



ABSOLUTE PROCESS
TECHNOLOGIES

water treatment systems

LPRO-B16 Series

Reverse Osmosis Systems

LPRO-B16 Series Reverse Osmosis systems have been engineered for capacities ranging from 250lts/hr to 1500lts/hr for low TDS feed waters (Feed TDS < 1500ppm)

Applications:

- Drinking water
- Food & Beverage
- Electroplating
- Boiler Feed Water
- Pharmaceutical
- Petrochemical industry
- Process Water
- Waste water reuse
- Agriculture
- Pretreatment of EDI or Mixed Bed

Benefits

- Fully Equipped & Customizable
- Individually Tested and preserved
- Expandable & Skid Mounted
- Low Operation & Maintenance Costs
- Components Easily Accessible
- Easy Maintenance & Servicing
- Pre-Plumbed Wired & Assembled
- 1-Year Limited Warranty





LPRO-B16 Series Reverse Osmosis Systems

Standard Features

Cartridge Filtration

- Housing: 20" Big Blue
- Sediment filter: 5 Micron Big Blue
- Quantity: 1 pc

Control system

- Relay and timer control
- Timer adjustable
- Tank level control
- Low pressure/ High pressure protection
- Auto flush
- Pretreatment lockout control backup

Membrane Elements and Housings

- Membrane model: TW30-4040
- Membrane manufacturer: Filmtec
- Membrane rejection: 99.0-99.6%
- Housing Spec: FRP, 300psi, End port

Solenoid valve

- Feed Solenoid Valve: SS304; 10bar
- Flush Solenoid Valve: SS304; 15bar

Boost Pump

- Type: Vertical Multi-stage Centrifugal
- Pump Material: SS304
Connection: DIN Flange
- Pump Brand: CNP

Material of Construction

- High - pressure piping: UPVC
- Low - pressure piping: UPVC
- Frame: SS304
- Control box: IP54 (painted carbon steel)

Connection Port

- Feed Inlet Port
- Permeate Port
- Drain Port
- Clean-in-Place (CIP) Ports

Documentation Included

- Operation & maintenance manual
- Drawings: P&ID, Electrical diagram

Instrumentation

- Flow meters: Permeate, concentrate, concentrate recycle
- Conductivity: Permeate
- Pressure gauge: Pre-filter, post - filter, pump discharge, concentrate
- Pressure switch: Feed, RO membrane inlet

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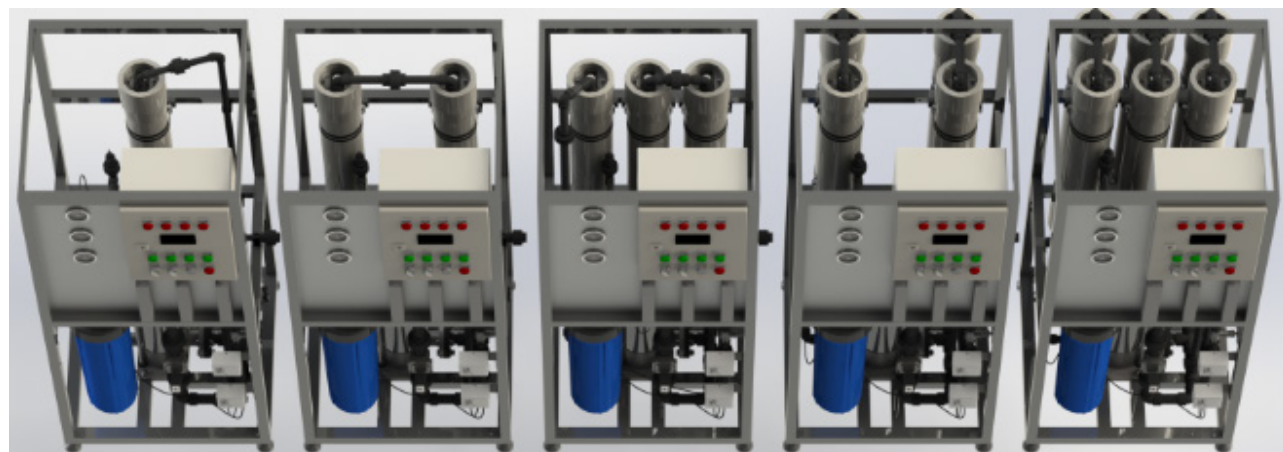
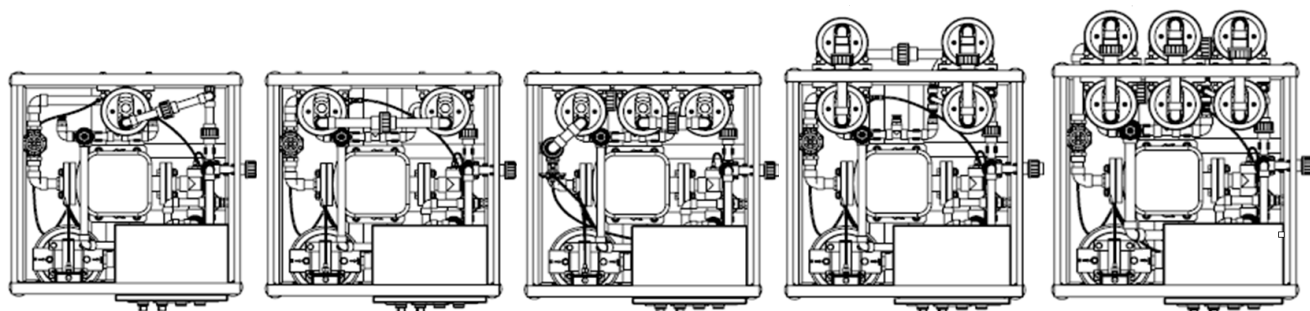
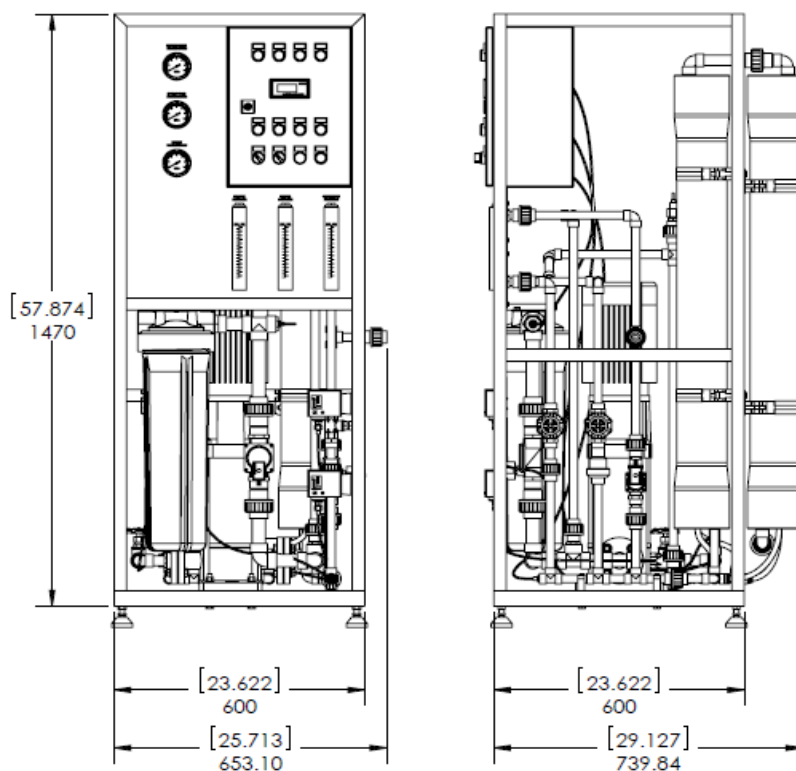
Reverse Osmosis Systems

MODEL	LPRO-B16-1500	LPRO-B16-3000	LPRO-B16-4500	LPRO-B16-6000	LPRO-B16-9000
Feed Water TDS ¹	<1500ppm	<1500ppm	<1500ppm	<1500ppm	<1500ppm
Nominal Perm. rate ²	0.25m ³ /hr	0.5m ³ /hr	0.75m ³ /hr	1.0m ³ /hr	1.5m ³ /hr
Approx. Conc. rate	0.12m ³ /hr	0.25m ³ /hr	0.3m ³ /hr	0.4m ³ /hr	0.6m ³ /hr
Approx. conc. recycle rate	1.1m ³ /hr	0.8m ³ /hr	0.8m ³ /hr	0.6m ³ /hr	0.6m ³ /hr
Approx. Feed rate	0.38m ³ /hr	0.7m ³ /hr	1.0m ³ /hr	1.5m ³ /hr	2.2m ³ /hr
Recovery Rate	50~75%	50~75%	60~75%	60~75%	60~75%
Pump and Motor					
Manufacturer	CNP	CNP	CNP	CNP	CNP
Model	C D L F 2 - 1 3 (50hz)	CDLF2-13 (50hz)	CDLF2-15 (50hz)	CDLF2-15 (50hz)	CDLF2-18 (50hz)
Motor HP	1.5kw	1.5kw	1.5kw	1.5kw	2.2kw
Wet contact Material	SS304	SS304	SS304	SS304	SS304
Design flow rate ³	1.48m ³ /hr	1.5m ³ /hr	1.8m ³ /hr	2.1m ³ /hr	2.8m ³ /hr
Pump pressure	10.8bar	10.8bar	11.8bar	11.0bar	10.8bar
Membranes Elements and Housings					
Membranes quantity	1	2	3	4	6
Memb. housing Qty	1 (single element)	2 (single element)	3 (single element)	4 (single element)	6 (single element)
Membrane housing array	1	1→1	1→1→1	1→1→1→1	1→1→1→1→1→1
Valves					
Auto inlet valve	3/4" SS304; solenoid	3/4" SS304; solenoid	1" SS304; solenoid	1" SS304; solenoid	1" SS304; solenoid
Auto flush valve	1/2" SS304; solenoid	1/2" SS304; solenoid	1/2" SS304; solenoid	1/2" SS304; solenoid	1/2" SS304; solenoid
Feed valve after HP pump	3/4" 304; adjustable	3/4" 304; adjustable	3/4" 304; adjustable	3/4" 304; adjustable	1" 304; adjustable
Concentrate valve	1/2" 304; adjustable	1/2" 304; adjustable	1/2" 304; adjustable	1/2" 304; adjustable	1/2" 304; adjustable
Recycle valve	1/2" 304; adjustable	1/2" 304; adjustable	1/2" 304; adjustable	1/2" 304; adjustable	1/2" 304; adjustable
Recycle check valve	1/2" UPVC	1/2" UPVC	1/2" UPVC	1/2" UPVC	1/2" UPVC
Manual CIP inlet	3/4" UPVC ball valve	3/4" UPVC ball valve	3/4" UPVC ball valve	3/4" UPVC ball valve	3/4" UPVC ball valve
Installation					
Inlet	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT
Permeate	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT
Drain	1/2"BSPT or NPT	1/2"BSPT or NPT	1/2"BSPT or NPT	1/2"BSPT or NPT	1/2"BSPT or NPT
CIP inlet	3/4"BSPT or NPT	3/4"BSPT or NPT	3/4"BSPT or NPT	3/4"BSPT or NPT	3/4"BSPT or NPT
CIP outlet	3/4"BSPT or NPT	3/4"BSPT or NPT	3/4"BSPT or NPT	3/4"BSPT or NPT	3/4"BSPT or NPT

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MODEL	LPRO-B16-1500	LPRO-B16-3000	LPRO-B16-4500	LPRO-B16-6000	LPRO-B16-9000
Package Dimension					
Approx. Height	1650mm	1650mm	1650mm	1650mm	1650mm
Approx. Width	700mm	700mm	700mm	700mm	700mm
Approx. Depth	650mm	650mm	650mm	800mm	800mm
Approx. Shipping Weight	180kg	190kg	200kg	215kg	235kg
Options					
¹ Treatment ability and working pressure of the RO system are dependent on feed water quality.					
² Maximum permeate rate listed at temperature 25°C, Permeate rate will decrease with decreasing temperature					
³ Design flow rate of the pump is the sum of Feed rate and Concentrate recycle rate					
Operating Limits					
Maximum Feed Temperature °C (°F)	35 (95)	pH (Continuous)		4 ~ 9	
Minimum Feed Temperature °C (°F)	5 (41)	Minimum pH (Continuous)		4	
Maximum Feed Pressure bar (psi)	5 (72)	Free Chlorine		undetectable	
Minimum Feed Pressure bar (psi)	2 (29)	Iron ppm		<0.1	
Maximum TDS ppm	1500	Manganese ppm		<0.05	
SDI	<5	Organic matter ppm		<1	

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