

**LB-4000 F - Energy-efficient Solution for Brackish Water**



**PRODUCT SPECS**

Article Number	LB-4000C-220
Salt Rejection	99.5%
Technology	High energy-efficient Reverse-Osmosis (RO)
Production per Day	1.5 m <sup>3</sup> /d (4,000 gpd)
Production per Hour	630 lph (160 gph)
Recovery Rate	50%
Feed Water Source	Brackish
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	208-240VAC single or three phase
Power	<1200 Watts on 24,000 PPM salinity
Watt per liter	2.5
Water Temperature Limits	Max 43°C (110°F) / Min 2°C (36°F)
Sound Pressure Level	79 dB at 1 meter
Weight	204 kg (450 lbs)
Frame Dimensions	135cm x 102cm x 71cm

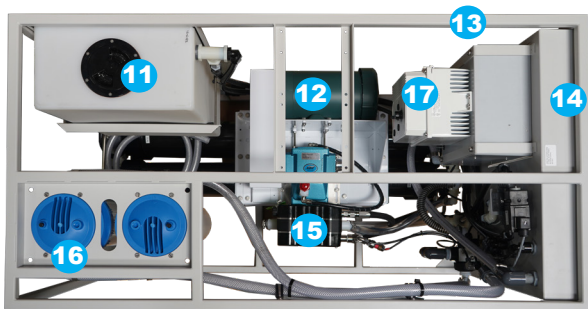
**FEATURES**

- Optimized for use with Brackish water (Total Dissolved Solids under 24,000 PPM)
- Spectra Connect Controller for automated operation and LAN enabled remote monitoring and control
- Extremely energy efficient, requiring typically less than 1200 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 technicians 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	VFD Speed Control

**SYSTEM SHIPPING LIST**

<b>System</b>
LB-4000 in Powder Coated Stainless Steel Frame
<b>Components Built into Frame Assembly</b>
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)
<b>Installation Kit</b>
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
<b>FT-FTC-5BB20</b>	5 micron 4x20" cartridge filter
<b>FT-FTC-10BBCALCITE</b>	10" Big Blue Calcite filter - For optional remineralization for drinking water
<b>KIT-SP5C-30R2K5</b>	2,500 hr Pearson Pump rebuild kit
<b>KIT-SP5C-30R10K</b>	10,000 hr Pearson Pump rebuild kit
<b>PP5-BD-BLT270H</b>	Drive belt
<b>KIT-CHEM-SC2</b>	Spectra alkaline membrane cleaner
<b>KIT-CHEM-SC3</b>	Spectra acid cleaner
<b>KIT-CHEM-SC1</b>	Spectra membrane preservative

**OPTIONAL COMPONENTS**

Article Number	Product	Description
<b>KIT-LB-BP-SP5AC</b>	Shallow Well Jet Pump	This pump is self-priming up to 4.5m (15ft.) and is a robust solution for Seawater
<b>FT-MD-AG16X65</b>	Automated Prefilter-System	This media filter is configured for seawater and optimized for easy backflushing
<b>SUB-X-CB-MNRFA</b>	Remineralizer and ph-correction	A calcite cartridge is used to balance the Ph and remineralize the product water in brackish water systems (not needed with seawater feed)
<b>EL-CHE3GPM220A</b>	Chlorine or Chemical Injection System	This unit precisely meters the 50 litre (1.5 g) concentrate into the product water
<b>FT-UV-3GPM24</b>	UV Post Treatment	Available when required by local regulations
<b>EL-SWT-SMLV</b>	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
<b>AF-200-DC</b>	Aquifer 200	Highly portable water purification/desalination system. External power required.	30l/h, 8gph
<b>AF-200-EX-FL</b>	Aquifer 200 Expedition	External power required, compatible with optional Solar Power Pack (KIT-AF-FLRPS2P24).	30l/h, 8gph
<b>AF-200-PPS</b>	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
<b>AF-FLR-200</b>	Aquifer 200 Flight Ready	Complete portable watermaker system, 3 cases include watermaker, feed pumps and solar panels. Weight managed for commercial flights.	30l/h, 8gph
<b>AF-360-EX-FL</b>	Aquifer 360 Expedition	Portable with higher output. External power required, compatible with optional Solar Power Pack (KIT-AF-FLRPS3P24).	55l/h, 15gph
<b>AF-FLR-360</b>	Aquifer 360 Flight Ready	Complete portable watermaker system, 3 cases include watermaker, feed pumps and solar panels. Weight managed for commercial flights.	55l/h, 15gph
<b>KIT-AF-FLRPS2P24</b>	2 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-200-EX-FL.	n/a
<b>KIT-AF-FLRPS3P24</b>	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
<b>LB-400</b>	Compact, modular purification/desalination	300	64l/h, 17gph
<b>LB-1800F-220M</b>	Framed watermaker with manual controls	800	285l/h, 75gph
<b>LB-1800C-220</b>	Framed watermaker with automated Spectra Connect controller	800	285l/h, 75gph
<b>LB-2800F-220M</b>	Framed watermaker with manual controls	1200	435l/h, 115gph
<b>LB-2800C-220</b>	Framed watermaker with automated Spectra Connect controller	1200	435l/h, 115gph
<b>LB-10000-F-MS</b>	Framed watermaker with manual controls	3800	1,575l/h, 420gph
<b>LB-10000F-230S</b>	Framed watermaker with automated Spectra Connect controller	3800	1,575l/h, 420gph
<b>LB-20000 Container</b>	Containerized community-level watermaker built into a standard shipping container. Ready to combine with a solar power system.	< 8kW	3,155l/h 833gph
<b>LB-4000F-220M</b>	Brackish Water system, framed with manual controls	1200**	680l/h, 180gph
<b>LB-4000C-220</b>	Brackish Water system, framed with automated Spectra Connect controller	1200**	680l/h, 180gph
<b>LB-14000F-M-BR2S</b>	Brackish water system, framed with manual controls	5300**	2,208l/h 583gph
<b>LB-14000F-230</b>	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).

\*\*25,000 ppm maximum salinity for these brackish water systems

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