



Address: No.78, XingYe Road, Chaolian Town, Jiangmen City, Guangdong, China. (Jiangmen Office)

Address: RM 1902 EASEY COMM BLDG 253-261 HENNESSY ROAD WANCHAI, HK (Hongkong Office)

Tel: +86 137 2595 7662 (Whatsapp) +86-750 3094316 Fax: +86 750 3723909

30Ton/H Reverse Osmosis Water Treatment System



1. Design basis and treated water standard:

Design Basis	Design Basis
Produced water's application	Bottle drinking water
The capacity of produced water	30,000L /H
System Configuration	Pretreatment + One Stage Reverse Osmosis Desalination System
Designed recovery	50-65%
Rejection rate	≥ 97%
Voltage	3 phases, 380V, 50Hz
Power	48KW
Overall dimension(mm)	6180X1250X1800

2. System requirements:

2.1 Inlet pipelines: inlet pipe connected with the raw water tank entrance.

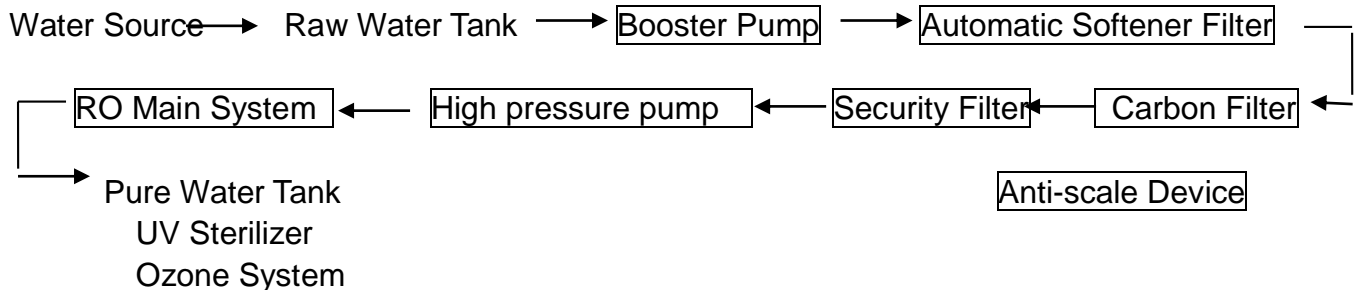
2.2 Cable: According to the calculated capacity of electric power, the user should send it on the control cabinet.

2.3 Outlet water pipelines: From pure water tank to the pure water using point.

2.4 Concentrated Water Treatment: Discharge to the wastewater pool (user considered).

2.5 Water temperature: 5-35°C

3. Process:



4. Process Description:

The process includes pretreatment and reverse osmosis system

1) Raw water pretreatment part:

Raw water contains many impurities, such as suspended solids, colloidal, organic and inorganic. To ensure Reverse Osmosis Desalination System at normal operation, the suspended solids, colloids, organic matters must be removed in advance, so that feed water to reverse osmosis system meets the requirement. So, the pretreatment part should be equipped. The pretreatment part includes: Mechanical Filter, Activated Carbon Filter and Security Filter.

(1) Mechanical filter:

Reverse osmosis equipment has the high requirement to the turbidity of the feed water, especially reverse osmosis water's pollution index value requests less than 4 SDI and turbidity less than 1NTU. Multi-media filter filled with several specification quartz sand, which remove suspended solids, colloid from raw water.

(2) Activated Carbon Filter:

Reverse osmosis equipment requests residual chlorine content be less than 0.1mg / L, so used activated carbon filter removing chlorine from raw water avoiding reverse osmosis membrane getting contamination.

Meanwhile, it can adsorb organic matter in raw water. Activated carbon filter inside filled with the coconut shell refined activated carbon, for adsorbing the chlorine, organic matter, some pigments and harmful substances, reducing the chemical oxygen demand(COD).

Activated carbon is widely used in life water, the food industry, chemical and other industries. Due to large specific surface area and the surface covered with lots of micropores, therefore, activated carbon with high adsorption capacity.

(3) Security filter:

Security filters are micro-filtration equipment, playing the insurance role in the pretreatment, to prevent the particles into the water pump and reverse osmosis system.



2) Reverse osmosis desalination parts:

Water reverse osmosis unit can remove most of inorganic salts, particles, bacteria, viruses, heavy metals, and other soluble substances.

The rejection rate can reach 98%. It is simple, low energy consumption, non-pollution, etc, so, it is widely used for producing pure water.

5. Main Components List:

Basic Configuration	Item	Description	Remark
Pretreatment part	Raw Water Feed pump	CNP(Nangfang) CDLF42-30-2	380V/50Hz; 11kw
	Automatic Softener	Φ2000×3300x4mm	3000kg resin Runxin Automatic Valve for generation 2000L Salt tank
	Active Carbon filter	Φ2000×3300x4mm)	filter 1500kg, sand cushion 1000kg SS304 4mm thickness
	Anti-scale device	AKS-800	With 200L PE tank
	Micron filter	40"×30 cores	SS304
	RO Part	Pressure pump	CNP CDL42-90
RO membrane		DOW FILMTEC BW30-365 x 30pcs	Brackish water standard membranes Made in USA
Membrane vessel		8040"x 5m 6 SETS	
Piping and controlling valve	Pipelines	Full SS304 Pipes, DN75, DN100	
	Butterfly Valve	DN100 12pcs	SUS304
	Check Valve	DN75 1pcs	SUS304
	High pressure sluice valve	DN75 1pcs	SUS304
	Cleaning Solenoid Valve	DN65 1set	SUS304
Automatic control box	high pressure electric control cabinet 1set with import electric elements, Mitsubishi PLC System and Mitsubishi transducer(37kw),		
Other fittings of machine	Oil Seal Pressure gage	6pcs in total	SS304
	Conductivity of the table	CM230 X 2sets	
	Main frame	Stainless steel 1set	
	Pipeline flow meter	40T/H 2sets	
	High pressure	Mitsubishi 37kw	



	transducer		
Cleaning part	Cleaning tank	CNP CHL20-20	
	Cleaning pump	2000L	
	Cleaning Micron Filter	40"x 15 cores	SUS304

Pictures of the Reverse osmosis water treatment system:



