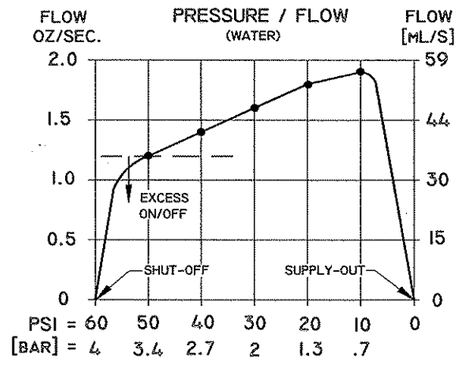
SPECIFICATIONS

FLUID PATH MATERIALS:	Polypropylene, Santoprene, EPDM, nylon, 316 stainless steel
PUMP SHUT OFF:	60 psi. [4 bar] ± 3
PUMP TURN ON:	50 psi. [3.4 bar] ± 5
SUPPLY OUT (LIGHT ON):	10 psi. [0. 7 bar] ± 3
SUPPLY OUT (LIGHT OFF):	13 psi. [.9 bar] ± 3
THERMAL PROTECTED:	Motor, automatic
TRANSFORMER:	110 VAC/24 VAC with non-replaceable internal fuse
AMB. TEMP. RANGE:	33° - 120°F [0.5 - 49°C]
PRIME:	6 ft. [2 M] vertical
DUTY CYCLE:	Intermittent
MAX. INLET PRESSURE:	30 PSI. [2.0 bar]
MAX. PARTICULATE SIZE:	Soft/round .025" dia. [.6mm]



RETURN POLICY

Whenever an electric pump system is removed from service, it *MUST* be sanitized/flushed to prevent contamination and possible health hazards. Units that have not received periodic sanitization will be deemed as non-repairable. For pumps that do not operate, warm water from a faucet ***MUST*** be flushed through the inlet port as soon as it is removed from service. All pumps returned to SHURflo that have not been properly sanitized and/or flushed will be dispositioned as a "scrapped pump" and will not be considered for testing, repair or warranty replacement.

LIMITED WARRANTY

SHURflo warrants the electric pump system to be free from material and workmanship defects (under normal use and service) for a period of one (1) year from the date of manufacture or one (1) year use, with proof of purchase, not to exceed two (2) years in any event.

The limited warranty will not apply to units that were improperly installed, misapplied, or incompatible with fluids or components not manufactured by SHURflo. SHURflo will not warrant any unit which is physically damaged or modified outside the SHURflo factory.

All units must be flushed/sanitized when removed from service. All units should be returned to the authorized distributor where they were purchased. SHURflo's obligation under this warranty policy is limited to repair or replacement. Units found not defective (under the terms of this limited warranty) are subject to charges to be paid by the returnee for the testing and packaging of "tested good" units.

This warranty is only a representation of the complete Beverage Limited Warranty outlined by Service Bulletin #1049.

NSF COMPONENT

SHURflo®
First in Fluid Innovation™

SHURflo reserves the right to update specifications, prices, or make substitutions.

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SHURflo
ELECTRIC PUMP SYSTEM
INSTALLATION AND OPERATION

The SHURflo Electric Pump System is designed to deliver liquid at a range of flow and pressure. Products from a Bag-In-Box, or from any non-pressurized, vented storage container may be used as long as the liquid does not contain solids (classed as round/soft) larger than .025" [.6mm] diameter. Whenever the dispenser valve is open, the pump will automatically run and continue running until the valve is closed. When the liquid supply is empty, the supply out switch is activated, shutting off the pump and causing the reset button to light up. The system will remain in this state until the liquid supply is replaced and the reset button is pressed and held down light goes out indicating the pump/system is primed and pressurized.

APPLICATION INFORMATION

The system requires a minimum of 15 PSI. [1 bar] back pressure on the output side to keep the Supply-Out/ reset feature engaged. If there is not enough back pressure, it will go into the supply out mode. For example, it will only pump if the reset button is engaged and held down. This may be due because: ① flow rate is too high, ② there is not enough restriction (back pressure) in the discharge equipment, or ③ air trapped between the pump inlet and/or discharge equipment.
The pump pressure switch reacts to outlet pressure and interrupts power at the preset shut-off (high) pressure indicated on the pump label. When outlet pressure drops below a predetermined limit (*typically 15 psi. [1 bar] less than the shut-off pressure), the switch will close and the pump operates until the shut-off (high) pressure is achieved. The turn-on and shut-off pressure are set to factory-calibrated* standards.
Ideally the pump would turn on (when product is needed) and continue to run until the flow is stopped. If sized correctly (for the flow rate), the pump should not cycle on/off faster than two-second intervals. Excessive cycling can be reduced by using an adjustable accumulator. (SHURflo P/N: 181-XXX)

This system is designed for an intermittent duty cycle. The maximum run time (at rated load) is approximately 20 minutes within one hour.

Maximum outlet side plumbing run length is determined by product viscosity, ambient temperature, flow rate and pressure drops within the dispensing equipment used.

The standard EPDM elastomers used in this system are typically used in applications for general beverage products. Most petroleum products are not compatible with EPDM elastomers. Consult with SHURflo for specific application data.

MOUNTING

Select a mounting location that is dry and has adequate ventilation to allow free air flow around the unit. It may be mounted vertical or horizontal. Locate the system within 6 feet [3M] of the liquid supply. To minimize the risk of air entrapment and false "supply-outs" from occurring, the pump should be located above the liquid supply. Fasten the pump board securely by attaching with suitable hardware through the base mounting holes.

*__CAUTION:__ Improper adjustment of the pressure switch setting may cause severe overload or premature failure. Failures due to improper adjustment of the pressure switch setting will not be covered under the limited warranty.

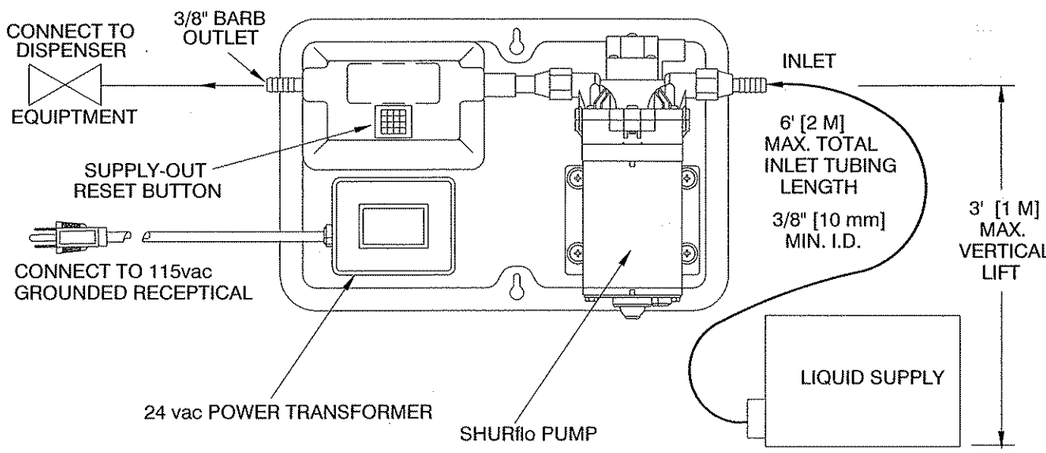
PLUMBING

3/8" [10 mm] I.D. tubing is recommended. Use clear, vacuum-rated, heavy wall tubing (1/8" thick) on the inlet (vacuum) side. Use only high pressure tubing (150 psi. [10 bar] rating minimum) for all outlet side plumbing. Beverage applications require N.S.F. approved tubing. Use stainless steel Oetiker clamps on all connections to avoid vacuum or pressure leaks.

1. Route inlet tubing from liquid supply to the inlet port on pump via the shortest possible path. Avoid sharp bends or kinks.
2. Connect the SHURflo swivel fitting to the inlet port and tighten until contact, plus an additional ½ turn.

CAUTION: ***Do not*** over-tighten fittings. ***Do not*** use Teflon tape or pipe dope to seal fittings. SHURflo swivel fitting seal with an internal taper fit.

3. Connect high pressure braided outlet tubing to the outlet barbed fitting. Complete the connections to the dispenser valve by following the manufacturer's recommendations.



SYSTEM START-UP

CAUTION: To avoid possible electrical shock hazard, the system must be grounded at all times. Do not, for any reason, connect the system to an electrical outlet that is not grounded. Do not use power cord adapter plugs or non-grounded extension power cords.

1. Plug into any grounded 115 VAC outlet.
2. Open the dispensing valve. Press the lighted reset button and hold down until a strong flow of liquid purges all air* from the system. **When there is sufficient back pressure, the light will go out. Release the reset button.**
3. Shut off dispense valve. Pump should stop.

* Air that becomes trapped in the pump (w/ outlet valve closed) cannot be purged, causing the pump to run or cycle on/off, and not activate the supply-out.

SANITIZING INTERVALS

The SHURflo electric pump is only one piece of a dispensing system. Therefore, frequent sanitization of the pump and ***ALL*** equipment in the system is required. ***Sanitization is dependent on the beverage type and its manufacturers' requirements.*** Factors which also affect the frequency of this procedure are temperature, facility conditions, installation and equipment. Consult other equipment manufacturers' instructions for their sanitizing requirements.

IN-PLACE SANITIZING PROCEDURE

1. Fill a clean bucket with four gallons [15 L] of warm water (120-180°F [49-82°C]).
2. Add four ounces [118 ml] of non-sudsing liquid detergent (common household automatic dishwasher type) to the four gallons [15 L] of water and assure that it is evenly mixed.
3. Add two ounces [59 ml] of bleach (common household type) to the water and detergent mixture (to obtain 200 ppm Sodium Hypochlorite) and stir gently.
4. Place the inlet suction tubing into the bucket.

NOTE: On B-I-B applications, the fittment from a used bag may be removed and used as an adapter to open the quick disconnect fitting.

5. Prime the pump by opening the dispenser valve and pushing the reset button until sanitizing solution is discharged. Pump approximately ½ of the solution through the pump. Stop and allow solution to soak for 10 minutes. Pump the remaining contents of the bucket through the pump.
6. **PRODUCT PURGE:** Connect the system to dispense beverage. Run the pump until it is primed and product has purged cleaning solution from the lines and dispensing equipment. Assure that no product off taste exists.

WINTERIZING

1. Perform the in-place sanitizing procedure as described.
2. Remove the inlet and outlet connections to the pump.
3. With the pump ports open, press and hold the reset button down until all liquid is expelled from the pump.
4. Drain or blow out all liquid from the remaining dispensing equipment and suction line.

NOTE: The in-place sanitizing procedure must be performed when the Electric Pump System is placed back in service.

REPLACEMENT PARTS KITS

Factory replacement parts kits are available. In order to assure the correct parts are ordered, include all of the model numbers and data from each label on system.