



# Wall Mounted Gas Chlorination Equipment

## 150 lb. (68 kg) Chlorine Cylinders



**Hydro Instruments** has been manufacturing highest quality gas chlorination and sulfonation equipment since 1978. A commitment to quality, safety and convenience sets **Hydro Instruments** apart from its competition. **Hydro Instruments** produces several different designs of vacuum solution gas feed equipment for chlorine gas feed rates up to 500 PPD (10 kg/hr). The Series 200, 300, 500, 750, 800, and 900 vacuum regulators can all be offered in wall mounting versions.

### Wall Mounted Vacuum Regulators

The **Hydro Instruments** vacuum regulators below 500 PPD (10 kg/hr) capacity can all be fitted for wall mounting. The vacuum regulator is mounted onto a panel with four wall mounting holes. The assembly includes a tantalum diaphragm protected chlorine gas pressure gauge. The inlet connection is threaded type CGA #660 for connection to USA standard flexible connectors.

### Drip Leg Requirement

For use with ton chlorine containers the wall mounted vacuum regulator must be fitted with a drip leg and heater. A small amount of liquid chlorine always comes out of full ton containers the first time they are opened. This liquid will cause damage if allowed to enter the vacuum regulator. Therefore, a drip leg with continuously energized heater must be used for ton container installations.

### Chlorine Gas Inlet Connection

Each wall mounted vacuum regulator requires a flexible connector with CGA #660 threaded fittings. Flexible connectors are available in 4, 6, 10, & 16 foot lengths (1.2, 1.8, 3, & 4.9 meters). If only one chlorine cylinder or ton container is being used, then the flexible connector can be directly connected from the wall mounted vacuum regulator to the chlorine cylinder or ton container (gas valve). However, if more than one chlorine cylinder or ton container is to feed one vacuum regulator, then additional manifolds must be installed.

## Ton Chlorine Containers



## Specifications

### Vacuum Regulator

1. Each regulator shall have a spring opposed diaphragm which controls vacuum and closes tight upon loss of vacuum.
2. Each regulator shall incorporate a pressure relief (vent) valve with separate ports for chlorine feed and chlorine vent.
3. Connections shall be provided for tubing vented gas away from the pressure relief (vent) port of each vacuum regulator to atmosphere outside the building. The outside end of the vent tubing shall be equipped with an insect screen.
4. Each regulator shall be equipped with an inlet filter to remove particulate matter from the gas before it enters the inlet safety valve.
5. Each regulator can optionally include a flow meter tube to indicate feed rate and which cylinder is in use.
6. Each regulator shall include a mechanism to indicate when the chlorine gas cylinder is empty and requires replacement.

### Wall Mounted Option

1. The vacuum regulator(s) shall be bracketed to a panel for wall mounting – mounting must be higher than the cylinder(s). The assembly shall include a diaphragm protected chlorine gas pressure gauge. The assembly shall include a CGA #660 type threaded inlet connector for flexible connector.

### Wall Mounting Option for Ton Container Installations

1. The vacuum regulator(s) shall be bracketed to a panel for wall mounting – mounting must be higher than the ton container(s). The assembly shall include a diaphragm protected chlorine gas pressure gauge. The assembly shall include a CGA #660 type threaded inlet connector for flexible connector.
2. The wall mounting vacuum regulator assembly shall include a drip leg with 25 watt heater to trap and evaporate any liquid chlorine to prevent it from entering the vacuum regulator.

### Ejector

1. The ejector(s) shall be the water operated venturi nozzle type. The ejector shall provide the operating vacuum for the chlorination system.
2. The ejector shall incorporate a spring loaded, normally closed check valve to prevent the backflow of water into the chlorine gas equipment. The check valve shall be suitable for back pressures up to a minimum of 145 psi (10 kg/cm<sup>2</sup>).
3. Ejector check valve shall automatically close upon the loss of vacuum in the Ejector.

### Ejector Options

1. The ejector(s) can be ordered with two identical spring loaded check valves for additional back flow protection.
2. For back pressures exceeding 145 psi (10 kg/cm<sup>2</sup>) the ejector(s) must be fitted with high pressure support plates.

### Automatic Switchover Module

1. A separate mechanical device shall be provided to automatically switch from empty cylinder to the standby cylinder. The switchover module shall be suitable for wall mounting. A pair of Series 900 vacuum regulators will directly perform the vacuum switchover function.

### Remote Meter

1. A gas flow meter can be provided to indicate the gas flow rate. The gas flow meter shall be suitable for wall mounting.
2. This gas flow meter shall be equipped with a control valve for manual feed rate adjustment.
3. Flow meter tubes shall indicate flow rates up to \_\_\_\_\_ and down to a minimum of 1/20 of the maximum value.

## System Selection Information

**Gas:** Chlorine, Sulfur Dioxide

**Capacity (maximum feed rate):**

English: 1.5, 4, 10, 25, 50, 100, 200, 250, 500 PPD

Metric: 75, 200, 500, 1000 & 2000 gr/hr  
4, 5, 10 kg/hr

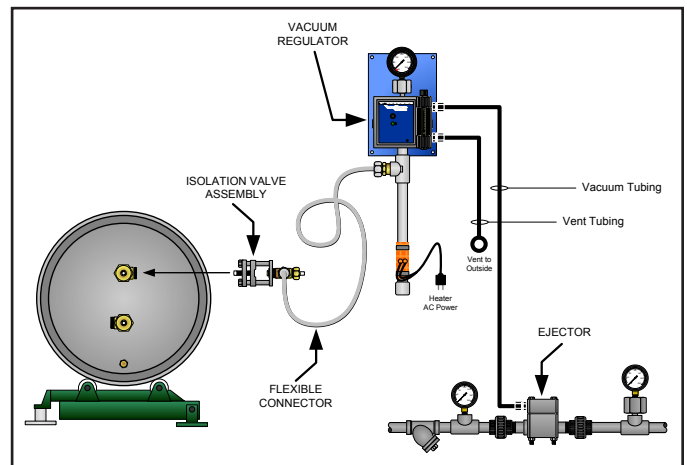
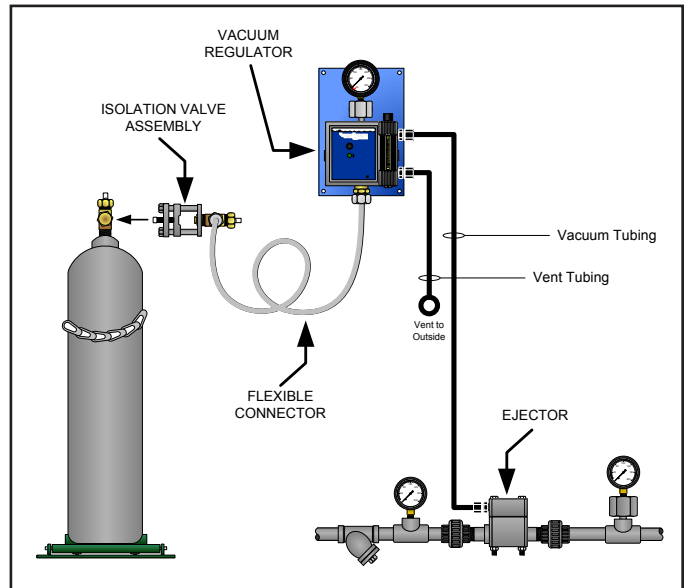
**Mounting:** Wall Mounted or Wall Mounted with Drip Leg and Heater

**Power (ton only):** 120 or 240 VAC or 24 VDC (heater)

**Automatic Switchover:** Yes or No

**Number of Feed Points:** Specify capacity of each feed point

**Optional:** Double check valve ejectors?  
High pressure ejectors?



INSTRUMENTS

