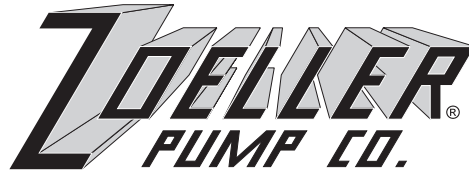


"QUALITY PUMPS SINCE 1939"

Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.



SECTION: 5.10.340
FM1240
0904
Supersedes
0603

MAIL TO: P.O. BOX 16347 • Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road • Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP • FAX (502) 774-3624

visit our web site:
www.zoeller.com



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, pantyhose, 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.....

- | | | |
|---|---------------------------------------|---|
| <input type="checkbox"/> 200-208V/1 Phase | <input type="checkbox"/> 230V/1 phase | <input type="checkbox"/> 200-208V/3 phase |
| <input type="checkbox"/> 230V/3 phase | <input type="checkbox"/> 460V/3 phase | <input type="checkbox"/> 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 bronze 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 re-conditioning.

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.
- Seal leak relay(s) with external indicating light(s).
- Manual reversing switch(s).
- Intrinsically safe relays.
- Elapsed time meter(s).
- Dry auxiliary alarm contact for high liquid level.

3) Variable level float switches.....
 Variable level with 20' cords.
 Adjustable weights and Mounting bracket

3A) Float switch options.....
 Extra cord length _____ft.

4) Indoor basin and cover only
 Simplex, 24" Dia. X 36" Deep
 Duplex, 30" Dia. X 36" Deep
 Fiberglass construction, 4" cast iron inlet hub (field mounted), 1/4" gasketed steel cover, seal(s) for 1 1/4" Discharge & 3" vent connections, pump cover(s), inspection plate, and cord seal(s).

4A) Prepackaged/Job Ready Indoor Basin **
 Fiberglass construction, 1/4" gasketed steel cover with inspection plate, pump cover(s), and pump support hardware. Also provided is a 4" cast iron inlet hub for field mounting, 1 1/4" discharge connection(s), 3" vent seal, cord seal(s), 1 1/4" ball valve(s), and 1 1/4" check valve(s).
 Simplex construction, 24" dia. x 36" Deep
 Duplex construction, 30" dia. x 36" Deep

4B) Indoor Basin & Cover Options....
 1 1/2" Discharge connection
 1 1/2" PVC shut-Off Valve
 1 1/2" Check Valve
 2" Vent connection
 Additional 4" cast iron inlet hub

5) Outdoor basin and cover only
 Fiberglass construction with solid cover and anti-flotation device. Diameter: 24" simplex / 36" duplex. 4" cast iron inlet hub and, 1 1/4" Discharge seal(s) for field mounting.
Depth dimensions: 48 inches
 60 inches
 72 inches
 84 inches
 96 inches
 _____ other

5A) Prepackaged/Job Ready Outdoor Basin ***
 Fiberglass construction with solid cover and anti-flotation device. Diameter: 24" Simplex/36" Duplex. 4" cast iron inlet hub for field mounting and 1 1/4" PVC discharge pipe with 1 1/4" ball valve(s) and 1 1/4" check valve(s) installed. Rail system with square stainless rails provided. Stainless steel lifting cable and rod included.
Basin Depth: **Over Head Clearance Required:**
 48 inches 3 feet
 60 inches 4 feet
 72 inches 5 feet
 84 inches 6 feet
 96 inches 7 feet
 _____ other

SIMPLEX SYSTEMS	DUPLEX SYSTEMS
<input type="checkbox"/> 3 Req.	<input type="checkbox"/> 3-Float <input type="checkbox"/> 4-Float
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

** NOTE: IN A PREPACKAGED INDOOR SYSTEM SELECT COMPONENTS IN SECTIONS 1A, 1E, 2, 2A, 3, 4A AND 4B.

*** NOTE: IN A PREPACKAGED OUTDOOR SYSTEM SELECT COMPONENTS IN SECTIONS 1A, 1E, 2, 2A, 3, 5A, 5B AND 9.

5B) Outdoor basin & cover options

- 1½" Discharge connection
- Additional 4" cast iron inlet hub
- Epoxy coated solid steel cover
- 1½" PVC discharge pipe and valves (Prepackaged System only)

5C) Stainless steel lifting cables:

- 8 feet
- 12 feet
- 16 feet
- 20 feet
- 24 feet

5D) Pull Rods:

- 1 feet
- 2½ feet
- 3½ feet
- 4½ feet
- 5½ feet

6) Rail systems - Field Installed.....

- Discharge Pipe Size 1¼" 1½"
- Rail System includes baseplate, angle arm bracket, check valve, shut-off valve, pipe fittings, and hardware.
- Depth dimensions:** _____ inches

6A) Angle Arm Bracket.....

Required for field assembled system basins over 72" deep

7) Check valves.....

- Full flow cast iron construction, rated 50 PSIG (115 ft.) @ 130°F., N.P.T threaded ends, neoprene reinforced flapper, stainless steel fasteners.
- Sizes available:** 1¼ inches
- 1½ inches

8) Ball valve.....

- PVC construction
- Sizes available:** 1¼ inches
- 1½ inches

9) Junction box.....

- Nema type 4X construction, watertight seals for SO cordage.
- 5-hole for simplex systems - 3 switch system
- 7-hole for duplex systems - 3 switch system
- 8-hole for duplex systems - 4 switch syste

SIMPLEX SYSTEMS	DUPLEX SYSTEMS
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<input type="checkbox"/> One Req.	<input type="checkbox"/> Two Req.
<input type="checkbox"/> One Req.	<input type="checkbox"/> Two Req.
<input type="checkbox"/> One Req. <input type="checkbox"/> One Req.	<input type="checkbox"/> Two Req. <input type="checkbox"/> Two Req.
<input type="checkbox"/> One Req. <input type="checkbox"/> One Req.	<input type="checkbox"/> Two Req. <input type="checkbox"/> Two Req.
<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

**** NOTE: IN A PREPACKAGED INDOOR SYSTEM SELECT COMPONENTS IN SECTIONS 1A, 1E, 2, 2A, 3, 4A AND 4B.**

***** NOTE: IN A PREPACKAGED OUTDOOR SYSTEM SELECT COMPONENTS IN SECTIONS 1A, 1E, 2, 2A, 3, 5A, 5B AND 9.**



www.zoeller.com



MAIL TO: P.O. BOX 16347
Louisville, KY 40256-0347
SHIP TO: 3649 Cane Run Road
Louisville, KY 40211-1961
(502) 778-2731 • 1 (800) 928-PUMP
FAX (502) 774-3624

Manufacturers of..

"QUALITY PUMPS SINCE 1939"