INSTALLATION AND OPERATION

SHURflo offers various pumps models for different applications. The information outlined by this manual is general, and not specific to all 2088 series pumps. Be certain the pumps' materials will be compatible with the fluid being pumped. 2088 series pumps are intended for intermittent or continuous duty when the proper operating criteria are met.

Product Data Sheets outlining specific thermal limits, load, flow curves, and other technical information for a particular model are available. If unsure of the chemical compatibility with a given elastomer or the motors intended design, please call SHURflo for assistance.

PRESSURE SWITCH OPERATION

The pressure switch reacts to outlet pressure, and interrupts power at the preset shut-off pressure indicated on the pump label. When outlet pressure drops below a predetermined limit (typically 15-20 psi.1-1.4 bar less than the shut-off pressure), the switch will close and the pump will operate until the shut-off (high) pressure is achieved. The shut-off pressure is set to factory calibrated standards. See the motor label and Product Data Sheet for specific pump specifications.

If the plumbing is restrictive or the flow rate is very low, the pump may re-pressurize the outlet faster than the fluid is being released causing rapid cycling (ON/OFF WITHIN 2 seconds). If the pump is subjected to rapid cycling during normal operation, or for infrequent periods, damage may occur. Applications which exhibit rapid cycling should have restrictions in the outlet minimized. If not feasible, consider a SHURflo Accumulator or a SHURflo "bypass" model pump.

BYPASS OPERATION

A bypass pump may be used for applications that normally induce frequent start/stop of the motor, and thereby create a potential for overheating. Models equipped with an internal bypass are designed to pump at high pressure while at low flow rates. Bypass models equipped with a switch may operate for several seconds even though the outlet side has been closed off. Contact SHURflo for information regarding bypass pumps

MOUNTING

The 2088 series pumps are self-priming. Horizontal and vertical prime vary depending on the fluid viscosity and pump configuration.

The pump should be located in an area that is dry and provides adequate ventilation. If mounted within an enclosure, provisions to cool the motor may be necessary. Heat sinks which attach to the motor are available from SHURflo if increased heat dissipation is necessary.

The pump may be mounted in any position. However, if mounting the pump vertically the pump head should be in the down position so that in the event of a leak, fluid will not enter the motor. Secure the rubber feet with #8 hardware. DO NOT compress the feet, doing so will reduce their ability to isolate vibration/noise.

PLUMBING

Flexible high pressure tubing compatible with the fluid should be used to connect the inlet/outlet ports. Tubing should be either 3/8" or ½" [10 or 13 mm] I.D., and at least 18 in. [46 cm] length is suggested to minimize stress on the fitting/ports and reduce noise. Allow for the shortest possible tubing route and avoid sharp bends that may kink over time.

NOTE: Restrictions on the inlet may cause vacuum levels to reach the fluid vapor pressure, causing cavitation, degassing, vapor lock and a loss in performance. Inlet pressure must not exceed 30 psi. [2.1 bar] maximum.

1/2" Male threaded models: Are intended to be used with SHURflo Swivel Barb Fittings which seal with an internal taper when hand tightened. Standard 1/2" NPT fittings may be used when tightened to a maximum torque of 3.7 ft.\Lb. (45 in\Lb.)[5 Nm].

NOTE: SHURflo does not recommend the use of metal fittings or rigid pipe to plumb the inlet/outlet ports. Standard plastic male and female threaded fittings can be acquired at commercial plumbing supply stores. SHURflo also distributes Swivel Barb Fittings, and special fitting through its dealers.

Sealers and Teflon tape may act as lubricant causing cracked housings or stripped threads due to over-tightening. Care should be used when applying sealers. Sealers may enter the pump inhibiting valve action, causing no prime or no shut-off. A failure due to foreign debris is not covered under warranty. Installation of a 50 mesh strainer is recommended to prevent foreign debris from entering the pump.

If a check valve is installed in the plumbing, it must have a cracking pressure of no more than 2 psi [.14 bar].

INSTALLATION AND OPERATION

ELECTRICAL

Electrical wiring should be performed by a qualified electrician, in accordance with all local electrical codes.

The pump should be on a dedicated (individual) circuit, controlled with a double pole switch (U.L./C-UL certified) rated at or above the fuse ampere indicated by the pump motor label. Depending on distance of the power source from the pump and ampere load on the circuit, wire may need to be heavier than indicated by the chart.

All 115 VAC and 230 VAC pump motors and systems MUST be grounded per local and state electrical codes.

Improper duty cycle and/or rapid start & stop conditions may cause the internal thermal breaker (if equipped) to trip, or can result in premature motor failure due to excessive heat. Refer to the pumps Product Data Sheet.

For the pump to meet U.L./C-UL requirements the circuit MUST be protected with a slow-blow fuse (U.L./C-UL certified) or equivalent circuit breaker as indicated on the motor label. Use an approved wire of the size specified or heavier.

⚠ CAUTION Circuit protection is dependent on the individual application requirements. Failure to provide proper overload / thermal devices may result in a motor failure, which will not be covered under warranty.

VOLTAGE	WIRE LEADS	WIRE SIZE	FUSE RATING
12 DC	RED (positive +) BLACK (negative -)	#14 AWG [2.5 Mm2] (or heavier)	SEE PUMP MOTOR LABEL
24 DC			
36 DC			
115 AC	BLACK (common) WHITE(neutral) GREEN (ground)	#16 AWG [1 Mm2] C-UL - TEW / UL 1015	
230 AC	BROWN (common) BLUE (neutral) GRN/YELL (ground)	[1 Mm2] C-UL - TEW / UL 1015	