OPERATIONAL AND INSTALLATION GUIDELINES
"DDP" SERIES DELIVERY/DEMAND PUMP

Please read these Operational and Installation Guidelines before installing the "DDP" Delivery/Demand Pump. If additional help is needed, please consult the Factory.

CAUTIONS:

1. The pump is equipped with a pressure sensing demand switch which controls the maximum operating pressure. In addition, never subject the pump to pressures above 125 PSI (8.5 bars).
2. Never operate the pump in a harsh environment or hazardous atmosphere, since motor brush and switch may cause electrical arcing.
3. Pumphead materials are designed for use with water only. Do not use with petroleum products.
4. As long as there is inlet water pressure, the pump will not stop forward flow of water even if the motor is turned off. Be sure the system has positive means of shutting off water supply.
5. Always consider electrical shock hazard when working with and handling electrical equipment. If uncertain, consult an Electrician. Electrical wiring should only be done by a qualified Electrician per Local and State Electrical Codes.

MOUNTING:

A. The pump should be mounted in a dry place and away from any source of heat. If an enclosure is used, special instructions for cooling the motor may be necessary. Consult the Factory.

B. Do not subject the pump to extreme high or low (freezing) temperatures while in operation. (Operating ambient temperature range is 32 °F to 115 °F).

C. The pump may be mounted horizontally with the outlet port on the right when viewed from the pump end or with the pump above the mount; or vertically with the pump above or below the motor.

PLUMBING:

A. We recommend use of flexible tubing with proper pressure rating.

B. Pump will prime only if all pressure is relieved from outlet port.

C. It is recommended that pure water be pumped or an in-line sediment filter (150 micron or 100 mesh) be installed at the inlet side to keep foreign debris out of the system. Please consult your Aquatec catalog for in-line filter.

D. Avoid any sharp bends which may crimp tubing and restrict flow. Use 90 ° elbow fittings if necessary. Aquatec provides pumps with different kinds of fittings. Please consult Factory for your needs.

E. The pump should always be mounted prior to any components which could introduce particles to the water; thus, preventing them from entering the pump chambers and possibly causing clogging.

ELECTRICAL:

A. The DDP series pumps are designed for intermittent duty. Make sure that "OFF" periods are sufficient. Refer to RAPID ON/OFF OPERATION. Consult the factory for particular data and design criteria.

B. If a power supply is used with the system and the supply is not furnished by Aquatec, it will need to be reviewed for correct application and approval by Aquatec.

INSTALLATION PROCEDURE
"DDP" SERIES DELIVERY/DEMAND PUMPS

The basic **"DDP"** pump is controlled by a built-in pressure sensing demand switch. When a faucet or valve is opened down stream of the pump, line pressure drops thus starting the pump automatically. Conversely, when the valve shuts, the line pressure increases turning the pump off automatically. The pressure switch actuates in response to the pump outlet pressure at a predetermined and preset pressure. The pump label indicates the predetermined ON and OFF pressures. Typically, the OFF pressure is accurately set at the FACTORY and the ON pressure is within an allowable range below that value. In response to the characteristics of the system in which the pump is installed, the flexibility and length of the tubing, the faucet or valves and the duration that they are open; these pressure settings may vary. Therefore, variation in pressure setting is expected with use and over time.

Read the OPERATIONAL AND INSTALLATION GUIDELINES on the other side carefully before starting to install the pump. Consult the Factory if there is any question.

Determine the optimum location for your pump before proceeding.

1. Turn off the water.
2. Cut the flexible tubing in sufficient length to avoid any stress on the tubing where it connects to the pump or the fitting on any accessory.
3. Insert tubing into pump ports. If fittings are John Guest type, be sure tubing is inserted past the resistance point until it bottoms out against the port stop. If compression fittings with threaded nuts are used, insert tubing until it bottoms out in the port and hand tighten the compression nut until the connection is tight. Then use a wrench to tighten the nut 1/2 turn clockwise or follow the wrench tightening instructions provided by the fitting manufacturer.
4. The "DDP" pump is now ready for operation. Open the inlet water valve if any to allow water to flow to the pump.
5. If the power source is a transformer, plug the appropriate Aquatec supplied/approved transformer into the receptacle and connect the pump to the transformer. If the power source is not a transformer, connect the pump to the appropriate power source. Open the discharge or dispensing valve. Allow water to circulate, purging any entrapped air.
6. The pump will now start building pressure. Operating pressure will vary with flow rate, flow valve, feed-water pressure and line voltage. Check for fitting leaks.
7. If compression fittings with threaded nuts are used, observe any leaks after pump has run for approximately 15 minutes. Further tighten compression nuts approximately 1/8 to 1/4 of a turn on all fittings in the system. Wait 15 minutes and repeat the leak check.

   NOTE: Further adjustments should not be necessary although it may take several days of operation before all the air has been purged and the system is stabilized.
8. ADJUSTING THE PRESSURE SWITCH. Should the pressure switch OFF setting vary with use and time to an unsuitable value, it may be adjusted for optimum performance. Turn the set screw clockwise to increase the OFF pressure setting and counter clockwise to decrease. The screw should not be adjusted more than one half turn without consulting the Factory. Excessive adjustment of the pressure switch could cause low system pressure, rapid cycling ON/OFF operation, and reduced pump and motor life. Damage may occur. The Warranty does not cover improper adjustment of the pressure switch.
9. RAPID ON/OFF OPERATION. In response to the characteristics of the system in which the pump is installed, the flexibility and length of the tubing, the faucet or valves, and the duration they are open; the time between pump ON and OFF may vary. Cycling operation of less than one minute OFF for each 30 seconds ON is considered to be an excessive duty cycle. In such cases the pressure switch may require adjustment. If the OFF period continues to be less than one minute the Factory should be consulted. It is good practice to allow the pump to be OFF for 3 minutes after every 30 seconds ON. For each minute of continuous running or cycling operation it is good practice to allow a 10 minute rest period to cool the motor.

SERVICING:

Every Year: Check system against operating standards.

Every 2-3 Years: Replace diaphragm and check against operating standards.