



VPH-10000-1 Vaporizer ***High Capacity, Intelligent, Dependable***

The Hydro Instruments VPH-10000-1 is engineered for facilities that need reliable, efficient 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, responsive heat transfer, and modern monitoring capabilities in a durable package built for the most critical treatment applications.

Performance That Keeps Pace with Demand

Capacity

- 12,000 PPD (227 kg/h) Chlorine
- 9,600 PPD (180 kg/h) Sulfur Dioxide
- 3,000 PPD (60 kg/h) Ammonia

Efficient Heat Transfer

- 18 kW or 20 kW heater with recirculating pump

Stable 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



600 Emlen Way, Telford, PA 18969 • Telephone: (215) 799-0980 • Fax: (215) 799-0984
US Toll Free: (888) 38-HYDRO • www.hydroinstruments.com • sales@hydroinstruments.com

Key Specifications at a Glance

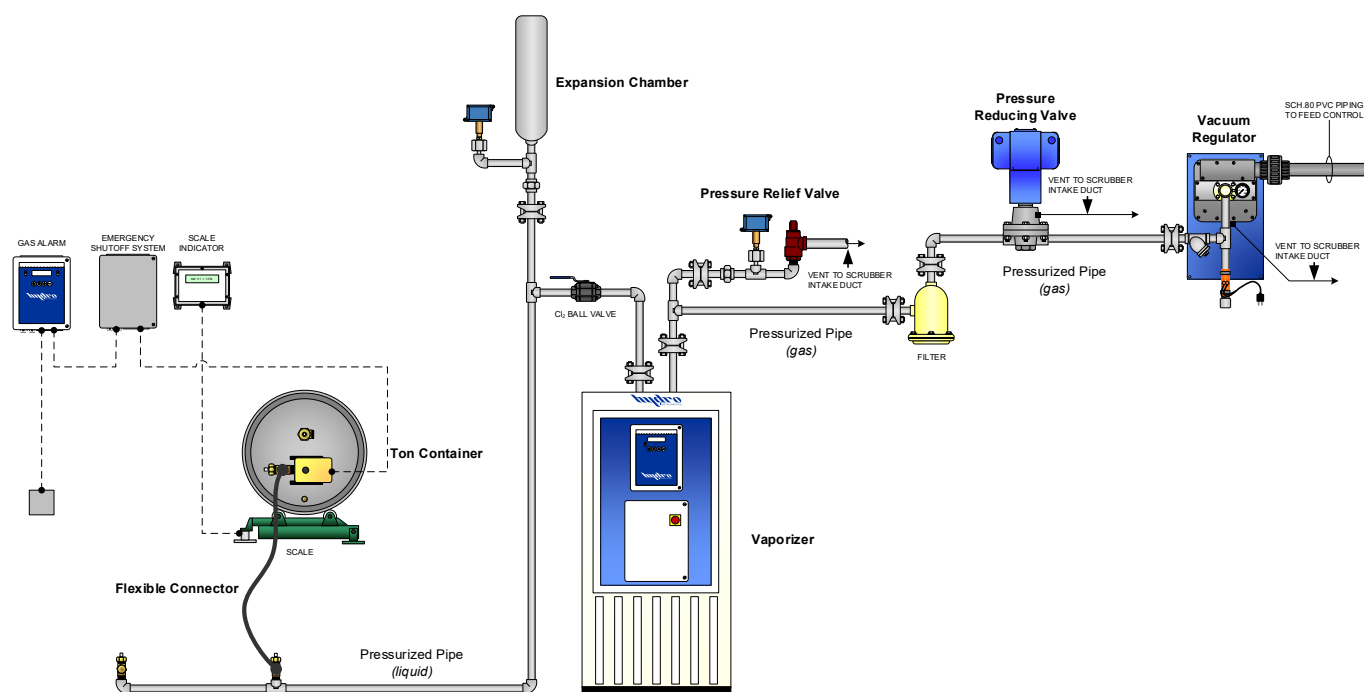
Specification	VPH-10000-1
Maximum Capacity	12,000 PPD (227 kg/h) Chlorine 9,600 PPD (180 kg/h) Sulfur Dioxide 3,000 PPD (60 kg/h) Ammonia
Heater Power	18 kW or 20 kW
Heat Transfer System	Heated water bath with recirculating pump and superheat baffles
Control & Monitoring	Electronic temperature, pressure, 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.

Ideal 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.



Ordering Information

Model No. VPH-10000-1- 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.)
	2	20 kW (12,000 PPD Cl ₂ / 227 Kg/h max.); (9,600 PPD SO ₂ / 180 Kg/h max.); (3,000 PPD NH ₃ / 60 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 information for PRV-71H Pressure Reducing Valve.