BOESCH

Oil Sentinel®

OIL SENTINEL
BT100 SERIES

60HZ-ANSI

2" FULL FREE PASSAGE SUBMERSIBLE SEWAGE PUMP

BOESCH PUMPS LLC

Art Chibli
achibli@boeschpumps.com

14031 SW 143rd Court Miami, FL 33186   **(305) 999-1769 & (786) 310-6988**

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
MATERIAL	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

//BOESCH BT100

PUMP PERFORMANCE REPORT

MODEL	BT100		RATED	
FREQUENCY	60 HZ	HEAD	30 ft / 9 m	
DISCHARGE	2 inches / 50 mm	CAPACITY	60 gpm / 227 lpm	
OUTPUT	1 hp / 0.75 kW	POLE / RPM	2 poles / 3450 rpm	

H-Q

PUMP EFF.

OUTPUT
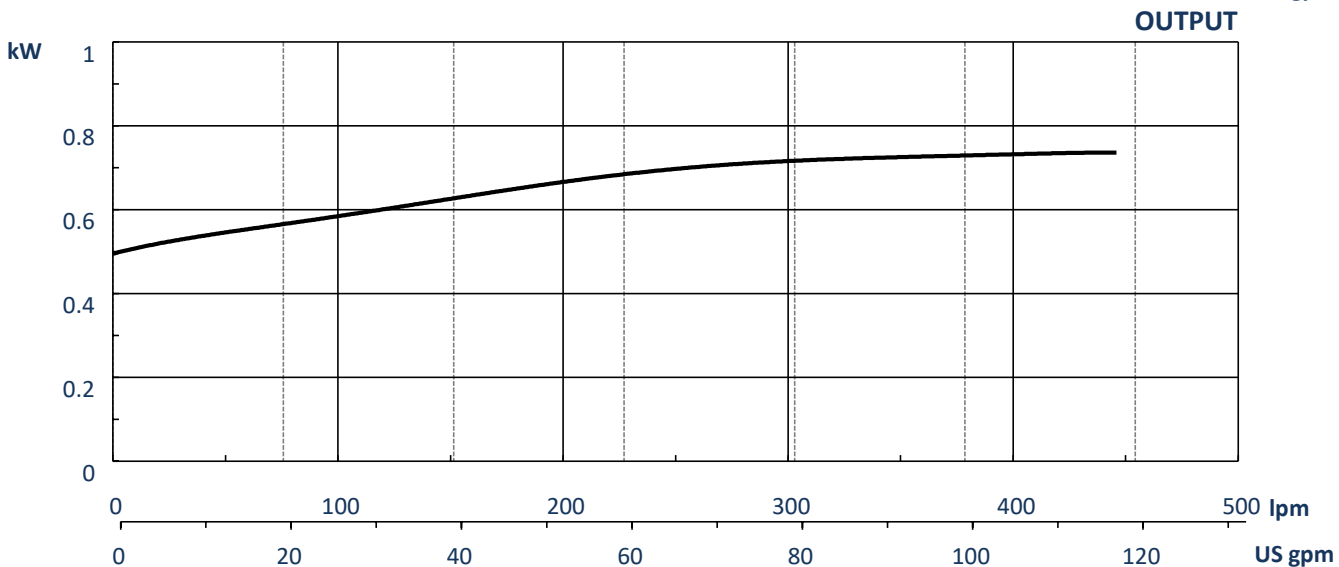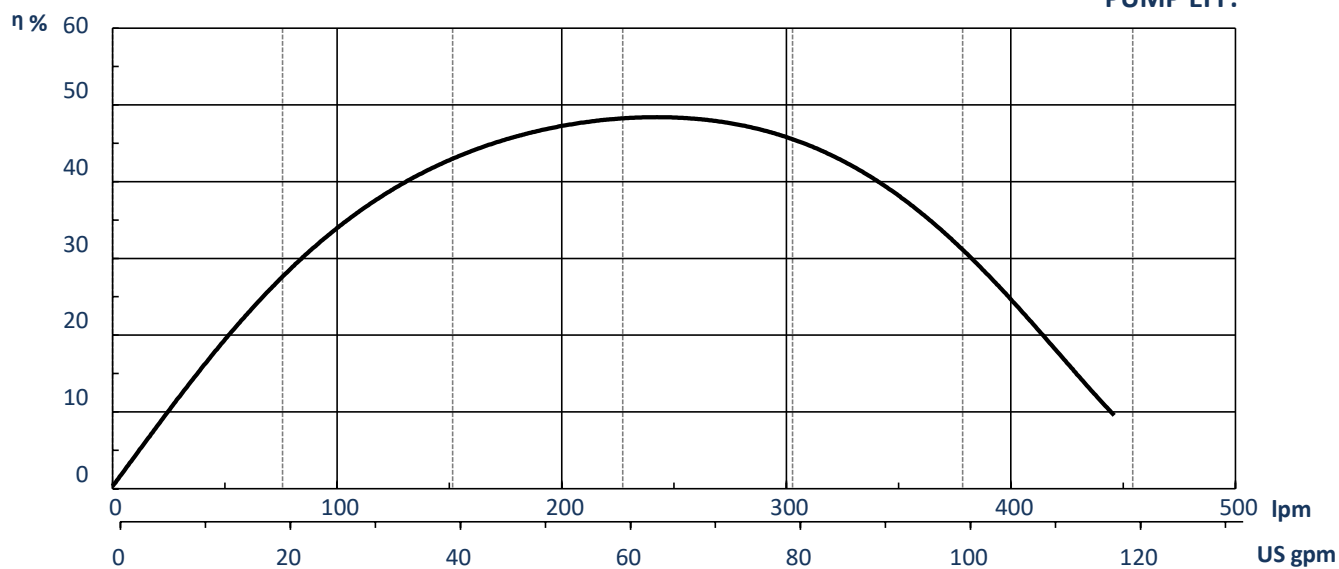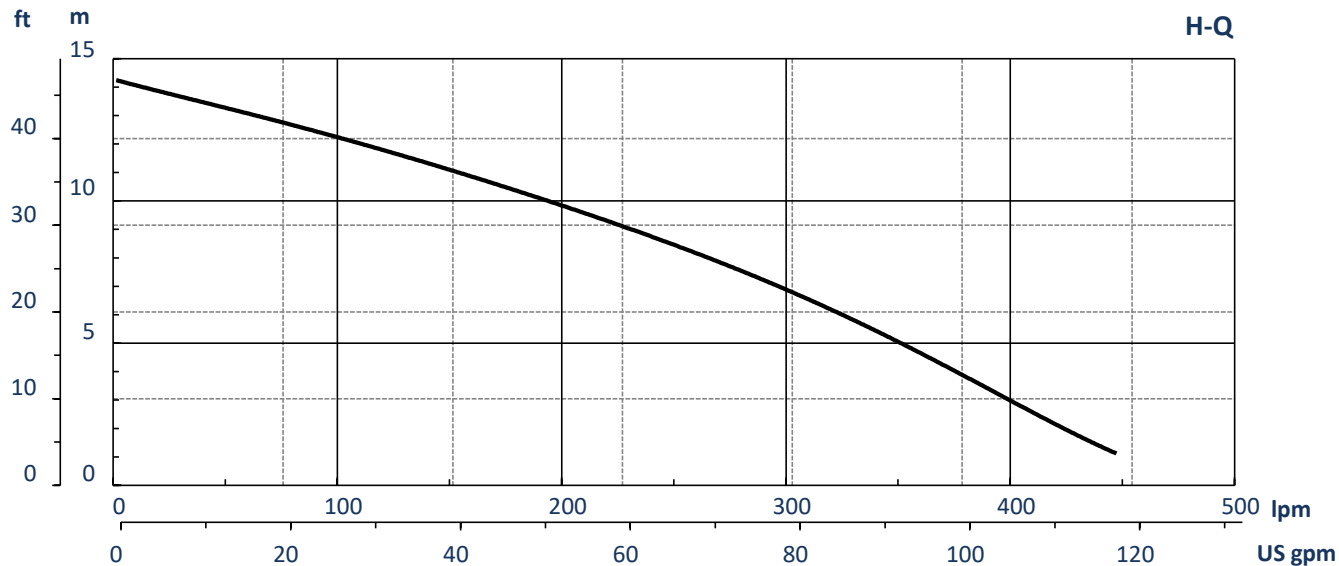
DIMENSIONAL DRAWING

MODELS: BT50 – BT100 (0.5~1HP)
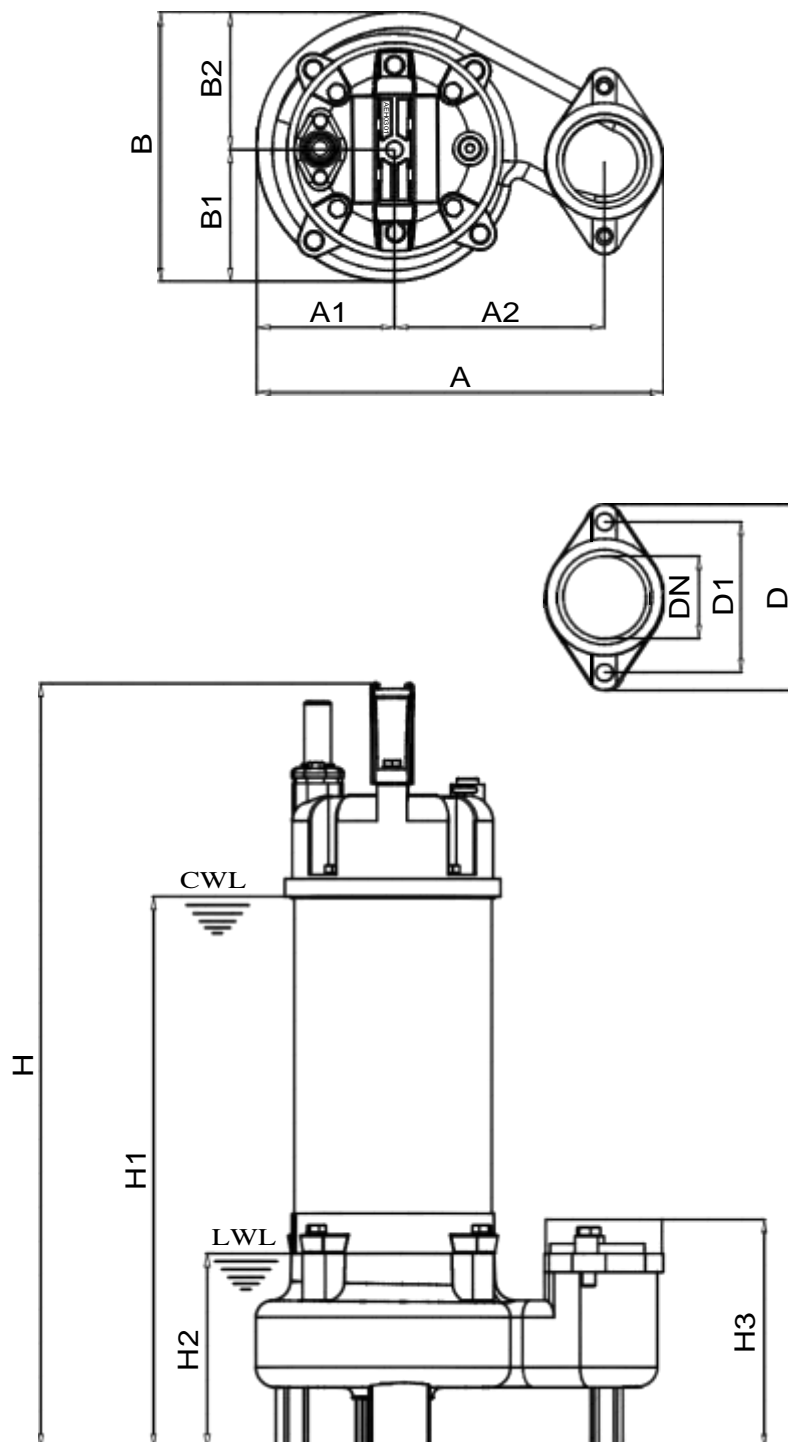
MODEL	A	A1	A2	B	B1	B2	D	D1	DN	H	H1	H2	H3	WT	
BT50	8.98	2.95	4.72	5.91	2.76	3.15	4.33	3.54	2	16.73	11.69	4.61	5.43	S:28.6	T:27.3
BT100	8.98	2.95	4.72	5.91	2.76	3.15	4.33	3.54	2	16.91	12.87	4.61	5.43	S:33.9	T:34.5

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

BOESCH OIL SENTINEL

Oil Sentinel®

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.

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)

c(UL)us
LISTED

**Control Panel**   **Remote Alarm**   **Preset Level Sensor**

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.
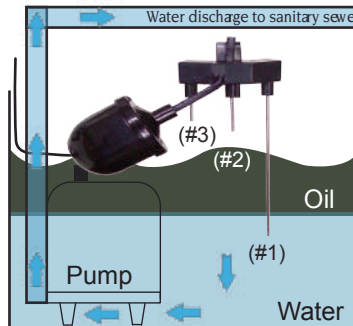
1. WATER RISES & PUMP TURNS ON

When the water reaches probe (#2) the system will turn on and pump the water out of the sump.
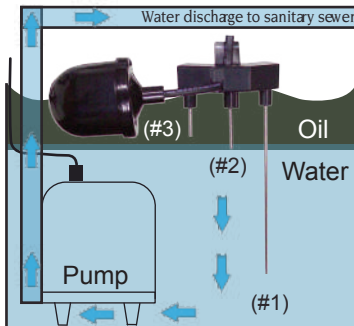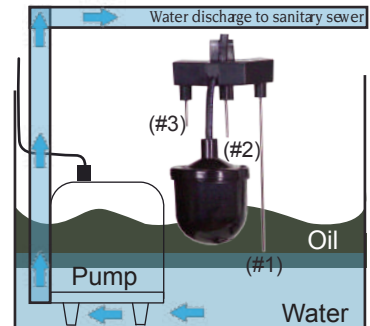
2. WATER IS REMOVED/OIL CONTAINED

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**
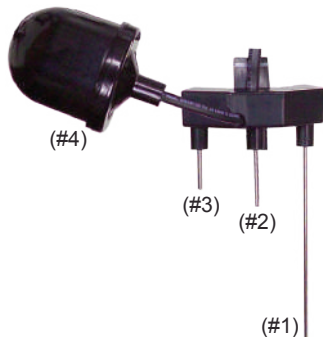
3. PUMP TURNS OFF

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

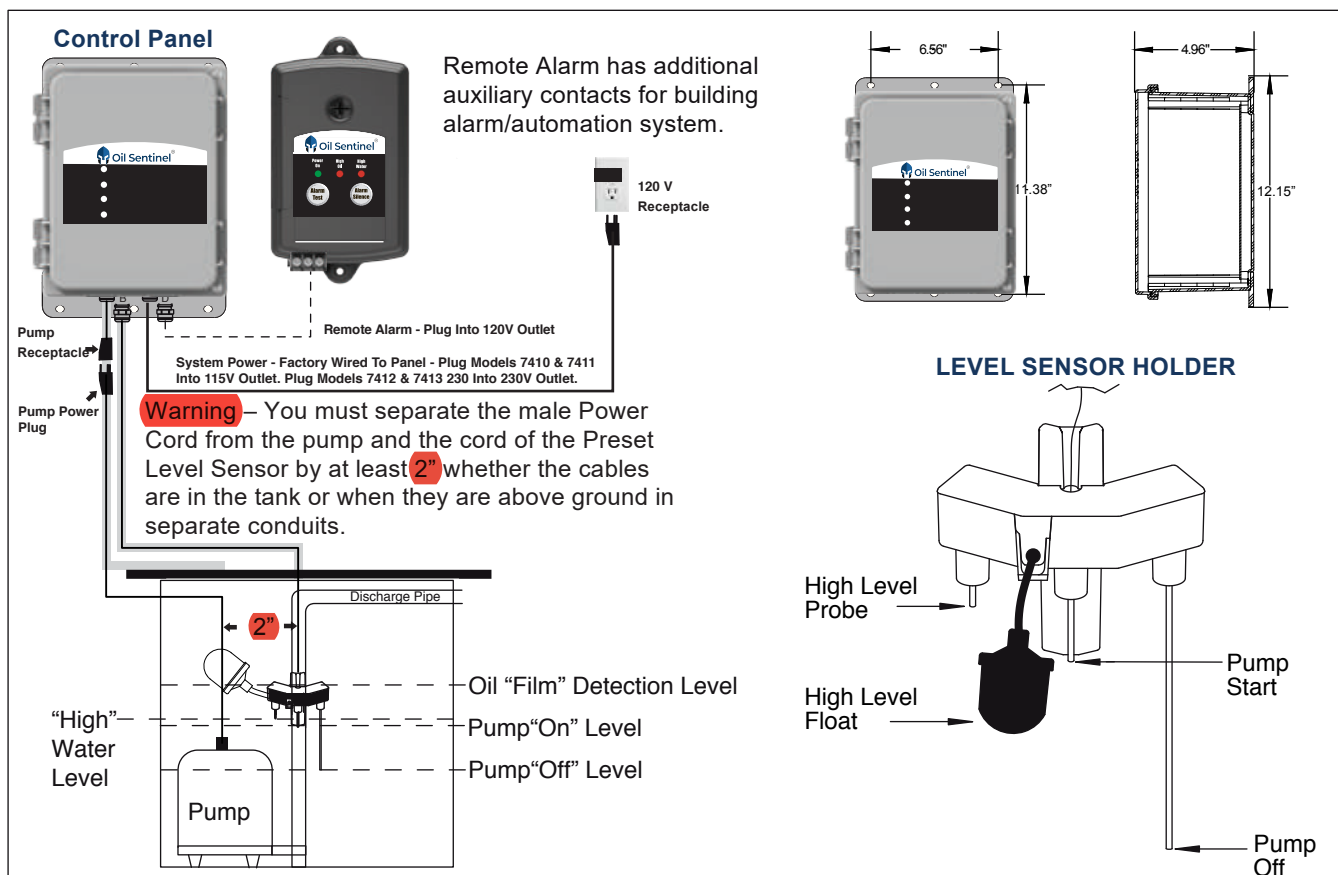## PRESET LEVEL SENSOR AND CONTROL PANEL OPERATION

▸ 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.

BOESCH

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.

Control Panel

Remote Alarm has additional auxiliary contacts for building alarm/automation system.

120 V Receptacle

Remote Alarm - Plug Into 120V Outlet

System Power - Factory Wired To Panel - Plug Models 7410 & 7411 Into 115V Outlet. Plug Models 7412 & 7413 230 Into 230V Outlet.

Pump Receptacle

Pump Power Plug

Warning – You must separate the male Power Cord from the pump and the cord of the Preset Level Sensor by at least **2"** whether the cables are in the tank or when they are above ground in separate conduits.

Discharge Pipe

2"

Oil "Film" Detection Level
Pump "On" Level
Pump "Off" Level

"High" Water Level

Pump

6.56"
4.96"
11.38"
12.15"

LEVEL SENSOR HOLDER

High Level Probe
High Level Float
Pump Start
Pump Off

SPECIFICATIONS

Sensor

▸ **Housing: ABS**
▸ **Probe: Stainless Steel**
▸ **Float: PVC**

Control Panel

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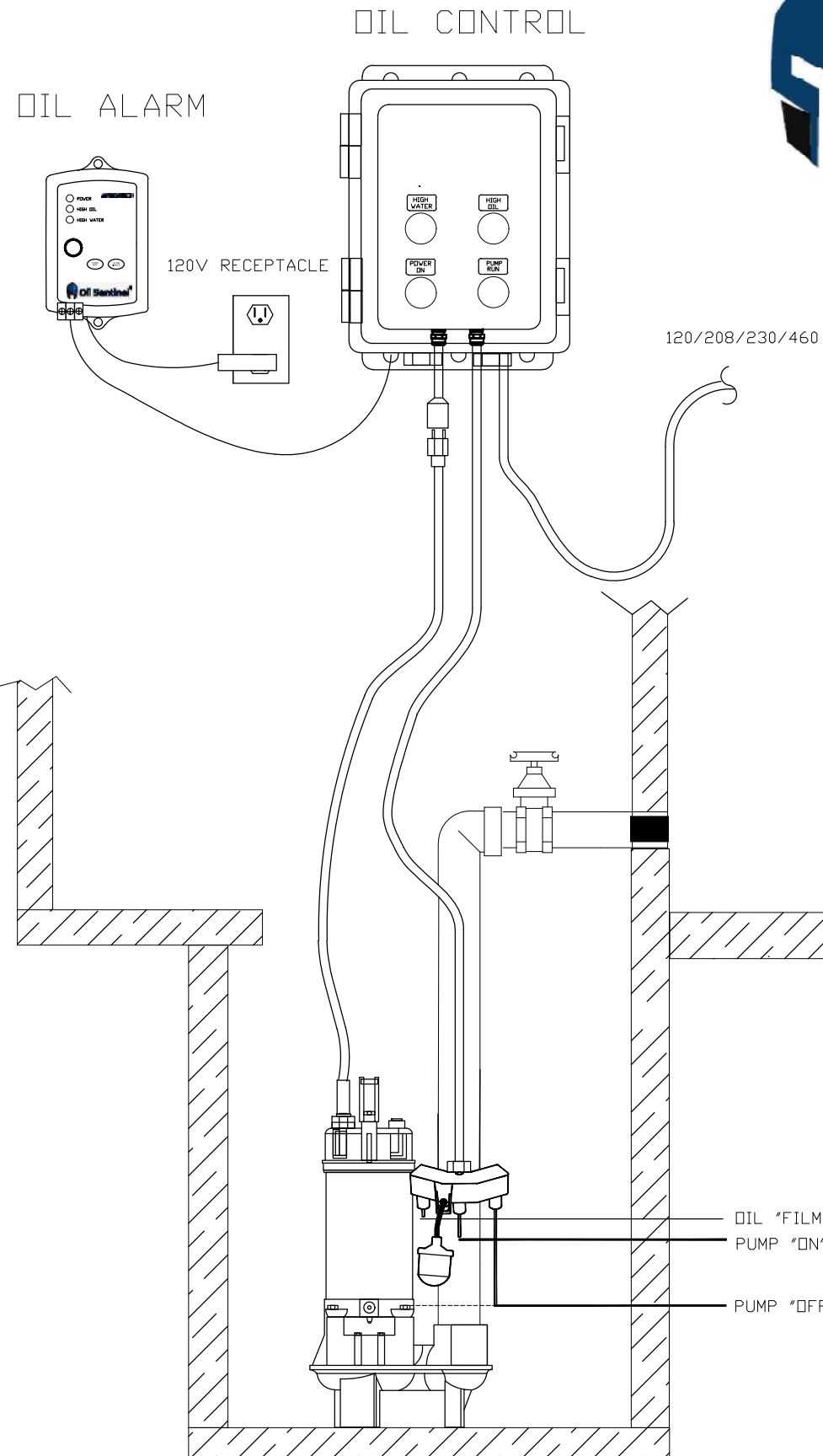▸ **Receptacle: 6" SJT, 120 VAC, 15 Amp**

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**
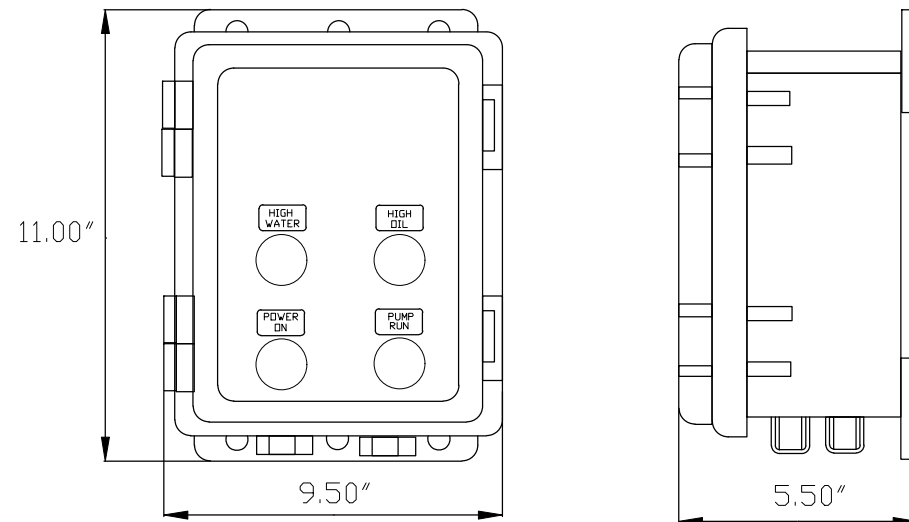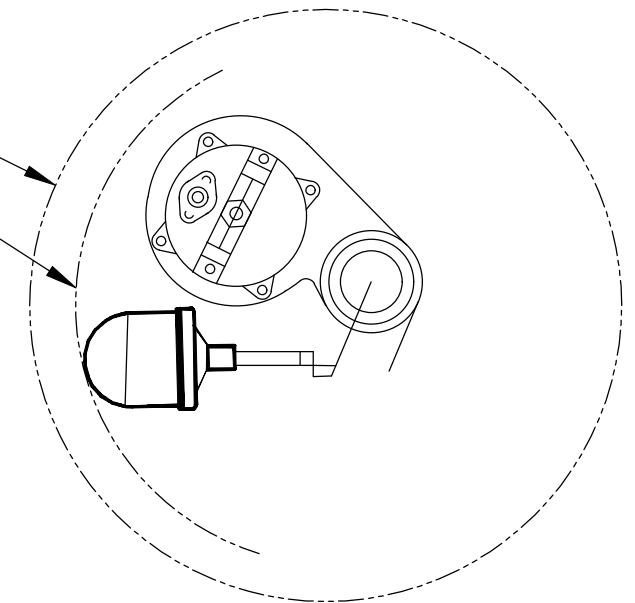▸ **Auxiliary Contact: High Water, High Oil, Optional Pump Fail**
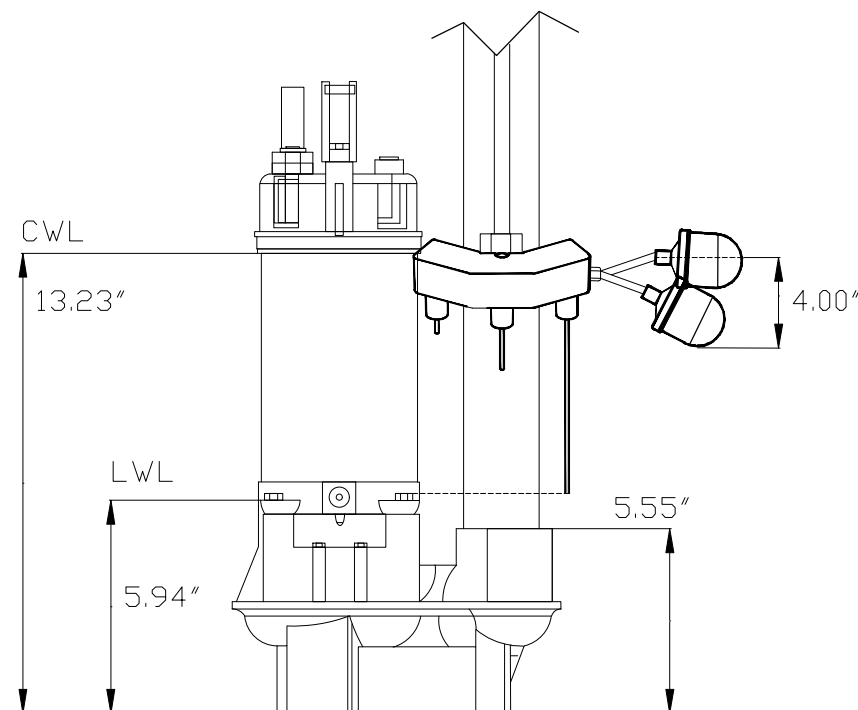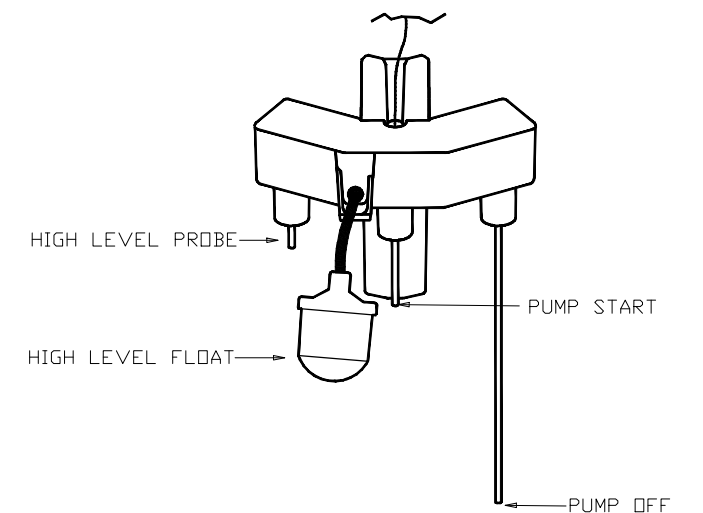
Oil Sentinel ®

OIL CONTROL

OIL ALARM

120V RECEPTACLE

120/208/230/460

PUMP TOP VIEW

DIA 18.00″

DIA 11.00″

OIL CONTROL DIMENSIONS

HIGH WATER
HIGH OIL
POWER ON
PUMP RUN

11.00″

9.50″

5.50″

LEVEL SENSOR HOLDER

HIGH LEVEL PROBE

PUMP START

HIGH LEVEL FLOAT

PUMP OFF

OIL "FILM" DETECTION LEVEL
PUMP "ON" LEVEL

PUMP "OFF" LEVEL

CWL

13.23″

LWL

4.00″

5.55″

5.94″

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

Drawn by:	Project:	Date:
C.Grajeda	BOESCH	06/14/2021
		Scale @ A3:
		XXXX
Client:	Drawing Title:	Revision:
	OIL SENTINEL	A