

REVERSE OSMOSIS



BLS SERIES, 12,000 TO 18,000 GPD COMMERCIAL RO SYSTEMS

The BLS Series RO Systems are engineered to economically produce high purity water while providing the flexibility to choose system features to meet your application specifications. Units are available as skid mounted, pre-wired, and pre-piped with pre-treatment and post-treatment equipment for a complete water purification package. Skid mounted systems provide maximum efficiency of floor space and reduced installation time and costs.



BLS 12000



BLS 15000



BLS 18000

BLS 12000-18000 Features

- Energy Saving, High Flow Membrane Elements
- Stainless Steel Membrane Pressure Vessels
- Automatic Feed Water Shutoff Valve
- 20 inch, 5 Micron, Big Blue Sediment Pre-Filter
- Adjustable Reject Water Control Valve
- Product & Reject Water Flow Meters
- Low Inlet Pressure Protection Switch
- System Operating Pressure Gauge
- Inlet & Outlet Pre-Filter Gauges
- Reject Water Recirculation Loop
- Storage Tank Float Control Connection
- Product Water Check Valve
- Pre-Treatment Lockout Connection
- One Year Limited Warranty

* NOTE: When ordering a BLS Series RO System, the customer must choose between a product water pressure switch (for water storage in a pressurized tank) or a water level float kit (for water storage in an atmospheric tank). See BLS Series Price List (Form 1259).

Standard Models Include

- S-150 Microprocessor Based Controller
- High Pressure Booster Pump
- 220V, 60Hz, 1-Phase
- Manual Membrane Flush

Optimum Models Include

- Upgraded S-150 Microprocessor Based Controller
- Vertical Multi-Stage Centrifugal Pump
- 230V, 60Hz, 3-Phase
- Automatic Membrane Flush
- Reject Water Recirculation Flow Meter
- Manual Feed Water Shutoff Valve
- Post-Membrane Pressure Gauge

Optional Features Include

- Stainless Steel Pump and/or Frame
- Clean-In-Place (CIP) Connection Ports
- Product Water Pressure Switch with Relief Valve*
- 460V, 60Hz, 3-Phase or 380V, 50Hz, 1-Phase
- High Rejection Membrane Elements
- Nanofiltration Membrane Elements

REVERSE OSMOSIS



BLS SERIES, 12,000 TO 18,000 GPD COMMERCIAL RO SYSTEM SPECIFICATIONS

	BLS 12000	BLS 15000	BLS 18000
Operating Specifications			
Flow Capacity, GPD *	12,000	15,000	18,000
Flow Capacity, GPM *	8.33	10.4	12.5
Flow Capacity, LPD *	45,425	56,781	68,137
Flow Capacity, LPM *	31.5	39.4	43.3
Typical Recovery	75%	75%	75%
Design Rejection Rate	95 to 99%	95 to 99%	95 to 99%
Typical Operating Pressure	165 PSI (11.3 Bar)	165 PSI (11.3 Bar)	165 PSI (11.3 Bar)
Nominal Feed Water Flow During Operation	11 GPM (41.6 LPM)	14 GPM (52.9 LPM)	17 GPM (64.3 LPM)
Nominal Feed Water Flow During System Flush	18 GPM (68.1 LPM)	32 GPM (121.1 LPM)	36 GPM (136.2 LPM)
Maximum Product Water Back Pressure	50 PSI (3.4 Bar)	50 PSI (3.4 Bar)	50 PSI (3.4 Bar)
Feed Water Parameters			
Temperature Range, °F	40 to 90°F	40 to 90°F	40 to 90°F
Temperature Range, °C	5 to 30°C	5 to 30°C	5 to 30°C
Minimum Pressure	35 PSI (2.4 Bar)	35 PSI (2.4 Bar)	35 PSI (2.4 Bar)
Maximum Pressure	85 PSI (5.8 Bar)	85 PSI (5.8 Bar)	85 PSI (5.8 Bar)
Maximum TDS	2,000 PPM	2,000 PPM	2,000 PPM
Maximum Chlorine Tolerance	< 0.1 PPM	< 0.1 PPM	< 0.1 PPM
Maximum Hardness	10 GPG (171 PPM)	10 GPG (171 PPM)	10 GPG (171 PPM)
Maximum Iron, Dissolved	0.5 PPM	0.5 PPM	0.5 PPM
Maximum Oil Tolerance	0.0 mg/l	0.0 mg/l	0.0 mg/l
Maximum Silt Index	< 5	< 5	< 5
Maximum Turbidity	< 1 NTU	< 1 NTU	< 1 NTU
pH Range	3 to 10	3 to 10	3 to 10
Minimum Pre-Filtration	5 Micron	5 Micron	5 Micron
Design Specifications			
Dimensions, Inches	30D x 24W x 60H	30D x 24W x 60H	30D x 24W x 60H
Weight, Lbs.	450	525	600
Feed Water Inlet, Inches	1" FPT	1" FPT	1" FPT
Reject Water to Drain, Inches	3/4" FPT	3/4" FPT	3/4" FPT
Product Water to Storage, Inches	3/4" FPT	3/4" FPT	3/4" FPT
Filter Housing, Inches	20" Big Blue	20" Big Blue	20" Big Blue
Membrane Housings, Inches	(4) 4 x 40 SS	(5) 4 x 40 SS	(6) 4 x 40 SS
Membrane Elements, Inches	(4) 4 x 40 XLE	(5) 4 x 40 XLE	(6) 4 x 40 XLE
Standard Pump, 60 Hz	High Pressure Booster	High Pressure Booster	High Pressure Booster
Optimum Pump, 60 Hz	Vertical Centrifugal	Vertical Centrifugal	Vertical Centrifugal
Standard Pump, 50 Hz	Vertical Centrifugal	Vertical Centrifugal	Vertical Centrifugal
Optimum Pump, 50 Hz	Vertical Centrifugal	Vertical Centrifugal	Vertical Centrifugal
Standard Motor, 60 Hz	1.5 HP, 1 Ph	2 HP, 1 Ph	3 HP, 1 Ph
Optimum Motor, 60 Hz	3 HP, 3 Ph	3 HP, 3 Ph	3 HP, 3 Ph
Standard Motor, 50 Hz	3 HP, 3 Ph	4 HP, 3 Ph	4 HP, 3 Ph
Optimum Motor, 50 Hz	3 HP, 3 Ph	4 HP, 3 Ph	4 HP, 3 Ph

* System production may vary depending upon incoming water temperature and chemistry. Based on feed water with 500 mg/L NaCl and temperature of 77°F (25°C).

NOTE: If the RO system is used with chlorinated water, a carbon filter is required. BLS systems are designed for use on potable water sources only.