CE Certified by ISO9001
Certified by ISO14001

HHitech
Pure water technologies

Smart

Water purification system

Smart water purification system

Models:

Smart-RO15 / 30
Smart-Q15 / 30
Smart-Q15 / 30UT
Smart-S15 / 30
Smart-S15 / 30UF
Smart-S15 / 30UV
Smart-S15 / 30UVF
Smart-D
Smart-DUF
Smart-DUV
Smart-DUVF

Smart series, the smallest and most compact lab water system from tap to ultrapure water, integrating pretreatment, RO, DI, UV, UF and terminal filter into one.

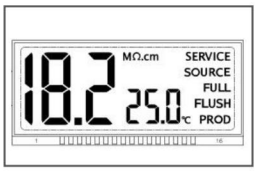
With injection molding process case, single stage RO system, 1 pump, portable TDS test pen and on-line resistivity monitor, its output ranges from 15 to 30 liters/hour with tap water inlet. And with distilled water inlet, its output is up to 2 liters/minute.

With tap water inlet, it can produce single stage RO water, deionized water and ultrapure water. And with distilled water inlet, it can produce deionized water and ultrapure water.

The single stage RO water's Ion rejection rate is more than 97%. 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.

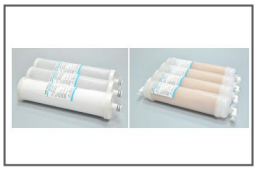
Injection molding process case

- Whole case with injection molding process
- The smallest and most compact lab water system from tap to ultrapure water, integrating pretreatment, RO, DI, UV, UF and terminal filter into one



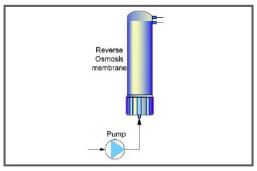
Micro-computer control system with LCD display

- LCD controlling system, intuitively display the system running state and various parameters.



Easy-to-replacing cartridge

- Independent cartridges design, with fast adapters, easy to replace, and running in low cost.



Single stage RO and 1 pump system

- 1st pump, to achieve single stage RO system, easy to maintain.

Whole plastic shell with high-strength

- Excellent ergonomic design, avoid rusting and keep clean, to meet GLP standard.

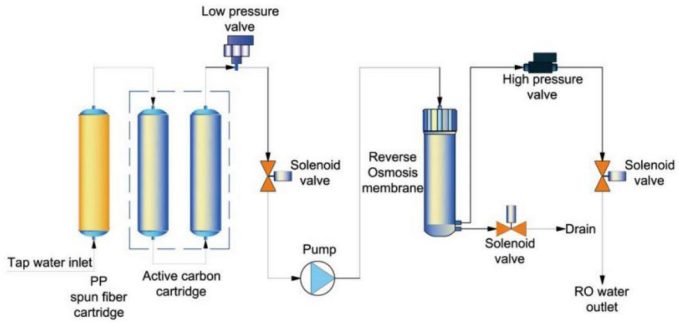
- Top cap of pretreatment in the case can be rapidly opened to replace the cartridges without opening the case.
- System automatically works, with electronic pressure sensor and microcomputer controlling.
- Automatic stop without water, automatic stop when water tank full, automatically cutting off water when pump stopping, guaranteeing 24 hours' work.
- Auto self-flushing of RO membrane function, extend RO membrane's life.
- External water tanks is optional to meet different need and assure ample water-supply.
- Tube and adapter with NSF authorization and top quality, reduce TOC level and assure ultrapure water's quality.
- Long life pretreatment (including PP fiber, and active carbon cartridge), effectively protect RO membrane.
- RO module with DOW's membrane, ensure long life, stable operation and high desalinization rate.
- 4 independent ultrapure cartridges with DOW's top polishing resin, ensure ultrapure water's quality up to 18.2 MΩ.cm, with the lowest TOC level and running cost.
- 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.

Smart-RO series reverse osmosis water system (tap water inlet)

With injection molding process case, single stage RO system, 1 pump, and portable TDS test pen, Smart-RO series reverse osmosis water system is **economic choice** of RO water for general glassware washing.

With tap water inlet, its output ranges from 15 to 30 liters/hour. It can produce **single stage RO water**. The single stage RO water's ion rejection rate is more than 97% (new RO membrane), organic rejection rate>99% (when mw>200 Dalton), particles and bacteria rejection rate>99%. It is suitable for glassware washing, feed of ultrapure water system, autoclave sterilizer, constant temperature and humidity chamber, salt spray test chamber, dampening machine and etc.

Flow Schematic



Specifications

Model	Smart-RO15	Smart-RO30
Output(25℃)*	15 liters/hour	30 liters/hour
Flow rate	Up to 2 liters/minute (with pressure tank)	
Pure water outlet	1: reverse osmosis water	
RO water quality		
Ion rejection rate	97%-99% (new RO membrane)	
Organic rejection rate	>99%, when MW>200 Dalton	
Particles and bacteria rejection rate	>99%	
Bacteria	<0.1cfu/ml (with optional 0.45+0.1μm PES terminal filter)	
Particle(>0.1μm)	<1/ml (with optional 0.45+0.1μm PES terminal filter)	
Feed water requirements	Tap water, temperature:5-45℃,pressure:1.0-4.0Kgf/cm^2	
Dimension and weight	Length×Width×Height:410×220×420mm / Weight: about 16Kg	
Electrical requirements	AC100-240V, 50/60Hz	
Power	48W	72W
Standard configuration	Main body (Including 1 set of cartridge)+15 liters pressure tank+ TDS/conductivity test pen	

Remarks:

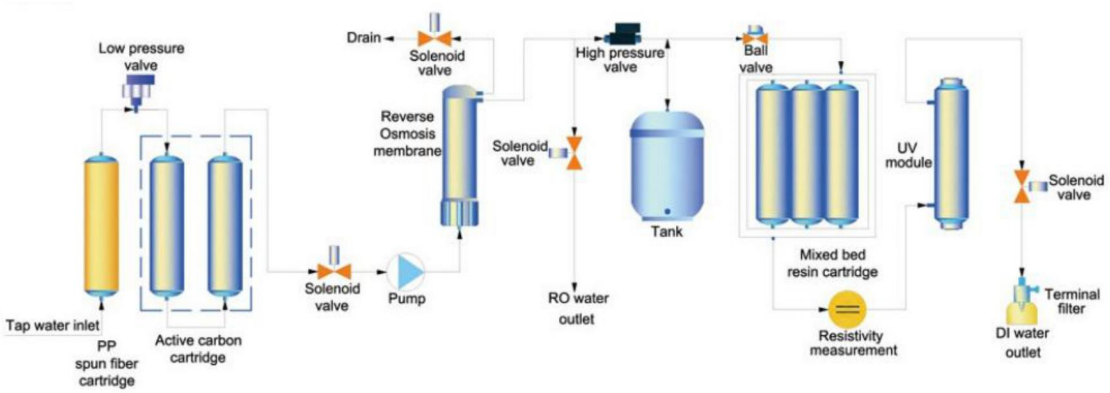
*The value will be influenced by temperature and feed water's quality.

Smart-Q series deionized water system (tap water inlet)

With injection molding process case, single stage RO system, 1 pump, portable TDS test pen and on-line resistivity monitor, Smart-Q series deionized water system is **sub-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 97%, and the deionized water's resistivity is more than 15MΩ.cm, near to 18.2MΩ.cm. It completely meets the requirements of general chemical or biological experiments for pure water.

Flow Schematic



Specifications

Model	Smart-Q15	Smart-Q15UT	Smart-Q30	Smart-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	15-18.2MΩ.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	97%-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:410×220×420mm / Weight: about 18Kg			
Electrical requirements	AC100-240V, 50/60Hz			
Power	72W			
Standard configuration	Main body (Including 1 set of cartridge)+15 liters pressure tank+ TDS/conductivity test pen			

Remarks:

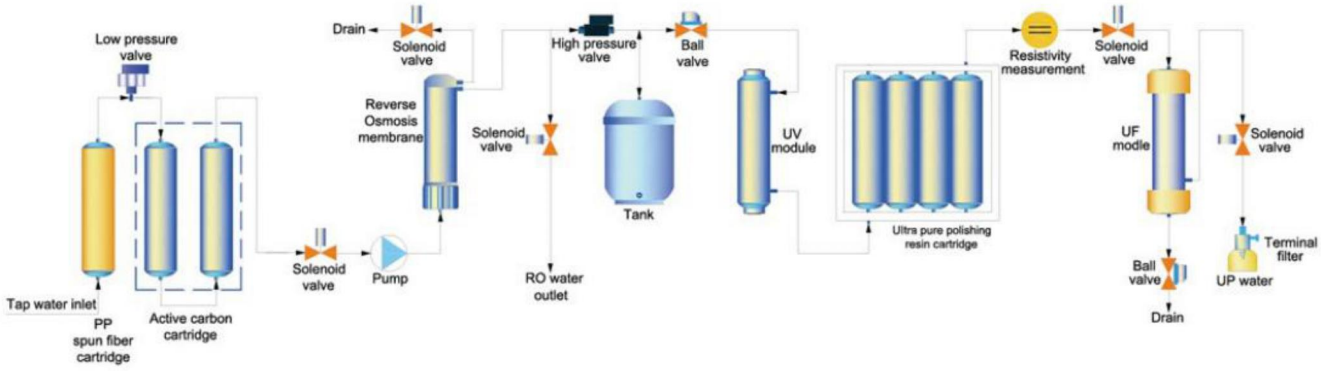
*The value will be influenced by temperature and feed water's quality.

Smart-S series ultrapure water system (tap water inlet)

With injection molding process case, single stage RO system, 1 pump, portable TDS test pen and on-line resistivity monitor, Smart-S series ultrapure water system is **sub-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 97%, 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
	Smart-S15	Smart-S15UF	Smart-S15UV	Smart-S15UVF
	Smart-S30	Smart-S30UF	Smart-S30UV	Smart-S30UVF
Output(25℃)*	15 series-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	<1pg/ml	N/A	<1pg/ml
DNases	N/A	<5pg/ml	N/A	<5pg/ml
RO water quality				
Ion rejection rate	97%-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:410×220×420mm / Weight: about 18Kg			
Electrical requirements	AC100-240V, 50/60Hz			
Power	72W			
Standard configuration	Main body (Including 1 set of cartridge)+15 liters pressure tank+ TDS/conductivity test pen			

Remarks:

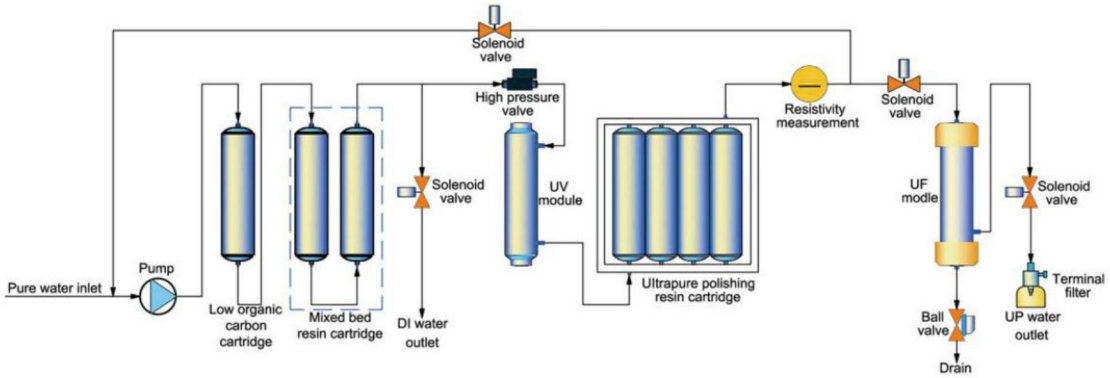
*The value will be influenced by temperature and feed water's quality.

Smart-D series ultrapure water system (distilled water inlet)

With injection molding process case, 1 pump, portable TDS test pen and on-line resistivity monitor, Smart-D series ultrapure water system is **sub-economic 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
	Smart-D	Smart-DUF	Smart-DUV	Smart-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	<1pg/ml	N/A	<1pg/ml
DNases	N/A	<5pg/ml	N/A	<5pg/ml
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:410×220×420mm / Weight: about 16Kg			
Electrical requirements	AC100-240V, 50/60Hz			
Power	72W			
Standard configuration	Main body (Including 1 set of cartridge)+ TDS/conductivity test pen			

Remarks:

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

Cartridges

Item no.	Commodity	Approximate replacement term /set
PC-M-PP	5μm spun fiber cartridge	2-6 months
PC-PP-ZK	Special spun fiber cartridge	2-6 months
PC-AC-B-ZK	Special active carbon block cartridge	4-6 months
PTC-AC-HZS1	Low organic carbon cartridge	About 6800 liters pure water
RO-100GPD	100 GPD reverse osmosis membrane	12-24 months
RO-200GPD	200 GPD reverse osmosis membrane	12-24 months
PTC-MBR-K	Mixed bed resin cartridge	1000 liters pure water
PTC-UPPR-K	Ultrapure polishing resin cartridge	1000 liters pure water
PTC-UPPR-KV	Ultrapure polishing resin cartridge	1000 liters pure water
TF-(0.45+0.1)μm-S	(0.45+0.1)μm terminal filter	-
UF-5000D	MWCO5000D UF cartridge	-
UV-(185nm&254nm)-10W-K	Double wavelength (185nm&254nm)UV cartridge	-
LAMP-(185nm&254nm)-10W-K	Double wavelength(185&254)nm uv lamp	9000 hours
UV-254-10W-K	254nm wavelength UV cartridge	-
LAMP-254-10W-K	254 nm wavelength uv lamp	9000 hours

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.

HHitech-Products

Designing and manufacturing under ISO certification, top quality controlling commitment, ensure compliance with CE standards of EU guarantee completely meeting with the highest grade I water standards of ASTM, CAP, CLSI, EP and USP.

HHitech-Service

As a responsible manufacturer with rich experience, operating in good faith, and the concept of common development, adhering to the customer-oriented and customer-needs, HHitech promises to provide professional comprehensive pre-sales and after-sales service in the whole business.

- 12 months warranty except for consumables.
- Timely guide for installation, usage and maintenance.
- Free and continuous upgrade service for sold products.

Your HHitech partner

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