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SECTION: 2.25.074

FM1240

1014

Supersedes

0904

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SPECIFICATIONS SHEET
MODEL 840
GRINDER PUMP SYSTEM



1) Grinder Pump (Zoeller Model 840).....

Each unit shall be capable of delivering, equally forward or reverse, a minimum of 15 GPM at 81' TDH and have a shut-off head of 104 ft. The Grinder Pump shall be UL Listed.

The pump shall have a submersible type motor with an attached grinder unit. The pump is designed to operate in such a fashion that solids shall be fed in a downward, horizontal, and upward direction into the grinder mechanism as the high head pumping unit develops suction at the inlet. The grinder cutting blades shall have the ability to be directional reversed automatically or manually for longer cutter life.

The grinder shall be capable of cutting materials normally found in sewage such as sanitary napkins, disposable diapers, panty hose, wash rags, and food particles into a fine slurry which will pass freely through the pump and force main.

1A) Design Conditions.....

[] Simplex system (1 Pump)

[] Duplex system (2 Pumps)

_____ GPM required

_____ Total Dynamic Head

_____ Shut-off Head

Voltage.....

[] 200-208V/1 Phase

[] 230V/1 phase

[] 200-208V/3 phase

[] 230V/3 phase

[] 460V/3 phase

[] 575V/3 phase

1B) The motor shall have the following features:

- 2 HP, 60 Hz, 3450 rpm motor.
• Durable, heavy duty, oil-filled, finned cast iron housing for heat dissipation and seal/bearing lubrication.
• Class F motor insulation...155°C./311°F.
• Operate over the complete performance curve without overloading or excessive vibration.
• Single upper and lower ball bearing.
• Single phase thermal overload protection with automatic reset.
• Three phase internal thermal sensor protection.
• 20' lengths of UL Listed power and sensor cable.
• Integral wired-in rotor/shaft directional reversing action.
• ANSI 416 Stainless steel rotor shaft.



1C) The pump and castings shall have the following features:

- Hermetically sealed enclosure.
- 1¼" NPT vertical discharge.
- 304 SS fasteners and lifting bail.
- Carbon/ceramic mechanical seals located in tandem.
- Seal leak moisture sensing probes.
- Balanced ductile iron vortex impeller, keyed and bolted to a stainless steel shaft, with top pump out vanes.
- The cutting assembly and impeller shall be replaceable without complete disassembly of the pump.
- Corrosion resistant powder coated epoxy finish.
- ASTM A-48 Class 30 grey cast iron housing with integral fins for maximum heat dissipation.
- UL Listed.

1D) The cutter & shredder mechanism shall have the following features:

- The rotary cutter, #440 SS hardened to a 55-60 Rockwell C, is keyed and bolted to a stainless steel shaft.
- The cutter is capable of forward and reverse rotation by means of an automatic or manual controller without removal from the pit.
- The SS shredding disc will be mounted onto the lower casting with SS cap screws.
- The cutter and shredding disc can be removed without disassembling the pump for easy surface reconditioning.

1E) Grinder pump options.....

Extra Cord Lengths:

- 25'
- 30'
- 50'

The following is a list of components which make up a grinder pump lift station, whether it be a simplex or duplex installation. You should check off the components required in this application and any additional options which are listed in the following sections.

2) Control panel.....

The control panel shall be housed in a NEMA 4X enclosure and be of a simplex design which controls a single pump from a 3-float system or a duplex design which controls two pumps in an alternating lead/lag cycle sequence from a 3 or 4-float system. The panel shall contain the required starting, control, & alarm circuits. Rated motor starters and circuit breakers are required for each pump. The 115 volt control circuit shall have short circuit protection. The panel shall have pump run pilot light(s) and pump & alarm selector switches. The panel shall be equipped with circuit(s) which automatically reverses the direction of the cutter blades. A seal leak indicator light is required as well as a thermal cut-out connection for 3 phase systems. A padlock hasp shall be provided. High water conditions shall be indicated by a visible light with polycarbonate cover. Numbered terminal strips are required. A wiring schematic and trouble shooting guide shall be included with each panel. The panel shall be UL listed and be labeled as such.

2A) Control panel options.....

- Audible high water alarm.
- Flasher for high water light.
- Moisture detection circuit(s) with relay and external indicating light(s).
- Intrinsically safe relays.
- Elapsed time meter(s).
- Dry auxiliary alarm contact for high liquid level.

