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# OIL SENTINEL BT50 SERIES

60HZ-ANSI

2" FULL FREE PASSAGE SUBMERSIBLE  
SEWAGE PUMP



BOESCH PUMPS LLC

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## MOTOR / PUMP SPECIFICATIONS

ITEM	DESCRIPTION
LIMITS	Liquid Temp 0~40°C
	Application Commercial / Industrial / Municipal use
TYPE	Frequency 60Hz
	Motor 2P (3450RPM) Dry Motor
	Insulation Class B
	Start Method Direct On Line
	Protection IP 68
	Protector Auto-Cut
	Bearing Ball Type
	Mech. Seal Dual. Mechanical Seal
MATERIAL	Impeller Vortex Impeller
	Motor Cover AISI 316
	Motor Housing+Stator AISI 316
	Shaft with Rotor AISI 316
	Mech. Seal Upper: CA/CE; Lower: SIC/SIC
	Pump Casing AISI 316
	Impeller AISI 316
	Cable H07RN-F / SJTOW / STOW



## MOTOR / PUMP DATA CHART

MODEL	OUTPUT		DISCHARGE	PHASE	1Ø			FREE PASSAGE	WEIGHT W/O CABLE
	HP	KW	INCHES	VOLTAGE	115V	208V	230V	INCHES	LBS
BT50/1	0.5	0.37	2	FULL LOAD AMPS	8A	4.4A	4A	1.4	29
BT100/1	1	0.75	2		12A	6.6A	6A	1.4	35
BT200/1	2	1.5	2 ( 3 )		-	12.2A	11A	1.8	69
BT300/1	3	2.2	2 ( 3 )		-	12.2A	11A	1.8	72

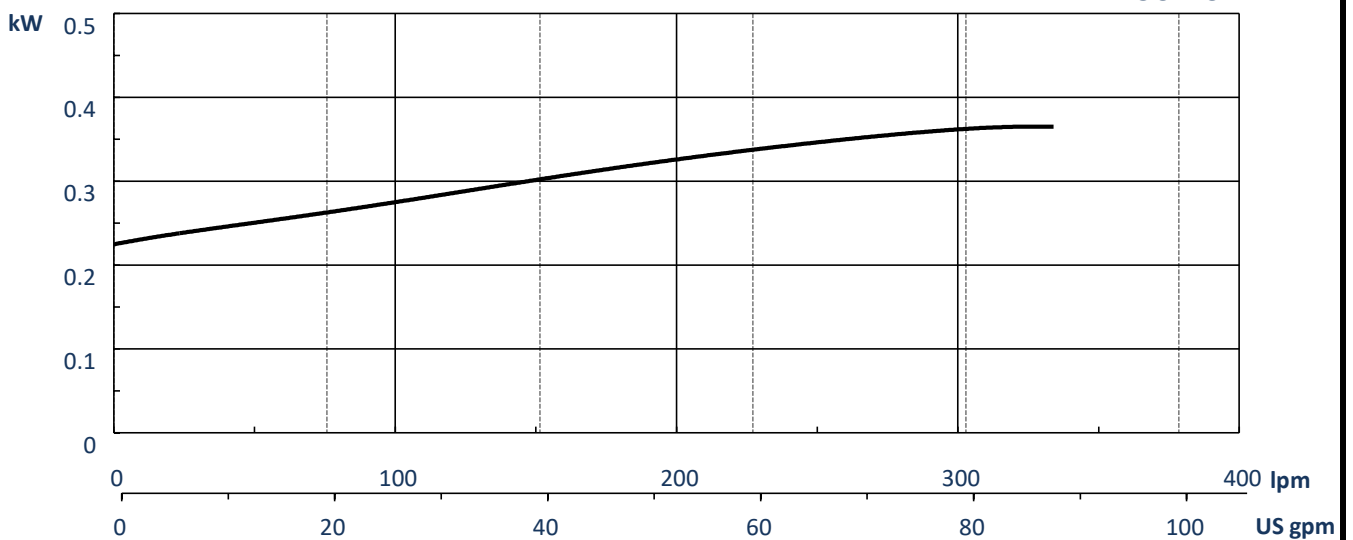
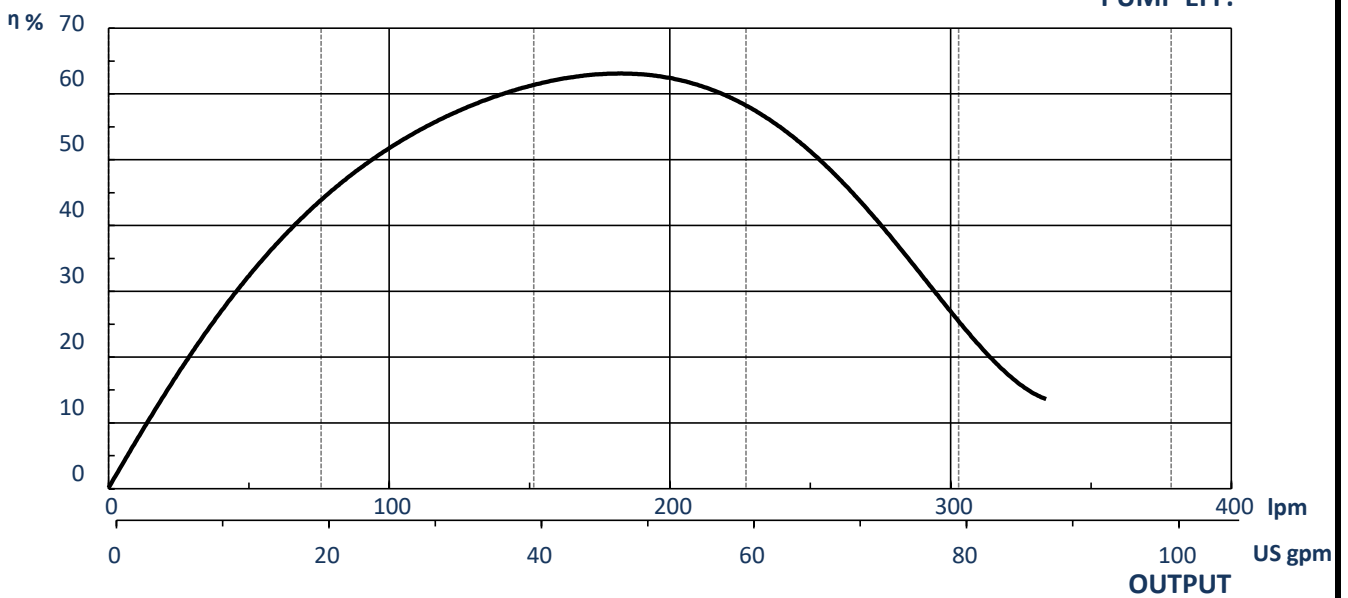
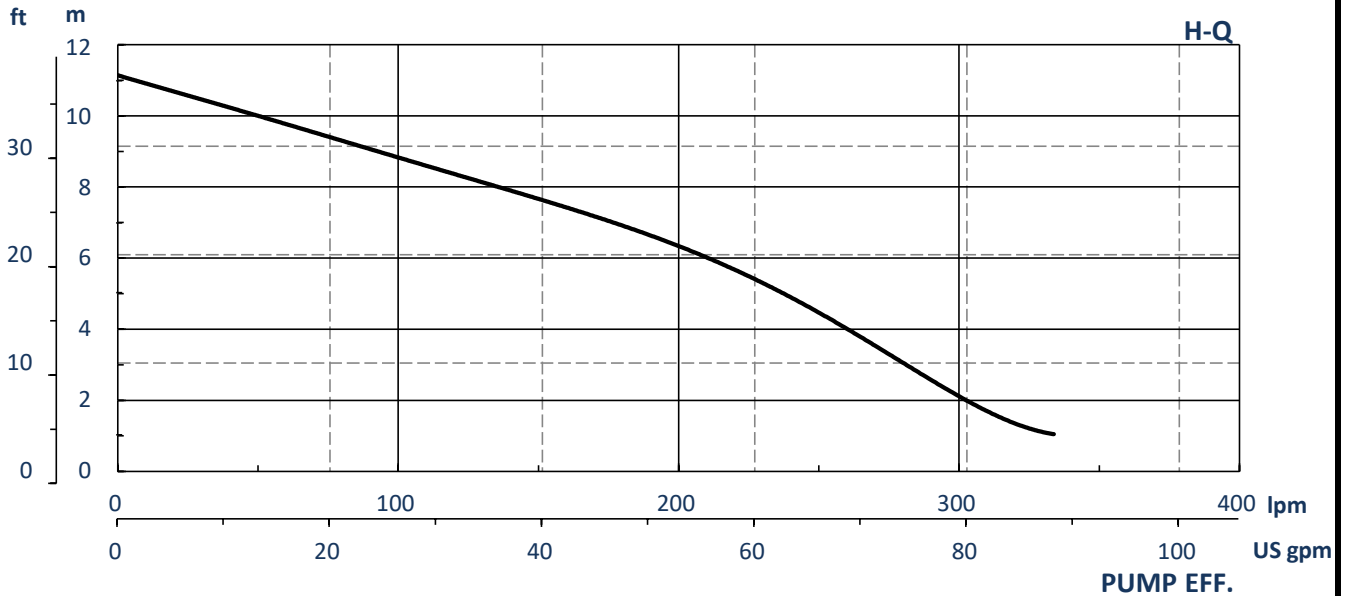
MODEL	OUTPUT		DISCHARGE	PHASE	3Ø			FREE PASSAGE	WEIGHT W/O CABLE
	HP	KW	INCHES	VOLTAGE	208V	230V	460V	INCHES	LBS
BT50/3	0.5	0.37	2	FULL LOAD AMPS	3.1A	2.8A	1.4A	1.4	28
BT100/3	1	0.75	2		4.4A	4A	2A	1.4	35
BT200/3	2	1.5	2 ( 3 )		7.7A	7A	3.5A	1.8	65
BT300/3	3	2.2	2 ( 3 )		8.8A	8A	4.5A	1.8	69
BT500/3	4	3.7	3 ( 4 )		16.6A	15A	8A	1.8	106
BT750/3	5	5.5	3 ( 4 )		23.2A	21A	10.5A	1.8	119

## MOTOR / PUMP CONSTRUCTION MATERIAL

PART	MATERIAL	PART	MATERIAL
Cable	H07RN-F/STJOW/STOW	Mechanical Seal	Upper: CA / CE
Handle	Nylon 6(0.5-1HP) AISI 316 (2-7.5HP)	Mechanical Seal	Lower: SIC / SIC
Motor Cover	AISI 316	Seal Housing	AISI 316
Bracket	ASTM A48 Class 30	Lip Seal	VITON
Motor Housing + Stator	AISI 316	Impeller	AISI 316
Shaft with Rotor	AISI 316	Pump Casing	AISI 316
Oil Chamber	ASTM A48 Class 30(0.5-1HP) AISI 316(2-7.5HP)	Upper/Lower Bearing	NTN/TPI

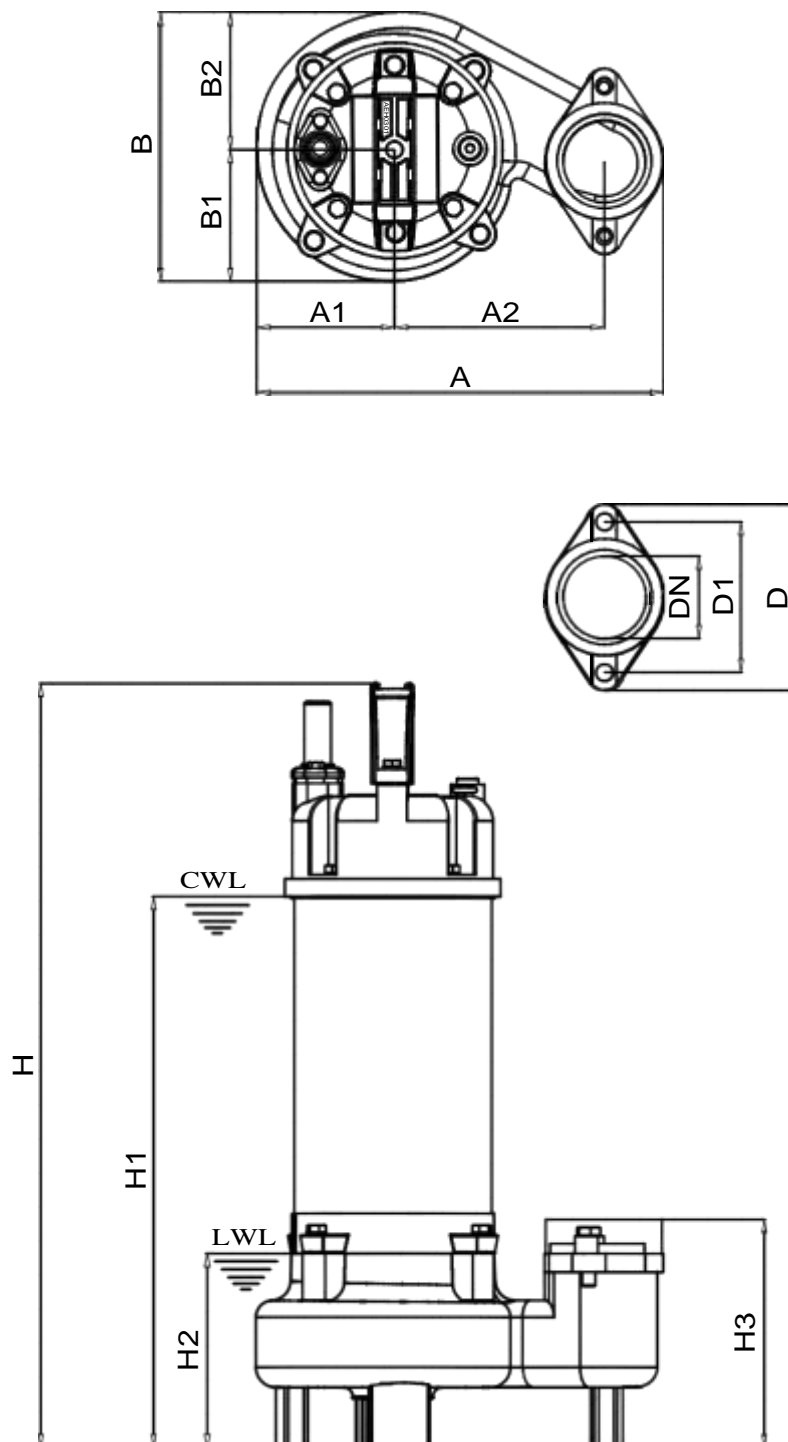
## PUMP PERFORMANCE REPORT

MODEL	BT50		RATED
FREQUENCY	60 HZ		22 ft / 6.7 m
DISCHARGE	2 inches / 50 mm	CAPACITY	50 gpm / 189 lpm
OUTPUT	0.5 hp / 0.37 kW	POLE / RPM	2 poles / 3450 rpm



## DIMENSIONAL DRAWING

MODELS: BT50 – BT100 (0.5~1HP)



MODEL	A	A1	A2	B	B1	B2	D	D1	DN	H	H1	H2	H3	WT	
BT50	8.98	2.95	4.72	5.91	2.76	3.15	4.33	3.54	2	16.73	11.69	4.61	5.43	S:28.6	T:27.3
BT100	8.98	2.95	4.72	5.91	2.76	3.15	4.33	3.54	2	16.91	12.87	4.61	5.43	S:33.9	T:34.5

CWL: CONTINOUS RUNNING WATER LEVEL

LWL: LOWEST RUNNING WATER LEVEL

WT: WEIGHT WITHOUT CABLE

S: SINGLE PAHSE      T: THREE PHASE

DIMENSIONS: INCHES

WEIGHT: LBS

PIPE CONNECTION TYPE: NPT

The Boesch Oil Sentinel is used in elevator sump pits to remove water while retaining oil and other hydrocarbons. The Boesch Oil Sentinel is a UL listed system.



**Control Panel**



**Remote Alarm**



**Preset Level Sensor**

## KEY FEATURES

### ONE SENSOR

One preset level sensor for easy installation.

### REMOTE ALARM

A remote alarm is included with the Oil Sentinel. Includes auxiliary contacts for High Oil, High Water and Pump Overload (on overload models).

### MULTIPLE INDICATOR LIGHTS

Power On, Pump Run, High Water, High Oil and Pump Overload (on overload models).

### ASME A17.1 COMPLIANT

WORKS WITH AUTO DIALERS OR BAS

(Building Automation Systems)

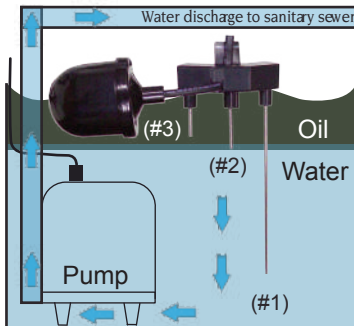


## OPERATION OF DISCHARGE

Water and oil fill the elevator sump pit. As the sump is filling, the oil will float on top of the water. This layer of oil will not be pumped from the tank. The water underneath the oil will be pumped out through the discharge pipe to the sewer or other proper disposal area.

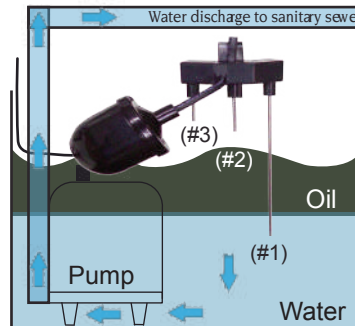
### 1. WATER RISES & PUMP TURNS ON

When the water reaches probe (#2) the system will turn on and pump the water out of the sump.



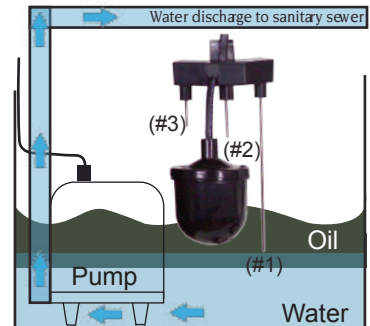
### 2. WATER IS REMOVED/OIL CONTAINED

As the water is being pumped from the sump pit, the oil will remain floating on top of the water. **THE OIL WILL NOT BE PUMPED INTO THE SANITARY SEWER**

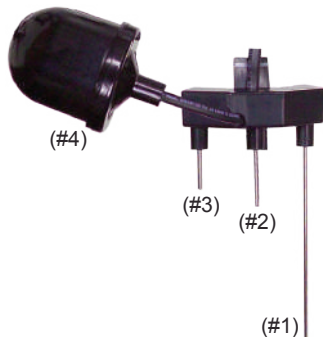


### 3. PUMP TURNS OFF

When the water is pumped below probe (#1) the pump will turn off.



## PRESET LEVEL SENSOR AND CONTROL PANEL OPERATION



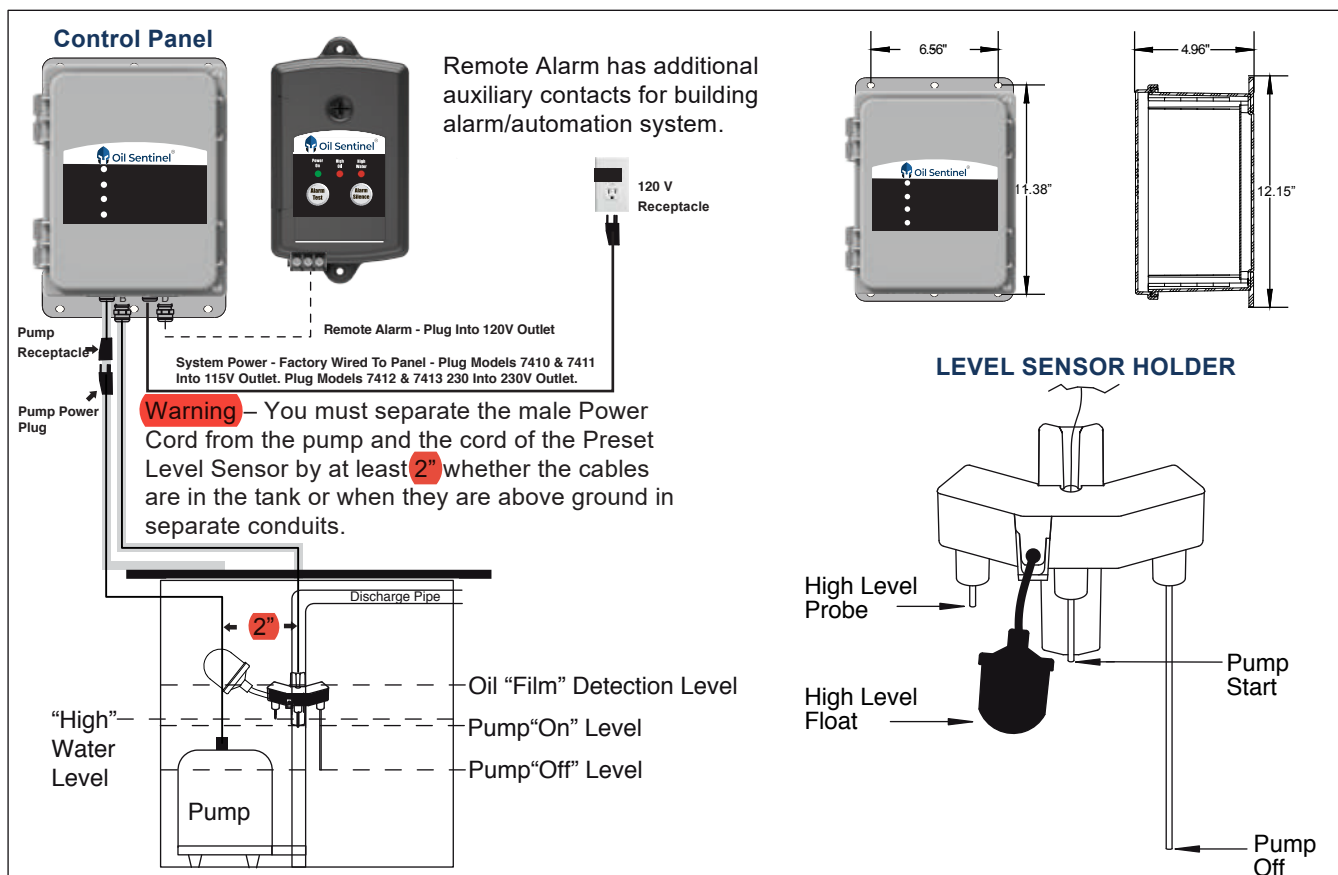
- ▶ When water touches probes (#1) and (#2) the pump will turn on.
- ▶ If the pump can not keep up, loses power or fails the water will reach probe (#3). The "High Water" light will illuminate on the control panel and the remote alarm will activate.
- ▶ If the water continues to rise the float switch will activate. If the float switch is activated and probe (#3) is touching water the "High Water" alarm will remain on. If OIL is touching probe (#3) and the float switch is activated, the "High Oil" light will illuminate and the remote alarm will activate.

# OIL SENTINEL CONTROL / ALARM SYSTEM



## DESCRIPTION OF OPERATION

On liquid rise, level reaches pump “Start” probe to start the pump. The pump will remain on until level is below “Off” probe. The “Off” probe senses air or oil and turns the pump off so the oil layer will not be pumped out of the tank. If the level reaches high level probe and high level float, the system will differentiate between water and oil and activate the remote alarm.



## SPECIFICATIONS

### Sensor

- ▶ Housing: ABS
- ▶ Probe: Stainless Steel
- ▶ Float: PVC

### Control Panel

- ▶ Enclosure: Type 1
- ▶ Power Cord: 6' SJT, 120 VAC
- ▶ Receptacle: 6" SJT, 120 VAC, 15 Amp

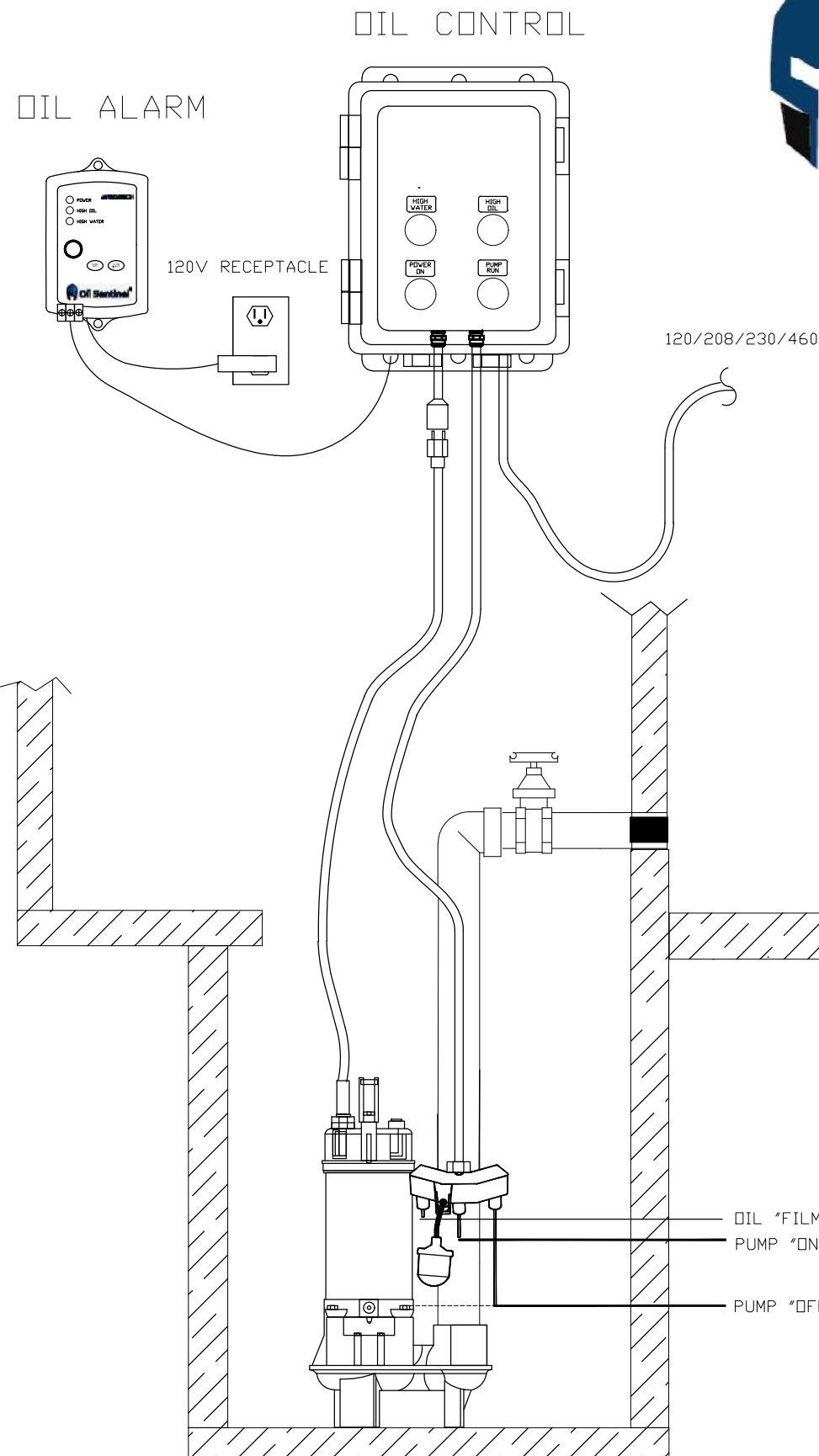
### Alarm Panel

- ▶ Enclosure: Type 1
- ▶ Power Cord: Plug in transformer, 120 VAC
- ▶ Backup Power: 9 VDC battery backup
- ▶ LED Alarm Indicators
- ▶ Audible Alarm: 103 db buzzer, auto/test rest
- ▶ Auxiliary Contact: High Water, High Oil, Optional Pump Fail

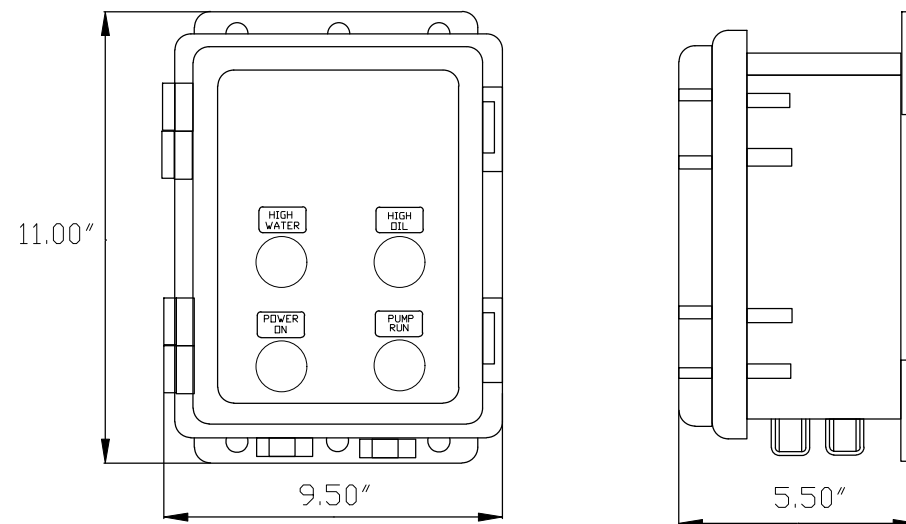




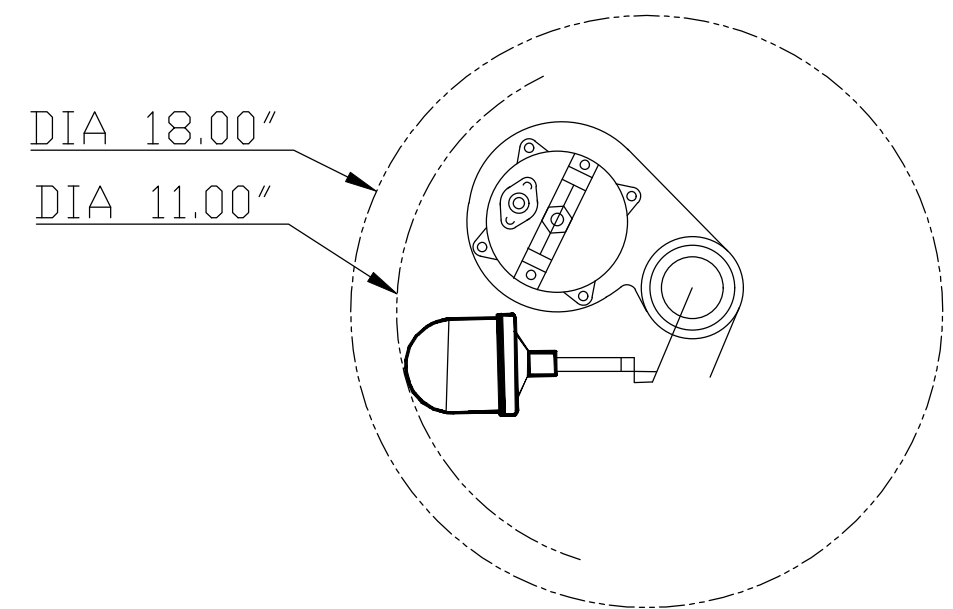
# Oil Sentinel®



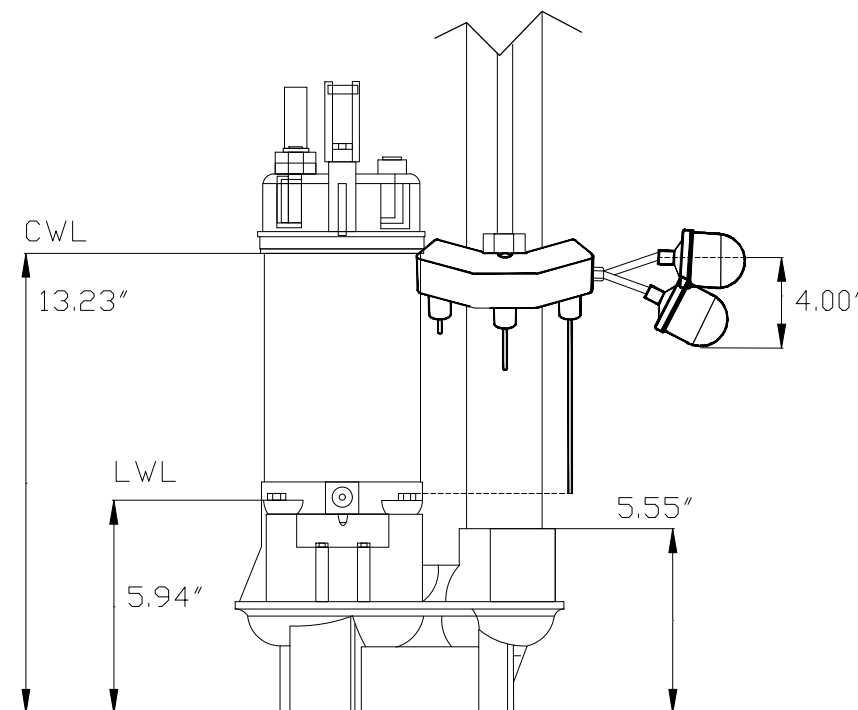
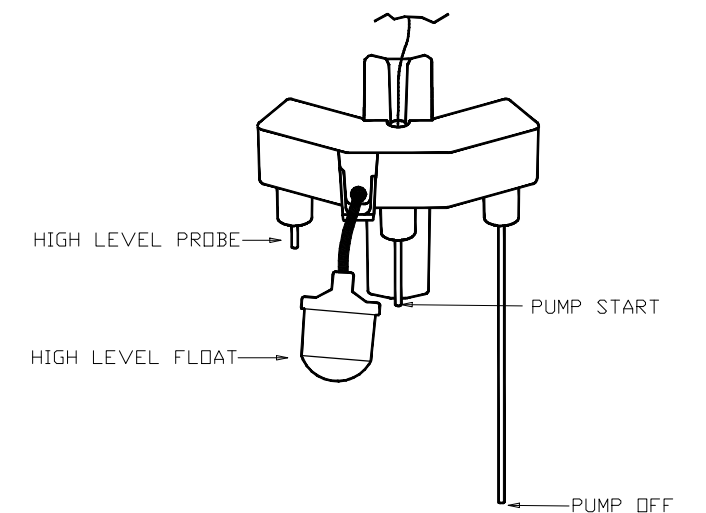
OIL CONTROL DIMENSIONS



PUMP TOP VIEW



LEVEL SENSOR HOLDER



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BOESCH OIL SENTINEL

Revision notes:

Rev:	Date:	Notes:
A	06/15/21	PROJECT

Drawn by:

C.Grajeda

Project:

BOESCH

Date:

06/14/2021

Scale @ A3:

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Revision:

A

Client:

Drawing Title:

OIL SENTINEL