Proseers

Portable Water Purification System

QINGDAO INNOVA BIO-MEDITECH CO., LTD

About Us

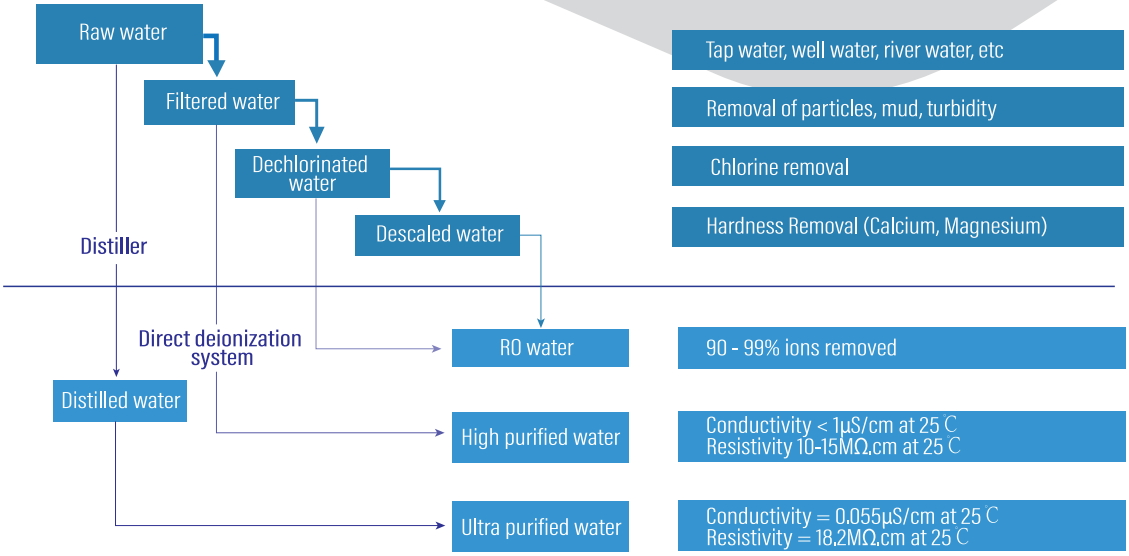
Innova Bio-Meditech is one of the leading global providers of laboratory and medical devices. Firmly committed to our mission of "sharing innovative bio-meditech solutions with the world ", we are dedicated to innovation in the fields of Biology Project, Life Science, Phamacy Industry and Medical Treatment.

Innova Bio-Meditech possesses a sound distribution and service network with business partners in North and Latin America, Europe, Africa and Asia-Pacific etc, We have built up a well established R&D, manufacture network with 3 centers in Bejjing, Qingdao, and shanghai. Inspired by the needs of our customers, we adopt advanced technologies and transfomm them into accessible innova-tion.This means constant effort and research, in order to more fully understand the developments of the market, produce constantly upgraded product ranges by adding new products year after year.

The passion for science

Content

Water purification phase



Applications of RO water

Reverse osmosis water (RO water) has a wide range of uses that cover many areas, the following are its uses:

- RO water is used to clean semiconductors and circuit boards to ensure that there is no ionic contamination, which is critical to the performance of electronic products.

- RO water is used in the pharmaceutical industry for drug preparation and equipment cleaning in the manufacturing process to ensure the purity and safety of drugs.

- Experimental water: In scientific research, especially in chemical and biological experiments, RO water provides the necessary high-purity water source to guarantee the accuracy of experimental results.
- Precision Instruments: High precision analytical instruments used in laboratories often require RO water to generate or dilute standard solutions to avoid background interference.

- Hospitals use RO water to clean surgical instruments to ensure a sterile environment and reduce the risk of post-operative infections.

Applications of Ultra pure water

Ultrapure water has been rigorously treated to remove almost all impurities, following are some of its major applications in several fields:

- **Wafer cleaning:** In the semiconductor manufacturing process, ultra pure water is used to clean silicon wafers to ensure that their surfaces are free of particles and ionic contamination, thus ensuring high chip quality.
- **Chemical solution dilution:** ultra pure water is used in the dilution process of photoresist and other chemicals to avoid the impact of impurities on the process.
  Equipment cooling: Many high-precision equipment needs to be cooled with ultra pure water to prevent corrosion and scale buildup.

- **Drug preparation:** Ultra pure water is used in the preparation of injections, eye drops and other sterile preparations to ensure the high purity and safety of drugs.
- **Laboratory analysis:** In drug development, ultra pure water is used for various experiments and analysis, such as high-performance liquid chromatography (HPLC).

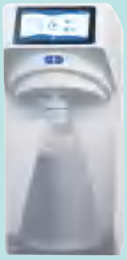
- **Cell culture:** In the process of cell culture, ultra pure water is used to formulate culture medium to avoid cell contamination.
- **Molecular biology experiments:** Such as PCR (polymerase chain reaction), DNA sequencing and other experiments using ultra pure water to ensure the accuracy of the experimental results.

- **Dialysis water:** Ultra pure water is needed during hemodialysis to avoid patient infection and complications.
- **Pathology testing:** Ultrapure water is used to prepare reagents and clean samples to ensure the accuracy of test results.

- **Analytical instruments:** High-precision instruments such as Inductively Coupled Plasma Mass Spectrometer (ICP-MS), Atomic Absorption Spectrometer (AAS), etc. require the use of ultra pure water to avoid background interference.
- **Sample preparation:** Ultrapure water is used to prepare high purity samples in various chemical and biological experiments.

- **Circuit board cleaning:** In the printed circuit board (PCB) manufacturing process, ultra pure water is used for cleaning to prevent residues from affecting circuit performance.
- **High pressure boiler feed water:** In some demanding industrial applications, ultrapure water is used as boiler feed water to prevent scaling and corrosion.

Water system selection guide

Model	 Nimble RU8	 Nimble U
Feed water source	Potable tap water	Type III water
Provide RO water	✓	✗
Provide ultra pure water	✓	✓
Pre-guard cartridge 	✓	✗
Reverse osmosis 	✓	✗
RO water tank 	✓	✗
Ultra-pure UV 	✓	✓
Ultra purification cartridge 	✓	✓

Overview

Main structure

5-inch touch screen, displays on-line operation status, water quality information, consumables status and alarm information.

6 types of specialized terminal filters for different laboratory requirements.

5L portable separated design water tank, can be moved with one hand.

Front view

All 6 consumables can be recognized by NFC, identified with a single swipe.

Independent reverse osmosis design, ion retention rate of ≥ 98%.

Independent purification cartridge , filled with electronic-grade resin,can remove trace ions.

Left view

185/254nm dual wavelength UV lamps, effectively remove organic and bacteria.

Right view

*The model shown is Nimble RU8

Overview

Water leakage detector

External water leakage detector

Built-in water leakage detector

Independent water leakage protection, dual-site detection inside and outside the main host, accurate identification of water contact points, distinguish between water source leakage and instrument internal leakage, to ensure the safety of the entire laboratory. Once water leakage detected, 2 seconds after will turns to standby mode automatically.

RO water tank

5L RO water tank is easy to lift to each laboratory room , can be configured with multiple.

The water tank liquid level is monitored by pressure level sensor, and the liquid level display is accurate and stable; The storage capacity can be adjusted from 5% to 100% online.

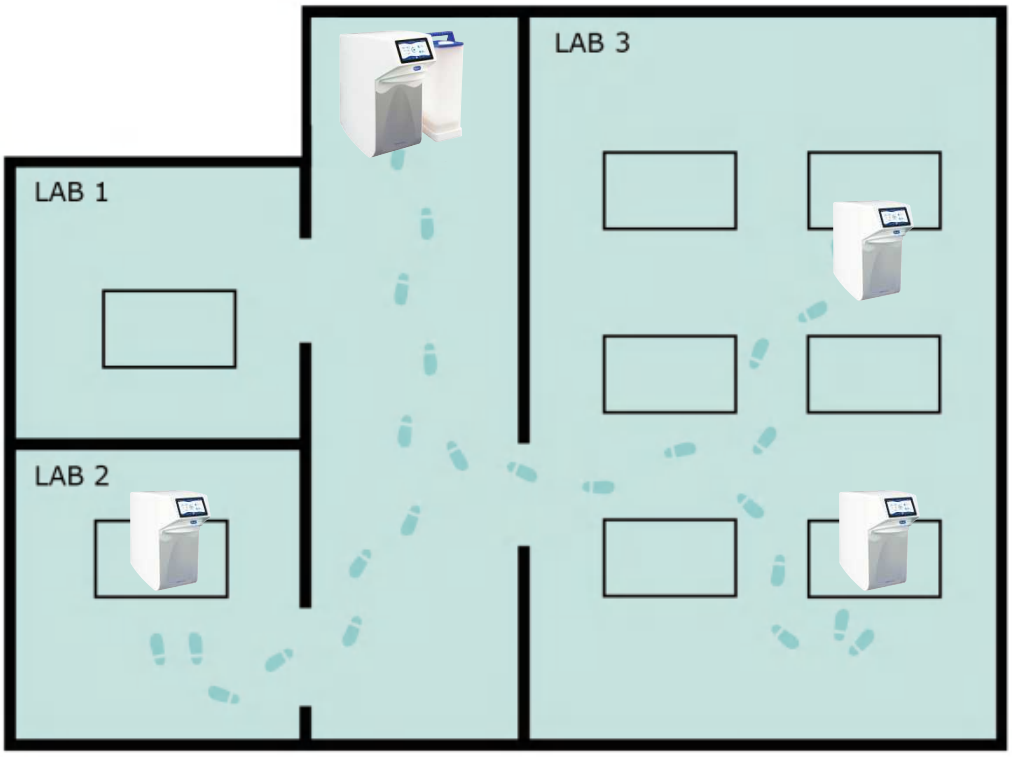
Smart and Unlimited

Unlimited expansion

Flexible to satisfy your need

Choose the configuration that best suits your space and user needs, and then easily expand more modules as your lab expansion.

You can carry RO water tamk of Nimble RU8 to Nimble U，and get ultra pure water by Nimble U.



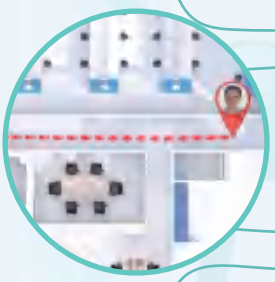
The above configuration consists of 1x Nimble RU8 system and 3x Nimble U system

Smart and Unlimited

Flexible access pure water

1 Produce RO water. The RO water is stored in the RO water tank.

Carry the RO water tank. 2



3 Move to your lab room.

Connect the RO water tank to Nimble U.Dispense freshly ultrapure water. 4

5 Bring the RO water tank back to Nimble RU8. Produce RO water again.

The new Nimble series water purification system is simple, flexible and convenient, thus greatly improving your experimental efficiency.

Smart and Unlimited

Flexible access pure water

RO tank adapts to all Nimble series, and can produce ultra-pure water flexibly.

You can easily access freshly purified ultrapure water at every lab bench, even remote benches without raw water.

Excellent Water Quality

Purification
cartridge

Pre-guard cartridge B

Filled with an appropriate amount of silicon phosphorus crystals to effectively reduce the hardnessof feed water, Filled with wire wound filter elements to retain powder and floc impurities.

Ultra purification cartridge B

Filled with electronic grade ion exchange resin, the ions in the water are controlled at ultra-trace levels.Advanced vertical flow purification method is adopted to ensure the service life and purification effect ofpurification cartridge, and reduce the use cost.

*The model shown is Nimble RU8

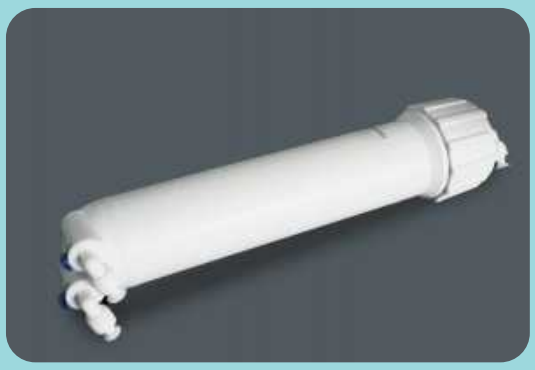
Excellent Water Quality

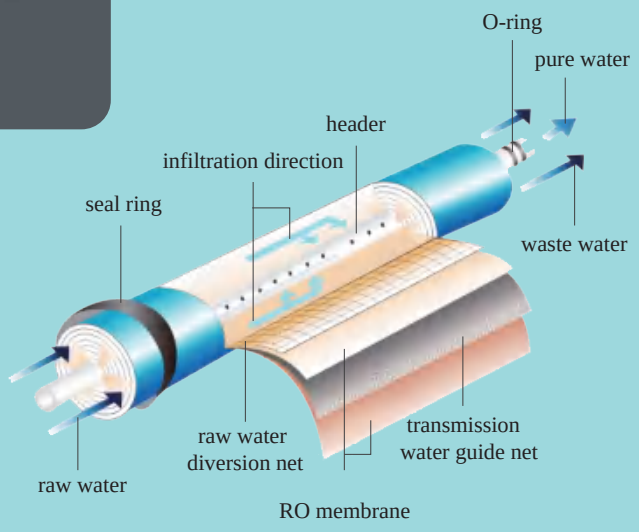
Reverse osmosis system

Independent reverse osmosis design, the retention rate of reverse osmosis membrane in non-destructive state is ≥98%.

Water pumps

Qualified water pumps,low noisy and stable working pressure, ensure the stability of reverse osmosis; With intelligent feedback adjustment function, automatically adjust the working state of the water pump according to changes in temperature and water quality, ensure the stability of the system water production.

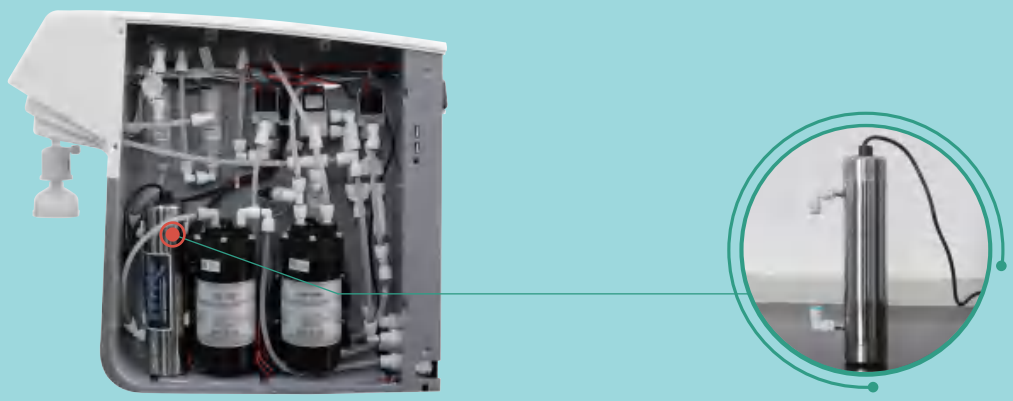




Excellent Water Quality

Dual wavelength
UV lamp

185nm wavelength can oxidize organic compounds.254nm wavelength can cause microbial DNA damage and has disinfection effect.



Total organic carbon
Monitoring

Total organic carbon (TOC) data will be shown on the screen, evaluated by a built-in TOC monitoring. TOC level of Ultra pure water is always less than 5ppb(μg/L).

TOC Monitoring

Excellent Water Quality

Optional point-of-use filter

You can choose to install **6** kinds of special terminal filters of the same brand to ensure that the water quality meets the requirements of various laboratory applications.

MIC-Filter

Bac-Filter

Pyr-Filter

VOC-Filter

ULC-Filter

EDS-Filter

Standard	MIC-Filter	0.22μm filter; for removal of bacteria and particle(>0.22μm)
Optional	Bac-Filter	0.22μm+0.45μm filter; for removal of bacteria and particle(>0.22μm)
	Pyr-Filter	For removal of bacteria, protease,endotoxin,nuclease
	VOC-Filter	For removal of volatile organic compound-related applications
	ULC-Filter	For removal of ultra-trace organic matter
	EDS-Filter	For removal of endocrine disruptors

Convenient Water Collect

Click button

Click the button to collect ultrapure water,convenient and quick

Quantitative water dispense

Quantitative water dispense.Click the flask icon, enter the amount in milliliters, save and press "dispenser" to collect water, the collecting can be terminated by clicking "cancel"

RO water tank

Pour the RO water from the tank through the hole in the tank lid

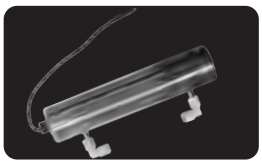
Consumable identification

The consumables of this equipment include two purification cartridges, RO module, dual wave-length UV lamp, air filter and terminal filter, all six of which can be identified using NFC (base on RFID).

After entering the consumables identification interface, contact the chip on the consumables with the identification point on the side of the equipment, and the consumables information can be automatically identified.

The following consumables are all NFC (base on RFID) identifiable：

Reverse osmosis membrane



Ultra-pure UV

Purification column

Air filter

Point-of-use filter

Advantages & Features

Smart design system

1+N design, support module expansion.

Water tank separate design.

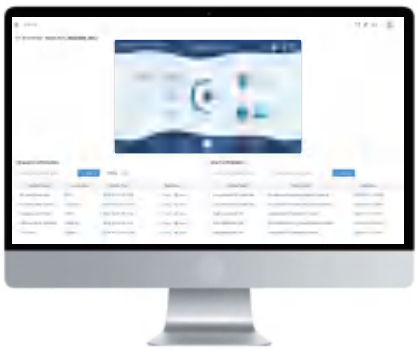
Multi-stage purification process combination.

A variety of water collect operations.

Whole tank transfer, no environmental interference.

Intelligent water injection module.

Cloud monitoring



Simultaneous monitoring of multiple devices from one account.

Consumables and alarm information are uploaded and monitored in real time.

Water quality data real-time monitoring, regular upload .

Ultra purification

Medical polymer material synthesis, no dissolution.

Controlled particle size and pore size distribution for targeted removal of organic matter.

Electronic polishing resin, large work exchange capacity.

Gel state,no heat source and endotoxin, avoid the secondary pollution of resin.

Intelligent human-computer interaction

5 inch touch screen,three languages display.

Three-level authority management.

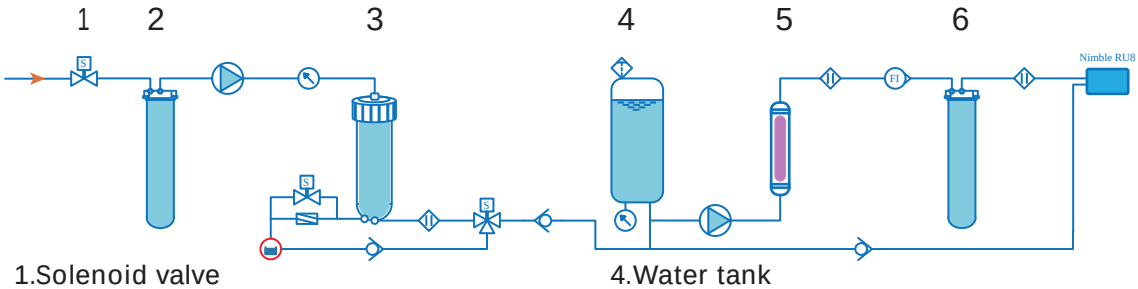
Quantitative water collect: 0.02-60L adjustable.

Water quality reporting function, real-time monitoring.

Automatical data store of water quality, instrument maintenance and others.

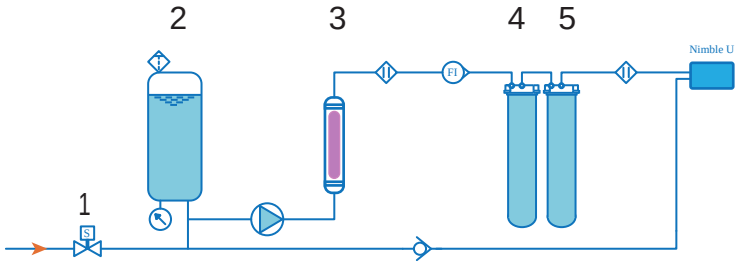
Process & Specifications

Nimble RU8



1.Solenoid valve
2.Pre-guard cartridge B
3.Reverse osmosis
4.Water tank
5.Ultra-pure UV
6.Ultra purification cartridge B

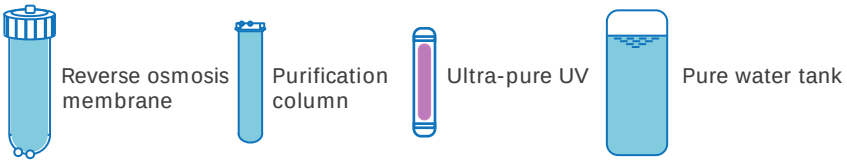
Nimble U



1.Solenoid valve
2.Water tank
3.Ultra-pure UV
4.Ultra purification cartridge B
5.Ultra purification cartridge B

Solenoid valve | Electrode | Air filter | Flowmeter | Waste-water ratio

Three-way valve | Pump | Pressure sensor | Check valve | Effluent liquor



Main configuration	All-in-one system	Ultra pure water
	Nimble RU8	Nimble U
Pre-guard cartridge	Yes	No
Reverse osmosis	Yes	No
Water tank	Yes	No
Ultra-pure UV	Yes	Yes
Ultra purification cartridge	Yes	Yes

Model	All-in-one system	Ultra pure water
	Nimble RU8	Nimble U
Feed water requirements		
Source	Potable tap water	Type III water
Water inlet pressure	0.1-0.4MPa	0-80KPa
Water inlet conductivity	<2000uS/cm	<100 us/cm
Water inlet TOC	<1ppm	<50 ppb
Ambient temperature	4-45℃	4-45℃
PH	4-10	6-8
Type I ultra purified water		
Electrical resistivity	18.2 MΩ.cm@25℃	
TOC (Total Organic Carbon)	<5 ppb [1]	
Particles (>0.2μm particles)	<1 /mL	
Microorganism	<0.01 CFU/mL	
Pyrogen	<0.001 EU/mL	
Rnase	<0.4 pg/mL	
Dnase	<2 pg/mL	
Flow rate	1L/min	
RO water		
RO rejection	97-98%	N/A
Organic rejection	≥99%	
Particulate and bacterial rejection	> 99%	
Electrical requirement		
Input voltage	100-240V/50-6OHz/AC	100-240V/50-60Hz/AC
Rated power	120w	120w
Size information		
Dimensions (width × depth × height)	Main host: 220*510*445 mm Water tank: 135*260*400 mm	Main host: 220*510*445 mm
Main host weight	12 kg	9 kg

[1] Under proper operating conditions

Dimensions & Operating Weights

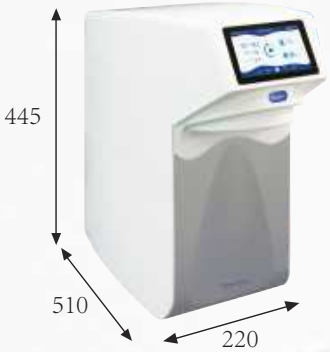
Nimble RU8

12 kg 4 kg

Water tank

0.5 kg 5.5 kg

Empty Full



Nimble U

9 kg

Indoor use only.

Avoid direct sunlight.

Altitudes between 0 and 2000 meters.

Ambient temperature: 4~45℃.

Operating voltage: 100~240V/50~60/AC.

A clear drainage pipe 1.5m from the instrument.

Fixed, horizontal, and non-combustible mounting surface.

No heat source around

Away from strong magnetic fields.

Accessories

Purified parts

Reverse osmosis membrane

Ultra-pure UV

Purification column

Point-of-use filter

MIC-Filter

Bac-Filter

Pyr-Filter

VOC-Filter

ULC-Filter

EDS-Filter

Others

Air filter

Water leakage detection

Proseers

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