



Primary Design Flow: \_\_\_\_\_  
Primary Design Head: \_\_\_\_\_  
Maximum Shut-off Head: 19'  
Maximum Flow: 87 GPM  
Motor Horsepower: 1/2  
Motor Speed: 1650 RPM  
Electrical: 115 Volts, 1Ø, 60 Hz

**Pump** – The pump shall be designed to handle septic tank effluent and be capable of passing 2 inch spherical solids. The pump shall be capable of handling liquids with temperatures to 140°F intermittent.

**Motor** – The pump motor shall be of the submersible type rated 1/2 hp at 1650 RPM and shall be for \_\_\_\_\_ 115 volts single phase, 60 cycles. Single phase motor shall be of the shaded pole type with no relays or starting switches. Stator winding shall be of the open type with Class A insulation rated for 105°C maximum operating temperature. The winding housing shall be filled with clean dielectric oil to lubricate bearings and seals, and transfer heat from the windings to the outer shell. The motor winding assembly shall be pressed into the stator housing for best alignment and heat transfer.

The motor shall be capable of operating over the full range of the performance curve without overloading the motor and causing any objectionable noise or vibration. The motor shall have two bearings to support the rotor; an upper sleeve bearing to accommodate radial loads and a lower sleeve bearing with thrust pad to take thrust and radial loads.

A heat sensor thermostat and overload shall be attached to the top end of the motor windings and shall be wired in series with the windings to stop the motor if the motor winding temperature reaches 221°F. The overload thermostat shall reset automatically when the motor cools to a safe operating temperature.

**Power Cord** – The motor power cord shall be \_\_\_\_\_ 20 feet SJOW or SJTW type. The power and switch cords shall be of the positive sealing, quick-disconnect type. The power and switch cable connections shall be sealed at the motor entrance by means of a compression nut which serves to make a positive electrical connection and prevent water from entering the cable jacket and motor housing.

**Optional Control Switch** – The effluent pump shall be controlled by an optional integral float switch. The float switch shall be of a non-mercury type and be capable of directly controlling the pump motor without the need for an external control panel.

**Shaft Seal** – The motor shall be protected by a rotating mechanical shaft seal. The seals shall have carbon and ceramic seal faces lapped to a tolerance of one light band. Metal parts and springs for seals shall be 300 series stainless steel.

**Pump Impeller** – The pump impeller shall be of the two vane enclosed type. The impeller shall be constructed of cast iron.

**Motor Castings** – The motor housing castings shall be of high tensile strength Class 30 gray cast iron. Castings shall be treated with phosphate and painted with a high quality air dried modified epoxy resin for corrosion protection.

## **Pump Case**