



Membrane Solutions

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Pinnacle Series-S Ultrapure water system

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Pinnacle S Series

Ultrapure water system



Pinnacle Series-S, integrating microcomputer control system with LCD display, 3 way water quality sensors, timing and quality dispensing, single stage RO system and pump (UPW-S-T13 with 2 pumps, UPW-S-T23 and UPW-S-P12 with 1 pump), 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.

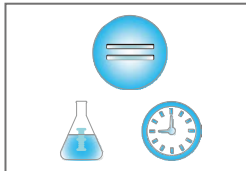
With tap water inlet, it can produce single stage RO water, deionized water and ultrapure water. And with distilled water inlet, it can produce deionized water and ultrapure water. The single stage RO water' s ion rejection rate is more than 97%. The deionized water' s resistivity is above 16 MΩ.cm, and the ultrapure water' s resistivity absolutely reaches to 18.2 MΩ.cm. It completely meets the highest grade I standard of ASTM, CAP, CLSI, EP and USP.





Micro-computer control system with LCD display

- LCD(resolution:240×128,dimension:106×57mm),intuitively display the system running



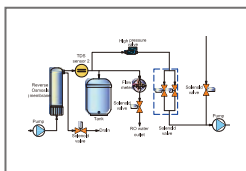
Comprehensive monitoring system

- 3 way online water quality sensors, detect the quality of feed water, RO water, deionized water, or ultrapure water respectively. And warn once water quality's standard exceeding.
- Water dispensing function-timing and quality (time range: 1-99min, water quality range: 0.1-18.2MΩ.cm) water.



Easy-to-replacing cartridge

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



Single stage RO and 1 pump system

- 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.

FEATURES AND ADVANTAGES

- 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.
- External water tanks is optional to meet different need and assure ample water-supply.
- 3 doors 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.
- 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.
- Ultrafiltration module, effectively eliminate endotoxin, and suitable for precise cell cultivating and NF.

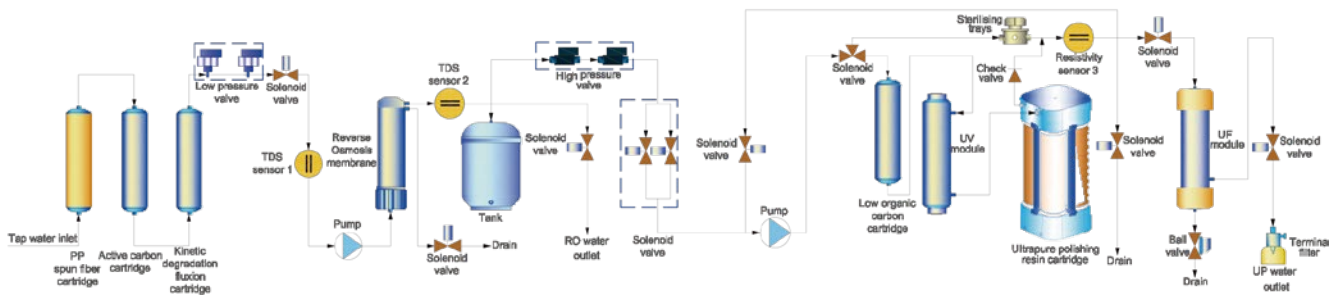
SELECTION GUIDE

| MS Item Number | Tap Water Inlet | DI Water Inlet | Type I Water | Type II Water | Type III Water | UV Lamp (254&185nm) | UV Lamp (254nm) | UF Module (5000D) | TOC Level | Endotoxin Level |
|----------------|-----------------|----------------|--------------|---------------|----------------|---------------------|-----------------|-------------------|-----------|-----------------|
| UPW-S-T13-15 | Y | | Y | | Y | | Y | | <10ppb | N/A |
| UPW-S-T13-15UF | Y | | Y | | Y | | Y | Y | <10ppb | <0.001Eu/ml |
| UPW-S-T13-15UV | Y | | Y | | Y | Y | | | <3ppb | N/A |
| UPW-S-T13-15VF | Y | | Y | | Y | Y | | Y | <3ppb | <0.001Eu/ml |
| UPW-S-T13-30 | Y | | Y | | Y | | Y | | <10ppb | N/A |
| UPW-S-T13-30UF | Y | | Y | | Y | | Y | Y | <10ppb | <0.001Eu/ml |
| UPW-S-T13-30UV | Y | | Y | | Y | Y | | | <3ppb | N/A |
| UPW-S-T13-30VF | Y | | Y | | Y | Y | | Y | <3ppb | <0.001Eu/ml |
| UPW-S-P12 | | Y | Y | Y | | | Y | | <10ppb | N/A |
| UPW-S-P12-UF | | Y | Y | Y | | | Y | Y | <10ppb | <0.001Eu/ml |
| UPW-S-P12-UV | | Y | Y | Y | | Y | | | <3ppb | N/A |
| UPW-S-P12-VF | | Y | Y | Y | | Y | | Y | <3ppb | <0.001Eu/ml |
| UPW-S-T23-15 | Y | | | Y | Y | | Y | | N/A | N/A |
| UPW-S-T23-15UT | Y | | | Y | Y | | Y | | N/A | N/A |
| UPW-S-T23-30 | Y | | | Y | Y | | Y | | N/A | N/A |
| UPW-S-T23-30UT | Y | | | Y | Y | | Y | | N/A | N/A |

CONSUMABLES

| Item No. | Description | Approximate replacement term/set |
|------------|---|----------------------------------|
| CG-S-PP | PP pre-treat cartridge for S-series UPW | 2-6 months |
| CG-S-KDF | KDF pre-treat cartridge for S-series UPW | 12 months |
| CG-S-AC | AC pre-treat cartridge for S-series UPW | 6 months |
| CG-100RO | 100 GPD RO module | 12-24 months |
| CG-200RO | 200 GPD RO module | 12-24 months |
| CG-TOC | Low organics carbon cartridge | 12-18 months |
| CG-S-MB1 | Mixed bed resin cartridge | 6 months |
| CG-S-MB4 | Mixed bed resin cartridge module,4 columns | 6-12 months |
| CG-S-PB1 | Ultrapure polishing resin cartridge | 6 months |
| CG-S-PB4 | Ultrapure polishing resin cartridge,4 columns | 6-12 months |
| CG-POU | Point-of-use filter | - |
| CG-UF | UF module | - |
| TB-DUV-10W | Dual wavelength(185&254)nm uv lamp | 9000 hours |
| TB-SGL-10W | 254 nm wavelength uv lamp | 9000 hours |

FLOW SCHEMATIC



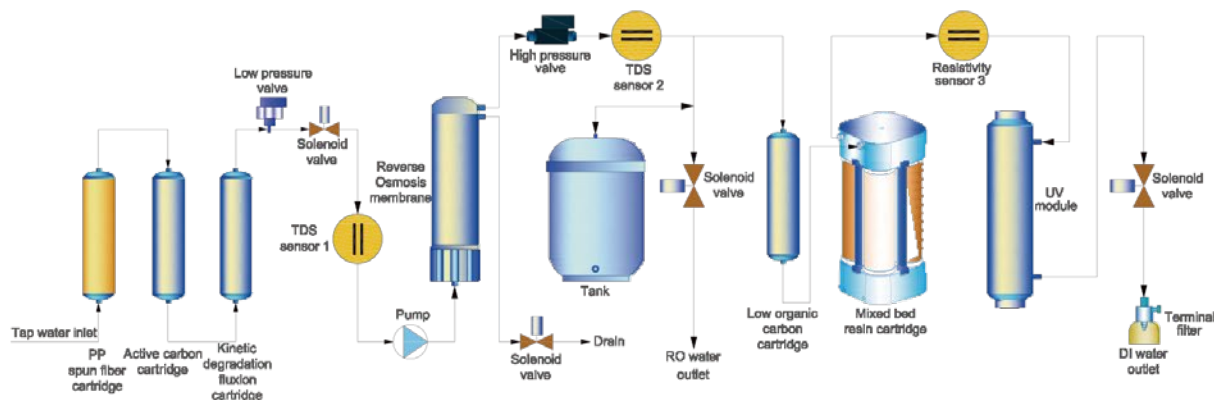
SPECIFICATIONS

| | Standard | Eliminating endotoxin | Low TOC | Integrated |
|--|---|-----------------------|----------------|----------------|
| | UPW-S-T13-15 | UPW-S-T13-15UF | UPW-S-T13-15UV | UPW-S-T13-15VF |
| | UPW-S-T13-30 | UPW-S-T13-30UF | UPW-S-T13-30UV | UPW-S-T13-30VF |
| Output(25°C)* | 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°C) | 18.2MΩ.cm | | | |
| TOC* | <10ppb | <10ppb | <3ppb | <3ppb |
| Bacteria | <0.1cfu/ml | | | |
| Particle(>0.1um) | <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 | | <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°C,pressure:1.0-4.0Kgf/cm ² | | | |
| Dimension and weight | Length x Width x Height 500×360×540mm /Weight about 20Kg | | | |
| Electrical requirements | AC100-240V,50/60Hz | | | |
| Power | 120W | | | |
| Standard configuration | Main body (Including 1 set of cartridge)+15 liters pressure tank | | | |

Remarks:

* The performance of the water system is contingent upon the ambient temperature and the quality of the source water.

FLOW SCHEMATIC



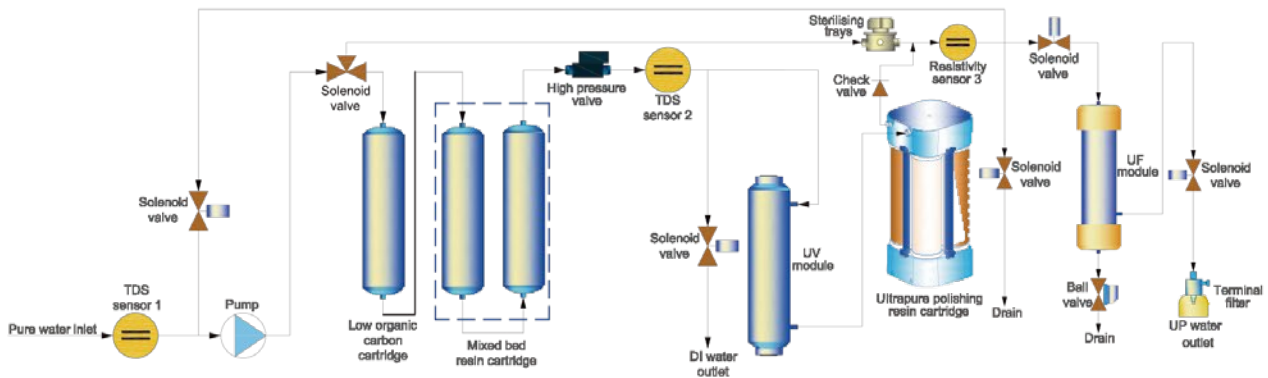
SPECIFICATIONS

| | General Grade | General Grade Bactria Control |
|---------------------------------------|---|-------------------------------|
| | UPW-S-T23-15 | UPW-S-T23-15UT |
| | UPW-S-T23-30 | UPW-S-T23-30UT |
| Output(25 C)* | 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, Pure water | |
| Ultrapure water quality | | |
| Resistivity(25 C) | 16~18.2MΩ.cm | |
| Bacteria | N/A | <0.01cfu/ml |
| Particle(>0.1um) | N/A | <1/ml |
| Endotoxin | N/A | N/A |
| 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 C,pressure:1.0-4.0kgf/cm ² | |
| Dimension and weight | Length x Width x Height 500x360x540mm /Weight about 20Kg | |
| Electrical requirements | AC100-240V,50/60Hz | |
| Power | 120W | |
| Standard configuration | Main body (Including 1 set of cartridge)+15 liters pressure tank | |

Remarks:

** The performance of the water system is contingent upon the ambient temperature and the quality of the source water.

FLOW SCHEMATIC



SPECIFICATIONS

| | Standard | Eliminating endotoxin | Low TOC | Integrated |
|-------------------------|--|-----------------------|---------------------|--------------|
| | UPW-S-P12 | UPW-S-P12-UF | UPW-S-P12-UV | UPW-S-P12-VF |
| Flow rate | Up to 2 liters/minute (with pressure tank) | | | |
| Ultrapure water quality | | | | |
| Resistivity(25 °C) | | | 18.2MΩ.cm | |
| TOC* | <10ppb | <10ppb | <3ppb | <3ppb |
| Bacteria | | | <0.1cfu/ml <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 | | <5pg/ml |
| RO water quality | | | | |
| Resistivity(25 °C) | ≥5MΩ.cm | | | |
| Feed water requirements | Distilled water, deionized water or RO water, water temperature 5-45 °C, water pressure 1atm | | | |
| Dimension and weight | Length x Width x Height 500×360×540mm /Weight about 20Kg | | | |
| Electrical requirements | AC100-240V,50/60Hz | | | |
| Power | 120W | | | |
| Standard configuration | Main body (Including 1 set of cartridge) | | | |

Remarks:

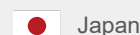
** The performance of the water system is contingent upon the ambient temperature and the quality of the source water.



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