

Brackish Water Reverse Osmosis system BWRO series



BWRO-B412 series



BWRO-P412 series

BWRO-B412 series have been engineered for **capacities ranging from 5,000-20,000 gallons per day** for brackish feed water design (**Feed water TDS < 3,000**).

Applications

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

Standard Features

■ Control system

- Relay and timer control
- Timer adjustable

- Tank level control
- Low pressure/High pressure protection
- Auto flush
- Pretreatment lockout control backup

■ Membrane element and pressure vessel

- Membrane model---LP21-4040
- Membrane manufacturer---Vontron/DOW/Hydronautics/Others
- Membrane rejection---99%-99.6%
- Pressure vessel spec.---FRP, 450PSI, side port
- Pressure vessel manufacturer---ROPV/Wave Cyber/First Line/Others

■ Cartridge Filtration

- Housing---HPCF-5DC2
- Filter cartridge---2.5''*20'', 5micron
- Quantity--- 5 pc

■ Boost Pump

- Type---Vertical multistage centrifugal
- Pump material--- SS316L
- Connection---DIN flange

- Brand---CNP

■ Documentation Included

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

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

■ Options and Upgrades

- PLC controller
- SS304 seamless pressure vessel
- Anti-scalant dosing system
- Clean-in-place (CIP) system
- Pre-treatment system
- PH meter

- Feed water conductivity meter
- Grundfos pump

■ Ordering Guide

Order Example	BWRO-B412	12000	TB	220T60
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

Specifications

MODEL	BWRO-B412-6000	BWRO-B412-9000	BWRO-B412-12000	BWRO-B412-15000	BWROB-412-18000
Feed Water TDS ¹	<3000ppm	<3000ppm	<3000ppm	<3000ppm	<3000ppm
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	0.45m ³ /hr	0.62m ³ /hr	0.86m ³ /hr	1.05m ³ /hr	1.24m ³ /hr
Approx. conc. recycle rate	0.5m ³ /hr	0.1m ³ /hr	0.9m ³ /hr	0.5m ³ /hr	0.3m ³ /hr
Approx. Feed rate	1.45m ³ /hr	2.06m ³ /hr	2.86m ³ /hr	3.5m ³ /hr	4.2m ³ /hr
Recovery Rate	65~75%	65~75%	65~75%	65~75%	65~75%
Pump and Motor					
Manufacturer	CNP	CNP	CNP	CNP	CNP
Model	CDLF2-15 (60hz)	CDLF2-18 (60hz)	CDLF4-14 (60hz)	CDLF4-14 (60hz)	CDLF4-16 (60hz)
Motor HP	3kw	4kw	5.5kw	5.5kw	5.5kw
Wet contact Material	SS316	SS316	SS316	SS316	SS316
Design flow rate ³	1.95m ³ /hr	2.3m ³ /hr	3.76m ³ /hr	4.0m ³ /hr	4.5m ³ /hr
Design RO Working pressure	17.8bar	20.5bar	17.2bar	17.0bar	18.8bar
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)
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" SS316; solenoid	1" SS316; solenoid	1-1/4" SS316;	1.5" SS316; solenoid	1.5" SS316; solenoid
Auto flush valve	1/2" SS316; solenoid	1/2" SS316; solenoid	3/4" SS316; solenoid	3/4" SS316; solenoid	3/4" SS316; solenoid
Feed valve after HP pump	3/4" SS316;adjustable	1" SS316;adjustable	1" SS316;adjustable	1-1/4" SS316; adjustable	1-1/4" SS316; adjustable
Concentrate valve	1/2" SS316;adjustable	1/2" SS316;adjustable	3/4" SS316;adjustable	3/4" SS316;adjustable	3/4" SS316;adjustable
Recycle valve	1/2" SS316;adjustable	1/2" SS316;adjustable	3/4" SS316;adjustable	3/4" SS316;adjustable	3/4" SS316;adjustable
Recycle check valve	1/2" UPVC	1/2" UPVC	3/4" UPVC	3/4" UPVC	3/4" UPVC
Manual CIP inlet	1" SS316 ball valve	1" SS316 ball valve	1" SS316 ball valve	1" SS316 ball valve	1" SS316 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	240kg	260kg	250kg	265kg	275kg
Options					
Antiscalant Feed System	Metering pump: 1.5L/hr Chemical tank: 60-100L	Metering pump: 1.5L/hr Chemical tank: 60-100L	Metering pump: 1.5L/hr Chemical tank: 60-100L	Metering pump: 1.5L/hr Chemical tank: 60-100L	Metering pump: 1.5L/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