



*The toughest vacuum regulator in the world!*

- Solid Machined PVC Construction
- Hastelloy-C Inlet Adapters
- 3-Year Limited Warranty
- Built-In Vent Valve

Hydro Instruments has been manufacturing the highest quality chlorination and sulfonation equipment since 1978. The **Series 900** Switchover Vacuum Regulator incorporates automatic switchover and a safety relief “vent” valve into a single durable component.

### Quality

The Series 900 is simply the most ruggedly designed, heavy-duty vacuum regulator in existence. Each part is derived from the very finest material available. 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 with the finest Epoxy Powder Coating**.

### Safety

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

1. Our rugged design and highest quality machined parts maximize safety by preventing cracks and minimizing corrosion.
2. At Hydro Instruments a skilled technician follows a rigorous testing procedure for each and every vacuum regulator.
3. Each Series 900 Vacuum Regulator is equipped with an integrally designed safety relief “vent” valve to immediately direct any leaking gas to a safe location.

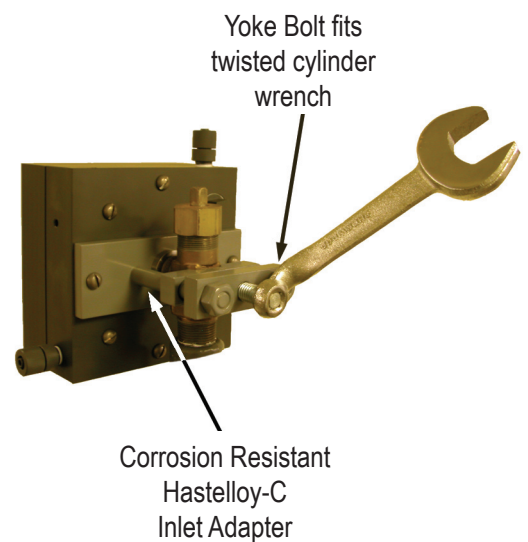
### Convenience

**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.)

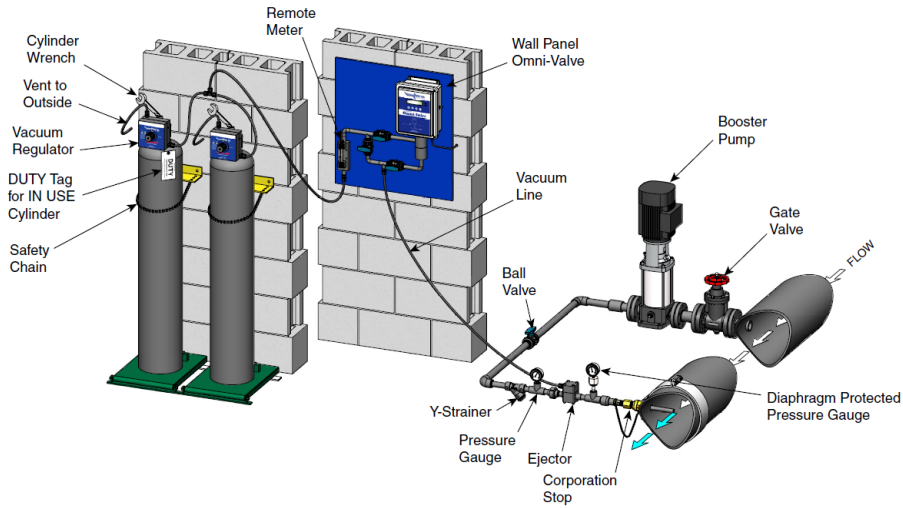
**Repairs:** Hydro equipment is designed with **fewer parts** and our assemblies are designed to be easily repaired without special tools.

**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.

# Series 900 Chlorine and Sulfur Dioxide Systems



# Technical Data



## Ejector Connections

Capacity	Standard
100 ppd	Nozzle 1" hose and 3/4" NPT Diffuser 1" hose and 3/4" NPT
250, 500, & 600 ppd	Inlet 1 1/4" NPT Outlet 1 1/4" NPT
800 & 2000 ppd	Inlet 2" Flange Outlet 2" Flange

Maximum back pressure at point of application for a standard ejector is 150 psig. For pressures greater than 150 psig, consult factory.

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

Various ejector nozzles are available – selected when ordering. Nozzle performance charts can be found in the Series 900 O&M manual.

**Accuracy:** within 4% of maximum flowmeter capacity

**Operating Range:** 20:1 manual or 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.

### Materials of Construction

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

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## Vacuum Tubing

Model	CONNECTIONS		
	Maximum Capacity	Vacuum	Vent
SVR-100-CL2 SVR-10T-CL2	100 ppd (2 kg/h)	3/8"	3/8"
SVR-250-CL2 SVR-25T-CL2	250 ppd (5 kg/h)	1/2"	3/8"
SVR-500-CL2 SVR-50T-CL2	600 ppd (10.5 kg/h)	5/8"	3/8"
SVR-1000-CL2 SVR-100T-CL2	2000 ppd (40 kg/h)	5/8"	3/8"

## Size Requirements – Distance

The **Hydro Series 900 Vacuum Regulator** 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"	5/8"
250	(5)	1/2"	5/8"	3/4"
600	(12)	5/8"	3/4"	1"
2000	(40)	1"	1"	1.5"

Note: Ammonia feed rates are 12, 25, 50, 100, 250, and 1000.

## 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

Regulator-Mounted Flow Tubes  
Inlet Water Assembly  
Scales  
Manifolds

Automatic Controls  
Isolating Valves  
Flexible Connectors  
Gas Masks  
Gas Detectors

