

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 O F to 115 O 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 OT 100 mesh) be installed at the inlet side to keep foreign debris out of the System. Please consult yourAquatec catalog for in-line filter.
- D. Avoid any sharp bends which may crimp tubing and restritt 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 or 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.

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WARRANTY:

Aquatec Water Systems, Inc. ("Aquatec") warrants its products to be free from defects in material and workmanship under the following terms:

Series 601X, 61XX, 65XX, 58XX, 68XX, 78XX, BBXX, 55XX, ERP 1000 as well as

AFR/TLC and PSW: The warranty will last for a period of thirteen months from date of shipping from an Aquatec warehouse with the exception that the period will be extended for an additional twelve months for 68XX series and ERP 1000. Aquatec's obligation under this warranty shall be limited to replacing or repairing at Aquatec's discretion, any such product or part which is returned to Aquatec's factory with a Return Material Authorization Number (RMA), transportation charges approved by Aquatec or prepaid, and upon examination, is found to Aquatec's satisfaction to have been defective under the terms of this warranty. No credit will be allowed against future purchases for items returned as defective under the terms of Aquatec's warranty.

Other models

This warranty does not extend to any products, which have been altered or modified outside The Aquatec factory, nor does it apply to units that are returned in an unassembled condition. Furthermore, it does not extend to pumps that were specified to have no controls per the customer and for which the customer did not supply their own control mechanism. The warranty guarantees that pumps systems will perform to Aquatec's flow and pressure specifications throughout the life of the warranty. The warranty does not cover wear, appearance, misapplication or external water damage. If the returned product is not found to be defective under the conditions of this warranty, a charge will be made for repair or replacement.

This is a limited warranty. It covers the product only and the extent of the coverage is limited to the cost of the product. As the manufacturer has no control over shipping, handling and installation, the warranty cannot cover water damage, or any other damage, caused by a leak or other malfunction.

This warranty is in lieu of all other warranties, expressed or implied, and no person is authorized to give any other warranty or assume obligation or liability in Aquatec's behalf. Aquatec shall not be liable for any indirect, incidental or consequential damages of any kind incurred by the reason of the use or sale of any defective product and part.

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