



MYERS®

## Specifications 4VL and 4VLX

**PUMP MODEL** – Pump shall be Myers Model Number 4VL / 4VLX Solids Handling Submersible Pump with two-vane enclosed impeller. All openings in pump impeller and volute case to be large enough to pass a 3" diameter sphere. Discharge flange shall be four (4) inch standard. The pump and motor assembly shall be FM listed for Class 1, Division 1 hazardous location service (4VLX only).

**OPERATING CONDITIONS** – Pump shall have a capacity of \_\_\_\_\_ GPM at a total head of \_\_\_\_\_ feet and shall use a \_\_\_\_\_ HP motor operating at \_\_\_\_\_ RPM.

**MOTOR** – Pump motor shall be of the sealed submersible type rated \_\_\_\_\_ HP at \_\_\_\_\_ RPM, 60 Hertz. Motor shall be for three phase 460 volts \_\_\_\_\_ or 575 volts \_\_\_\_\_. Motor shall be NEMA B type.

Stator winding shall be of the open type with Class H insulation good for 180°C (356°F) maximum temperature. Winding housing shall be filled with a clean high dielectric oil that lubricates bearings and seals and transfers heat from winding and rotor to outer shell. Air-filled motors, which do not have the superior heat dissipating capabilities of oil-filled motors, shall not be considered equal.

Motor shall have two heavy duty ball bearings to support pump shaft and take radial and thrust loads. Ball bearings shall be designed for 50,000 hours B-10 life. Stator shall be held in place by four (4) clamp rings on the upper end of the stator; each clamp ring shall be held by two (2) motor bolts.

A heat sensor thermostat shall be attached to and embedded in the winding and be connected in series with the motor starter contactor coil to stop motor if temperature of winding is more than 302°F. Thermostat shall reset automatically when motor cools to safe operating temperature. Three heat sensors to be used on 3 phase motors. The common pump, motor shaft shall be of 416 stainless steel and shall be of tapered design.

**SEALS** – Motor shall be protected by two mechanical seals mounted in tandem with a seal chamber between the seals. Seal chamber shall be oil filled to lubricate seal face and to transmit heat from shaft to outer shell.

Seal faces shall be carbon and ceramic and lapped to a flatness of one light band. Lower seal faces shall be \_\_\_\_\_ carbide (optional).

A double electrode shall be mounted in the seal chamber to detect any water entering the chamber through the lower seal. Water in the chamber shall cause a red light to turn on at the control box. This signal shall not stop motor but shall act as a warning only, indicating service is required.

**IMPELLER** – The impeller shall be ductile iron and of the two-vane solids handling enclosed type. Vane inlet tips shall be carefully rounded to prevent stringy material from catching in vanes. Impeller shall be dynamically balanced. Impeller to be driven by stainless steel shaft key and impeller held in place with lock screw and washer on a tapered shaft. Impeller and motor shall lift off case as a unit without disturbing discharge piping.

**PUMP CASE** – The volute case shall be cast iron and have a flanged center line discharge. Discharge flange shall be four (4) inch standard with bolt holes straddling center line. Bronze wear ring to be bolted into case for guiding impeller neck and to prevent corrosion freeze-up. Wear ring to be held from rotating by locking with stainless steel screws in end of ring.

**PUMP AND MOTOR CASTING** – All castings shall be of high tensile cast iron. The pump shall be painted with waterborne hybrid acrylic/alkyd paint. This custom engineered, quick dry paint shall provide superior levels of corrosion and chemical protection. All fasteners shall be 302 stainless steel.

**BEARING END CAP** – Upper motor bearing cap shall be a separate casting for easy mounting and replacement.

**POWER CABLES** – Power cord and control cord shall be triple sealed. The power and control conductor shall be single strand sealed with epoxy potting compound and then clamped in place with rubber seal bushing to seal outer jacket against leakage and to provide for strain pull. A third sealing area shall be provided by a terminal board to separate the cable entry chamber from the motor chamber. Cords shall withstand a pull strain to meet FM requirements.

Insulation of power and control cords shall be type SOOW and W. Both control and power cords shall have a green carrier ground conductor that attaches to motor frame.