

# APPLIED<sup>®</sup> SYSTEMS

## SERIES L – 300 – 19,000 GPD RO SYSTEMS

Reverse Osmosis Systems 300 to 19,000 Gallons/Day  
For feed water TDS 500 to 1000 PPM

Designed to produce low dissolved solids water from tap or well water, these RO systems use high efficiency reverse osmosis membranes. The product water is used in applications such as spot free rinse, water stores, whole house, labs, ice makers, humidification, misting and a wide variety of other applications.

Part of the L-series family (other systems include XL and HL series), these RO systems are designed to work at pressures of 200-250 psi for higher TDS water and use TW reverse osmosis membranes. The TW RO membranes offer higher salt removal and the higher operating pressure overcomes the loss of membrane flow due to higher TDS level.

These reverse osmosis systems use the proven, reliable components and are mounted on a sturdy powder-coated metal frame. There are numerous design details learned from years of experience that are incorporated in our water filtration systems. Our process and fluid design ensures an optimum membrane life and minimizes the membrane fouling.

### Key Features:

- Over 25 years of experience is reflected in our quality
- Compact, Heavy Duty, Powder Coated Frame
- Proven components used throughout the system
- Conservatively engineered for reliable long term performance
- Factory tested to ensure trouble-free operation

### Why Applied Membranes?

- Over 10,000 commercial/industrial systems in operation
- Our products are being used in over 100 countries worldwide
- From packaged systems to custom engineered Reverse Osmosis systems, we can take care of your needs
- We are one of the few companies that have the expertise to provide Reverse Osmosis systems for drinking water, boiler feed water, seawater, desalination, ultrapure water, USP water, and water reuse.
- We have supplied more systems to more countries than most of our competitors
- Our customers include major national and international companies in every field of application
- We stock more components for all sizes of RO systems than any other company
- We have earned an enviable reputation for our product quality, performance reliability and business integrity.



L-64A



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### STANDARD EQUIPMENT

- Thin Film Composite Membranes
- Stainless steel membrane pressure vessels
- 5 micron 20" cartridge filter & housing
- Feed water temperature gauge
- Automatic inlet feed solenoid valve
- Permeate flowmeter
- Concentrate flowmeter
- Recycle flowmeter
- System control valve
- Recycle control valve
- Low pressure pump protection
- High pressure RO pump
  - Rotary Vane brass for L-12521 – L-24A
  - Stainless steel multistage for L-34A – L-124A with SS pump throttling valve
- Automatic membrane flush
- 4) Liquid filled pressure gauges for filter in/out and system pressures
- Product TDS displayed on controller LED
- System on/off with 2-level tank floats
- Powder coated carbon steel frame
- Boxed and palletized for shipment

### MICROPROCESSOR CONTROLLER FOR AUTOMATIC OPERATION

#### Monitors and/or Controls:

- Inlet valve
- Delayed start-up of high pressure pump
- Feed water flush at system shut-down
- Low pressure switch
- On/Off with tank level
- Permeate Quality (TDS )
- Pre-treatment backwash/lockout

#### UL508A Labeled



Controller Model S100

#### Features:

- Backlit LED Display
- LED indicator light for system status/alarm
- Front panel access port for calibration of TDS sensor
- LED indicator light for water quality (TDS)
- Start-up and shut-down with tank level
- Feed flush at shut-down
- Low pressure shut-down
- Low pressure automatic restart
- Delayed start-up of high pressure pump

#### LED Display:

- Permeate Quality (TDS)
- Operating Status
- Alarm Condition

Model	Capacity		Membrane Elements			Line Sizes (In/cm)			Dimensions (In/cm)			Approx. Ship. Wt. (lb/kg)
	GPD	m <sup>3</sup> /day	Qty.	Dia. (in/cm)	Length (in/cm)	Inlet	Perm.	Conc.	Length	Depth	Height	
L-12521A-116	300	1	1	2.5/6	21/53	0.75/2	0.38/1	0.38/1	20/51	24/61	55/140	230/104
L-125A-116	600	2	1	2.5/6	40/102	0.75/2	0.38/1	0.38/1	20/51	24/61	55/140	240/109
L-225A-116	1,200	5	2	2.5/6	40/102	0.75/2	0.38/1	0.38/1	20/51	24/61	55/140	250/113
L-14A-116	1,800	7	1	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	24/61	55/140	275/125
L-24A-116	3,000	12	2	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	24/61	55/140	300/136
L-34A-216	5,500	21	3	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	32/82	55/140	325/147
L-44A-216	7,000	27	4	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	32/82	55/140	350/159
L-54A-216	8,500	32	5	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	32/82	55/140	375/170
L-64A-216	10,000	38	6	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	32/82	55/140	400/181
L-74A-216	11,500	44	7	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	40/102	55/140	441/200
L-84A-216	13,000	49	8	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	40/102	55/140	466/211
L-94A-216	14,400	55	9	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	40/102	55/140	491/223
L-104A-216	16,000	60	10	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	46/117	55/140	516/234
L-114A-216	17,300	66	11	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	46/117	55/140	541/245
L-124A-216	19,000	72	12	4/10	40/102	0.75/2	0.5/1.3	0.5/1.3	20/51	46/117	55/140	566/257

### NOTES

- **Recommended Optional Pre-Treatment Equipment:** Carbon Filter, Water Softener, Multi-Media Filter
- **All dimensions and weights are approximate.**
- **Capacity Basis:** 24 hrs/day
- **Systems rated at:** 77°F (25°C) using 1000 ppm sodium chloride solution operating at approx. 200 psi (14 kg/cm<sup>2</sup>) pressure. For feed water with higher TDS refer to our Series HL brochure.
- **Minimum feed pressure to RO System:** 40-60 PSI. System capacity changes significantly with water temperature
- Chlorine must be removed if present in feed water prior to RO with a carbon filter.
- Pretreatment for water hardness using a softener should be added to avoid scaling the membranes.
- Feed water turbidity: Less than 1 NTU; Feed water silt density index (SDI): 3 maximum. If exceeded, pretreatment with media filter recommended. All pretreatment equipment and SDI test kits are available from Applied Membranes.

**VOLTAGE** Above models indicate recommended voltage codes per model. Alternative voltages can be ordered using the voltage codes from the table below. Available Voltages:

Voltage →	-116	-216	-215	-236	-235	-436
	120V/1PH/60Hz	220-240V/1PH/60HZ	220-240V/1PH/50HZ	240V/3PH/60HZ	240V/3PH/50HZ	460V/3PH/60HZ
L-12521A to L-24A	✓	✓	✓	-	-	-
L-34A to L-124A	-	✓	✓	✓	✓	✓