HHitech

CE Certified by ISO9001:2008

Laboratory water purification system

Total pure water solutions

Hitech Instruments Co., Ltd

COMPANY PROFILE

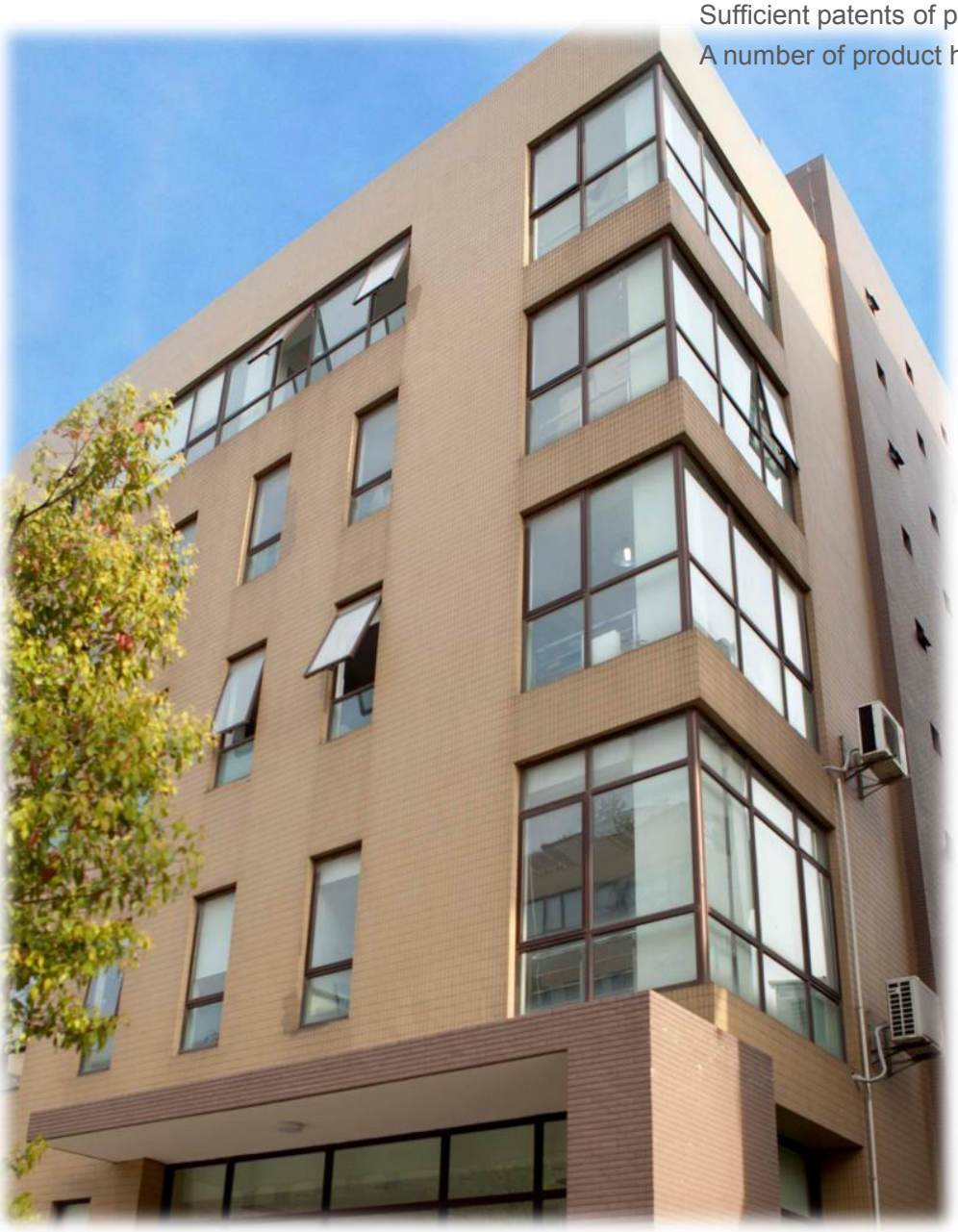
Established in 2003, Hitech Instruments Co., Ltd. is a professional Chinese manufacturer of laboratory water purification system and related apparatus.

Hitech will constantly bring in new technology, and devote ourselves to the development of new products in order to cover diversified demands from clients. We will provide comprehensive solutions for the lab pure water with professional pre-sales support and impeccable after-sales service. We aim to integrate products with the world market, establish first-class brand by excellent quality and gain market shares by top brand.

After more than 10 years' development, Hitech has become the top brand in the field of lab water purification system in Chinese market. We have exported to about 50 countries worldwide, such as *UK, Germany, Belgium, Spain, Iceland, Germany, Israel, USA, Brazil, Chile, Saudi Arabia, Iraq, Malaysia, Singapore, Japan* and etc.

CERTIFICATES AND PARTNERS

Sole Chinese Good Instrument of lab water,
Scientific Instrument manufacturers of China
Certified by ISO9001:2008
Certified by CE
High-tech achievement transformation enterprise
The supported enterprise of national innovation fund
Sufficient patents of pure water technology
A number of product honor certificates

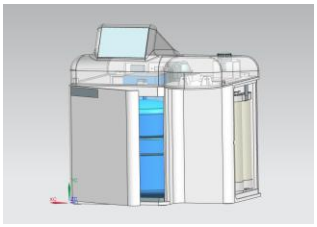


PRODUCT LINE

											
Series	**Basic-RO/-IT Basic-Q/-IT**	**Smart-RO Smart-Q Smart-S Smart-D**	**Eco-Q Eco-S**	**Master-Q Master-S Master-D Mastertouch-Q Master touch-S Master touch-D**	**Edi-Q Edi-S Edi touch-Q Edi touch-S**	**Dura 12/24 Dura**	**Super 10 Super-TOC10**	**Medium-RO Medium-Q Medium-S**	**Medium-1600RO Medium-1600Q Medium-1600S**	**Center Center-EDI**	**Central**
Output (liter/hour)	15, 30	15, 30 1-2.0L/min	15, 30	15, 30 1-2.0L/min	10	12, 24 1-2.0L/min	10	45, 63 94, 125	250	45, 60, 90	250, 500
RO process	1st stage	1st stage	1st stage	1st stage	1st stage	2nd stage	2nd stage	1st stage	1st stage	2nd stage	2nd stage
Source water	Tap	Tap Type III or II	Tap	Tap Type III or II	Tap	Tap Type III or II	Tap	Tap	Tap	Tap	Tap
Water quality	Type III, II	Type III, II, I	Type III, II, I	Type III, II, I	Type III, II, I	Type II, I	Type II, I	Type III, II, I	Type III, II, I	Type III, II, I	Type III, II
Water quality sensor	NO	1	2	3	3	3	4	1 (RO), 3 (Q, S)	1 (RO), 3 (Q, S)	3	3
Flow sensor	NO	NO	NO	2(touch)	2(touch)	NO	3	NO	NO	2	6
Touch screen	NO	NO	NO	YES (touch)	YES (touch)	NO	YES	NO	NO	YES	YES
EDI module	NO	NO	NO	NO	YES	NO	YES	NO	NO	YES (EDI)	YES
TOC module	NO	NO	NO	NO	NO	Optional	YES (TOC)	NO	NO	Optional	NO
Internal tank	NO	NO	1 tank	NO	NO	2 tank	1 tank	2 tank	NO	2 tank	2 tank
Installation method	Desk or Wall-mounted	Desk	Desk	Desk	Desk	Desk	Desk	Floor type	Floor type	Floor type	Floor type

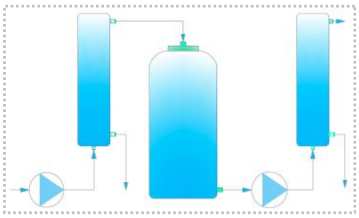
Dura series water purification system

- **LCD controlling system**
  - Display system running status and real-time parameters



- **Built-in 2 water tanks and 3 pumps**
  - Built-in 5.8 liters PE tank and 10 liters airtight plastic pressure water tank, Save more lab space.
  - Built-in 1st stage， 2nd stage RO pump and circulating sanitizing

- **Easy-to-replacing cartridge**
  - Integrated design of pretreatment and subsequent purification unit
  - New card hawk type fast inserted interface, easy to replace



- **Double stage RO system**
  - With 2 stage pump, 2 stage RO membrane and buffer tank, system achieves stable water quality, little drain, and low running cost.

Features and Advantages

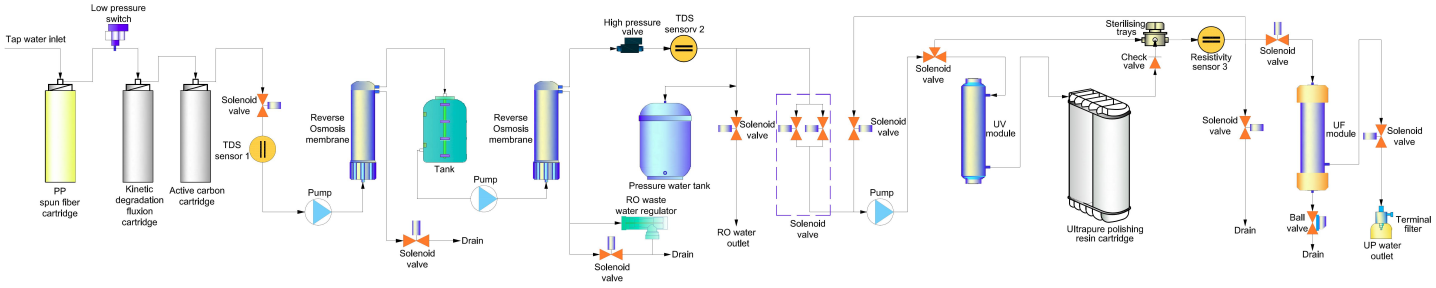
- Double stage reverse osmosis technology, assure 2nd RO water quality's stability from different source water.
- Built-in 3 pump- 1st stage RO pump, 2nd stage RO pump and circulating sanitizing pump.
- Built-in 5.8 liters PE tank and 10 liters airtight plastic pressure water tank.
- 4 door and easy-to-replacing cartridge design, convenient to maintain system and replace cartridges.
- LCD *(resolution: 240×128, dimension: 106×57mm)* controlling system, intuitively display the system running state and various parameters.
- 3 way online water quality sensor, detect the quality of feed water, 2nd RO water, and ultrapure water respectively. And warn once water quality's standard exceeding.
- Cartridges replacing alarm function, based on time and water quality, show cartridges' used and residual life.
- Multiple alarm function: no feed water, full water, water quality's standard exceeding, and cartridge life ending.
- Auto self-flushing of RO membrane function, extend RO membrane's life.
- Auto running data storing function through RS232/USB communication port to computer for 1 year at least.
- System sanitizing procedure, achieve the disinfection of ultrapure water's tube and valve.
- System circulation function, achieve ultrapure water's circulation to keep top quality of ultrapure water.
- Level II password, protect all the parameters setting, and prohibit any unauthorized setting change.
- Water dispensing function- timing and quality *(time range: 1-99min, water quality range: 0.1-18.2MΩ.cm)*.
- External water tanks is optional to meet different need and assure ample water-supply.
- Whole plastic shell with high-strength, avoid rusting and keep clean, to meet GLP standard.
- Tube and adapter with NSF authorization and top quality, reduce TOC level and assure ultrapure water's quality.
- Optimized pretreatment *(including PP fiber, KDF and active carbon cartridge)*, effectively protect RO membrane.
- RO module with DOW's membrane, ensure long life, stable operation and high desalinization rate.
- Ultrapure cartridge with DOW's top polishing resin, ensure ultrapure water's quality up to 18.2 MΩ.cm, with the lowest TOC level.
- Double wavelength *(185&254nm)* ultraviolet lamp module, restrain bacteria's increase and reduce TOC.
- MWCO 5000D ultrafiltration module, effectively eliminate endotoxin, and suitable for precise cell cultivating and IVF.
- *(0.45+0.1)*μm double layer PES terminal disinfection filter, assure that terminal pure water is absolutely axenic.

Dura 12/24 series *ultrapure* water system *(tap water inlet)*

With LCD controlling system, 3 way water quality sensor, built-in 2 water tanks, 3 pump, and 2 stage RO system, ***Dura 12/24*** series is ***sub-top choice*** of ultrapure water for high grade experiments.

With tap water inlet, its output ranges from 12 to 24 liters/hour. It can produce ***2nd stage RO water*** and ***ultrapure water***. The 2nd stage RO water's conductivity can stay 1-5μs/cm, and the ultrapure water's resistivity absolutely reaches to 18.2MΩ.cm. It completely meets the highest grade I standard of *ASTM, CAP, CLSI, EP* and *USP*.

Flow Schematic



Specifications

Model	Standard	Eliminating endotoxin	Low TOC	Synthesizing
	Dura 12	Dura 12F	Dura 12V	Dura 12FV
	Dura 24	Dura 24F	Dura 24V	Dura 24FV
Output -2nd stage RO water*	12 or 24 liters/hour			
Output -ultrapure water	Up to 2 liters/minute *(when tank is full)*			
Ultrapure water quality				
Resistivity(25℃)	18.2MΩ.cm			
TOC*	<10ppb	<10ppb	<3ppb	<3ppb
Bacteria	<0.1cfu/ml			
Particle(>0.1μm)	<1/ml			
Endotoxin	N/A	＜0.001Eu/ml	N/A	＜0.001Eu/ml
RNases	N/A	<0.01ng/ml	N/A	<0.01ng/ml
DNases	N/A	<4pg/μl	N/A	<4pg/μl
RO water quality				
Conductivity - 1st stage RO water	Feed water conductivity×5%*			
Conductivity - 2nd stage RO water	1-5μs/cm*			
Feed water requirements	Tap water, temperature:5-45℃,pressure:1.0-4.0Kgf/cm²			
Dimension and weight	Length×Width×Height:545×470×610mm / Weight: 25Kg			
Electrical requirements	AC110-240V, 50/60Hz			
Power	240W			
Standard configuration	Main body *(Including 1 set of cartridge)*+built-in 12 liters pressure tank			

Remarks:

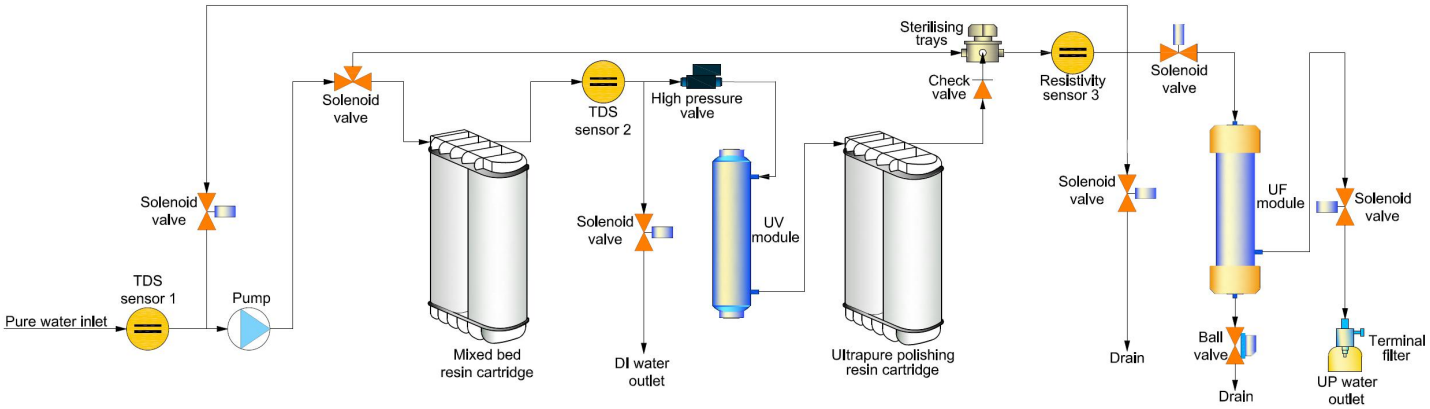
*The value will be influenced by temperature and feed water's quality.

Dura series *ultrapure* water system *(distilled water inlet)*

With LCD controlling system, 3 way water quality sensor, ***Dura*** series is ***sub-top choice*** of ultrapure water for high grade experiments.

With pure water or distilled water inlet, its output is up to 2 liters/minute. It can produce ***deionized water*** and ***ultrapure water***. The deionized water's resistivity is above 16MΩ.cm, and the ultrapure water's resistivity absolutely reaches to 18.2MΩ.cm. It completely meets the highest grade I standard of *ASTM, CAP, CLSI, EP* and *USP*.

Flow Schematic



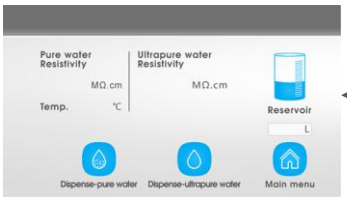
Specifications

Model	Standard	Eliminating endotoxin	Low TOC	Synthesizing
	Dura	Dura F	Dura V	Dura FV
Output -ultrapure water	Up to 2 liters/minute *(less output with UF cartridge)*			
Ultrapure water quality				
Resistivity(25℃)	18.2MΩ.cm			
TOC*	<10ppb	<10ppb	<3ppb	<3ppb
Bacteria	<0.1cfu/ml			
Particle(>0.1μm)	<1/ml			
Endotoxin	N/A	＜0.001Eu/ml	N/A	＜0.001Eu/ml
RNases	N/A	<0.01ng/ml	N/A	<0.01ng/ml
DNases	N/A	<4pg/μl	N/A	<4pg/μl
Deionized water quality				
Resistivity(25℃)	>16MΩ.cm			
Feed water requirements	RO water, distilled water, deionized water, 5-45℃,1atm*			
Dimension and weight	Length×Width×Height:545×470×610mm / Weight: 20Kg			
Electrical requirements	AC110-240V, 50/60Hz			
Power	240W			
Standard configuration	Main body *(Including 1 set of cartridge)*			

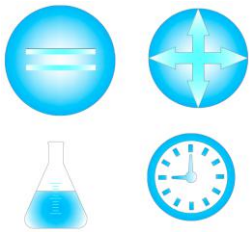
Remarks:

*The value will be influenced by temperature and feed water's quality.

Master Touch series water purification system

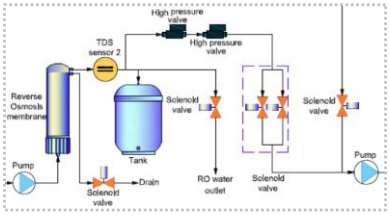


- **Colorful touch screen**
  - 5.0 inch high-resolution touch screen controlling system



- **Comprehensive monitoring system**
  - 3 water quality sensor, 2 flow sensor
  - Quantified and timing dispense

- **Easy-to-replacing cartridge**
  - Independent pretreatment design, and integrated subsequent purification unit design, with fast inserted adapters, easy to replace



- **Single stage RO and 2 pumps system**
  - 1st pump, to achieve single stage RO system, easy to maintain.
  - 2nd pump, to achieve system sanitizing and circulation.

Features and Advantages

Master Touch series is ***optimized and upgraded*** on the basis of ***Master series***, which is the sole leading brand of Chinese Good Instrument in lab water area. It is the most representative products in Chinese lab water market.

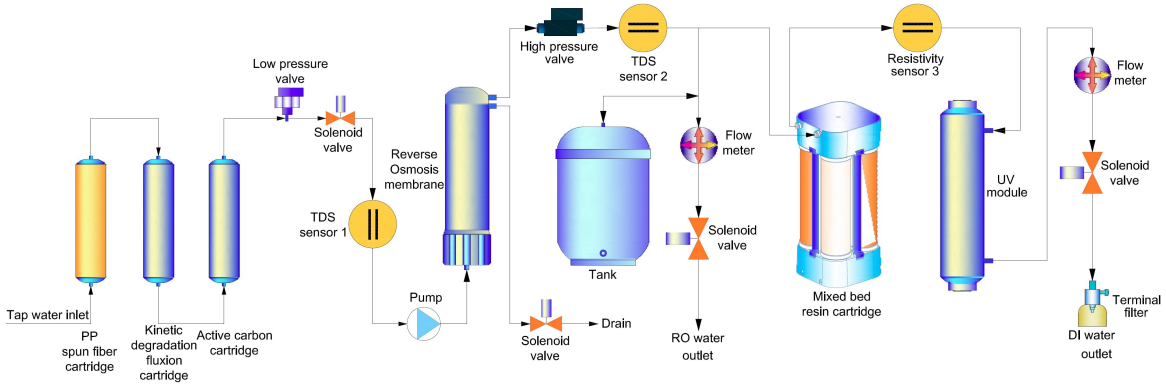
- 5.0 inch colorful high-resolution touch screen (*16:9*) controlling system, achieve finger-touch new experience.
- 3 way online water quality sensor, detect the quality of *feed water, RO water, deionized water*, or *ultrapure water* respectively. And warn once water quality's standard exceeding.
- 2 way flow sensor, achieve quantified dispensing of *RO water, deionized water*, or *ultrapure water.*
- System sanitizing procedure, achieve the disinfection of ultrapure water's tube and valve.
- System circulation function, achieve ultrapure water's circulation to keep top quality of ultrapure water.
- All Cartridges replacing alarm function, based on time, or water quality, show cartridges' used and residual life.
- Multiple alarm function: no feed water, full water, water quality's standard exceeding, and cartridge life ending.
- Auto self-flushing of RO membrane function *(interval and continuous time setting)*, extend RO membrane's life.
- Auto running data storing function with built-in SD card, and data can be exported through the USB interface.
- Comprehensive Information query and management function, master system status, water quality, cartridges usage and alarm information.
- System time setting *(year/month/day/hour/minute)*, timing standby *(0-60 minute),* and timing shutdown *(0-24 hour)* function.
- Level II password, protect all the parameters setting, and prohibit any unauthorized setting change.
- 2 kind of pure water tank *(liquid level PE tank and pressure tank)*. Also external tanks is optional.
- Whole plastic shell with high-strength, avoid rusting and keep clean, to meet GLP standard.
- 3 door and easy-to-replacing cartridge design, convenient to maintain system and replace cartridges.
- Tube and adapter with NSF authorization and top quality, reduce TOC level and assure ultrapure water's quality.
- Optimized pretreatment *(including PP fiber, KDF and active carbon cartridge)*, effectively protect RO membrane.
- RO module with DOW's membrane, ensure long life, stable operation and high desalinization rate.
- 4 in 1 ultrapure cartridge *(can be divided to 4 independent cartridge)* with DOW's top polishing resin, ensure ultrapure water's quality up to 18.2 MΩ.cm, with the lowest TOC level.
- Double wavelength *(185&254nm)* ultraviolet lamp module, restrain bacteria's increase and reduce TOC.
- MWCO 5000D ultrafiltration module, effectively eliminate endotoxin, and suitable for precise cell cultivating and IVF.
- *(0.45+0.1)*μm double layer PES terminal disinfection filter, assure that terminal pure water is absolutely axenic.

Master Touch-Q series *deionized* water system *(Tap water inlet)*

With 5.0 inch touch screen system, 3 way water quality sensor, 2 way flow sensor for quantified dispensing, single stage RO system and 1 pump, ***Master Touch-Q*** series ***deionized water system*** is ***superior choice*** of deionized water for general grade experiments.

With tap water inlet, its output ranges from 15 to 30 liters/hour. It can produce ***single stage RO water*** and ***deionized water***. The single stage RO water's ion rejection rate is more than 96%, and the deionized water's resistivity is more than 16MΩ.cm, near to18.2MΩ.cm. It completely meets the requirements of general chemical or biological experiments for pure water.

Flow Schematic



Specifications

Model	Master Touch-Q15	Master Touch-Q15UT	Master Touch-Q30	Master Touch-Q30UT
Output(25℃)*	15 liters/hour		30 liters/hour	
Flow rate	Up to 2 liters/minute *(with pressure tank)*			
Pure water outlet	2: reverse osmosis water, deionized water			
Deionized water quality				
Resistivity	16-18.2MΩ.cm			
Bacteria	N/A	<0.1cfu/ml	N/A	<0.1cfu/ml
Particle(>0.1μm)	N/A	<1/ml	N/A	<1/ml
RO water quality				
Ion rejection rate	96%-99% *(new RO membrane)*			
Organic rejection rate	>99%, when MW>200 Dalton			
Particles and bacteria rejection rate	>99%			
Feed water requirements	Tap water, temperature:5-45℃,pressure:1.0-4.0Kgf/cm^2			
Dimension and weight	Length×Width×Height:500×360×540mm / Weight: about 20Kg			
Electrical requirements	AC110-240V, 50/60Hz			
Power	120W			
Standard configuration	Main body *(Including 1 set of cartridge)*+15 liters pressure tank			

Remarks:

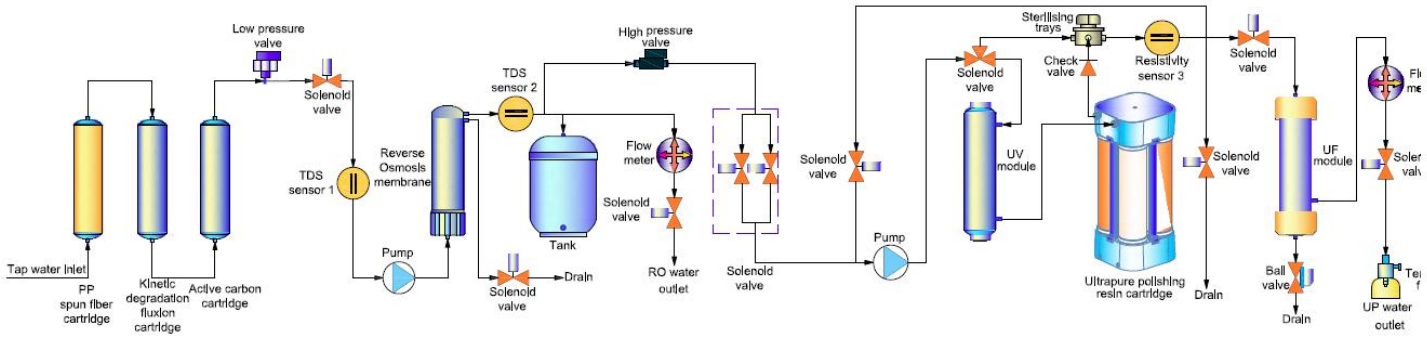
*The value will be influenced by temperature and feed water's quality.

Master Touch-S series *ultrapure* water system *(Tap water inlet)*

With 5.0 inch touch screen system, 3 way water quality sensor, 2 way flow sensor for quantified dispensing, single stage RO system and 2 pumps, ***Master Touch-S*** series ***ultrapure water system*** is ***superior choice*** of ultrapure water for high grade experiments.

With tap water inlet, its output ranges from 15 to 30 liters/hour. It can produce ***single stage RO water*** and ***ultrapure water***. The single stage RO water's ion rejection rate is more than 96%, and the ultrapure water's resistivity absolutely reaches to 18.2MΩ.cm. It completely meets the highest grade I standard of *ASTM, CAP, CLSI, EP* and *USP*.

Flow Schematic



Specifications

Model	Standard	Eliminating endotoxin	Low TOC	Synthesizing
	Master Touch-S15	Master Touch-S15UF	Master Touch-S15UV	Master Touch-S15UVF
	Master Touch-S30	Master Touch-S30UF	Master Touch-S30UV	Master Touch-S30UVF
Output(25℃)*	***15series***-15 liters/hour, ***30 series***-30 liters/hour			
Flow rate	Up to 2 liters/minute *(with pressure tank)*			
Pure water outlet	2: reverse osmosis water, ultrapure water			
Ultrapure water quality				
Resistivity(25℃)	18.2MΩ.cm			
TOC*	<10ppb	<10ppb	<3ppb	<3ppb
Bacteria	<0.1cfu/ml			
Particle(>0.1μm)	<1/ml			
Endotoxin	N/A	＜0.001Eu/ml	N/A	＜0.001Eu/ml
RNases	N/A	<0.01ng/ml	N/A	<0.01ng/ml
DNases	N/A	<4pg/μl	N/A	<4pg/μl
RO water quality				
Ion rejection rate	96%-99% *(new RO membrane)*			
Organic rejection rate	>99%, when MW>200 Dalton			
Particles and bacteria rejection rate	>99%			
Feed water requirements	Tap water, temperature:5-45℃,pressure:1.0-4.0Kgf/cm^2			
Dimension and weight	Length×Width×Height:500×360×540mm / Weight: about 20Kg			
Electrical requirements	AC110-240V, 50/60Hz			
Power	120W			
Standard configuration	Main body *(Including 1 set of cartridge)*+15 liters pressure tank			

Remarks:

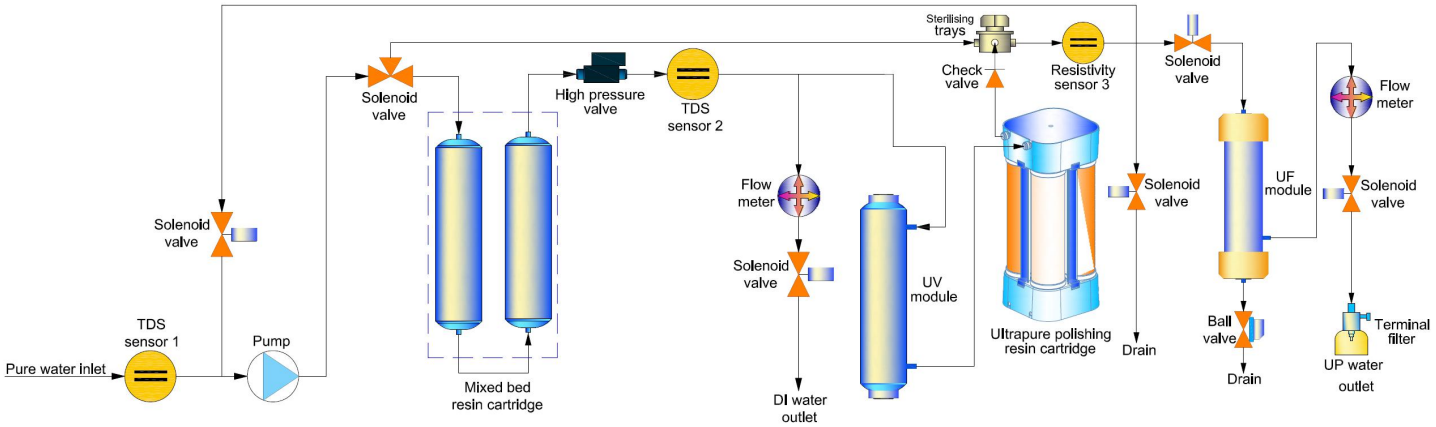
*The value will be influenced by temperature and feed water's quality.

Master Touch-D series *ultrapure* water system *(Distilled water inlet)*

With 5.0 inch touch screen system, 3 way water quality sensor, 2 way flow sensor for quantified dispensing and 1 pump, ***Master Touch-D*** series ***ultrapure water system*** is ***superior choice*** of ultrapure water for high grade experiments.

With pure water or distilled water inlet, its output is up to 2 liters/minute. It can produce ***deionized water*** and ***ultrapure water***. The deionized water's resistivity is above 5MΩ.cm, and the ultrapure water's resistivity absolutely reaches to 18.2MΩ.cm. It completely meets the highest grade I standard of *ASTM, CAP, CLSI, EP* and *USP*.

Flow Schematic



Specifications

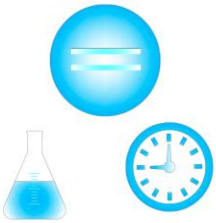
Model	Standard	Eliminating endotoxin	Low TOC	Synthesizing
	Master Touch-D	Master Touch-DUF	Master Touch-DUV	Master Touch-DUVF
Output	Up to 2 liters/minute *(less output with UF cartridge)*			
Pure water outlet	2: deionized water, ultrapure water			
Ultrapure water quality				
Resistivity(25℃)	18.2MΩ.cm			
TOC*	<10ppb	<10ppb	<3ppb	<3ppb
Bacteria	<0.1cfu/ml			
Particle(>0.1μm)	<1/ml			
Endotoxin	N/A	＜0.001Eu/ml	N/A	＜0.001Eu/ml
RNases	N/A	<0.01ng/ml	N/A	<0.01ng/ml
DNases	N/A	<4pg/μl	N/A	<4pg/μl
Deionized water quality				
Resistivity(25℃)	>5MΩ.cm			
Feed water requirements	RO water, distilled water, deionized water, 5-45℃,1atm*			
Dimension and weight	Length×Width×Height:500×360×540mm / Weight: about 18Kg			
Electrical requirements	AC110-240V, 50/60Hz			
Power	120W			
Standard configuration	Main body *(Including 1 set of cartridge)*			

Remarks:

*The value will be influenced by temperature and feed water's quality.

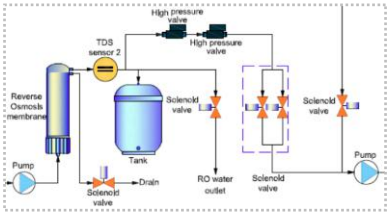
Master series water purification system

- **LCD controlling system**
  - Display system running status and real-time parameters



- **Comprehensive monitoring system**
  - 3 water quality sensor
  - Timing and quality dispense

- **Easy-to-replacing cartridge**
  - Independent pretreatment design, and integrated subsequent purification unit design, with fast inserted adapters, easy to replace



- **Single stage RO and 2 pumps system**
  - 1st pump, to achieve single stage RO system, easy to maintain.
  - 2nd pump, to achieve system sanitizing and circulation.

Features and Advantages

Master series is the sole leading brand of Chinese Good Instrument in lab water area. It is the most representative products in Chinese lab water market.

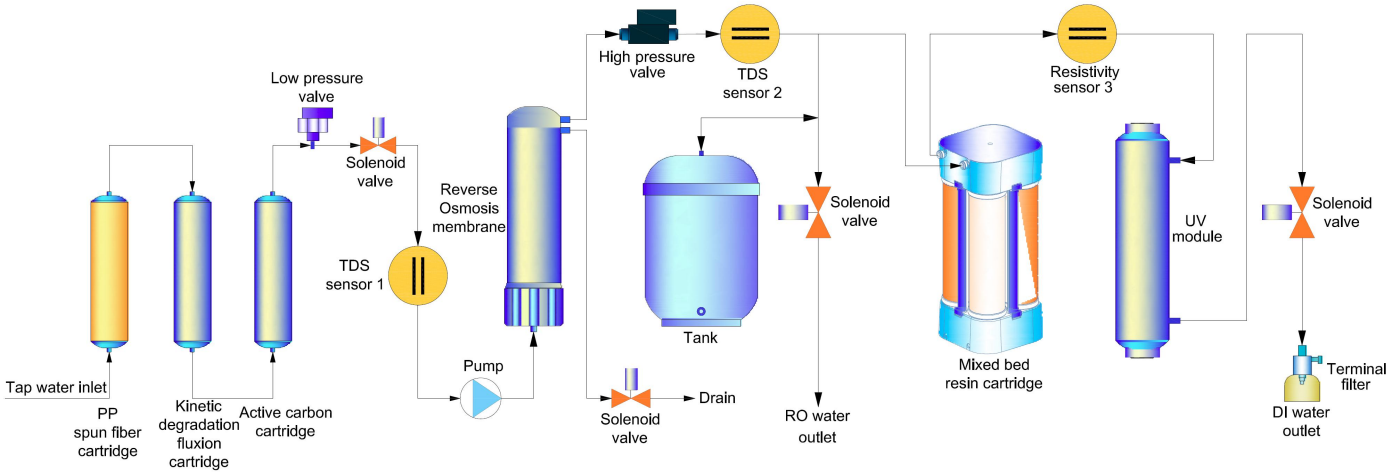
- LCD *(resolution: 240×128, dimension: 106×57mm)* controlling system, intuitively display the system running state and various parameters.
- 3 way online water quality sensor, detect the quality of *feed water, RO water, deionized water*, or *ultrapure water* respectively. And warn once water quality's standard exceeding.
- Cartridges replacing alarm function, based on time and water quality, show cartridges' used and residual life.
- Multiple alarm function: no feed water, full water, water quality's standard exceeding, and cartridge life ending.
- Auto self-flushing of RO membrane function, extend RO membrane's life.
- Auto running data storing function through RS232/USB communication port to computer for 1 year at least ***(optional)***.
- System sanitizing procedure, achieve the disinfection of ultrapure water's tube and valve.
- System circulation function, achieve ultrapure water's circulation to keep top quality of ultrapure water.
- Level II password, protect all the parameters setting, and prohibit any unauthorized setting change.
- Water dispensing function- timing and quality *(time range: 1-99min, water quality range: 0.1-18.2MΩ.cm)*.
- External water tanks is optional to meet different need and assure ample water-supply.
- Whole plastic shell with high-strength, avoid rusting and keep clean, to meet GLP standard.
- 3 door and easy-to-replacing cartridge design, convenient to maintain system and replace cartridges.
- Tube and adapter with NSF authorization and top quality, reduce TOC level and assure ultrapure water's quality.
- Optimized pretreatment *(including PP fiber, KDF and active carbon cartridge)*, effectively protect RO membrane.
- RO module with DOW's membrane, ensure long life, stable operation and high desalinization rate.
- 4 in 1 ultrapure cartridge *(can be divided to 4 independent cartridge)* with DOW's top polishing resin, ensure ultrapure water's quality up to 18.2 MΩ.cm, with the lowest TOC level.
- Double wavelength *(185&254nm)* ultraviolet lamp module, restrain bacteria's increase and reduce TOC.
- MWCO 5000D ultrafiltration module, effectively eliminate endotoxin, and suitable for precise cell cultivating and IVF.
- *(0.45+0.1)*μm double layer PES terminal disinfection filter, assure that terminal pure water is absolutely axenic.

Master-Q series *deionized* water system *(Tap water inlet)*

With LCD controlling system, 3 way water quality sensor, timing and quality dispensing, single stage RO system and 1 pump, ***Master-Q*** series ***deionized water system*** is ***superior choice*** of deionized water for general grade experiments.

With tap water inlet, its output ranges from 15 to 30 liters/hour. It can produce ***single stage RO water*** and ***deionized water***. The single stage RO water's ion rejection rate is more than 96%, and the deionized water's resistivity is more than 16MΩ.cm, near to18.2MΩ.cm. It completely meets the requirements of general chemical or biological experiments for pure water.

Flow Schematic



Specifications

Model	Master-Q15	Master-Q15UT	Master-Q30	Master-Q30UT
Output(25℃)*	15 liters/hour		30 liters/hour	
Flow rate	Up to 2 liters/minute *(with pressure tank)*			
Pure water outlet	2: reverse osmosis water, deionized water			
Deionized water quality				
Resistivity	16-18.2MΩ.cm			
Bacteria	N/A	<0.1cfu/ml	N/A	<0.1cfu/ml
Particle(>0.1μm)	N/A	<1/ml	N/A	<1/ml
RO water quality				
Ion rejection rate	96%-99% *(new RO membrane)*			
Organic rejection rate	>99%, when MW>200 Dalton			
Particles and bacteria rejection rate	>99%			
Feed water requirements	Tap water, temperature:5-45℃,pressure:1.0-4.0Kgf/cm^2			
Dimension and weight	Length×Width×Height:500×360×540mm / Weight: about 20Kg			
Electrical requirements	AC110-240V, 50/60Hz			
Power	120W			
Standard configuration	Main body *(Including 1 set of cartridge)*+15 liters pressure tank			

Remarks:

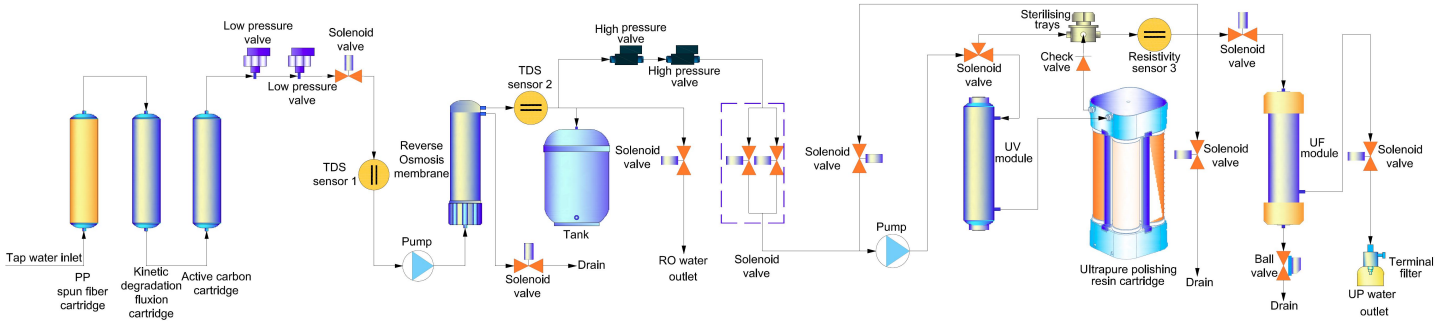
*The value will be influenced by temperature and feed water's quality.

Master-S series *ultrapure* water system *(Tap water inlet)*

With LCD controlling system, 3 way water quality sensor, timing and quality dispensing, single stage RO system and 2 pumps, ***Master-S*** series ***ultrapure water system*** is ***superior choice*** of ultrapure water for high grade experiments.

With tap water inlet, its output ranges from 15 to 30 liters/hour. It can produce ***single stage RO water*** and ***ultrapure water***. The single stage RO water's ion rejection rate is more than 96%, and the ultrapure water's resistivity absolutely reaches to 18.2MΩ.cm. It completely meets the highest grade I standard of *ASTM, CAP, CLSI, EP* and *USP*.

Flow Schematic



Specifications

Model	Standard	Eliminating endotoxin	Low TOC	Synthesizing
	Master-S15	Master-S15UF	Master-S15UV	Master-S15UVF
	Master-S30	Master-S30UF	Master-S30UV	Master-S30UVF
Output(25℃)*	***15series***-15 liters/hour, ***30 series***-30 liters/hour			
Flow rate	Up to 2 liters/minute *(with pressure tank)*			
Pure water outlet	2: reverse osmosis water, ultrapure water			
Ultrapure water quality				
Resistivity(25℃)	18.2MΩ.cm			
TOC*	<10ppb	<10ppb	<3ppb	<3ppb
Bacteria	<0.1cfu/ml			
Particle(>0.1μm)	<1/ml			
Endotoxin	N/A	＜0.001Eu/ml	N/A	＜0.001Eu/ml
RNases	N/A	<0.01ng/ml	N/A	<0.01ng/ml
DNases	N/A	<4pg/μl	N/A	<4pg/μl
RO water quality				
Ion rejection rate	96%-99% *(new RO membrane)*			
Organic rejection rate	>99%, when MW>200 Dalton			
Particles and bacteria rejection rate	>99%			
Feed water requirements	Tap water, temperature:5-45℃,pressure:1.0-4.0Kgf/cm^2			
Dimension and weight	Length×Width×Height:500×360×540mm / Weight: about 20Kg			
Electrical requirements	AC110-240V, 50/60Hz			
Power	120W			
Standard configuration	Main body *(Including 1 set of cartridge)*+15 liters pressure tank			

Remarks:

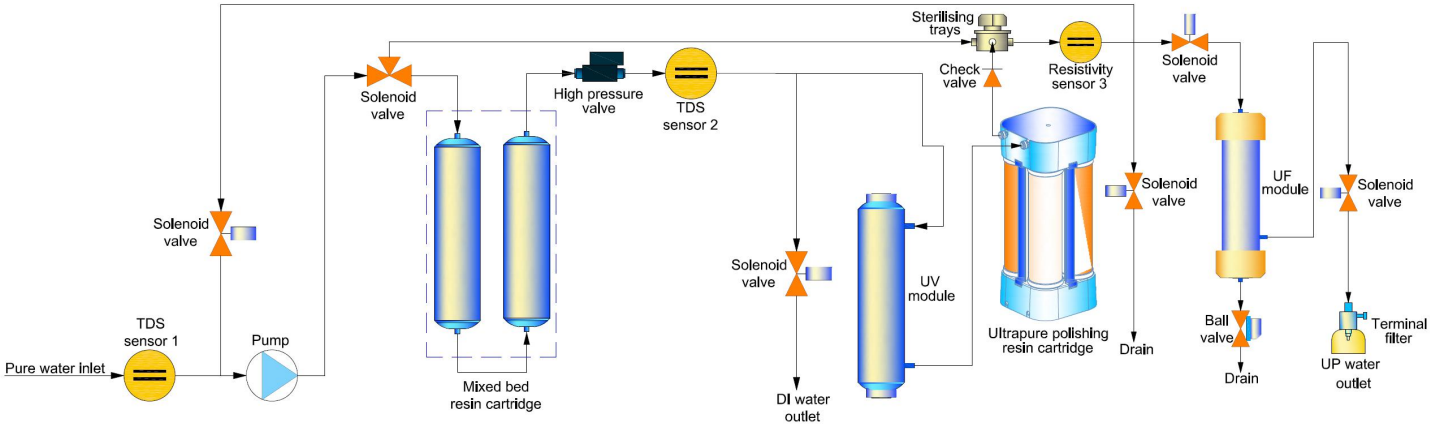
*The value will be influenced by temperature and feed water's quality.

Master-D series *ultrapure* water system *(Distilled water inlet)*

With LCD controlling system, 3 way water quality sensor, timing and quality dispensing and 1 pump, ***Master-D*** series ***ultrapure water system*** is ***superior choice*** of ultrapure water for high grade experiments.

With pure water or distilled water inlet, its output is up to 2 liters/minute. It can produce ***deionized water*** and ***ultrapure water***. The deionized water's resistivity is above 5MΩ.cm, and the ultrapure water's resistivity absolutely reaches to 18.2MΩ.cm. It completely meets the highest grade I standard of *ASTM, CAP, CLSI, EP* and *USP*.

Flow Schematic



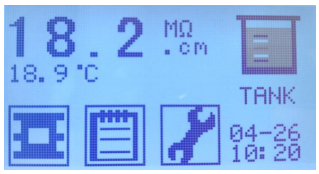
Specifications

Model	Standard	Eliminating endotoxin	Low TOC	Synthesizing
	Master-D	Master-DUF	Master-DUV	Master-DUVF
Output	Up to 2 liters/minute *(less output with UF cartridge)*			
Pure water outlet	2: deionized water, ultrapure water			
Ultrapure water quality				
Resistivity(25℃)	18.2MΩ.cm			
TOC*	<10ppb	<10ppb	<3ppb	<3ppb
Bacteria	<0.1cfu/ml			
Particle(>0.1μm)	<1/ml			
Endotoxin	N/A	＜0.001Eu/ml	N/A	＜0.001Eu/ml
RNases	N/A	<0.01ng/ml	N/A	<0.01ng/ml
DNases	N/A	<4pg/μl	N/A	<4pg/μl
Deionized water quality				
Resistivity(25℃)	>5MΩ.cm			
Feed water requirements	RO water, distilled water, deionized water, 5-45℃,1atm*			
Dimension and weight	Length×Width×Height:500×360×540mm / Weight: about 18Kg			
Electrical requirements	AC110-240V, 50/60Hz			
Power	120W			
Standard configuration	Main body *(Including 1 set of cartridge)*			

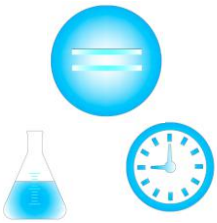
Remarks:

*The value will be influenced by temperature and feed water's quality.

Eco series water purification system



- **LCD controlling system**
  - Display system running status and real-time parameters



- **Comprehensive monitoring system**
  - 2 water quality sensor
  - Timing and quality dispense

- **Built-in water tanks and 1 pump**
  - Built-in 12 liters airtight plastic pressure water tank, save more lab space.
  - 1st pump, to achieve single stage RO system, easy to maintain.

- **Easy-to-replacing cartridge**
  - Independent pretreatment design, and integrated subsequent purification unit design, with fast inserted adapters, easy to replace.

Features and Advantages

Eco series is ***simplified*** on the basis of ***Master series***, which is the sole leading brand of Chinese Good Instrument in lab water area. It is the most representative products in Chinese lab water market.

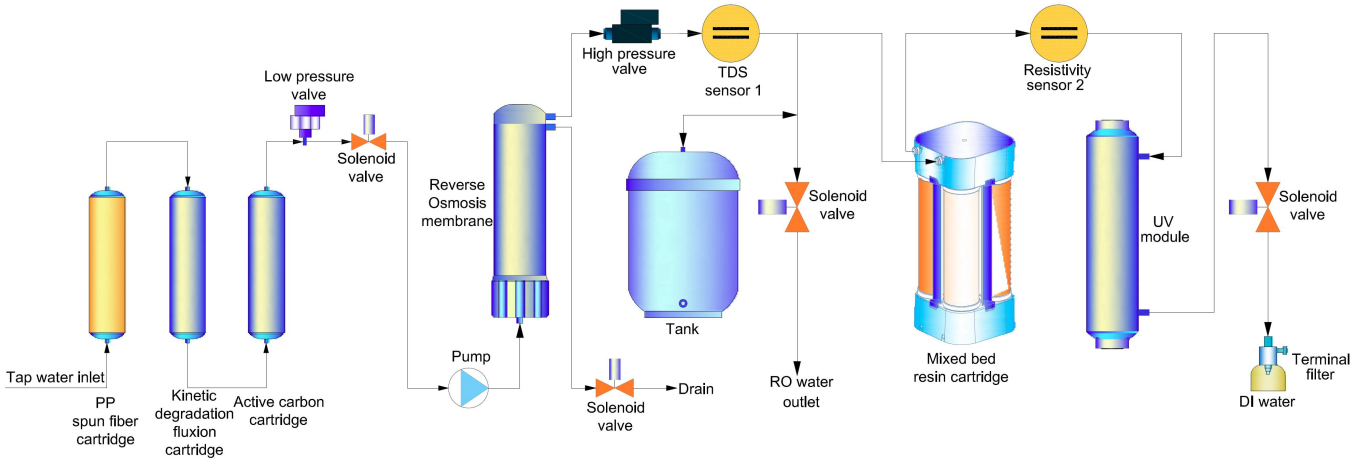
- LCD *(resolution: 128×64, dimension: 66×33mm)* controlling system, intuitively display the system running state and various parameters.
- 2 way online water quality sensor, detect the quality of *RO water, deionized water*, or *ultrapure water* respectively. And warn once water quality's standard exceeding.
- Cartridges replacing alarm function, based on time and water quality, show cartridges' used and residual life.
- Multiple alarm function: no feed water, full water, water quality's standard exceeding, and cartridge life ending.
- Auto self-flushing of RO membrane function, extend RO membrane's life.
- Level II password, protect all the parameters setting, and prohibit any unauthorized setting change.
- Water dispensing function- timing and quality *(time range: 1-99min, water quality range: 0.1-18.2MΩ.cm)*.
- System time setting *(year/month/day/hour/minute)*
- 3 kind of status lamp-running, alarm and full water, convenient to know system status.
- Built-in 12 liters pressure water tank, save laboratory space, easier for installation and maintenance.
- External water tanks is optional to meet different need and assure ample water-supply.
- Whole plastic shell with high-strength, avoid rusting and keep clean, to meet GLP standard.
- 3 door and easy-to-replacing cartridge design, convenient to maintain system and replace cartridges.
- Tube and adapter with NSF authorization and top quality, reduce TOC level and assure ultrapure water's quality.
- Optimized pretreatment *(including PP fiber, KDF and active carbon cartridge)*, effectively protect RO membrane.
- RO module with DOW's membrane, ensure long life, stable operation and high desalinization rate.
- 4 in 1 ultrapure cartridge *(can be divided to 4 independent cartridge)* with DOW's top polishing resin, ensure ultrapure water's quality up to 18.2 MΩ.cm, with the lowest TOC level.
- Double wavelength *(185&254nm)* ultraviolet lamp module, restrain bacteria's increase and reduce TOC.
- MWCO 5000D ultrafiltration module, effectively eliminate endotoxin, and suitable for precise cell cultivating and IVF.
- *(0.45+0.1)*μm double layer PES terminal disinfection filter, assure that terminal pure water is absolutely axenic.

Eco-Q series *deionized* water system *(Tap water inlet)*

With LCD controlling system, 2 way water quality sensor, timing and quality dispensing, single stage RO system,1 pump, and built-in 12 liters tank, ***Eco-Q*** series ***deionized water system*** is ***economic choice*** of deionized water for general grade experiments.

With tap water inlet, its output ranges from 15 to 30 liters/hour. It can produce ***single stage RO water*** and ***deionized water***. The single stage RO water's ion rejection rate is more than 96%, and the deionized water's resistivity is more than 16MΩ.cm, near to18.2MΩ.cm. It completely meets the requirements of general chemical or biological experiments for pure water.

Flow Schematic



Specifications

Model	Eco-Q15	Eco-Q15UT	Eco-Q30	Eco-Q30UT
Output(25℃)*	15 liters/hour		30 liters/hour	
Flow rate	Up to 2 liters/minute *(with pressure tank)*			
Pure water outlet	2: reverse osmosis water, deionized water			
Deionized water quality				
Resistivity	16-18.2MΩ.cm			
Bacteria	N/A	<0.1cfu/ml	N/A	<0.1cfu/ml
Particle(>0.1μm)	N/A	<1/ml	N/A	<1/ml
RO water quality				
Ion rejection rate	96%-99% *(new RO membrane)*			
Organic rejection rate	>99%, when MW>200 Dalton			
Particles and bacteria rejection rate	>99%			
Feed water requirements	Tap water, temperature:5-45℃,pressure:1.0-4.0Kgf/cm^2			
Dimension and weight	Length×Width×Height:340×500×560mm / Weight: about 18Kg			
Electrical requirements	AC110-240V, 50/60Hz			
Power	72W			
Standard configuration	Main body *(Including 1 set of cartridge)*+built-in 12 liters pressure tank			

Remarks:

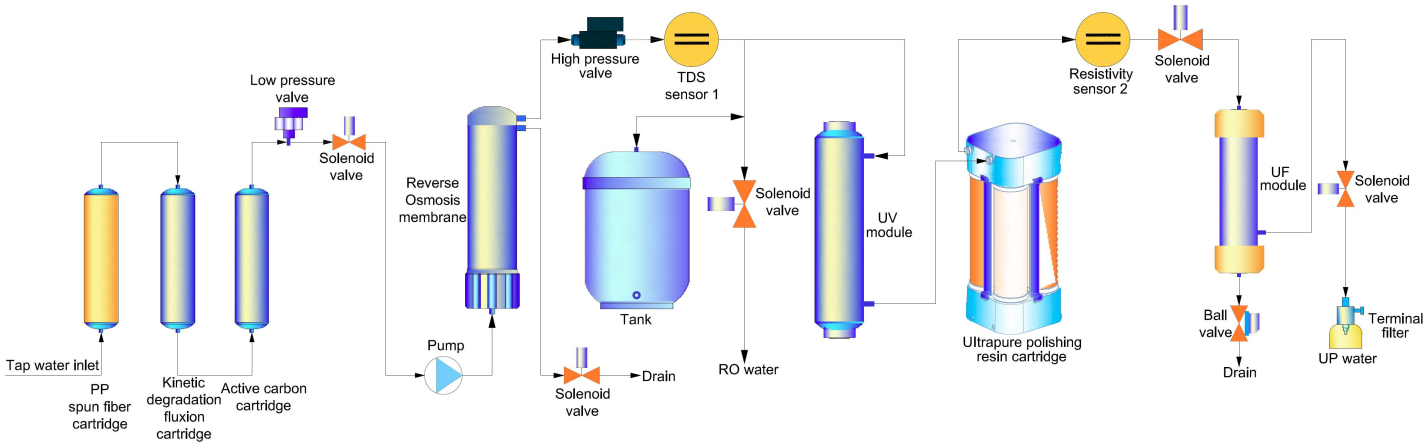
*The value will be influenced by temperature and feed water's quality.

Eco-S series *ultrapure* water system *(Tap water inlet)*

With LCD controlling system, 2 way water quality sensor, timing and quality dispensing, single stage RO system, 1 pump, and built-in 12 liters tank, ***Eco-S*** series ***ultrapure water system*** is ***economic choice*** of ultrapure water for high grade experiments.

With tap water inlet, its output ranges from 15 to 30 liters/hour. It can produce ***single stage RO water*** and ***ultrapure water***. The single stage RO water's ion rejection rate is more than 96%, and the ultrapure water's resistivity absolutely reaches to 18.2MΩ.cm. It completely meets the highest grade I standard of *ASTM, CAP, CLSI, EP* and *USP*.

Flow Schematic



Specifications

Model	Standard	Eliminating endotoxin	Low TOC	Synthesizing
	Eco-S15	Eco-S15UF	Eco-S15UV	Eco-S15UVF
	Eco-S30	Eco-S30UF	Eco-S30UV	Eco-S30UVF
Output(25℃)*	***15series***-15 liters/hour, ***30 series***-30 liters/hour			
Flow rate	Up to 2 liters/minute *(with pressure tank)*			
Pure water outlet	2: reverse osmosis water, ultrapure water			
Ultrapure water quality				
Resistivity(25℃)	18.2MΩ.cm			
TOC*	<10ppb	<10ppb	<3ppb	<3ppb
Bacteria	<0.1cfu/ml			
Particle(>0.1μm)	<1/ml			
Endotoxin	N/A	＜0.001Eu/ml	N/A	＜0.001Eu/ml
RNases	N/A	<0.01ng/ml	N/A	<0.01ng/ml
DNases	N/A	<4pg/μl	N/A	<4pg/μl
RO water quality				
Ion rejection rate	96%-99% *(new RO membrane)*			
Organic rejection rate	>99%, when MW>200 Dalton			
Particles and bacteria rejection rate	>99%			
Feed water requirements	Tap water, temperature:5-45℃,pressure:1.0-4.0Kgf/cm^2			
Dimension and weight	Length×Width×Height:340×500×560mm / Weight: about 18Kg			
Electrical requirements	AC110-240V, 50/60Hz			
Power	72W			
Standard configuration	Main body *(Including 1 set of cartridge)*+built-in 12 liters pressure tank			

Remarks:

*The value will be influenced by temperature and feed water's quality.

PWS pure water supply system

PWS series pure water supply system can combine with any brand's water purification system to supply pure water for specific equipment, for example, ***cleaning machine, biochemical analyzer, immunoassay analyzer, constant temperature*** and ***humidity chamber, salt spray test chamber, dampening machine, printing machine, laser engraving machine, cooling device*** and etc. It also could be used for the central water supply.

PWS I:

Suitable for short distance and small amount of pure water's supply;

PWS II:

Suitable for long distance and large amount of pure water's supply.

Features and Advantages

- Independent power control and automatic operation, easy to install, use and maintain;
- Integrate level control, pressure pump, buffer tank and inlet valves together;
- It is unnecessary to connect to the circuit of pure water main-body. It can run automatically according to liquid lever of the tank.
- Optional UV lamp module, to restrain bacteria's increase and reduce TOC.

Specifications

Model		PWS I-T100R-P12-3G ①	PWS -200S-4008 ②
Shape & volume of tank		Roundness: 100, 200 liters Square:80,120, 200 liters	Roundness: 500, 1000, 2000 liters Square: 200 liters
Material of tank		HDPE (High-density polyethylene)	
Specifications of pump	Maximum flow rate	3, 5, 7, 10, 12 liters/min (Optional)	70, 100 liters/min (Optional)
	Vertical self-priming height	2 meters	2 meters
	The rated stop pressure	0.45Mpa±0.4Mpa	0.3Mpa±0.4Mpa, 0.35Mpa±0.4Mpa
	Max pressure/pump lift	About 0.8Mpa/80meters	About 0.3Mpa/30meters, About 0.35Mpa/35 meters
	Volume of buffer tank	12 liters	1 liter

Remarks:

① Introduction of PWS I-T100R-P12-3G: "T100"-volume of tank:100 liters, "R"-shape of tank: roundness, "P12"-flow rate:12 liters/min, "3G"-volume of buffer tank: 3 gallon

② Introduction of PWS II-T200S-4008: "T200"-volume of tank: 200 liters, "S"-shape of tank: square, "4008"-flow rate:70 liters/min.

Extension parts for water purification system

The system integrate extra pretreatment filter, tank, large capacity polishing cartridge, water dispenser and other parts, help user save lab room. The bottom of system has 4 wheels, it could be moved to anywhere easily.

Extra pretreatment:
Including: PP spun fiber filter, water softener filter, KDF filter, dislodge granular, residual chlorine, organics, heavy metal in case of scaling, bacterial growth and hard water.

Built-in polishing resin cartridge:
The capacity is 12 liter, ensure the resistivity is more than 10MΩ.cm, and it can produce about 20000 liters water.

Built-in tank
Built-in 2 pressure water tank (15 liters/tank), to save more lab space.

Pure water dispenser:
With extension tube (3 meters) to get pure water easily. Terminal filter is optional to remove bacteria and particles.

Humanized tray
All kinds of lab containers and ware glass could be put on the tray

Portable on-line resistivity monitor
With dry cell & AC100-240V design, to measure the pure water's resistivity easily anywhere.

Item	Commodity	Description
HT-EP	Main body: Extension part	-
PF-10T-PRK	Optional: 10" triple filter (PP+DI+KDF)	Including: 10" spun fiber PP filter,10" water softener filter,10" KDF filter
PTC-MBR-12L	Optional: 12 liters mixed bed resin cartridge	Lifetime: about 20'000 liters pure water
TANK-P-15L	Optional: Pressure tank	To store RO water, capacity:15 liters
DG-PTFE	Optional: PTFE water dispenser	Material of dispenser: PTFE, including PFA extension tube(1/4" 3M)
DG-PP	Optional: PP water dispenser	Material of dispenser: PP, including PP extension tube(1/4" 3M)
ORM-P	Optional: Portable on-line resistivity meter	Dry cell design or external power supply, to measure on-line resistivity

Medical series water purification system

Feed of biochemical analyzer

Features

With tap water inlet, to produce high pure water directly, meet the requirements of NCCLS/CAP standard. Provide professional pure water solutions for Clinical testing laboratory, clinical automatic analyzer and related laboratory.

Technic parameter

Output: 15-125 liters/hour
Resistivity: >10MΩ.cm

Typical application

Hitachi, Toshiba, Olympus, Roche, Beckmann, Abbott, Bayer, Mindray and etc.

Medical water of disinfection supply center, operating room

Features

The system uses multistage RO membrane technology, ultraviolet sterilization process, enclosed full automatic operation, and has automatic cycle disinfection function, keep the low level pollution of bacteria and good water quality.

Technic parameter

Output: 15-1000 liters/hour
Water quality: meet the requirements of pharmacopoeia standard, remove the peculiar smell, bacteria and particles.

Typical application

Used for disinfection supply center, operating room and other labs.

Industry series pure water system

Features

The system uses professional technological process and structural design, reasonable standard configuration, high quality components, ensure the high water quality.

Typical application

Lab water supply center, ultrasonic cleaning water, industry products coating water, boiler water, microelectronics and etc.

CARTRIDGES

Dura series

Item no.	Commodity	Replacement term/set
D-PP1	Pretreatment cartridge	About 2-6 months
D-AK	KDF+ granular active carbon mixed cartridge	About 12 months
D-AC2	Active carbon block cartridge	About 6 months
D-RO-75	75 GPD reverse osmosis membrane	About 12-24 months
D-RO-150	150 GPD reverse osmosis membrane	About 12-24 months
D-RO-200	200 GPD reverse osmosis membrane	About 12-24 months
D-Pocart4	Ultrapure polishing resin cartridge	About 5000 liters pure water
D-Decart	Mixed bed resin cartridge	About 5000 liters pure water
D-Uvlamp	(254&185) nm wavelength uv lamp	About 9000 hours
D-Ufcart	Eliminating endotoxin uf cartridge	-
D-Tefit	(0.45+0.1μm) terminal filter	-
D-SF	Water softener cartridge	
D-EDI10-IP	EDI module	About 1-3 years

Master Touch, Master, Eco series

Item	Commodity	Service life
PC-M-PP	5μm spun fiber cartridge	About 2-6 months
PC-M-KDF	KDF+ granular active carbon mixed cartridge	About 12 months
PC-M-AC-G	Granular active carbon cartridge	About 6 months
RO-100GPD	100 GPD reverse osmosis membrane	About 12-24 months
RO-150GPD	150 GPD reverse osmosis membrane	About 12-24 months
RO-200GPD	200 GPD reverse osmosis membrane	About 12-24 months
PTC-MBR-M	Mixed bed resin cartridge	About 1000 liters pure water/set
PTC-UPPR-M	Ultrapure polishing resin cartridge	About 1000 liters pure water/set
TF-(0.45+0.1)μm-S	(0.45+0.1)μm terminal filter	-
UF-5000D	MWCO5000D UF cartridge	-
LAMP-(185nm&254nm)-10W-M	Double wavelength(185&254)nm uv lamp	About 9000 hours
LAMP-254-10W-M	254 nm wavelength uv lamp	About 9000 hours
PTC-SF	Water softener cartridge	-
PTC-EDI10-IP	EDI module	About 1-3 years

Remarks:

- The quality of inlet water will effect cartridge's life.
- When inlet water's TDS>200ppm, Replace term of filter will be suggested to decrease, or outside pre-filter is added. Or water quality and life of ultrapure cartridge will be affected.

ACCESSORIES

Source water pretreatment filter

As for different regional source water, it can effectively eliminate the rust, sediment, colloid, suspended solids, soluble organic matter, residual chlorine, heavy metals, and prevent water scaling, inhibit microorganism growth, soften hard water, effectively protect the reverse osmosis host system.

Item	Commodity	Description
PF-10S/PF-20S	10”/20" single-stage filter	PP cartridge, soft water cartridge, AC cartridge or KDF cartridge (Optional)
PF-10D/PF-20D	10”/20” double-stage filter	PP cartridge, soft water cartridge, AC cartridge or KDF cartridge (Optional)
PF-10T/PF-20T	10”/20” triple-stage filter	PP cartridge, soft water cartridge, AC cartridge or KDF cartridge (Optional)
PC-10PP/PC-20PP	10”/20” PP cartridge	Eliminate the rust, sediment, colloid, suspended solids
PC-10AC-G/PC-20AC-G	10”/20” AC cartridge	Eliminate soluble organic matter, residual chlorine
PC-10RS/PC-20RS	10”/20” soft water cartridge	Eliminate Ca^{+}, Mg^{+} ion, reduce the index of water hardness
PC-10KDF/PC-20KDF	10”/20” KDF cartridge	Eliminate soluble organic matter, residual chlorine, heavy metals, and prevent water scaling, inhibit microorganism growth, soften hard water
HT-QZ-FF06E	Stainless steel flush filter	Eliminate the particles, sediment, colloid, suspended solids and can be used for the pretreatment of the groundwater, water of well and rivers

Automatic reborn water softener

Applications

Eliminate Ca^{2+} and Mg^{2+}, reduce the hardness of feed water, prevent RO membrane from scaling, and prolong the service life of RO membrane, polishing resin cartridge and EDI module.

Principle

Sodium type cation resin replace Ca^{2+} and Mg^{2+}

Features

Fast-plug connectors are easy to install, operate and maintain, intelligent control valve, realize softening water and resin rebirth. The ion exchange resin is food grade and the resin tank is glass fiber reinforced plastics. The case is made by injection molding, and it doesn’t need external tank, very easy to operate.

Item	HT-Autosoftener-817	HT-Autosoftener-835
Working capacity①	0.5-0.8m^3	1.0-1.5m^3
Working temperature	5-38℃	5-38℃
Working pressure	0.15-0.6Mpa	0.15-0.6Mpa
Caliber of inlet and outlet	3/4"	3/4"
Material of main body	0817	0835
Capacity of resin	7.5L	16.5L
Total continuous softening capacity②	2.0m^3	5.0m^3
Hardness of outlet	≤0.6mmol/L	≤0.6mmol/L
Electronics supply	220V, 50Hz	
Dimension (Lx Wx H)	30×46×62cm	30×43×110cm
Applicable pure water system type	Table type	Floor-stand type

Remarks:

① The testing pressure differential of working capacity is 0.3 Mpa. The actual capacity depends on the pressure,

② Total continuous softening capacity is calculated by feed water hardness: 150mg/L. The actual capacity depends on feed water hardness.

Large capacity resin cartridge

Low running cost, large pure water capacity. The resin, made by DOW (USA brand), combining with HHitech proprietary technology, removes the trace inorganic ion. The resistivity could reach to 18.2MΩ.cm.

Item	Commodity	Description
PTC-MBR-10S	10" mixed bed resin filter	Including: 10" filter+10" mixed bed resin cartridge (0.55L resin)
PTC-MBR-7.7L	7.7l mixed bed resin cartridge	Including:7.7L precise resin, lifetime: about 16000 liters pure water
PTC-MBR-12L	12l mixed bed resin cartridge	Including:12L precise resin, lifetime: about 20000 liters pure water
PTC-UPPR-12L	12l ultrapure polishing resin cartridge	Including:12L polishing resin, lifetime: about 20000 liters pure water
PTC-MBR-25L	25l mixed bed resin cartridge	Including:25L precise resin, lifetime: about 40000 liters pure water
PTC-UPPR-25L	25l ultrapure polishing resin cartridge	Including:25L polishing resin, lifetime: about 40000 liters pure water

Pure water tank

Pressure tank

Pressure tank's lining is made of double butyl, and it is certified by FDA. It can prevent CO_2 and other pollutant to enter into pure water. Its maximum capacity is 100 liters. Moreover its maximum pressure can reach to 0.3Mpa. It means that pure water can be supplied to point of use by pressure tank without any additional boost pump.

PE tank with liquid level switch

Material: HDPE, with liquid level control, can connect to pure water host.

Item	Commodity	Description
TANK-P-10L	10L plastic pressure tank	Capacity: 10 liters
TANK-P-15L	15L plastic pressure tank	Capacity: 15 liters
TANK-P-40L	40L steel pressure tank	Capacity: 40 liters
TANK-P-75L	75L steel pressure tank	Capacity: 75 liters
TANK-P-100L	100L Steel pressure tank	Capacity: 100 liters
TANK-LLS-50L	50L PE tank with liquid level control	Material: PE, capacity: 50L, 2 point liquid level control, bottom water faucet
TANK-LLS-100L	100L PE tank with liquid level control	Material: PE, capacity: 100L,2 point liquid level control
TANK-LLS-200L	200L PE tank with liquid level control	Material: PE, capacity: 200L, 2 point liquid level control

Ultrapure water tank

Applications:

Store high pure water and ultrapure water

Features:

It is made by blow molding, and the material is PE. There is no adhesives and surfactant. The seal ring could prevent air to enter into tank, and large cover is convenient to clean tank. Pure PE material avoids impurities' separating out. The smooth internal surface can restrain bacteria's breeding. The inlet is at the bottom of tank, reducing absorbing of CO_2. Conical bottom could discharge all the water from the bottom, and it can assure complete cleaning of the tank (There is a drain valve in the bottom). Air filter could absorb CO_2 and organics, and eliminate bacteria and particles. UV lamp could restrain bacteria's increase and reduce TOC.

Item	Commodity	Description
TANK-UPW-50L	Ultrapure water tank	Capacity: 50 liters
AIR FILTER-B2008	Air filter	Absorb CO_2 and organics, and eliminate bacteria and particles
UV-254-10W-Immerse	Immersing UV lamp (254nm)	Restrain bacteria's increase and reduce TOC.

Long-distance water dispenser

As for different pure water's requirement, 2 kinds of dispensers (material: PTFE and PP) and extension tube (material: PFA and PP) are optional. Getting water within 3 meters with 1 extension tube. Moreover, 0.22μm terminal filter could be added onto the end of dispenser, to eliminate bacteria and particles.

Item	Commodity	Description
DG-PTFE	PTFE water dispenser	Including: PFA extension tube, diameter:1/4",length: 3meters
DG-PP	PP water dispenser	Including PP extension tube, diameter:1/4",length: 3meters

Terminal filter

0.2μm and (0.45+0.1)μm, 2 kinds of terminal filters are optional. Material is PES membrane, to install it on the end point of use, to eliminate bacteria and particles effectively.

Item	Commodity	Description
TF-0.2μm-B	0.2μm terminal filter	PES membrane, pore size: 0.2μm
TF-(0.45+0.1)μm-S	(0.45+0.1)μm terminal filter	PES membrane, pore size: 0.45μm and 0.1μm

Portable on-line resistivity monitor TDS/conductivity test pen

Portable on-line resistivity monitor:
With dry cell & AC100-240V design, to measure the pure water's resistivity easily anywhere.
TDS/conductivity test pen: Dry cell design, to test TDS (ppm), conductivity (μs/cm) and temperature (℃, ℉) easily anywhere.

Item	Commodity	Description
ORM-P	Portable on-line resistivity monitor	Dry cell & AC100-240V design
TDS pen-1	TDS/conductivity test pen	Dry cell design, built-in 2 pieces of button cell, range: 0-1999ppm

Inlet/outlet pressure valve

Inlet pressure valve: Reduce the feed water's pressure, meet the requirements of RO system's inlet pressure.
Outlet pressure valve: Reduce the outlet pressure, meet the requirements of external equipment's inlet pressure. 8mm metric fast-plug is standard configuration.

Item	Commodity	Description
PA-IN	Inlet pressure valve	Including: pressure regulator, connector and tube
PA-OUT	Outlet pressure valve	Including: pressure regulator, connector and tube

Leakage protection system

Once water leakage occurs, system will close inlet valve to cut off water supply, and alarm for checking. Leakage situation disappear, just one reset button is ok.

Item	Commodity	Description
LKA-FLQF-220V	Leakage protection system	Including: main valve body, transformer and leakage sensor

Sanitizing tablets

Effervescent tablets design, dissolved in water fast, disinfect the ultrapure water tube. Also, suitable for other lab goods.

Item	Commodity	Description
Sanitizing tablets	Sanitizing tablets	20 effervescent tablets each bottle

Pure water knowledge

Water contaminants

Natural water contains five major classes of contaminants that are also present in tap water.
Inorganic Ions: Inorganic ions commonly present in tap water are cations, such as sodium, calcium, magnesium or iron, and anions, such as bicarbonate, chloride and sulfate. Many other ions can be present depending on the water source. Inorganic ions, even at trace levels, may affect both organic and biochemical reactions by acting as catalysts.
Organics: Dissolved organic molecules present in tap water are mainly of biological origin. Molecules including humic acids, tannins, and lignin are the by-products of the decay of plants. However, man-made contaminants may be introduced by the pipes carrying the water. For example, PVC pipes may leak their phthalate esters plasticizers into the water. Dissolved organics can affect biological experiments such as cell culture and disturb analytical techniques. Even moderate organic contamination present in water used to prepare Liquid Chromatography eluents can cause baseline instability and decrease sensitivity and resolution, therefore decreasing chromatography column lifetime.
Particulates and Colloids: Natural water usually contains soft particulates (vegetal debris) and hard particulates (sand, rock) as well as colloids that can interfere with instrument operation.
Bacteria and their By-Products: Bacteria contaminate natural water, especially surface water. The chlorination process will ensure removal of harmful bacteria, but tap water still contains live micro-organisms. Bacteria can cause different issues in laboratory experiments either directly or through their by-products, such as pyrogens, nucleases or alkaline phosphatase.
Gases: Natural water contains dissolved gases such as nitrogen, oxygen and carbon dioxide. The concentration of oxygen can affect specific biochemical reactions and nitrogen can form bubbles that are detrimental to processes such as particulate counting or spectrophotometric measurements.

Water purification methods

1,Distillation, 2, Ion Exchange, 3, Activated Carbon, 4, Microporous Filters, 5, Ultrafiltration, 6. Reverse Osmosis, 7, Elix Continuous Deionization, 8, Ultraviolet (UV) Radiation

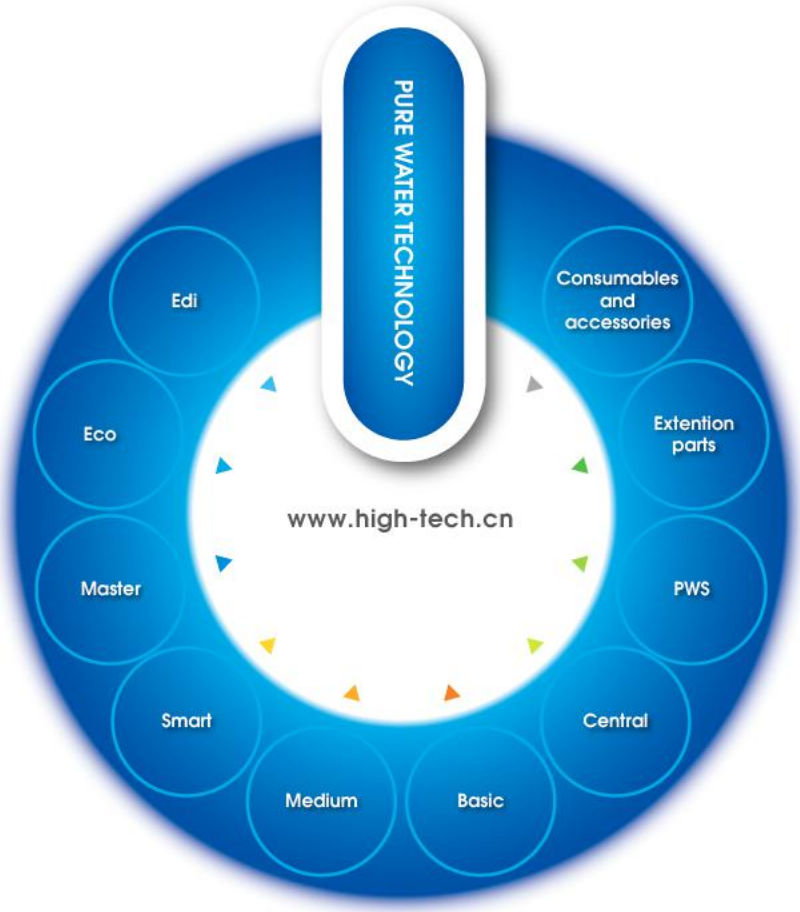
Laboratory Water Grades

Type III water is the lowest laboratory water grade, recommended for glassware rinsing, heating baths and filling autoclaves, or to feed Type 1 lab water systems.
Type II water is the grade used in general laboratory applications such as buffers, pH solutions and microbiological culture media preparation; as feed to Type 1 water systems, clinical analyzers, cell culture incubators and weatherometers; and for preparation of reagents for chemical analysis or synthesis.
Type I water is the grade required for critical laboratory applications such as HPLC mobile phase preparation, blanks and sample dilution in GC, HPLC, AA, ICP-MS and other advanced analytical techniques; preparation of buffers and culture media for mammalian cell culture and IVF; production of reagents for molecular biology applications (DNA sequencing, PCR); and preparation of solutions for electrophoresis and blotting.

The general pure water standard

Different published norms define the quality required for specific laboratory water applications: ASTM® and ISO® 3696 for laboratory applications; CLSI guidelines for clinical laboratories. Some laboratories will also use norms defined in the European or the US Pharmacopoeia.
The table below outlines the different water specifications based on the different water types:

Contaminant	Parameter and unit	Type 3	Type 2	Type 1
Ions	Resistivity (MΩ•cm @ 25°C)	>0.05	>1.0	>18.0
Organics	TOC (ppb)	<200	<50	<10
Pyrogens	(Eu/ML)	NA	NA	<0.03
Particulates	Particulates > 0.2 µm (units/mL)	NA	NA	<1
Colloids	Silica (ppb)	<1000	<100	<10
Bacteria	Bacteria (cfu/mL)	<1000	<100	<1



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Hitech Instruments Co., Ltd.
Tel: +86 21 5779 5001
Fax: +86 21 5779 5003
Web: www.high-tech.cn

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