

LitePure® - Brackish Water Reverse Osmosis

TDS<3000

As a result of the world water crisis, countries, global organizations and even individuals are actively seeking solutions for potable water.

As world populations require clean water, the demand for water reclamation and purification is a growing need worldwide.

LitePure® is a compact skid mounted fully automated Brackish Water Reverse Osmosis system, designed to provide pure water, free of all solids, impurities, chemicals, bacteria and viruses.

LitePure® treated water meets the World Health Organization (WHO) guidelines for drinking water quality.



For illustration only

The following are just a few of the applications that benefit from the use of reverse osmosis water:

- ✚ Small Municipalities
- ✚ Chemical Manufacturing
- ✚ Heavy / Light Industry
- ✚ Mining Industry
- ✚ Emergency Relief
- ✚ Hospitals - Dialysis facilities & Boiler Feed water
- ✚ Electronics Manufacturing
- ✚ Food / Beverage Production
- ✚ Bottled Water
- ✚ Ice-Making
- ✚ Pharmacy Industry
- ✚ Agriculture & Irrigation

Technical Data

- Operating pressure (3 years membrane age): 12-20 bar (174-290 psi)
- Minimum feed pressure : 2 bar (29 psi)
- Operating Temperature: 15 to 25°C (59 to 77°F)
- Maximum inlet free chlorine: <0.1 mg/l
- Maximum inlet Silt Density Index: 3 SDI
- Turbidity: <1 NTU
- Nominal TDS reduction: 95%-99%
- Nominal Recovery Rate Product/Feed: 75%
- Performance and operation based on inlet feed of: 3000 ppm TDS
- Standard Electrical Power: 3 Phase / 400-460VAC/50-60Hz

Metric Units

Catalog No.	Design Capacity		Element Quantity ##	RO Feed m ³ /hr	RO Reject m ³ /hr	Operating Pressure bar	Pump Power KW	System Piping Connections		
	m ³ /h	m ³ /d						Inlet Feed inch	Permeate inch	Reject inch
LPBR9001	1.0	24.0	6	1.3	0.3	13	1.5	1"	1"	1"
LPBR9003	3.0	72.0	15	4.0	1.0	14	4.0	1"	1"	1"
LPBR9005	5.0	120.0	6	6.7	1.7	17	7.5	1½"	1½"	1"
LPBR9008	8.0	192.0	8	10.7	2.7	14.5	7.5	1½"	1½"	1½"
LPBR9011	11.0	264.0	12	14.7	3.7	19	15	2"	2"	1"
LPBR9015	15.0	360.0	16	20.0	5.0	20	15	3"	2"	1½"
LPBR9019	19.0	456.0	20	25.3	6.3	20	22	3"	3"	1½"
LPBR9023	23.0	552.0	24	30.7	7.7	20	22	3"	3"	1½"
LPBR9028	28.0	672.0	30	37.3	9.3	20	30	4"	3"	2"
LPBR9034	34.0	816.0	36	45.3	11.3	20	37	4"	3"	2"
LPBR9040	40.0	960.0	42	53.3	13.3	20	45	4"	3"	2"
LPBR9045	45.0	1080.0	48	60.0	15.0	20	45	4"	4"	2"
LPBR9050	50.0	1200.0	54	66.7	16.7	20	45	6"	4"	2"
LPBR9057	57.0	1368.0	60	76.0	19.0	20	75	6"	4"	2"

U.S Units

Catalog No.	Design Capacity		Element Quantity ##	RO Feed GPM	RO Reject GPM	Operating Pressure psi	Pump Power HP	System Piping Connections		
	GPM	GPD						Inlet Feed inch	Permeate inch	Reject inch
LPBR9001	4.4	6.34K	6	5.72	1.32	188.5	2.0	1"	1"	1"
LPBR9003	13.2	19.0K	15	17.6	4.4	203	5.4	1"	1"	1"
LPBR9005	22.0	31.7K	6	29.5	7.5	247	10	1½"	1½"	1"
LPBR9008	35.0	50.7K	8	47.0	12.0	210	11	1½"	1½"	1½"
LPBR9011	48.5	69.75K	12	64.8	16.3	276	20	2"	2"	1"
LPBR9015	66.0	95.1K	16	88.0	22.0	290	20	3"	2"	1½"
LPBR9019	83.7	120K	20	111.5	27.8	290	30	3"	3"	1½"
LPBR9023	101.0	145.8K	24	135.0	34.0	290	30	3"	3"	1½"
LPBR9028	123.3	177.5K	30	164.3	41.0	290	40	4"	3"	2"
LPBR9034	149.7	215.5K	36	199.5	49.8	290	50	4"	3"	2"
LPBR9040	176.0	253.6K	42	234.5	58.5	290	60	4"	3"	2"
LPBR9045	198.2	285.3K	48	264.2	66.0	290	60	4"	4"	2"
LPBR9050	220.0	317K	54	293.7	73.3	290	60	6"	4"	2"
LPBR9057	251.0	361.4K	60	334.6	83.6	290	100	6"	4"	2"

Features

Skid Assembly

The membrane systems are skid mounted, including all elements. This enables fast and easy installation with minimum ground space. Designed to stand corrosion. The skid frame is powder coated.

Pre-Filtration.

Water prior to membrane entrance will go through a 5 micron filter stored in 304 stainless steel housing.

Pressure Pump

Multi-stage type, constructed of 316 stainless steel, supplied with VFD.

Pressure Vessels

FRP pressure vessels.

Membrane Elements

Spiral-wound configuration. Minimum salt rejection 99.6%. Maximum operation pressure 45°C.

CIP System

A separate CIP system is supplied and is used when required to remove fouling on membranes.

Instrumentation

Optimal monitoring instrumentation, panel mounted.

- Pressure gauges on micron filter and RO vessels.
- Pump discharge pressure switch.
- Inlet and Permeate magnetic water meter.
- Concentrate flow meter (rotometer).
- Permeate conductivity indicator.

System Control

The system is fully automated, controlled by GE programmable logic controller (PLC) and operating display. The control board also includes operator switches, push buttons, and status and alarm indication lights.

The system will indicate:

- Low inlet pressure.
- High pump discharge pressure.
- High permeate conductivity.
- Feed water flush at shutdown.

System piping and valves

Low pressure piping and valves are schedule 40 PVC material.

High pressure piping and valves are 316 stainless steel. For pressure and flow control the following valves are standard:

- Solenoid controlled inlet valve for shutdown.
- Sampling valves on every pipe.
- Pre/post micron cartridge filter and membrane, isolation valve for maintenance operation.

Optional Equipment

Machine Hardware

- 316 SST micron cartridge filter housing.
- Compressed air unit.

Instrumentation

- pH indicator , digital display
- turbidity indicator , digital display
- Silt Density Index (SDI) indicator , digital display

Pre-Treatment Systems

- Multi media filters.
- Activated carbon filters.
- Water softening systems.
- Inlet feed dechlorination chemical addition.
- Inlet feed anti scalant chemical addition.
- Inlet feed pH adjustment chemical addition.
- Turbidity monitoring and management.

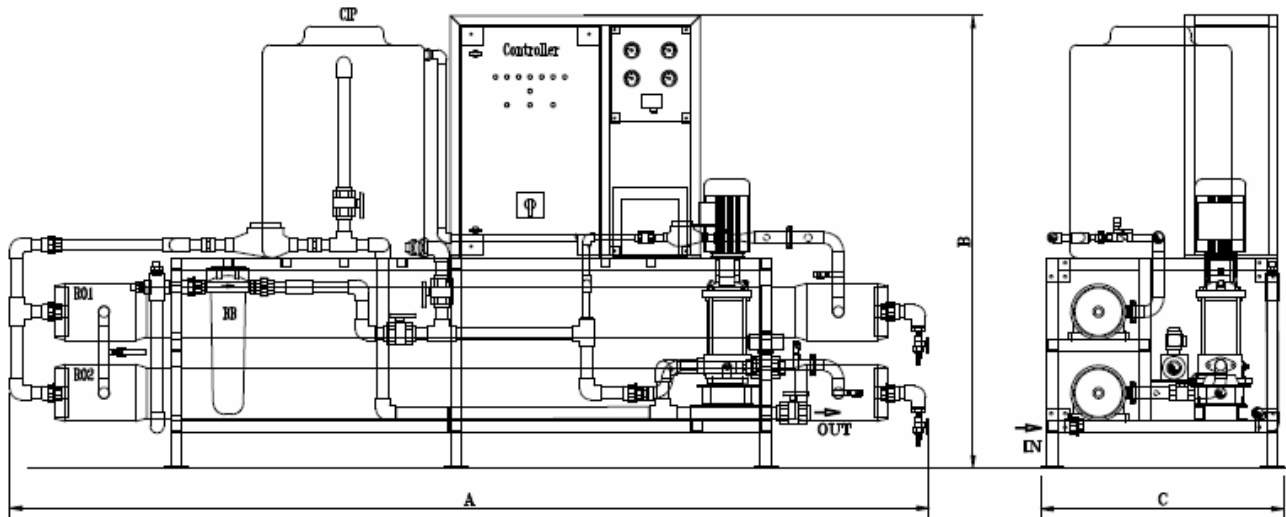
Post-Treatment Systems

- Hardening – mineral recovery.
- UV sterilization / chlorination.
- Degasser for pH correction.

Benefits

- Complete efficient reverse osmosis system available in one compact package.
- Fast and easy installation.
- Recovery rate of 75%-80%.
- 24/7 fully automated system.
- High quality components ensure reliability and low operating costs.
- All components are weather-proof.

LITEPURE® Dimensions and Weights



Metric Units / US Units

Model No.	Dimensions							
	Length (A)		Height (B)		Width(C)		Approx. Shipping Weight	
	Meter	Feet	Meter	Feet	Meter	Feet	kg	lb
LPBR9001	3	13.1	2	6.6	1	3.3	370	815
LPBR9003	3	13.1	2	6.6	1	3.3	520	1150
LPBR9005	3	13.1	2	6.6	1	3.3	1315	2900
LPBR9008	4	13.1	2	6.6	1	3.3	1450	3200
LPBR9011	4	13.1	2	6.6	1	3.3	1550	3400
LPBR9015	4	16.4	2	6.6	1.3	4.3	1770	3900
LPBR9019	4	16.4	2	6.6	1.3	4.3	1860	4100
LPBR9023	4	16.4	2.5	8.2	1.3	4.3	2040	4500
LPBR9028	6	20	2.3	7.6	1.6	5.3	2180	4800
LPBR9034	6	20	2.5	8.2	1.6	5.3	2320	5100
LPBR9040	6	20	2.3	7.6	1.6	5.3	2500	5500
LPBR9045	6	20	2.3	7.6	2	6.6	2630	5800
LPBR9050	6	20	2.3	7.6	2	6.6	2900	6400
LPBR9057	6	20	2.3	7.6	2	6.6	3270	7200

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