Instruction manual

Automatic water softener twin tank 2x 8 l
DuoSoft 9

2026-10-19

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1. DECLARATION OF CONFORMITY

Decree of the Ministry of Health of the Czech Republic no. 38/2001 Coll. of 19 January 2001 Regulation (EC) No 1907/2006 - Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Regulation of the European Parliament and Council Regulation (EC) no. 1935/2004 of 27 October 2004

The products meet the requirements of §26 of Act No.258/2000 as amended. The products meet the requirements of RoHS Directive 2015/863/EU, 10/2011, 517/2014, 2015/1094, 2015/1095.

Attention, the manufacturer gives up any responsibility in case of direct and indirect damage that is relate to poor installation, incorrect intervention or adjustments, insufficient maintenance, incorrect by using and which are eventually caused by other causes that the points referred to in the conditions sales. This appliance is intended only for professional use and must be operated by qualified by persons. Parts that have been secured by the manufacturer or authorized worker after the setting rebuild.

2. TECHNICAL DATA

The label with technical data is located on the side or back panel of the device. Please read the wiring diagram and all the following information in the attached manual before installation.

Net Width [mm]	Net Depth [mm]	Net Height [mm]	Net Weight [kg]	Power electric [kW]
250	1080	1080	25.00	0.010

Loading	Gross depth [mm]	Gross Height [mm]	Resin capacity	Gross Volume [m3]
230 V / 1N - 50 Hz	350	680	0.00	0.069

Net Volume [m3]	Gross Weight [kg]	Gross Width [mm]
0.223	25.50	290

3. LOCATION ELECTRIC

For the correct operation and placement of the appliance, it is necessary to observe the following all prescribed standards for the given market. Unpack the device and check that the device has not been damaged during transport. Place the device on a horizontal surface (maximum unevenness up to 2°). Small unevenness can be leveled with adjustable feet. If the device will be placed in such a way that it will be in contact with the walls of the furniture, these must withstand a temperature of up to 60°C. Installation, adjustment, commissioning must be performed by a qualified person who is authorized to perform such operations, according to applicable standards. The device can be installed separately or in series with devices of our production. A minimum distance of 10 cm from flammable materials must be observed. In this case, it is necessary to secure the appropriate modifications to ensure the thermal insulation of the combustible parts. The appliance must only be installed on a non-flammable surface or against a non-flammable wall. **Parts of the appliance provided by the manufacturer. or his representative, the worker performing the installation may not rebuild the product.**

4. SAFETY MEASURES FOR FIRE PROTECTION

- the appliance may only be operated by adults
- the appliance may be used safely in accordance with applicable market standards:

Fire protection in spaces with special risk or danger

Protection against the effects of heat

- the appliance must be placed so that it stands or hangs firmly on a non-combustible surface

Objects of flammable substances must not be placed on the appliance at a distance less than a safe distance from it (the smallest distance between the appliance and flammable substances is 10 cm).

Table: degree of flammability of building materials included in st. flammability of substances and products

Degree of flammability	Building materials
A - non-flammable	granite, sandstone, concrete, brick, ceramic tiles, plaster
B - Not easily flammable	Acumin, Heraclitus, Lihnos, Itaver
C1 - highly flammable	wood, hardwood, plywood, hard paper, umakart
C2 - moderately flammable	chipboards, solodur, cork boards, rubber, flooring
C3 - Highly flammable	wood fiber boards, polystyrene, polyurethane, PVC

- information on the degree of flammability of common building materials is given in the table above. Appliances must be installed in a safe manner. During installation, the relevant design, safety and hygiene regulations must also be respected:
- fire safety of local appliances and heat sources
- fire protection in areas with special risk or danger
- protection against the effects of heat

5. INSTALLATION

Important: The manufacturer does not provide any warranty for defects arising as a result of incorrect use, failure to follow the instructions contained in the attached user manual and mishandling of appliances. Installation, modification and repair of appliances for large kitchens, as well as their dismantling due to possible damage to the gas supply, can only be carried out on the basis of a maintenance contract, this contract can be concluded with an authorized dealer, while technical regulations and standards and regulations must be observed regarding installation, electrical supply, gas connection and work safety. Technical instructions for installation and adjustment, for use by specialized technicians ONLY. The instructions that follow refer to a technician qualified for installation to carry out all operations in the most correct manner and according to the applicable standards. Any activity related to regulation etc. must only be performed with the device disconnected from the network. If it is necessary to keep the appliance under voltage, the utmost care must be taken. The type of appliance for extraction is declared on the nameplate, it is an A1 appliance.

6. WATER CONNECTION

Water connection is done using G1/2 threaded hoses. The water supply must be fitted with separate closures that are freely accessible and within reach of the device. The device includes return valves. The water for filling the duplicator space must be softened - a maximum of 5 ° the French scale of water hardness. The water pressure must be in the range of 50-300 kPa.

7. CONNECTING THE ELECTRICAL CABLE TO THE NETWORK

Installation of the electrical supply - this supply must be separately secured. Ato with the corresponding circuit breaker of rated current depending on the power input of the installed device. Check the power consumption of the device on the production label on the back panel (or side) of the device. The connected ground wire must be longer than the other wires. Connect the device directly to the network, it is necessary to insert a switch between the device and the device with a minimum distance of 3 mm between the individual contacts, which corresponds to the applicable standards and load. The earth supply (yellow-green) must not be interrupted by this switch. Connect the device to the mains if the socket has adequate protection. In any case, the supply cable must be located so that it does not reach a temperature of 50 degrees higher than the environment at any point. Before the appliance is connected to the network, it is necessary to first make sure that:

- the supply circuit breaker and the internal distribution can withstand the current load of the appliance (see matrix label)
- the distribution board is equipped with effective grounding according to the standards of the relevant market and the conditions given by law
- the socket or switch in the supply is easily accessible from the appliance

- the electrical supply to the device must be made of oil-resistant material

We disclaim any responsibility in the event that these standards are not respected and in the event of a violation of the above principles. Before first use, you must clean the device, see chapter """"cleaning and maintenance"""". The appliance must be grounded using a screw with a grounding mark.

- Do not insert the plug of the power supply into the electrical outlet. sockets and do not pull out the zel. sockets with wet hands and pulling on the power cord!
- Do not use extension cords or multiple sockets.
- **The mains connection point must have a maximum of the following impedance: ZMAX = 0.042 + j 0.026 Ω for the phase conductors and 0.028 + j 0.017 Ω for the neutral conductor.**

8. GENERAL INSTRUCTIONS

The relevant installation and operation instructions contained in this manual must be read prior to the installation and operation of this device.

The manufacturer will not bear responsibility in case of improper use and incorrect operation of the device.

The system is used only for removing unwanted mineral substances, which accumulate as lime scale (Calcium and Magnesium). This device is a part of the system protection.

It is forbidden to make change in the system without consultation with the manufacturer. The manufacturer will not bear responsibility in case of any damage caused by this type of modification.

The temperature in the device operating room must be at least 10℃

The general regulations and provisions as well as provisions concerning accident prevention must be observed at the installation location of the device.

The installation location of the device must be secured from any damage caused by water (e.g. by the existing floor drain). The manufacturer is not responsible for any damage caused by water.

The appliance in which the filter is used must be free of limescale and gypsum deposits prior to installation.

Do not assemble near sources of heat and open flames.

Protect the filter system from mechanical damage.

Installation and maintenance of the filter system may only be carried out by trained and authorized personnel.

For cleaning do not use any abrasive chemicals, cleaning solutions or astringent cleaning agents

The proper name and serial number of the device must be provided with any enquiries and ordering of spare parts. Only then an effective and quick reply or order implementation is ensured.

9. TRANSPORTATION AND PACKAGING

Prior to shipment our systems are carefully packed and controlled.

Damage during transportation cannot be excluded in case of shipment by a shipping company. It is necessary therefore to check the package at receipt of the product.

Check the completeness of the delivery based on the delivery receipt.

In case of damaged packaging: perform a visual inspection of the goods and record conclusions in the shipping documentation provided by the shipping company. Make photographic documentation of the damaged package and the device. In the shipping documentation place an annotation of possible claiming of hidden damages, which may be revealed after start-up. Immediately contact the shipping company because otherwise the shipping insurance will not be available. Save the package for the purpose of any later inspections by the shipping or insurance company.

In case of returning the package, it must be packed in a way to be protected against any mechanical da-

mage.

Drain water from the system prior to the shipment. This will help reduce shipping costs. It will also prevent the packaging from damage due to potential water leakage.

After storage and transport below 0 °C, the product must be stored in the open original packaging for at least 24 hours before it is commissioned at the stated ambient temperatures for operation.

10. LIABILITY EXCLUSION

Installation must be performed precisely in accordance with the instructions in this manual. Manufacturer shall not be held liable for any damage, including subsequent damage, arising from the incorrect installation or use of the product.

How it works

Hard water contains the combination of calcium (Ca), magnesium (Mg) and iron (Fe). The softening process serves the removal of the positively charged ions by means of ion-exchanged resin. When the ion-exchanged resin loses its effectiveness it is regenerated by the reagent.

Regeneration:

The regeneration is based on rinsing the deposits using the tablet salt solution and rinsing out the absorbed calcium and magnesium ions into the sewage.

The water-softening type Duosoft 9 consists of two columns filled with softening resin. Each column is equipped with a

control head. When the first column with control valve EI softens the water, second column with control head B65 is not working. While the column 1 is exhausted, water softening begins column 2. After the completion of the regeneration column No. 1 again starts to work and the column 2 stops and waits for another start. After some time, column 2, also runs out and starts to regenerate, then works only column 1. The first column is set to the regeneration immediately, after passing a predetermined amount of water. Second column is set for time regeneration mode – set the frequency of the regeneration of every specified number of days based on the average water consumption at the customer. The default setting every 6 days.

Standards, provisions and statutory regulations

Water supplying the device must comply with the requirements of the utility water use regulation.

Parts that are in contact with treated water must be made of material resistant to treated water.

In the room for the water treatment floor drainage must be installed. The purchaser is responsible to ensure the drainage.

Maximum temperature of the supply water is 30 ° C.

11. DESCRIPTION OF THE DEVICE

System structure

The system of water purification type DUOSOFT 9 is a device of high quality and precision.

Properly installed and maintained guarantees infallible functioning for many years.

The water softener station type DUOSOFT 9 is used where the water flow does not exceed 75l/m.

System structure:
Water softener Type : DUOSOFT 9
Drain hose ½”

Technical description

Quantity of softened water for 10odh /regeneration (from one columne)	[liters]	2300
Daytime efficiency at 4 regeneration cycle	[liters]	9200
Salt consumption (for 1 columne)	[kg]	1,4
Flow Rate	[l/min]	0-30/75
Operating pressure	[bar]	2,0 - 6,0
Connections	[cal]	¾“
Height	[mm]	640
Depth	[mm]	250
Width	[mm]	540
Brine tank diameter	[mm]	285
Salt storage capacity	[kg]	25
Maximum water temperature	[0C]	30

*water softened completely
** water softened partially

The system is configured to use 1,4 kg of reagent per each regeneration (for one columne).
Calculating the amount of softened water between regenerations:
The amount of water between regenerations is calculated according to this formula:
Z = 2300x10/y
Where
Z – is the amount of softened water between regenerations
Y – is the examined water hardness according to ‘n (German degree)
An example of calculation the amount of softened water ‘z’ between regeneration.
Data: the examined water hardness = 15’n
The amount of ‘z’ water between regenerations is calculated according to the formula:
Z = 2300 x 10/15 = 1533 liters.
At the water hardness of 15’GH we get 1533 liters of softened water.
TAB. 1. CAPACITY

Water Hardness				
English degree	French degree	PPM	German degrees	Efficiency DUOSOFT 9 (one column)
12,5	18,0	178,6	10	2300
13,8	19,8	196,5	11	2091
15,0	21,6	214,3	12	1917
16,3	23,4	232,2	13	1769
17,5	25,2	250,0	14	1643
18,8	27,0	267,9	15	1533

20,0	28,8	285,8	16	1438
21,3	30,6	303,6	17	1353
22,5	32,4	321,5	18	1278
23,8	34,2	339,3	19	1211
25,0	36,0	357,2	20	1150
26,3	37,8	375,1	21	1095
27,5	39,6	392,9	22	1045
28,8	41,4	410,8	23	1000
30,0	43,2	428,6	24	958
31,3	45,0	446,5	25	920
32,5	46,8	464,4	26	885
33,8	48,6	482,2	27	852
35,0	50,4	500,1	28	821
36,3	52,2	517,9	29	793
37,5	54,0	535,8	30	767
38,8	55,8	553,7	31	742
40,0	57,6	571,5	32	719
41,3	59,4	589,4	33	697
42,5	61,2	607,2	34	676
43,8	63,0	625,1	35	657
45,0	64,8	643,0	36	639
46,3	66,6	660,8	37	622
47,5	68,4	678,7	38	605
48,8	70,2	696,5	39	590
50,0	72,0	714,4	40	575

The stated capacities were calculated based on standard application and machine conditions. This information may vary according to external influencing factors (for example, fluctuating raw water quality).

Control function

Control function - head Column 1 (Electronic Head)

Before starting, you must program the current time and device performance (using the table performance should be investigated hardness and enter the appropriate number of liters). The head control has been factory programmed to regenerate instantly every 1150 liters.

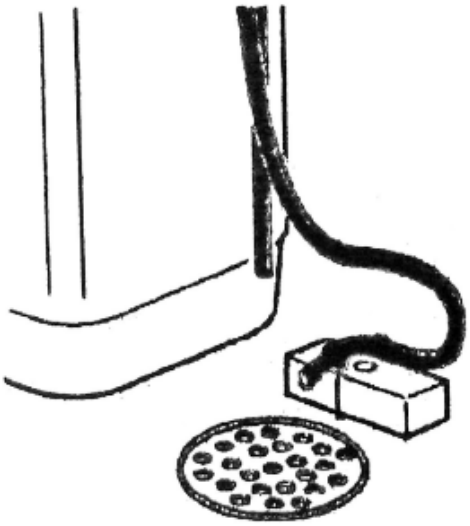
Control head Column 2 (Mechanical head)

Before starting, you must program the current time and the regeneration frequency (the number of days

between regenerations). The head control has been factory programmed to regenerate at 2:00 AM every 6 days. Depending on the hardness of the water and the expected daily consumption must be programmed frequency regeneration device.

12. PREPARATION FOR INSTALLATION

On the purchaser's side:
Utility water supply pipe (cold) 3/4" with a cut off valve.
Drainage (sewer) at a max. height of 100 mm, connection DN 50.
Electric socket 230 V / 50 Hz, 16 A
Floor drainage must be in the room.
Sediment filter should be use before water softener.



Picture 1.

Dismantling and utilization

The device is dismantled after it lifetime has expired (for final destruction or scrap). The reversed assembly steps are to be commenced.
Note!
First clean the system thoroughly with fresh water and drain the tanks and pipes completely!
Comply with workplace safety instructions in this respect!
Different parts of the device must be utilized in accordance with binding regulations of utilization and waste management!

13. INSTALLATION

After preparation for mounting, the device is to be placed in the designated room in accordance with the system structure.

All inlets and outlets are to be connected on the water's side. The device connections are shown in the following figure:

Connect the inlet (1) and outlet (2) to water supply;

Connect the elastic pipe (1/2') draining the sewage to the stub connector pipe (3) and to a sewage grating or a

draining installation.

The sewage draining should be permeable enough to drain 5l/m of the flushing water. The draining pipe should be stiff enough to avoid its breaking, which may cause blockage and result in the overflow in the tank with the reagent as well as faulty regeneration process;

Before water softener should be used mechanical sediment filter to protect device from mechanical damage caused by sediments from water pipes.

The brine tank of the water softening device is to be filled with salt tablets (max. filling 100 mm from the upper edge of the brine tank). Next add 5 liters of water using buckets.

Check and tighten all fittings connecting the device.

Connect to electric Power socket.

The device is factory adjusted. The fine tuning is done by the user on site.

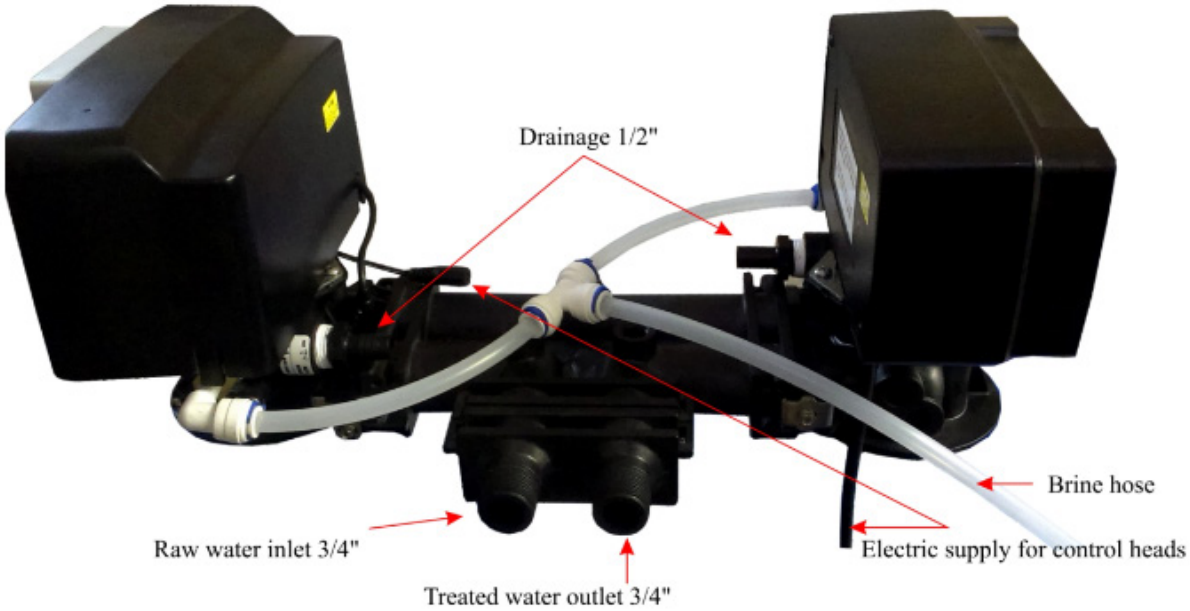
The electronic head must be program the current time and device performance (using the table performance should be investigated hardness and enter the appropriate number of liters)

The mechanical head must program the current time and the regeneration frequency (the number of days between regenerations).

Open the water supply to the water softening device.

The water pressure must be at least 2,0 bars and a maximum of 6,0 bars.

De-aerate system by turning the regeneration knob (7) clockwise to Backwash position IN MECHANICAL CONTROL VALVE B65. After few minutes the system will de-aerates. Next turn the regeneration knob clockwise to IN SERV position. The device is ready to work.



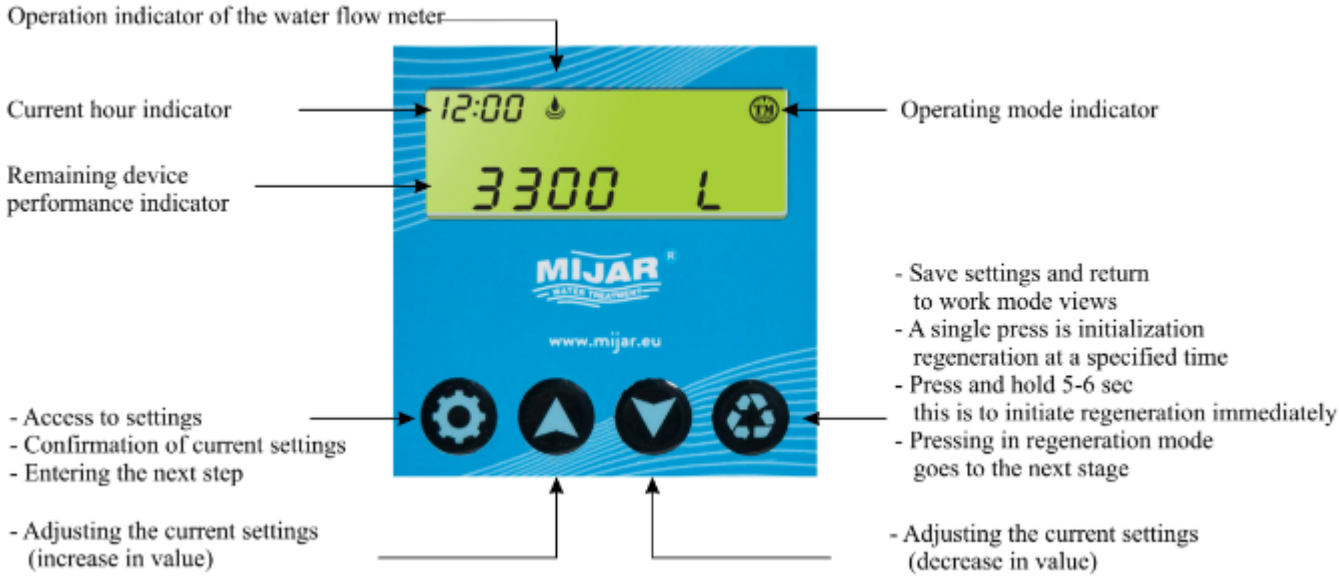
Picture 2. Steering valve connection

Inlet of raw water (3/4“,)
Outlet of treated water (3/4“,)
Drain (1/2“, elastic connection) – SEPARATE DRAINAGE HOSES FOR EACH VALVE
Power supply

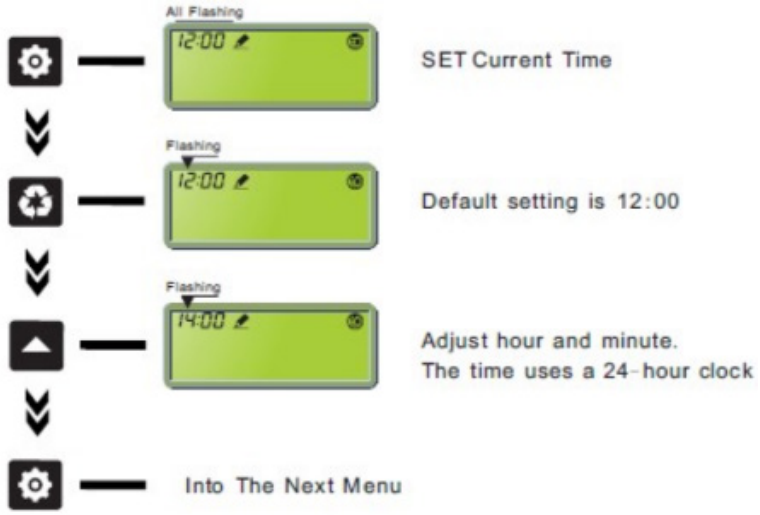
14. PROGRAMMING DEVICE

Programming Control head for column 1 (ELECTRONIC)

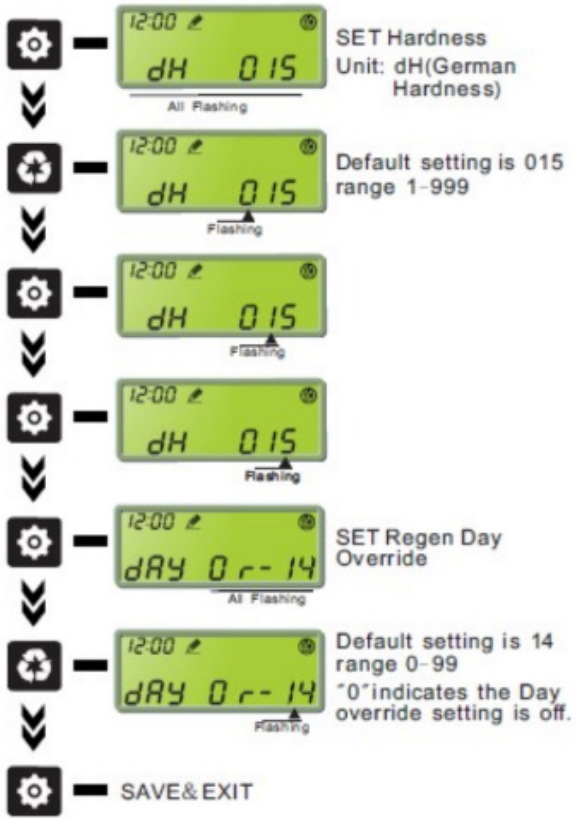
Display description:



The current time:



The Water Hardness and override regeneration:



Programming Control head for column 2 (MECHANICAL)

To program the device must be entered: The current time and Regeneration frequency

The current time

To set the current time, the user must press and hold the white button (1), and simultaneously turn the gearwheel (2) so in the gap (3) the current time is shown* (like on the watch). Next, release the white button (1) so it falls back between the gearwheel pins.

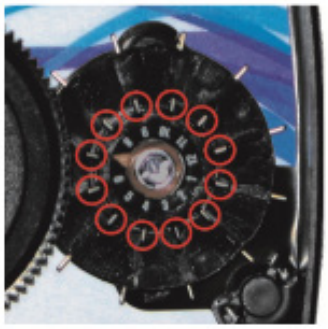
”a”- morning hours (midnight to midday) e.g. 9a=9:00 (AM)

„p”- afternoon hours (midday to midnight) e.g. 9p=21:00 (PM)

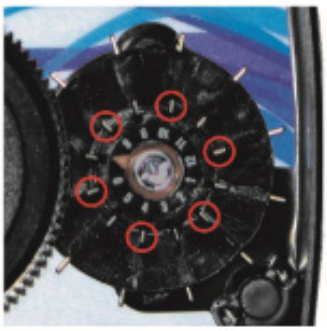
Regeneration frequency

Days of regeneration are set on the 12 day disk (4). Red arrow indicate the current day (5). To set regeneration frequency use the pinions (6) Each pinion represents 1 day: By lifting up or lowering the pinions (6) set the regeneration days. First the user has to lower all of pinions (6) down and then lift the pinions representing days, when the regeneration is to be carried out.

EXAMPLE:
All pins are lift

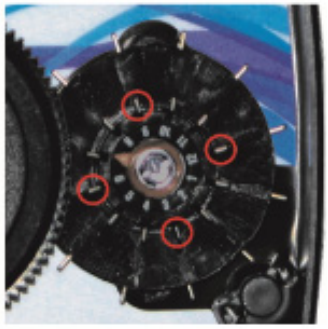


Regeneration takes place every day
Every 2nd pin is lift



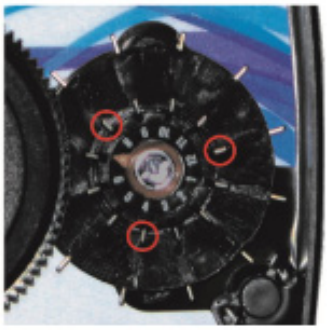
Regeneration takes place every 2nd day

Every 3rd pin is lift



Regeneration takes place every 3rd day

Every 4th pin is lift



Regeneration takes place every 4th day

15. MANUAL INITIATION OF REGENERATION PROCESS

Each of the columns may be regenerated at any time by manually initiating regeneration.

Control head in Column 1 (Electronic head)

- A single press is an initiation regeneration at a specified time.
- Press and hold 5-6 sec this is to initiate regeneration immediately.

Control head in Column 2 (Mechanical head E65)

To manually initiate the regeneration process, the user has to turn the knob (7) clockwise until REGEN is shown in the gap.

The knob (7) will turn and when the regeneration process is finished, the knob will reach the (IN SERV) position. Thank to the built-in water mixer, during the regeneration mode hard water is available.

16. OPERATION:

Service is to refiling tableted salt regenerant tank. Salt should fill the tank regularly. The minimum amount of salt in the container, a 1/3 of container.

WARNING!

Do not allow the operation without salt tableted, for more than 14 days. Otherwise deposit softeners may be permanently damaged.

17. CLEANING AND MAINTENANCE

It is recommended to have the device checked with a specialist service at least once a year. All the interventions in the device can only be carried out by a qualified person who has the authorization to do so. **CAUTION!** The device must not be cleaned with direct or pressure water. Clean the equipment daily. Daily maintenance extends the life and efficiency of the equipment. Always turn off the main inlet to the device. Wash the stainless steel parts with a damp cloth with a detergent without coarse particles and wipe dry. Do not use abrasive or corrosive cleaning agents. Attention! Before using the device, it is necessary to remove the protective foil from the entire surface, and then wash it well with water with detergent, and then wipe it with a damp cloth. **ALERT!** The warranty does not apply to all consumables subject to normal wear (rubber seals, bulbs, glass and plastic parts, etc.). The warranty also does not apply to the device if the installation is not carried out in accordance with the instructions - an authorized worker according to the corresponding standards and if the equipment was unprofessionally manipulated (interventions in the internal equipment, etc.) or were operated by unhappy staff and contrary to the instructions for use, further The warranty does not apply to damage by natural effects or other external intervention. **Required service organization 2 times a year. After the lifetime, the shipping packaging and equipment are submitted to the collection, according to the regulations on waste management and hazardous waste.**