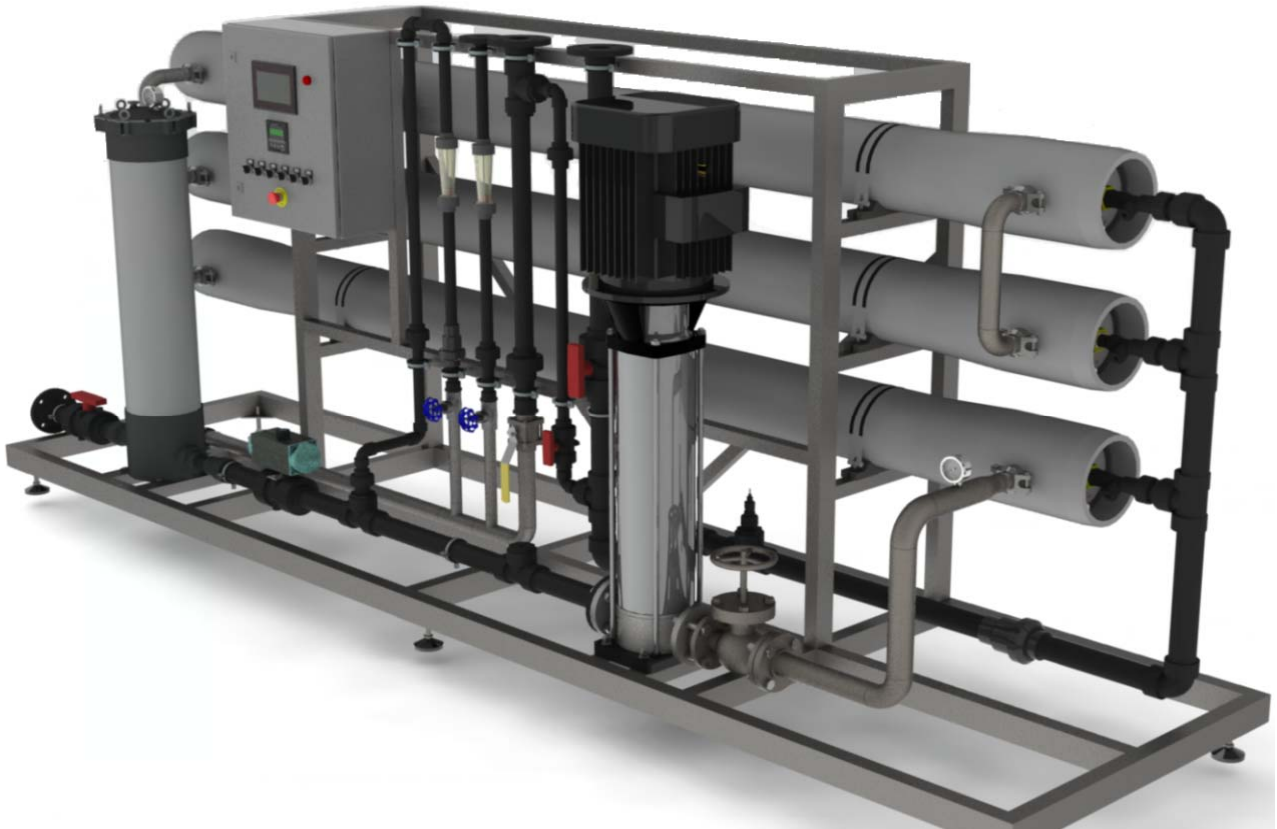


PTROM Series Reverse Osmosis Systems

PTROM Series Reverse Osmosis System

have been engineered for permeate capacities

ranging from 3.5 to 10m³/h.



Benefits

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

WATER PURIFICATION TECHNOLOGIES

PTROM Series Reverse Osmosis Systems

Standard Features

Membrane Elements and Housings

- Membrane model --- BW30-400 IG
- Membrane manufacturer --- Filmtec
- Nominal rejection --- 97-99%
- Housing --- FRP, 300psi, Side port (for ≤ 1000ppm)
FRP, 450psi, Side port (for ≤ 2500ppm)
- Housing manufacturer --- Balance or Equal

Electrical valve

- Feed Valve --- UPVC
- Flush Valve --- SS316

Boost Pump

- Type --- Vertical Multi-stage Centrifugal
- Pump material --- SS304 (for ≤ 500ppm)
--- SS316 (for ≤ 1000ppm)
--- SS316 (for ≤ 2500ppm)
- Connection --- DIN Flange
- Pump Brand --- CNP

Connection Port

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

Instrumentation

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

Options and Upgrades

- | | |
|---------------------------------|---|
| ● ABB VFD | ● Anti-scalant Dosing System |
| ● pH and ORP Meter | ● Clean-in-Place (CIP) system |
| ● Feed Water Conductivity Meter | ● Pretreatment system |
| ● Grundfos Pump | ● Flow transmitter with pulse signal output |
| ● Communication: Modbus RTU | ● Pressure transducer with analog signal output |
| ● EasyAccess Remote Control | |

Control system

- Siemens PLC
- Weinview HMI
- Parameters setting panel
- Tank level control
- Low pressure/High pressure protection
- Auto flush
- Pretreatment lockout control backup

Material of Construction

- High-pressure piping --- SS304 (for ≤ 500ppm)
--- SS316 (for ≤ 1500ppm)
--- SS316 (for ≤ 2500ppm)
- Low-pressure piping --- UPVC
- Frame --- SS304
- Control box --- IP54

Documentation Included

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

PTROM Series Reverse Osmosis Systems

Ordering Guide

Order Example	PTROM	8	FD/TB	480T60
Type				
Membrane quantity				
Connection port Flange/Thread/Socket(code)				
Power supply (code)				

Connection Port (Flange)	Code
Flange, ANSI	FA
Flange, DIN	FD

Connection Port (Thread)	Code
Thread, NPT	TN
Thread, BSPT	TB

Connection Port (Socket)	Code
Socket, ANSI	SA
Socket, DIN	SD

Power Supply	Code
220VAC / 50hz / single phase	220S50
230VAC / 50hz / single phase	230S50
240VAC / 50hz / single phase	240S50
100VAC / 60hz / single phase	100S50
110VAC / 60hz / single phase	110S50
120VAC / 60hz / single phase	120S60
127VAC / 60hz / single phase	127S60
200VAC / 60hz / single phase	200S60
220VAC / 60hz / single phase	220S60
240VAC / 60hz / single phase	240S60
380VAC / 50hz / three phase	380T50
400VAC / 50hz / three phase	400T50
415VAC / 50hz / three phase	415T50
440VAC / 50hz / three phase	440T50
200VAC / 60hz / three phase	200T60
208VAC / 60hz / three phase	208T60
220VAC / 60hz / three phase	220T60
240VAC / 60hz / three phase	240T60
380VAC / 60hz / three phase	380T60
440VAC / 60hz / three phase	440T60
460VAC / 60hz / three phase	460T60
480VAC / 60hz / three phase	480T60

WATER PURIFICATION TECHNOLOGIES

PTROM Series Reverse Osmosis Systems

Specificati

MODEL	PTROM-4	PTROM-6	PTROM-8	PTROM-9	PTROM-10	PTROM-12
Permeate rate ¹	4m ³ /hr	6m ³ /hr	8m ³ /hr	9m ³ /hr	10m ³ /hr	11.1m ³ /hr
Approx. conc. rate	1.33m ³ /hr	2m ³ /hr	2.67m ³ /hr	3m ³ /hr	3.33m ³ /hr	3.7m ³ /hr
Approx. recycle	3.33m ³ /hr	2.5m ³ /hr	1.8m ³ /hr	1m ³ /hr	0.6m ³ /hr	0 ~ 0.5m ³ /hr
Approx. Feed rate	5.33m ³ /hr	8m ³ /hr	10.7m ³ /hr	12m ³ /hr	13.33m ³ /hr	14.8m ³ /hr
Design Recovery	75%	75%	75%	75%	75%	75%
Pump and Motor - Up to 500mg/L Feed TDS design						
Manufacturer	CNP	CNP	CNP	CNP	CNP	CNP
Model	CDLF8-8 (60hz)	CDLF12-7 (60hz)	CDLF12-8 (60hz)	CDLF12-8 (60hz)	CDLF12-8(60hz)	CDLF16-7 (60hz)
Motor HP	5.5kw	7.5kw	11kw	11kw	11kw	15kw
Pump Material	SS304	SS304	SS304	SS304	SS304	SS316
Design flow rate ²	8.66m ³ /hr	10.5m ³ /hr	12.5m ³ /hr	13m ³ /hr	13.93m ³ /hr	15.3m ³ /hr
Design boost pressure	10.7bar	11.8bar	12.5bar	12.2bar	11.5bar	12.6bar
Pump and Motor - Up to 1000mg/L Feed TDS design						
Manufacturer	CNP	CNP	CNP	CNP	CNP	CNP
Model	CDLF8-10 (60hz)	CDLF12-8 (60hz)	CDLF12-10 (60hz)	CDLF12-10 (60hz)	CDLF12-10 (60hz)	CDLF16-8 (60hz)
Motor HP	7.5kw	11kw	11kw	11kw	11kw	15kw
Pump Material	SS316	SS316	SS316	SS316	SS316	SS316
Design flow rate ²	8.66m ³ /hr	10.5m ³ /hr	12.5m ³ /hr	13m ³ /hr	13.93m ³ /hr	15.3m ³ /hr
Design boost pressure	13.5bar	13.4bar	15.5bar	15.3bar	14.5bar	14.4bar
Pump and Motor - Up to 2500mg/L Feed TDS design						
Manufacturer	CNP	CNP	CNP	CNP	CNP	CNP
Model	CDLF8-14 (60hz)	CDLF12-12 (60hz)	CDLF12-12 (60hz)	CDLF12-12 (60hz)	CDLF12-12(60hz)	CDLF16-10(60hz)
Motor HP	11kw	15kw	15kw	15kw	15kw	18.5kw
Pump Material	SS316	SS316	SS316	SS316	SS316	SS316
Design flow rate ²	8.66m ³ /hr	10.5m ³ /hr	12.5m ³ /hr	13m ³ /hr	13.93m ³ /hr	15.3m ³ /hr
Design boost Press.	19.0bar	20.3bar	18.8bar	18.5bar	17.6bar	18.1bar
Membranes Elements and Housings						
Membrane	4	6	8	9	10	12
Memb. housing	2element long,	3element long,	4element long,	3element long,	5element long,	4element long,
Membrane housing array	1→1	1→1	1→1	1→1→1	1→1	1→1→1
Cartridge Filtration						
Filter housing	HPCF-5DC3	HPCF-5DC3	HPCF-5DC4	HPCF-5DC4	HPCF-5DC4	HPCF-8DC4
PP Cartridge	30"	30"	40"	40"	40"	40"
Filter housing Qty.	1	1	1	1	1	1
	5 per housing	5 per housing	5 per housing	5 per housing	5 per housing	8 per housing
Valves						
Auto inlet valve	1.5" UPVC; ball	1.5" UPVC; ball	2" UPVC;butterfly	2" UPVC;butterfly	2" UPVC;butterfly	2.5"UPVC;butterfly
Auto flush valve	3/4" SS; ball valve	3/4" SS; ball valve	1" SS; solenoid	1" SS; solenoid	1" SS; solenoid	1" SS; solenoid
Feed valve after HP pump	1-1/4" SS;adjustable	1-1/4" SS;adjustable	1.5" SS;adjustable	1.5" SS; adjustable	1.5" SS; adjustable	2" SS; adjustable
Concentrate valve	3/4" SS;adjustable	3/4" SS;adjustable	1" SS;adjustable	1" SS;adjustable	1" SS;adjustable	1" SS;adjustable
Recycle valve	3/4"SS3;adjustable	3/4" SS;adjustable	3/4" SS;adjustable	1/2" SS;adjustable	1/2" SS;adjustable	1/2" SS;adjustable
Recycle check	3/4" UPVC	3/4" UPVC	3/4" UPVC	1/2" UPVC	1/2" UPVC	1/2" UPVC
Manual product valve	1-1/4"UPVC double union ball valve	1.5" UPVC double union ball valve	1.5" UPVC double union ball valve	2" UPVC butterfly valve	2" UPVC butterfly valve	2" UPVC butterfly valve
Manual CIP inlet	1.5" SS; ball valve	1.5" SS; ball valve	1.5" SS; ball valve	1.5" SS; ball valve	1.5" SS; ball valve	1.5" SS; ball valve
Manual CIP conc.outlet	1.5" SS; ball valve	1.5" SS; ball valve	1.5" SS; ball valve	1.5" SS; ball valve	1.5" SS; ball valve	1.5" SS; ball valve
Manual CIP perm.outlet	1" UPVC double union ball valve	1" UPVC double union ball valve	1" UPVC double union ball valve	1" UPVC double union ball valve	1" UPVC double union ball valve	1" UPVC double union ball valve
Installation						
Inlet	1.5" Flange	1.5" Flange	2" Flange	2" Flange	2" Flange	2" Flange
Permeate	1.5" Flange	1.5" Flange	1.5" Flange	1.5" Flange	1.5" Flange	2" Flange
Drain	1" Flange	1" Flange	1-1/4" Flange	1-1/4" Flange	1-1/4" Flange	1.5" Flange
CIP inlet	1.5" BSPT or NPT	2" BSPT or NPT	2" BSPT or NPT	2" BSPT or NPT	2" BSPT or NPT	2" BSPT or NPT
CIP conc. outlet	1.5" BSPT or NPT	1.5" BSPT or NPT	1.5" BSPT or NPT	1.5" BSPT or NPT	1.5" BSPT or NPT	1.5" BSPT or NPT
CIP perm. outlet	1"DIN or Sch80	1"DIN or Sch80	1"DIN or Sch80	1"DIN or Sch80	1"DIN or Sch80	1"DIN or Sch80

Package Dimension						
Approx. Height	1675mm	1675mm	1675mm	1675mm	1675mm	1675mm
Approx. Width	3000mm	4000mm	5000mm	4000mm	5500mm	5000mm
Approx. Depth	1000mm	1000mm	1000mm	1000mm	1000mm	1000mm
Approx. Shipping Weight	490kg	500kg	512kg	525kg	540kg	770kg
Options						
Antiscalant Feed System	Metering pump: 1.5L/h Chemical tank: 200-300L	Metering pump: 1.5L/h Chemical tank: 200-300L	Metering pump: 1.5L/h Chemical tank: 200-300L	Metering pump: 1.5L/h Chemical tank: 200-300L	Metering pump: 1.5L/h Chemical tank: 200-300L	Metering pump: 1.5L/h Chemical tank: 200-300L
CIP system	CIP tank: 500L CIPpump: 8m ³ /h@4.0bar CIP filter: HPCF-5DC3	CIP tank: 500L CIPpump: 8m ³ /h@4.0bar CIP filter: HPCF-5DC3	CIP tank: 500L CIPpump: 8m ³ /h@4.0bar CIP filter: HPCF-5DC3	CIP tank: 500L CIPpump: 8m ³ /h@4.0bar CIP filter: HPCF-5DC3	CIP tank: 500L CIPpump: 8m ³ /h@4.0bar CIP filter: HPCF-5DC3	CIP tank: 1000L CIPpump: 8m ³ /h@4.0bar CIP filter: HPCF-5DC3
Pretreatment: sand / MMF filter + carbon filter	PTSC836-30	PTSC836-36	PTMC-100	PTMC-120	PTMC-120	PTMC-120
Pretreatment: sand / MMF filter + carbon filter + softener	PTSCS836-30	PTSCS836-36	Customized	Customized	Customized	Customized

¹ Nominal permeate rate listed at temperature 25°C, Permeate rate can be reduced by up to 20% as temperature drops.

² 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

LPRO-B412 Series Reverse Osmosis Systems

LPRO-B412 Series Reverse Osmosis System

have been engineered for capacities ranging from 5000GPD to 20000GPD for low TDS feed water design (Feed TDS < 1500ppm)

Applications:

- Drinking water
- Food & Beverage
- Electroplating
- Power plant
- Preparation of medicine
- Petrochemical industry
- Eyeglass
- Waste water reuse
- Metallurgy
- Pretreatment of EDI or Mixed Bed



Benefits

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

LPRO-B412 Series Reverse Osmosis Systems

Standard Features

Cartridge Filtration

- Housing --- HPCF-5DC2
- PP cartridge --- 2.5" × 20"; 5micron
- Cartridge quantity --- 5pcs

Membrane Elements and Housings

- Membrane model --- ULP21-4040
- Membrane manufacturer --- Vontron
- Membrane rejection --- 99.0-99.6%
- Housing Spec. --- FRP, 300psi, End port

Boost Pump

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

Connection Port

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

Instrumentation

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

Control system

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

Solenoid valve

- Feed Solenoid Valve --- SS304; 10bar
- Flush Solenoid Valve --- SS304I; 15bar

Material of Construction

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

Documentation Included

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

Options and Upgrades

- | | |
|--|--|
| <ul style="list-style-type: none"> ● PLC Controller ● pH Meter ● Feed Water Conductivity Meter ● Grundfos Pump | <ul style="list-style-type: none"> ● SS304 Seamless Housing ● Anti-scalant Dosing System ● Clean-in-Place (CIP) system ● Pretreatment system |
|--|--|

Ordering Guide

Order Example	LPRO-B412	12000	TB	220S60
Type				
Nominal Capacity (GPD)				
Connection (code)				
Power supply (code)				

Connection Port	Code
Thread, BSPT	TB
Thread, NPT	TN

Power Supply	Code
220VAC / 50hz / single phase	220S50
230VAC / 50hz / single phase	230S50
240VAC / 50hz / single phase	240S50
100VAC / 60hz / single phase	100S50
110VAC / 60hz / single phase	110S50
120VAC / 60hz / single phase	120S60
127VAC / 60hz / single phase	127S60
200VAC / 60hz / single phase	200S60
220VAC / 60hz / single phase	220S60
240VAC / 60hz / single phase	240S60
380VAC / 50hz / three phase	380T50
400VAC / 50hz / three phase	400T50
415VAC / 50hz / three phase	415T50
440VAC / 50hz / three phase	440T50
200VAC / 60hz / three phase	200T60
208VAC / 60hz / three phase	208T60
220VAC / 60hz / three phase	220T60
240VAC / 60hz / three phase	240T60
380VAC / 60hz / three phase	380T60
440VAC / 60hz / three phase	440T60
460VAC / 60hz / three phase	460T60
480VAC / 60hz / three phase	480T60

LPRO-B412 Series Reverse Osmosis Systems

Specifications

MODEL	LPRO-B412-6000	LPRO-B412-9000	LPRO-B412-12000	LPRO-B412-15000	LPRO-B412-18000
Feed Water TDS ¹	<1500ppm	<1500ppm	<1500ppm	<1500ppm	<1500ppm
Nominal Perm. rate ²	1.0m ³ /hr	1.5m ³ /hr	2.0m ³ /hr	2.5m ³ /hr	3.0m ³ /hr
Approx. conc. rate	0.4m ³ /hr	0.6m ³ /hr	0.8m ³ /hr	1.0m ³ /hr	1.2m ³ /hr
Approx. conc. recycle rate	0.6m ³ /hr	0.6m ³ /hr	1.2m ³ /hr	0.8m ³ /hr	0.8m ³ /hr
Approx. Feed rate	1.5m ³ /hr	2.2m ³ /hr	2.8m ³ /hr	3.5m ³ /hr	4.2m ³ /hr
Recovery Rate	60~75%	60~75%	65~75%	65~75%	65~75%
Pump and Motor					
Manufacturer	CNP	CNP	CNP	CNP	CNP
Model	CDLF2-11 (60hz)	CDLF2-11 (60hz)	CDLF4-10 (60hz)	CDLF4-10 (60hz)	CDLF4-10 (60hz)
Motor HP	2.2kw	2.2kw	4kw	4kw	4kw
Wet contact Material	SS304	SS304	SS304	SS304	SS304
Design flow rate ³	2.1m ³ /hr	2.8m ³ /hr	4.0m ³ /hr	4.3m ³ /hr	5.0m ³ /hr
Design RO Working pressure	12.5bar	10.8bar	12.0bar	11.6bar	11.3bar
Membranes Elements and Housings					
Membrane quantity	4	6	8	10	12
Housing quantity	4 (single element)	6 (single element)	4 (2-element)	5 (2-element)	6 (2element)
Membrane housing array	1→1→1→1	1→1→1→1→1→1	2→2	2→2→1	2→2→2
Valves					
Auto inlet valve	1" SS304; solenoid	1" SS304; solenoid	1-1/4" SS304;	1.5" SS304; solenoid	1.5" SS304; solenoid
Auto flush valve	1/2" SS304; solenoid	1/2" SS304; solenoid	3/4" SS304; solenoid	3/4" SS304; solenoid	3/4" SS304; solenoid
Feed valve after HP pump	3/4" SS304;adjustable	1" SS304;adjustable	1" SS304;adjustable	1-1/4" SS304; adjustable	1-1/4" SS304; adjustable
Concentrate valve	1/2" SS304;adjustable	1/2" SS304;adjustable	3/4" SS304;adjustable	3/4" SS304;adjustable	3/4" SS304;adjustable
Recycle valve	1/2" SS304;adjustable	1/2" SS304;adjustable	3/4" SS304;adjustable	3/4" SS304;adjustable	3/4" SS304;adjustable
Recycle check valve	1/2" UPVC	1/2" UPVC	3/4" UPVC	3/4" UPVC	3/4" UPVC
Manual CIP inlet	1" UPVC ball valve	1" UPVC ball valve	1" UPVC ball valve	1" UPVC ball valve	1" UPVC ball valve
Installation					
Inlet	1.5"BSPT or NPT	1.5"BSPT or NPT	1.5"BSPT or NPT	1.5"BSPT or NPT	1.5"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	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT
CIP outlet	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT	1"BSPT or NPT
Package Dimension					
Approx. Height	1350mm	1350mm	1350mm	1350mm	1350mm
Approx. Width	700mm	700mm	850mm	850mm	850mm
Approx. Depth	1650mm	1650mm	2350mm	2350mm	2350mm
Approx. Shipping Weight	210kg	230kg	220kg	235kg	250kg
Options					
Antiscalant Feed System	Metering pump: 1.5 L/hr Chemical tank: 60-100L	Metering pump: 1.5 L/hr Chemical tank: 60-100L	Metering pump: 1.5 L/hr Chemical tank: 60-100L	Metering pump: 1.5 L/hr Chemical tank: 60-100L	Metering pump: 1.5 L/hr Chemical tank: 60-100L
CIP system	CIP tank: 200L CIPpump: 2m ³ /h@3bar CIP filter: 4.5"×20"BB	CIP tank: 200L CIPpump: 2m ³ /h@3bar CIP filter: 4.5"×20"BB	CIP tank: 200L CIPpump: 2m ³ /h@3bar CIP filter: 4.5"×20"BB	CIP tank: 200L CIPpump: 2m ³ /h@3bar CIP filter: 4.5"×20"BB	CIP tank: 200L CIPpump: 2m ³ /h@3bar CIP filter: 4.5"×20"BB
Pretreatment: PTSC836 series	PTSC836-14	PTSC836-16	PTSC836-18	PTSC836-21	PTSC836-24
Pretreatment: PTSCS836 series	PTSCS836-14	PTSCS836-16	PTSCS836-18	PTSCS836-21	PTSCS836-24

¹Treatment 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 decreases 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

LPRO-B16 Series Reverse Osmosis Systems

LPRO-B16 Series Reverse Osmosis System

have been engineered for capacities ranging from 1200GPD to 9000GPD for low TDS feed water design (Feed TDS < 1500ppm)

Applications:

- Drinking water
- Food & Beverage
- Electroplating
- Power plant
- Preparation of medicine
- Petrochemical industry
- Eyeglass
- Waste water reuse
- Metallurgy
- Pretreatment of EDI or Mixed Bed



LPRO-B16-9000 Reverse Osmosis System

Benefits

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

WATER PURIFICATION TECHNOLOGIES

LPRO-B16 Series Reverse Osmosis Systems

Standard Features

Cartridge Filtration

- Housing --- 4.5" × 20"
- Sediment filter --- 4.5" × 20"; 5micron
- Quantity --- 1 pc

Membrane Elements and Housings

- Membrane model --- ULP21-4040
- Membrane manufacturer --- Vontron
- Membrane rejection --- 99.0-99.6%
- Housing Spec. --- FRP, 300psi, End port

Boost Pump

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

Connection Port

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

Instrumentation

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

Control system

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

Solenoid valve

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

Material of Construction

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

Documentation Included

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

Options and Upgrades

- | | |
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| <ul style="list-style-type: none"> ● PLC Controller ● pH Meter ● Feed Water Conductivity Meter ● Grundfos Pump | <ul style="list-style-type: none"> ● SS304 Seamless Housing ● Anti-scalant Dosing System ● Clean-in-Place (CIP) system ● Pretreatment system |
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LPRO-B16 Series Reverse Osmosis Systems

Ordering Guide

Order Example	LPRO-B16	9000	TB	220S60
Type				
Nominal Capacity (GPD)				
Connection (code)				
Power supply (code)				

Connection Port	Code
Thread, BSPT	TB
Thread, NPT	TN

Power Supply	Code
220VAC / 50hz / single phase	220S50
230VAC / 50hz / single phase	230S50
240VAC / 50hz / single phase	240S50
100VAC / 60hz / single phase	100S50
110VAC / 60hz / single phase	110S50
120VAC / 60hz / single phase	120S60
127VAC / 60hz / single phase	127S60
200VAC / 60hz / single phase	200S60
220VAC / 60hz / single phase	220S60
240VAC / 60hz / single phase	240S60
380VAC / 50hz / three phase	380T50
400VAC / 50hz / three phase	400T50
415VAC / 50hz / three phase	415T50
440VAC / 50hz / three phase	440T50
200VAC / 60hz / three phase	200T60
208VAC / 60hz / three phase	208T60
220VAC / 60hz / three phase	220T60
240VAC / 60hz / three phase	240T60
380VAC / 60hz / three phase	380T60
440VAC / 60hz / three phase	440T60
460VAC / 60hz / three phase	460T60
480VAC / 60hz / three phase	480T60

LPRO-B16 Series Reverse Osmosis Systems

Specifications

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	CDLF2-9 (60hz)	CDLF2-9 (60hz)	CDLF2-9 (60hz)	CDLF2-9 (60hz)	CDLF2-11 (60hz)
Motor HP	2.2kw	2.2kw	2.2kw	2.2kw	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	11.1bar	11.1bar	10.7bar	10.3bar	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" SS304;adjustable	3/4" SS304;adjustable	3/4" SS304;adjustable	3/4" SS304;adjustable	1" SS304;adjustable
Concentrate valve	1/2" SS304;adjustable	1/2" SS304;adjustable	1/2" SS304;adjustable	1/2" SS304;adjustable	1/2" SS304;adjustable
Recycle valve	1/2" SS304;adjustable	1/2" SS304;adjustable	1/2" SS304;adjustable	1/2" SS304;adjustable	1/2" SS304;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
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					
Antiscalant Feed System	Metering pump: 1.5 L/hr Chemical tank: 60-100L	Metering pump: 1.5 L/hr Chemical tank: 60-100L	Metering pump: 1.5 L/hr Chemical tank: 60-100L	Metering pump: 1.5 L/hr Chemical tank: 60-100L	Metering pump: 1.5 L/hr Chemical tank: 60-100L
CIP system	CIP tank: 200L CIPpump: 2m ³ /h@3bar CIP filter: 4.5"×20"BB	CIP tank: 200L CIPpump: 2m ³ /h@3bar CIP filter: 4.5"×20"BB	CIP tank: 200L CIPpump: 2m ³ /h@3bar CIP filter: 4.5"×20"BB	CIP tank: 200L CIPpump: 2m ³ /h@3bar CIP filter: 4.5"×20"BB	CIP tank: 200L CIPpump: 2m ³ /h@3bar CIP filter: 4.5"×20"BB
Pretreatment: PTSC836 series	PTSC836-10	PTSC836-10	PTSC836-12	PTSC836-14	PTSC836-16
Pretreatment: PTSCS836 series	PTSCS836-10	PTSCS836-10	PTSCS836-12	PTSCS836-14	PTSCS836-16

¹Treatment 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 decreases with decreasing temperature

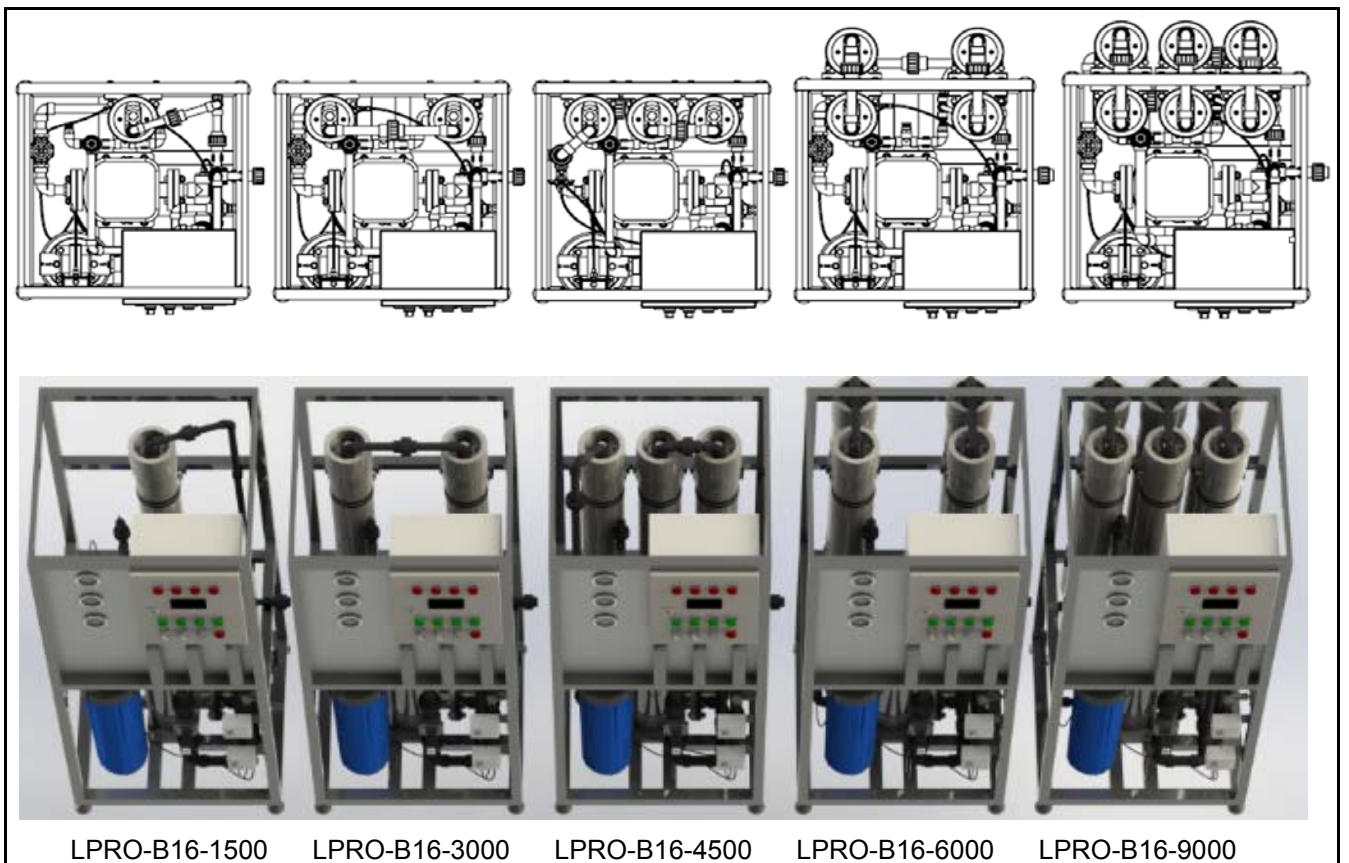
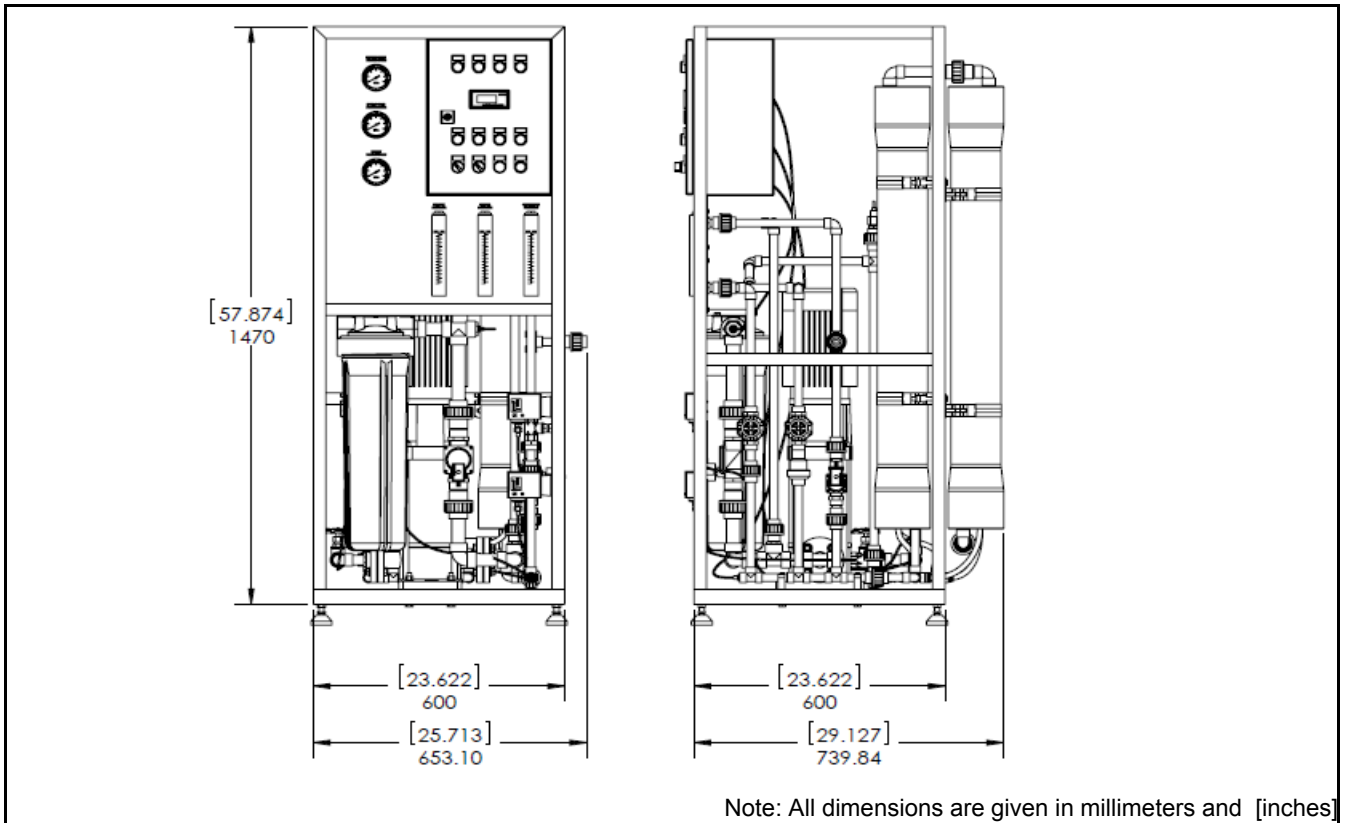
³ Design flow rate of the pump is the sum of Feed rate and Concentrate recycle rate

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

WATER PURIFICATION TECHNOLOGIES

LPRO-B16 Series Reverse Osmosis Systems 02-3412-8268



WATER PURIFICATION TECHNOLOGIES