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## 10,000L/H Reverse Osmosis Water Treatment System



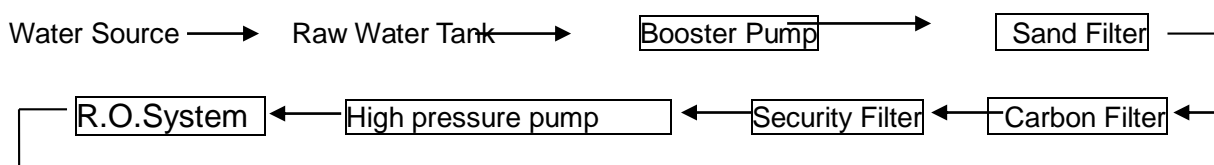
### 1. Design basis and treated water standard:

- 1.1 Raw water: Surface water(Underground water; Raw water quality analysis report is necessary(TDS, Conductivity, pH, Hardness, Iron, Manganese contents, etc.)
- 1.2 Produced water's application: Pure drinking water
- 1.3 The capacity of produced water: 10,000L /H
- 1.4 System Configuration: Pretreatment + One Stage Reverse Osmosis Desalination System.
- 1.5 Designed recovery: 50-65%.
- 1.6 Rejection rate:  $\geq 97\%$
- 1.7 Voltage: 3 phases, 380V, 50Hz; Power: 21KW

### 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:





- Pure Water Tank
- ↑ Ozone Generator
- ↑ UV sterilizer

## 4. Features of Electric Control:

1) Inlet low pressure protection switch of high-pressure pump:

Linkage with the high-pressure pump, pressure below the set value, high-pressure pump will stop running.

2) The membrane inlet high pressure protection switch:

Linkage with the high-pressure pump, if operated high pressure too high, the membrane will be easy get blocked, even penetrated. When the membrane system operating pressure exceeds the setting value, the high-pressure pump will stop running.

3) The reverse osmosis unit equipped with low pressure automatic flush valve:

Linkage with the high-pressure pump, set by the time relay, when the reverse osmosis unit start to work, the system auto startup, washing the film surface with large-flow, so the sediments on membrane surface washed away in time, to ensure the normal operation of membrane.

4) Raw water tank / pure water tank high and low level control switch

The raw water pump / high pressure pump linkage, the raw water tank at low level, the raw pump automatic shutdown for protection, when pure water tank full, high-pressure pump to stop.

## 5. Main Components List:

Basic Configuration	Item	Description	Remark
Pretreatment part	Raw water pump	CNP CDL16-30	380V/50Hz, 3KW
	Quartz sand filter	Φ1200×2600Xδ3.0	SUS304 (filter 1900kg)
	Active Carbon filter	Φ1200×2600Xδ3.0	SUS304 (filter 550kg)
	Micron filter	40"×5 core 2sets	SS304
RO Part	Pressure pump	CNP CDL16-140	380V/50Hz
	RO membrane	FILMTEC BW30-400 x 9pcs	DOW FILMTEC Made in USA
	Membrane vessel	8040" x 3M 3 SETS	FPR
Piping, Valves and Control System	SOFT STARTER	15kw	SIEMENS
	Piping and valves	U-PVC piping & Valves, high pressure part with SS304	
	Control system & Indicator	Water level control, Pump protecting, Automatic electric valve	Automatic Control box with LS PLC system

		control	
Other fittings of machine	Oil Seal Pressure gage	6pcs in total(1.0Mpa + 2.5Mpa)	SS304
	Conductivity table	CM230 X 2sets	
	Main frame	Stainless steel 1set	
	Pressure Controller	P6E	
	Pipeline flow meter	1-16M <sup>3</sup> 2set	
Membrane Washing part	Cleaning tank	1000L	
	Cleaning pump	CNP CHL8-40	
	Solenoid valve	DN40	
Ozone System	OZ-32G Ozone Generator, DN32 mixing unit and CNP CHL8-30 mixing pump		
UV Sterilizer	FS-100		

## 6. Picture of Reverse Osmosis Water Treatment System

