



MYERS®

## Specifications 4VHA and 4VHAX Series

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**PUMP MODEL** – Pump shall be Myers Model Number 4VHA/4VHAX Solids Handling Submersible Pump with two-vane enclosed impeller. All openings in pump impeller and volute case shall be large enough to pass a 2" solid. Discharge flange shall be four (4) inch standard. Pump and motor assembly shall be FM listed for Class 1, Groups C & D hazardous location service (4VHAX 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 200 volts \_\_\_\_\_, 230 volts \_\_\_\_\_, 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 operating temperature. Winding housing shall be filled with a clean high dielectric oil that lubricates bearings and seals and transfers heat from windings 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 and a sleeve guide bushing directly above the lower seal to take radial load and act as flame path for seal chamber. Ball bearings shall be designed for 50,000 hours B-10 life. Stator shall be heat shrunk into motor housing.

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 120°C (248°F). Thermostat to reset automatically when motor cools to safe operating temperature. The common pump, motor shaft shall be of 416 stainless steel.

**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 face 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.

**PUMP IMPELLER** – The impeller shall be cast ductile iron and of the two-vane solids handling enclosed type. Vane inlet tip(s) shall be carefully rounded to prevent stringy material from catching in vane(s). Pump-out vane shall be used in front chamber. Impeller shall be dynamically balanced. Impeller shall be driven by stainless steel shaft key and impeller held in place with lock screw and washer. Impeller and motor shall lift off case as a unit without disturbing discharge piping. Impeller neck shall run in brass wear ring that is pressed into volute case.

**PUMP CASE** – The volute case shall be cast iron and have a flanged center line discharge. Discharge flange shall be 4" standard with bold holes straddling centerline. A brass wear ring shall be pressed into case for guiding impeller neck and to prevent corrosion freeze-up. Wear ring shall be held from rotating by locking with stainless steel set screw in end of ring.

**PUMP AND MOTOR CASTING** – 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 double 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. Cords shall withstand a pull strain to meet FM requirements.

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