

Liberty Pumps™

MODEL 441 EMERGENCY SUMP PUMP SYSTEM 12V Battery Operated

**2
YEAR
WARRANTY**



*Works auto-
matically when
power fails!*

MODEL 441 INCLUDES:

- High output 12 volt submersible pump
- Automatic, mercury-free switch
- Control panel
- Battery box and strap (battery not included)
- 12 volt charger
- Coupling, tee, check valve and bushings for 1-1/2" or 1-1/4" connections

FEATURES:

- Automatic start-up
- Advanced 4-stage charging system
- Audible in-use alarm and light
- 25 GPM at 6' head

MODEL 441

12 VOLT EMERGENCY SUMP PUMP SYSTEM

FEATURES:

- **Advanced Charging System** outperforms “trickle” chargers with a 4-stage charging process. The system tests the battery and maintains a maximum charge without running the battery down or self-discharging. A sophisticated charging algorithm continuously tests the charging process from start to finish.

CHARGING STAGES:

Stage one: Battery Test Stage – determines the condition of the battery. If the charger determines the battery’s condition is not conducive to receiving a charge, further charging will stop.

Stage two: Constant Current Charge Stage – charges battery at full rated output.

Stage three: Constant Voltage Charge Stage – equalizes the charge in each cell and ends when battery nears 100% charge.

Stage Four: Battery Float Charge Stage – if the battery’s voltage drops below a preset voltage level, the charger turns on briefly to keep the battery “topped-off” and prevents self-discharging.

- **Red “Fault” L.E.D.** warns of a problem with the battery or charging process
- **Time dependent charging** with built-in 150-hour safety timer. If the safety timer “times-out,” the red “Fault” L.E.D. is displayed and charging discontinued to protect equipment from “run-away” battery under charge.
- **Reverse battery and short circuit protection**
- **Audible alarm and light** advises of emergency pump operation
- **Works with marine-type deep-cycle batteries (not included with system)**
- **Easy wiring with slip-on connectors and terminal block**

Charger Specifications:

INPUT: 120Vac, 0.19Aac, 60Hz

OUTPUT: 12Vdc, 800mA

Safety Timer: 150 hours

When used with a recommended deep-cycle marine-type battery, the model 441 will provide 8-10 hours of continuous run operation and up to 30 hours of intermittent operation.

NOTE: Duration will vary depending on frequency of pump operation and pumping head.

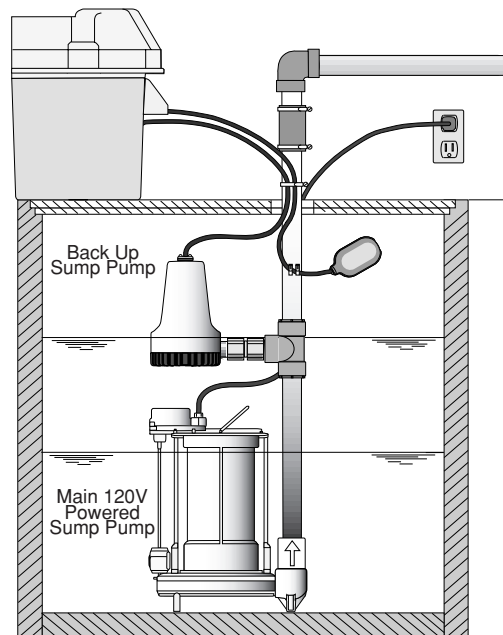


PUMP PERFORMANCE

Model 441

Total Head In Feet	0'	4'	8'	12'	13'
GPM	40	30	18	6	0

Typical Installation Diagram



(Specifications subject to change without notice.)