

UCS-LP

Uninterruptable Chemical Supply

Automated drawdown and chemical skid management

- Flow measurement for pulsing, intermittent flows
- Tank level measurement
- Pump control to maintain dosage
- Remote monitoring and control of chemical pumps
- Eliminate unnecessary site visits and get better control of your chemical programs!

The Uninterruptable Chemical Supply (UCS) system is a patented flow and level transmitter with advanced reporting and pump control capabilities.

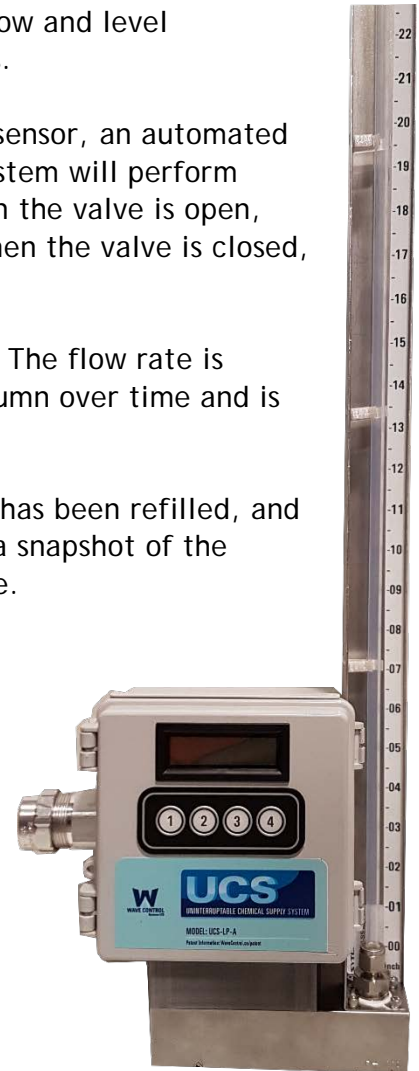
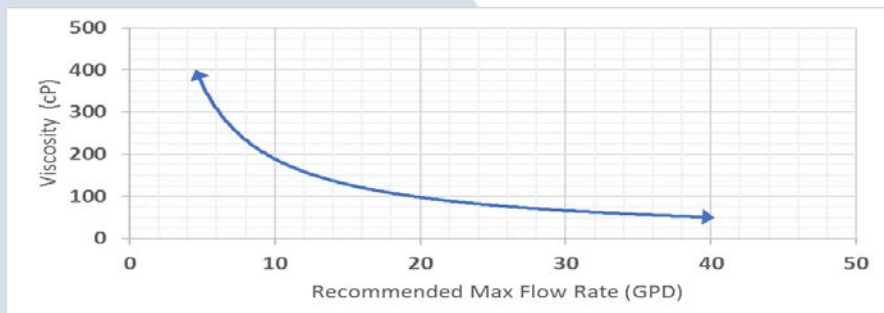
The UCS contains a calibrated column, a highly accurate pressure sensor, an automated valve and a microcontroller with proprietary software. The UCS system will perform cycles of draining and filling a calibrated draw down column. When the valve is open, fluid flows from the tank to feed the pump and fill the column; when the valve is closed, the pump is drawing only from the column.

The fluid level in the column is monitored by the pressure sensor. The flow rate is calculated based on the change in the fluid level (mass) in the column over time and is output via Modbus.

The UCS system also acts as a level transmitter. When the column has been refilled, and has hydrostatically equalized with the supply tank, the UCS takes a snapshot of the column height. It reports this value back as the tank level estimate.

Application Envelope

Flow rate is limited only by the requirement to fill the tube by gravity. Equilibrium fill to 8" + is sufficient for flow measurement. Tank level estimate is based on equilibrium fill height v tank level, which will be dependent on head, viscosity and fill time.



Model Specification

UCS-LP-A.W.X.Y.Z

W - wiring connector: default Q1 = one ¼" gland, Q2 = two ¼" glands, C = custom
 X - Local display: default N = none, C = 2-line character LCD, T = touch screen
 Y - Column height, feet: default 4, 2-6 feet, C = custom (e.g., >6')
 Z - Communication options: default MB = Modbus, C = custom
 e.g., UCS-LP-A.Q1.N.4.MB

Area Classification:	General area (UCS-LP-A)
Power:	12-24 V DC, 2A (peak during valve activation)
Fluid Connections:	½" NPT female
Outputs:	measured flow rate, tank level, alarm State, solenoid/relay drive
Communications:	RS485 (4-20 mA, etc. optional)
	2-wire, half duplex Modbus, 9600/8/none/1
Wetted parts:	316 SS, PTFE, ceramic
Operating Temperature:	-20 C - +55 C
Storage Temperature:	-40 C to +85 C*
Flow range:	depends on viscosity, 0-50 GPD @ 25 cP
Measurement error:	better than 5% (can be <1% with slower update, >30" head)
Head Range:	13" - 65"
Weather Protection:	IP55 (IP67 available)

Supplied with mounting hardware (strut base plate, mounting bracket and tube backing). Purchaser supplies 1-5/8" strut channel (e.g., Unistrut). Custom is additional charge.

