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# OIL SENTINEL BC50 SERIES

60HZ-ANSI

2" FULL FREE PASSAGE SUBMERSIBLE  
SEWAGE PUMP



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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
	Impeller	Vortex Impeller
	Motor Cover	0.5~1HP:PA66+30GF; 1.5~2HP: ASTM A48 Class 30
MATERIAL	Motor Housing+Stator	AISI 304
	Shaft with Rotor	AISI 410
	Mech. Seal	Upper: CA/CE; Lower: SIC/SIC
	Pump Casing	ASTM A48 Class 30
	Impeller	ASTM A48 Class 30
	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
BC50/1	0.5	0.37	2	FULL LOAD AMPS	9A	5A	4.5A	2	29
BC75/1	0.75	0.55	2		11A	6A	5.5A	2	31
BC100/1	1	0.75	2		14A	7.7A	7A	2	34
BC150/1	1.5	1.1	2		18.6A	10.3A	9.3A	2	53
BC200/1	2	1.5	2		-	11.6	10.5A	2	55

MODEL	OUTPUT		DISCHARGE	PHASE	3Ø			FREE PASSAGE	WEIGHT W/O CABLE
	HP	KW	INCHES	VOLTAGE	208V	230V	460V	INCHES	LBS
BC50/3	0.5	0.37	2	FULL LOAD AMPS	3.3A	3A	1.5A	2	29
BC75/3	0.75	0.55	2		4A	3.6A	1.8A	2	31
BC100/3	1	0.75	2		5.6A	5A	2.5A	2	34
BC150/3	1.5	1.1	2		6.9A	6.2A	3.1A	2	53
BC200/3	2	1.5	2		7.7A	7A	3.5A	2	55

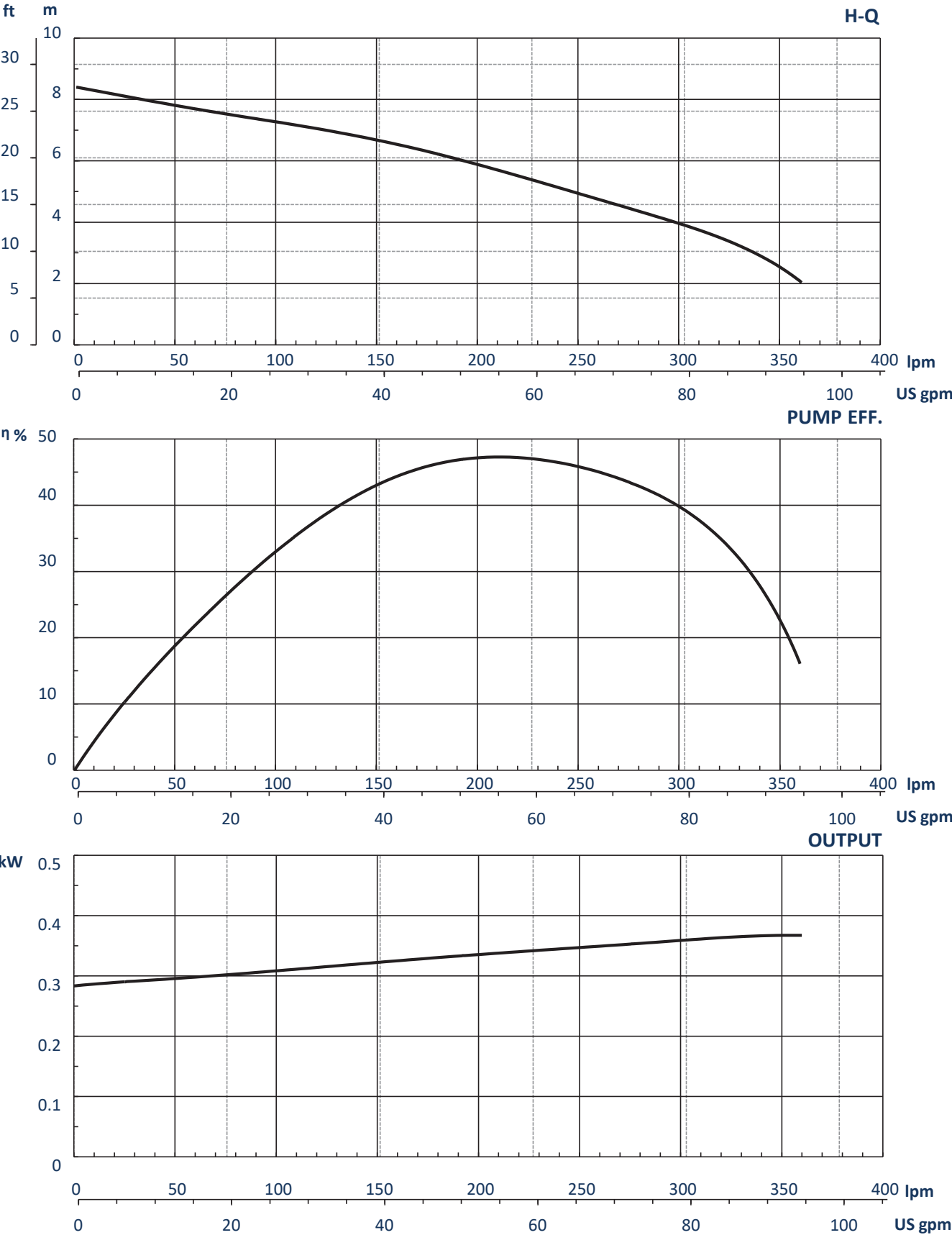
## MOTOR / PUMP CONSTRUCTION MATERIAL

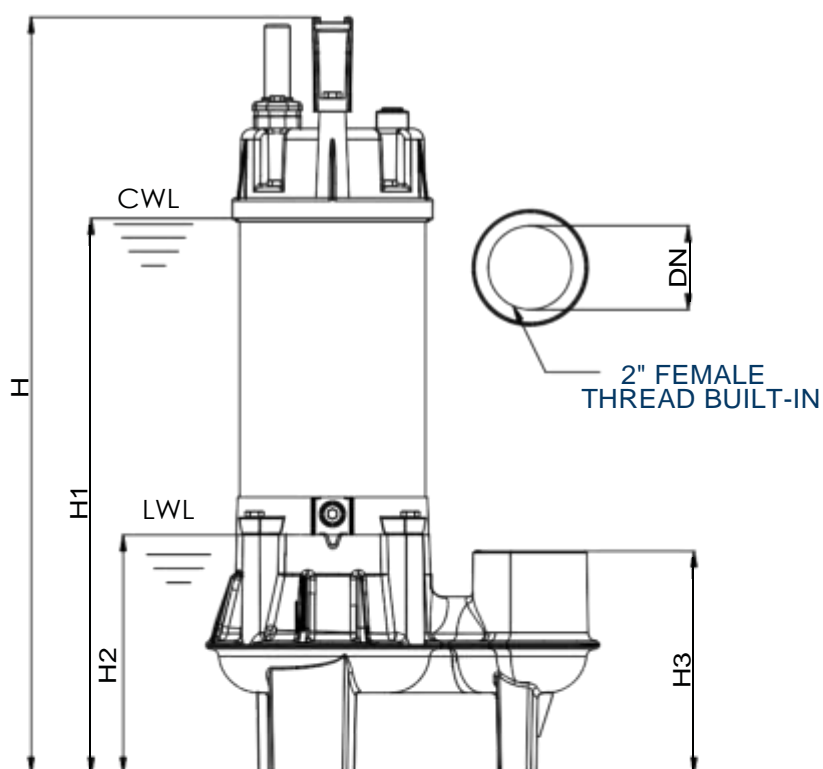
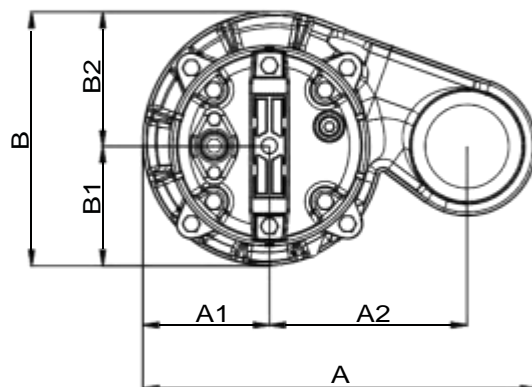
PART	MATERIAL
Cable	H07RN-F/STJOW/STOW
Handle	Nylon 6
Motor Cover	PA66+30GF (0.5~1HP)
Motor Cover	ASTM A48 Class 30 (1.5~2HP)
Bracket	ASTM A48 Class 30
Motor Housing + Stator	AISI 304
Shaft with Rotor	AISI 410
Oil Chamber	ASTM A48 Class 30

PART	MATERIAL
Mechanical Seal	Upper: CA / CE
Mechanical Seal	Lower: SIC / SIC
Seal Housing	ASTM A48 Class 30
Lip Seal	BUNA N
Impeller	ASTM A48 Class 30
Pump Casing	ASTM A48 Class 30
Upper Bearing	NTN/TPI

PUMP PERFORMANCE REPORT

MODEL	BC50		RATED
FREQUENCY	60 HZ		21 ft / 6.4 m
DISCHARGE	2 inches / 50 mm		CAPACITY
OUTPUT	0.5 hp / 0.37 kW		50 gpm / 189 lpm
	POLE / RPM		2 poles / 3450 rpm



**DIMENSIONAL DRAWING**
**MODELS: BC50 - BC200 (0.5 - 2HP) THREADED DISCHARGE**

**DIMENSIONS: INCHES**
**WEIGHT: LBS**
**PIPE CONNECTION TYPE: NPT**

MODEL	A	A1	A2	B	B1	B2	DN	H	H1	H2	H3	WT
BC50	10.24	3.50	4.92	6.70	3.54	3.15	2	18.35	13.23	5.94	5.55	28.40
BC75	10.24	3.50	4.92	6.70	3.54	3.15	2	18.98	13.86	5.94	5.55	30.60
BC100	10.24	3.50	4.92	6.70	3.54	3.15	2	19.53	14.41	5.94	5.55	34.00
BC150	10.71	3.66	5.12	7.36	3.43	3.94	2	19.92	14.80	5.94	5.63	53.24
BC200	10.71	3.66	5.12	7.36	3.43	3.94	2	20.47	15.59	5.94	5.63	55.44

**CWL: CONTINUOUS RUNNING WATER LEVEL**
**LWL: LOWEST RUNNING WATER LEVEL**
**WT: WEIGHT WITHOUT CABLE**

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)

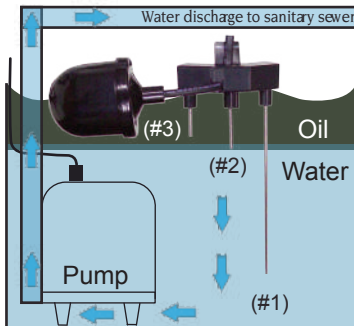


## OPERATION OF DISCHARGE

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.

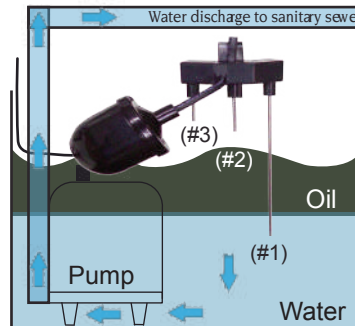
### 1. WATER RISES & PUMP TURNS ON

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



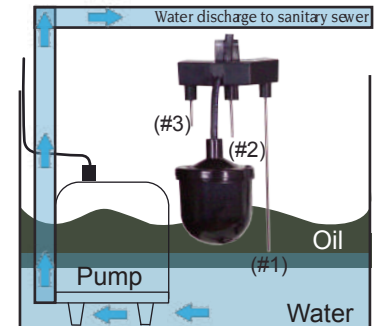
### 2. WATER IS REMOVED/OIL CONTAINED

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**

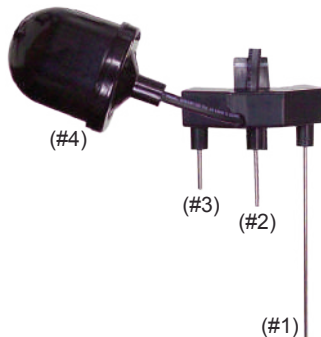


### 3. PUMP TURNS OFF

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



## PRESET LEVEL SENSOR AND CONTROL PANEL OPERATION



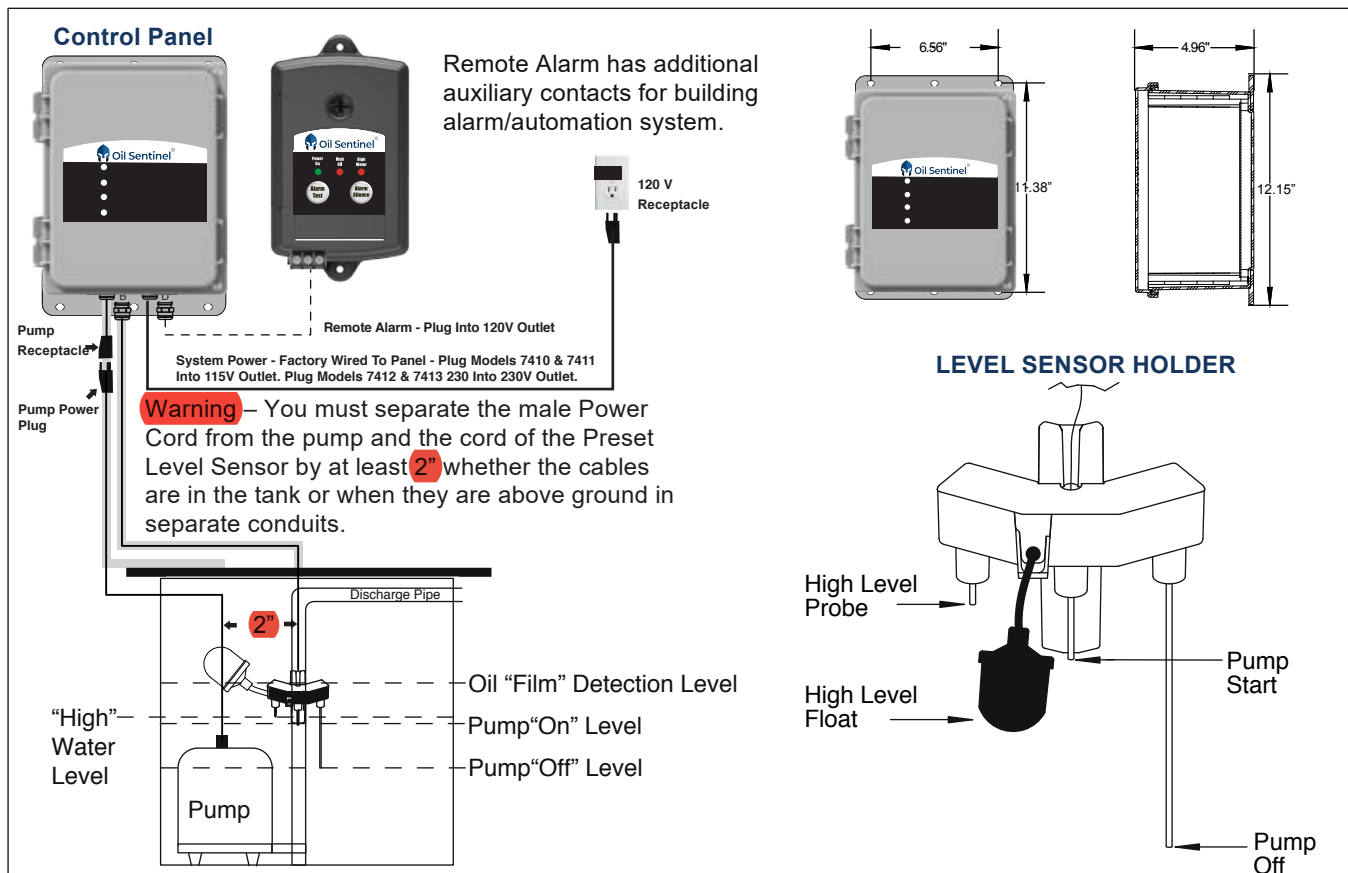
- ▶ When water touches probes (#1) and (#2) the pump will turn on.
- ▶ If the pump can not keep up, loses power or fails the water will reach probe (#3). The "High Water" light will illuminate on the control panel and the remote alarm will activate.
- ▶ If the water continues to rise the float switch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

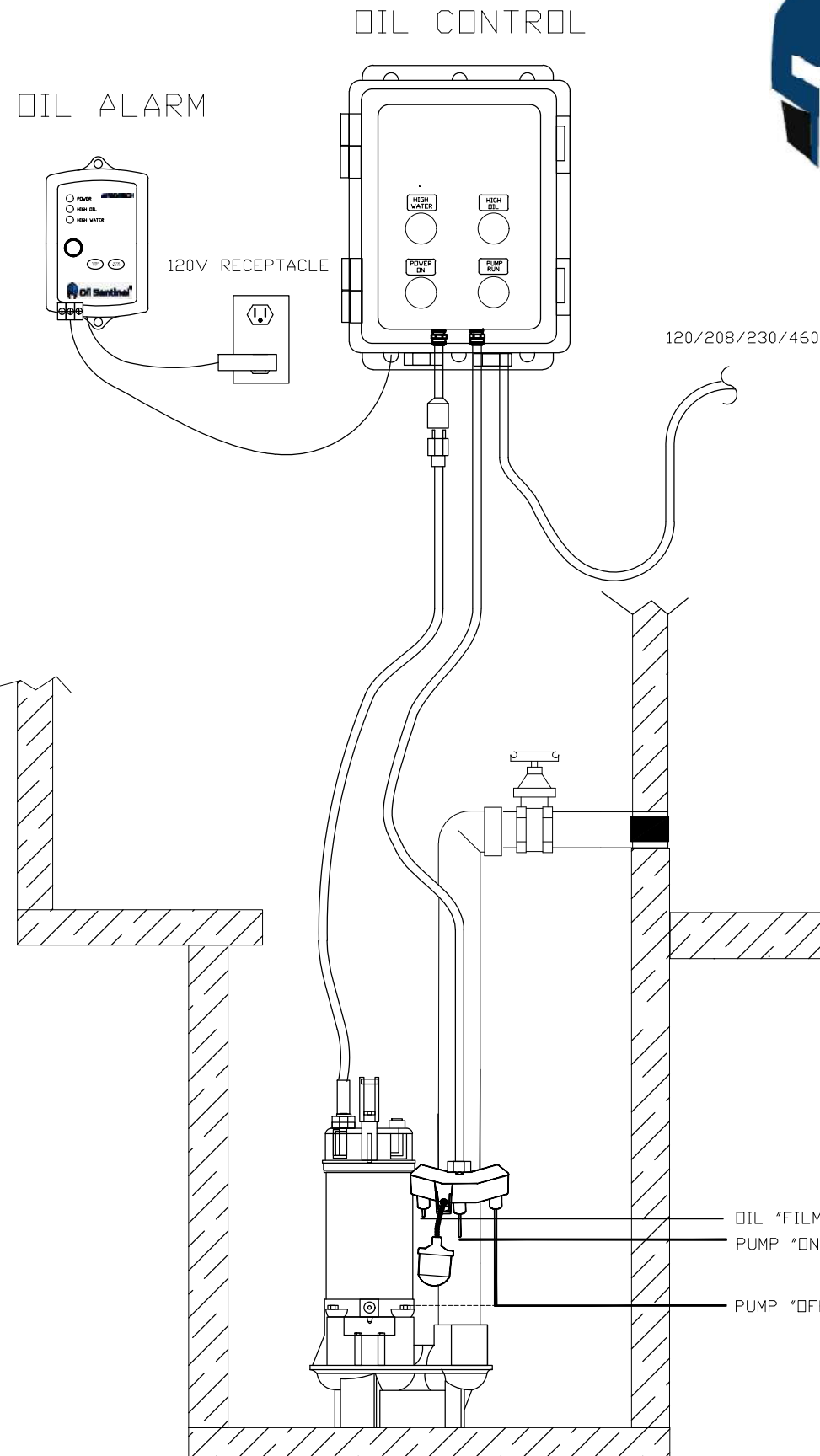
- Housing: ABS
- Probe: Stainless Steel
- Float: PVC

### Control Panel

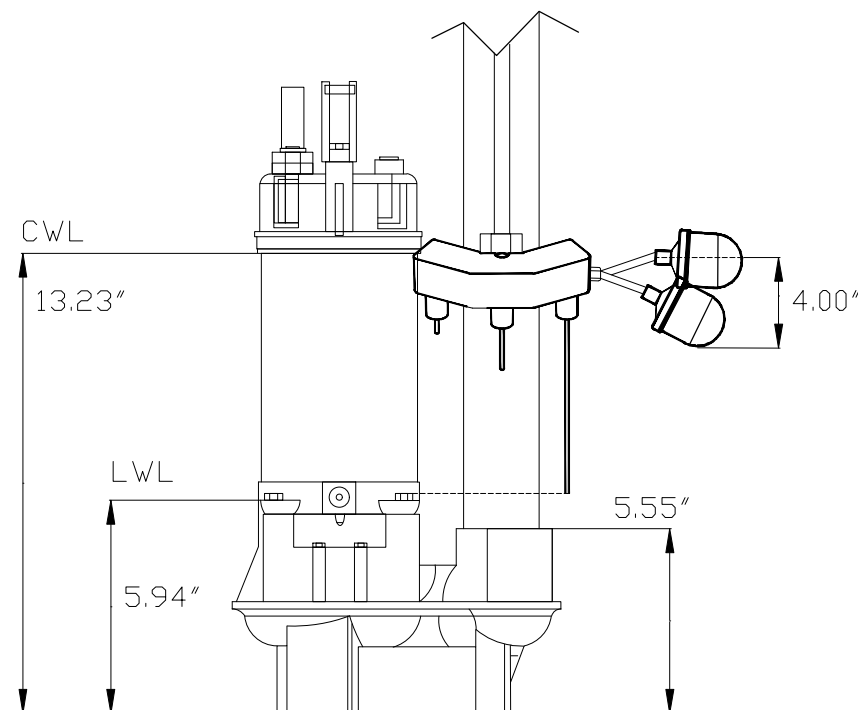
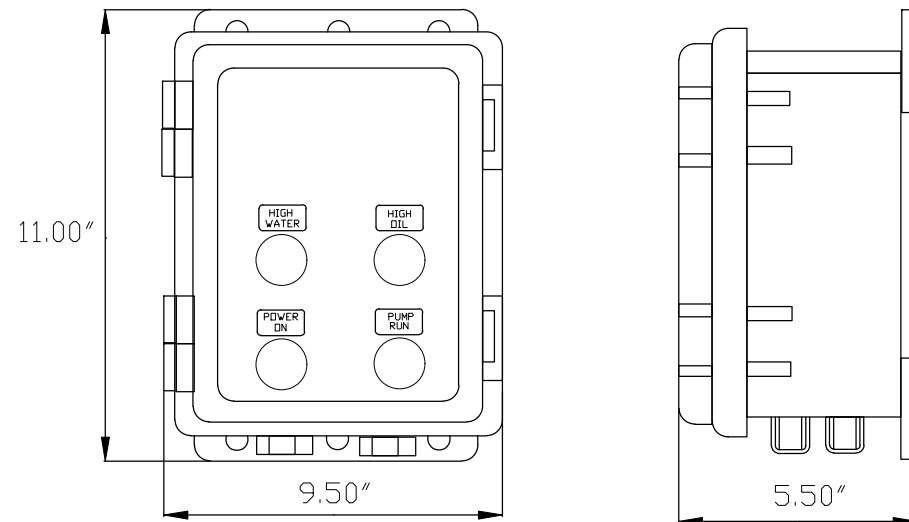
- Enclosure: Type 1
- Power Cord: 6' SJT, 120 VAC
- Receptacle: 6" SJT, 120 VAC, 15 Amp

### 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



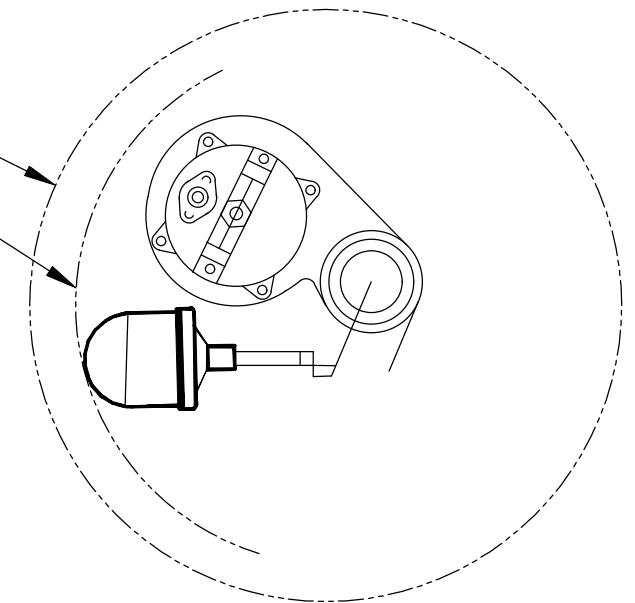
OIL CONTROL DIMENSIONS



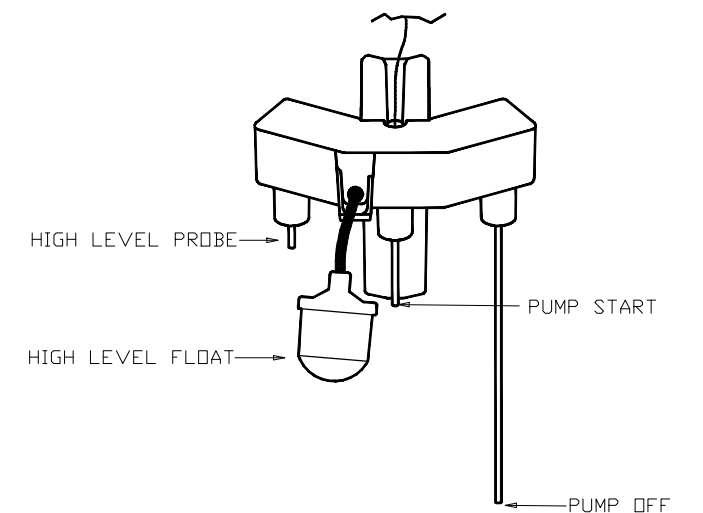
PUMP TOP VIEW

DIA 18.00"

DIA 11.00"



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:

XXXX

Revision:

A

Client:

Drawing Title:

OIL SENTINEL