# **SPRING 20S**

Cat. no: 20DS-TOC-0S







#### Technical specification:

- The device works under tap water pressure.
- Water purification levels:
  - sediment filtration prefilter 5μm,
  - module A (sediment-carbon-softening),
  - demineralization on a spectrally clean mixed ion exchange resin,
  - cascade microfiltration capsule 0,45/0,2μm.
- Automatic and unattended system operation.
- Equipped with a pump increasing feed water pressure.
- Water intake point second purity class (PN-EN ISO 3696:1999, ASTM, CLSI) nozzle reach min. 2 m, equipped with a pressure tank.
- System equipped with a 10 dm<sup>3</sup> pressure storage tank.
- Optional replacement with a bigger tank (40dm<sup>3</sup>, 80dm<sup>3</sup> and more).
- The possibility of installing additional water intake point for general-purpose water (third class (PN-EN ISO 3696:1999)).
- Automated system shutdown when the tank is full.
- Optional connection to an autoclave, washer machine etc.
- User-performed maintenance procedures (easy disposables replacement).
- Intended to be fed by cold water: 5-40°C.
- Energy consumption less than 70W.
- Optional user-performed device installation.
- Power supply: 220-240V/50Hz.

Dimensions (SxGxW): 235x470x570 mm

Tank 101: height: 390 mm, diameter: 250 mm

#### Functions monitoring the device:

- The device is equipped with a 24V automatics with a microprocessor control and measurement system, that includes:

- color display screen with a Touch Panel,
- conductometer measuring conductivity and temperature of feed water, after reverse osmosis and purified water (measured in µS/cm or MOhm),
- clock displaying date and time,
- information about current system status,
- information about the membrane module retention level,
- alarm informing about necessity to replace module A,
- alarm informing about necessity to replace ionex resins,
- alarm informing about necessity to replace microfiltration capsule,
- graphic and sound alarm signal,
- maintenance dates preview,
- tank fill level,
- built-in RS 232 connection to personal computers allowing to adjust maintenance frequency and alarm levels,
- built-in USB connection to personal computers allowing to adjust maintenance frequency and alarm levels.
- Software.
- Built-in manometer measuring feed water pressure.

## 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.
- Notification/alarm preview.





### Standard:

Water purified by the Spring device fits the requirements of the ISO 3696:1999, ASTM, CLSI standard for I\* and II purity class, microbiological and physicochemical parameters match the 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\*. \*point with a 0,2µm microfiltration capsule

### **Required connections:**

- cold water connection  $\frac{1}{2}$  or  $\frac{3}{4}$ ,
- 220-240V socket,
- drain.

# General information:

- fed by: tap water
- efficiency: min. 20 l/h
- conductivity: 0,06  $\mu\text{S/cm}$
- resistivity: 18,2 M0hm\*cm
- bacteria < 1 cfu/ml\*
- particles > 0,2  $\mu m <$  1/ml\*

model	Sediment	Module	Modules	MF capsule
	prefilter 5µm	A2	H6	0,2μm
SPRING 20S	+	+	+	+
Lifetime	6 months*	6 months*	5000 dm <sup>3**</sup>	12 months
<b>Cataloge no.</b>	<b>EO-005-10</b>	<b>EO-MA-12</b>	<b>EJ-5000-0</b>	<b>EM-SP-20</b>

\* The life of a filter cartridge can be affected by the flow, it's characteristic as well as the level and type of the contamination.

\*\* \* Volume of the purified water depends on the quality of the feed water, the maximum amount of the dissolved salt in the feed water - 1200 mg/l.