

The JCS Industries Model 4100-LC Liquid Vacuum Chemical Feeder is for operations that require high efficiency, accuracy, control and safety. The Model 4100-LC will feed numerous aqueous chemicals commonly used in municipal and industrial water treatment systems, i.e, sodium hypochlorite, sodium bisulfate, aluminum sulfate, ammonium sulfate, acids, sodium hydroxide, non-oxidizing biocides, scale and corrosion inhibitors.

The system is comprised of a vacuum injector to safely introduce the liquid into the feed-water stream. A reversing servo motor coupled with a V-notch valve to regulate the chemical feed rate; an electronic flow sensor to monitor and regulate the feed rate and a control module for complete electronic control and communications.

The JCS Model 4100-LC Liquid Feeder will automatically regulate in both fixed and variable control modes.

Control Modes:

- Fixed Feed Rate
- Flow Paced
- Residual Control
- Compound Loop



- Wide flow range: 12,000-60,000 GPD**
- Turn down ratio of 100:1**
- High accuracy: +/- 2% of actual feed**
- System Flexibility: four control modes**
- Vacuum Feed: safety and zero leaks**
- Battery Backup: > 2.5 hours of backup**
- Programmable microprocessor**
- No air binding possible**
- Metering to validate the actual flow rate**
- Multiple failure mode alarms**

Patent: US 7,776,275

Range	●	5% to 400% in 0.01% increments 12,000 to 60,000 GPD
Accuracy	●	+/- 2% of actual feed rate
Power Supply	●	110/220 VAC, 50/60 Hz
Battery Backup	●	12 VDC, 2.5 Amp Hours
Operating Temperature	●	32°to 120°F
Enclosure Protection	●	IP 66,67
Display	●	Backlit LCD 16 characters X 2 lines
Connections Inlet & Outlet	●	2" Socket
Inputs	●	Flow, Residual Chlorine 4-20mA DC
	●	Remote Start & Stop Volt Free
Outputs	●	Chemical Feed Rate 4-20mA DC
	●	System Failure Power supply, chemical feed drive motor and set point-all volt free.
Dimensions (Including Floor Mount Panel)	●	20" L x 14" W x 72" H
Weight	●	72 Lbs.

Characteristics

The plant's water flow rate and/or a chemical residual signal is used to adjust the chemical liquid flow rate by electronically positioning the servo-motor driving the feed control valve. The ratio of input signal to liquid flow is adjustable over a range of 5% to 400% to enable increased liquid feed in response to additional chemical demand. Where compound loop control is required, the model 4100-LC controller will receive two analog signals and feed to a user defined set point without the need for an additional PID controller. A compound loop with a second trim signal and remote control signal must be included. A provision is available for user adjustment of flow and residual dynamics factor to ensure accuracy of dosage control. In the automatic or manual mode, output relay contacts will provide the means for alarm and control functions. All relays are user selectable as normally open or normally closed. A 4-20mA output signal of the actual chemical feed rate is supplied.