

Specifications – Ejector

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3" & 4" SUBMERSIBLE SEWAGE PUMPS

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Furnish all labor, materials, equipment and incidentals required to provide _____ (qty.) solids handling submersible centrifugal sewage pumps(s) as specified herein.

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Each pump shall be rated _____ HP, _____ volts, _____ phase, _____ hertz, and _____ RPM. The unit shall produce _____ U.S. GPM at _____ feet TDH. The S3S shall be capable of handling a 2-1/2" spherical solid and the S4S a 3" spherical solid. The pump shall be non-overloading throughout the entire range of operation without employing service factor. The pump shall reserve a minimum service factor of 1.20. The performance curve submitted for approval shall state in addition to head and capacity performance, the pump efficiency and solid handling capability.

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Each pump shall be of the sealed submersible type, Models S3S, S4S, SB3S, SB4S, S3SD, S4SD, SB3SD, and SB4SD as manufactured by Hydromatic Pump. The pump volute, motor and seal housing shall be high quality gray cast iron, ASTM A-48, Class 30. The pump discharge shall be fitted with a 3" standard ASA 125 lb. flange, faced and drilled for the S3S models, and a 4" standard ASA 125 lb. flange, faced and drilled for the S4S models. All external mating parts shall be machined and Nitrile O-ring sealed on a beveled edge. Gaskets shall not be acceptable. All fasteners exposed to the pumped liquids shall be 300 series stainless steel.

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Electrical power cord shall be SOOW or W, water resistant 600V, 90°C, UL and CSA approved and applied dependent on amp draw for size.

The pump shall be double protected with compression fitting and an epoxy potted area at the power cord entry to the pump.

The power cable entry into the cord cap assembly shall first be made with a compression fitting. Each individual lead shall be stripped down to the bare wire, at staggered intervals, and each strand shall be individually separated. This area of the cord cap shall then be filled with an epoxy compound potting which will prevent water contamination to gain entry even in the event of wicking or capillary attraction.

The power cord assembly shall then be connected to the motor leads with insulated butt connectors rather than a terminal board that allows for possible leaks.

The cord cap assembly where bolted to the motor housing shall be sealed with a Nitrile O-ring on a beveled edge to assure proper sealing.

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The stator, rotor and bearings shall be mounted in a sealed submersible type housing. The stator windings shall have Class F insulation (155°C or 311°F) and dielectric oil-filled motor, NEMA B design. Single-phase motors shall have thermal type overload protection with automatic reset and be capacitor start with capacitor located in the control panel. Three phase motors shall use magnetic starters with overload relays located in the control panel for further protection. Because air-filled motors do not dissipate heat as efficiently as oil-filled motors, air-filled designs shall not be acceptable.

Stators shall be securely held in place with threaded fasteners so they may be easily removed in the field. No special tools shall be required for pump and motor disassembly.

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