

# APPLIED<sup>®</sup> SYSTEMS USA

## Series HLS -1,400 to 6,600 GPD High TDS Brackish Water RO Systems

### Reverse Osmosis Systems 1,400 to 6,600 Gallons/Day For Feed Water TDS up to 15,000 PPM

Designed to produce low dissolved solids water from high TDS brackish well water or similar source water, these RO systems use high efficiency reverse osmosis membranes in FRP membrane housings. The product water is used in applications such as water stores, whole house, ice makers, humidification, misting and a wide variety of other applications.

HLS Series RO systems incorporate careful design steps taken to minimize the highly corrosive nature of these brackish waters. All high pressure lines and components are made of corrosion resistant materials. These BWRO systems operate at pressures between 350 and 500 psi.

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

- 38 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

**APPLIED  
MEMBRANES INC.<sup>®</sup>**

Industry Leader in RO Expertise and Membrane Applications Since 1983™



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### Standard Equipment

- Thin Film Composite Membranes
- FRP membrane pressure vessels
- 5 micron 20" cartridge filter & housing
- Feed water temperature
- Automatic inlet feed solenoid valve
- Permeate, Concentrate & Recycle
- Flowmeters
- System control valve, Stainless Steel
- Recycle control valve, Stainless Steel
- Low pressure pump protection
- High pressure stainless steel RO pump
- Automatic membrane flush with fresh water pump
- Liquid filled pressure gauges for filter in/out and system pressures
- Feed and permeate TDS displayed on controller LED with percent rejection
- System on/off with 2-level tank floats
- Stainless Steel and corrosion resistant materials on high pressure side
- 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 Water Quality (TDS)
- Pre-treatment backwash/lockout
- Permeate TDS (or conductivity)
- Feed TDS (or conductivity) and percent rejection
- Water Temperature
- Operating hours
- RO tank full override
- Auxiliary pump or valve control (optional)

#### Controller Features:

- Backlit LED Display
- Multi-function keypad
- Visual and audible alarm & silence key
- Programmable time delays, set-points and flush mode
- Visual indicator alarm light
- Low pressure automatic restart

#### UL508A Labeled



I-ROC 150S

#### LED Display:

- Permeate TDS
- Feed TDS with % Rejection
- Water Temperature
- Operating Hours
- Operating Status
- Alarm condition

### Recommended Optional Pre-Treatment Equipment

- Carbon filter
- Water Softener
- Multi-media filter
- Antiscalant Injection

### Ordering Information

Model No.	System Capacity		Membrane Elements		Line Sizes (NPT, Inches)			System Dimensions (in/cm)			Approx. Shipping Weight (Lb/Kg)
	GPD	m <sup>3</sup> /day	Qty.	Size (Dia. x L)	Inlet	Perm.	Conc.	Length	Depth	Height	
<b>HLS-14A</b>	1,400	5.3	1	4 x 40	1	1/2	1/2	20/51	24/61	55/140	400/181
<b>HLS-24A</b>	3,500	13.2	2	4 x 40	1	1/2	1/2	20/51	24/61	55/140	425/193
<b>HLS-34A</b>	4,600	17.4	3	4 x 40	1	1/2	1/2	20/51	32/82	55/140	450/204
<b>HLS-44A</b>	5,500	21	4	4 x 40	1	3/4	3/4	20/51	32/82	55/140	475/216
<b>HLS-54A</b>	6,200	23.5	5	4 x 40	1	3/4	3/4	20/51	32/82	55/140	500/227
<b>HLS-64A</b>	6,630	25	6	4 x 40	1	3/4	3/4	20/51	32/82	55/140	525/238

### Notes and Voltage/ Ordering Information

- All dimensions and weights are approximate.
- **Capacity Basis:** 24 hrs/day
- **Systems rated at:** 77°F (25°C) using 15,000 ppm sodium chloride solution operating at approx. 350-500 psi pressure.
- **Minimum feed pressure to RO System:** 40-60 PSI. System capacity changes significantly with water temperature
- Chlorine must be removed with a carbon filter prior to the RO system, if present in feed water.
- Pretreatment for water hardness using a softener or antiscalant injection 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:** Please add our voltage codes to the end of the model number when ordering.  
 Example: HLS-14A-236 = 220 or 230v, 3 ph, 60 hz.
  - Voltage Codes:
    - **216** = 220 or 230v/ 1ph/ 60hz
    - **236** = 220 or 230v/ 3ph/ 60hz
    - **436** = 460 or 480v/ 3ph/ 60 Hz

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