

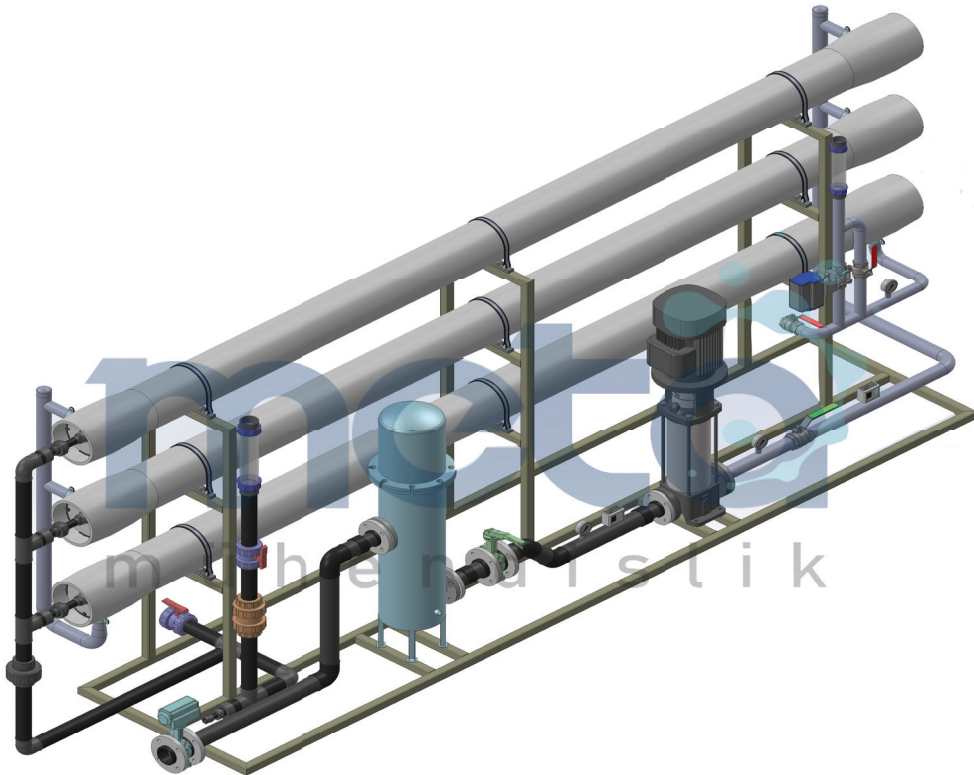


Reverse Osmosis



Abstract

With over 20 years of expertise in water treatment, Meta offers high performance reverse osmosis systems geared with the most advanced technology for domestic and industrial use. Arora reverse osmosis systems offer a combination of reliability and durability with their specific design that allows high quality permeate production for a long period of time. Arora reverse osmosis systems serve facilities such as hospitals, laboratories, greenhouses, hotels, residential buildings and schools, as well as industries including textile, agriculture, manufacturing, heavy industry and mining. The product range includes standardized and tailor made systems for both brackish water and seawater applications.



Standardized products & tailor made systems.

Arora reverse osmosis systems offer a combination of reliability and durability.



Design Parameters and Raw Water Limit Values

Rejection: 90-99%
SDI: <3
Free Chlorine : < 0,1 ppm
Oil and Grease: None
Organic Matter: None
Iron: < 0,02 ppm
Manganese: < 0,01 ppm
Design Temperature: 15 °C

Note: A raw water sample analysis is required in order to validate the design.

Arora Reverse Osmosis Systems consists of;

- Microfiltration
- Anti-scale dosing
- High Pressure Centrifugal Pump
- Reverse Osmosis Membranes
- Conductivity and Flow Measuring Sensors with Display Visualization
- High and Low Pressure Switches
- Control System to check and display all operating conditions, performances and alarms.

Optional Features

- Pre-filtration
- Biocide dosing
- pH controlled dosing
- CIP system for chemical washing of the membranes
- Disinfection



Microfiltration

Container: PE or Stainless Steel
Cartridge Dimensions: 20" or 40"
Degree of Filtration: 5 micron

Antiscalant Dosing System

Flow Rate: 0-8 lt/h
Type: Metering Pump
Control: On/Off
Pressure: 5 bar at 5 lt/h

High Pressure Pump

Type: Vertical Centrifugal
Pump Body: AISI 304
Rotor: AISI 304
Piping: Flanged

Pressure Vessels

Dimensions: 4", 8"
Material: PRFV

Membranes

Type: Thin Film Composite
Dimensions: 4", 8"

Skid

Material: AISI 304, AISI 316 or Epoxy
Coated Carbon Steel

Piping

High Pressure Piping:
Stainless Steel AISI 316
Low Pressure Piping:
U-PVC PN16

Instruments

Manometers: 2 at inlet/outlet of microfiltration,
2 at inlet/outlet of membranes
Low and High Pressure Switches : 2 at inlet/outlet
of high pressure pump
Conductivity Meter : 1 installed at permeate line
Flowmeter: 1 installed at permeate line,
1 installed at concentrate

Electric Control Panel

Type: Microprocessor or PLC
Degree of Protection: IP54
Equipments: General Switch, Contactors,
Relays, Fuses, Thermic Protection
Parameters Displayed: Permeate
conductivity and flow rate, concentrate flow rate

Standard Products

Model	Permeate m ³ /day	Membrane Size	# of Membranes	Vessel	Control Panel	Skid
ARORA BW 1-21	1	4021	1	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 1-40	5	4040	1	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 2-40	10	4040	2	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 3-40	15	4040	3	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 4-40	20	4040	4	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 5-40	25	4040	5	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 6-40	30	4040	6	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 7-40	35	4040	7	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 8-40	40	4040	8	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 9-40	45	4040	9	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 10-40	50	4040	10	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 11-40	55	4040	11	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 12-40	60	4040	12	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 13-40	65	4040	13	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 14-40	70	4040	14	FRP	RO9500 or PLC	AISI304 or CS
ARORA BW 15-40	75	4040	15	FRP	RO9500 or PLC	AISI304 or CS



Arora BW 3-40

- Standardized products for brackish water applications
- Suitable for domestic and industrial use

