

EUROWATER

A GROUP OF CO-OPERATING EUROPEAN WATER TREATMENT SPECIALISTS

AUTOMATIC SOFTENING

AUTOMATIC SOFTENING PLANTS SERIES SF/SFH & SFG/SFHG



Type SFH 1202

TIMER-CONTROLLED SOFTENING PLANT

- 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
- SFG/SFHG INTENDED FOR SOFTENING OF HOT WATER UP TO 85°C

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 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. In connection with multitank plant, a connecting pipe system can be delivered with stop valves. Each unit is supplied with an electronic programmer.

TIMER CONTROL

The electronic ETP4 programmer consists of a time clock and a regeneration clock. The time clock allows several regenerations every 24 hours and submits pulses to start a regeneration. The regeneration clock controls the variable salt and rinse programmes.

COMBINED TIMER AND METER CONTROL

A CSD control panel is a combination of timer and meter control. The panel starts regenerations at preset hours, 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 SF 601

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 pulses 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 operating position.

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 can be constructed as a frame-mounted plant 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 a pulse 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.

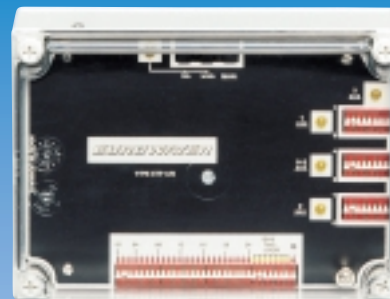
LIGHT-EMITTING DIODES/REMOTE ALARM

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 light-emitting diodes. Remote alarm signals are available.

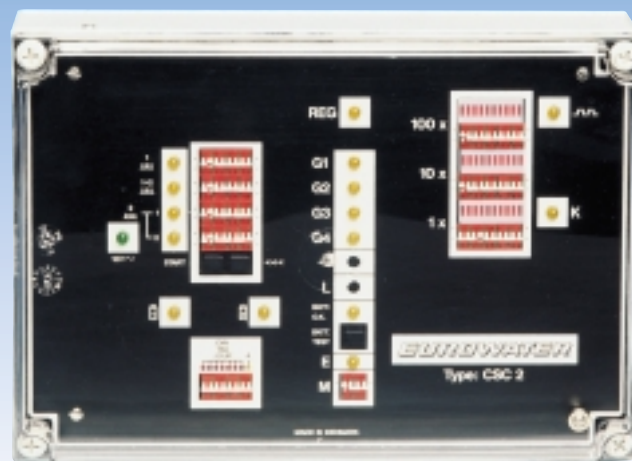
BRINE MAKER

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
- ELECTRONIC 12 V CONTROL PANEL FOR INDIVIDUAL PROGRAMMING
- THE SFG/SFHG SERIES ARE INTENDED FOR SOFTENING OF HOT WATER UP TO 85°C



Programmer for timer control



Control panel for meter control

SOFTENING PLANT FOR HOT WATER SFG/SFHG

PLANT COMPONENTS

APPLICATION

The SFG/SFHG plants are suitable for softening of hot water with temperatures up to 85°C. Resin tank, inlet and outlet distributors and 5-cycle valve are constructed especially for hot water.

THEORY OF OPERATION

The plant is regenerated with cold water from a separate cold water connection, to avoid unnecessary calorie loss during regeneration. During the last regeneration cycle, the resin tank is rinsed with warm water again, whereby the plant can supply warm, softened water for consumption immediately after a regeneration.

SPECIAL ADVANTAGES

When hot water is softened in a traditional way, calcium precipitations very fast clog the valve. The mechanical functions are thus disturbed. This problem is almost eliminated by feeding the movable parts of the valve with cold water only. In the same way, supplying the brine tank with cold water only, prevents crystallization and clogging from happening.

SPECIFICATIONS

Performances, capacities and dimension sketches are identical with those stated for the SF and SFH plants.

EUROWATER 5-CYCLE 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 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 approximately 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 m³ 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 ³ /h	PRESSURE LOSS bar	BASIC CAPACITIES (1)			
			Minimum m ³ á 1°dH	Salt cons. kg NaCl	Medium m ³ á 1°dH	Salt cons. kg NaCl
SF 360	7.2	1.1	240	7.0	300	11.0
SF 600	8.7	1.1	360	10.5	450	16.5
SF 1200	9.0	1.1	720	21.0	900	33.0
SF 1800	9.0	1.1	1080	31.5	1350	49.5
SF 2000	9.0	1.1	1560	45.5	1950	71.5
SFH 600	13.8	1.1	360	10.5	450	16.5
SFH 1200	24.0	1.1	720	21.0	900	33.0
SFH 1800	31.2	1.1	1080	31.5	1350	49.5
SFH 2000	31.2	1.1	1560	45.5	1950	71.5

(1) Selection of control system influences on the basic capacity.

Operating pressure: 2.5-6 bar. Power supply: 230 volt, 50 Hz, transformed into 12 volt. Regeneration salt: 98% NaCl, 10-20 mm grade. Water temperature: Max. 35 °C.

DIMENSIONS

MODULE	1-TANK-UNIT						2-TANK-UNIT					
	RESIN TANK			BRINE TANK			RESIN TANKS			BRINE TANK		
	Width mm	Depth mm	Height mm	Diameter mm	Height mm	Content kg NaCl	Width mm	Depth mm	Height mm	Diameter mm	Height mm	Content kg NaCl
SF 360	400	450	1950	520	1090	230	1055	575	2020	1 x 760	1090	460
SF 600	500	550	1950	520	1090	230	1155	625	2020	1 x 760	1090	460
SF 1200	700	750	1950	760	1090	460	1710	750	2020	1 x 760	1090	460
SF 1800	850	900	1950	760	1090	460	1860	900	2020	1 x 760	1090	460
SF 2000	850	900	2450	760	1090	460	1860	900	2520	1 x 760	1090	460
SFH 600	750	550	1950	520	1090	230	1750	550	2185	2 x 760	1090	920
SFH 1200	1060	750	1950	760	1090	460	2210	750	2190	2 x 760	1090	920
SFH 1800	1210	900	1950	760	1090	460	2520	900	2215	2 x 760	1090	920
SFH 2000	1210	900	2450	760	1090	460	2520	900	2715	2 x 760	1090	920

Dimension sketches with exact installation dimensions are available on request.



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