

LiquiCal is a unique combination of feed/bleed controller and chemical pump. Its primary application is cooling tower chemical control, but can be used in boiler and other industrial applications. Configuration and operation are simplified by twist-to-set knobs that are easier to operate than keypads. LiquiCal SP features the same operation as LiquiCal, but drives an external pump.

Equipment costs and control sophistication can be tailored to each user via LiquiCal's six operation modes. Bleed functions are controlled by either % ON- time or conductivity. Feed functions are controlled by either a water meter, cycle timer or % bleed ON-time. Several modes allow the Feed and Bleed functions to operate independently.

KEY BENEFITS



- Simple to set up, simple to operate
- Large ratio piston pump provides more reliable priming than diaphragm pump
- Nema 4 enclosure stands up to wet environments
- Multiple operation modes save equipment and installation costs

OPERATING MODES

	Bleed Method	Feed Method	Required Equipment Options
Mode 1	% (0-100) of recycling 10-minute time period	Feed (0-100 seconds) based on water meter pulse accumulation	Water Meter
Mode 2	% (0-100) of recycling 10-minute time period	Feed (0-100 seconds) based on 10-minute cycle accumulation	None
Mode 3	Occurs when conductivity exceeds microSiemen setpoint (200-6000)	Feed (0-100 seconds) based on water meter pulse accumulation	Water Meter and Conductivity Probe
Mode 4	Occurs when conductivity exceeds microSiemen setpoint (200-6000)	Feed (0-100 seconds) based on 10-minute cycle accumulation	Conductivity Probe
Mode 5	Occurs when conductivity exceeds microSiemen setpoint (200-6000)	Feed runs at same time as bleed (0-100 minutes) then locks out	Conductivity Probe
Mode 6	% (0-100) of recycling 10-minute time period	Feed runs as a % (0-100) of Bleed ON-time based on a 10-second recycling time period	None

SPECIFICATIONS

SIZE

LiquiCal	9.5H x 9.5W x 4.6D (inches), 5.93 lbs 24.2H x 24.2W x 11.7D (centimeters), 2.69 kg With optional mounting plate and probe assembly 17H x 14W x 4.6D (inches), 8.9 lbs 43.2H x 35.6W x 11.7D (centimeters), 4.0 kg
LiquiCal SP	9.54H x 6W x 4.6D (inches), 5.3 lbs 24.2H x 15.24W x 11.7D (centimeters), 2.4 kg With optional mounting plate and probe assembly 17H x 11.5W x 4.6D (inches), 8.27 lbs 43.2H x 29.21W x 11.7D (centimeters), 3.75 kg

ELECTRICAL SPECIFICATIONS

CONDUCTIVITY RANGE

200 to 6000 microsiemens/cm, temperature compensated, 40° to 150° F (4° to 65° C)

CONDUCTIVITY INPUT

Conductivity probe (k-factor=2.2)
Maximum distance from LiquiCal = 100 feet
A wide range of conductivity probes are available

POWER

115 VAC field changeable to 240 VAC, 50/60 Hz

AMBIENT OPERATING CONDITIONS

TEMPERATURE

34° to 120° F (2° to 50° C)

RELATIVE HUMIDITY

0 to 100% (with unit door closed)

PUMP OUTPUT

LiquiCal Piston pump 0 to 26 gpd (0 to 91 liters per day) @ 100 psi
Maximum inlet vacuum, 10" Hg
Maximum lift distance = 100 feet
LiquiCal SP 6 Amp relay

ALARM INDICATIONS (TRIGGER FEED LOCKOUT)

Conductivity Probe Error, Temperature Probe Error, No Flow Indicator, Low Product Level Indicator, Four-Hour Feed Alarm and Lockout

ENCLOSURE

- IP 54 splash proof (Nema 4)
- Prewired with 6 ft type SJOW power cord (male)
- 1 AC grounded output cord (female) for bleed valve (115 VAC, 6 Amp max)
- 1 AC grounded output cord (female) for chemical pump (LiquiCal SP) (115 VAC, 3 Amp max)
- 4 additional water-tight strain reliefs for flow switch, water meter, conductivity probe, and low level sensor

ORDERING INFORMATION

Item # Description

LiquiCal

097711 LiquiCal with flow assembly
097710 LiquiCal without flow assembly

LiquiCal SP

098571 LiquiCal SP with pigtails and flow assembly
098570 LiquiCal SP with flow assembly, without pigtails
098573 LiquiCal SP without flow assembly, with pigtails
098572 LiquiCal SP without flow assembly, without pigtails

Install Kit that comes with LiquiCal includes

034155 Injector check valve assembly, 1/4"
034186 Foot valve strainer with 10' tubing
095688 Pump rebuild kit

AVAILABLE ACCESSORIES

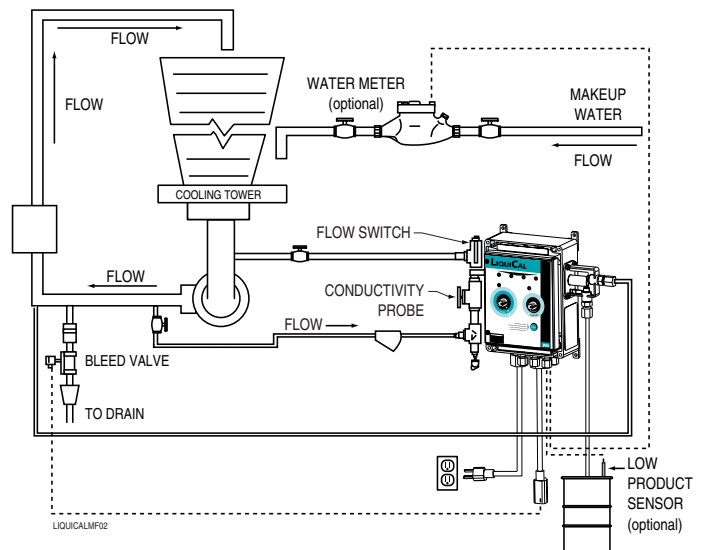
Item # Description

099368 Wall mount flow assembly, CPVC 80
1201180 Low product level float switch
069887 Drop-in probe (10')

A variety of other accessories are available as needed, including solenoid bleed valve, contacting head flow meter, strainer and/or other optional probes. Please contact our Customer Service Department at (800) 858-2382 for additional information on these items.

Design and specifications are subject to change without notice.

TYPICAL INSTALLATION



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Beta Technology is ISO 9001 Certified