



CSU - Laboratory water purification system



COLO Breakthrough design to highlight the aesthetics of science and technology.


- CS series, using the innovative automatic control system and LCD display, embedding new purification cartridges with patented structure, stable and reliable RO system with higher ion rejection rate, and DI ion-exchange cartridges with larger capacity, equipping with built-in 1.8-liter pressure water tank, more economical and cost-effective, is the economic choice for lab pure water.
- System output ranges from 13 to 60 liters/h (HSP series, with pure water inlet, output is up to 2 liters/minute). It can simultaneously produce ultrapure water (18.2MΩ.cm), high pure water (>17.5MΩ.cm) or pure water(<5µs/cm)[1]. The quality of pure water fully meets or exceeds the requirements of water quality standard, specified by ASTM D1193-06, GB/T 11446.1-2013, GB/T33087-2016, GB/T6682-2008, CP, EP, USP, JP, CAP, CLSI, etc.


[1] CSU/CSD series products can produce single RO water (ion rejection rate ≥ 98%). CSRS series products can produce double RO water (<5µs/cm).

Application Area:

- HPLC、UPLC、LC-MS
- ICP-MS、ICP-AES、AAS、GC-MS
- MALDI-TOF-MS、IC、TOC analysis
- Electrochemical, spectrophotometric determination
- Preparation of microbial media and reagents
- Cell culture, PCR, IVF
- Protein purification, electrophoresis, biochemistry
- Proteomics, genomics, immunoassay
- Feed water of laboratory instruments, such as: autoclave, bottle washing machine, environmental test chamber, water bath...

 **LCD Screen - display data**
Water quality, System state information, the remaining life of the pre-filter, deionization performance of the module...

 **Cartridges and filters are easily accessible – no need tools to replace them**

 **The system can be installed on laboratory table or can be mounted on the wall**

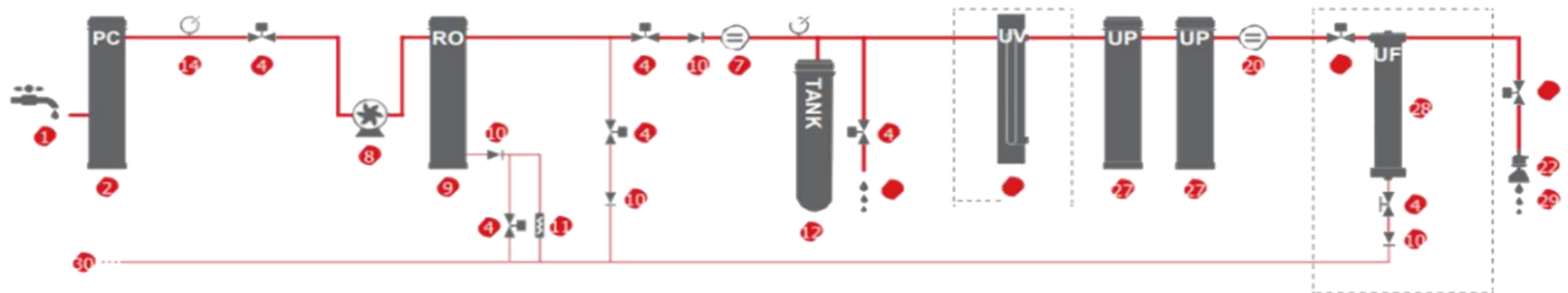
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 **UF type with UF filter, Eliminate the endotoxin efficiently**



Model type	CSU-20/40/60	CSU-20/40/60UV	CSU-20/40/60UF	CSU-20/40/60UVF
Configuration	Standard	Low TOC	Eliminating endotoxin	Synthesizing
Production rate [1]	20series:20L/hour,40series:40L/hour,60series:60L/hour			
Dispensing rate [2]	Up to 2 liters/minute	Upto2liters/minute	Upto2liters/minute	Upto2liters/minute
Ultrapure water quality [3]				
Resistivity (25°C) [4]	18.2MΩ.cm	18.2MΩ.cm	18.2MΩ.cm	18.2MΩ.cm
Conductivity (25°C)	0.055 μs/cm	0.055 μs/cm	0.055 μs/cm	0.055 μs/cm
TOC [5]	5 ppb[6]	2 ppb[7]	5 ppb[6]	2 ppb[7]
Particles [8]	<1 /ml (>0.2μm)	<1 /ml (>0.2μm)	<1 /ml (>0.2μm)	<1 /ml (>0.2μm)
Bacteria [9]	<0.01CFU/ml	<0.01CFU/ml	<0.01CFU/ml	<0.01CFU/ml
Endotoxin [10]	N/A	N/A	<0.001 EU/ml	<0.001 EU/ml
RNases [10]	N/A	N/A	1 pg/ml	1 pg/ml
DNases [10]	N/A	N/A	5 pg/ml	5 pg/ml
Protease [10]	N/A	N/A	0.15 μg/ml	0.15 μg/ml
RO1st water quality [3]				
Ion rejection rate	98%-99% (with new RO module)	98%-99% (with new RO module)	98%-99% (with new RO module)	98%-99% (with new RO module)
Organic rejection rate	>99% (MW>300 Dalton)	>99% (MW>300 Dalton)	>99% (MW>300 Dalton)	>99% (MW>300 Dalton)
Particles and bacteria rejection rate	>99%	>99%	>99%	>99%
Feed water requirements				
Water source type	Tap water	Tap water	Tap water	Tap water
Pressure	1-6 bar	1-6 bar	1-6 bar	1-6 bar
Temperature	5-40°C	5-40°C	5-40°C	5-40°C
Conductivity	<2000 μs/cm	<2000 μs/cm	<2000 μs/cm	<2000 μs/cm
Total hardness (In CaCO3)	<300 ppm	<300 ppm	<300 ppm	<300 ppm
TOC	<2000 ppb	<2000 ppb	<2000 ppb	<2000 ppb
Free chlorine	<3 ppm	<3 ppm	<3 ppm	<3 ppm
PH	4-10	4-10	4-10	4-10
Dissolved CO2	<30ppm	<30ppm	<30ppm	<30ppm
Power supply	100-240V, 50/60Hz	100-240V, 50/60Hz	100-240V, 50/60Hz	100-240V, 50/60Hz
Total Power	20series:48W,40series:72W,60series:120W			
Dimension (LxWxH)	Main unit: 273x555x568mm	Main unit: 273x555x568mm	Main unit: 273x555x568mm	Main unit: 273x555x568mm
GW/NW	23/21	23/21	23/21	23/21
Standard configuration				

- [1] Affected by inlet water quality, pressure, temperature and status of RO membrane
- [2] Affected by the tank status and terminal filter
- [3] The following values are typical and may vary depending on the nature and concentration of feed water contaminants
- [4] According to USP requirements, the resistivity can be displayed as a non temperature-compensated value
- [5] Affected by the type of organics
- [6] Inlet TOC<1000ppb, follow professional operating procedures and correct sampling conditions
- [7] Inlet TOC<50ppb, follow professional operating procedures and correct sampling conditions
- [8] Equip with terminal micro filter and follow professional operating procedures and correct sampling conditions
- [9] Equip with terminal micro filter and follow professional operating procedures and correct sampling conditions
- [10] Equip with terminal ultrafilter and follow professional operating procedures and correct sampling conditions



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|-----------------------------|-----------------------|------------------------|---------------------------|
| 1 Feed Water | 9 RO cartridge | 17 Three way valve | 25 UV Component |
| 2 PP Pretreatment Cartridge | 10 One way valve | 18 High tension switch | 26 TOC Component |
| 3 Pressure sensor | 11 Flow Restrictor | 19 DI Cartridge | 27 UP Ultrapure cartridge |
| 4 Solenoid valve | 12 Pressure watertank | 20 Resistivity Sensor | 28 UF Cartridge |
| 5 Flow sensor | 13 RO Water Outlet | 21 Sanitization Block | 29 UP Water Outlet |
| 6 PC Pretreatment Cartridge | 14 Low tension switch | 22 Final Filter | 30 Drain Outlet |
| 7 Conductivity Sensor | 15 EDI Component | 23 DI Water Outlet | |
| 8 Pump | 16 PE watertank | 24 Dispenser arm | |



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Dispensing Mode	18.2 MΩ·cm 3.2 ppb 25.2 °C
Flux	0000 ml/min
Amount	500 ml

- Powerful HiDis water dispenser arm (Optional)
- Color display, to monitor dispensing resistivity, water temperature, flow rate, single and cumulative water quantity.
 - General, quantitative, instant - 3 water dispensing modes cycle, meeting with needs of different water dispensing mode.
 - It can be fixed on the bracket in any direction of 360 degrees horizontally, making dispensing water more flexible in different directions.
 - Function of circulating with the host can always ensure the quality of pure water.
 - Equipped with 0.2µm MF terminal micro filter or UF terminal ultrafilter, to produce bacterial-free, nuclease-free, roteinase-free ultrapure water.
 - Up to 5 sets of HiDis water dispenser arm can be connected to one host, fully covering the pure water usage range on the laboratory table..

Professional PE pure water tank (Optional)

- Material: HDPE, double layer design. Anti-UV inhibitor is added to the outer layer to prevent the growth of algae inside and improve the durability of the tank. Pure PE raw material is used in inner layer to reduce material precipitation and ensure water quality safety.
- Drainage valve is installed at the cone bottom, which can empty the water tank and ensure thorough cleaning.
- Feeding from the bottom can reduce CO2 absorption.
- The enlarged cover with seal can prevent air from entering and facilitate manual cleaning.
- Compound air filter is in the standard configuration, containing special packing and microporous membrane, to absorb CO2 and organics, and filtrate bacteria and particles.
- UV disinfection module is optional to sterilize tank and inhibit the growth of bacteria in the tank.
- Equipped with an independent pressure sensor, independent level control module and LCD display, it can display the liquid level, storage (L) and storage percentage (%) of the water tank in real-time in the form of dynamic icons. A clear glance for storage status.



Innovative design of cartridge structure

- Patented 3-chamber design, compatible with packaging of PP/PC/RO/DI cartridge, to ensure consistency.
- Patented clamping mechanism, easier and more efficient to install and replace the cartridge.
- Patented error-proofing design, effective to avoid installation errors of different cartridges.
- 12-inch cylinder with 1.36L resin filling capacity brings more bigger ion exchange capacity and more effective filtration.
- Encrypted long serial number verification code can identify the authenticity of cartridges, record the use and replacement of cartridges, and ensure the safety of the system.