Trusted. Tested. Tough.®

ZOELLER®
PUMP COMPANY

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

TECHNICAL DATA SHEET

Oil Guard® SYSTEM

For Submersible Dewatering Applications

Designed to help protect the environment and equipment from the dispersion of oils and/or hydrocarbons.

SYSTEMS:

- Operation of the Zoeller® Oil Guard® System has been independently verified by OnSpeX, a division of CSA, when installed in accordance with our instructions.
- Choose from four pump models. Includes pump, Oil Smart® switch and alarm (optional control panel)
- Controls are ASME A17.1 compliant

Oil Smart® SWITCH AND ALARM PANEL FEATURES:

- NEMA-4X alarm panel enclosure
- Audible, light alarms and dry contacts
- Preset "on" and "off" points differentiate oil and water and alerts maintenance personnel of high water or oil detected conditions
- 20' (6 m) piggyback electrical supply cord
- 20 amp internal relay
- Alarm test and silence switches
- 304 stainless steel probes
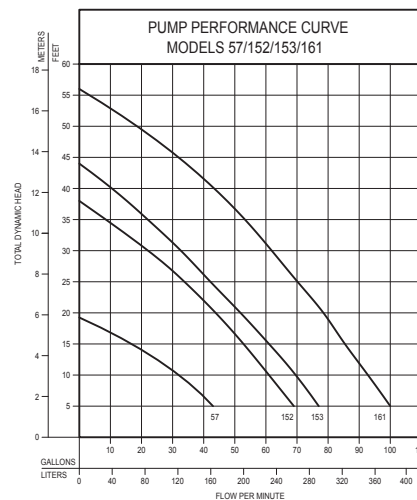- UL508 approved switch

PUMP FEATURES:

- Pumps are durable, cast iron construction with powder coated epoxy finish and all stainless steel fittings.
- Tested to UL Standard UL778 and Certified to CSA Standard CSA 22.2 No. 108

TOTAL DYNAMIC HEAD
FLOW PER MINUTE

MODEL		57		152		153		161	
Feet	Meters	Gal.	Liters	Gal.	Liters	Gal.	Liters	Gal.	Liters
5	1.5	43	163	69	261	77	291	100	379
10	3.0	34	129	61	231	70	265	93	352
15	4.6	19	72	53	201	61	231	85	322
20	6.1	--	--	44	167	52	197	79	299
25	7.6	--	--	34	129	42	159	70	265
30	9.1	--	--	23	87	33	125	62	235
35	10.7	--	--	--	--	22	83	54	204
40	12.2	--	--	--	--	11	42	45	170
50	15.2	--	--	--	--	--	--	20	76
Shut-off Head:		19.25 ft (5.9 m)		38 ft (11.6 m)		44 ft (13.4 m)		56 ft (17 m)	

018939

Product may not be exactly as shown.

PUMP PERFORMANCE CURVE
MODELS 57/152/153/161

TOTAL DYNAMIC HEAD

FLOW PER MINUTE

018939

MODEL 57

3-7/8" [98 mm]
6-3/16" [157 mm]
4-5/8" [117 mm]
3-7/8" [98 mm]
3-7/8" [98 mm]
1-1/2" NPT
10-1/16" [256 mm]
3-3/32" [79 mm]

SK1015

MODEL 152/153

6 7/32" [158 mm]
3 7/8" (98 mm)
4 5/8" (117 mm)
3 7/8" (98 mm)
3 7/8" (98 mm)
1 1/2" NPT
12 1/8" (308 mm)
5 3/8" (137 mm)

SK2064

MODEL 161

4" (101 mm)
8-3/4" (222 mm)
6-1/2" (165 mm)
4" (101 mm)
1-1/2" NPT
2" NPT
OR
3" NPT
AVAILABLE
18-9/16" (471 mm)
6" (152 mm)
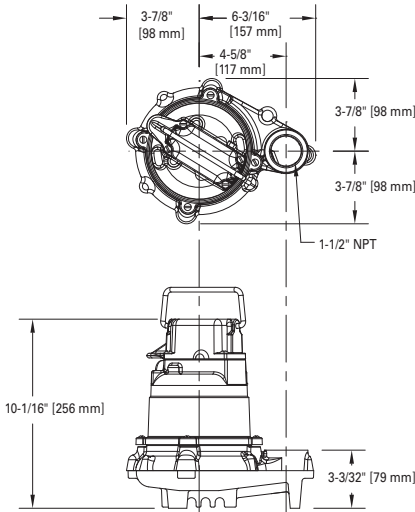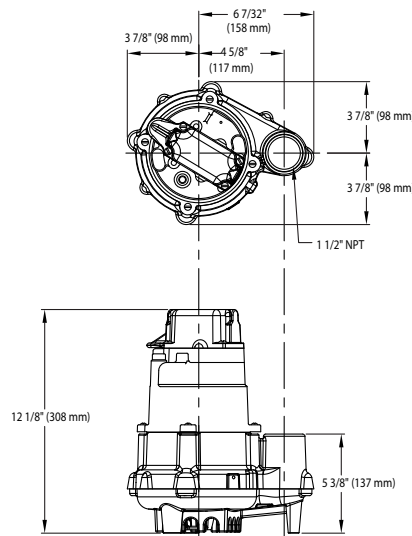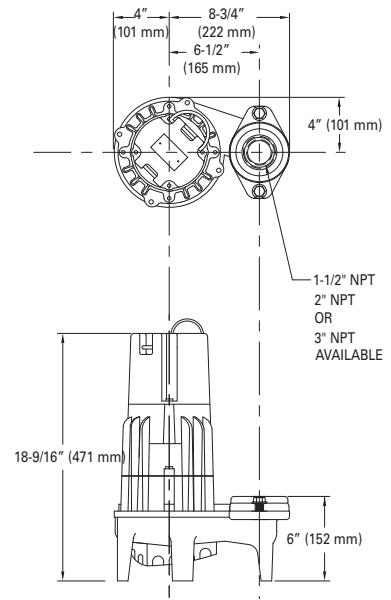
SK2644

See FM2778 (model 57), FM2784 (model 152, 153), FM2785 (model 161) for complete pump specifications.

CHOOSE A PREPACKAGED SYSTEM

Part Number	Description	Alarm Panel	Oil Smart® Pump Switch	Nonautomatic Pump	Pump Part Number	Volts	HP	Amps
940-0005	Oil Guard® Pump Switch and Panel	10-1526	10-1528	N57	57-0002	115	3/10	9.7
940-0006	Oil Guard® Pump Switch and Panel	10-1526	10-1528	N152	152-0002	115	4/10	8.5
940-0007	Oil Guard® Pump Switch and Panel	10-1526	10-1528	N153	153-0002	115	1/2	10.5
940-0008	Oil Guard® Pump Switch and Panel	10-1526	10-1528	N161	161-0002	115	1/2	15.0
940-0012	Oil Guard® Pump Switch and Panel	10-1526	10-1528	*N152	*152-0028	115	4/10	8.5
940-0013	Oil Guard® Pump Switch and Panel	10-1526	10-1528	*N153	*153-0027	115	1/2	10.5
940-0014	Oil Guard® Pump Switch and Panel	10-1526	10-1528	*N161	*161-0090	115	1/2	15.0

* 6' (1.8 m) SO jacketed cord for oil resistance.

OR BUILD YOUR OWN SYSTEM

Part Number	Description	Alarm Panel	Oil Smart® Pump Switch	Oil Smart® High Liquid Alarm Switch	Oil Smart® High Liquid Switch
10-1526	Oil Smart® Alarm Panel	√	---	√	---
10-1528	Oil Smart® Pump Switch	---	√	---	---
10-1727	Oil Smart® Pump Switch w/o Plug	---	√	---	---
10-2149	Oil Smart® Simplex Panel	√	√	√	---
10-2150	Oil Smart® Duplex Panel	√	√	√	√
10-2516	Oil Smart® Simplex Panel w/ Mtr.	√	√	*	---

√ INCLUDED   * VARIABLE LEVEL FLOAT SWITCH

> ⚠ **CAUTION**
>
> **All installation of controls, protection devices and wiring should be done by a qualified licensed electrician. All electrical and safety codes should be followed including the most recent National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA).**

SIMPLEX PANEL:

- 115V, single phase
- NEMA 4X watertight enclosure w/ lockable latch
- 30 amp motor start relay
- Pump HOA switch
- Top-mounted red alarm beacon light
- 81 - 84 decibel rated alarm horn
- Horn silence and alarm test switches
- Alarm automatically resets
- Dry auxiliary alarm contacts
- Separate circuit protection for alarm
- Circuit breaker protection
- Pump "Run" indicator light

Model 10-2149

DUPLEX ALTERNATING PANEL:

- 115V, single phase
- NEMA 4X watertight enclosure w/ lockable latch
- (2) 30 amp motor start relays
- Pump HOA switches
- Top-mounted red alarm beacon light
- 81 - 84 decibel rated alarm horn
- Horn silence and alarm test switches
- Alarm automatically resets
- Dry auxiliary alarm contacts
- Separate circuit protection for alarm
- Pump "Run" indicator light

Model 10-2150

OIL SMART® PUMP SWITCH

Application

The Oil Smart® Switch is factory-calibrated and set up for immediate installation and operation. The dielectric design is extremely sensitive to variations in dielectric constant of air, water, oil and/or hydrocarbons (see Dielectric Data Chart).

Material

- The Oil Smart® Switch is constructed of high-impact, injection-molded plastic.
- Enclosure (Ignition-Proof).
- 304 stainless steel sensor probes.

Temperature

- The Oil Smart® Switch standard temperature operation range is -33°F (-36°C) to 170°F (77°C).

Operating Pressure

- The Oil Smart® Switch is designed to operate to 30 psig (2 bar) at 70°F (21°C).

Standby Current

- 0.004 Amps.

Signal Output

The Oil Smart® Switch is configured at the Factory.

- 120 VAC - 50/60 Hz (6 Amps).

Relay Configuration

- 20 Amp internal relay.

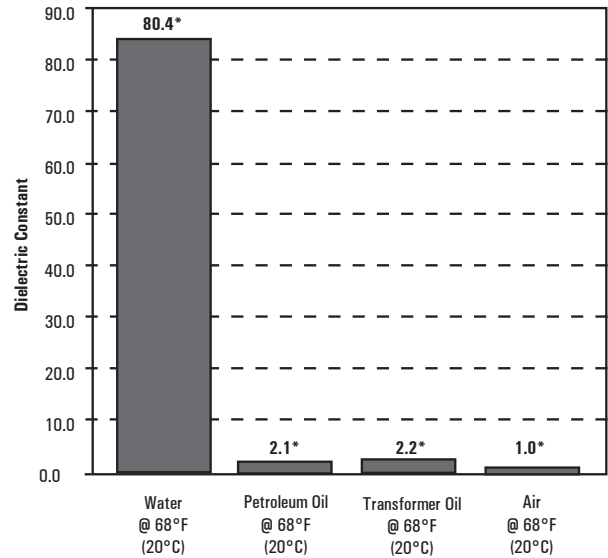## Approval

- UL Marine Listed
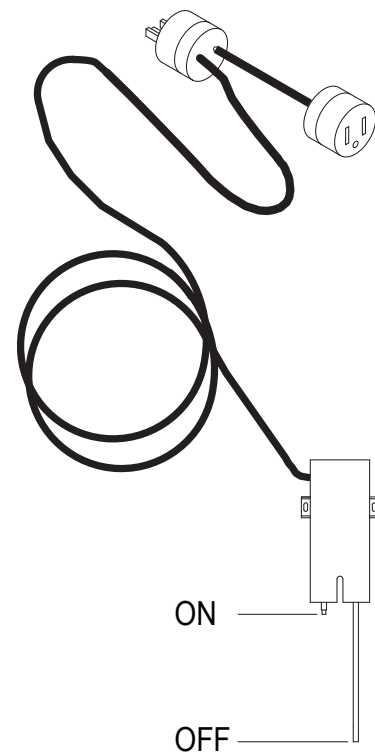- CE Certified

Control Circuit

- Solid State.

Power Input

- 120 VAC - 50/60 Hz.

Dielectric Data Chart

*Note: Estimated values.

SK2404

Oil GUARD® PUMP SYSTEM

Single Phase Pumps
General

1. Pump motor shall be hermetically sealed, submersible-type operating in a high-quality dielectric oil for cooling the windings and for lubrication of the motor bearings and ceramic-carbon shaft seal. Single phase motor shall have internal automatic resetting, thermal overload protection. Construction shall be of cast iron with 100% baked-on, powder coated epoxy finish for corrosion-resistance and longer casting durability. All fasteners and external metal parts shall be of stainless steel. Impeller shall be of vortex non-clog design. Check applicable series.

_____ 57 (0.3 HP) cast iron series pump shall have a shaded pole motor. Guard and handle shall be stainless steel.

_____ 152 (0.4 HP) _____ 153 (0.5 HP) series pump shall have a permanent split capacitor motor. Motor housing shall be cast iron. The impeller shall be glass reinforced thermoplastic.

_____ 161 (0.5 HP) series pump shall have a 3450 RPM motor. Motor housing, switch case and pump housing shall be cast iron. The impeller shall be bronze.

SK2423

2. The Oil Smart® Pump Switch is an industrial grade switch with internal 20 amp relay and 304 stainless steel sensor probes used to control water pumps in elevator, utility, marine and industrial sump applications. Installation will prevent oil and or hydrocarbons from being inadvertently pumped into the environment.
Options:

_____ 20' (6 m) cord with piggyback plug.

3. **115 Volt Piggyback Power Plug**

4. Oil Smart® Alarm will alert residents or maintenance personnel of liquid level problems. High Oil and High Water Level Lights and standard Remote Dry Contacts (SCADA Monitoring System).

_____ Alarm System with High Liquid Audible Alarm (71db @ 2' [0.6 m]), Red Beacon, Oil Present - Yellow Light and Water Present - White Light. Built with Oil Smart® technology.

5. Liquid Smart Sensor™ incorporates both an electro-optic and Oil Smart® Sensor all in one encapsulated unit. Differentiates and indicates the presence of oil and or water under high water condition.

6. **Check Valve Recommended (purchased separately).**

7. Optional Oil Smart® Simplex Control Panel - Built with Oil Smart® technology. Will control pump and alert residents or maintenance personnel of liquid level problems. High Oil and High Water Level Lights and standard Remote Dry Contacts (SCADA Monitoring System).

_____ Simplex Panel 10-2149.

8. Optional Oil Smart® Duplex Control Panel - Built with Oil Smart® technology. Will control pumps and alert residents or maintenance personnel of liquid level problems. High Oil and High Water Level Lights and standard Remote Dry Contacts (SCADA Monitoring System).

_____ Duplex Panel 10-2150.

Notes: 20 Amp Relay is inside pump switch.
             For float tree installation see FM2364.