

OPERATION

PRIMING

CAUTION: DO NOT RUN PUMP DRY HOPING THAT IT WILL SELF-PRIME. CENTRIFUGAL END SUCTION PUMPS SHOULD NEVER BE STARTED OR RUN DRY. OPERATING A PUMP DRY WILL CAUSE SCORING OF THE MECHANICAL SEAL, RESULTING IN PREMATURE SEAL FAILURE. To prevent the pump from being run dry, it must be primed before starting.

FLOODED SUCTION:

1. If the pump is installed with a positive head on the suction, prime by opening suction valve and allowing liquid to enter the casing, at the same time venting all air out of the top of the separator and recovery tank (on CSR system).
2. If the liquid source is located above the pump, open the separator and recovery tank (on CSR system) air vent valve, and suction isolation valve.
3. The suction line and pump should be filled slowly until a steady stream of liquid is observed flowing from the air vents.
4. After five minutes of operation, it is recommended that the air vent valve or plug be opened again to insure that all air has been expelled from the pump casing.

SUCTION LIFT:

CAUTION: CERTAIN CRITERIA MUST BE MET BEFORE INSTALLING AN END SUCTION PUMP UNDER NEGATIVE SUCTION LIFT. PLEASE CONTACT FACTORY BEFORE PRIMING.

1. If the pump is installed with a suction lift, priming must be done by other methods, such as foot valves, or by manually filling casing and suction line.
2. A foot valve should be used for priming on suction lift applications. The foot valve, located at the end or foot of the suction piping, functions as a check valve and allows flow in one direction only, toward the pump. Otherwise, all the liquid will drain from the pump and suction piping back into the sump after shutdown.
3. Initial priming is accomplished by completely filling the suction or pipe and pump casing with the liquid. This can be done by removing the air vent valve or plug at the top of the pump casing, and inserting a pipe nipple in the orifice with an appropriate increaser to accommodate a hose connection. A priming line can also be inserted in the discharge piping between the check valve and the pump, or the priming can be done with a bucket and funnel. The important thing is to completely fill the suction pipe and pump casing with liquid.
4. When the pump starts, the fluid combined with atmospheric pressure creates a vacuum. Fluid is forced into the suction pipe, which opens the check valve and keeps it open until the pump is shut down.
5. When the pump is shut down, the liquid being pumped reverses its flow causing the valve to close. The liquid is now trapped in the suction piping and pump casing, thus maintaining a prime on the pump.

WIRING AND GROUNDING PANEL

CAUTION: THE WIRING TO THE CONTROL PANEL MUST BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE OR YOUR LOCAL ELECTRICAL CODE. IF MORE INFORMATION IS NEEDED, CALL YOUR LOCAL LICENSED ELECTRICIAN OR YOUR POWER COMPANY.

WIRING:

1. Panel wiring should conform to national, state, and local electrical codes.
2. Use wire of adequate size to prevent voltage drop.
3. Connect the electrical supply from the switch to the control panel, following the wiring diagram on the inside of the door panel. NOTE: Make sure the voltage and frequency of the electrical current supply agrees with that stamped on the motor nameplate. If in doubt, check with the local Power Company.
4. Three phase motors can be run in either direction, depending on how they are connected to the power supply.

GROUNDING PANEL:

1. It is required that a permanent ground connection be made to the unit using a conductor of appropriate size from a metal underground water pipe or a grounded lead in the service panel.
2. Do not ground to a gas supply line.
3. Do not connect to electric power supply until unit is permanently grounded.
4. Connect the ground wire to the approved ground and then connect to the terminal provided.