THINK IN WATER


Molewater System Co.,Ltd

Address:No.29,Baihai Road,Baishiyi,Hi-tech Zone,Chongqing,China,401329

Tel: +86-23-68887664

Http://www.molewater.com

Email: sales@molewater.com

## International Trade Department

Tel: +86-23-68887656

Fax:+86-23-68887664

Email:kathy@molewater.com

Email:serena@molewater.com

Email:vilina@molewater.com

Email:alex@molewater.com

## Technical Department

Tel: +86-23-68619385

Email: techsupport@molewater.com


# Molecular™ Laboratory Water Purification System


GLOBAL WATER PURIFICATION PRODUCT& SERVICE PROVIDER

## About MOLECULAR

Found in 2003, certificated with ISO9001:2008, Molewater System Co., Ltd is recognized as a hi-tech enterprise by Ministry of Science and Tec hnology of the PRC. We provide professional pure & ultrapure water system & solution for different laboratories. Right now, our new factory covering 20,000 square meters.

After years of exertion and innovation of water treatment technology, our seven series of Molecular™ laboratory pure water and ultrapure water system has been widely used in small and big labs in university, testing organization,research institute,hospital, pharmaceutical plant,chemical industry etc.

With multi-stage pre-filters, RO, UF,ion exchange, UV, final filter and other technology, our machine can meet GB 6682-2008 Type 3 water standard and ASTM, CAP,NCCLS and USP requirement for pure water and ultrapure water.

More than 80 countries of global customers are using Molecular™ products, with our good quality, professional design and comprehensive pre-sales and after-sales service, we have expanded our oversea markets and distribution system.

### Principle

Focus on RO Water and Ultra Pure Water for 100 years!

### Attitude

Passion, Innovation, Responsibility, Co-ordination

### Mission

Be the top leader brand in water treatment industry.



## Laboratory Ultrapure Water System for Research and Testing Applications

Reliable data only result from correct methods and accurate instruments. Molecular knows the importance of water in research and tests, our lab water systems consistently deliver pure and ultrapure water with the highest quality to meet various laboratory applications.

All units are equipped with RO purification, a reservoir and all needed accessories in one unit, with vertical and desktop design to meet your space demands.

The selection of the right pure water system for your laboratory will depend on varying factors such as required water quality, consumption of water and other parameters. When feed water TDS > 200ppm, we will recommend water softener and double pass reverse osmosis technology.

## Applications

| | |
|---|---|
| 1. University and high school | 9.Microelectronics semiconductor industry |
| 2. Environmental monitoring bureau | 10.Chemical industry |
| 3.Quality inspection industry | 11.Supporting industry for biochemistry analyzer |
| 4.Research institute | 12.Spectrum chromatographic analysis industry |
| 5.Biology-pharmacy industry | 13.Biological engineering research institute |
| 6.Centers for Disease Control | 14.Cell culture research institutions |
| 7. Animal testing institutions | 15.Supply room |
| 8.Hospital and blood station | 16.Electroplating, metallurgy industry |

## Lab test and corresponding water type list

| Test name | Type III Water | Type II Water | Type I Water |
|---|---|---|---|
| Lab glassware washing | √ | | |
| Hydroponics | √ | | |
| Sterilizer use water | √ | | |
| Gas generator use water | √ | √ | |
| Conventional test | √ | | |
| Reagents/ drugs preparation,dilution | √ | | |
| Feed water for ultrapure water | √ | √ | |
| IC | | | √ |
| LC/LC-MS | | | √ |
| HPLC | | | √ |
| AAS | | | √ |
| ICP/ICP-MS | | | √ |
| GC/GC-MS | | | √ |
| Trace analysis | | | √ |
| TOC analysis | | | √ |
| Organic analysis | | | √ |
| Inorganic analysis | | | √ |
| Environmental analytical test | | | √ |
| Microelectronics parts cleaning | | | √ |
| Precision instrument use water | | | √ |
| Analytical reagent/ drugs preparation. dilution | | | √ |
| Mass spectrometry | | | √ |
| PCR application/analysis | | | √ |
| DNA/RNA research | | | √ |
| Proteomics research | | | √ |
| Plant and animal cell culture | | | √ |
| Toxicity analysis | | | √ |
| Microbiology experiment | | | √ |
| Immunological experiment exper iment | | | √ |
| Biochemistry experiment | | | √ |
| Serum test | | √ | |
| IVF | | √ | √ |

## Molecular™ Molgene Sires-Low TOC & Pyrogen

### Applications

. IC/ ICP/ICP-MS/HPLC/LC-MS organic analysis, electrophoresis

. TOC analysis, trance analysis, environmental analytical test

. Molecular biology related experiment; e.g: PCR, DNA/RNA preparation, protein analysis


### Technical specification

| Model | Molgene 610s | Molgene 610d |
|---|---|---|
| Process | Single pass ro system | Double pass ro system |
| Output of pure water | ⩾10L/H | ⩾10L/H |
| Output of ultrapure water | ⩾ 1-1.5L/min | ⩾ 1-1.5L/min |
| Resistivity at 25℃ | 18.25MΩ.cm | 18.25MΩ.cm |
| Conductivity at 25℃ ( Type 3 water) | ⩽ 10μs/cm | ⩽ 5μs/cm |
| TOC | < 3ppb | < 3ppb |
| Pyrogens/endotoxins | <0.025EU/ml | <0.025EU/ml |
| Bacteria | < 1cfu/ml | < 1cfu/ml |
| Particles (> 0.22μm) | < 1/ml | < 1/ml |
| Absorbance(254nm,1cm optical distance) | ⩽ 0.001 | ⩽ 0.001 |
| Reactive Silica(SiO2) | < 0.01ppm | < 0.01ppm |
| Heavy metal | < 0.01ppm | < 0.01ppm |
| Electrical requirements | 220V/50HZ (or customer oriented) | |
| Power | ⩾ 100W | ⩾ 150W |
| Dimension: L/W/H | 340* 550* 530mm | 340*550* 530mm |
| Weight | ⩾34KG | ⩾45KG |

## Molecular™ Molelement Series

### Applications

- Sample pretreatment. e.g.: reagents preparation, laboratory washing and tissue cleaning
- Conventional physical and chemical analysis experiment. e.g.: Toxicity test,quantitative analysis of trace element, buffer solution
- HPLC/LC-MS organic analysis
- IC/ICP-MS element analysis


### Technical specification

| Model | Molelement 810s | Molelement 810d |
|---|---|---|
| Process | Single pass ro system | Double pass ro system |
| Output of pure water | ⩾ 10L/H | ⩾ 10L/H |
| Output of ultrapure water | ⩾ 1-1.5L/min | ⩾ 1-1.5L/min |
| Resistivity at 25℃ | 18.25MΩ.cm | 18.25MΩ.cm |
| Conductivity at 25℃ ( Type 3 water) | ⩽ 10μs/cm | ⩽ 5μs/cm |
| TOC | < 10ppb | < 10ppb |
| Pyrogens/endotoxins | <0.025EU/ml | < 0.025EU/ml |
| Bacteria | < 1cfu/ml | < 1cfu/ml |
| Particles (> 0.22μm) | < 1/ml | < 1/ml |
| Absorbance(254nm,1cm optical distance) | ⩽ 0.001 | ⩽ 0.001 |
| Reactive Silica(SiO2) | < 0.01ppm | < 0.01ppm |
| Heavy metal | < 0.01ppm | < 0.01ppm |
| Electrical requirements | 220V/50HZ (or customer oriented) | |
| Power | ⩾ 100W | ⩾ 150W |
| Dimension: L/W/H | 340* 550* 530mm | 340* 550* 530mm |
| Weight | ⩾32KG | ⩾41KG |

### Why HPLC,LC experiment require controlling of TOC in ultarpure water?

In HPLC, GC analysis experiment, organic impurities will cover on the surface of resin particles and play as nutrient for the growth of cells and molecules. It will also prevent the exchange sites combined, meanwhile reducing the solution diversion effect and also raising the baseline.

MOLECULAR lab water purification system use high quality dual UV lamp with wavelength of 254nm&185mn, it can cut organic matter as CO2 and H2O, reduce the TOC to 1-3ppb, which will improve the ion exchange function.

## Molecular™ Cell Sires

### Applications

- IC/ ICP/ICP-MS/HPLC/LC-MS organic analysis, electrophoresis
- TOC analysis, trance analysis, environmental analytical test
- Molecular biology related experiment


### Technical specification

| Model | Molcell 710s | Molcell 710d |
|---|---|---|
| Process | Single pass ro system | Double pass ro system |
| Output of pure water | ⩾10L/H | ⩾10L/H |
| Output of ultrapure water | ⩾ 1-1.5L/min | ⩾ 1-1.5L/min |
| Resistivity at 25℃ | 18.25MΩ.cm | 18.25MΩ.cm |
| Conductivity at 25℃ ( Type 3 water) | ⩽ 10μs/cm | ⩽ 5μs/cm |
| TOC | < 5ppb | < 5ppb |
| Pyrogens/endotoxins | <0.025EU/ml | <0.025EU/ml |
| Bacteria | < 1cfu/ml | < 1cfu/ml |
| Particles (> 0.22μm) | < 1/ml | < 1/ml |
| Absorbance(254nm,1cm optical distance) | ⩽ 0.001 | ⩽ 0.001 |
| Reactive Silica(SiO2) | < 0.01ppm | < 0.01ppm |
| Heavy metal | < 0.01ppm | < 0.01ppm |
| Electrical requirements | 220V/50HZ (or customer oriented) | |
| Power | ⩾ 100W | ⩾ 150W |
| Dimension: L/W/H | 340* 550* 530mm | 340*550* 530mm |
| Weight | ⩾34KG | ⩾45KG |

## Molecular™ Molresearch Series

The Molecular™ Molresearch system produces pure and ultrapure water straight from your tap water /distilled water supply. This model can meet your basic requirement to the laboratory water with a constant and reliable quality. With desktop and vertical design which can be placed wherever it's convenient .

## Applications

. Conventional physical and chemical analysis experiment. e.g.: Toxicity test,quantitative analysis of trace element, buffer solution
. ASS(atomic absorption spectroscopy)
. IC/ICP-MS element analysis

## Technical specification

| Model | Molresearch 310s | Molresearch 310d |
|---|---|---|
| Process | Single pass ro system | Double pass ro system |
| Output of pure water | ⩾ 10L/H | ⩾ 10L/H |
| Output of ultrapure water | ⩾ 1-1.5L/min | ⩾ 1-1.5L/min |
| Resistivity at 25℃ | 10-16 MΩ.cm | 10-16 MΩ.cm |
| Conductivity at 25℃ ( Type 3 water) | ⩽ 10μs/cm | ⩽ 5μs/cm |
| TOC | < 20ppb | < 20ppb |
| Absorbance (254nm,1cm optical distance) | ⩽ 0.001 | ⩽ 0.001 |
| Reactive Silica(SiO2) | < 0.01ppm | < 0.01ppm |
| Heavy metal | < 0.01ppm | < 0.01ppm |
| Electricalrequirements | 220V/50HZ (or customer oriented) | |
| Power | ⩾ 100W | ⩾ 150W |
| Dimension: L/W/H | 340* 550* 530mm | 340* 550* 530mm |
| Weight | ⩾35KG | ⩾40KG |

## Molecular™ Molatom Series

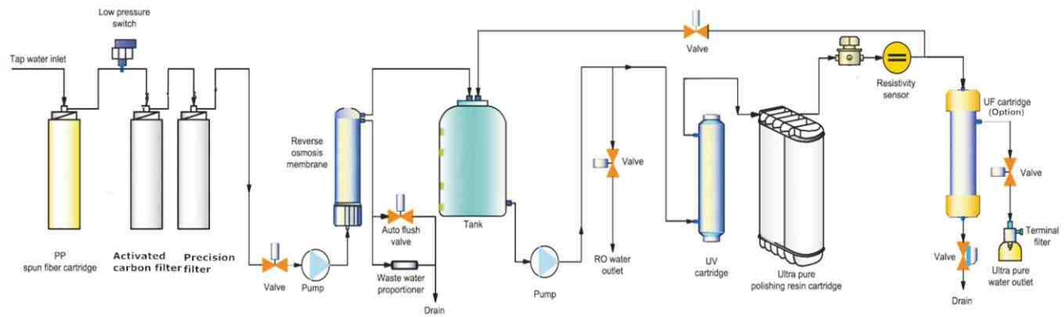
## Applications

Conventional physical and chemical analysis experiment. e.g.: Toxicity test,quantitative analysis of trace element, buffer solution

. HPLC/LC-MS organic analysis, ASS
. IC/ICP-MS element analysis

## Technical specification

| Model | Molatom 510s | Molatom 510d |
|---|---|---|
| Process | Single pass ro system | Double pass ro system |
| Output of pure water | ⩾ 10L/H | ⩾ 10L/H |
| Output of ultrapure water | ⩾ 1-1.5L/min | ⩾ 1-1.5L/min |
| Resistivity at 25℃ | 18.25MΩ.cm | 18.25MΩ.cm |
| Conductivity at 25℃ ( Type 3 water) | ⩽ 10μs/cm | ⩽ 5μs/cm |
| TOC | < 20ppb | < 20ppb |
| Pyrogens | < 0.02EU/ml | < 0.02EU/ml |
| Absorbance (254nm,1cm optical distance) | ⩽ 0.001 | ⩽ 0.001 |
| Reactive Silica(SiO2) | < 0.01ppm | < 0.01ppm |
| Heavy metal | < 0.01ppm | < 0.01ppm |
| Electrical requirements | 220V/50HZ (or customer oriented) | |
| Power | ⩾ 100W | ⩾ 150W |
| Dimension: L/W/H | 340* 550* 530mm | 340* 550* 530mm |
| Weight | ⩾30KG | ⩾39KG |



## Molecular™ Molbiochem Series


### Applications

- Clinical laboratory in hospital
- Blood station
- Research lab
- Directly connect to biochemical analyzer or other biochemical tests

### Technical specification

| Model | Molbiochem 910s | Molbiochem 910d |
|---|---|---|
| Process | Single pass ro system | Double pass ro system |
| Water production capacity | ⩾ 10L/H | ⩾ 10L/H |
| Water output rate | 1-1.5L/min | 1-1.5L/min |
| Resistivity at 25℃ | ⩾5MΩ.cm | ⩾5 MΩ.cm |
| Pyrogens/endotoxins | No limited value | No limited value |
| Absorbance (254nm,1cm optical distance) | ⩽ 0.01 | ⩽ 0.01 |
| Reactive Silica(SiO2) | ⩽ 0.02ppm | ⩽ 0.02ppm |
| Heavy metal | < 0.01ppm | < 0.01ppm |
| Electrical requirements | 220V/50HZ (or customer oriented) | |
| Power | ⩾ 100W | ⩾ 150W |
| Dimension: L/W/H | 490* 550* 850mm | 490* 550* 850mm |
| Weight | ⩾50KG | ⩾55KG |

## Molecular™ MOLRO Series-Type III water

The Molecular™ Molro system produces Type III water /distilled water straight from your tap water supply. It is our economical model for users which only need the pure water for chemical & physical inspection,analysis resolution preparation and laboratory water for instruments. The conductivity of the outlet water is 0-10 us/cm, which meet the Type III water quality of GB6682-2008 and ASTM CAP NCCLS standards.

### Application

Conventional chemical physics test, solution preparation and cleaning pure water for instruments in lab

### Technical specification

| Model | Molro 210s | Molro 210d |
|---|---|---|
| Process | Single pass ro system | Double pass ro system |
| Output of pure water | ⩾ 10L/H | ⩾ 10L/H |
| Output of ultrapure water | ⩾ 1-1.5L/min | ⩾ 1-1.5L/min |
| Conductivity at 25℃ | ⩽ 10μs/cm | ⩽ 5μs/cm |
| PH | 5.0-7.5 | 5.0-7.5 |
| Oxidizabes(as O) | ⩽ 0.4mg/L | ⩽ 0.4mg/L |
| Evaporation residue | ⩽ 2.0mg/L | ⩽ 2.0mg/L |
| Electrical requirements | 220V/50HZ (or customer oriented) | |
| Power | ⩾ 100W | ⩾ 150W |
| Dimension: L/W/H | 340* 550* 530mm | 340*550* 530mm |
| Weight | ⩾ 30KG | ⩾ 35KG |

### Model Description

The model end with "s" have single stage ro module, suitable for feed water inlet TDS<200ppm;Model end with"d" have double stage ro module, suitable for feed water inlet 200ppm<TDS<400ppm;If feed water inlet TDS>400ppm, suggest an additional industrial type softener.

### Capacity

Above series all support to make as 5L/H to 150L/H capacity.

# Molecular™ Touch Screen RO/DI Water Treatment Machine



1. New 5.0-inch color touch screen with 800x480 resolution for fingertip touch operation
2. Customized standby screen show customer company name and LOGO;
3. Factory function settings and consumable maintenance are protected by independent passwords to prevent unauthorized changes.
4. Perfect fault alarm prompt: liquid level switch fault, low water level alarm, low water inlet pressure alarm, water leakage protection alarm, consumables expiration prompt;
5. On-line monitoring of working condition and water quality: water production, RO flushing, circulation, pure water conductivity, ultra-pure water resistivity;
6. There are three modes for water intake of Type I and Type III water: random water intake, quantitative water intake, and regular water intake to meet different water demand requirements;
7. Digital pressure sensor is optional device, and the dispensing pressure high / low limit can be set through the touch screen, and the current pressure value can be displayed too;
8. When tank is full , it has a temporary water-making function for easy checking the pure water conductivity.
9. Online display of date and time, it can be set by adjusting the time button;
10. Data record query: current filter using time, RO membrane using time, water intake volume, etc.
11. With usage time clearance function for filter, RO membrane and DI purification package

## Model :

We can make each series with touch screen operation with more parameters monitoring , customer can place order add extra letter" X " after each series, also there is bench top type and floor type to choose.

| Single stage RO | Double stage RO |
|---|---|
| Molgene610s-X | Molgene610d-X |
| Molelement810s-X | Molelement810d-X |
| Molatom510s-X | Molatom510d-X |
| Molresearch310s-X | Molresearch310d-X |
| Molro210s-X | Molro210d-X |


On-line monitoring of working condition and waterquality, pressure, consumablelife span


USA imported Minntech hollow ultrafiltration filter remove endotoxin&pyrogen


Ultra-purification cartridge with Dow and Rohm Hass polishing resin to remove ionic and organic contaminants below trace levels

Terminal filter size is 0.22μm, which can remove the particulate>0.22μm and keep the particulate less than 1/ ml

## Main consumable list

| No. | Name | Specification | Lifespan |
|---|---|---|---|
| 1 | PP filter | 1st stage,10"/20" (5μm) | 3-6 months |
| 2 | Activated Carbon filter | 2nd stage ,10"/20" | 6-12months |
| 3 | Softener filter | 3rd stage,10"/20" | 6-12months |
| 4 | Precision filter | 4th stage,10"/20"(1μm) | 10-12months |
| 5 | RO membrane | 75g/300g | 1-2 years |
| 6 | Ultra purification resin column | | 1 year |
| 7 | Micro filter | 0.22μm | 1 year |
| 8 | UV lamp | 185/254nm | 8000hours |
| 9 | Pure water tank | 30L.80L,120L | |

## Pictures for consumable parts






## Molecular Product in Lab