

## Laboratory Water Purification System

### User Manuals



MODEL: Moresearch310d

This manual is mainly used to help users to properly use and maintain laboratory water purification system equipment, ensure the equipment is in the best running state and prolong the service life, based on a scientific attitude, please carefully read the instructions for use before using "Molecular" equipment.

Display area codes for the system status:

E01--- Feed water pressure is low, please check whether the tap water is open, or whether its pressure is lower than 0.1 MPa

E02--- The water is under the liquid level of water tank, not available to intake water.

E03--- No card                      E04--- Illegal card

E05--- Life expires; it is needed to change consumables

E06--- Communication failure, check whether the cable or hardware is damaged

E08-- Tips that consumable shall be replaced soon

## Important notes:

- 1) Ultra pure water must be taken on site and not be stored in a common plastic barrels for a long time.
- 2) Replace consumable regularly according to the practical use of this equipment (See the attached consumables replacement instructions and methods), ensuring the machine is running at the best status.
- 3) To ensure safety, please turn off the power supply when not in use and close the tap water.
- ★ 4) In order to ensure safety, it is suggested to build a cofferdam (10-15 cm) around the pure water machine, and equipped with floor drain, in case that the pure water machine leaks and cause laboratory safety problems, especially when this machine is under the unmanned operation status.

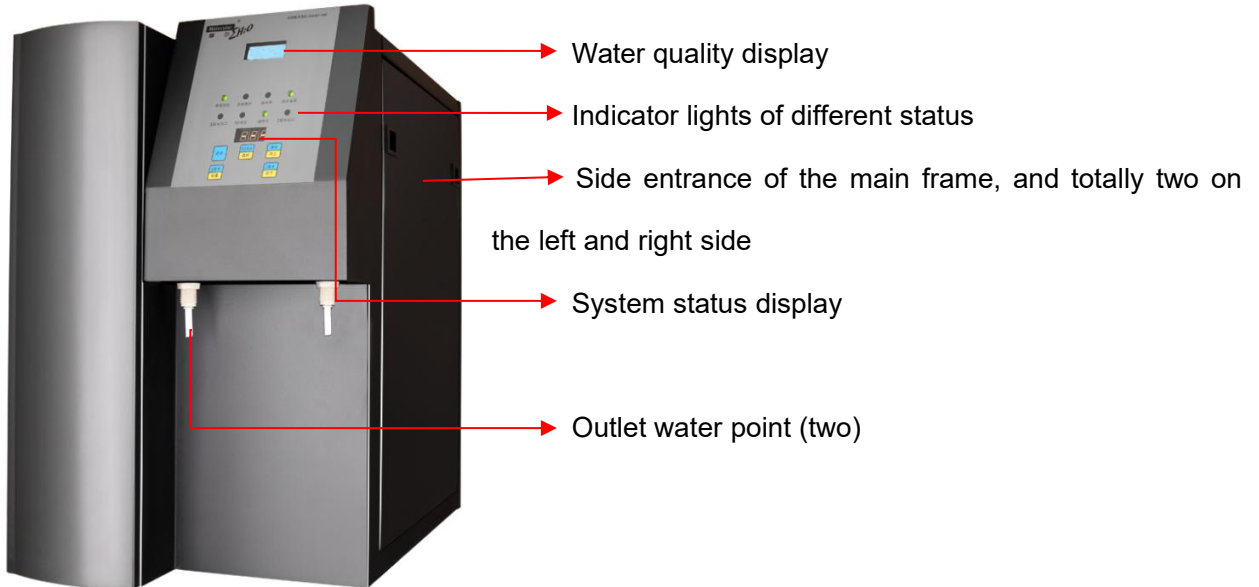
# Maintenance Service Center

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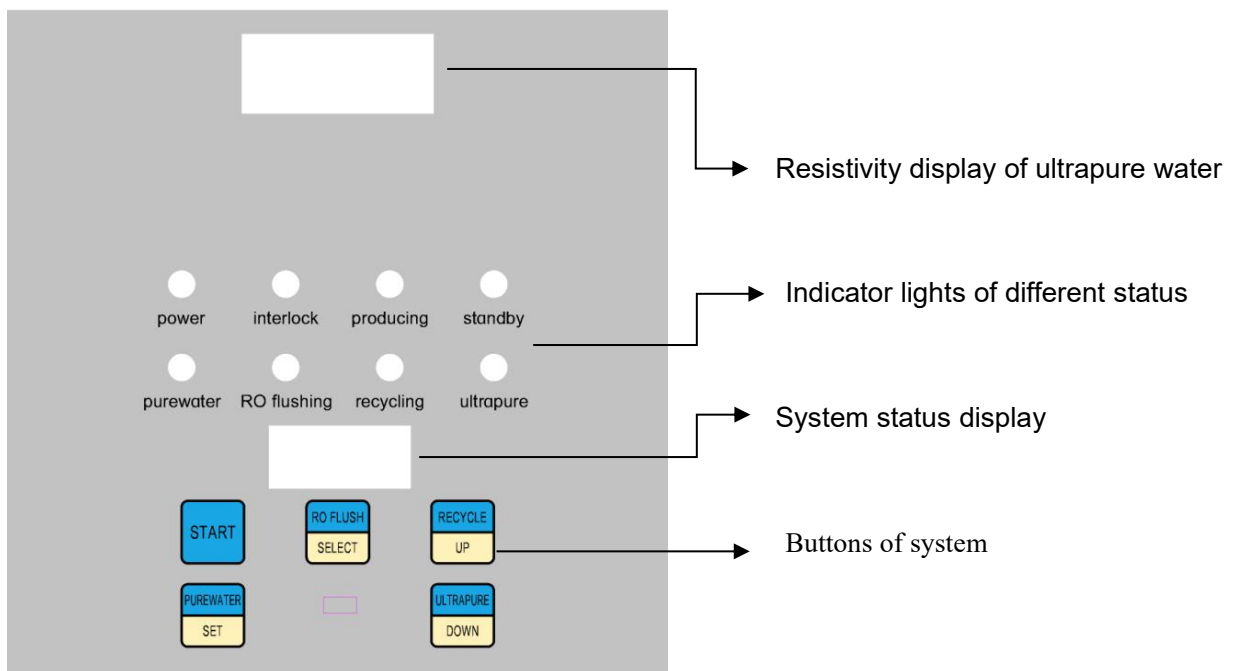
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## 1. Diagrams of Machine

### 1.1 Appearance of machine



### 1.2 Operation panel of machine



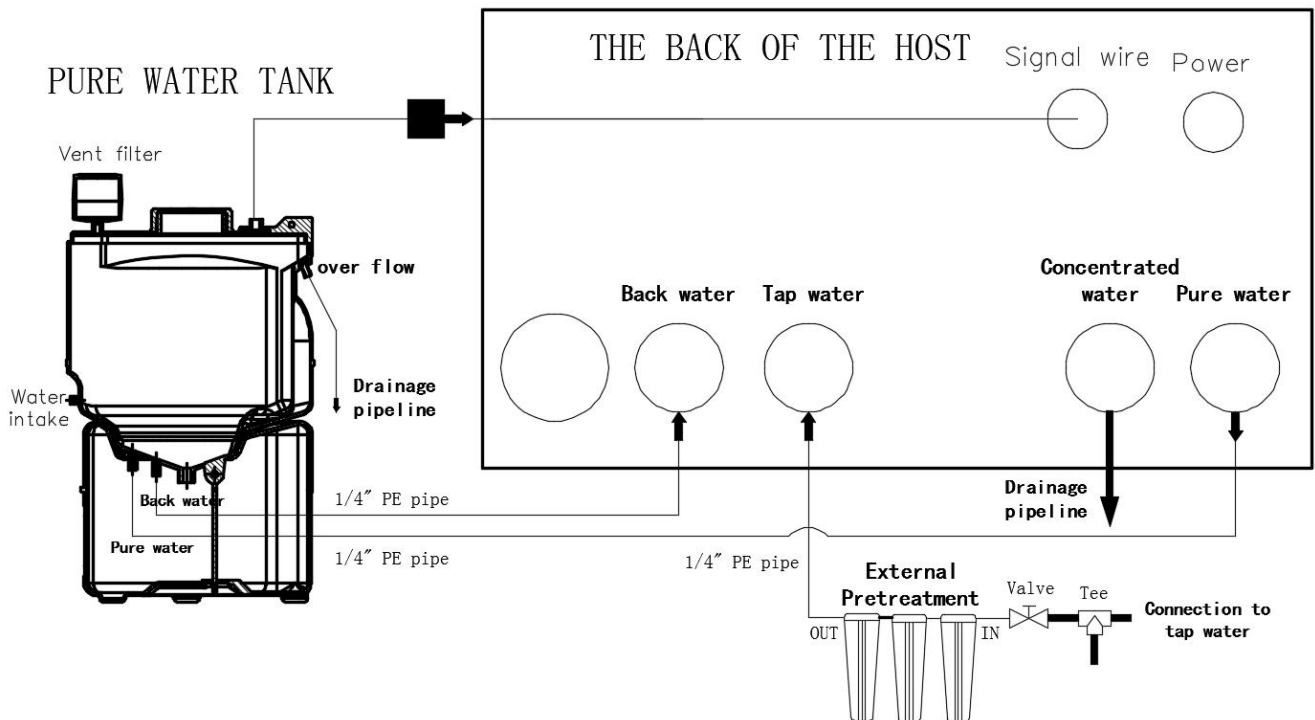
## 2. Working Condition of Lab Water Purifier

Voltage	AC220V/50Hz, with reliable ground connection
Max power	150W
Tap water	Temperature: 5—40°C, TDS: <400ppm
Tap water pressure	0.15 — 0.3Mpa (if above 0.3Mpa, then the customer needs to take decompression measures, otherwise, it is easy to overpressure to cause damage leakage; if below 0.1 Mpa, the alarm will be triggered and the machine stops working, then the feed water pump is needed)
Working environment	Installation site must have a ventilation, dry environment, with temperature at 5-30°C; special utility must be care for north owner in order to prevent freezing and damaging the machine; the freezed water in the machine will cause instrument completely damaged; Don't place the machine in an environment with large acidity.

## 3. Installation Steps

### 3.1 Equipment installation diagram

(According to the actual labels , with the method of one correspondence connection )



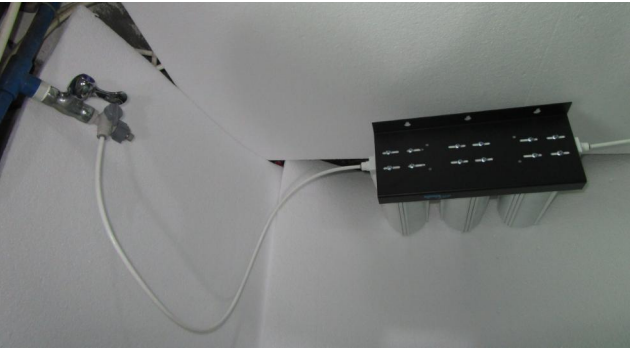


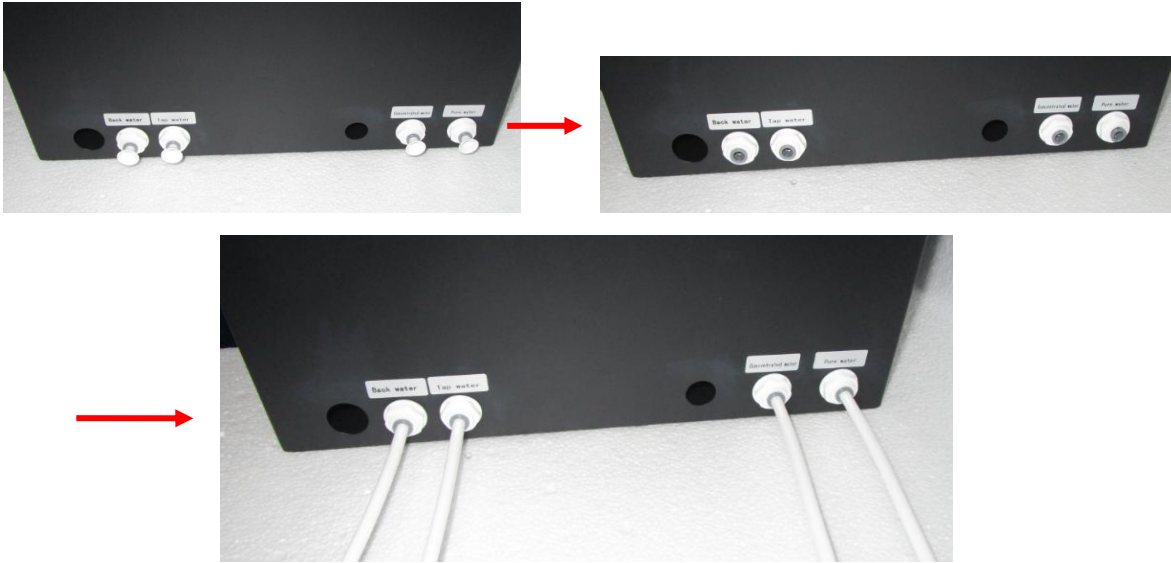
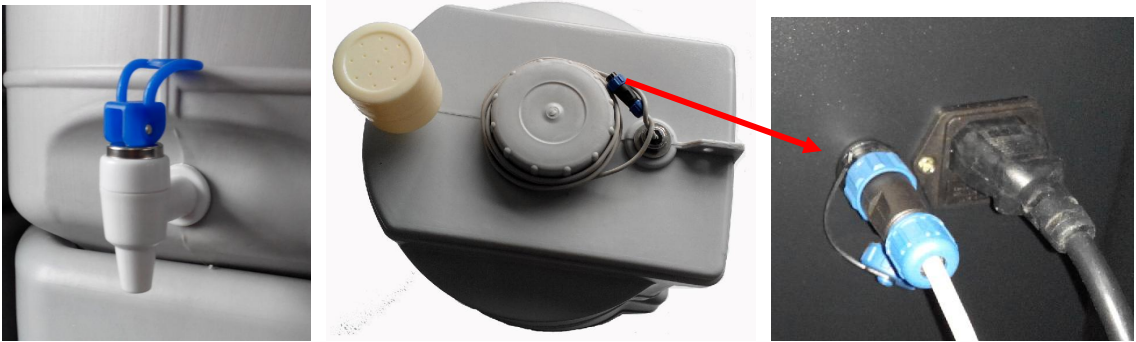
## 3.2 Installation steps

### 3.2.1 Open the package and confirm the goods

			
<b>Host ( frame )</b>	<b>Pure water tank</b>	<b>External pretreatment</b>	<b>1/4" Kit</b>

### 3.2.2 Installation & Operation Method

No.	Installation & Operation Method	Remarks
1	Open the tee joint, connect one source nipple to the tap water pipe, connect the other one to the original tap water consuming point or be blocked with end cap.	
2	Connect the quick connector with a valve to the IN of external pretreatment, And then OUT to connect to the "Tap water" at he rear frame by 1/4" white PE pipeline.	
	 	

3	Connect a 1/4" white PE pipeline to the drainage pipelines from the "Concentrated water" at the rear frame, with the insertion depth of about 0.5 m.	
4	Connect a 1/4" white PE pipeline from "Back water" at the rear frame to the "Back water" at the bottom of the pure water tank.	
5	Connect a 1/4" white PE pipeline from "Pure water" at the rear frame to the "Pure water" at the bottom of the pure water tank.	
		
6	Please contact the signal wire (above the pure water tank), to the signal socket (rear of the main case)	
7		
8	After installation, the machine and the site shall be clean and tidy.	

## 4. Standard Procedure for Operation Maintenance of Machine

### 4.1 Functional specification of buttons

Name of Button	Functions of buttons during the normal operation
START	Start/Stop the machine
RO FLUSH/SELECT	Manual RO membrane flush start/stop. There are about 3 minute's automatic flush when the machine is start up.
PUREWATER/SET	When the water level in tank is higher than the low liquid level, it is available to get/stop getting pure water
RECYCLE/UP	Start or stop the manual recycle of ultrapure water
ULTRAPURE/DOWN	When the water level in tank is higher than the low liquid level, it is available to get/stop getting Ultrapure water.

At setting the status, the following buttons can be reused:

Name of buttons	Functions	Notes
PUREWATER/SET	Set	In standby mode, press the button for 3 seconds to enter Set
RO FLUSH/SELECT	Select	After choosing the pressure control mode on the circuit board, select the high and low pressure control point, High-Hxx, L-Lxx. (Note: after the first adjustment operation is good, do not re-adjust arbitrarily, otherwise there will be delivery failure)  Users can adjust the values of ones, tens and hundreds in the timing Ultrapure water intake mode.
RECYCLE/UP	Increase	Increase the number
ULTRAPURE/DOWN	Decrease	Decrease the Number

When the system is in standby mode, long press the Set for 3 seconds, enter the Set status, press the Select to choose data that need modify, press Up or Down to modify data. Press the standby button or re-press the Set again to exit the Set.

## 4.2 Instruction of Indicator Light

Name of Indicator light	Status	Description
Power	Red	Standby mode
	Green	Operation mode/ Settings
Interlock	Flicker for 1 sec.	Low feed water pressure/ switch breakdown
	Flicker for 0.5 sec.	Medium or high liquid level switch breakdown
	Flicker for 0.3 sec.	Water level is below the low liquid level/ the switch breakdown
Purewater	On	Random intake pure water
RO flushing	Flicker	Automatic flushing: power-on flushing, timing flushing or flushing after stop making water
	On	RO manual flushing
Standby	Flicker	Water level is between medium and high liquid level
	On	Water level is up to high liquid level
	Off	Water level is below medium liquid level
Producing	On	Water producing condition
Recycling	Flicker	Timing automatic recycling
	On	Manual recycling
Ultrapure	Flicker	Timing intake Ultrapure water and display the remaining time
	On	Random intake for Ultrapure water

## 5. Consumables Replacement Procedure

Turn off the water inlet valve first, and turn off the power when low pressure switch alarm is triggered, which can reduce the residual water in the filter and make it convenient to replace the consumables. Then open both sides of the case and replace the consumables with simple tools.

5.1 Primary treatment filter: Contrarotate the filter housing (PP filter) with a strap-wrench, slowly unscrew it and take down the filter housing; clean the housing after withdrawing the inner filter cartridge and put a new PP filter into the housing, then assemble the housing to the fixed joggle; screw the housing clockwise with strap-wrench, the operation please refer to diagram 1, diagram 2. Note: 1. Do not remove the black rubber washer when clean the housing; 2. Pay attention to align the centre hole of the PP filter and the housing...

5.2 Secondary/Third/Fourth treatment filter: the replacement of secondary(activated carbon filter) /Third (soft) /Fourth (precision) treatment filter is the same as one of the primary treatment filter. Note: please do not remove the black rubber washer on the activated carbon.

5.3 Unscrew the clamp (fixed on the integrated purification kit mp6) and the nut of PE pipe, take out the kit and put a new ultra-purification kit at the original place.

5.4 Reverse osmosis (Molrofilm) : Be clear about the direction of inlet and outlet water, and do not confuse the pure water and wastewater outlet; loosen the clamp which fixes the membrane and then fix the clamp to a new RO membrane and connect to the relevant pipes correctly.

Note:

1. Please assemble the device in the right order;
2. After the assembling, power on the device to test the flush and running, fix the joint if there is leakage founded, make sure there is no leakage and the water quality is up to standard before use.

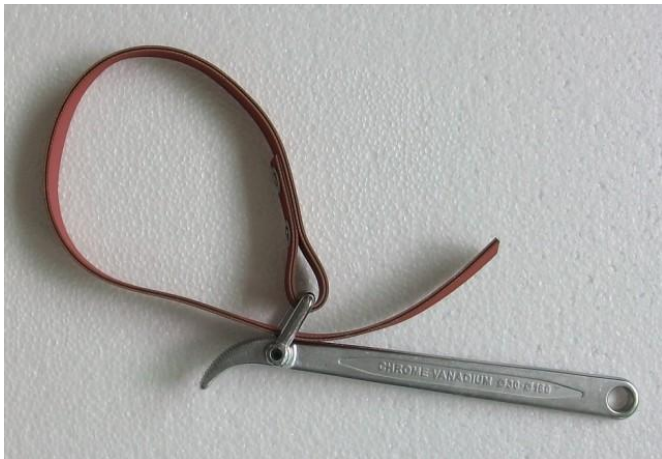


Diagram 1



Diagram 2

## 6. Replacement and Judging Method of Consumables

Items	Specification	Qty.	Replacement Period	Judgment Method
Primary treatment filter (5micron PP filter)	Molcot10	1 piece	2-3 monthly	Replace when the color of the filter cartridge becomes deep yellow.
Secondary treatment filter (Activated carbon filter)	Molgac10	1 piece	4-6 monthly	Shorten the replacement time when the local feed water contains much bleaching powder and the quality is bad.
Third treatment filter (Soft filter)	Molsf10	1 piece	4-6 monthly	Shorten the replacement time when the local feed water is bad.
Fourth treatment filter (1micron PP filter)	Molpp10	1 piece	6-12 monthly	
RO membrane	Molrofilm75	3 pieces	yearly	Test the conductivity of pure water. Replace when the conductivity exceeds 10µs/cm.
Integrated purification kit	Molp pack mp6	1 piece	yearly	Replace when the operation panel displays E05 or resistivity is less than 10MΩ.cm.

Note: Consumables replacement period may vary subjecting to feed water quality...