

## LB 400 - STATIONARY MODULAR WATER SOLUTION



### PRODUCT SPECS

|                     |                                                                        |
|---------------------|------------------------------------------------------------------------|
| Production / Day    | 400 gal (1.5 m <sup>3</sup> )                                          |
| Production / Hour   | 17 gal (64 l)                                                          |
| Salt Rejection      | 99.5%                                                                  |
| Recovery Rate       | 10%                                                                    |
| Feed Flow Rate      | Recommended Feed Flow rate is<br>10.5 lpm (2.8gpm) at 7.5 bar (100psi) |
| Feed Water Source   | Fresh, brackish, seawater                                              |
| Feed Pump           | Not Included, See page 2                                               |
| Power Requirement   | 24 V DC   48 V DC   110V AC   220V AC                                  |
| Power               | 300-600 Wh<br>(contingent on feed pump selection)                      |
| Watt per Liter      | 4                                                                      |
| Temperature Range   | Max 110°F (43°C)   Min 36°F (2°C)                                      |
| Shipping Weight     | 95 lbs (43.1 kg)                                                       |
| Shipping Dimensions | 47" x 23" x 18"<br>120 cm x 59 cm x 46 cm                              |

### FEATURES

- Simple analog controls and gauges, no electronics
- Super efficient, requiring as little as 350 watts to purify seawater, ideal for solar and wind power
- Fixed water recovery ratio for easy operation, optimized for long RO membrane life
- Perfectly pairs with wind or solar power due to high energy efficiency
- Patented energy recovery design and automated controls eliminate the need for constant monitoring by an operator
- Composite construction for superb corrosion resistance
- Membranes are protected from overpressure and scaling by design and can last 8-10 years or more with proper maintenance
- Spectra Watermakers' renowned customer service and support with technicians available by phone, e-mail, and WhatsApp in North America
- Also available in compact configuration with two 21" pressure vessels (LB-400S)

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|   |                                   |
|---|-----------------------------------|
| 1 | Clark Pump Energy Recovery Device |
| 2 | Reverse Osmosis Membrane          |
| 3 | Pressure Accumulator              |
| 4 | Prefilter Assembly                |
| 5 | Flow and Pressure Gauge           |

### SYSTEM SHIPPING LIST

| System                                                                         |
|--------------------------------------------------------------------------------|
| LB-400                                                                         |
| Included Components                                                            |
| Clark Pump pressure intensifier, 10% recovery rate                             |
| Spectra 1000 psi composite pressure vessel with SW30-2540 seawater RO membrane |
| 2.5" x 10" 5 and 20 micron pre-filters (1)                                     |
| Analog gauges and controls                                                     |
| Modular construction for versatile installation options.                       |
| Product, Feed and Brine hoses                                                  |
| <b>Feed Pump is not included with this system</b>                              |
| Installation Kit                                                               |
| Filter Wrench                                                                  |
| Hand-held TDS/Salinity Meter                                                   |
| User Manual                                                                    |
| Log Book                                                                       |

### Special Note

**This system does not include a feed pump.**

A single LB-400 unit requires a feed flow of 10.5 lpm (2.8 gpm) at a pressure of 7.5 bar (100 psi). Two LB-400 units require a feed flow of 21 lpm (5.6gpm) at 7.5 bar (100 psi).

Optional feed pump kit KIT-LB-CP-FPS220 includes a Procon 240 vane pump & 220 V AC motor with a variable speed control. Feed pump kit is not self-priming and must have positive pressure relative to waterline or via a separate boost pump.

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### SPARE PARTS AND CONSUMABLES

| Article Number     | Product                            |
|--------------------|------------------------------------|
| FT-FTC-5           | 5 micron cartridge filters         |
| FT-FTC-20          | 20 micron cartridge filters        |
| FT-FTC-CC          | 10" Carbon Block Filter Cartridge  |
| FT-FTC-10BBCALCITE | Calcite filter cartridge 10" BB    |
| KIT-HP-S&O         | Seal and O-ring kit for Clark Pump |
| KIT-HP-10UD        | 10% Clark 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                                                                                                                                                  |
|------------------|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| KIT-MD-AG14X65   | 14" x 65" Multi-Media Prefiltration System | Media filter is configured for seawater and optimized for easy backflushing. Specify voltage requirement at time of order. Media not included.               |
| KIT-LB-CP-FPS220 | 220 V AC Feed Pump Kit                     | With Procon 240 mag drive seawater vane pump, VFD speed control and 220 V AC three phase motor.                                                              |
| KIT-FLT-CALCTBB  | PH Correcting Filter System                | A calcite cartridge is used to balance the PH and remineralize the product water in brackish water systems (not needed with seawater feed).                  |
| KIT-PMP-3GPDINJ  | Chlorine or Chemical Injection System      | This unit precisely meters concentrate into the feed or product water depending on desired application. Chlorine on product side is most common application. |
| KIT-FLT-CC       | Carbon Filter Kit                          | For freshwater flush- eliminates chlorine from flush water. Also can be used on product water side to improve taste.                                         |
| KIT-HHM          | Hand held conductivity tester              | Handheld salinity meter kit & calibration solution.                                                                                                          |
| EL-SLT-INLPMNT2  | Inline salinity monitor                    | Inline salinity monitor (push button to check salinity).                                                                                                     |

## ALL PORTABLE & STATIONARY LANDBASED SYSTEMS

### AQUIFER SERIES

| Article Number               | Product                      | Product Information                                                                                                                                                              | Output             |
|------------------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| AF-200-DC-12<br>AF-200-DC-24 | Aquifer 200                  | Highly portable water purification/desalination system. In-case suction pump, external power required.                                                                           | 30 l/h, 8 gal/h    |
| AF-360-DC-12<br>AF-360-DC-12 | Aquifer 360                  | Highly portable water purification/desalination system with dual in-case suction pumps for higher output, external power required.                                               | 55 l/h, 15 gal/h   |
| AF-200-EX-FL                 | Aquifer 200 EXP Flight Ready | Flight ready and enhanced priming capability using submersible pumps. External power required, compatible with optional Solar Power Pack (KIT-AF-FLRPS3P24)                      | 30 l/h, 8 gal/h    |
| AF-200-PPS                   | Aquifer 200 Power Pack Solar | Included Solar Panel, a self-sufficient offgrid water purification/desalination solution that fits in a single case.                                                             | 30 l/h, 8 gal/h    |
| AF-360-EX-FL                 | Aquifer 360 EXP Flight Ready | Flight ready and enhanced priming capability using submersible pumps, with higher output. External power required, compatible with optional Solar Power Pack (KIT-AF-FLRPS3P24). | 55 l/h, 15 gal/h   |
| AF-4000                      | Aquifer 4000                 | Revolutionary ultra-high output portable system, 3.5kW generator or external power required.                                                                                     | 628 l/h, 166 gal/h |
| KIT-AF-FLRPS3P24             | 3 Panel Power Supply Case    | Power supply case with options for 12/24 V DC, 100-240 V AC 50/60 Hz as well as included Solar Panels. Compatible with AF-200-EX-FL and AF-360-EX-FL.                            | n/a                |

### LANDBASED SERIES

| Article Number | Product Information                                                     | Watts Used* | Output               |
|----------------|-------------------------------------------------------------------------|-------------|----------------------|
| LB-400         | Compact, modular purification/desalination                              | 300         | 64 l/h, 17 gal/h     |
| LB-1800M-220   | Framed watermaker with manual controls                                  | 800         | 285 l/h, 75 gal/h    |
| LB-1800C-220   | Framed watermaker with automated Spectra Connect controller             | 800         | 285 l/h, 75 gal/h    |
| LB-2800F-220M  | Framed watermaker with manual controls                                  | 1200        | 435 l/h, 115 gal/h   |
| LB-2800C-220   | Framed watermaker with automated Spectra Connect controller             | 1200        | 435 l/h, 115 gal/h   |
| LB-4000-220    | Brackish water system, framed with manual controls                      | 1200**      | 680 l/h, 180 gal/h   |
| LB-4000C-220   | Brackish water system, framed with automated Spectra Connect controller | 1200**      | 680 l/h, 180 gal/h   |
| LB-10000F-230S | Framed watermaker with automated Spectra Connect controller             | 3800        | 1,575 l/h, 420 gal/h |
| LB14000F-230   | Brackish water system, framed with automated Spectra Connect controller | 5300**      | 2,208 l/h, 583 gal/h |

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

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