

Specifications - PFPO2LA-6C (2x2), PFPO3LA-8D (3x3)

General:

Furnish and install a quantity of _____ Power-Flo® Pumps & Systems self-priming centrifugal pump(s), Model _____, with a ___ inch horizontal discharge. Each pump shall be capable of delivering the following performance, _____ U.S. GPM at _____ Feet Total Dynamic Suction Lift and Maximum Priming Lift at _____ Feet, at _____ Efficiency. Each pump shall run at _____ RPM. Each pump shall be mounted on a fabricated steel base equipped with either a flex coupling or v-belt drive assembly, guard, and a _____ HP, _____ Volt, ___ Phase, ___ Hz., _____ Rpm, horizontal electric motor with a _____ type enclosure.

Pump Design:

The pump(s) shall be capable of handling 1-1/4 inch diameter spherical solids, any trash or stringy material. Each pump shall be designed to maintain adequate liquid in the pump case to ensure unattended automatic re-priming while operating at its rated speed in a completely open system without suction or discharge check valves and with a dry suction leg. Upon re-priming, the pump shall deliver full speed rated design capacity. The pump (s) shall be capable of handling liquids with temperatures to 160°F continuous.

Pump Construction:

The pump case, volute/wear plate and bearing housing shall be constructed of no less than Class 30 cast iron. An air dry enamel shall be used on all exposed pump surfaces and all exposed hardware shall be corrosion resistant plated steel. The PFPO2LA-6C shall be equipped with standard 2 inch NPT suction and discharge connections and shall have a neoprene check valve as an integral part of the suction elbow. The pump suction elbow shall be made so that it can be rotated 90 deg., right or left or in the straight forward position.

The PFPO3LA-8D shall be equipped with standard 3 inch 125lb flat face flanged suction and discharge connections. The suction elbow shall have a integral neoprene check valve that can be cleaned or replaced through a large two bolt cover without removing the suction piping. The pump suction elbow shall be made so that it can be rotated 90 deg., right or left or in the straight forward position.

The impeller shall be a two-vane, cast ductile iron, semi-open, non-clog type, with pump out vanes on the back side to help eliminate foreign material build up and reduce pressure on shaft seal. The impeller shall be keyed and to the shaft and secured with washer and stainless/Nylock nut.

The impeller is to be equipped with the proper means for pulling off the shaft without removing the pedestal assembly from the pump or removing the piping. The impeller shall be dynamically balanced.

The pump shall be designed with a full diameter clean out cover for full access to the interior of pump for removing obstructions and to allow access for service and repairs without removing the suction and discharge piping. The pump case shall be round facilitating maximum self-cleaning and efficient operation. The pump shall have a replaceable volute/wearplate, and a alloy steel seal plate permitting the replacement of the expendable parts without replacing the pump case. Replacement of the wearplate, impeller, seal plate shall be accomplished through the removable end cover without disturbing the piping. The complete rotating assembly, which includes the impeller, shaft seal, shaft bearings and pedestal shall be removable without disturbing the pump case or piping. Means shall be provided for the external adjustment of the impeller and volute/wearplate clearance.

A spring loaded mechanical seal shall be supplied to seal shaft against leakage. The materials of construction shall be carbon for rotating face and ceramic for the stationary face, lapped and polished to a tolerance of one light band as measured by an optical flat and monochromatic light, 300 series stainless steel hardware and Buna-N elastomer parts.

The seal shall be commercially available and not a proprietary design of the pump manufacture. To insure the seal faces are in full contact at all times, the stationary seal gasket shall be of the resilient double floating type and self-aligning during periods of shock loads that will cause deflection, vibration, and axial or radial movement of the pump shaft. The mechanical shaft seal shall be installed within a separate grease filled reservoir that will be force filled by a spring loaded grease cup. The grease reservoir is to be separated from the pump pedestal in order to prevent possible contamination. The seal must be removable and replaceable through the cover opening.

The shaft shall be of high carbon steel and be contained within a bearing pedestal of ample size to contain heavy duty thrust bearing and radial bearing of adequate size to withstand all imposed loads. Bearings shall be oil lubricated with the bearing pedestal separate from the pumped liquid to prevent lubricating oil contamination. A visual means of checking lubricating oil level shall be provided.

