

LB-20,000 Container - Energy-efficient, Municipal-level Desalination



PRODUCT SPECS

Article Number	LB-20000 Container
Salt Rejection	99.5%
Technology	High energy-efficient Reverse-Osmosis (RO)
Production per Day	75 m ³ /d (20,000 gpd)
Production per Hour	3150 lph (840 gph)
Recovery Rate	35%
Feed Water Source	Fresh, brackish, seawater
Voltage Options	208-240VAC, single or three phase
Power	≈8 kW
Watt per Liter	<2.5
Water Temperature Limits	Max 37°C (110°F) / Min 2°C (36°F)
Weight	≈7700 kg (17000 lbs)
Shipping Dimensions	20ft ISO Container Certified for Ocean Freight

FEATURES

- Two complete 10,000 GPD watermakers for redundancy
- "Plug and play" unit includes everything from feed pumps to chlorine injection for the product water
- Dual Spectra Connect controllers for automated operation and LAN enabled remote monitoring and control
- Extremely energy efficient, requiring typically less than 8 kW to purify seawater
- Soft-start speed control, no start-up spike
- Completely enclosed in a lockable, insulated steel shipping container
- Fixed product water recovery ratio makes for easy operation, optimized for long RO membrane life
- Perfectly pairs with solar power due to high energy efficiency
- 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	Dual Pearson Pump Energy Recovery Systems
2	Spectra Connect Control Panel
3	Speed Control
4	Prefilters
5	Membranes

6	Multimedia Prefiltration
7	Chlorine Injection for Product Water
8	Feed Pumps

SYSTEM SHIPPING LIST

System
LB-20,000 in Shipping Container
Components Built into Container
Dual Pearson Pump Energy Recovery Systems
Two 1000psi composite high pressure vessels w/ three Filmtec seawater RO membranes in each
Spectra Connect Control Systems
VFD Speed Controls
Self-priming Feed Pumps
Multimedia Prefiltration
Tank Full Switch
Product Water Quality and Temperature Sensor
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
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
EL-CHE-3GPD220A	Anti-scalant Chemical Injection System	On/off control integrated with main desalination system control for automatic operation. Tank level switch indicates low chemical level, composite construction for long life. Stroke and frequency adjustments for easy setup and operation.
FT-MD-AG16X65	Multi-media Prefiltration System	Electronically automated media valve heads allow for autonomous operation. Manually or scheduled automatic backwash standard, backwash on differential pressure available with differential pressure switch option, below. Two units are required per installation.
KIT-LB-BP-20SC	Shallow Well Jet Pump	Self priming up to 10ft (3m), composite construction, motor speed control to allow for maximum efficiency.
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 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

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.	30l/h, 8gph
AF-200-EX-FL	Aquifer 200 Expedition	External power required, compatible with optional Solar Power Pack (KIT-AF-FLRPS2P24).	30l/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.	30l/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	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
KIT-AF-FLRPS2P24	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
KIT-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, 75gph
LB-1800C-220	Framed watermaker with automated Spectra Connect controller	800	285l/h, 75gph
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).

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

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