



Sample Specifications for Submersible Type UW Sewage Non-Clog Pumps.

Peerless Pump Type UW Non-Clog Sewage Pumps

Furnish one two Peerless Pump Type UW non-clog centrifugal sewage pump(s) complete with motor(s) and automatic controls.

Each pump shall have a cast iron casing and be equipped with a cast iron enclosed impeller dynamically balanced for all hydraulic loads within the pump's operating range. Each impeller shall be keyed to the motor shaft and secured in place by means of a lock screw. A substantial tripod support shall be cast integral with the pump casing. The design of the pump shall permit removal of the motor-shaft-impeller assembly without need to disconnect the discharge piping or to remove the pump casing from the basin. Each pump shall be driven by a _____ hp _____ volt _____ phase 60 Hertz _____ RPM AC motor which shall be UL listed for use in Class 1 Group D Hazardous Locations. Each motor shall have a corrosion resistant cast iron frame, cast iron end shields and a stainless steel motor/impeller shaft. Each motor shall incorporate an inner and an outer water seal with moisture sensing probe which will sense the presence of water in the event of seal failure. Thermal protection rated NEMA MG1-12 shall be standard with insulation compatible with Class B rated system with Class F components. Motor shall be furnished with not less than 30 feet of multi-conductor cable with ground wire as standard. Each pump shall be rated for a capacity of _____ GPM when discharging against a total head of _____ feet.

Moisture Detection Relay Panel

Provide one two moisture detection relay panel(s) with amber outer seal failure warning light, motor moisture probe cable, continuity check circuit including light and circuit check push button, N.O.set of 1 pole contacts for alarm device by others in NEMA I NEMA 4 enclosure for remote mounting

Basin and Basin Cover

Provide one cast iron fiberglass iron basin _____ inch diameter and _____ feet _____ inch deep. Centerline of lowest inlet to basin shall be located not less than 48 inches above bottom of basin. Provide one steel basin cover with access opening, vent and cord grip fittings where motor cables pass through the basin cover. Where each pump discharge passes through the basin cover, provide a flexible connector (two bolt flange and sealing ring) to seal opening around discharge pipe.

Automatic Pump Controller

Provide one: (Select one):

- Float operated switch to start and stop one pump at preset water levels to be used in conjunction with full voltage motor starter furnished by others.
- Mechanical Alternating Float operated switch to start and stop two pumps at preset water levels and alternate lead-lag pump operation to be used in conjunction with full voltage motor starters furnished by others.
- Peerless Pump Series P Sealtrode® Floatless Pump Controller Model _____ for the automatic control of one two pumps. (For Sealtrode specifications see Section 6620).



SUBMERSIBLE SEWAGE PUMPS Type UW

UW PUMP AND MOTOR DATA

Pump Model	Disc. Pipe Size	Maximum				Minimum Basin Size (inches)			Min. Water Level Inches	
		Imp. Dia.	Sphere Size	Pump RPM	Running Cycles per Hour	Round or Square x Depth			Continuous Operation 40° C Amb. 15 Min. Max.	Intermittent Operation
						Simplex	Duplex	Duplex w/ Flush Kleen Fittings		
UWNSB3	3	7	2	1750	8	30 x 60	42 x 60	48 x 72	26	10
UWNSBC4	4	7	2	1750	8	30 x 60	42 x 60	48 x 72	26	10
UWLMB3	3	7	2-1/2	1750	8	30 x 60	42 x 60	48 x 72	26	11
UWLMB4	4	7	2-1/2	1750	8	30 x 60	42 x 60	48 x 72	26	11
UWLLB3	3	11	2	1750	8	36 x 60	42 x 60	48 x 72	30	12
UWLLBC4	4	11	2	1750	8	36 x 60	42 x 60	48 x 72	30	12
UWLMB4A	4	9	3	1750	8	36 x 60	42 x 60	48 x 72	32	13

Recommended Maximum Pump Capacity versus Basin Size (for continuous operation with basin inlet at a minimum of 60 inches from bottom).						
Basin Size inches (Round or Square)	30	36	42	48	60	72
Simplex GPM	100	150	200	300	400	600
Duplex GPM	-	-	200	300	500	600

SERVICE LIMITATIONS

Units are designed for continuous duty submerged in liquids containing a maximum solid content 10% by weight to 90% liquid normally encountered in sewage lift or sump pump applications and limited to corrosion limits of standard materials of construction. 40° C. (105° F.) maximum liquid temperature. Motors less than 1 hp. labeled Cl. 1 Group D are supplied with a cautionary nameplate and are suitable only when vapor or gas ignition temperature are 280° C. or greater. All units must be provided with a magnetic full voltage (across-the-line) motor starter. The motor thermal protector must be wired in series with the pump liquid level controller and starter contactor holding coil for motor warranty to be valid.

The motor thermal protectors are limited to control circuits in which the maximum current does not exceed the following values.

Volts	Amps	Inrush Amps
110-220	3.00	30.0
220-240	1.50	15.0
440-480	.75	7.5
575	.60	6.0

MOTOR DATA

Reliance, vertical, submersible, T Frame, NEMA B design, universal flange close coupled mounted motor with automatic reset thermal overload protector, moisture detection probe in oil filled chamber sealed with two mechanical seals, prelubricated ball bearings with a minimum B-10 life of 15,000 hours. Class B rated insulation for 40° C. maximum ambient liquids. 1.0 service factor 3/4 Hp., 1.15 Service factor 1 Hp and up.

MOTOR FULL LOAD AMPS

3 phase

Volts	208		230		460		575	
	1150	1750	1150	1750	1150	1750	1150	1750
¾ hp	3.7	-	3.2	-	1.6	-	1.3	-
1 hp	4.8	5.8	4.2	5.0	2.1	2.5	1.7	2.0
1½ hp	6.7	6.9	5.8	6.0	2.9	3.0	2.3	2.4
2 hp	8.5	8.3	7.4	7.2	3.7	3.6	3.0	2.9
3 hp	11.0	12.0	9.6	10.4	4.8	5.2	3.8	4.2
5 hp	17.5	16.6	15.2	14.4	7.6	7.2	6.9	6.6
7½ hp	26.4	24.2	23.0	21.0	11.5	10.5	9.2	8.4
10 hp	-	32.3	-	27.0	15.5	13.5	-	10.8
15 hp	-	48.3	-	42.0	19.5	21.0	-	16.8
20 hp	-	64.4	-	56.0	27.0	28.0	-	22.4

1 phase

Volts	208		230	
	1150	1750	1150	1750
¾ hp	15.2	-	7.6	-
1 hp	18.0	17.6	9.0	8.8
1½ hp	25.0	23.0	12.5	11.5
2 hp	31.6	28.0	15.8	14.0
3 hp	42.0	40.0	21.0	20.0
5 hp	-	-	32.0	30.0

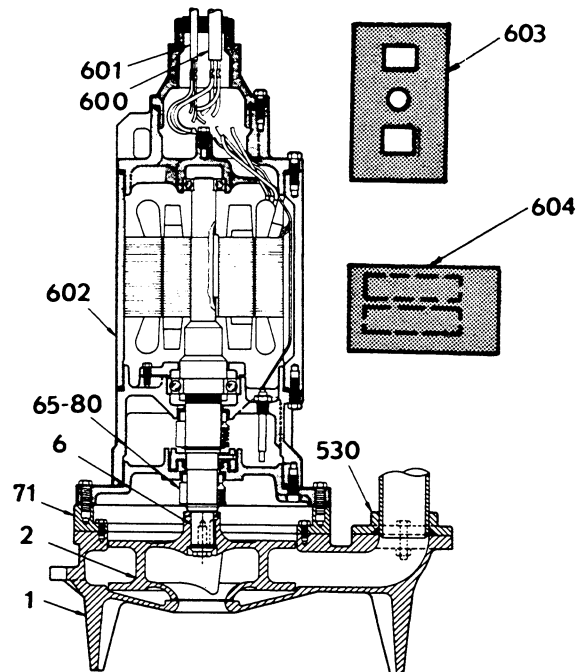
SUBMERSIBLE SEWAGE PUMPS
Type UW



Peerless Pump Company
 Indianapolis, IN 46207-7026

Standard Pump Construction

Item	Description	Material
1	Casing	Class 30 Cast Iron
2	Impeller 2 Vane Non-Clog Closed Type	Class 30 Cast Iron
6	Motor/Impeller Shaft	Stainless Steel
65-80	Outer Mechanical Seal	Stainless Steel Metal Parts Ceramic Seat Carbon Rotating Washer Buna-N Rubber Flexible Members
517	Discharge Pipe Packing O Ring	Rubber
530	Discharge Packing Ring Flange	Class 30 Cast Iron
600	4 Conductor, 30 Feet, Motor Lead Cable 1 for Ground	Copper Stranded Conductors, Vinyl or Neoprene
601	4 Conductor, 30 Feet, Thermal Protector & Moisture Detection Circuit Cable	Jacketed, Epoxy Sealed Buna -N Terminal Head Grommet
602	Motor Housing	Cast Iron with Stainless Steel Fasteners



Standard Accessory Equipment

Item	Description
603	Moisture detection relay panel with amber outer seal failure warning light with continuity check circuit including light and circuit check push button, N.O.set of 1 pole contacts for alarm device by others in NEMA I enclosure for remote mounting
604	Single Phase Capacitor Panel with Starting Relay and Terminal Block in NEMA 1 Enclosure for Remote Mounting

Optional Accessory Equipment

Item	Description
603	Moisture detection relay panel with amber outer seal failure warning light with continuity check circuit including light and circuit check push button, N.O.set of 1 pole contacts for alarm device by others in NEMA 4 enclosure for remote mounting
-	Screwed or Flanged 45° Basin Cover Mounted Discharge Elbows
-	6 x 4 Flush Kleen® Fittings
-	Sealtrode® Floatless Controls, C84 Float Controls, High Water Alarms
-	Cast Iron, Fiberglass Basins; Steel Basin Covers and Curb Rings