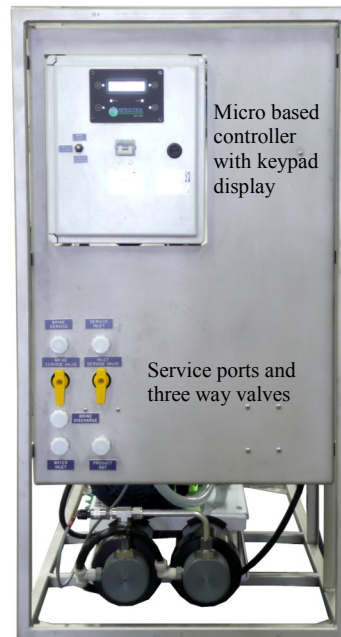


# Spectra LB 1800F and 2800F Datasheet

The **LB-1800** and the **LB-2800** are extremely energy efficient reverse osmosis desalination plants designed for stationary or industrial applications. They can treat high salinity brackish or seawater using just a fraction of the energy of conventional small plants. In fact, the Spectra LB machines are so efficient they are often powered from renewable energy. These units are built using Spectra's revolutionary and proprietary new **Pearson high pressure pump**. The plants are supplied with a rugged stainless steel frame, **Pearson Pump** coupled to Spectra's proprietary Spectraflux™ membrane assembly, micro-processor control system with Burkert product water diversion valve, pre-filtration system, automated freshwater flushing system and a motor speed control for total system command. Touchpad display and controls are mounted in sealed enclosure. Service ports with three way valves are included to ease maintenance procedures.



## Technical Specs:

**LB-1800 GPD**  
**75 GPH (285 LPH)**  
Treats Seawater  
or Brackish  
Approx 800W  
Available in 24V DC  
48VDC, 120VAC,  
240AC

**LB-2800 GPD**  
**116 GPH (444 LPH)**  
Approx 1200W  
Available in 48VDC  
240VAC

Dimensions  
57"L x 24D x 45"H  
Approx 300 Lb  
145cm L x 115cm W  
x 45cm H  
Approx 136 kg



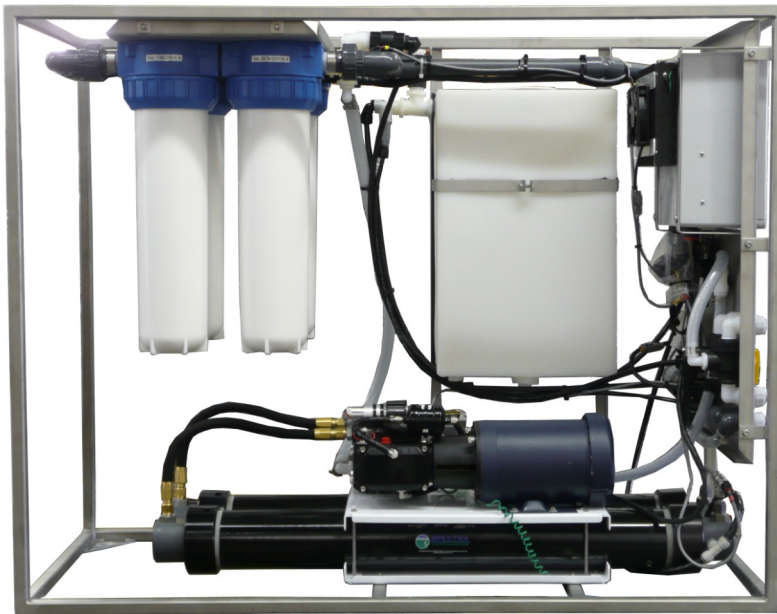
**Pearson Pump with Spectraflux™  
Membrane assembly**

The **Pearson Pump** is a breakthrough reciprocating pump design. This unique high pressure pump combines feed stream pumping and energy recovery into a single unit. The "Energy Recovery" feature of the **Pearson Pump** takes the energy entrained in the brine reject stream from the RO mem-

branes and recaptures it dramatically increasing the overall efficiency. This results in bringing energy requirements down to an impressive 8-11 Watt Hours per Gallon (2.6 KWH per Cubic Meter) on seawater, a major improvement for small scale water desalination. The system does not require continuous monitoring and pressure adjustment as it stays inherently in balance at all times, providing a constant product flow and recovery ratio, The product flow can be controlled via the variable speed drive to the motor.

The **Pearson Pump** is manufactured from engineered composites and super duplex stainless steel for extreme corrosion resistance. Spectra's innovative oil filtration system allows for long maintenance intervals.

# Spectra LB 1800F and 2800F Datasheet



## Features

- **Pearson Pump**-the most energy efficient desalination pump on the planet!
- **Pearson Pump** integrated with Spectra's exclusive oil filtration system for extended service periods.
- Microprocessor based controller with keypad display to monitor and control all functions. Readouts include digital based flow and pressure as well as filter condition and operational hours. A conductivity controller monitors product water quality and automatically rejects poor product water on startup. A high quality Burkert diversion valve with manual bypass is standard. Tank switches can be integrated to automatically start and stop the system.
- Motor speed control with external heat sink for total command over motor speed and product flow.
- Three way valves and service ports integrated into the system for ease of maintenance.
- 20 and 5 micron Spinring™ Industrial prefilter set protects the membranes. Water delivery and pretreatment is site specific and will be engineered for your particular application. Multimedia filters and Ultra filtration options are available from Spectra.
- Spectra engineered pressure vessels with proprietary Spectraflux™ membranes.
- Totally enclosed fan cooled motors for long service life.
- Rugged 304 Stainless steel welded frame.
- Integral tank and pump for automatic freshwater flushing of the membranes is included.

Spectrawatermakers engineers and builds a full line of marine, mobile and land based desalination systems for sea and brackish water. Many of our systems are custom built to meet our customers needs and application.

Please contact the factory with your requirements.

### LB-1800

Feed water recovery 20%  
Salt rejection 99.4% minimum  
Feed flow 6 GPM (23 LPM)  
Required inlet pressure 20 PSI (1.4 bar).

Membranes 2 ea. Spectraflux TFC 4"x38"

Seawater RO.

Pearson pump constructed of glass epoxy composites and super duplex SS.

Filters 2ea. 20" 20 micron, 2ea. 20" 5 micron.

### LB-2800

Feed water recovery 30%  
Salt rejection 99.4% minimum  
Feed flow 6 GPM (23 LPM)  
Required inlet pressure 20 PSI (1.4 bar).

Membranes 3ea. Spectraflux TFC 4"x38"

Seawater RO.

Pearson pump constructed of glass epoxy composites and super duplex SS.

Filters 2ea. 20" 20 micron, 2ea. 20" 5 micron.



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