



E  **PROBE PUMPS**
ELECTRIC SUBMERSIBLE PUMPS

Single-Phase Pumps

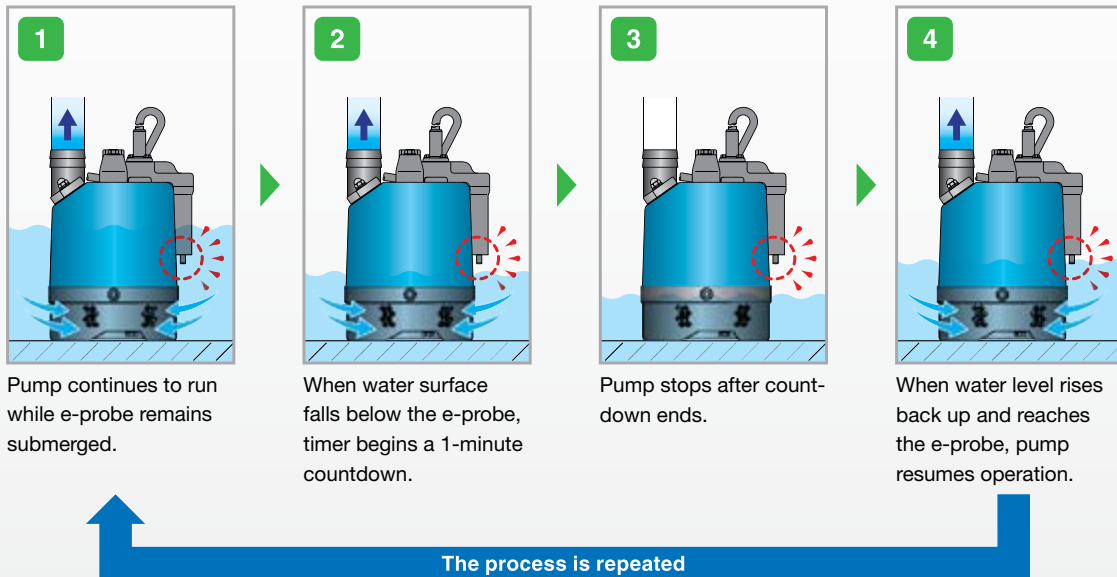


Automatic water level sensor (electrode probe) molded in resin and covered by rubber case to protect against rough handling



- Sensitive electrodes detect water to start pump cycling even when foreign materials are present
- Internal 60-second timer eliminates frequent pump on/off cycling in rough water to extend motor life
- Jobsite tested for more than 30,000 on/off cycles without failure or damage

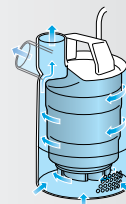
Automatic Operation (LB-A)



Motor Cooling & Discharge Design

Top Discharge, Flow-Thru Design

This design provides maximum motor cooling efficiency allowing continuous operation at low water levels and extended dry-run capability, and also allows the shape of the pump to be cylindrical and slim for installation in a well casing for deep well dewatering.



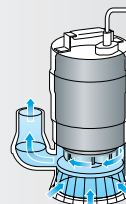
LB-480A

LB-800A



Side Discharge, Spiral Design

The pump has a spiral pump casing that facilitates smoother passage of foreign objects like mud and soil contained in the pumped liquid. It is a simple and practical design that facilitates inspection and repair work.



HSE2.4S



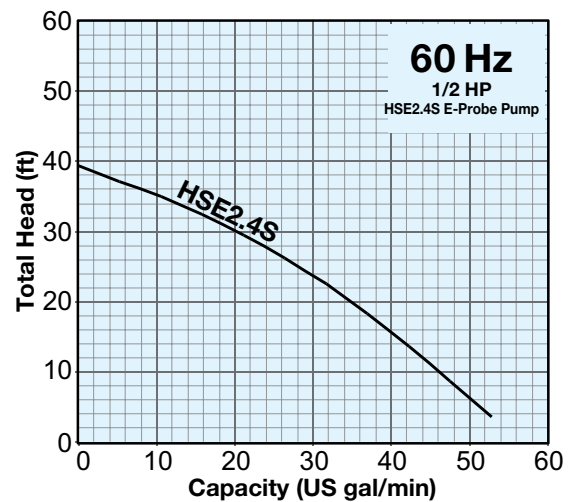
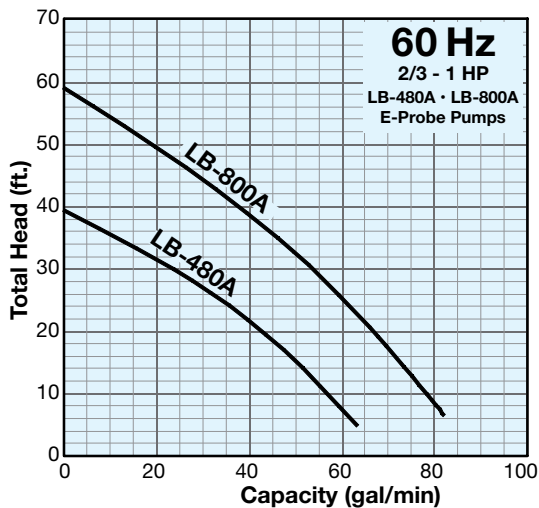
E-PROBE PUMPS Single-Phase Pumps

Light-weight construction, for ease of portability **LB-A**

Durable lightweight trash pump, designed to pump water containing sand, solids & debris **HSE**

LB-480A & LB-800A features an electrode (Automatic Water Level Sensor) which incorporates low voltage, stainless steel probes, epoxy and rubber encapsulated timing relay, that turns the unit off when water is not present. It saves energy and extends the life of the motor and bearings!

HSE2.4S is a durable automatic trash pump that features an electrode (Automatic Water Level Sensor), designed to pump water containing sand, solids and debris with minimal wear and clogging.



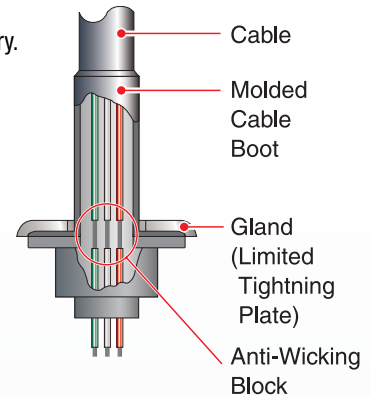
LB-480A / LB-800A / HSE2.4S Features

- No control panel or float switches required
- Performs like the non-automatic pump with no special float installation required
- Urethane semi vortex impeller for maximum durability and pump performance
- Dual inside mechanical seal with SiC faces provides longest operational life
- Oil lifter provides lubrication of the seal faces
- V-Ring Seal design protects mechanical seal from abrasive particles

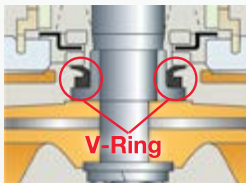
MODEL	Output (HP)	Phase	MOTOR SPECIFICATIONS		RPM	Discharge Size (inches)	DIMENSIONS (inches)		Max. Solids Dia. (inches)	Pump Starting Water Level (inches)	Pump Weight (lbs.)
			Rated Current (A)				Diameter	Height			
			Single Phase 115V	220V							
LB-480A	2/3	Single	5.9	3	3525	2	8 3/4	11 1/4	0.236	4 1/2	29
LB-800A	1	Single	10.5	5.2	3316	2	8 3/4	13 7/16	0.236	6 3/4	38
HSE2.4S	1/2	Single	5.2	-	3404	2	10 1/16	14 1/8	0.276	6 1/2	30

Anti-Wicking Cable Entrance: Maximum protection against water incursion through the cable entry.

- Molded Cable Boot or Cable Protection Tube - extends cable bending radius, prevents abrading, and reduces fatigue.
- Cable Gland - provides 360 degree compression of cable boot, protection tube or cable bush for a water tight fit.
- Anti-Wicking Block - window cuts on conductor insulation expose strands to molded rubber or epoxy to prove water wicking through the strands and entering the motor providing protection even if the cable insulation is cut.



Circle Thermal Protector (CTP): For pumps with 1-10HP : 3-Pole protector connects to each winding of the motor and reacts to excessive heat and amperage. Automatic reset at safe temperature to restart the motor. No motor protection circuit required in starter or control panel.



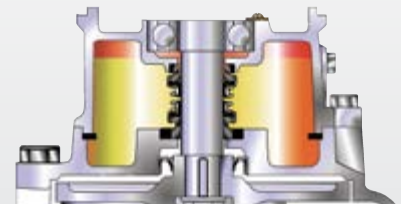
V-Ring: V-Ring is mounted at the top of the impeller and is brought in close contact to the bottom of the mechanical seal by the internal pressure of the pump casing. This V-Ring acts as a dust seal to prevent fine abrasive particles in the pumping fluid from reaching the mechanical seal.



High-Performance Motor: Dry type, squirrel-cage, induction motor, housed in a watertight casing, conforms to either insulation class B or E, or F. In both of these classes, all standard pumps can be used in ambient temperature up to 104°F (40°C).

Dual Inside, Silicon Carbide Mechanical Seals:

Isolation of mechanical seals in an oil chamber provides a clean, non-corrosive and abrasion free lubricating environment to prevent spring failure due to corrosion or abrasion and bottom seal failure due to loss of cooling during dry-run conditions.



Oil Lifter: Tsurumi's Oil Lifter encloses the mechanical seal and uses the centrifugal force generated by the rotating shaft and seal to pump oil to the upper seal faces. Upper and lower seal faces are positively lubricated even when extremely low oil levels exist, as experienced after long periods of extended operation.

