

Frame Mounted End Suction, Flanged Connection

General

Furnish and install as shown on the plans, _____ (qty) Weinman End Suction Series 500 size (____x____x____) model _____ centrifugal pump(s). Each shall be capable of pumping _____ GPM when operating against a total pumping head of _____ feet (suction lift/suction pressure) at the temperature, specific gravity and viscosity indicated. The pump shall operate at _____ RPM and shall have _____ percent minimum efficiency at the design point. The pump(s) shall be rated for continuous service and shall be bronze fitted construction suitable for pumping a liquid with the following characteristics:

- Liquid handled _____
- Specific Gravity _____
- Temperature _____
- Viscosity of liquid at pumping temperature _____
- NPSHA _____

Note: Add any additional facts concerning the nature of the liquid or installation which might affect the pump construction, application or operation.

Construction

The adapter to the casing is to be one piece cast iron construction capable of mounting a type 21 mechanical seal with carbon/(ni-resist)(ceramic) faces, stainless steel metal parts and elastomers, rated at (180)(230) degrees F. Casing shall be of cast iron ASTM-A48, Class 30 cast iron with tensile strength of 30,000 psi. Pump unit shall be capable of standing hydrostatic test pressures of 1.5 times maximum working pressure. All assembly points shall be of machine register fit to assure proper alignment. The flanged casing discharge nozzles shall conform to ANSI B16.1 specifications with minimum 125 psi ratings at 230 degrees F. A renewable wear ring shall be fitted to the case at the suction fitting.

The casing shall have tapped and plugged drain connections, air vent and 1/4" npt gauge tappings on the suction and discharge nozzles. The case shall be of the suction cover design for ease of maintenance and service with out disturbing discharge piping, bearing frame or motor mounting. The impeller shall be of the enclosed design constructed of ASTM B584 Bronze (with a renewable impeller wear ring).

The motor shaft shall be steel and protected with a (bronze)(stainless steel) sleeve heat fit to the shaft. A neoprene deflector shall be mounted on the shaft to prevent liquid from entering the motor.

The bearing frame shall have a 4140 steel shaft sized for a maximum deflection of .002 inch at the seal faces when the pump is operating (at _____) maximum load conditions. The bearings shall be grease lubricated having a 3-year minimum life (AFBMA B10) under the maximum load conditions. The shaft and bearings shall be mounted in a cast iron ASTM-A48 Class 30 frame.

The pump frame and motor shall be mounted on a common fabricated heavy steel base plate with (drip pan) and mounting flanges the length of both sides, grout holes, and platform motor riser with no more than 1" high motor blocks. The pump shall be coupled to the driver through a flexible (spacer)(non-spacer) type coupling covered by an (OSHA type)(standard) coupling guard.

Testing

The following (witnessed)(non-witnessed) tests are to be performed in accordance to Hydraulic Institute test standards.

- _____ Pump performance (A)(B) tolerance level
- _____ Routine Motor test
- _____ Hydrostatic - Complete Pump

Motor

The motor shall be not less than _____ hp _____ RPM, NEMA design B squirrel cage type, (drip proof)(TEFC) EISA efficiency motor with (1.15)(1.0) service factor and suitable for operation on (115)(230) volt, 1 phase, (50) (60) Hertz power supply OR (200)(230)(460)(575) volt, 3 phase, 60 hertz power supply. Motor size shall be sufficient to prevent overloading at operating conditions or at the lowest listed head conditions whichever point requires greater horsepower. Following installation, grouting and connection of all piping, pump and motor must be checked for alignment in accordance with standards of the Hydraulic Institute.