

Specifications - PFSPTAM3 (3x3), PFSPTAM4 (4x4), PFSPTAM6 (6x6)

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 _____ inch diameter spherical solids, any trash or stringy material and specifically designed for pumping raw, unscreened sewage and domestic sanitary sewage. 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 check valves 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, cover plate, bearing housing and seal plate 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. Each pump shall be equipped with cast iron suction and a discharge spool flange assemblies. Each spool assembly shall be of a one piece design with 125# flanges and have one 1-1/4 NPT and one 1/4" NPT holes with pipe plugs for instrumentation.

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 threaded onto the shaft and secured with washer and capscrew.

The pump shall be equipped with a fill port to allow 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 fill port shall have a removable gasketed cover plate which can be removed by loosening a clamp bar/screw assembly.

The pump shall have a replaceable wear plate, which along with the impeller, seal and suction check valve can be replaced through the removable back cover plate opening. The entire rotating assembly shall be removable as a unit, which shall include the impeller, shaft, bearings, and seals, without disturbing the pump casing or piping.

A suction check valve, used to eliminate re-priming with each cycle, shall be incorporated into the pump which can be removed or installed through the fill port cover plate opening and without disturbing the suction piping. Pumps requiring suction check valves to prime or re-prime will not be acceptable.

A spring loaded mechanical seal shall be supplied to seal shaft against leakage. The materials of construction shall be tungsten carbide for both the stationary and rotating members, 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 Viton 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 seat shall be of the 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 shaft seal and bearings shall be oil lubricated from separate, oil-filled reservoirs. A visual means of checking oil level shall be provided.

The shaft bearings shall be heavy duty ball type, designed and size to withstand radial and thrust loads under normal operations. The oil-filled bearing cavity shall be separate from seal cavity and shall have an oil level sight gauge an fill plug air vent. The sight gauge shall be clear, and provide for monitoring of oil condition and level in the cavity without removing of the fill/air vent plug. The shaft shall be of a 420 stainless steel and protected with a stainless steel shaft sleeve.

Clearance between the impeller and wear plate shall be accomplished by externally adjusting the entire rotating assembly. Adjustments by moving the shaft shall not be accepted.