

LB-1800 F - Durable, Energy-efficient Desalination









PRODUCT SPECS

Article Number LB-1800C-220

Salt Rejection 99.5%

Technology High energy-efficient Reverse-Osmosis (RO)

Production per Day 6810 lpd (1800 gpd)
Production per Hour 285 lph (75 gph)

Recovery Rate 20%

Feed Water Source Fresh, brackish, seawater

Feed Flow Rate Recommended Feed Flow rate is 24 lpm

(6.5gpm) at 2 bar (30 psi). Note that the feed pressure needs to be adjustable to optimize pump performance for the

pre-filtration system utilized.

Voltage Options 24VDC, 208-240VAC

single or three phase,

Power 800W Watt per Liter 2.5

Water Temperature Limits $Max 43^{\circ}C (110^{\circ}F) / Min 2^{\circ}C (36^{\circ}F)$

Sound Pressure Level 79 dB at 1 meter Weight 193 kg (425 lbs)

FEATURES

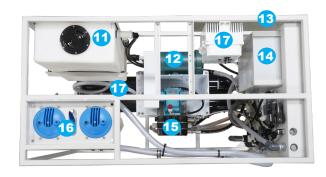
- Spectra Connect Controller for automated operation and LAN enabled remote monitoring and control
- Extremely energy efficient, requiring typically less than 800 watts to purify seawater
- Soft-start speed control, no start-up spike
- Rugged, powder coated 304 stainless steel frame
- Fixed freshwater recovery ratio for easy operation, optimized for long RO membrane life
- Perfectly pairs with wind or solar power due to high energy efficiency
- Significantly quieter than conventional RO watermakers
- Patented energy recovery design and automated controls eliminate the need for constant monitoring by an operator.
- Membranes are protected from overpressure and scaling by design and can last 8-10 years or more with proper maintenance
- Spectra's renowned customer service and support with technicans available by Skype, phone and e-mail in North America and Europe



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| 1 | Product Quality + Feed Flow Gauges |
|----|------------------------------------|
| 2 | Product Water Out |
| 3 | Spectra Connect Control Panel |
| 4 | Boost Pressure Gauge |
| 5 | Membrane Pressure Gauge |
| 6 | Brine Pressure Gauge |
| 7 | Service Port |
| 8 | Brine Port |
| 9 | Service Valve |
| 10 | 4''x 40'' Membranes |



| 11 | Flush/Service Module | |
|----|-------------------------------------|--|
| 12 | 2HP 220V Motor | |
| 13 | Rugged 304 Stainless Steel Frame | |
| 14 | Spectra Connect Control System | |
| 15 | Pearson Pump Energy Recovery Device | |
| 16 | Prefilter Assembly | |
| 17 | 4''x 40'' Membranes | |
| 18 | VFD Speed Control | |

SYSTEM SHIPPING LIST

| System |
|---|
| LB-1800 in Powder Coated Stainless Steel Frame |
| Components Built into Frame Assembly |
| Pre-Filtration Assembly - Two 4x20" Filters |
| Fresh Water Flush Tank |
| Inlet and Brine Discharge Service Connections |
| Spectra Connect Control Box with Main Circuit Breaker |
| Feed Valve - Automatic On/Off |
| 24VDC Power Supply (for controls) |
| Installation Kit |
| Service Hoses and Filter Wrench |
| Hand-held TDS/Salinity Meter |
| User Manual |
| Log Book |



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SPARE PARTS AND CONSUMABLES

| Article Number | Product |
|--------------------|--|
| FT-FTC-5BB20 | 5 micron 4x20'' cartridge filter |
| FT-FTC-10BBCALCITE | 10" Big Blue Calcite filter For optional remineralization of drinking water |
| KIT-SP5C-30R2K5 | 2,500 hr Pearson Pump rebuild kit |
| KIT-SP5C-30R10K | 10,000 hr Pearson Pump rebuild kit |
| PP5-BD-BLT270H | Drive belt |
| KIT-CHEM-SC2 | Spectra alkaline membrane cleaner |
| KIT-CHEM-SC3 | Spectra acid cleaner |
| KIT-CHEM-SC1 | Spectra membrane preservative |

OPTIONAL COMPONENTS

| Article Number | Product | Description |
|---|---------------------------------------|--|
| KIT-LB-BP-SP5AC | Shallow Well Jet Pump | This pump is self-priming up to 4.5m (15ft.) and is a robust solution for Seawater |
| FT-MD-AG16X65 | Automated Prefilter-System | This media filter is configured for seawater and optimized for easy backflushing |
| SUB-X-CB-MNRFA Remineralizer and ph-correction A calcite cartridge is used to balance the Ph and remineralizer the product water in brackish water systems (not need seawater feed) | | A calcite cartridge is used to balance the Ph and remineralize the product water in brackish water systems (not needed with seawater feed) |
| EL-CHE3GPM220A | Chlorine or Chemical Injection System | This unit precisely meters the 50 litre (15 g) concentrate into the product water |
| FT-UV-3GPM24 | UV Post Treatment | Available when required by local regulations |
| EL-SWT-SMLV | Tank Level Switch | Allows the Spectra Connect control to respond automatically to changes in storage tank levels |



List of all Portable Desalination and Purification Systems

AQUIFER SERIES

| Article Number | Product | Product Information | Output |
|------------------|--|--|--------------|
| AF-200-DC | Aquifer 200 | Highly portable water purification/desalination system. External power required. | 301/h, 8gph |
| AF-200-EX-FL | Aquifer 200 Expedition | External power required, compatible with optional Solar Power Pack (KIT-AF-FLRPS2P24). | 301/h,8gph |
| AF-200-PPS | Aquifer 200 Power Pack Solar | Includes Solar Panel. A self-sufficient offgrid water purification/desalination solution that fits in a single case. | 30l/h, 8gph |
| AF-FLR-200 | Aquifer 200 Flight Ready | Complete portable watermaker system, 3 cases include watermaker, feed pumps and solar panels. Weight managed for commercial flights. | 301/h, 8gph |
| AF-360-EX-FL | Aquifer 360 Expedition | Portable with higher output. External power required, compatible with optional Solar Power Pack (KIT-AF-FLRPS3P24). | 55l/h, 15gph |
| AF-FLR-360 | AF-FLR-360 Aquifer 360 Complete portable watermaker system, 3 cases include watermaker, feed pumps and solar panels. Weight managed for commercial flights. | | 55l/h, 15gph |
| KIT-AF-FLRPS2P24 | 2 Panel Power Supply Case | | |
| KIT-AF-FLRPS3P24 | IT-AF-FLRPS3P24 3 Panel Power Supply Case Power supply case with options for 12/24v DC, 100-240c AC 50/60 Hz as well as included Solar Panels. Compatible with AF-360-EX-FL. | | n/a |

LANDBASED SERIES

| Article Number | Product Information | Watts Used* | Output |
|-----------------------|--|-------------|-----------------------|
| LB-400 | Compact, modular purification/desalination | 300 | 64l/h, 17gph |
| LB-1800F-220M | Framed watermaker with manual controls | 800 | 285l/h, <i>75</i> gph |
| LB-1800C-220 | Framed watermaker with automated Spectra Connect controller | 800 | 285l/h, <i>7</i> 5gph |
| LB-2800F-220M | Framed watermaker with manual controls | 1200 | 435l/h, 115gph |
| LB-2800C-220 | Framed watermaker with automated Spectra Connect controller | 1200 | 435l/h, 115gph |
| LB-10000-F-MS | Framed watermaker with manual controls | 3800 | 1,575l/h, 420gph |
| LB-10000F-230S | Framed watermaker with automated Spectra Connect controller | 3800 | 1,575l/h, 420gph |
| LB-20000 Container | Containerized community-level watermaker built into a standard shipping container. Ready to combine with a solar power system. | < 8kW | 3,155l/h 833gph |
| LB-4000F-220M | Brackish Water system, framed with manual controls | 1200** | 680l/h, 180gph |
| LB-4000C-220 | Brackish Water system, framed with automated Spectra Connect controller | 1200** | 680l/h, 180gph |
| LB-14000F-M- BR2S | Brackish water system, framed with manual controls | 5300** | 2,208l/h 583gph |
| LB-14000F-230 | Brackish water system, framed with automated Spectra Connect controller | 5300** | 2,208l/h 583gph |

^{*}Using Seawater feed at 32,000 ppm and 25°C (77° F).

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2220 S. McDowell Blvd | Petaluma, CA 94954 | U.S.A. Tel: +1 415 526 2780 | Fax: +1 415 526 2787 sales@spectawatermakers.com | www.spectrawatermakers.com Spectra reserves the right to make changes to this fact sheet.



^{**25,000} ppm maximum salinity for these brackish water systems