

# EUROWATER

A GROUP OF CO-OPERATING EUROPEAN WATER TREATMENT SPECIALISTS

AUTOMATIC SOFTENING

## AUTOMATIC SOFTENING PLANTS SERIES SMH AND SML



Type SMH 602/CSC2-F

## TIMER-CONTROLLED SOFTENING PLANTS

- **SUITABLE FOR REGULAR AND MODERATE DAILY CONSUMPTION**
- **ELECTRONIC 12 V PROGRAMMER FOR INDIVIDUAL DAILY PROGRAMMING**
- **REGENERATION TIMER FOR INDIVIDUAL PROGRAMMING OF SALT AND RINSE WATER CONSUMPTION**
- **ALL PARTS EXPOSED TO LIQUIDS ARE MADE OF CORROSION-RESISTANT MATERIALS**

### SOFTENING

During operation, calcium and magnesium salts (hardness) in the raw water are exchanged for sodium salts, thereby eliminating the problems caused by hard water. When the resin is saturated with calcium and magnesium salts, the unit draws brine from the brine tank. The collected calcium and magnesium salts are discharged to drain, and the resin is recharged with sodium ions.

### THE PRINCIPLE OF TIMER CONTROL

A timer-controlled 1-tank unit regenerates at preset hours by means of an electronic timer. During regeneration, the resin tank is out of service and the water supply is consequently interrupted. When the regeneration is completed, the tank returns automatically to service.

### RANGE OF APPLICATION

A timer-controlled 1-tank unit is used in case of moderate water consumptions without considerable fluctuations, and where interruptions of 1-3 hours in the water supply are acceptable.

### PLANT DESIGN

A 1-tank unit consists of a resin tank with 5-cycle valve and brine tank. The mono-constructed pipe system is equipped with automatic diaphragm valves of plastic. Each unit is supplied with an electronic programmer.

### TIMER CONTROL

The electronic ETP 4 programmer consists of a time clock and a regeneration clock. The time clock allows for several regenerations every 24 hours and submits impulses to start a regeneration. The regeneration clock controls the variable salt and rinse programmes.

### COMBINED TIMER AND METER CONTROL

A CSD control panel is combination of timer and meter control. The panel starts regenerations at preset time, but only if the preset consumptions have been reached. With this arrangement, water and regeneration chemicals are saved during holidays and other non-working days. The CSD control panel may be used for meter control only, if interruptions of the water supply during regeneration are acceptable.



Type SMH 601/ETP4-B

## METER-CONTROLLED SOFTENING PLANTS

### THE PRINCIPLE OF METER CONTROL

A pulse transmitter at the outlet side of the unit registers the consumptions of softened water and transmits impulses to the control panel concurrently with the consumption. When the capacity of a resin tank is exhausted, the control panel starts a regeneration of the tank.

### CONTINUOUS SOFT WATER SUPPLY

During regeneration, one resin tank is taken off-line while the other supplies softened water. When the tank is regenerated, it goes into stand-by position, until the other tank needs a regeneration.

### ADVANTAGES OF METER CONTROL

The resin tanks can be regenerated at intervals of a few hours. Thus the filter media are utilized in the best way, and even small plants can deliver large amounts of softened water at minimum cost and space requirements. As the units are regenerated according to consumption only, the system offers optimal economy as to water and chemicals.

### RANGE OF APPLICATION

A meter-controlled softening plant is suited for irregular and large water consumptions.

### FRAME-MOUNTING

A meter-controlled 2-tank unit is frame-mounted and ready for installation. It consists of two resin tanks with 5-cycle valves, a pipe system with necessary automatic and manual plastic valves, and a control panel.

### ELECTRONIC CONTROL PANEL

The CSC 2 control panel contains a programming and an impulse counting section which can both be programmed individually by means of keys on the panel front. The panel can control from 1 to 4 resin tank groups.

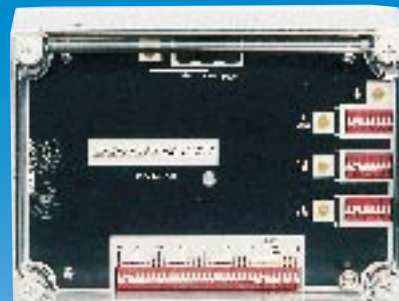
### LIGHT-EMITTING DIODES/REMOTE ALARM

The programming section controls the salt and rinse programmes of the unit, while the counting section controls the meter control. All service cycles and regenerations can be checked by means of lightemitting diodes. Remote alarm signals are available.

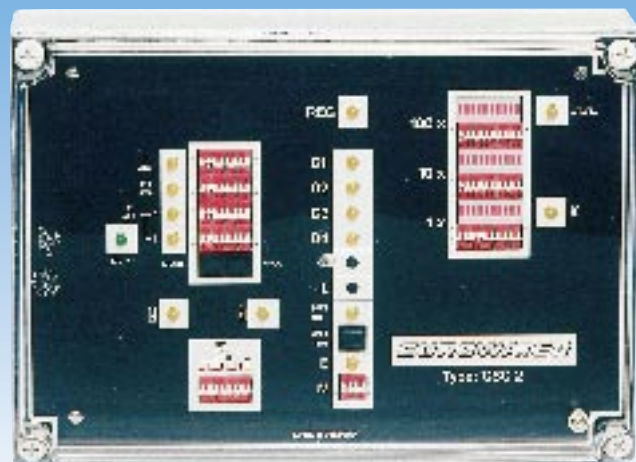
### BRINE MAKER

For very large units, an automatic system is available for production of heavy amounts of brine (storage capacity of 2000 kg salt or more).

- SUITED FOR IRREGULAR AND LARGE WATER CONSUMPTIONS
- CONTINUOUS SOFT WATER SUPPLY
- REGENERATION PROPORTIONAL TO WATER CONSUMPTION ENSURES OPTIMAL WATER AND CHEMICAL ECONOMY
- REGENERATION AT INTERVALS OF A FEW HOURS OFFERS HIGH 24-HOURS CAPACITY IN PROPORTION TO THE PLANT SIZE
- ELECTRONIC 12 V CONTROL PANEL FOR INDIVIDUAL PROGRAMMING
- ALL PARTS EXPOSED TO LIQUIDS ARE MADE OF CORROSION-RESISTANT MATERIALS



Programmer for timer control



Control panel for meter control

## PLANT COMPONENTS

### EUROWATER 5-4CYCLE VALVE

The patented EUROWATER 5-cycle valve is made of plastic and is simple and sturdy with 3 movable parts only. The valve has been designed especially for EUROWATER plants and ensures an efficient and lenient treatment of the ion exchangers resulting in a better utilization of the plant and a long life-time of the resin.

### CORROSION-RESISTANT RESIN TANK

The resin tanks are coated with high-density polyethylene. The coating is absolutely free of pin-holes, and the TAB dielectric strength is approx. 21 kV/mm. The tanks thus have the strength of steel and the chemical corrosion resistance of plastic.

### CORROSION-RESISTANT BRINE TANK

The brine tanks are made of rigid polyethylene with lids of the same material. They are easy to fill and clean and contain salt for several regenerations.

### SALT SETTING

All units have variable salt settings which can be adjusted without tools. The minimum setting is the most economic. At higher settings, comparatively more salt is used per m<sup>3</sup> of softened water.

### BASIC CAPACITY

The amount of raw water which can be softened between two regenerations depends on the hardness of the raw water and the salt consumption per regeneration. The basic capacities stated indicate the amount of raw water with 1 degree of hardness (1°GH) which can be softened per regeneration. The actual capacity per regeneration is consequently calculated by dividing the basic capacity by the hardness of the raw water.

## FLOW RATES AND CAPACITIES

MODULE	FLOW RATE m <sup>3</sup> /h	PRESSURE LOSS bar	BASIC CAPACITIES			
			Minimum m <sup>3</sup> of 1°GH	Salt cons. kg. NaCl	Medium m <sup>3</sup> of 1°GH	Salt cons. kg. NaCl
SMH 360	5	1,1	300	10	360	15
SMH 600	8	1,1	450	15	540	23
SMH 900	11	1,1	750	25	900	38
SMH 1200	13	1,1	975	33	1170	49
SMH 1800	15	1,1	1500	50	1800	75
SMH 2000	13	1,1	2100	70	2520	105
SML 1200	20	1,1	975	33	1171	49
SML 1800	26	1,1	1500	50	1800	75
SML 2000	20	1,1	2100	70	2520	105

Operations pressure: 2.5-6 bar. Connection 230/12 V, 50 Hz.

Regeneration salt: 98% NaCl, grain size 10-20 mm.

Raw water temperature: Max. 35°C.

## DIMENSIONS

MODULE	1-TANK-UNIT						2-TANK-UNIT					
	RESINTANK			BRINE TANK			FRAME DIMENSIONS			BRINE TANK		
	Length mm	Width mm	Height mm	Qty.	Dia. mm	Height mm	Length mm	Width mm	Height mm	Qty.	Dia. mm	Height mm
SMH 360	520	350	1925	1	520	1090	1480	600	2075	1	760	1090
SMH 600	620	450	1925	1	520	1090	1480	600	2075	1	760	1090
SMH 900	750	550	1925	1	760	1090	1880	800	2075	1	760	1090
SMH 1200	850	650	1925	1	760	1090	1880	800	2075	1	970	1090
SMH 1800	1000	800	1925	1	970	1090	2180	950	2075	1	970	1090
SMH 2000	1000	800	2425	1	970	1090	2180	950	2575	1	970	1090
SML 1200	1075	650	1925	1	760	1090	1880	800	2075	1	970	1090
SML 1800	1225	800	1925	1	970	1090	2180	950	2075	1	970	1090
SML 2000	1225	800	2425	1	970	1090	2180	950	2575	1	970	1090

Dimensioning sketches with exact installation dimensions are available on request.



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