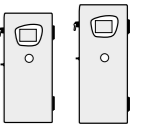




SPRING SERIES



SPRING 5 UV



SPRING 5

SPRING demineralizers are devices powered by tap water, with extended equipment and advanced automatics. Similar to HLP series, SPRING systems produce water of 0,055 $\mu\text{S}/\text{cm}$ conductivity, matching the requirements of standards: PN-EN ISO 3696:1999, ASTM, CLSI, FP. These devices are intended for more demanding users, equipped with advanced automatics, that monitors the disposables usage, archiving data, allowing personalization of alarm levels for feed water, after reverse osmosis treatment and ultrapure, membrane rinsing and work with several adju-tages simultaneously.

Depending on a model, the water obtained may be used for AAS, ICP/MS, IC, HPLC and GC instrumental analyses. Spring demineralizers are equipped with a microprocessor control and measurement system, which ensure that the demineralization process is running correctly (auto-mation C).

| Models 5 l/h | Dimensions [mm] | Prefilter 5 μm | Module A2 | Microfiltration 0,2 μm | Pump 24V | Pump 48V | UV Lamp | Module 2xH7 | Module 2xH7TOC | Module GAC10* | Module H6 | Module H6TOC | Standard PN-EN 3696:1999 | Catalogue no |
|-----------------|--------------------|------------------------------|--------------|--------------------------------------|-------------|-------------|------------|----------------|-------------------|------------------|--------------|-----------------|-----------------------------|--------------|
| SPRING 5 | 235x440x510 | + | + | - | + | - | - | + | - | - | - | - | 2 class | 5DS-TOC-00 |
| SPRING 5s | 235x440x510 | + | + | + | + | - | - | + | - | - | - | - | 1 class | 5DS-TOC-0S |
| SPRING 5uv | 235x440x510 | + | + | + | + | - | + | - | + | - | - | - | 1 class | 5DS-TOC-UV |

| Models 10 l/h | Dimensions [mm] | Prefilter 5 μm | Module A2 | Microfiltration 0,2 μm | Pump 24V | Pump 48V | UV Lamp | Module 2xH7 | Module 2xH7TOC | Module GAC10* | Module H6 | Module H6TOC | Standard PN-EN 3696:1999 | Catalogue no |
|------------------|--------------------|------------------------------|--------------|--------------------------------------|-------------|-------------|------------|----------------|-------------------|------------------|--------------|-----------------|-----------------------------|--------------|
| SPRING 10 | 235x470x570 | + | + | - | + | - | - | - | - | - | + | - | 2 class | 10DS-TOC-00 |
| SPRING 10s | 235x470x570 | + | + | + | + | - | - | - | - | - | + | - | 1 class | 10DS-TOC-0S |
| SPRING 10uv | 235x470x570 | + | + | + | + | - | + | - | - | - | - | + | 1 class | 10DS-TOC-UV |

| Models 20 l/h | Dimensions [mm] | Prefilter 5 μm | Module A2 | Microfiltration 0,2 μm | Pump 24V | Pump 48V | UV Lamp | Module 2xH7 | Module 2xH7TOC | Module GAC10* | Module H6 | Module H6TOC | Standard PN-EN 3696:1999 | Catalogue no |
|------------------|--------------------|------------------------------|--------------|--------------------------------------|-------------|-------------|------------|----------------|-------------------|------------------|--------------|-----------------|-----------------------------|--------------|
| SPRING 20 | 235x470x570 | + | + | - | - | + | - | - | - | - | + | - | 2 class | 20DS-TOC-00 |
| SPRING 20s | 235x470x570 | + | + | + | - | + | - | - | - | - | + | - | 1 class | 20DS-TOC-0S |
| SPRING 20uv | 235x470x570 | + | + | + | - | + | + | - | - | - | - | + | 1 class | 20DS-TOC-UV |

| Models 30 l/h | Dimensions [mm] | Prefilter 5 μm | Module A2 | Microfiltration 0,2 μm | Pump 24V | Pump 48V | UV Lamp | Module 2xH7 | Module 2xH7TOC | Module GAC10* | Module H6 | Module H6TOC | Standard PN-EN 3696:1999 | Catalogue no |
|------------------|--------------------|------------------------------|--------------|--------------------------------------|-------------|-------------|------------|----------------|-------------------|------------------|--------------|-----------------|-----------------------------|--------------|
| SPRING 30 | 235x470x570 | + | + | - | - | + | - | - | - | - | + | - | 2 class | 30DS-TOC-00 |
| SPRING 30s | 235x470x570 | + | + | + | - | + | - | - | - | - | + | - | 1 class | 30DS-TOC-0S |
| SPRING 30uv | 235x470x570 | + | + | + | - | + | + | - | - | - | - | + | 1 class | 30DS-TOC-UV |

| Models 40 l/h | Dimensions [mm] | Prefilter 5 μm | Module A2 | Microfiltration 0,2 μm | Pump 24V | Pump 48V | UV Lamp | Module 2xH7 | Module 2xH7TOC | Module GAC10* | Module H6 | Module H6TOC | Standard PN-EN 3696:1999 | Catalogue no |
|------------------|--------------------|------------------------------|--------------|--------------------------------------|-------------|-------------|------------|----------------|-------------------|------------------|--------------|-----------------|-----------------------------|--------------|
| SPRING 40 | 270x470x570 | + | - | - | - | + | - | - | - | + | + | - | 2 class | 40DS-TOC-00 |
| SPRING 40uv | 270x470x570 | + | - | + | - | + | + | - | - | + | - | + | 1 class | 40DS-TOC-UV |

| Models 60 l/h | Dimensions [mm] | Prefilter 5 μm | Module A2 | Microfiltration 0,2 μm | Pump 24V | Pump 48V | UV Lamp | Module 2xH7 | Module 2xH7TOC | Module GAC10* | Module H6 | Module H6TOC | Standard PN-EN 3696:1999 | Catalogue no |
|------------------|--------------------|------------------------------|--------------|--------------------------------------|-------------|-------------|------------|----------------|-------------------|------------------|--------------|-----------------|-----------------------------|--------------|
| SPRING 60 | 270x470x570 | + | - | - | - | + | - | - | - | + | + | - | 2 class | 60DS-TOC-00 |
| SPRING 60uv | 270x470x570 | + | - | + | - | + | + | - | - | + | - | + | 1 class | 60DS-TOC-UV |

Catalogue no EO-005-10 EO-MA-12 EM-SP-20 A-P-024 A-P-048 EUV-254-HLP EJ-2000-0 EJ-2000-1 EW-001-10 EJ-500-0 EJ-5000-1

General information:

- Powered by: tap water.
- Efficiency: 5-60 l/h.
- Purified water dosage speed 1-2 l/min.
- Conductivity < 0,055 $\mu\text{S}/\text{cm}$.
- Bacteria < 1 cfu/ml*.
- Particles > 0,2 μm < 1/ml*.

Standard:

Water purified in this device fits the PN-EN ISO 3696:1999 standard for I*, II, III purity class, and microbiological/physicochemical FP requirements for purified production water*.

Application:

Obtained water may be used for instrumental analyses AAS, ICP/MS, IC, HPLC*, GC*, bacteria cultures*, biochemical analyses*.

* device equipped with a UV lamp and/or a microfiltration capsule 0,22 μm

Technical specification:

- Device operates under tap water pressure.
- Water purification levels:
 - module 5 μm filtration,
 - module A2 filtration (sedimentary-carbon-softening),
 - module RO,
 - ion exchange demineralization (SQF system)
 - UV lamp 254 nm (SPRING-UV),
 - microfiltration capsule 0,45/0,2 μm (SPRING-S, SPRING-UV).
- Automatic and unattended system operation
- System equipped with a pump increasing feed water pressure, with an automatics.
- Water intake point – purity class according to PN-EN ISO 3696:1999 equipped with a demi water nozzle of a min. 2 m reach.
- System equipped with a 10dm³ pressure storage tank (ability to exchange for bigger one).
- Optional connection to a washer, an autoclave, an analyser etc.
- Optional installation of a UV sterilizer.
- Maximum operating pressure: 1 MPa.
- User-performed maintenance procedures (easy disposables replacement).
- Intended to be fed by cold water: 4-40°C.
- Automatic membrane module rinsing.
- Energy consumption 20-100W.
- Power supply: 230V/50Hz.
- Optional user-performed device installation.

Functions protecting the device:

- Pump shutdown when:
 - the feed water pressure is too low (lack of feed water) low pressure sensor,
 - the tank is full - high pressure sensor.
- Thermal protection of the RO module, automated system shutdown when the feed water temperature is below 4°C or above 40°C.
- Can be automatically shut down when any alarm occurs.
- System autostart.

Functions monitoring system performance: (aut. C)

The device is equipped with a microprocessor automatic, that includes:

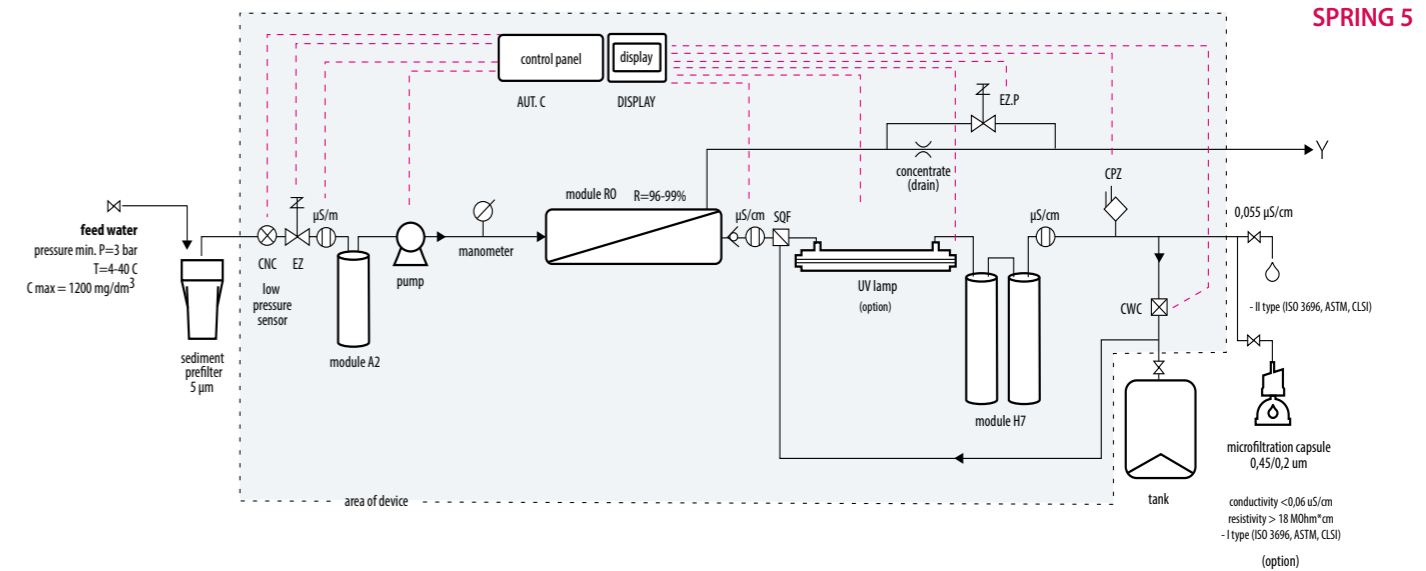
- Color display screen with a Touch Panel function.
- Conductometer measuring water pressure: feed, after reverse osmosis and demineralized (in $\mu\text{S}/\text{cm}$ or MOhm).
- Clock displaying date and time.
- Actual system state information.
- Membrane retention level information.
- Tank fill level.
- Water dosage.
- Alarm informing about the necessity to replace the mechanical and carbon filters.
- Alarm informing about the necessity to replace the A2 module.
- Alarm informing about the necessity to replace the ion exchange module.
- Alarm informing about the necessity to replace the UV lamp radiator.
- Alarm informing about the necessity to replace the microfiltration capsule.
- Alarm informing about the necessity to replace the RO.
- Graphic and sound alarm signal.
- Service dates view.
- RS 232 connector for service frequency and alarm levels adjustment.
- USB connector for service frequency and alarm levels adjustment.
- External software to calibrate the device.
- Built-in feed water manometer.

Feed water parameters:

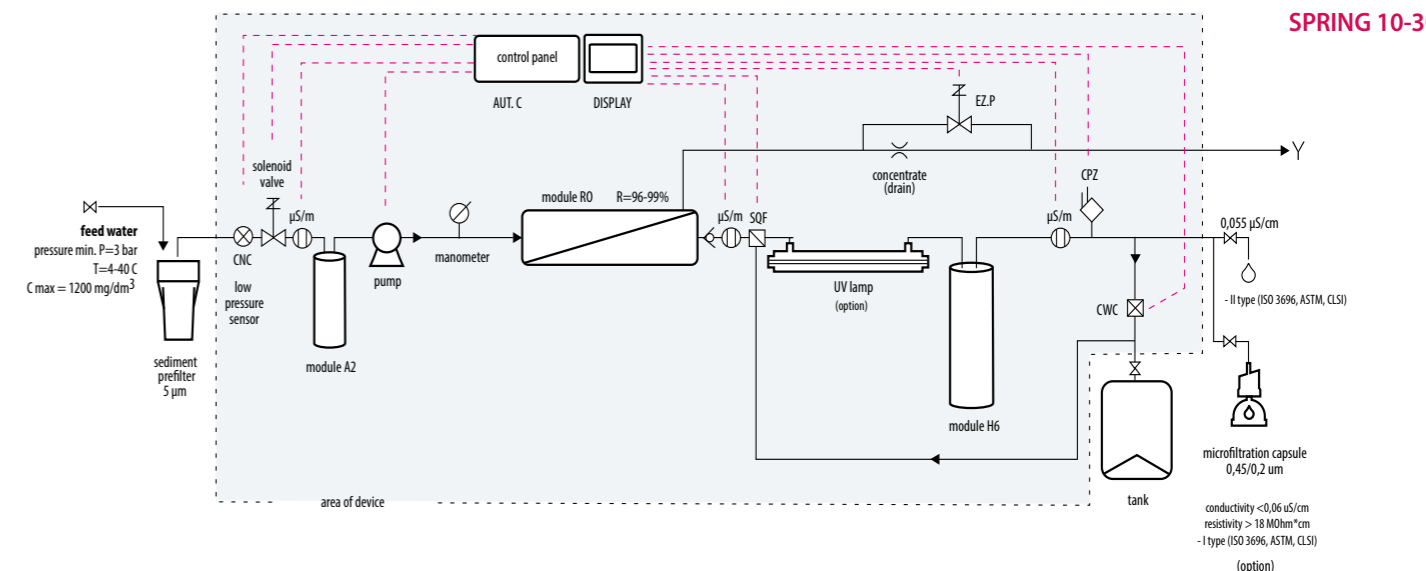
- Conductivity < 1200 $\mu\text{S}/\text{cm}$.
- Pressure > 3,0 bar.
- Temperature : 4-40°C.
- Hardness < 250 mg CaCO₃/dm³
- Fe < 0,2 mg/dm³

Installation point connections:

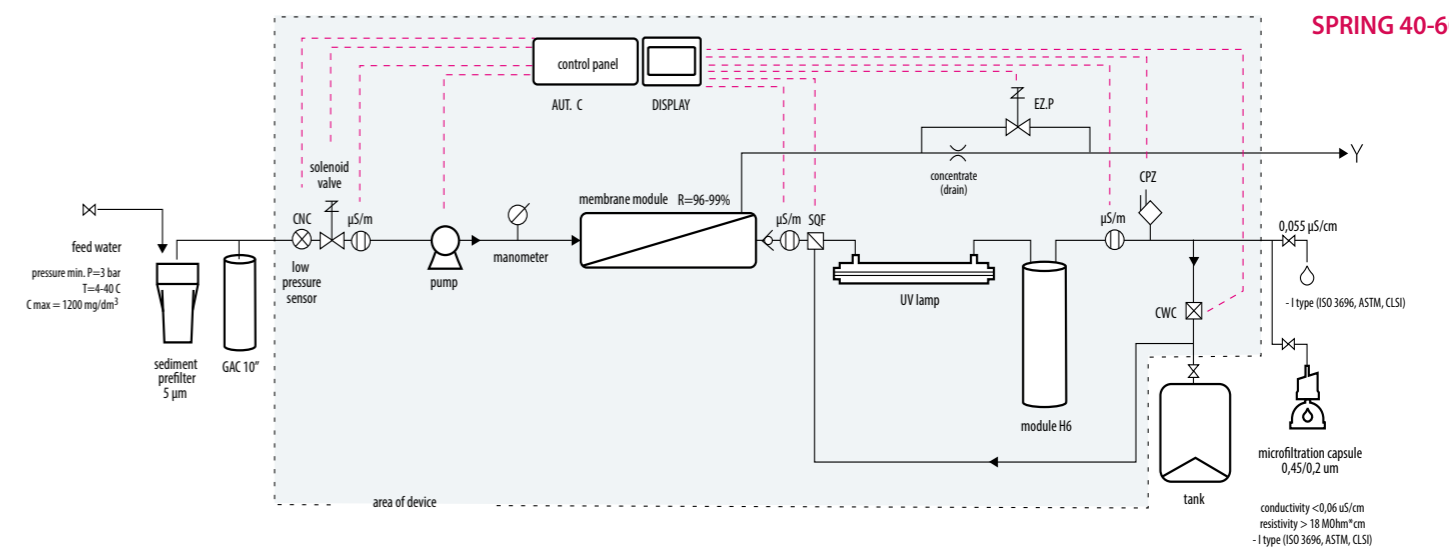
- Cold tap water connection 1/2" or 3/4".
- 230V power supply socket.
- Drain.



SPRING 5



SPRING 10-30



SPRING 40-60