

Industrial pure water machine/industrial water purifiers

Model: DI-250



DI-250 industrial pure water machine is an integrated deionized water generator that cooperates with our company SCM5600D PCBA cleaning machine or S-1688 steel mesh cleaning machine; the machine provides 250 liters of DI water per hour, which is used for rinsing and cleaning of stencil cleaning machine. The function is to remove the residual solution and ions on the steel mesh after cleaning, so that the cleanliness of the steel mesh can meet the requirements; according to the composition function, it is divided into three parts: pretreatment system, RO reverse osmosis system and MB mixed bed system.

DI-250 Description 1

I. Overview of pure water system

According to the user's technical requirements, water quantity and other technical indicators, based on the municipal tap water quality, the RO reverse osmosis + MB mixed bed ultra-pure water preparation system is designed and provided (individual cities need to provide tap water quality report).

The ultrapure water system can be divided into three major components according to the composition function, namely the pretreatment system, the RO reverse osmosis system, and the MB mixed bed system;

Pretreatment system: consists of multi-media screening program (composed of quartz sand, coconut shell activated carbon), cationic softener, and pp cotton core fine screening program; its function is to remove particulate impurities, organic matter, residual chlorine, etc. in raw water. The SDI value of water prevents the calcium and magnesium ions in the water from fouling on the reverse osmosis membrane, and protects the RO membrane system in the back-end process for long-term stable operation. According to RO reverse osmosis water production requirements, the pre-treatment standard effluent capacity is designed to be 1m³/h. **RO reverse osmosis system:** mainly composed of high pressure pump, reverse osmosis membrane, membrane pressure vessel components and so on. It acts as a pre-desalting effect on water. The removal rate of raw water salt content is above 98%. Considering the natural aging change of the reverse osmosis membrane over time, the configuration has a margin, the standard water production of reverse osmosis is 250L/h, and the water production of the terminal MB mixed bed system is 0.5 ton/hour (normal temperature).

Water quality: RO reverse osmosis system The desalination rate is greater than 98%, and the terminal effluent resistivity reaches 10MΩ/CM for cleaning process water (25°C).

Raw water quality: local municipal tap water.

Second, pure water system unit composition and operation

1 pre-processing system

Including multi-media screening program (quartz sand, coconut shell activated carbon) PP cotton core fine screening program.

1.1, multi-media screening program

1.11 Suspended matter in water is a small particle. It can be seen by the naked eye that these particles are mainly composed of sediment, clay, protozoa, algae, bacteria, and high molecular organic matter, and are often suspended in water. When tap water passes through quartz sand, it can remove large particles of suspended solids from water. It can remove the aquatic organisms, plants or microbes in the water, and the scent or astringency of the fish. Residual chlorine remaining in disinfectant water. Ensure the normal operation of the subsequent system. The reduction of residual chlorine in the water plays a large role in the protection of the softened resin and membrane elements, prolonging the service life of the reverse osmosis membrane and the mixed bed. The filler is granular shell-shell activated carbon.

1.12 Flush multi-media filter: (flushing cycle: 1-2 times per week, depending on local water quality)

Flushing method: The multi-media screening program is manually controlled to the normal flushing position, after 15 minutes of flushing, it is dialed to the positive punching position, and then rinsed for 10 minutes. After the flushing is completed, the multi-way valve is set to the running state.

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1.2, cationic softener

In order to prevent the precipitation of calcium and magnesium ions in the water on the reverse osmosis membrane, the membrane element is damaged by the solid particles, and large-scale scaling occurs.

Adding a softener before R.O reverse osmosis can extend the system cleaning cycle limit and extend the life of the membrane to reduce costs. Flush again

Bio-cation softener (cycle: depending on water quality), the method is as follows:

(a) First add 5 kg of industrial salt in industrial salt drums. Add 15 kg of saturated solution by adding water.

(b) Backwashing: Turn the manual multi-way valve to the backwash position (BACKWASH) for 15 minutes and then dial to

Aspiration position (BRINE&SLOWR).

(c) Brine suction: After the manual multi-way valve is set to the salt absorption position (BRINE&SLOWR), the water is automatically sucked (20—
25 minutes).

(d) Quick flush: After taking 20 kg of industrial salt solution, set the manual multi-way valve to the fast flush position (FAST RINSE).

Rinse for 30 minutes.

Softened water sampling (e) Sampling test: Open the sampling valve and take out the sample water. It is required to be tested with a special demineralized water reagent.

, drip the reagent, if the color of the sample water turns blue, it is qualified. If it is purple or red, it is bad.

Cleaning. After the cleaning is completed, the normal water supply (SERVICE) is performed.

1.3, PP fine screening program

The security screening program is the last filter device before entering the R.O reverse osmosis host. It must ensure that the tap water enters the reverse osmosis.

The pollution index SDI before the host is stable below 4. The pure water recovery rate of the reverse osmosis unit is generally only 50%-60%.

The designed water production is 1t/h.

Principle of operation:

(a) PP cotton screening program uses a 5um pore size PP cotton filter, water is infiltrated from the PP cotton, through the micropores from the inner wall of the PP cotton

The heart tube permeates out to filter out fine particulate impurities larger than the pore size.

(b) After the PP cotton is used for a period of time, more and more impurity particles are trapped outside the outer hole until it fails.

Replace the filter element, otherwise it will pollute the subsequent reverse osmosis equipment, the general replacement cycle is 1-2 months (according to the local Water quality and water use).

1.4 Note:

(a) After the precision screening program filter element is used, the impurities trapped in the micropores will become larger and larger until it fails. Please be careful at this time.

Make replacement. Usually changed once a month, the frequency of replacement depends on the quality of raw water and the use time of the equipment, first

The filter can be checked regularly every week for complete contamination and needs to be replaced. After several iterations to determine the appropriate one.

Change the cycle and keep going.

(b) Check the effluent SDI value of the security screening program regularly every day. If the SDI value is greater than 4, please check the precision screening program.

Whether the core seal is damaged or loose, if the filter is contaminated, please replace the filter in time.

2RO reverse osmosis system

2.1 Preface

RO reverse osmosis unit is the heart of the whole set of pure water system. Users should pay special attention to maintenance, usually in RO system.

At the time of transfer, the acquisition of various operational data should be appropriately adjusted in accordance with the design reference values of the system. Membrane effluent when adjusting

The amount and working pressure are the main indicators, and are adjusted in conjunction with the clogging and contamination of the membrane. And the water pressure, out

Water pressure, influent flow, outlet flow, and pure water conductivity should be recorded normally so that the system can be faulty to find out the cause.

In general, the removal rate of organic matter by the RO pure water system can reach 99.9%. For inorganic salts, it can reach 94%~

98% or so. Since the RO system has the fine ability of efficient deionization, the resistance of water can be used, both by the inlet of the system.

Compared with the resistance of the water outlet, the working efficiency is obtained. The ability of the RO system to remove minerals and organic matter due to the week

The process of rinsing and washing can maintain stable water quality.

The native computational metadata is based on the following factors:

- 1) The inlet water temperature is maintained within the design range (about 25 ° C at room temperature)
- 2) The water in the water should be the same as the municipal tap water.
- 3) Inlet water must pass through pre-treatment equipment to reduce SDI and remove residual chlorine

The RO system uses automatic control technology and has the necessary protection, such as water shortage, full water, low voltage protection, etc.

Does not mean that the system can be operated unattended for a long time. Please record the pressure, flow, temperature and conductivity parameters regularly.

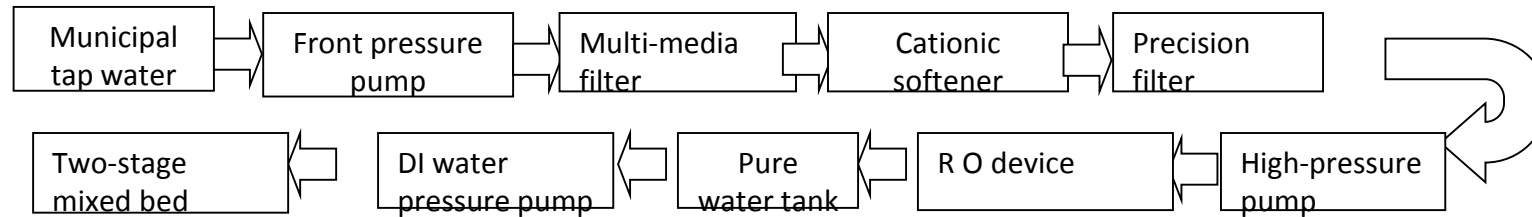
If the limit of the system design is exceeded, please adjust it in time, otherwise it will cause damage to the RO membrane or system, thus affecting the use of this machine.

life. Therefore, it is recommended that users operate and record in strict accordance with the design specifications, due to personnel errors and unfavorable supervision.

The company has the right not to bear any responsibility.

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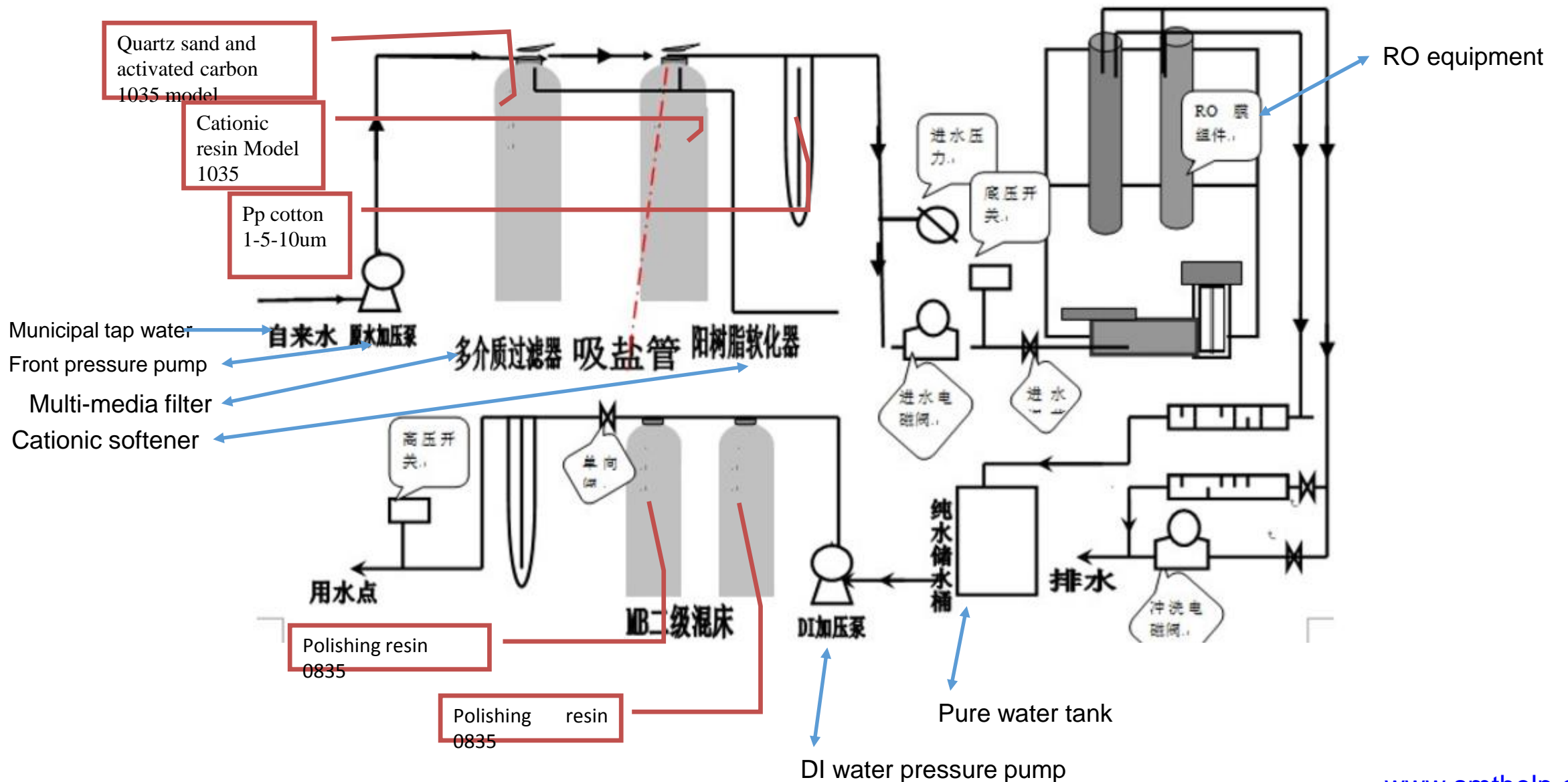
Process Flow of Pure Water System



Fourth, the replacement of consumables and consumables:

no	mane	model	qty	Recommended replacement cycle
1	Quartz sand	0.5—	25kg	8—12 unit/mon, Water production is about 50T
2	Activated carbon	6—12	12.5kg	8—12Polishing resin, Water production is about 80T
3	Softening resin	cation		12—20Polishing resin , Water production is about 100T
4	Precision filter	1—5	2 unit	7—15 days
5	RO membrane	40*40	2 unit	Water quality Decide, Water production is about 90T
6	Mixed bed resin	Polishing resin		Water quality incompatible, Water production is about 60T

DI-250 structure diagram



DI-250 consumable replacement and record sheet

Description:

1. Multi-media screening program. Rinse once every 15 days (see instructions, IV, (2) for details)
- 2, softener regeneration, (see instructions, details, 4, 2, (1))
- 3, replace the filter
- 4, the display of the transcription table, (inlet pressure, R.O pressure, conductivity meter, conductivity meter) readings).

1	Inlet pressure	R.O pressure	DI pressure	Conductivity meter	Electric resistance meter	Replacement filter	Change person	Confirmor
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