

Stancor Duplex Oil-Minder® System Submittal SE-100 115 Volt Single Phase



The Stancor Duplex Oil-Minder® System provides for all the safety and operational features of the Simplex System, while allowing two pumps to operate together in the same sump.

The Duplex Oil-Minder® Control alternates each pump upon start-up, assuring equal run time and wear. In the event of heavy inflow, both pumps will operate together until the water level recedes and both pumps are deactivated. The high level/lag pump float will activate an alarm if the water condition continues after a pre-set time point is reached (set for 6 seconds, adjustable between 6 seconds and 10 minutes). An alarm and separate diagnostic LED lights are provided for oil alert, high water, and high amperage (pump overload) conditions. Remote monitoring relays are also provided for alert conditions. A silence and reset switch clears the alarm mode once a fault is addressed. In addition, there are LED lights to “power” the system and to indicate “pump 1” and “pump 2” activation. As with all Stancor Oil-Minder® Systems, oil is contained in the sump while water is pumped on a fully automatic basis, assuring protection of the environment, personnel, and valuable equipment—even during an alarm condition.

The standard Stancor Duplex Oil-Minder® System includes two SE-100 pumps, 115 Volt. However, Stancor can provide systems with any of its wide range of pumps up to 75 HP, with electrical provisions that meet the customer’s requirements.

STANCOR SE-100 115 VOLT SINGLE PHASE DUPLEX
OIL MINDER® ELEVATOR SUMP PUMP

SPECIFICATION FOR SUBMITTAL

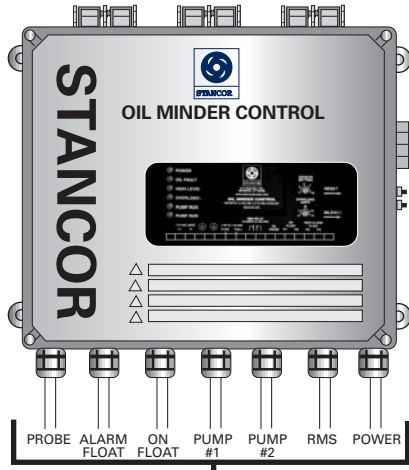
The contractor shall furnish and install a Stancor Model SE-100 complete duplex pump and Oil-Minder® control system for each elevator sump, as shown on the drawings. The pumping system shall be capable of pumping water while containing oil. The system shall function automatically and shall provide local visual LED indicator lights for EACH of the following events a) the presence of oil in the sump when the pump is signaled to run, b) high liquid in the sump, c) high amps or a locked rotor motor condition, d) electrical power to the panel and e) pump activation. An alarm that occurs only in the event of a high liquid level condition and/or oil detected in the pit shall not be considered equal and will not be accepted. Provide dry contacts for remote monitoring of oil detected, high water/sump level alarm/motor overload. The Oil Monitoring Control System shall have a minimum of 10 years of proven reliability.

The sump pump shall be a Model SE-100, heavy duty submersible type, capable of pumping 90 GPM @ 20' TDH or 50 GPM @ 28' TDH. The motor shall be rated 1H.P, 1 phase, 60 hertz, 115 volt, and shall be capable of operating continuously or intermittently and shall include thermal and overload protection. The pump discharge shall have a minimum discharge connection size of 2". The motor housing and fastening bolts shall be constructed of 304 Stainless Steel and the mechanical seals shall be housed in a separate oil-filled compartment. The pump shall have a semi-open non-clogging Vortex impeller, and shall be designed for floor mounting complete with support legs.

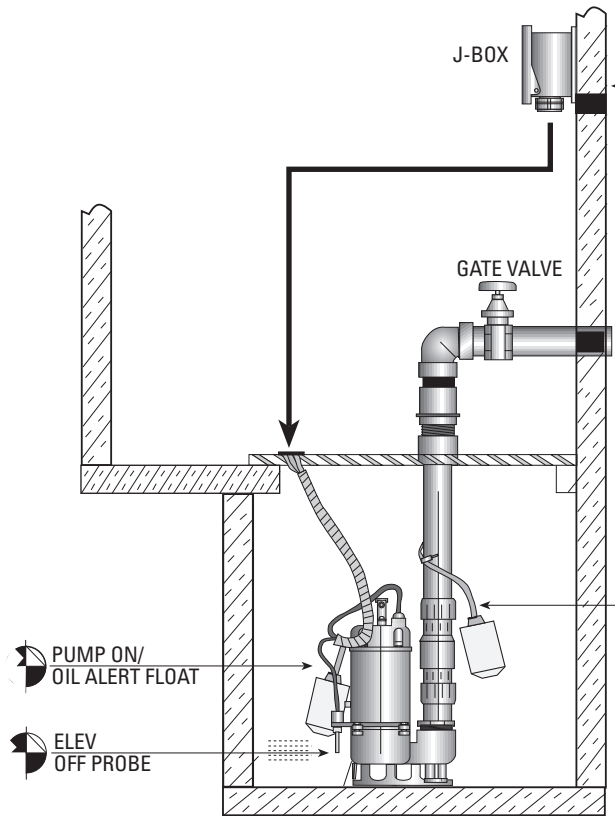
The main float (lead pump on float) will rise (close) when the liquid level increases in the sump pit. Pump #1 contactor should close to allow the pump to discharge the liquid as long as the oil sensor has a resistance to ground lower than the set point (i.e., the oil sensor is in conductive water and normal operation is allowed). The pump relay will open when the liquid level drops below the oil sensor probe tip (pump off). There is a one (1) second time delay after the liquid level drops below the oil sensor probe tip. At this point, the oil sensor probe voltage drops from 5VDC to 15 millivolts DC until the "pump-on" float rises again, at which point the oil sensor input voltage returns to 5VDC. The 15 millivolt input greatly reduces the potential field and subsequent metal ion exchange, thus preventing build up of foreign matter on the probe surface. When the pump on float rises again the alternator will activate Pump #2. The alternator allows for equal wear on each of the pumps. If water level continues to rise and raises float #2 (high level alarm float / lag pump start float), the lag pump contactor will be energized until water level drops below the oil-minder probe (pump's stop sensor).. If float number #2 rises both pumps are activated.

If the water condition continues and the two pumps cannot bring down the water level below float #2 The alarm/RMS will activate after the time set point is reached (The point timer, RMS alarm delay is adjustable between .1 to 10 minutes). The high level liquid alarm is enabled by an additional float (high level alarm float / lag pump start float) placed at a level in the pit above normal acceptable liquid levels. The rising of this float (closing) will cause the controller to energize the audible alarm, remote alarm relay, and the high level LED. The buzzer will follow the RMS delay when high level fault occurs. If an Oil Fault occurs, the buzzer will still alarm immediately, however, "high level" faults should not alarm until the RMS delay has expired. The high level alarm will only be de-energized after the high level float drops to its normal state (open). The high level liquid alarm will not disable the pump motor from normal operation. In a high level alarm condition, the remote alarm relay will cycle on and off with 0.5 seconds on, and 0.5 seconds off.

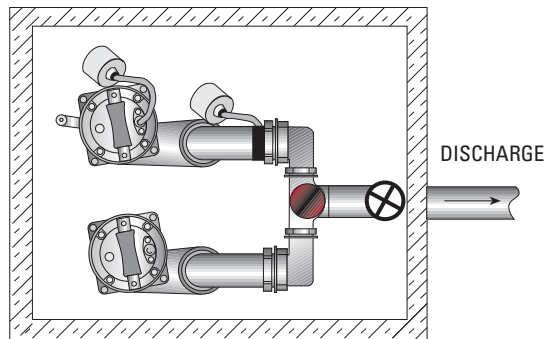
The factory installed Oil Sensor probe detection system must be hermetically sealed, heavy duty, Stainless Steel with low voltage self-cleaning technology. The oil sensor probe voltage shall not exceed 15 millivolts DC until it comes in contact with water, at which point the oil sensor returns to 5VDC. The low 15 millivolt DC input shall reduce the potential field and subsequent metal ion exchange, preventing build up of foreign matter on the probe surface. Oil sensing systems using optical lenses subject to dirt contamination and false alarms are not considered equal. The pump control float and oil sensing probe are to be factory mounted on the pump and factory tested. Pipe discharge mounted pump floats and oil sensors are not considered equal. The control panel to include a high decibel warning horn buzzer complete with alarm silencing switch. A clearly marked terminal board with unpowered remote monitoring contacts for connection to the RMS shall be included as standard. Provide factory hard wiring of pump, oil probe and floats into the NEMA 4X control box. **All cables between the pump and control box shall be 16' long as standard.**



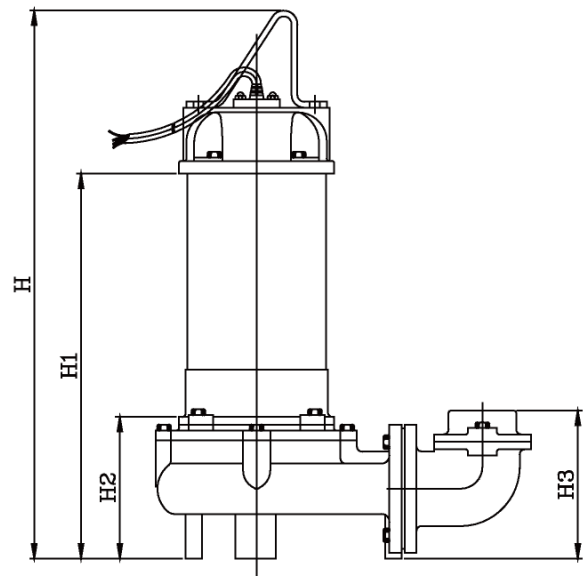
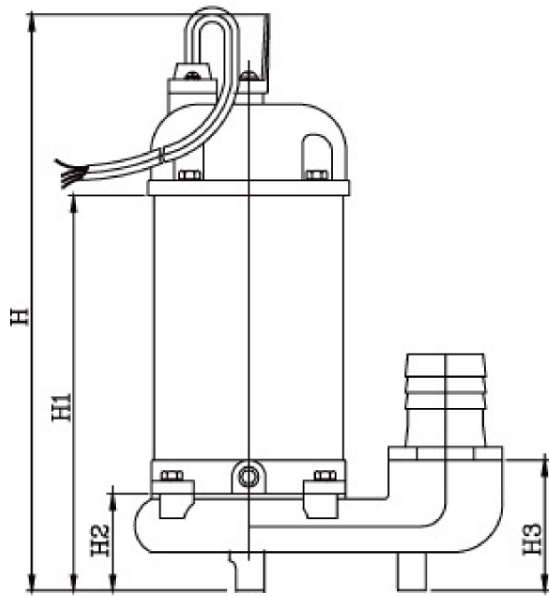
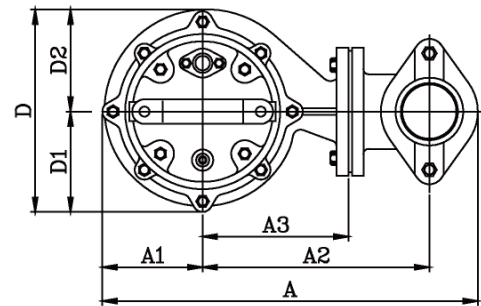
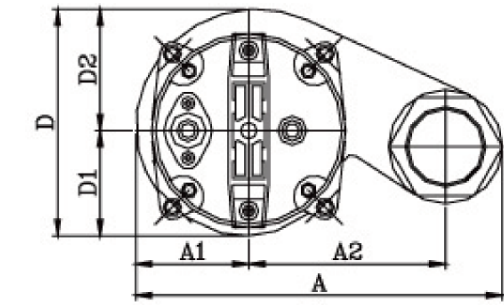
SUMP PUMP INSTALLATION - OIL-MINDER® SYSTEM



HIGH LEVEL
& LAG PUMP
FLOAT



SE/SV-Series Dimensions



SE-40~100

SE/SV-200~750

Dimensions (mm)

Type	A	A1	A2	A3	D	D1	D2	H	H1	H2	H3
SE-40	231	72	132	NA	145	66	78	396	266	110	110
SE-50	231	72	132	NA	145	66	78	421	291	110	110
SE-100	231	72	132	NA	145	66	78	496	339	110	110
*SE/SV-100	312	82	183	101	163	76	87	494	351	124	156
SE/SV-200	390	103	235	151	210	105	105	532	400	150	152
SE/SV-300	390	103	235	151	210	105	105	552	420	150	152
SE/SV-500	470	110	257	170	218	98	120	633	468	160	206
SE/SV-750	470	110	257	170	218	98	120	673	508	160	206

> *SE/SV-100 : Elbow Type (Optional)

Additional Pump Selections

ASME A 17.1 Section 2.2.2.5 (2007) requires that, for each building elevator, the elevator sump pump shall be capable of pumping at least 3,000 gallons per hour. Therefore, after considering vertical lift and pipe friction losses, a larger pump selection may be necessary for certain projects.

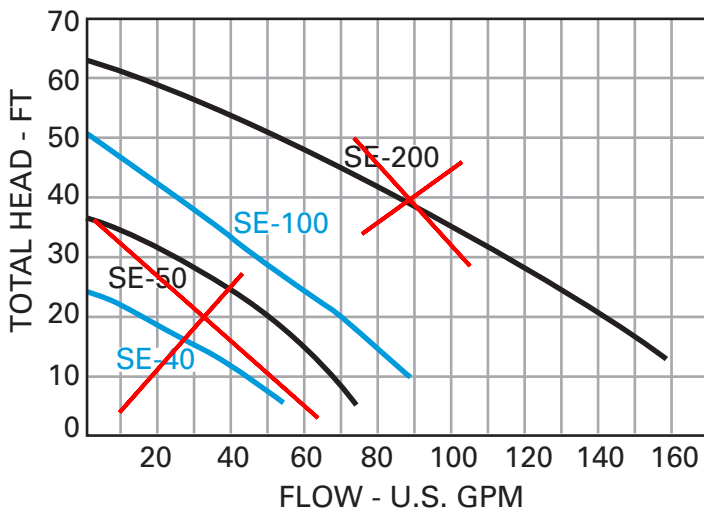
No matter what the pump capacity requirement may be, Stancor has an Oil-Minder® System that will do the job.

Please refer to the chart below for additional commonly specified pump selections. Stancor manufactures pumps up to 75 HP, details of which can be found at www.stancorpumps.com.

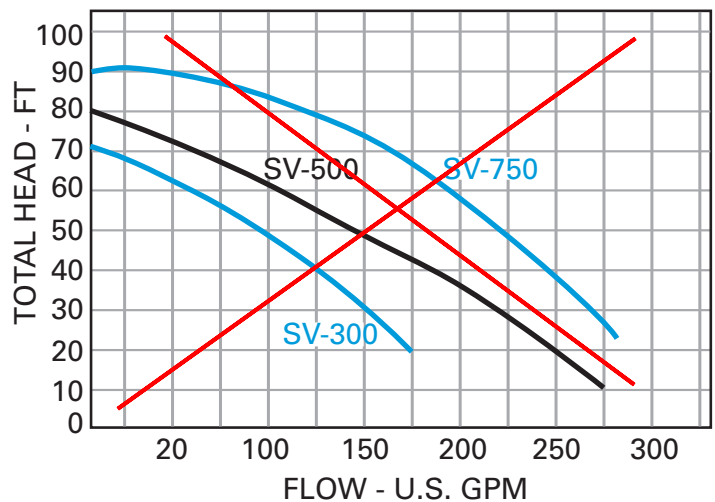
Specifications Pump & System Model	Output		Discharge		Rated		Cable Length (ft)
	HP	Voltage	Amps	In.	Max. Head (ft)	Max. Capacity	
SE-40 O/M	4/10	115	5	2"	22	64 GPM	16
SE-50 O/M	1/2	115/220/460	8/4/2	2"	37	74 GPM	16
SE-100 O/M	1	115/220/460	14/7/3.5	2"	50	100 GPM	16
SE-100HH O/M	1	115/220/460	16/8/4.5	2"	80	80 GPM	33
SE-200 O/M	2	220/230/460	21/10/5.5	2" (3")	62	172 GPM	33
SV-300 O/M	3	230/460	9/5.2	3" (4")	70	210 GPM	33
SV-500 O/M	5	230/460	15/8.6	3" (4")	80	280 GPM	33
SV-750 O/M	7.5	230/460	22.5/12.8	3" (4")	90	330 GPM	33

1. Guiderail systems are available for all Stancor pumps
2. Elbow with female threaded connection provided, standard
3. 208V available as special order

Series SE Performance Curves



Series SV Performance Curves



Stancor, Inc.

515 Fan Hill Road • Monroe, CT 06468

Phone 203-268-7513 • Fax 203-268-7958 • www.stancorpumps.com