

PRODUCT LINE



Highest Quality, Best Service

Manufacturing chlorination equipment and related products since 1978



600 Emlen Way, Telford, PA 18969 • Telephone: (215) 799-0980
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Gas Feed Systems

Hydro Instruments has been manufacturing the highest quality gas chlorination and sulfonation equipment since 1978. A commitment to quality, safety, and convenience sets us apart from our competition.



(L-R) Series 500, Series 800, Series 900, Series 300

Design and Quality

All body parts are machined from solid PVC, designed with a heavy wall thickness to avoid cracks and breakage.

- Inlet capsules are made of solid Hastelloy-C276 or PVDF.
- Inlet valves are made of solid silver.
- All yoke assemblies are protected by the finest Epoxy Powder Coating.



Ease Of Operation

Included with every Vacuum Regulator is a Hydro twisted cylinder wrench. The wrench fits both cylinder valve and vacuum regulator yoke bolts.

Safety

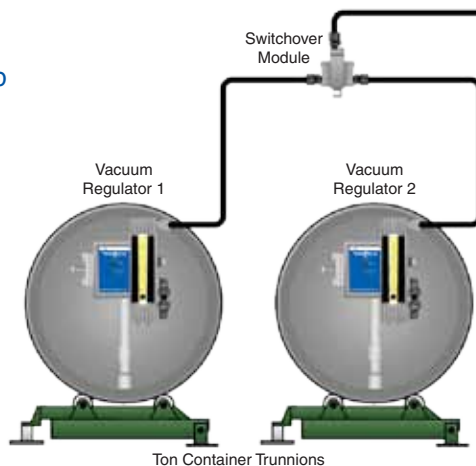
Every vacuum regulator shipped by Hydro goes through a rigorous testing procedure utilizing Chlorine, Sulfur Dioxide, or Ammonia.

Fast Service

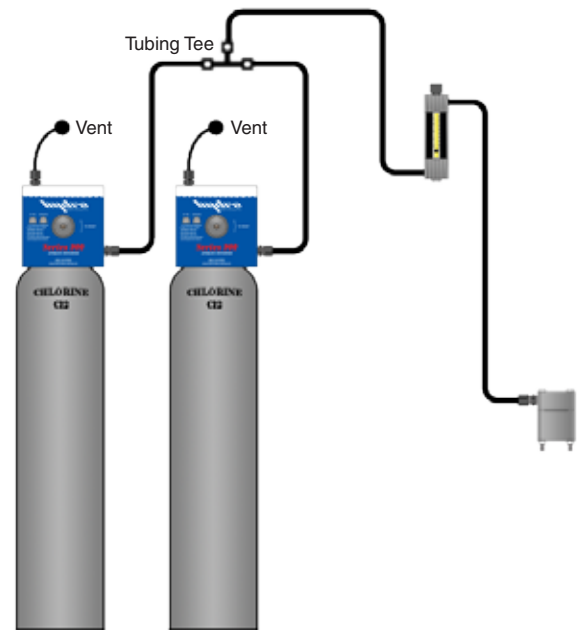
Inventoried spare parts, components, and complete systems available to ship within 24 hours. Most orders will ship same day.



Floor Cabinets Available!



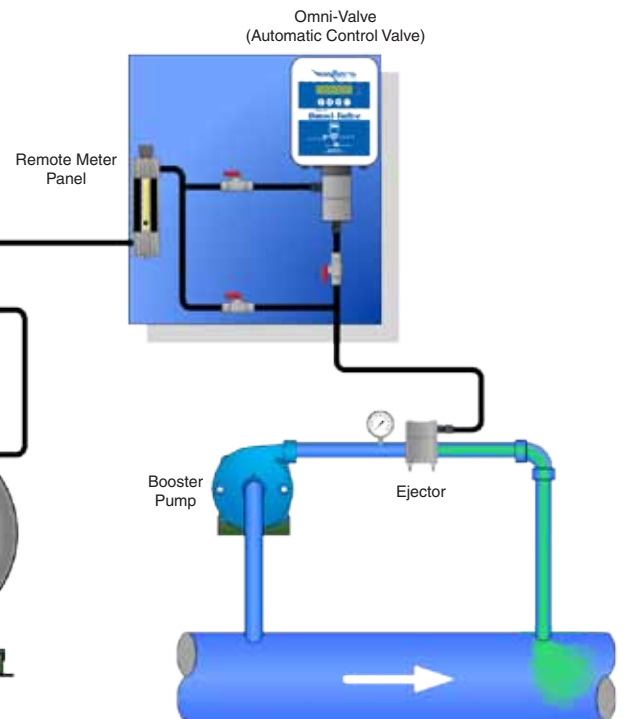
Hydro Instruments Series 702 Gas Chlorination System with Omni Valve











Hydro Instruments Series 900 Gas Chlorination System with Integral Switchover

Lifetime Warranty on inlet springs, diaphragm, inlet capsules and machined PVC bodies!

All vacuum regulators are backed by a 3 year warranty!



Gas Feed Systems

	Series 500	Series 900	Series 300	Series 800	Series 3000	Series 700/750	Series 200
							
Capacity (PPD)	Up to 100	Up to 500	Up to 500	Up to 100	Up to 10,000	500	250
Ammonia Capacity (PPD)	Up To 50	Up To 250	Up To 100	N/A	500	250	100
Gas	Cl ₂ SO ₂ NH ₃	Cl ₂ SO ₂ NH ₃	Cl ₂ SO ₂ NH ₃	Cl ₂ SO ₂	Cl ₂ SO ₂ NH ₃	Cl ₂ SO ₂ NH ₃	Cl ₂ SO ₂ NH ₃
Mounting	- Cylinder - Ton - Wall	- Cylinder - Ton - Wall	- Cylinder - Ton - Wall	- Cylinder - Wall	- Wall	- Cylinder - Ton - Wall	- Cylinder - Ton - Wall
Switchover	Module	Built-in	Module	Module	Module	Module	Module

This easy to read chart can help answer which Hydro chlorination system is right for you. Call the factory with any other questions.

Gas Detectors

Hydro Instruments manufactures two gas alarm systems the **GA-170** and the **GA-171**. Both systems provide reliable and simple solutions for gas detection applications. Both incorporate a basic modular design that can integrate a variety of gas sensor types and feature a user-friendly key pad interface for easy calibration and operation.

GA-170



- Up to four sensors per alarm module
- 2 common relays, plus 2 per sensor
- Backlit liquid crystal display (LCD) for easy reading, 2 line / 20 spaces
- Built-in 90 dB audible alarm and danger/alarm LEDs
- Password Protection
- Optional battery back-up
- RS232 Output Option
- 4-20 mA Output Option
- Remote Acknowledge Option

Available for
Cl₂, SO₂, H₂S, O₃,
ClO₂, H₂, O₂, NO,
NO₂, HCl, and NH₃

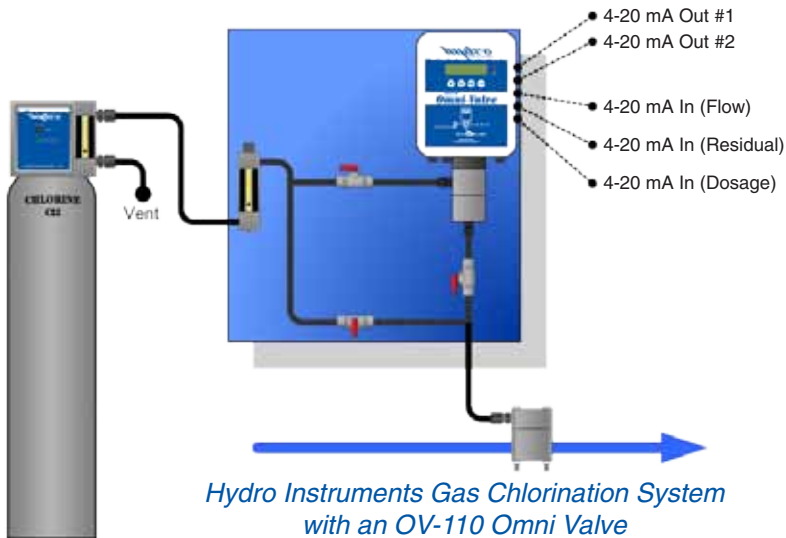


GA-171

- One or two sensors per alarm module
- 1 Alarm contact relay
- Backlit liquid crystal display (LCD) for easy reading, 2 line / 20 spaces
- Built in normal / alarm LEDs
- Password Protection
- RS232 Output
- 4-20 mA Output

Automatic Valves

State-of-the-art microprocessor technology, highest quality materials, precision machining and a minimal number of moving parts all combine to make the **Hydro Automatic Valves** extremely reliable over long periods of continuous operation.



- 4-20 mA Out #1
- 4-20 mA Out #2
- 4-20 mA In (Flow)
- 4-20 mA In (Residual)
- 4-20 mA In (Dosage)

We Build Custom Wall Panels!

CV-230 Control Valve

Compact Design!

Simple

Proportional Program!

CV-230 Control Modes

Manual and Automatic
(Proportional/Flow Pacing)



OV-110 Omni Valve

The most versatile valve on the market!

OV-110 Control Modes

Manual,
Proportional (Flow Pacing),
Set Point (Residual or ORP),
Compound Loop (PID),
or Step Feed

Three analog inputs:
(Flow, Residual, and
Remote Dosage)



Both Models Provide:

- Automatic feed of Chlorine gas, Sulfur Dioxide gas, Ammonia gas, Carbon Dioxide gas, Sodium Hypochlorite and other liquid chemicals
- Linear drive design eliminates rotary motion, meaning minimal parts wear
- Contact alarm output and 4-20 mA (2) outputs standard
- Ten point linearization process for accurate feed control
- 2 line x 20 character display
- Capacities up to 4000 PPD or 10 GPM Liquid Chemical Feed
- Excellent accuracy and repeatability

PID Controller

The **HC-220 PID Controller** offers the capability to control liquid chemical or gaseous chemical feed devices with a wide range of control options, adjustable features, and settings.

Each **HC-220 PID Controller** can perform proportional, set point, and compound loop control.



HC-220 PID Controller

- Liquid Crystal Display
- 4 Pushbutton User Interface
- RS-232 Output
- Alarm Relay Output
- 5 x Analog Inputs and 2x 4-20 mA Outputs for control
- Adjustable: Signal Filters, Lag Time, Display Ranges, and More
- Password Protected Control Settings

Residual Chlorine Analyzers

Does not rely on sample and hold methods!

Simple calibration and maintenance!

Allows for rapid process control!

Analyzers and parts are stocked for immediate shipment!



Series RAH-210

- Amperometric Residual Analyzer
- Available Range: 0 – .1 to 0 – 20 PPM
- Free Chlorine, Total Chlorine, Chlorine Dioxide, Bromine, and Iodine
- Continuous sensor cleaning mechanism
- Gold and Copper electrodes in direct contact with the sample water
- Available with a gravity driven reagent feeder or with pH probe for automatic compensation



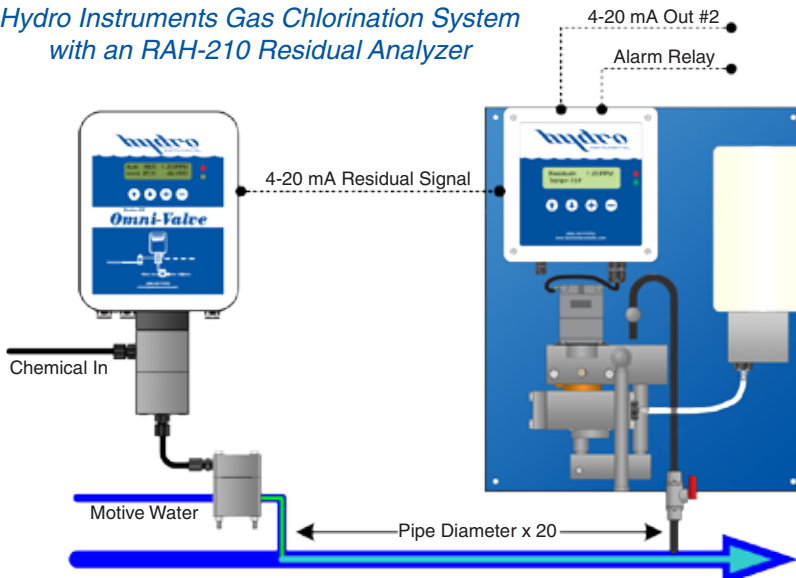
PRV and Pressure Gauge for a Hydro Instruments Residual Analyzer

Series RPH-250

- Amperometric Probe-Style Analyzer for Free Chlorine, Total Chlorine, or Chlorine Dioxide
- Transparent Inlet & Probe Flow Cells
- pH probe can be included for independent monitoring or for automatic compensation when measuring free chlorine
- PRV, Pressure Gauge, Sample Control Valve & Meter Tube Provided (Standard)



Hydro Instruments Gas Chlorination System with an RAH-210 Residual Analyzer



Standard Features On Both Models Include:

- Automatic pH Compensation Software
- Continuous measurement and rapid response
- Continuous temperature monitoring and compensation
- 2 Selectable Analog Outputs (Residual, pH, Temperature or Control)
- Alarm Relay
- Complete PID Control Program
- Adjustable measurement range
- 2 line x 20 character LCD display

Liquid Feed Systems

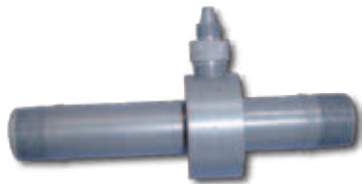
Hydro Instruments' **Series LF Liquid Chemical Feeders** are a family of ALL-VACUUM chemical feed systems designed for the injection of a variety of chemical solutions.

Innovatively designed liquid feed systems allow for easy metering and adjustment of dosage by simply moving the control valve to the desired position. Unlike metering pumps, this system provides a visual indication of chemical feed rate.

- Much more reliable than metering pumps!
- Systems for feeding a variety of liquid chemical solutions (including Sodium Hypochlorite and others)
- Available feed rates up to 10 Gallons/Minute
- Precision made solid machined parts of only the highest quality and most chemically resistant materials
- Automatic control is available

Hydro Instruments' Series LF systems are in use around the world metering the following chemicals:

- Sodium Hypochlorite
- Sodium Chlorite
- Hydrochloric Acid
- Sulfuric Acid
- Sodium Bisulfite
- Sodium Bisulfate
- Sodium Thiosulfate
- Fluoride
- Liquid Ammonium Sulfate



Machined PVC Venturi ejectors (inductors) for maximum durability.



All Vacuum!
No Moving Parts!
No Electricity!
(for manual systems)

V-RAD

Vacuum-Revolving Automatic Doser

A new reliable alternative to metering pumps!

- **Metering orifice is self-flushing and will not clog!**
- Accurate and repeatable feed control of liquid chemicals **under vacuum** (such as Sodium Hypochlorite)
- Designed for feed rates of 0.1 through 4 GPH, **Higher Capacities Are Available**
- Provides manual or automatic feed rate adjustment
- Allows for controlled timed pulses of liquid chemical
- Accepts 4-20 mA input signal for proportional control
- 4-20 mA output



No Vapor Locking!
No Clogging!
Absolute Control and Reliability!
Guaranteed!

Accessories

Corporation Stops



- Standard solution-wetted materials include PVC, CPVC and 316 SS
- Hydro Instruments offers customized solution tube lengths and inlet connections for no additional charge (upon request)
- Available with threaded socket or hose barb inlet connections

Size and Material Options

Sizes	Ball Valve	Solution Tube Assembly
1/2"	PVC, CPVC	PVC, CPVC
3/4"	Brass, PVC, CPVC	PVC, CPVC
1"	Brass, PVC, CPVC	PVC, CPVC, PVDF, PTFE, Stainless Steel
1 1/2"	Brass, PVC, CPVC	PVC, CPVC, Stainless Steel
2"	Brass	PVC, CPVC

Hydro Instruments offers a complete line of chemical feed accessories to complement any installation.

Check Valves



Ejectors



Injection Diffusers



Vacuum Tubing and Tube Fittings



UV Resistant PVDF

Main Connects (Quills)



PVC, CPVC, and PVDF

Universal Ton Adapters



Isolation Valves



Flexible Connectors



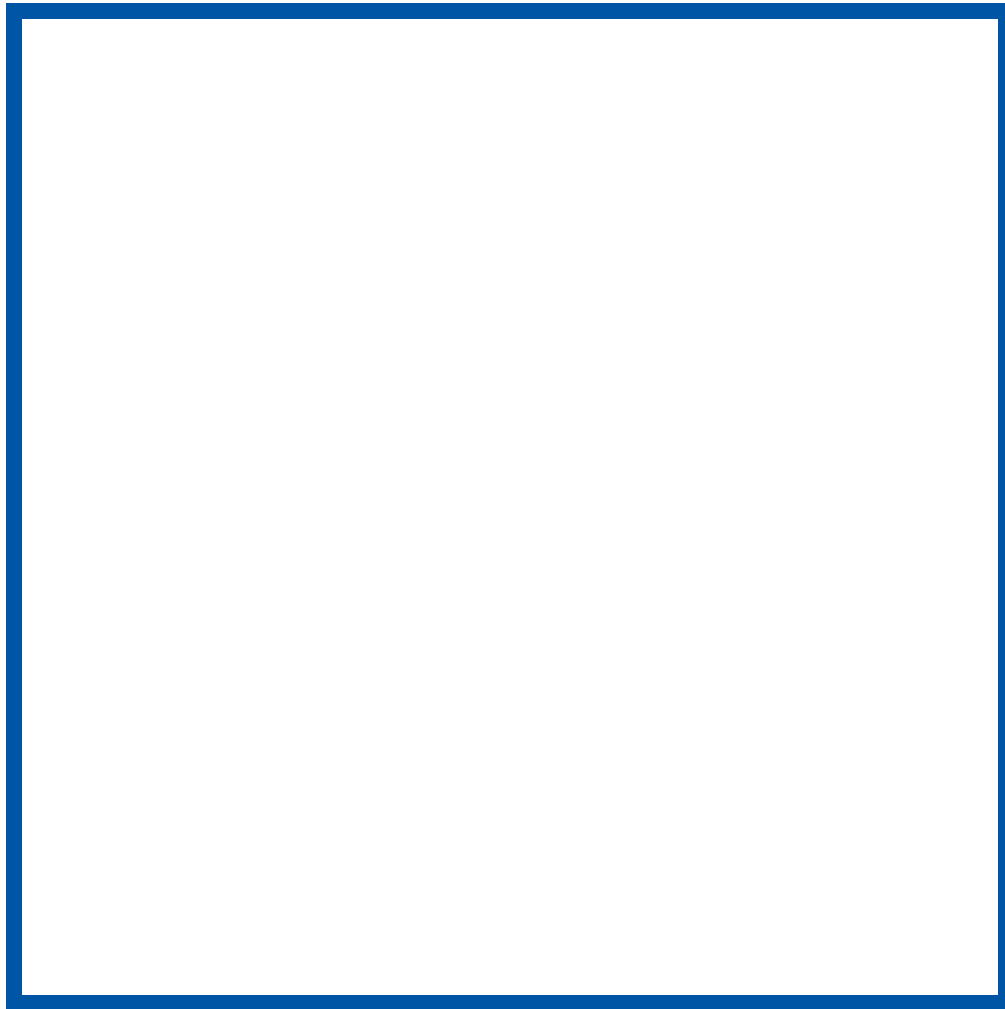
Modular Rate Control Valves



- Calibration Columns
- Modular Vent Valves
- Gauges, Switches, and Solenoids
- Water Inlet Assemblies
- Drain Valves
- Open Channel Diffusers
- Differential Pressure Regulators
- Pressure Changeover Systems and MORE!



Below is the full Hydro Instruments CD-ROM Catalog complete with product bulletins, O&M manuals, specifications, and more.



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