



PoseidonPak Specifications

Poseidon Pak OilSense Single phase Simplex sump pump oil protection system:

Models to include the following;

OS1E1B5C3050SF – 1/2HP 115/1/60

OS1E2B5C3050SF – 1/2HP 230/1/60

OS1E1D5C3050SF – 1HP 115/1/60

OS1E2D5C3050SF – 1HP 230/1/60

PART I - GENERAL

1.01 Single Source Responsibility: the OilSense sump pump oil protection system shall come as a package kit system. Kit to include simplex control panel, submersible sump / effluent pump & smart multi-probe level device, PVC wet well, stainless steel mounting bracket & u-bolt.

1.02 Certifications: The pump used in the kit must be certified to UL standards. The control panel shall meet a minimum UL 508 listed & labeled.

1.03 Serial Number – Each package shall be given a unique serial number for tracking purposes and that number must be provided on a label supplied with the unit. That serial number must enable the supplier to identify the date code for assembly, the generation of product defining any product updates, materials of construction.

1.04 Factory Testing – Each package shall be tested at the maximum design point of the package. The packages will also be run tested to validate control points and proper functioning of the system.

PART 2 – PRODUCTS

2.01 Scope: Factory-assembled and tested package for use in safe operation of pumping, alarming and monitoring of elevator sump pits, transformer vaults and leachate well applications. In accordance with ASME A17.1

System at a minimum to come complete with pumps, motors, control panel, smart multi-probe level device, **optional, resin / PVC perforated / slotted cover, probe extension kit 18" to 45.5", audible alarm, beacon, H.O.A. switches, remote indication, light tower.

The system to be equipped with the following attributes/capabilities:

A. Site Connection Flexibility: the pump discharge 2" FNPT with options 1.5" adapter.

** - Denotes optional equipment

B. Lock Out/Tag Out Ease of Maintenance: the system shall be constructed in a manner which allows the power to be locked out for safety purposes during any service or repairs.

C. Terminal strip to include I/O contacts to provide simple alarm status though BMS / BAS.

D. Remote Access: optional - control panel shall have the option of having remote accessibility through either a Modbus card or Ethernet card connection. The Ethernet connection shall permit access to view, monitor and change the control parameters through the use of mobile app programs.

2.02 Pump/Motor Construction: Pumps shall be CSA / UL listed.

A. CASING: Units with pump connections 2" and under shall be constructed heavy-duty epoxy-coated cast iron and or molded resin and stainless steel for superior corrosion resistance. Includes handle for ease of removal and removable intake screen.

B. IMPELLER: Impellers shall be of clog resistant vortex design and constructed of AISI 304 stainless steel or a molded resin for superior corrosion resistance.

C. MECHANICAL SHAFT SEAL: The mechanical shaft seal assembly shall be double seals composed of a Silicon Carbide SiC rotating face, Carbon graphite stationary, EPDM elastomers and AISI 316 stainless steel hardware as standard. Silicon carbide SiC stationary and FKM elastomers are optional.

D. PUMP SHELL: Shell will be manufactured from AISI 304 SS or AISI 304 SS coils TIG welded, calibrated, and cut at precise height.

E. ELECTRIC MOTOR: The pump drive motor shall be Class F insulated. Solid copper motor windings. Thermally protected PSC motor design. Double O-Ring seals.

2.03 Controls/Electrical

A. The control panel shall have a rating of NEMA 4X (Indoor/Outdoor) Constructed of a Polycarbonate material. 10.5" X 9.5" X 5" providing a small footprint for mounting. Panel door shall be transparent allowing visual confirmation of operating condition. A stainless steel lockable hatch will be provided for lock-out safety while being serviced.

B. Proper terminations for the incoming site power and pump power connections

C. Panel shall have dual voltage capability with a dual voltage selector allowing for 115/1/60 or 230/1/60 by simply moving the switch to the proper setting. 220V - 230V - 240V all refer to the same system voltage level. 110V - 115V - 120V all refer to the same system voltage. The power supply shall be provided from factory set at 230 VAC and can be field adjusted to required voltage.

D. Panel shall include the following;

DPDT Power Relays 4

DPDT Power Relay Rating 120VAC @ 40A (N.O.) / 120VAC @ 30A (N.C.)

SPST Dry Contacts for Remote Signaling (BMS, BAS, or Other) 5

SPST Dry Contact Rating 24VDC @ .5A

SPST Dry Contact Functions (1) Power-loss, (4) Control Functions

LED Indicators: 5

Press to Test Yes

Audible Alarm: Available upon request

Alarm Beacon: Available upon request

Temperature Alarm: Available upon request

E. Level Probe to be low voltage non-fouling not capacitive, conductive or ultrasonic. Single cable with low voltage that does not require conduit. Mounting plug style 3" PVC Slip-Plug, sensor head to be constructed of PVC. Sensor head to be 3" diameter (round). Probes to be constructed of stainless steel with a PVC heat shrink and color coded for each function as follows;

Black Rod – Reference Probe – 17" Length

Blue Rod – Pump Stop – 17"

Brown Rod – Pump Start – 8.25"

Green Rod – High Water Alarm – 5.5"

SS Double Float Rod with oil fault alarm (6.75") and high oil alarm (4")

Probe extension optional 18" to 45.5" extension kits available.