



Complies with  
the requirements of  
**TRD 604**  
**72-h BOB**

picture: SENSOTROL 320 incl. fine filter and backflow preventer



picture: SENSOTROL 2900

## **SENSOTROL 500 – 1400** **Duplex Water Softeners - quality controlled**

Automatic, sensor-controlled softener producing soft water by means of ion-exchange. Especially suitable in case of fluctuating raw water hardness, irregular soft water consumption, the need to restrict hard water entry to the system is increased.

Regeneration is initiated automatically, regardless of the raw water hardness, as soon as the ion exchange resin has become depleted.

# SENSOTROL 500 - 1400

## Duplex Water Softeners - quality controlled

### Unit design

**Two ion-exchange tanks** made of glass-fibre reinforced plastic with PE inliner. Ion-exchange resin and supporting gravel for on-site filling.

**ABS central control valve** for each ion exchange tank (direct current flow)

**Brine tank** with salt tray, support, two standpipes, two brine valves, and plastic lid

**Pre-mounted piping** with manual shut-off valves

During regeneration, the soft water outlet of each filter is **automatically isolated** by an electrically controlled diaphragm valve

**Pilot distributor** controlling a hydraulically operated main control valve on each exchange vessel

**Manometer** for raw water pressure, manometer for soft water pressure

**Water meter** for exact determination of the soft water amount produced

**Salt empty switch** in the brine tank

### Microprocessor control SENSOTROL

for fully automatic operation.

**Sensor-controlled regeneration** initiation with switch-over to the other ion-exchange tank. Controller with 3 function keys (context sensitive) and 4 control keys. 2 LEDs for operation and mal-function, graphic display for graphic representation of the current filter's operating mode, as well as for clear text display of all parameters relevant to operation.

**Integrated history function** allows tracking back all operating modes of the controller within at least 2 weeks.

**Integrated SD card reader** for storing all operating data and fault messages as well as settings and calibration data (several years of history). The data can be conveniently analyzed using common spreadsheet programs.

**Alarm system:** Alarm in case of low salt level, lack of brine (if no brine gets to the resin during regeneration), lack of capacity (no regenerated ion-exchange tank available), insufficient rinsing (lack of water during regeneration), excess of max. flow rate, defective sensor (installation then switches to volume-controlled operation automatically), low or excessive flow, water meter defective in sensor mode BOB.

**Networking with PC (optional):** Visualisation of all control actions via RS 232 interface, remote control of controller via PC, history tracking, manual control using a keyboard for maintenance purposes, modem interface, remote maintenance possible.

**Display:** Date, time, operating mode for each filter, alarm history, amount produced per filter and cycle

The installation fulfils the requirements of the German Technical Rules for Boilers (TRD 604) for 72 h continuous unattended operation.

### Options

- Interface Profinet, item no. 541844, for transmission of data to the ZLT
- WUP-D7/ -D8 guarantees minimum flow rate
- Skids RD 500 to RD 1400 incl. assembly of the filled water softening installation. Additional components such as backflow preventer, fine filter, and blending device will be mounted on the skid when ordered.
- Blending device VSE
- Regeneration with brine
- fast brine formation on request

Technical Data		SENSOTROL 500	SENSOTROL 600	SENSOTROL 800	SENSOTROL 1000	SENSOTROL 1400
Nominal capacity*	m <sup>3</sup> x °dH	500	600	800	1000	1400
Capacity	m <sup>3</sup> /h	5,0	6,0	8,0	10,0	14
Pressure drop	bar	1,2	1,3	1,5	1,7	2,9
Flow min.	m <sup>3</sup> /h	0,65	0,75	1,0	1,25	1,75
Salt consumption/regeneration	kg	25	30	40	50	70
Flushing water per regeneration	l	920	1.183	1.578	1.920	2.688
Flushing water flow max.	m <sup>3</sup> /h	1,5	1,9		2,9	
Raw / soft water connection		Rp 1 1/4"/DN 32		Rp 2"/DN 40		Rp 2"/R 1 1/2"
Volume brine tank	l	300		500		750
Height brine tank	mm	1050		1280		1034
Diameter (outside) brine tank	mm	750		870		1170
Height	mm	2300		2500		2350
Width	mm	1800		2050		2250
Depth	mm	750		900		1200
<b>Item no.</b>		361 006	361 007	361 008	361 009	361 010

Voltage 230 V/50 Hz, raw water conductivity min./max. 200/1,600 µS/cm, operating pressure min./max. 3/6 bar, pressure fluctuation max. ± 0.5 bar, operating temperature min./max. 5/35 °C, \*max. achievable capacity with respect to Mg<sup>2+</sup> and Ca<sup>2+</sup> for regeneration with full brining