

MBR-RO SEWAGE RECYCLING SYSTEM



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- Secondary treated effluent such as MBR effluent is reclaimable by Hitachi Aqua-Tech's brackish water RO systems to produce reusable water at reasonable cost.
- With the combination of MBR system and RO system, the product water quality is further improved for more applications.



3,000,000 litres/day production capacity MBR-RO in Dubai, UAE

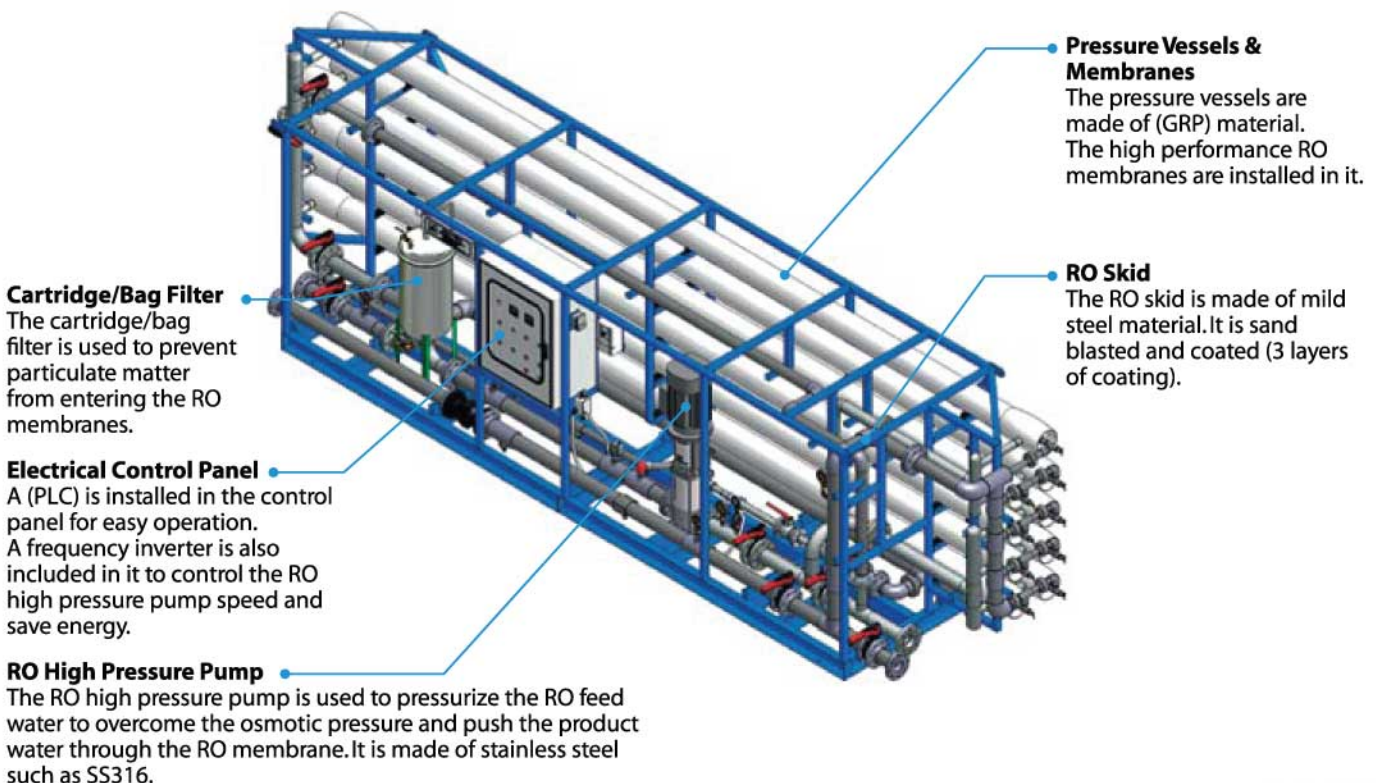


500,000 litres/day production capacity MBR-RO in Abu Dhabi, UAE

FEATURES AND BENEFITS

- | | |
|--|---|
| 1) Standardized systems with competitive price | 6) Fast delivery with in house fabrication capability |
| 2) Energy and cost efficient | 7) Minimum site works required |
| 3) High quality equipment and materials | 8) High quality product water |
| 4) Easy process control and monitoring | 9) Designed for ease of shipping |
| 5) Excellent proven track records | 10) High reliability with excellent service support |

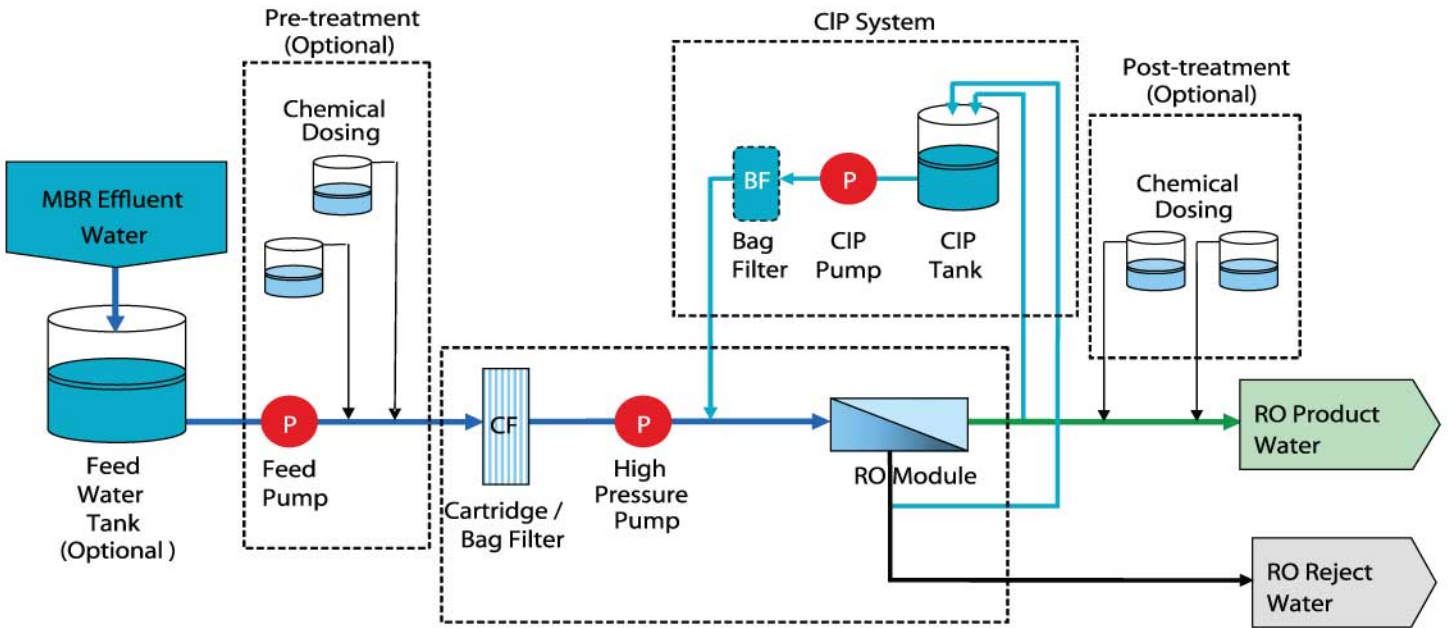
MBR-RO SYSTEM EXPLODED VIEW



Notes :

* PLC - Programmable Logic Controller GRP - Glass -reinforced Plastic

GENERAL PROCESS FLOW DIAGRAM



Notes :

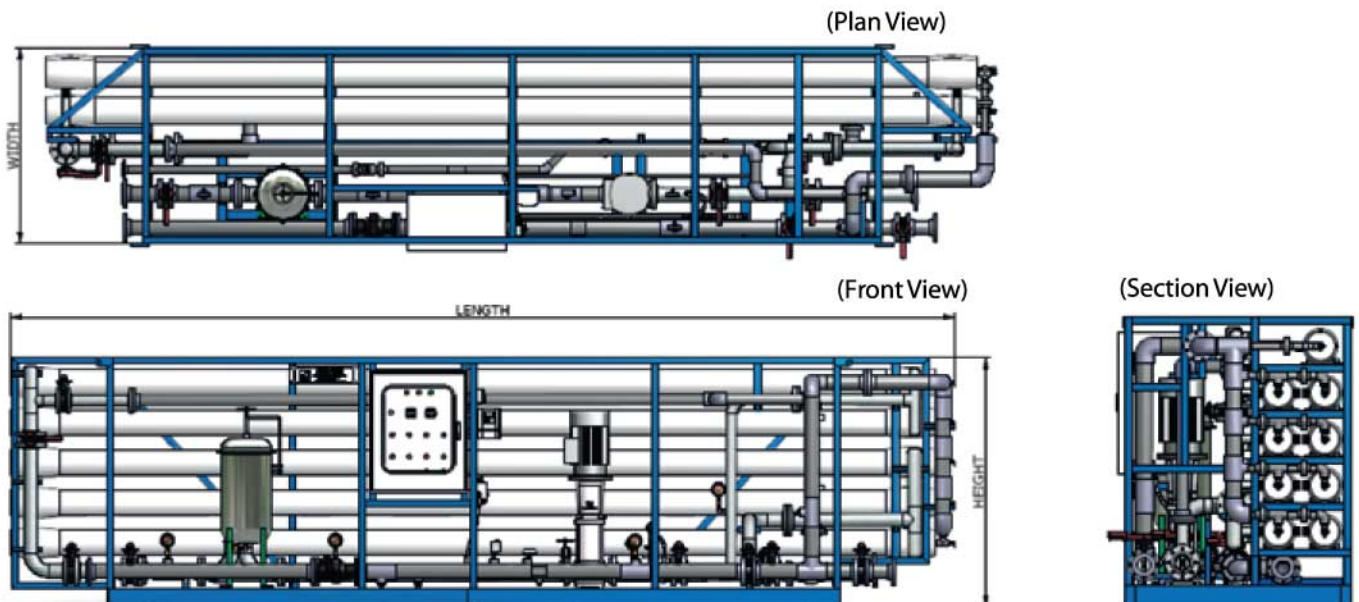
* CIP - Cleaning In Place

Main RO System



1,000,000 litres/day production capacity MBR-RO in Dubai, UAE

TYPICAL MBR-RO MAIN SKID LAYOUT



TYPICAL SPECIFICATIONS OF MBR-RO SEWAGE RECYCLING SYSTEMS

Model MBR-RO-	Product Water Flow	Feed Water Flow	Main RO Skid Dimensions (L x W x H)	Overall* Floor Space	Overall* Shipping Weight	Overall* Electrical Loading	Overall* Power Consumption
	(m ³ /day)	(m ³ /day)	(m x m x m)	(m ²)	(kg)	(kw)	(kwh/day)
100T	100	125	3.9 x 1.4 x 1.9	27	1,800	7	150
200T	200	250	3.9 x 1.4 x 1.9	32	2,300	15	345
400T	400	500	6.5 x 1.3 x 1.9	43	3,000	22	520
500T	500	625	6.5 x 1.5 x 2.1	45	3,400	22	520
600T	600	750	6.5 x 1.6 x 2.1	50	3,700	28	665
800T	800	1,000	6.5 x 1.7 x 2.1	55	4,000	31	750
1000T	1,000	1,500	7.8 x 1.6 x 2.1	60	4,500	43	1,025
1500T	1,500	2,000	7.8 x 2.0 x 2.1	66	5,500	55	1,300

Notes:

* Overall system includes main RO system which comes with Pre-treatment, Post-treatment and CIP systems.

TYPICAL WATER QUALITY OF MBR-RO SEWAGE RECYCLING SYSTEMS

Ion	Concentration (ppm)		Ion	Concentration (ppm)	
	Feed	Product		Feed	Product
Ca ²⁺	63.9	0.9	CO ₃ ²⁻	0.0	0.0
Mg ²⁺	18.2	0.2	HCO ₃ ⁻	219.2	9.1
Na ⁺	415	14.5	SO ₄ ²⁻	235	3.3
K ⁺	10.2	0.5	Cl ⁻	511	17.3
Ba ²⁺	0.0	0.0	F ⁻	0.2	0.0028
Sr ²⁺	0.0	0.0	NO ₃ ⁻	17.5	1.1
NH ₄ ⁺	5.4	0.3	SiO ₂	3.9	0.2
TDS	1500	47	pH	6.5	6.5 - 7.5

Design Criteria:

1) Recovery: 70~80% 2) Feed water temperature: 25°C

OPTIONS

- **Solar Powered System**
clean energy which reduces commercial electricity consumption
- **Containerized RO System**
customized and built into brand new / used 20 foot / 40 foot containers that meet international quality standards



Solar powered system



Containerized RO system

The content described here provides general information for the products. Hitachi Aqua-Tech Engineering Pte Ltd reserves all rights to revise the design, specifications and equipment without prior notice.

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