

# SPECIFICATION SHEET-REMOTE SUBMERSIBLE 60 & 50 HZ PETROLEUM PUMPS



## 6" MAXXUM MODELS

### 60 Hz STP MODELS

MXP300J4-2HB  
MXP500J4-2K  
MXP500J6-2K

### 50 Hz STP MODELS

MXP300J17-3HB  
MXP500J17-3K

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## 1. The MAXXUM SUBMERSIBLE TURBINE PUMPS

- 3 and 5 Hp Models available

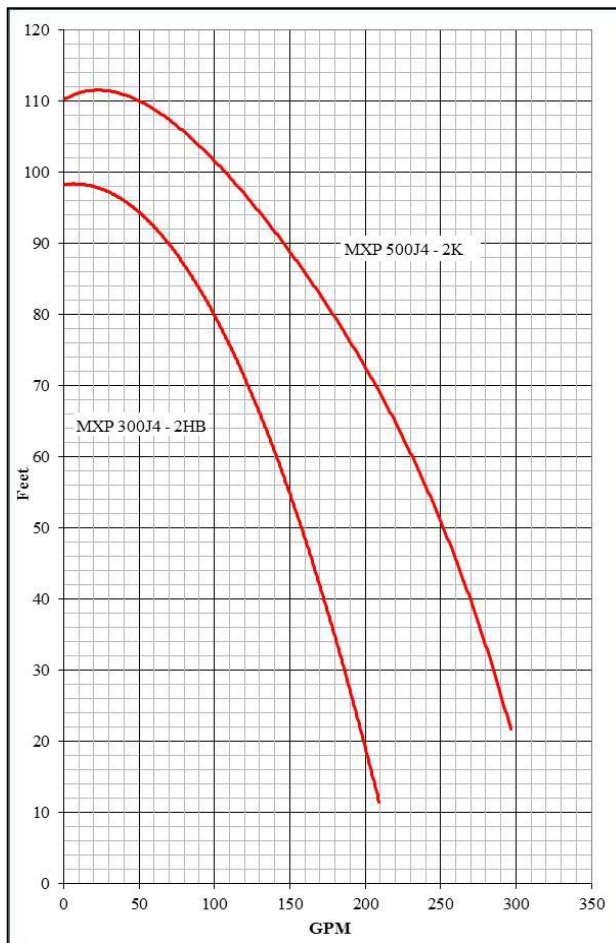
The RED JACKET MAXXUM SUBMERSIBLE TURBINE PUMP series are UL 79 Listed for the following fuels:

- 100 % Gasoline
- Gasoline and up to: 10% Ethanol, 15% Methanol, 20% MTBE, 20% ETBE, 20% TAME

The RED JACKET MAXXUM SUBMERSIBLE TURBINE PUMP series are designed and manufactured to be compatible with:

- All blends of automotive and similar liquid fuels including alcohol blends from 0 to 20% ethanol, 0 to 20% methanol, 20% MTBE, ETBE or TAME with 80% gasoline as well as
- 100% diesel, fuel oil, Avgas, jet fuel or kerosene.

Performance Curves:



## 2. SCOPE

This specification sheet covers the technical requirements for submersible explosion proof pumping equipment with a maximum pressure of less than 50 psi.

## 3. DESCRIPTION

Pump shall be of submersible centrifugal type which installs through a standard 6" NPT threaded tank opening. Size shall be of 3 and 5 HP, depending upon required flow rates and head loss of a given piping system.

## 4. MECHANICAL FEATURES

### A. Pump

Pump shall be multi-stage, dependent upon required flow rate and pressure, self-lubricating and easily removed from the storage tank without disconnecting discharge piping, mechanical or electronic leak detectors or siphon systems. The pump and motor assembly shall be readily separable from the pump column pipe and discharge head to allow for simple field replacement of the pump/motor (UMP) assembly.

### B. Impellers and Diffusers

Impellers shall be splined or keyed to the pump shaft to provide positive, non-slip rotation. Diffusers shall be tightly secured to prevent rotation.

### C. Pump Intake Inlet

Pump intake inlet openings shall be horizontal to prevent drawing sediment from the tank bottom into the pump inlet. The bottom of the inlet shall be a minimum of 4 inches to the bottom of the tank.

### D. Manifold Head Assembly

Manifold Head assembly shall consist of a manifold and extractable packer assembly and shall be completely sealed against product leakage into the ground and exterior water leakage into the storage tank. The discharge outlet shall be standard 3" NPT opening. The manifold shall have a built-in line check valve, pressure relief valve, 2" NPT port for electronic line leak detection and shall support an optional siphon system when required. The extractable packer shall incorporate O-ring seals. The contractor's box and yoke assembly shall be provided. The extractable packer assembly shall incorporate lifting eyes for safe extraction of the pump/motor (UMP) assembly.

### **E. Electrical Disconnect**

The electrical disconnect shall be incorporated into the contractor's box/yoke assembly. The yoke electrical disconnect shall serve as a function to disconnect the electrical connection to the pump motor, using a swing joint, prior to removal of the extractable packer assembly. Upon re-insertion of the extractable packer and tightening of the fasteners the yoke shall be used to complete the electrical connection. The field connection for the conduit entry port located on the contractor's box shall be 1" NPT.

### **F. Check Valve with "Lock down" Feature**

The check valve shall incorporate a "Lock down" feature that mechanically locks the check valve to provide line isolation during servicing. The check valve housing incorporates an adjustable pressure relief valve for the product line and can be optimized for compatibility with Veeder-Root PLLD systems.

### **G. Vacuum - Siphon System (optional)**

The siphon system shall be capable of drawing up to 25 inches of mercury vacuum through a venturi. The siphon shall incorporate a check valve to maintain the siphon system vacuum after the pump has been turned off. The siphon system shall incorporate a ¼" NPT connection as the interface to the siphon plumbing.

## **5. ELECTRICAL FEATURES**

### **A. Electric Motors-6" Models**

The motor shall be available in a 208-230 volt or 575 volt, 60 Hz, three phase, 3450 RPM, or 380-415 volt 50 Hz three phase 2850 RPM continuous duty, rated explosion proof for use in Class 1, Group D, petroleum products. The motor windings shall be Class B 130°C and hermetically sealed against leakage of product or moisture. The motor shall have a pilot duty rated thermal overload device with automatic reset built into the motor housing for motor cut-off when motor temperature reaches a level which may cause damage to the motor.

### **B. Connections**

The motor shall have a 5-wire quick-disconnect type male/female connector to be readily separable for servicing without cutting or splicing of conducting wires. Wiring connections to the motor shall be disconnected by the quick-disconnect. Reconnecting motor to pump column pipe and discharge head shall use an alignment dowel pin for positive realignment of electrical male/female connector.

## **6. CONSTRUCTION**

### **A. Accessibility**

All components shall be designed and assembled to facilitate disassembly and servicing from above without disrupting the discharge piping, leak detection equipment and siphon systems.

### **B. Assembly Order**

The pump shall be assembled with the pump inlet and impellers at the bottom for maximum liquid draw. The motor is to be mounted above the pump inlet, so that the motor is both cooled and lubricated by the liquid flow through and past the motor.

### **C. Column Pipe Assembly**

The length of the pump shall be of fixed length construction where the length is dependent upon riser length and tank diameter.

### **D. Riser/flange Assembly**

The manifold shall be secured to the riser flange with the bolt holes in the flange aligned with those in the manifold and the discharge port is aimed in the desired direction.

## **7. ENVIRONMENTAL**

The pump assembly shall be rated for operation between -20°F (-29°C) and 105°F (40.5°C) in non-gelling petroleum products. The pump assembly shall be listed under UL 79 for operation between -20°F (-29°C) and 125°F (52°C) ambient environment. Maximum liquid viscosity : 70 SSU @ 60°F (15°C).

## **8. AGENCY LISTING**

The pump assembly shall meet the standards of UL 79 and carry the following regulatory approvals:

UL  
cUL

## 9. MATERIALS OF CONSTRUCTION

### 6" Red Jacket MAXXUM STP Series

#### PUMP COMPONENTS

- 1) Packer/Manifold Head
- 2) Elastomers - "O" Rings
- 3) Check Valve Seat
- 4) Column Pipe
- 5) Conduit Pipe
- 6) Discharge Head
- 7) Riser Pipe

#### MATERIAL

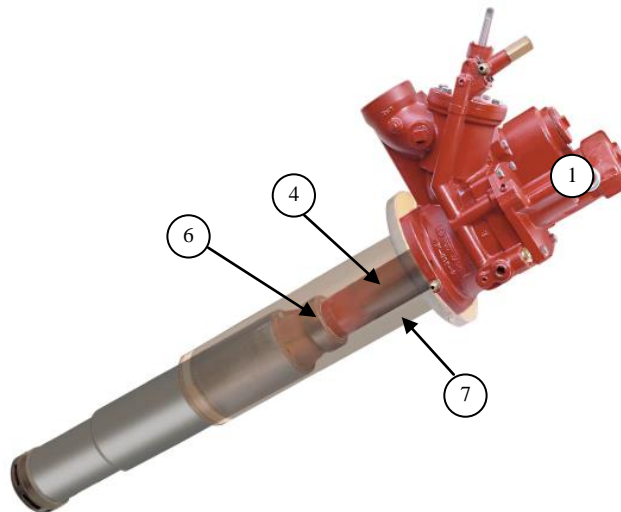
Gray Cast Iron  
Fluorocarbon  
Brass  
3" Schedule 40 Black Steel Pipe  
3/4" Aluminum or Steel  
Gray Cast Iron  
6" Schedule 40 Black Steel Pipe with Welded Flange incorporating 3/4"-10 UNC-2B Threads Located on a 9.5" Bolt Circle

#### PUMP/MOTOR

- 8) Outer Shell
- 9) Stator Shell
- 10) Pump Shaft
- 11) Diffusers
- 12) Impellers
- 13) Motor Bearings
- 14) Motor Shaft

#### MATERIAL

Steel  
Stainless Steel  
Stainless Steel  
3HP - Celcon® (Acetal) Plastic  
5HP - Cast Iron  
3HP & 5HP - Aluminum  
Carbon  
Stainless Steel journals & extension



Veeder-Root manufactures Red Jacket brand submersible petroleum pumps. Direct product inquiries to:

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Veeder-Root reserves the right to make design improvements and pricing modifications as necessary and without notice.

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