Series LF
Liquid Chemical Feed Systems

The **Series LF Liquid Chemical Feeders** are a family of fully vacuum operated, chemical solution feed systems, consisting of the following components: a Metering Assembly, Venturi Nozzle and Backflow Prevention Device.

Hydro Instruments' new, 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.

Operation:

Water flow supplied to the venturi nozzle in the Hydro Ejector creates a vacuum which draws the chemical from the storage drum. Solution feed rate is visually monitored and manually controlled by the rotameter type Hydro Remote Liquid Flow Meter with a manual rate valve. **Automatic control is available.** Presence of vacuum is required to open the spring loaded, normally closed check valve in the Hydro Ejector. This prevents backflow of water into the storage drum. A secondary Teflon check valve is included for additional protection.

Durability:

The component parts of this Equipment have been proven in the field for more than 25 years. Solid machined parts are precision made of only the highest quality and most chemical resistant materials for maximum durability and safety. The purely mechanical design and a minimal number of rugged, machined parts (and no moving parts during operation) guarantee simple operation, maximum durability and minimal maintenance.

Smart Design:

Hydro Instruments' Liquid Feed Systems offer an **all vacuum** design for the injection of liquid Chlorine solutions and a variety of other chemical solutions. Traditional Metering Pumps pressurize the chemical solution prior to injection, which presents the risk of a pressurized chemical leak. The **Hydro LF Series** draws the solution through the lines under vacuum; **therefore breakage of the tubing or connections will not cause a chemical leak.**

Simplicity:

Feed rate (in Gallons/hour) is clearly indicated on the rotameter tube and controlled by adjusting the manual, variable orifice rate valve. Unlike chemical feed pumps, this system operates over the full range from 5% to 100% capacity.

Switching from a Gas system?

Switching from a gas system couldn't be easier. The existing booster pump and control set-up is kept in place. The operation principle is almost identical to gas feed systems. Please consult the factory for assistance in feed rate calculations.

P.O. Box 213, Perkasie, PA 18944 ● Ph: 215-453-3102 ● Fax: 215-453-3106
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SPECIFICATIONS LF-10
CHEMICAL SOLUTION FEED SYSTEM

1.03.1 General

The chemical solution feed system shall be vacuum operated.

The system shall have a feed capacity of 0.5, 1, 4, 10, 28 or 80 gallons per hour.

The system shall convey the chemical solution under vacuum from the chemical storage drum to the ejector assembly.

The system shall be constructed of materials suitable for the appropriate chemical solution.

1.03.2 Overflow to drain

The chemical storage drum should be installed with a 1" PVC overflow pipe connected to an appropriate drain. This is a safety precaution to prevent the possibility of spillage of the chemical solution in the event of back flow of water into the chemical storage drum.

1.03.3 Secondary Check Valve

One secondary check valve will be supplied as a safety precaution in the event of failure of the primary check valve that is located in the Ejector.

This check valve shall be spring loaded and normally closed.

This check valve shall require the presence of a vacuum to allow feed of the chemical solution in the appropriate direction only.

1.03.4 Remote Liquid Flow Meter

The one (1) liquid flow meter shall be provided to indicate the flow rate.

The flow meter shall be suitable for wall mounting.

This flow meter shall be equipped with a control valve for manual feed rate adjustment.

Flow meter tubes shall indicate chemical solution flow rates up to 0.5, 1, 4, 10, 28 or 80 gallons per hour and down to a minimum of 1/20 of the maximum value.

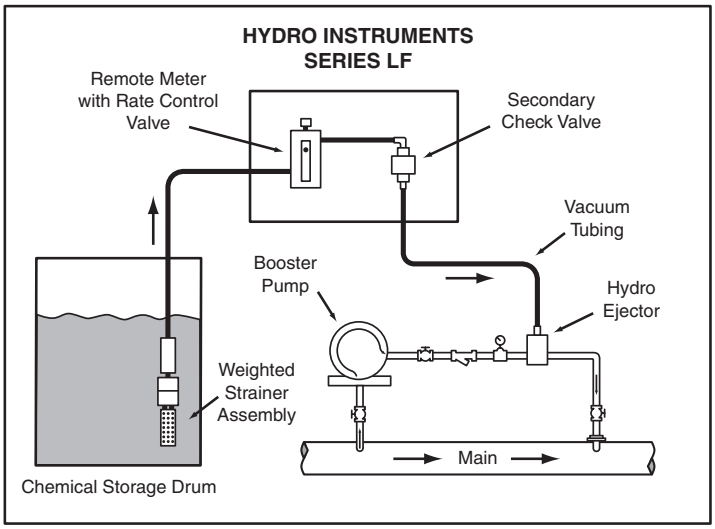
1.03.5 Ejector

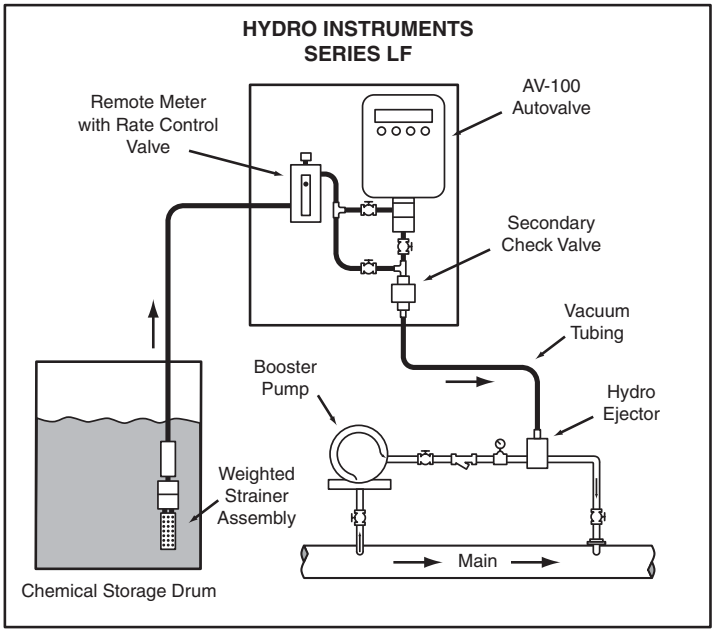
The one (1) ejector shall be water operated venturi nozzle type. The ejector shall provide the operating vacuum for the system.

The ejector shall incorporate a spring loaded, normally closed check valve to prevent the backflow of water into the chemical storage drum .

The check valve shall be suitable for back pressures up to a minimum of 100 psi.

Ejector check valve shall automatically close upon the loss of vacuum in the Ejector.





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