IMPORTANT NOTICE - READ CAREFULLY

Sprinkler Pumps

1. LOCATION

The pump should be installed in a dry, accessible place not subject to freezing temperatures. If installed in a pump pit or other location subject to dampness, proper ventilation must be provided to avoid moisture damage to the electrical equipment.

89000 Series Sprinkler Pump

2. PIPING

Galvanized steel or plastic pipe is recommended. If copper or other dis-similar metal piping is used, a di-electric union or bushing is recommended where the piping is connected to the pump body. The pipe used should be cleaned and free of scale. Ream ends of pipe to remove burrs. Check threads to see that they are clean and not damaged. Horizontal runs of suction pipe must slope upwards from the well to the pump to avoid air pockets in the line which will make it difficult, if not impossible, to prime the pump. The recommended slope is one inch in ten feet.

If pump must be offset an appreciable distance from the well, the size of horizontal pipe should be increased to reduce friction losses.

If using di-electric bushing, hand start bushing into female end of pump housing (or other female connection) first. Use a six-sided socket to tighten the bushing. The bushing should be fully inserted into the female connection. After the male end of the bushing is fully installed, hand start pipe (or other male connection) into the female end of the bushing. Failure to follow these guidelines may damage the bushing. Caution should be taken to not cross-thread the bushing.

3. FLUSHING

If the pump discharge line is connected to pressure tank or house service, disconnect it and flush and clean the system by temporarily wasting the water outdoors or to drain. The pump should be operated until the water runs clear, without sand, mud or rust.

This procedure will eliminate the danger of pumping dirty water into the pressure tank and home appliances. When water runs clear, re-connect discharge line to tank and service.

4. WIRING (Use copper conductors only)

Be certain that wire and fuses of correct size are installed. Be certain the phase, voltage, and cycles of the supply circuit are the same as that shown on the motor name plate.

It is strongly recommended that a separate electric line, well protected against fire, be run from electrical service to the pump, with a fused switch box at the pump. In the event of fire, this precaution will permit continuous operation of your pumping system. For added safety, the pump and motor should be properly grounded to the well casing or to a separate ground rod driven eight feet into the ground.

NOTE: For proper fuse, circuit breaker and wire sizes in your area, follow local codes. Otherwise:

Wire Gage and Standard Fuse Sizes

MOTOR	WIRE SIZE		*FUSETRON		*CIRCUIT BRKR.	
SIZE	115V	230V	115V	230V	115V	230V
1 HP	8	12	30 amp	20 amp	35 amp	20 amp
1.5 HP	6	10	35 amp	25 amp	40 amp	20 amp
2	8	8	-	30 amp	-	25 amp

* Time delay fuses and circuit breakers (Single Phase).

For distances of 100 feet and over from meter to motor, larger wire than shown may be required.

5. MOTORS

Motors are equipped with sealed ball bearings and require little attention.

If motor repeatedly stops, cools off, and starts again, the cause or trouble must be located and corrected. Do not cover motor with canvas or other material that may interfere with proper air circulation and cause over-heating.

ATTENTION! Important information for installers of this equipment!

This equipment is intended for installation by technically qualified personnel. Failure to install it in compliance with national and local electrical codes, and with motor suppliers recommendations, may result in electrical shock or fire hazard, unsatisfactory performance, and equipment failure. Installation information is available from pump manufacturers and directly from motor suppliers. Retain this information sheet with the equipment for future reference.

WARNING

Serious or fatal electrical shock may result from failure to connect the motor, control enclosures, metal plumbing, and all other metal near the motor or cable, to the power supply ground terminal using wire no smaller than motor cable wires. To reduce risk of electrical shock, disconnect power before working on or around the water system.

WARNING: It is unlawful in **CALIFORNIA & VERMONT (effective 1/1/2010); MARYLAND (effective 1/1/2012); LOUISIANA (effective 1/1/2013) and the UNITED STATES OF AMERICA (effective 1/4/2014)** to use any product in the installation or repair of any public water system or any plumbing in a facility or system that provides water for human consumption if the wetted surface area of the product has a weighted average lead content greater than 0.25%. This prohibition does not extend to service saddles used in California, Louisiana or under USA Public Law 111-380.

IMPORTANT NOTICE - READ CAREFULLY

Sprinkler Pumps - Shallow Well

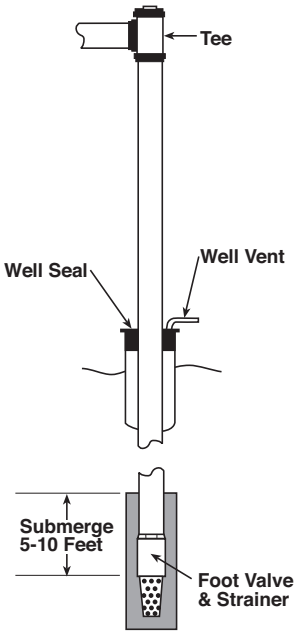

Figure 1

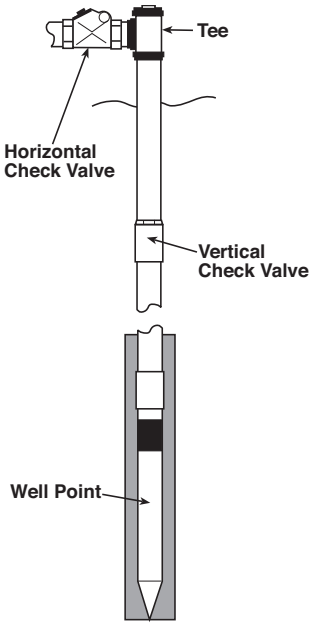

Figure 2

A shallow well system should not be installed where total suction lift exceeds 25 feet at sea level. Suction lift must be reduced at the rate of approximately 1 foot per 1000 feet at elevation. Total suction lift consists of the vertical distance from the water level when pumping to the pump plus losses due to friction in the pipe line. The volume of water delivered decreases with an increased suction lift.

Drilled, bored or dug wells may employ an arrangement as in **Figure 1**. Driven wells and sandpoints employ the configuration in **Figure 2**.

1. a) Install a foot valve on the bottom of the suction line and place it 5 to 10 feet below the draw down level, that is, the level of the water when the unit is pumping its rated capacity. It should be far enough from the bottom of the well to avoid pumping sand and mud. (Figure 1)

   b) On driven well installation, install a spring dog- check valve on the vertical pipe at least five feet above the well point, or install a horizontal check valve in the suction line near the pump.(Figure 2)

2. Check the foot valve, see that it seats properly and that no obstruction prevents its opening or closing. A leaky foot valve may cause excessive cycling (motor starts and stops).

3. Lower first length of suction pipe, with attached foot valve into the well, fill pipe with clean water. If water recedes a leak is indicated. If no leaks occurs, assemble the remaining section(s) of pipe and check again for leaks.

4. Install the well seal at the top of the well casing and tighten well seal bolts. (Figure 1)

5. Install a tee at top of suction pipe, with a plug in the top opening, and connect through a union to the female thread in the pump body.

6. Connect pump discharge to pressure tank if used, and pressure tank to plumbing.

7. After piping is completed and motor is properly wired, remove the priming plug on top of pump and fill pump with clean water. Allow time for air in the system to escape, and refill pump if necessary before replacing the priming plug. Start motor and the unit should operate. If it does not, it may be necessary to reprime.

8. When unit has built up to maximum pressure, and has automatically stopped, check all piping both suction and discharge lines for leaks, as they will be under pressure.

NOTE: If the unit is to be used with a vacuum type air volume control where the source of supply is on a level with the pump or above it (artesian well, pond, cistern or shallow well with less than five feet lift) a valve should be installed in the suction line that may be partially closed to cause the pump to operate under a moderate suction lift of 8-10 ft. to insure correct operation of the air volume control which is operated by vacuum.