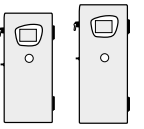




SPRING SERIES



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:

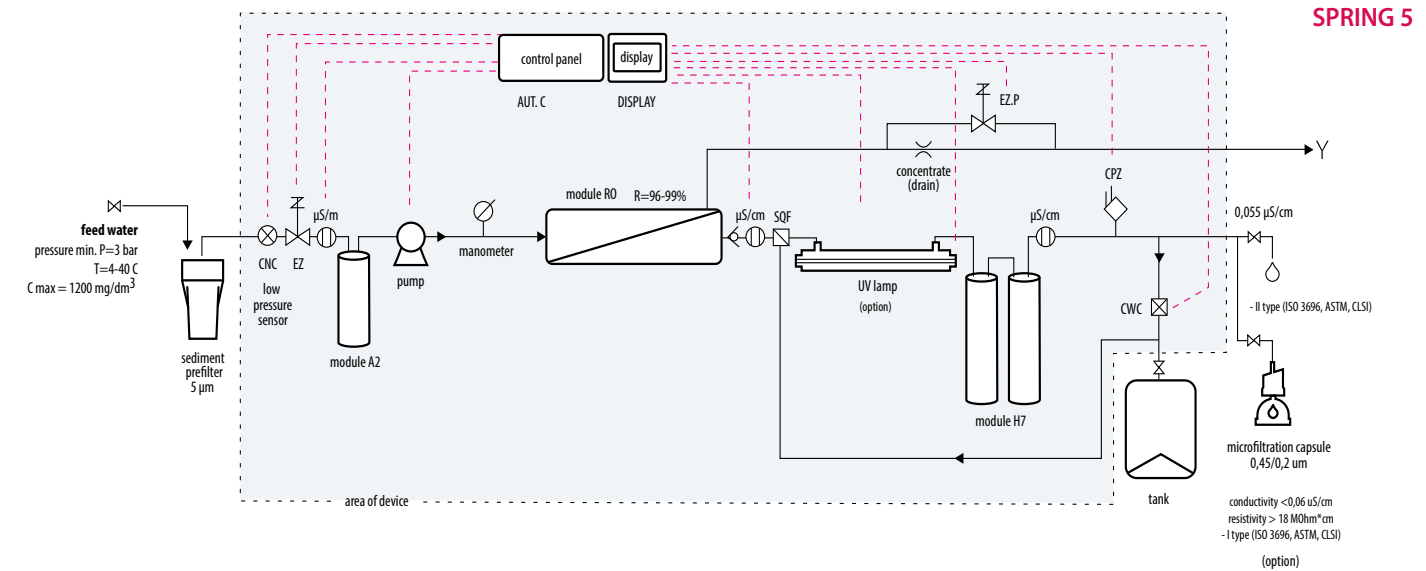
- Color display screen with a Touch Panel function.
- Conductometer measuring water pressure: feed, after reverse osmosis and demineralized (in $\mu\text{S}/\text{cm}$ or MOhm).
- Clock displaying date and time.
- Actual system state information.
- Membrane retention level information.
- Tank fill level.
- 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:

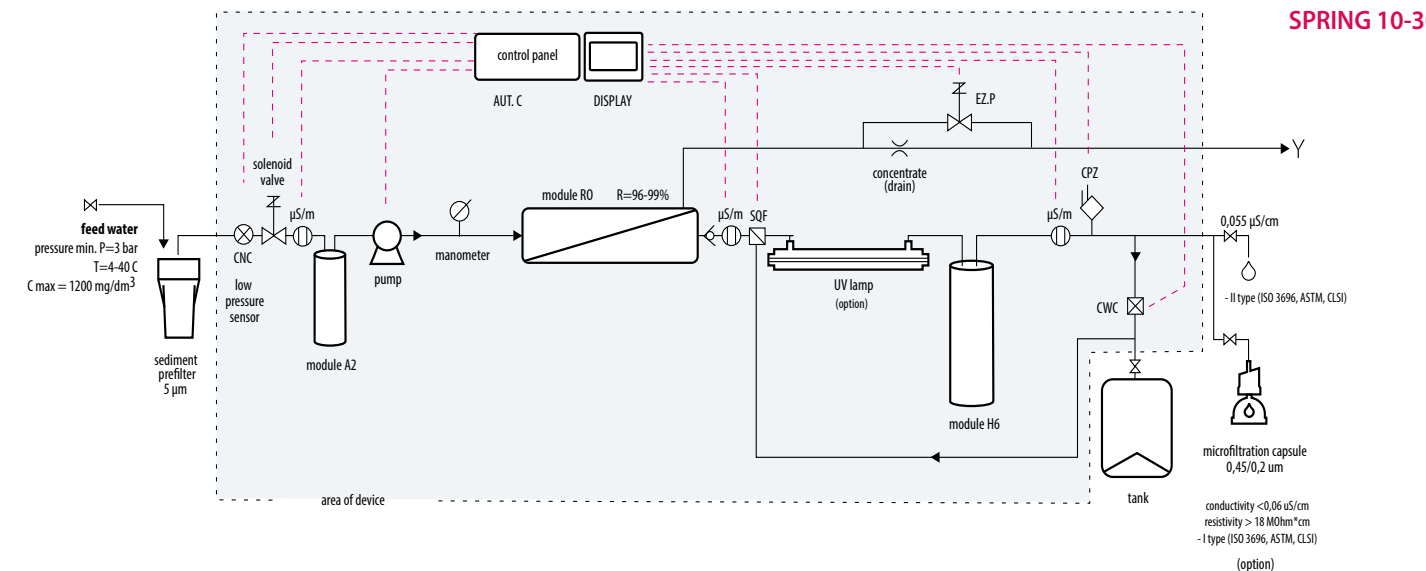
- Conductivity < 1200 $\mu\text{S}/\text{cm}$.
- Pressure > 3,0 bar.
- Temperature : 4-40°C.
- Hardness < 250 mg CaCO₃/dm³
- Fe < 0,2 mg/dm³

Installation point connections:

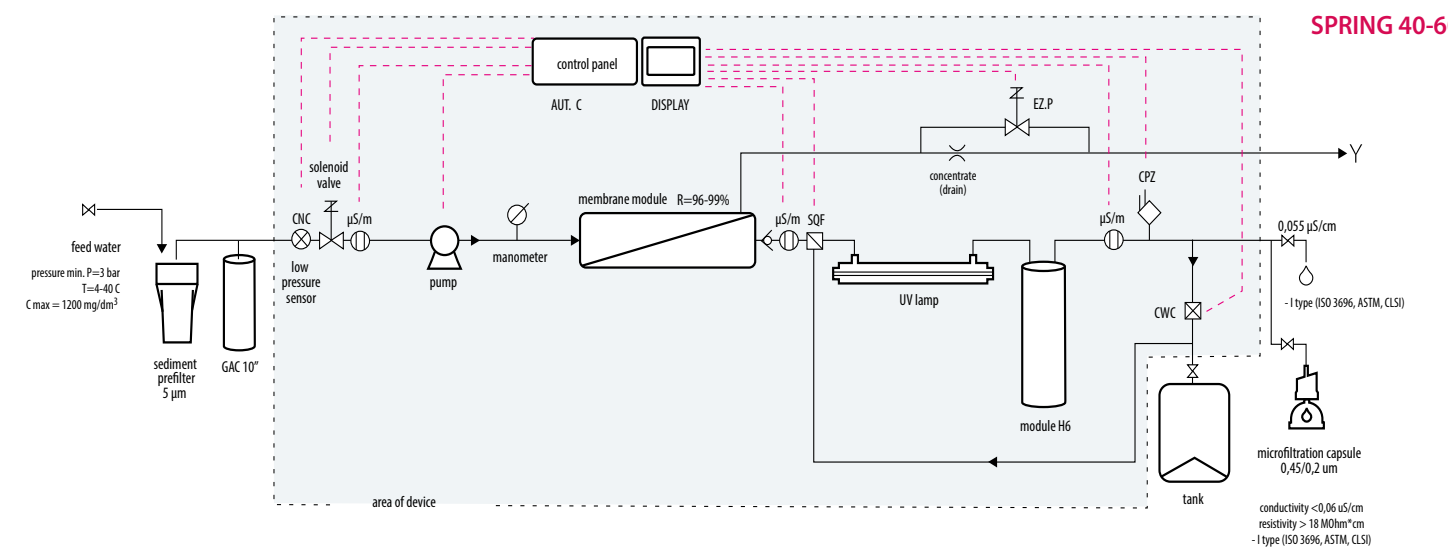
- Cold tap water connection 1/2" or 3/4".
- 230V power supply socket.
- Drain.



SPRING 5



SPRING 10-30



SPRING 40-60