

STANDARD REVERSE OSMOSIS SYSTEM with PRETREATMENT

1,500GPD - 12,000GPD



Benefits :

- * Fully Assembled in Malaysia
- * Wide Selection of Skid Material - Stainless Steel, Powder Coated Aluminium and Carbon Steel
- * Fully Equipped and Customizable
- * Expandable and Skid Mounted
- * Components Easily Accesible
- * Pre-Plumbed Wired and Assembled
- * Individual Tested and preserved
- * Low Maintenance Costs
- * Easy Maintenance and Servicing
- * 1 Year Limited Warranty

STANDARD FEATURES

System Design

The Operation Of The Proposed Water Treatment System Is Fully Automatic Base On Tank Level And Water Demands.

RO Guard Filter

BWRO 1500, 3000

Housing - 2.75" x 20" (Plastic)

Cartridge Filter - 2.75" x 20", 5 Micron

BWRO 4500, 6000

Housing - Stainless Steel 304 Multi Cartridge

Cartridge Filter - 2.75" x 10", 5 Micron

BWRO 9000, 12000

Housing - Stainless Steel 304 Multi Cartridge

Cartridge Filter - 2.75" x 20", 5 Micron

Membrane Elements and Housing

RO Membrane Brand : LG Chem or Equivalent

RO Membrane Model : 4" - BW 4040R / ES, 8" - BW 400R Dura or Equivalent

RO Housing Brand : Pureline / Codeline

RO Housing Material : 4" - Stainless Steel # 304 Seamless
8" - FRP

Feed & RO Booster Pump

Brand : G-Pump

Type : Horizontal / Vertical Multistage Centrifugal Pump

Material : all wetted parts Stainless Steel 304

Instrumentation

- * Flowmeter - Permeate, Concentrate
- * Pressure Gauge - Feed Water, RO Pump, Concentrate
- * Pressure Switch - Feed Water
- * Solenoid Valve - Feed Water, Flushing

Material of Construction

- * Frame - Stainless Steel, Powder Coated Aluminium, Powder Coated Carbon Steel
- * Control Box - IP54 (Powder Coated Aluminium)
- * High Pressure Piping - UPVC (SCH.80)
- * Low Pressure Piping - UPVC (SCH.80)

RO Programme Controller

Features : -

- i) 6 Channels Signal Detection(Dry Contact Input)
 - Raw Water (no water protection)
 - Low Pressure Protection
 - High Pressure Protection
 - Pure Water Tank High Level
 - External Control Mode Signal
 - Running Reset
- ii) 5 Channels Control Port (Dry Contact Output)
 - Raw Water Pump
 - Inlet Valve
 - High Pressure Pump
 - Flush Valve
 - Conductivity Over Limit Drainage Valve
- iii) Conductivity Detection
Measurement Range : 0.5 - 2,000 $\mu\text{S}/\text{cm}$
- iv) Temperature Detection : 0 - 50°C

Switch and Control Panel

Telemecanique Relay Control

Accessories :

- a. Main Circuit Breaker
- b. Control Circuit Booster and High Pressure Pump, Isolating Transformer
- c. Overload Relay
- d. Shutdown Circuit For : -
 - i) Dry Run
 - ii) Motor Overload
 - Hand Off Auto Selector Switch
 - Plant Running Indicating Lamp

Documentation

- * Operation and Maintenance Manual
- * Electrical Diagram
- * RO Programme Controller Manual

Main RO Unit Feed Water Condition Requirement

Minimum Raw Water Pressure	29 PSI (2.0 bar)	Silt Density Index	SDI < 5
Maximum Raw Water Pressure	72 PSI (5.0 bar)	Iron (Fe3+)	< 0.1mg/L
Maximum Feed Water TDS	< 1500ppm	Free Chlorine (Cl-)	Undetectable
Raw Water pH Range (Continuous)	4 - 9	Manganese (Mn)	< 0.05mg/L
Oil	Free	Organics Substance	< 1mg/L
Hardness	< 50mg/L (Count as CaCO3)	Maximum Feed Temperature	35°C
Turbidity	< 1NTU	Minimum Feed Temperature	5°C

SPECIFICATION

Main RO Unit (BWRO Series)

	BWRO 1500	BWRO 3000	BWRO 4500	BWRO6000	BWRO 9000	BWRO 12000A	BWRO 12000B
Feed Water TDS	<1500ppm	<1500ppm	<1500ppm	<1500ppm	<1500ppm	<1500ppm	<1500ppm
Nominal Perm. Rate	0.25m³/Hr	0.5m³/Hr	0.75m³/Hr	1.0m³/Hr	1.5m³/Hr	2m³/Hr	2m³/Hr
Approx. Conc. Rate	0.12m³/Hr	0.25m³/Hr	0.3m³/Hr	0.4m³/Hr	0.6m³/Hr	1.2m³/Hr	1.2m³/Hr
Approx. Conc. Recycle Rate	1.1m³/Hr	0.8m³/Hr	0.8m³/Hr	0.6m³/Hr	0.6m³/Hr	0.8m³/Hr	0.8m³/Hr
Approx. Feed Rate	0.38m³/Hr	0.7m³/Hr	1.0m³/Hr	1.5m³/Hr	2.2m³/Hr	2.8m³/Hr	2.8m³/Hr
Recovery Rate	50-75%	50-75%	60-75%	60-75%	60-75%	65-75%	65-75%
PUMP & MOTOR							
Brand	G-Pump	G-Pump	G-Pump	G-Pump	G-Pump	G-Pump	G-Pump
Model	SVM2-110	SVM2-130	SVM2-150	SVM2-180	SVM2-220	SVM4-160	SVM4-160
Motor	1.1kW	1.5kW	1.5kW	2.2kW	2.2kW	3.0kW	3.0kW
Wet Contact Material	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304
MEMBRANE ELEMENTS AND HOUSING							
Membrane Dimension (Ø x L)	4" x 40"	4" x 40"	4" x 40"	4" x 40"	4" x 40"	2E x 4" x 40"	8" x 40"
Membrane Quantity	1	2	3	4	6	8	2
Membrane Housing Array	1	1→1	1→1→1	2→1→1	4→2	2→1→1	1→1
Membrane Housing Arrangement	Vertical	Vertical	Horizontal	Horizontal	Horizontal	Horizontal	Horizontal
INSTALLATION CONNECTION							
Inlet	3/4"	3/4"	3/4"	1"	1 1/2"	1 1/2"	1 1/2"
Permeate	1/2"	1/2"	1/2"	1"	1"	1"	1"
Concentrate	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"	3/4"
MAIN RO UNIT DIMENSION							
Approx. Height	1605mm	1605mm	1680mm	1680mm	1680mm	1700mm	1600mm
Approx. Length	500mm	500mm	1530mm	1530mm	1530mm	2600mm	2350mm
Approx. Width	550mm	550mm	700mm	700mm	700mm	850mm	850mm

Pretreatment Unit (PRE Series)

	PRE100	PRE100	PRE200	PRE200	PRE400	PRE600	PRE600
PUMP & MOTOR							
Brand	G-Pump	G-Pump	G-Pump	G-Pump	G-Pump	G-Pump	G-Pump
Model	SHM2-30	SHM2-30	SHM2-40	SHM2-40	SHM4-40	SHM4-40	SHM4-40
Motor	0.37kW	0.37kW	0.55kW	0.55kW	0.75kW	0.75kW	0.75kW
Wet Contact Material	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304	SS 304
SAND FILTER							
FRP Tank Size	1054	1054	1354	1354	1665	1865	1865
Digital Automatic Control Valve	Runxin F71B1	Runxin F71B1	Runxin F67B1	Runxin F67B1	Runxin 67B1	Runxin 75B1	Runxin 75B1
ACTIVATED CARBON FILTER							
FRP Tank Size	1054	1054	1354	1354	1665	1865	1865
Digital Automatic Control Valve	Runxin F71B1	Runxin F71B1	Runxin F67B1	Runxin F67B1	Runxin 67B1	Runxin 75B1	Runxin 75B1
SOFTENING FILTER							
FRP Tank Size	1054	1054	1354	1354	1665	1865	1865
Digital Automatic Control Valve	Runxin F65B1	Runxin F65B1	Runxin F63B1	Runxin F63B1	Runxin 63B1	Runxin 74B1	Runxin 74B1
BRINE TANK							
PE Tank Size	70L	70L	100L	100L	140L	140L	140L
PRETREATMENT UNIT DIMENSION							
Approx. Height	1670mm	1670mm	1670mm	1670mm	1900mm	1900mm	1900mm
Approx. Length	930mm	930mm	1150mm	1150mm	1350mm	1800mm	1800mm
Approx. Depth	550mm	550mm	700mm	700mm	700mm	800mm	800mm

* Design and Specifications subject to change without prior notice.

STANDARD REVERSE OSMOSIS SYSTEM with PRETREATMENT



CAPACITY:
4,500GPD (0.75m³/Hr)
- 9,000GPD (1.5m³/Hr)



4" MEMBRANE



8" MEMBRANE



CAPACITY: 12,000GPD (2m³/Hr)



CAPACITY:
1,500GPD (0.25m³/Hr) - 3,000GPD (0.5m³/Hr)

Applications :

- * Drinking Water
- * Food & Beverage
- * Electroplating
- * Power Plant
- * Preparation of Medicine
- * Petrochemical Industry
- * Eyeglass
- * Waste Water Reuse
- * Metallurgy
- * Pretreatment of EDI or Mixed Bed