

Water Proof Pump Set

Specifications & Ordering Information

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Designed for applications where fuel oil pumps can't be installed above historic flood levels due to suction lift constraints, **Preferred's waterproof pumps** are designed to be installed below grade level, withstand seawater inundation, and continue supplying diesel fuel to critical generators and boilers. They are rated for 75ft of water submersion.

Available in sizes from the NYC approved LO-101 (20 gph) to the LO-205 (1100 gph) pump sizes, they are protected by an epoxy-enamel painted carbon steel enclosure with flanged access door.

Additional features include:

- Oil suction and discharge fittings on the exterior of the enclosure
- Preferred HD-A2C discriminating leak detector installed at the low point of the enclosure to alert operators to the presence of water or oil in the containment vessel.
- 30' high voltage conduit "pig tail" with motor leads for connection above historic flood levels
- 30' low voltage conduit "pig tail" for leak detector wiring
- Sealed conduit to stop water in the conduits from entering the pump enclosure
- Flanged access door and sliding tray for easy pump removal

These pumps have been tested under load and show only negligible temperature rise inside the enclosure.

Waterproof Light Oil Pump & Motor Assemblies

The WP line of pump enclosures is available stand-alone, or with Preferred ATPS or SATPS style pump accessories to be mounted above expected flood levels. Pump control panels, motor starters, strainers, gauges, and switch packages are available to integrate seamlessly with Preferred WP pumps. Product details subject to change.

Application

Oil pump and motor assembly shall be factory assembled in an epoxy-enamel coated carbon steel waterproof enclosure with external threaded connections for pump suction and discharge. The base-mounted motor shall be directly connected by a flexible coupling to abi-rotational, internal gear pump, having self-adjusting mechanical seals and cast iron housing. The pump and motor assembly shall be mounted on a sliding steel base for easy access. Stainless steel flex hoses shall connect pump suction and discharge to couplings welded to the pump enclosure. A PreferredHD-A2C discriminating leak detector shall be installed at the low point of the pump enclosure to detect and annunciate the presence of oil or water. Electrical connections shall include sealed conduit and wire pigtails for termination above expected high water levels. Pump and motor assemblies shall be Preferred Utilities Manufacturing Corp., Danbury, CT.

- (a) Pressure tested to a minimum of 40 psi for 15 minutes.
- (b) Testing for heat buildup, running unsubmerged continuously for 45 minutes.
- (c) Minimum five years' experience producing WP design, have field engineers, etc.

Motors

The pumpset shall include two (2) TEFC, rigid base, standard NEMA frame motors. Motors sized to develop no less then ___ HP at ___ RPM using ___ V, _ P, 60 Hz electrical service. Motor shall have copper windings; a dynamically balanced rotor, ball bearings and a heavy gauge steel NEMA frame. Any pump design which exposes the motor itself directly to water shall not be acceptable.

Pressure Testing

The Waterproof pump design shall have been tested under controlled conditions to an external pressure of 40 psi for no less than 15 minutes. The test shall be observed by a third party and documented, including the results. After the test the enclosure shall be unsealed and inspected for any liquid. Waterproof pump manufacturer shall test a minimum of five (5) pumps based on the design, and all must withstand the pressure for the duration listed above with no liquid gaining access to the pump components or the interior of the sealed enclosure.

Temperature Testing

The Waterproof pump shall be tested in unsubmerged conditions for temperature buildup by running continuously for no less than 45 minutes with a temperature rise of less than 12 degrees F. Ambient conditions in the testing area shall be no less than 65 degrees F. Fuel shall be pumped at a pressure of 100 psi minimum from a testing reservoir between 500 and 1,000 gallons at ambient temperature. Temperature of the internal enclosure space, testing area ambient air shall be observed by a third party and recorded at 5-minute intervals. External temperature measurement, or temperature measurement via infrared shall not be acceptable. Waterproof pump manufacturer shall test a minimum of five (5) pumps based on the design.

Manufacturer Requirements

The Waterproof pump shall be manufactured by a company with at least five (5) years of experience producing and commissioning waterproof pump designs. Manufacturer must have field service engineers available for startup and commissioning.



Waterproof Pumps Prior to Shipment to New York City

Specs found here



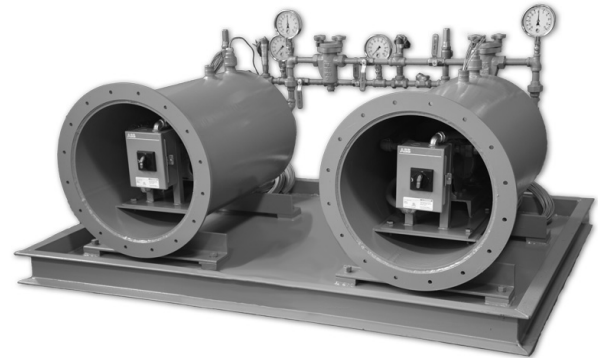
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Suggested Specifications

Oil pump and motor assembly shall be factory assembled in an epoxy-enamel coated carbon steel waterproof enclosure with external threaded connections for pump suction and discharge. The base-mounted motor shall be directly connected by a flexible coupling to a bi-rotational, internal gear pump, having self-adjusting mechanical seals and cast iron housing. The pump and motor assembly shall be mounted on a sliding steel base for easy access. Stainless steel flex hoses shall connect pump suction and discharge to couplings welded to the pump enclosure. A Preferred HD-A2-C discriminating leak detector shall be installed at the low point of the pump enclosure to detect and announce the presence of oil or water. Electrical connections shall include sealed conduit and wire pigtails for termination above expected high water levels. Pump and motor assemblies shall be Preferred Utilities Manufacturing Corp., Danbury, CT. WT___ rated at ___ GPH (No.2), (No. 4), (Diesel) all or against a discharge pressure of ___ PSI.



Two Waterproof Pumps in a Duplex Pumpset configuration

Ordering Information

Select model number from the table below.

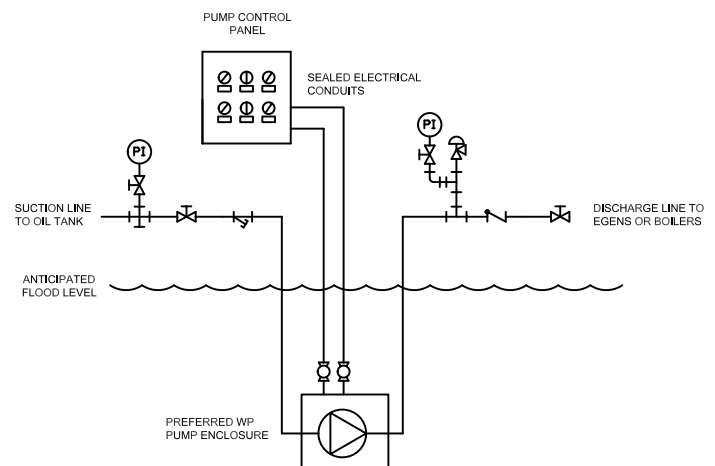
Catalog Number	GPH. Oil No. 2 / No. 4	PSI	Motor	
			RPM.	HP
WP-101E	20 / 23	100	1725	1/3*
	23 / 23	50	1725	1/3*
WP-102E	27 / 33	100	1725	1/3*
	32 / 33	50	1725	1/3*
WP-103E	80 / 93	100	1725	1/3*
	86 / 95	50	1725	1/3*
WP-104E	145 / 155	100	1725	1/2**
	155 / 164	50	1725	1/2**
WP-105E	282 / 285	50	1725	3/4**
WP-106E	277 / 285	100	1725	1**
WP-201	340 / 415	50	1140	1/2**
WP-202	300 / 410	100	1140	3/4**
WP-203	780 / 890	50	1140	3/4**
WP-204	700 / 870	100	1140	1 1/2**
WP-205	1100/1300	50	1140	1 1/2**
WP-206	1100/1200	100	1140	2*

Specifications subject to change without notice.

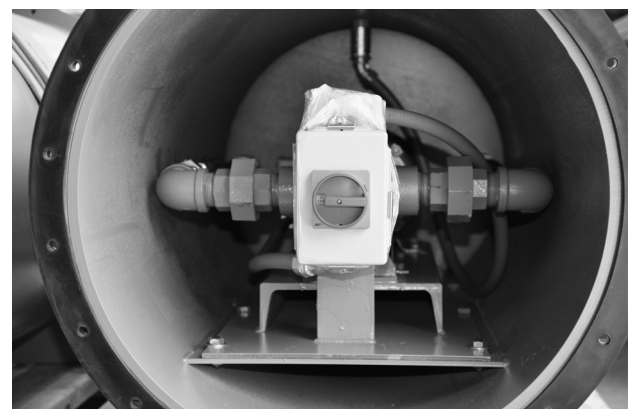
Pump & motor assemblies ratings are nominal at pressures shown with maximum 10" Hg vacuum at pump inlet.

*115, 208 or 230V 60Hz 1 phase

**208, 230 or 460V 60Hz 3 phase



Typical WP Pump Installation



Internal View Waterproof Light Oil Pump & Motor Assembly