducing valve control relay (PRV sold separately.)
	2	Dual pressure reducing valve control replay (PRV's sold separately.)
F. Fiberglass Cabinet	0	None
	1	Included

NOTES:

1. Expansion chamber assembly, pressure relief assembly and electrically actuated pressure reducing valve sold separately.
2. ASME certification with “L” stamp for lethal gas service.
3. Conforms to The Chlorine Institute, Inc. design guidelines.

INSTALLATION:

No less than one (1) expansion chamber assembly, one (1) pressure relief assembly and one (1) electrically actuated pressure reducing valve must be ordered and installed with each vaporizer. Additional expansion chamber assemblies may be required.

1” FPT manifold union inlet & outlet connections

ACCESSORIES:

For expansion chamber assemblies, pressure relief assemblies, rupture discs, etc. please see Vaporizer System Accessories.

For electrically actuated pressure reducing valves please see PRV-71H Pressure Reducing Valve.