



Series 300 Chlorine and Sulfur Dioxide Systems

- 3-Year Limited Warranty
- Hastelloy-C Inlet Adapters
- Solid Machined PVC Constructed

Hydro Instruments has been manufacturing the highest quality gas chlorination and sulfonation equipment since 1978. Now Hydro Instruments also offers this popular and proven design as a reliable and economical alternative. The Series 300 offers feed rates up to 500 PPD (10 kg/hr). Systems are available with automatic switchover capabilities and the vacuum regulators can be outfitted with an optional out of gas alarm switch.

Quality

Hydro Instruments continually strives to produce the longest lasting and most reliable gas chlorination and sulfonation equipment on the market. We believe that this means using only the highest quality materials and most rugged designs. To avoid cracking, our body parts are machined from solid PVC and designed with heavy wall thickness. For maximum durability and corrosion resistance our inlet adapters are constructed of Hastelloy-C and our yoke assemblies are protected by the finest Epoxy Powder Coating.

Safety

For Hydro, safety is the highest concern. Here are two points that set us apart from the competition:

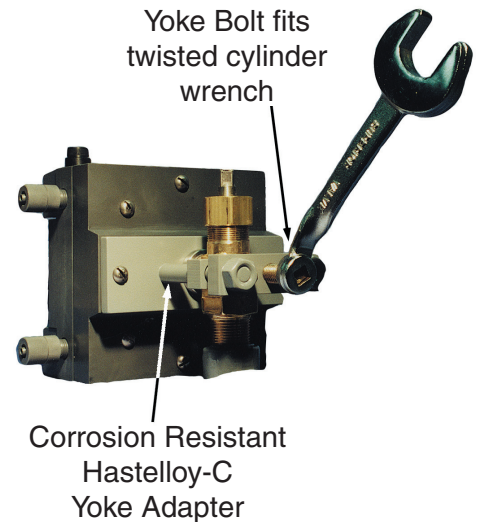
1. Our rugged design and highest quality machined parts maximize safety by avoiding cracks and corrosion.
2. At Hydro Instruments a skilled technician follows a rigorous testing procedure for each and every vacuum regulator.

Convenience

Design: Hydro has designed the vacuum regulator yokes so that a **twisted cylinder wrench** can be used for both the cylinder and vacuum regulator. One of these wrenches is provided with each vacuum regulator purchased from Hydro. (See photo at right.)

Repairs: Hydro equipment is designed with **fewer parts** and our assemblies are designed to be easily repaired without special tools.

Service: We provide our top quality parts at reasonable prices and **always keep all parts in stock**. Also, **expedited service is the norm with Hydro**; most orders ship the same day and we never charge expediting fees.



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Technical Data

Model Information Code

Model 3

Gas

- C - Chlorine
- S - Sulfur Dioxide
- A - Ammonia

Vacuum Regulator Mounting

- 1 - Cylinder or manifold mounted with rate valve
- 2 - Ton container mounted with rate valve
- 3 - Cylinder or manifold mounted with remote meter(s) and rate valve
- 4 - Ton mounted with remote meter(s) and rate valve
- 5 - Cylinder or manifold mounted with automatic switchover
- 6 - Ton mounted with automatic switchover

Available Gas Flowmeters

- 3 - 4 ppd (75 g/h)
- 4 - 10 ppd (200 g/h)
- 5 - 25 ppd (0.5 kg/h)
- 6 - 50 ppd (0.9 kg/h)
- 7 - 100 ppd (2.0 kg/h)
- 8 - 250 ppd (5.0 kg/h)
- 9 - 500 ppd (10 kg/h)

Accuracy: within 4% of maximum flowmeter capacity

Operating Range: 20:1 manual; 10:1 automatic

Operating Temperature: Ejector, 35°F to 120°F;
Other components, -20°F to 120°F

The system operating temperature is largely dependent on the withdrawal rate of gas from the cylinder and is a function of the existing ambient temperature.

Represented by

Vacuum Tubing

Model	CONNECTIONS		
	Maximum Capacity	Vacuum	Vent
37X	100 ppd (2 kg/h)	3/8"	3/8"
38X	250 ppd (5 kg/h)	1/2"	3/8"
39X	500 ppd (10 kg/h)	5/8"	3/8"

Size Requirements – Distance

The **Hydro Series 300 Gas Feeder** can be a few feet to several hundred feet from the ejector, depending on maximum feed rate and the diameter of connecting pipe or tubing.

Maximum Feed Rate PPD	Length of Vacuum Tubing (kg/h)	Length of Vacuum Tubing		
		100' (31m)	200' (61m)	500' (153m)
50	(1)	3/8"	3/8"	1/2"
100	(2)	3/8"	1/2"	1/2"
250	(5)	1/2"	5/8"	3/4"
500	(10)	5/8"	3/4"	1"

Note: Ammonia feed rates are 12, 25, 50, 100, and 250.

Ejector Connections

Capacity	Standard
100 ppd	Nozzle 1" hose and 3/4" NPT Diffuser 1" hose and 3/4" NPT
250 & 500 ppd	Inlet 1 1/4" NPT Outlet 1 1/4" NPT

Optional
1 1/2" hose

Materials of Construction

PVC, polyethylene, tantalum, silver, Hastelloy-C, monel, viton and teflon.

Maximum back pressure at point of application for a standard ejector is 140 psig. For pressures greater than 140 psig, consult factory.

All feed rate capacities shown in this bulletin are for chlorine. For sulfur dioxide, multiply each chlorine value by 0.95.

Gas Warning

All unattended gas containers and gas feed equipment should be monitored for leaks. Gas sensitive detectors, which will respond quickly to gas leaks in the atmosphere, should be installed at each site.

Options and Accessories

Inlet Water Assembly
Booster Pumps
Scales
Manifolds
Automatic Controls

Isolating Valves
Flexible Connectors
Gas Masks
Gas Detectors



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600 Emlen Way, Telford, PA 18969 • Telephone: (215) 799-0980 • Fax: (215) 799-0984