User manual

Euro-Clear Midnight

Household, cabinet water softener

Number of the equipment's drinking water safety (NNK) certificate: NNGYK/02292-4/2024

1. Be sure to read this user manual before installation and use..

2. Be careful not to pinch the O-rings, use food-grade silicone grease to wet the seals.

3. The equipment is not suitable for treating microbiologically unsafe water or water of unknown origin and quality. In such cases, disinfection is required before or after the equipment.

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BE SURE TO READ THIS SECTION

BEFORE STARTING THE COMMISSIONING OF THE EQUIPMENT

►Read the user manual carefully before installation, commissioning and use.

Not following instructions may result in personal injury and/ or property damage.

► During installation, always comply with local laws and regulations regarding electrical installation and pipe installation under pressure. Follow the relevant regulations even if they differ from those contained in these instructions for use.

►Operate the water softener at an incoming water pressure of between 2 and 5 bar. In case of pressure exceeding this or strongly fluctuating pressure, it is necessary to install a pressure control valve. Ideal operating conditions: 2.5 - 3.5 bar. If the pressure is significantly different from this, it may be necessary to correct the settings of the regeneration phases and replace the injector.

► Store and operate the water softener at a temperature range between 5°C and 40°C. The temperature of the water flowing through the equipment must not exceed 30°C.

►Do not use to soften hot water.

► Do not install the water softener in a place exposed to weather, rain, direct sunlight or in an environment that exceeds the above-mentioned ambient temperature.

► If the equipment has been relocated or if the parameters of the incoming water have changed by more than 15% (water hardness, pressure...) then it is necessary to put back to operation again.

► Use suitable lubricating grease (silicone grease) for wetting and installing the O-rings. Do not use a damaged or pinched O-ring.

►The water softener is not protected against high iron, manganese, sulfur content and suspended solids, so its use is only permitted for drinking water quality. Failure of seals and discs due to lack of proper pretreatment is not covered by the warranty.

►It is absolutely necessary to install a 50 µm pre-filter in front of the water softener, which is a condition for the warranty to be valid.

► The frequency of cleaning/replacing seals and closing elements depends on the quality and hardness of the treated water.

►To avoid contamination, operate the water softener with biologically pretreated water.

►To avoid contamination, operate the water softener with biologically pretreated water.

Euro-Clear Kft. guarantees that your new water softener was built with quality materials and expertise. With proper installation and maintenance, it ensures long-term, problem-free use.

Euro-Clear Kft reserves the right to change the technical content of the equipment without prior notice.

ATTENTION

BE SURE TO STUDY AND COMPLY WITH LOCAL REGULATIONS, LAWS, REGULATIONS!

⚠ CAUTION

DISASSEMBLY UNDER PRESSURE CAN LEAD TO FLOODING AND DAMAGE OF THE PREMISES!

FUNDAMENTALS OF WATER TREATMENT

WHAT IS HARD WATER AND HOW TO SOFTEN IT?

Fresh water everywhere originally comes from falling precipitation (snow, rain, hail). Precipitation falling on the earth's surface evaporates under the influence of the sun and rises to form clouds, then almost completely clean and soft water falls again in the form of precipitation, when it filters through the atmosphere and collects dust and smog. As a result of percolation through rocks and soil, the hardness and pH of the water will change, and chemical substances that affect its color, smell, and taste will dissolve.

The hardness of the water comes mainly from the limestone dissolved by the rainwater. Based on this principle, in the past, if people needed soft water, the water runoff from the roofs was collected in barrels and channeled through sewer systems before it dissolved the hardness-causing minerals from the ground.

Some regions have highly corrosive water that a water softener cannot solve. If the water softener is used with such water, the manufacturer/distributor assumes no responsibility for that and for the equipment connected to the water network afterwards. In this case, the warranty of the water softener becomes void.

Iron content in water is one of the most common problems. Iron can be present in water in the following four chemical/ physical forms:

1. IN DISSOLVED FORM—The larger amount of iron content dissolved in "iron" water can be easily detected by filling it in a clean glass and then exposing it to the open air for oxidation, because then its transparency starts to become a veil and then it becomes colored due to the iron content and oxidation. This iron content can be removed in a similar way to the hardness-causing elements (calcium, magnesium), but with a different filling.

2. SOLID IRON PARTICLES—This type of iron is present in an undissolved state. Appropriate mechanical pre-filtration is required for its removal. The resin of the water softener, as a filter media, is capable of binding larger particles, but these cannot be removed during regeneration, so the resin eventually becomes saturated with iron, which can lead to a significant reduction in the capacity of the water softener.

3. ORGANIC, BOUND IRON—This type of iron is bound to the organic components of water. The ion exchange process alone cannot break these bonds, so a water softener cannot remove this type of iron.

4. BACTERIAL BOUND IRON—This type of iron is locked up in the bacterial colony. Similar to organic, bonded iron, this form of appearance cannot be removed with a water softener.

It is important to note that the water softener will reduce the amount of dissolved iron along with the hardness, but it can work with much more frequent regeneration than in the presence of hardness alone. There are several types of correction factors in the public mind for operation in the presence of dissolved iron, but in such cases, as a rule of thumb, we cannot count on a water softening capacity of more than 50-70%. In this mode, clogging of the charge can be minimized.

The water also contains scale-forming substances (in an amount equivalent to 50mg/l CaO) even when softened to the legally regulated minimum hardness (5Nk) typical of drinking water by ion exchange. Although scale formation is reduced to a fraction, completely stain-free drying of the cleaned surfaces cannot be guaranteed. Dishwasher, boiler, boiler, iron, humidifier...etc. when feeding, take into account the water quality specified in the machine's specifications. Remove the deposits formed on the surface of the equipment and fittings with the chemicals and treatment approved in their manual.

Due to the principle of ion exchange, ingested sodium can also cause visible deposits and staining, but these deposits are less sticky and can be wiped off more easily when dry. The amount of sodium precipitation will depend on the difference in hardness between the incoming and softened water.

Even if you operate the equipment with a dissolved iron content that does not exceed the sanitary limit value, but the iron has already appeared on the treated water side, the resin bed must be cleaned. In this case, clean the resin bed with the appropriate chemical every six months or more often.

The water softener works with ion exchange, during which the filling is saturated with calcium and magnesium salts. These are removed by salt-based regeneration, the resin is refilled with sodium, and it is prepared to bind scale-forming materials. Always ensure that your water softener is topped up with salt regularly. Use only table salt. Household, fine-grained salt cannot be used, as it can cause malfunctions.

⚠ ATTENTION

DO NOT USE THE WATER SOFTENER WITH RAW WATER OF UNKNOWN ORIGIN, CHEMICAL COMPOSITION, AND MICROBIOLOGICALLY DISORDERED. IN SUCH CASES, DISINFECTION IS NECESSARY!

WATER SOFTENER EQUIPMENT SPECIFICATIONS

Product code	Type	Control valve	Salt and water consumption / regeneration	Connection (in, out)	Flow	Resin liter	Capacity	Installation size H x W x L mm
MN12/P&P	Midnight 12 Plug&Play	®ECOPRO+	1,6 kg NaCl 90 liter H_2O	3/4"	1.0 – 1.5 m^3/h	12,5	30 m^3x°nk	555 x 320 x 450
MN18/P&P	Midnight 18 Plug&Play	®ECOPRO+	1,6 kg NaCl 90 liter H_2O	3/4"	1.5 – 1.8 m^3/h	18	50 m^3x°nk	1116 x 320 x 450
MN25/P&P	Midnight 25 Plug&Play	®ECOPRO+	3,0 kg NaCl 140 liter H_2O	3/4"	1.8 – 2.0 m^3/h	25	75 m^3x°nk	1116 x 320 x 450
MN30/P&P	Midnight 30 Plug&Play	®ECOPRO+	3,6 kg NaCl 160 liter H_2O	3/4"	2.0 – 2.5 m^3/h	30	90 m^3x°nk	1116 x 320 x 450
MN12HF/P&P	Midnight 12 HF Plug&Play	®ECOPRO+	1,6 kg NaCl 90 liter H_2O	1"	1.2 – 1.8 m^3/h	12,5	30 m^3x°nk	555 x 320 x 450
MN18HF/P&P	Midnight 18 HF Plug&Play	®ECOPRO+	2,2 kg NaCl 110 liter H_2O	1"	1.5 – 2.0 m^3/h	18	50 m^3x°nk	1116 x 320 x 450
MN25HF/P&P	Midnight 25 HF Plug&Play	®ECOPRO+	3,0 kg NaCl 140 liter H_2O	1"	2.0 – 2.5 m^3/h	25	75 m^3x°nk	1116 x 320 x 450
MN30HF/P&P	Midnight 30 HF Plug&Play	®ECOPRO+	3,6 kg NaCl 160 liter H_2O	1"	2.0 – 3.0 m^3/h	30	90 m^3x°nk	1116 x 320 x 450

CONTROL VALVE DESCRIPTION ®ECOPRO+

The ECOPRO water softener can also be equipped with the safety salt valve, BIO disinfection function, the software SafeHOME function, as well as an optional floor waterer as standard accessories. The water softener works with a dry salt bed, so there is no water loss between the two regenerations. It also includes a calculation-based salt monitoring function, and a vacation program is also available to reduce further water loss during the trip. Due to the Plug&Play function, the equipment is not required to be commissioned.

DESCRIPTION OF FUNCTIONS

- **The BIO disinfection function:** By using the resin bed disinfectant during regenerations, the device not only uses the Na+ ions from the salt tablet (NaCl), but also uses Cl- ions to disinfect the resin bed during each regeneration. In almost all Western European countries, water softening equipment can only be sold with a resin bed disinfection unit.

- **The SafeHOME function:** a water consumption monitoring system. In the case of peak consumption protection, if consumption with a higher volume flow occurs than the peak value set by the consumer, the equipment blocks the water path, assuming a pipe break. In the case of temporal protection, if consumption exceeds the pre-set water consumption time, it appears to the system as a pipe break or leakage, and the water softener blocks the water path. The system can be supplemented with an additional, optional water leakage sensor, which increases the effectiveness of protection against water damage.

- **The salt sensor function:** in some devices, sensor-based detection takes place, while others send an alarm based on a calculation to refill the salt. In the case of the Midnight series, the application installed on our smartphone also indicates that the device has run out of salt.

- **Plug&Play function:** there is no need for an installation specialist, because the device installs itself by pressing a single button. All you have to do is set the exact time, water hardness, and fill the device with salt tablets, then press a button for 3 seconds, after which the device will start up automatically. This feature can save you money. We provide a standard 4-year manufacturer's warranty for devices equipped with the Plug&Play function. In the case of most competing water softeners on the market, the stated warranty period is conditional upon the completion of annual maintenance work. In the production of Plug&Play water softeners, we use high-quality materials in order to ensure the long-term, safe operation of the equipment.
Our equipment does not require annual maintenance within the indicated warranty period.

- **With the Plug&Play function**, you can save not only the installation costs, but also the annual maintenance costs! Due to the mandatory annual maintenance, you will almost pay the price of a water softener again in 6 to 8 years.

Specification		Requirement
Működési feltételek	Water pressure	2 - 5 bar
	Water temperature	max. 30°C
Environment conditions	Ambient temperature	5 - 40°C
	Relative humidity	≤ 95% (25°C)
	Electric data	AC100-240V/50-60Hz
Inlet water quality	Turbidity	< 2 FTU
	Hardness	5 - 35°Nk
	Free chlorine	< 0,1 mg/l
	$Iron^{2+}$	< 0,2 mg/l
	Manganese	< 0,05 mg/l
	COD	< 0,2 mg/l

The capacity and performance of the equipment and the quality of the incoming water may differ.

After changing the factory settings for salt and salt dosage, it may be necessary to replace the injectors to achieve the desired capacity.

The value of iron in the water must not be higher than 0.2 ppm. If the value is above 0.2 ppm, it is necessary to install a de-ironing device.

Do not use on water that is not microbiologically safe or does not have the appropriate pretreatment.

The manufacturer reserves the right to continuously develop the product, as a result of which it may happen that you experience values different from the data given above. These changes do not oblige the manufacturer to change the previously sold products or to communicate these changes.

PUBLIC HEALTH AND LEGAL CONDITIONS:

1) The product may only be operated with a network supplied with drinking water quality. The temperature of the treated water must not exceed 30°C.

2) Application area: Post-treatment (water softening) of piped water at household, workplace, and community levels.

3) During commissioning, after a prolonged shutdown (exceeding 2–3 days), and following disinfection, the instructions in the user manual must be strictly followed. During commissioning, the product must undergo regeneration. After a shutdown exceeding 2–3 days, the product must be flushed, with at least 5 minutes of continuous flow required at each water outlet supplied by the treated water. Water obtained during flushing must not be used for drinking or food preparation.

4) Commissioning, regular disinfection, and maintenance must be provided as a service by the distributor or its authorized representative.

5) To prevent bacterial growth, the product must undergo regular disinfection every 3 months and weekly regeneration. Disinfection must also cover the network section between the product and consumer taps.

6) Chemicals and regenerating salts used for cleaning and disinfection must comply with the registration and regulatory requirements outlined in Government Decree 5/2023 (I.12.), Joint Decree 38/2003 (VII.7.) of ESzCsM-FVM-KvVm, and Government Decree 316/2013 (VIII.28.).

7) Only water-contact components compliant with Government Decree 5/2023 (I.12.) may be used for product installation.

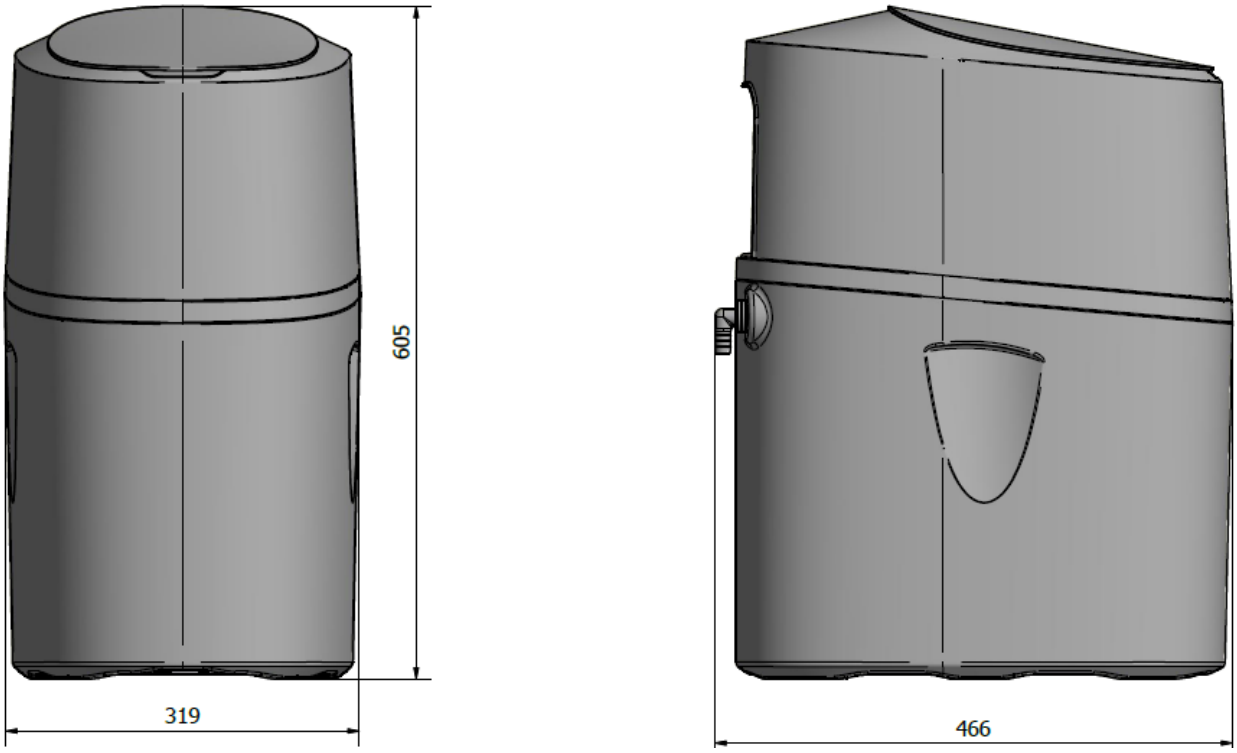
8) The product is capable of significantly reducing total hardness in piped water. The degree of hardness reduction depends on the bypass mixing ratio. If used for drinking water, the bypass must be adjusted so that the total hardness of the treated water is at least 50 mg/L CaO. For other purposes, softer water may be used. However, if the treated water's total hardness is below 50 mg/L CaO, its exclusive long-term consumption as drinking water is not recommended.

9) The use of the treated water is not recommended for pregnant women and children under 3 years of age due to the risk of nitrite formation.

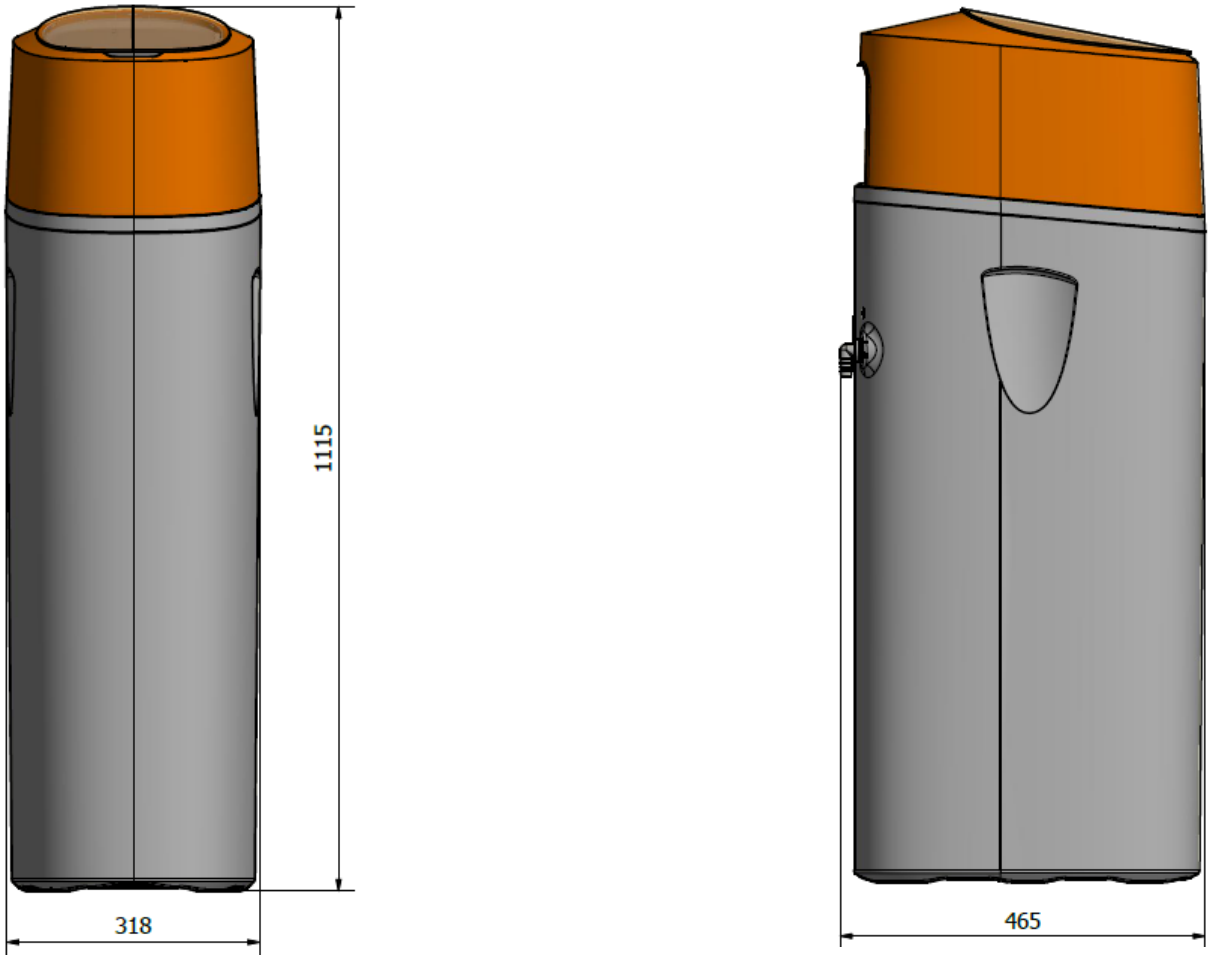
10) The use of the product in public institutions is recommended only under the following additional conditions:
- The territorial public health authority (district or metropolitan district office) must be informed of the application.
- Additional application conditions may be determined by the territorial public health authority based on local circumstances.
- A minimum disinfection frequency of every 3 months is recommended.
- The quality of treated water must be regularly tested at least every 6 months by an accredited laboratory:
    - Colony count at 22°C
    - Pseudomonas aeruginosa
    - Ammonium
    - Nitrite
    - Total hardness
- The treated water must comply with the quality requirements of Government Decree 5/2023 (I.12.), Annex 1. The intervention threshold for colony count at 22°C is 1000 CFU/mL.
- The results of laboratory tests must be submitted to the territorial public health authority and copied to NNGYK. In case of non-compliance, immediate corrective actions (e.g., disinfection) must be taken.
- A maintenance log must be kept for disinfection and other maintenance operations.
- A responsible employee should be appointed to ensure compliance with the product's operating conditions.
- The user manual must be placed in a visible and accessible location for all users.

11) The use of the product in workplaces is recommended only under the following additional conditions:
- A minimum disinfection frequency of every 3 months is recommended.
- A maintenance log must be kept for disinfection and other maintenance operations.
- A responsible employee should be appointed to ensure compliance with the product's operating conditions.
- The user manual must be placed in a visible and accessible location for all users.

DIMENSIONS OF WATER SOFTENING EQUIPMENT



Midnight 12 and 12HF



Midnight 18, 25, 30 and 18HF, 25HF, 30HF

UNPACKING AND INSPECTING THE WATER SOFTENER

The equipment can only be delivered in a set up state. Inspect the water softener thoroughly to make sure there is no shipping damage. If you find damage to the equipment or its packaging, immediately notify the shipping company and ask for a damage inspection and damage report. If you waive this right, you will not be able to regain it later.

Handle the equipment with extra care, do not drop it, do not throw it and make sure that it is not stored on uneven or damaged ground. Never tilt the device sideways or turn it upside down!

COMMENT

IF YOU EXPERIENCE TOO LARGE PRESSURE DROP AFTER THE EQUIPMENT IS USED, THEN IT IS DEFINITELY CAUSED BY A DECLINE THAT HAPPENED DURING TRANSPORTATION, AND IT HAS BEEN LOST ON SIDE. IF THIS HAPPENED, THE RESIN CHARGE CAN BE REORGANIZED BY STARTING A BACKWASH.

The manufacturer cannot be held responsible for damage resulting from transport. The smaller parts required for installation are packed in a separate box. To avoid losing these parts, keep them in their packaging until installation.

Accessories:

- 2 pcs O-rings
- bypass valve
- power adapter

Recommended accessories:

- mechanical prefilter (CPF and DFA series)
- 3-way sewer inlet siphon with non-return valves (PG/1)
- tablet regenerating salt (TBS-SAL)

INSTALLATION GUIDE

SELECT THE LOCATION OF THE WATER SOFTENING EQUIPMENT

Choose the appropriate location for the equipment, taking into account the points listed below:

1. It should be as close as possible to the source of the water entering the apartment.

2. As close as possible to the ground or channel to channel.

3. A channel connection option (32-40mm) should be available to ensure free, gravity flow

4. Be properly placed with other water treatment equipment.

5. The softener must be installed in front of the water heater. Water with a temperature above 30°C will damage the equipment.

6. Only install the equipment in a frost-free place. Damage caused by freezing can permanently destroy the water softener and the warranty will immediately become invalid.

7. Provide space for servicing around the equipment.

8. Determine if additional piping is necessary if the water source is a community water main, a public water main or if you want to bypass water used by geothermal heat pumps, irrigation systems, outbuildings or other high water applications.

9. Do not expose the device to direct sunlight. The heat generated by sunlight can soften and melt plastic parts.

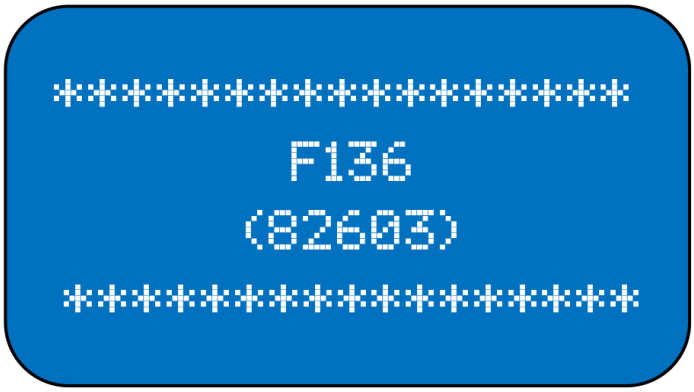
10. A 230V wall plug must be installed

11. In the case of your own well, have a water analysis performed, and for a complex solution, ask for expert advice.

12. If you use tap water, measure the hardness of the incoming water or contact your service provider, and then, based on the data obtained, the ideal setting of the water softener is possible.

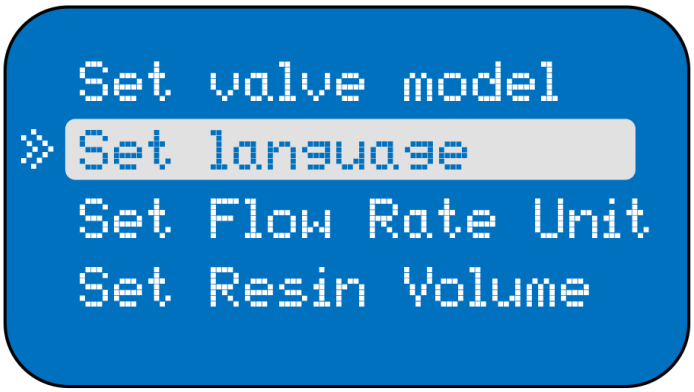
13. Note that the water softener, during regeneration, does not supply water in the first phase and only hard water in the other phases. In order to avoid a significant pressure drop, always time the regeneration for the users' inactive period (by default 2 hours at night).

SETTING THE LANGUAGE OF THE SOFTENER



The first step of changing the language of the softener is depowering the equipment. After reconnecting it to the power supply, please wait until the screen shows the control valve type.

During this time, please **press and hold** down the Force reg / Back button and Down button until the service menu shows up where you can see the "Set language" option.



The second step is to enter the "Set language" menu where you can see the available languages.

You can enter this menu with the Menu / Confirm button.

After entering the language selection menu, you can see all the available languages.

Use the up and down buttons to navigate through the list and select the desired language.

Once selected, you can set the language with the Menu / Confirm button.

COMMENT	WHEN INSTALLING THE EQUIPMENT, ALL OFFICIAL REGULATIONS VALID IN THE GIVEN COUNTRY MUST BE COMPLIED WITH!

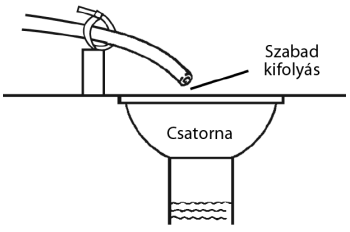
In any case, the installation must be carried out by a specialist. We are not responsible for damages resulting from improper wiring.

TOOLS REQUIRED FOR INSTALLATION:

► Adjustable wrench, pipe wrench.
► Additional tools may be needed if you need to modify the piping in your home.
► Use copper, brass or PVC, PE pipes and quick connectors.
► Some regulations allow the construction of PVC piping. Refer to local regulations.
► 32 mm diameter piping is required to connect the siphon

More information:

- it is the customer's responsibility to connect the equipment to the water, waste water and electricity network
- the operator of the equipment and the specialist performing the installation check that the equipment has been installed as described in the operating and user manual, and that the conditions for mitigating damage resulting from possible malfunctions have been met
- commissioning of the equipment can be carried out by Euro-Clear Kft.'s commissioning or service partner. Commissioning the equipment only means adjusting the automatic control valve according to local conditions, not installation.
- during installation, you must follow the locally valid installation regulations, general instructions, general hygiene regulations and ensure that the installation conditions specified above are observed.
- For damage mitigation purposes, we recommend installing the equipment in a room with a floor drain.
- Reliable regeneration is not ensured below 2.5 bar mains water pressure, so in this case we recommend the installation of a pressure boosting device.
- In the event of a lack of constant water pressure, it may happen that the water treatment equipment cannot carry out the backwashing that may be necessary during a break in water production, regeneration.
- in front of the equipment due to possible pressure shocks and pressure fluctuations a pressure reducer or a mechanical filter with a pressure reducer is required to install. Sudden pressure fluctuations exceeding ±0.5 bar are not permitted!
- The equipment does not have special protection against water or power failure. This must be provided on the installation page as required.



⚠ ATTENTION

WHEN CONNECTING A DUCT, PLEASE TAKE INTO ACCOUNT THAT THE EQUIPMENT CAN ONLY WORK ON A GRAVITY, FREE FLOW DUCT, IN WHICH THE VACUUM DUE TO THE LACK OF OVERPRESSURE AND VENTILATION IS NOT ALLOWED.

⚠ ATTENTION

DO NOT CONNECT THE DUCT CONNECTION HOSE DIRECTLY TO THE SEWER PIPE, ALWAYS LEAVE A DISTANCE BETWEEN THE END OF THE EQUIPMENT DUCT HOSE AND THE MEDIUM FLOWING IN THE MAIN DUCT BRANCH. TO AVOID BACKFLOW AND BACK-VENTILATION, USE A SIPHON FITTED WITH A BALL CHECK VALVE.

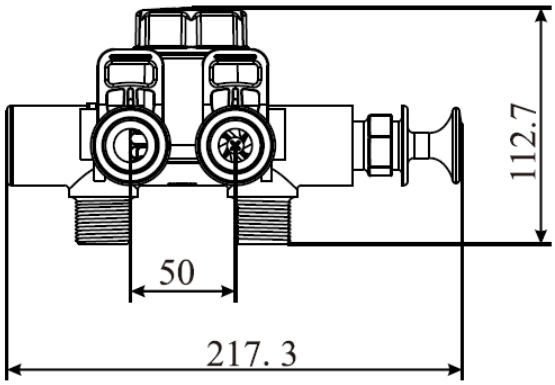
COMMENT

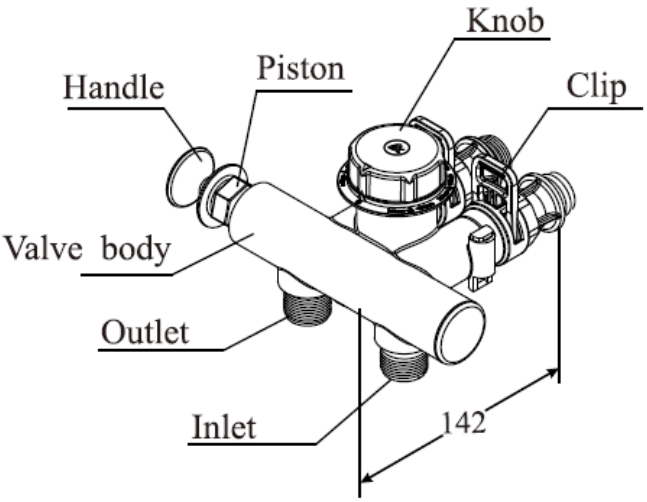
IN ALL CASES, WITHOUT EXCEPTION, PIPING MUST BE DESIGNED IN ACCORDANCE WITH LOCAL REGULATIONS AND LAWS

3/4 " BY-PASS VALVE

The bypass valve is primarily used to regulate the flow of water through the water softener. If the water softener requires maintenance or repair, the bypass valve allows for isolating the unit from the water supply network. During this period, hard water will be supplied, but water service remains uninterrupted.

For residential applications, health regulations specify that fully softened water is not suitable for human consumption. The bypass valve enables easy adjustment of the required mixing ratio between softened and hard water to comply with regulatory limits.





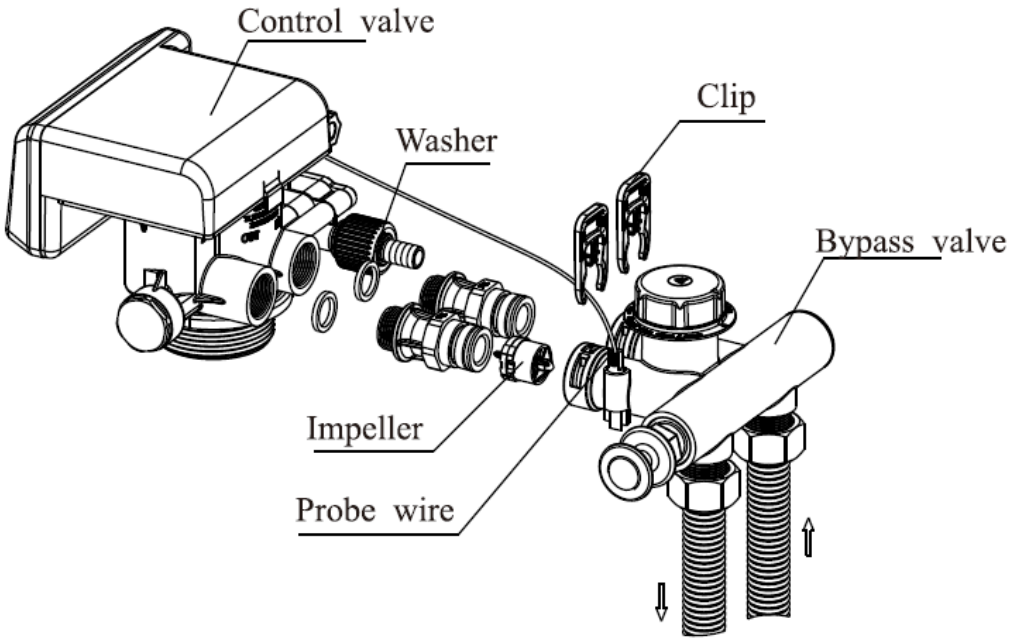
BYPASS VALVE INSTALLATION

Always perform the installation in compliance with local regulations, laws, and site-specific conditions.

1. Insert the sealing rings into the inlet and outlet connections of the control valve, then screw in and tighten the union nuts by hand (without tools).

2. Insert the water meter into the outlet pipe, then connect the bypass valve to the control valve, and finally, attach the retaining clips to secure the bypass valve.

3. Connect the water meter cable to the outlet pipe connection.



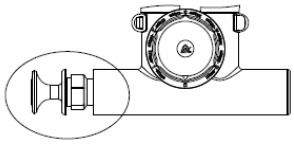
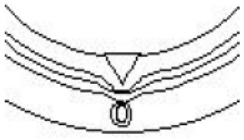
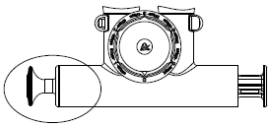
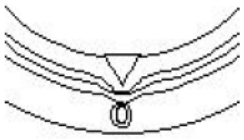
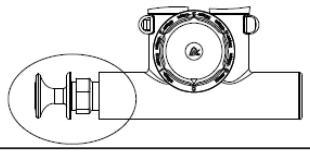
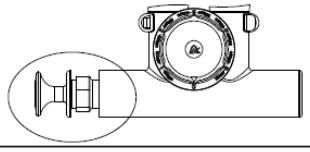
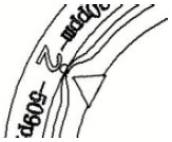
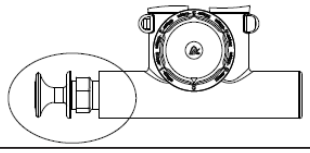
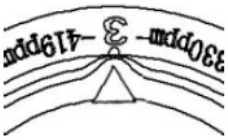
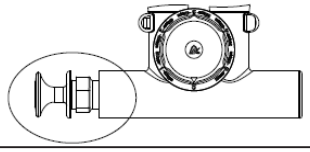
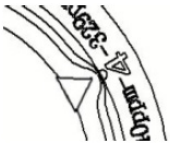
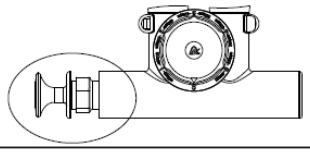
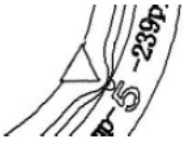
3/4 " BY-PASS VALVE

The bypass valve's adjustment knob and lever allow for configuring different functions of the valve.

Under normal operation, the bypass valve should be set to partial bypass mode, meaning a mixing function is active. If you need to completely isolate the system, switch the valve to bypass mode. In this setting, all water-operated appliances remain functional, but since the water bypasses the softener, only hard water will enter the appliances.

Ensure that the bypass valve is set correctly according to the diagram below. Incorrect settings may result in unsoftened water entering the system.

3/4" BY-PASS VALVE FUNCTIONS

Function	Handle position	Arrow position	Note
Service			When arrow is at "0" position.
Full Bypass			When arrow is at "0" position, push the handle to the end.
Part bypass Stage 1			When arrow is at "1" position. Suitable for ~34 °dH raw water.
Part bypass Stage 2			When arrow is at "2" position. Suitable for ~29 °dH raw water.
Part bypass Stage 3			When arrow is at "3" position. Suitable for ~24 °dH raw water.
Part bypass Stage 4			When arrow is at "4" position. Suitable for ~19 °dH raw water.
Part bypass Stage 5			When arrow is at "5" position. Suitable for ~14 °dH raw water.

Note: The values and recommended settings shown in the diagram above are for reference only.

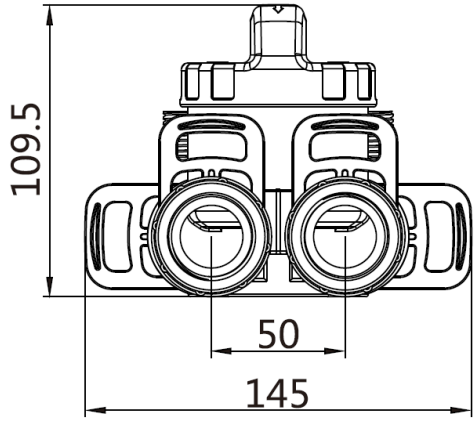
The operating conditions at the installation site of the water softener can significantly impact the above values. Therefore, special attention must be paid to adjusting these values based on the actual site conditions.

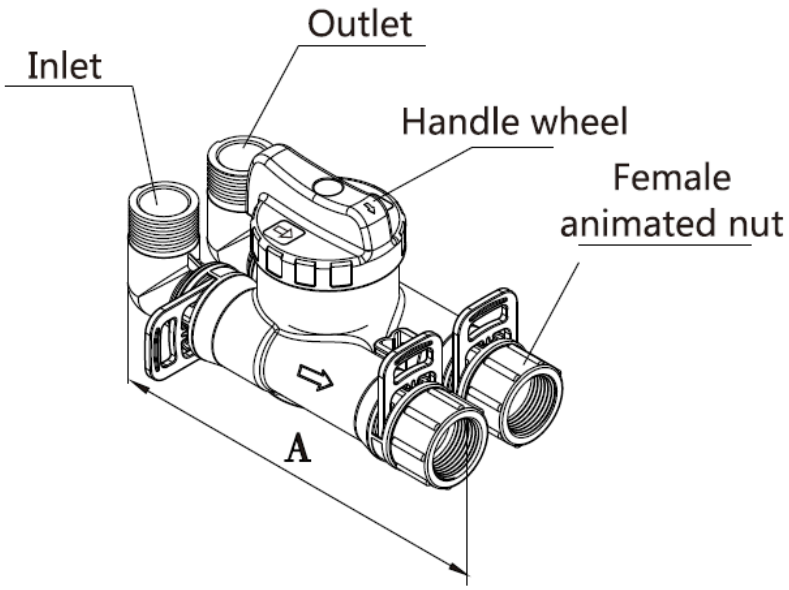
ATTENTION	To produce drinking-quality softened water (5-35 °dH), use the MIXING function. After making the necessary adjustments, always verify the water hardness level using titration to ensure it meets the required value.

1" BY-PASS VALVE

The bypass valve is primarily used to regulate the flow of water through the water softener. If the water softener requires maintenance or repair, the bypass valve allows for isolating the unit from the water supply network. During this period, hard water will be supplied, but water service remains uninterrupted.

For residential applications, health regulations specify that fully softened water is not suitable for human consumption. The bypass valve enables easy adjustment of the required mixing ratio between softened and hard water to comply with regulatory limits.





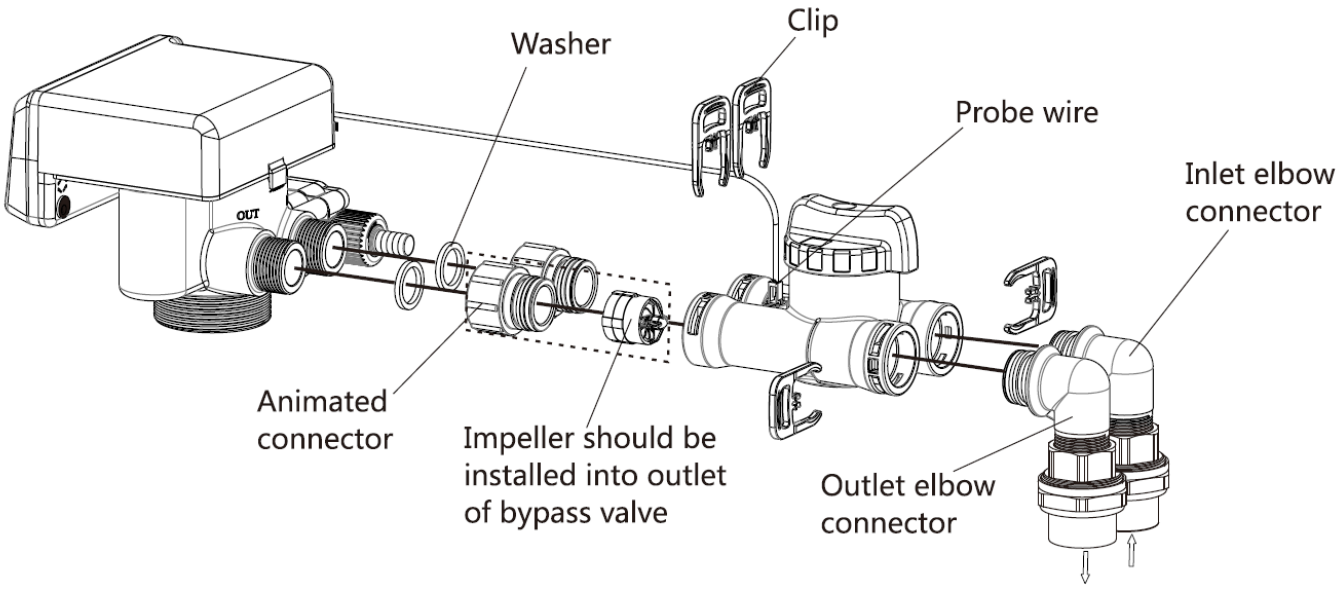
BYPASS VALVE INSTALLATION

Always perform the installation in compliance with local regulations, laws, and site-specific conditions.

1. Insert the sealing rings into the inlet and outlet connections of the control valve, then screw in and tighten the union nuts by hand (without tools).

2. Insert the water meter into the outlet pipe, then connect the bypass valve to the control valve, and finally, attach the retaining clips to secure the bypass valve.

3. Connect the water meter cable to the outlet pipe connection.



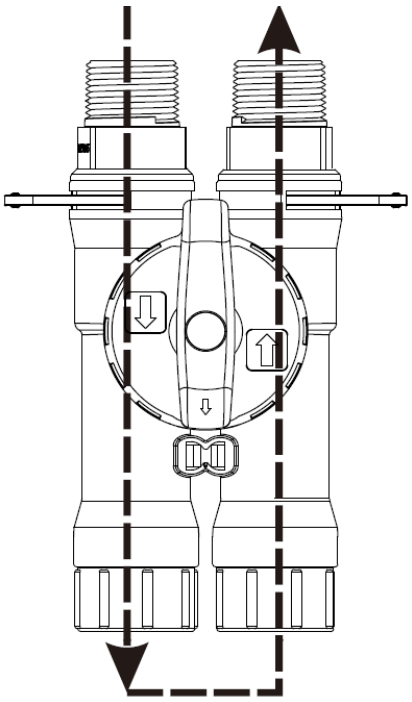
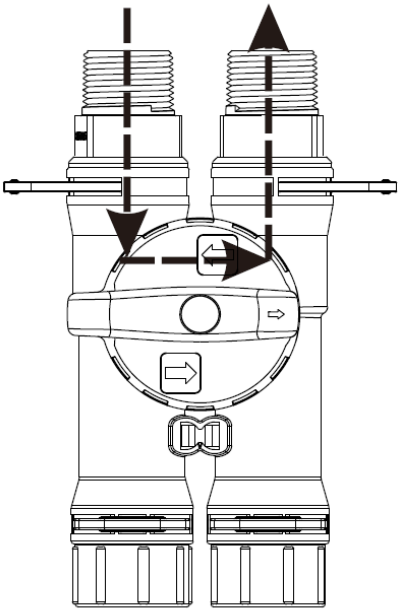
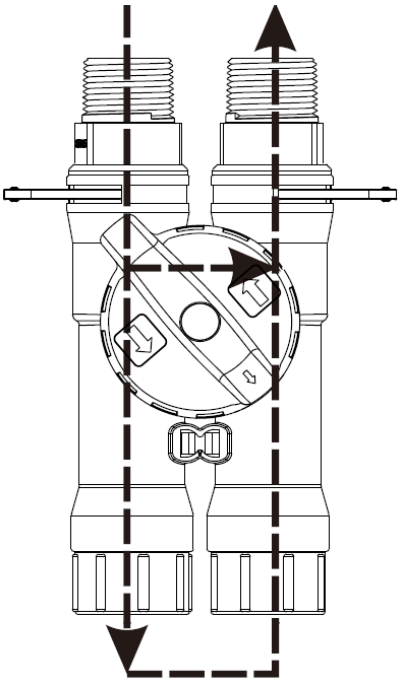
1" BY-PASS VALVE

The bypass valve's adjustment knob and lever allow for configuring different functions of the valve.

Under normal operation, the bypass valve should be set to partial bypass mode, meaning a mixing function is active. If you need to completely isolate the system, switch the valve to bypass mode. In this setting, all water-operated appliances remain functional, but since the water bypasses the softener, only hard water will enter the appliances.

Ensure that the bypass valve is set correctly according to the diagram below. Incorrect settings may result in unsoftened water entering the system.

1" BYPASS VALVE FUNCTIONS

Service	Bypass	Part Bypass (Mixing)
		
Fully softened water comes out of the equipment.	Raw water passes, hard water comes out of the equipment.	Softened water mixed with hard water.

MEGJEGYZÉS	To produce drinking-quality softened water (5-35 °dH), use the MIXING function. After making the necessary adjustments, always verify the water hardness level using titration to ensure it meets the required value.

COMMISSIONING THE WATER SOFTENER

1. Use a water hardness tester (not included) to measure the raw water hardness.

Fill the measuring cylinder with water up to the 5ml mark. Begin adding reagent drops while observing the color change. If the water immediately turns light green after the first drop, the water hardness is below 1 °dH.

If the water turns red, it indicates hard water. Continue adding reagent drops one at a time until the water changes from red to green. The number of drops needed corresponds to the water hardness in °dH.

2. Adjust the Necessary Settings.

2.1 Set the current time on the control valve.
2.2 Set the regeneration time (recommended: 22:00–00:00) on the control valve.
2.3 Set the water hardness value on the control valve.
The hardness must be entered in mg/L, which is calculated by multiplying the measured water hardness (from step 1) by 10.
Example: For 15 °dH, the correct setting is $15 \times 10 = 150$ mg/L.
2.4 Set the continuous water supply time.
2.5 Set the maximum water flow rate.

Settings 2.4 and 2.5 are part of the SafeHOME function, which is factory-set to 0 (inactive). Adjust these settings according to your water usage habits. When the set values are exceeded, the safety function activates, detecting a possible pipe burst and shutting off the water supply.

3. Adding Salt Tablets.

After completing the above steps, add one full bag (25 kg) of high-purity salt tablets into the water softener's brine tank (cabinet salt grid).

⚠ CAUTION	BRINE CAN CAUSE EYE AND SKIN IRRITATION AND MAY AGGRAVATE OPEN WOUNDS. IN CASE OF CONTACT WITH SKIN, RINSE THOROUGHLY WITH CLEAN WATER. KEEP THE WATER SOFTENER OUT OF REACH OF CHILDREN IN A SECURE LOCATION.

4. Physical Commissioning of the Device.

Good news! The control valve automates the commissioning process with a single button press. Check the installation: Ensure the water softener is properly connected by verifying that there are no leaks at the connections when turning on the water supply. Also, confirm that the drain connection is properly installed.

Activate the system: Set the bypass valve to service mode and run water through a tap until the preservative solution is flushed out and clear water flows.

Start regeneration: After unlocking the keypad, press and hold the for 3 seconds to initiate a regeneration, cleaning, and flushing cycle. The water softener automatically refills the brine tank. After 4 hours, it draws in the dissolved brine, then purges air and finally flushes the system. Once complete, the unit is fully operational and ready to supply softened water.

Water quality verification: Always test the treated water's measurable and sensory properties directly at the outlet of the device. Additional pipes or connected appliances may affect water quality.

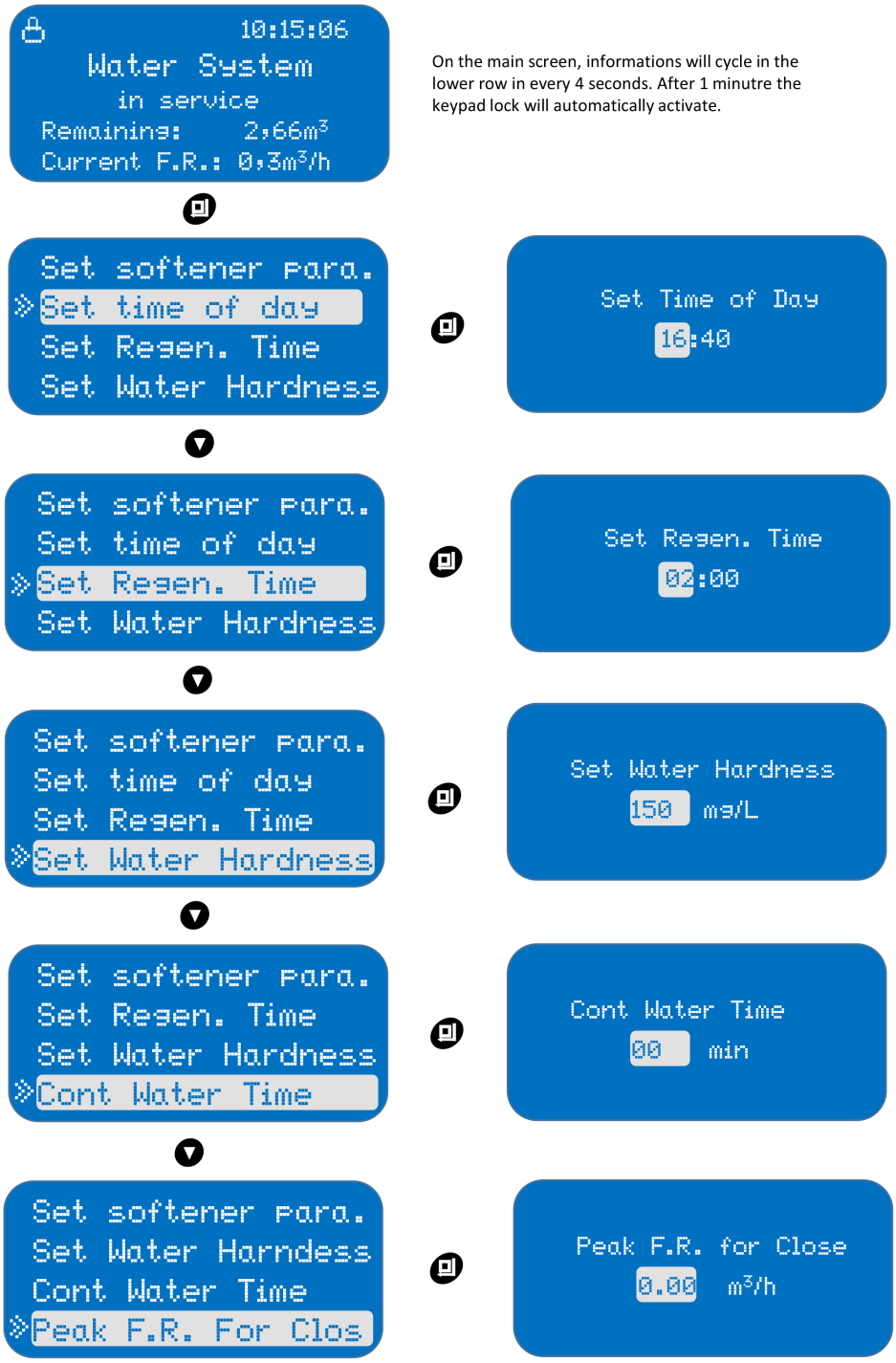
5. Adjusting Water Hardness.

After completing the above steps, repeat the hardness test (step 1) at a kitchen tap.
The measurement should now indicate fully softened water.

Use the bypass valve to mix hard water with softened water to achieve your desired hardness level.
Important: According to legal regulations, the final water hardness must not be lower than 5 °dH!
Double-check the setting by performing multiple hardness tests (as described in step 1).

MENU

To unlock the keyboard, press and hold the Up and Down buttons simultaneously for 5 seconds.
The menu is accessed by pressing the button once. By scrolling with the down button, you can find the following menu items.



OPERATION IN CASE OF POWER OUTAGE

In the event of a power failure, the device remembers the date and time for 48 hours. The set values are automatically stored in a "non-volatile" memory module, so they are not lost in the event of a power failure. If the power supply stops during regeneration, the control valve will continue regeneration from the current position when the power returns.

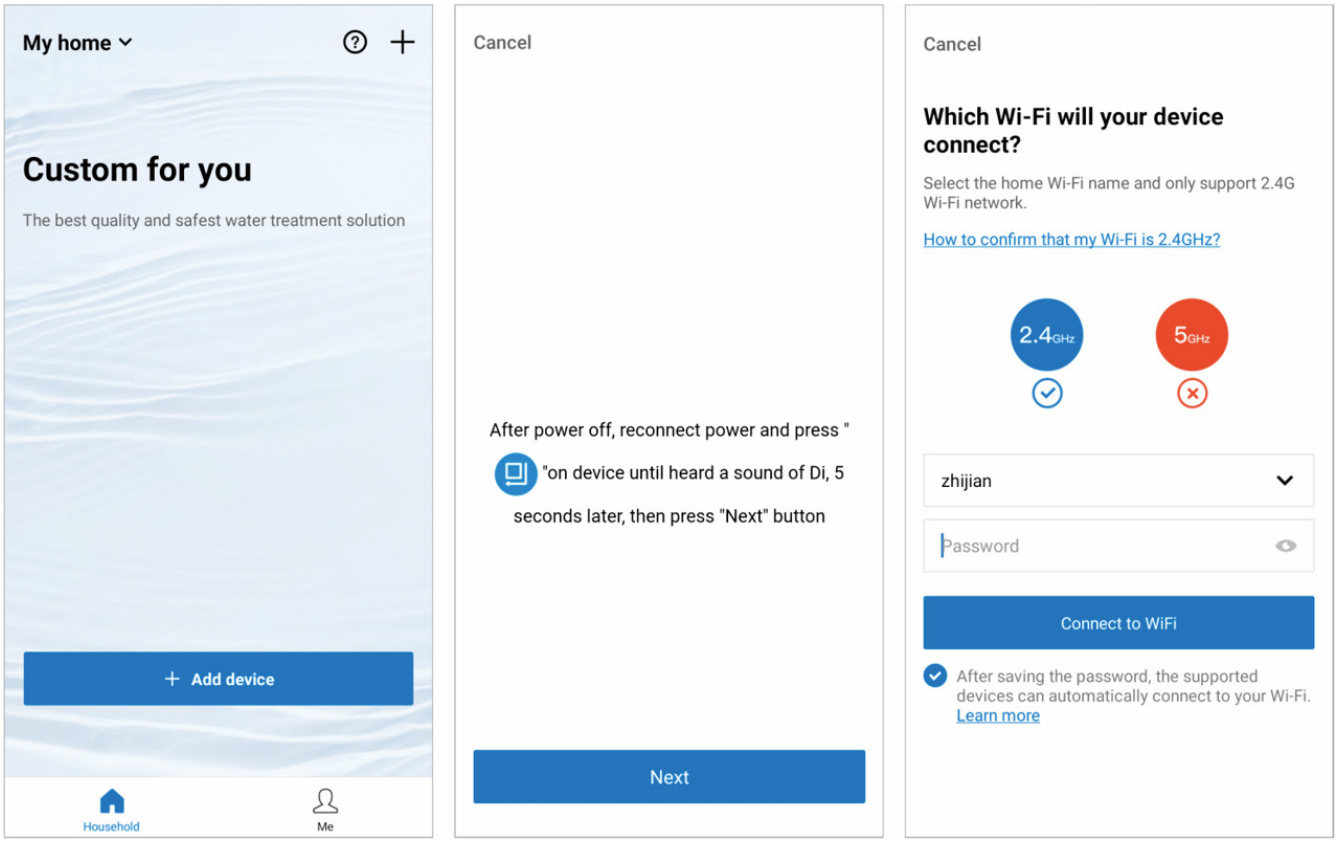
Since a power supply is also required to measure water consumption, do not use the device without a suitable power supply!

WIFI APPLICATION

1. Use your cell phone QR code reader to scan the below QR code, select your app according to your operating system of your cell phone. If you use an iPhone, you can search "Water device" in AppStore.

2. If installation is successful, the "Water device" app will appear on your home screen or your app drawer. First time opening the app, you have to choose your country and register a user for the application.

3. You have to connect to a stable wifi network before addig a device and follow the steps below:



Before pressing the "Connect to WiFi" button you have to set the valve to open network mode, where it can accept the SSID and password from your cell phone. For this, please follow the below steps:

1. Disconnect your water softener from the power source.

2. Upon reconnecting the softener, please wait until the display shows the valve type (for example: ***F136***).

3. During this phase press and hold the Menu / Confirm button until you hear a beeping sound.

4. After this is done, the control valve of the softener is in open network mode and can accept your wifi details upon pressing the "Connect to WiFi" button.

5. Congratulations! You have added your water softener to your mobile device! Now you can start managing your devices (set the name of the device, create households and rooms...etc).

MAINTENANCE INSTRUCTION

CHECKING SALT LEVEL

Check the salt level monthly. Remove the top of the cabinet and make sure the salt level is above the brine.

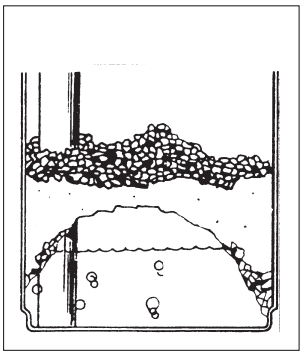
COMMENT	YOU WILL NOT SEE THE WATER IN THE CABINET / SALT TANK.

REFILLING SALT

Only use salt suitable for water softening that can be placed in the equipment (e.g. salt tablets). The use of rock salt and table salt is not recommended, as it may contain mud and sand, and may cause clogging of the brine suction valve and injector system. Pour the salt directly into the cabinet.

CAVITATION

If the humidity is high or if the wrong salt is used, the salt may clump together. In this case, a so-called vaulting cavity can form under the amount of salt, so no brine can be created, as a result of which the softener cannot regenerate, so it will supply hard water.



If there is a suspicion of vaulting, carefully tap the side of the cabinet or pour a little warm water on the accumulated salt, which will dissolve it. Then, let the water softener use up all the salt, then clean the cabinet thoroughly. Wait four hours for the proper brine concentrate to be created, then start a manual regeneration.

Taking care of the water softener

To keep your water softener shiny and spotless on the outside, wash it occasionally with soapy water. Do not use abrasives, ammonia or any other solvents for cleaning. Only store and operate in a frost-free place.

Water hardness check

Regularly check the hardness of the incoming water and the hardness of the supplied water after mixing, correct it if necessary.

Check menu settings:

If there is a possibility that someone will make changes to the setting parameters of the device, in order to maintain the functionality of the water softener, we recommend that you regularly compare the current settings with the settings recorded at the time of installation in the back of this manual.

SERVICING THE WATER SOFTENING EQUIPMENT

The water softening equipment sold by Euro-Clear Kft. can only be serviced by qualified mechanics. If you experience problems with the operation of your water softener or want to report a fault or maintenance, please contact our company, your reseller partner or the store where you purchased the product.

Contacts:

- Phone: +36 96 544 240
- Email: contact@euro-clear.eu
- Adress: Euro-Clear Kft, 9071, Gönyű, Béke utca 2.

In the event of an error report, try to provide us with as much information as possible (device type, photos of the installation, error phenomenon...), thus speeding up the process and helping our work.

In case of warranty administration, the invoice proving the purchase and the factory number shown on the quality certificate are absolutely necessary!

In the absence of this information, our company is unable to remedy the defect free of charge under warranty. In this case, our expert colleague will contact you and then give you a quote for servicing and maintaining the equipment.

ATTENTION DO NOT ATTEMPT TO REMOVE THE FAULT WITHOUT APPROPRIATE TRAINING AS THIS CAN EASILY DAMAGE THE EQUIPMENT AND VOID YOUR WARRANTY.

ATTENTION IF THE EQUIPMENT IS MALFUNCTIONING OR YOU EXPERIENCE UNUSUAL PHENOMENA, UNPLUG IT AND DO NOT USE UNTIL YOU HAVE CONSULTED WITH OUR PROFESSIONALS.

QUALITY CERTIFICATE

1. Quality certificate issuer: Euro-Clear Kft.	**2. Producer:** Euro-Clear Kft.
3. The specific name of the product (purpose): Automatic water softener.	Type: .....
4. Quantity: 1 pc	
5. Product identification: a) Control valve serial number: ..... b) Item number: ..... c) Other identification data:	**6. Transport and storage regulations:** It can only be transported and stored in standing position. Store in a dry, cool place, away from water and precipitation. Do not expose to direct sunlight or UV radiation. Extremely frost-prone.
7. Wrapping: Cardboard paper	**8. The test method used to check the quality of the product:** Inter-production
9. Instructions for use and handling: According to the handling and use instructions.	**10. Production date:**
11. Essential product features (with complete technical data, measurement results): Peak flow: ..... m^3/h Amount of resin: ..... liter **Qualification, classification: Adequate!**	
12. Other data: Serial Number:	**13. Signature of the issuer of the quality certificate:** Dated, Gönyű, ... signature, stamp

Warranty Card

Name of the installation specialist: **……**

Contact details of the installation specialist

- **Adress:** **……**
- **Telephone:** **……**
- **E-mail:** **……**

Dealer (from whom you bought the equipment) company name: **……**

Contact details of the dealer (from whom you bought the equipment).

- **Adress:** **……**
- **Telephone:** **……**
- **E-mail:** **……**

Equipment operator name: **……**

Contact details of the equipment operator

- **Adress:** **……**
- **Telephone:** **……**
- **E-mail:** **……**

Type of installed equipment: **BlueSoft ……**

Commissioning date: **……**

……
signature, stamp

The manufacturer guarantees the equipment, subject to intended use, according to the general warranty conditions, for 24 months from the date of commissioning, but a maximum of 30 months from the date of issue of the quality certificate.
The guarantee and warranty are only valid in case of installation by Euro-Clear Kft. or its representative.

Warranty Card

1, Check the mechanical and electrical connections on the device as follows:

- Is a mechanical protective filter with a fineness of ≤50 µm installed in front of the water softener? Yes No
- If not, the customer must be informed that the pre-filter is a condition of the warranty! Yes No
- Incoming water pressure value: _____ bar
- Are the water flow directions correct? (on assembly block / bypass valve, device) Yes No
- Has the channel been connected in the correct way, in accordance with the regulations? Yes No
- Is the power supply adequate? (230V, 50Hz) Yes No
- Raw water hardness value: _____ °nk

2, Program the water softener control valve and record the settings below:

- Is the correct date and time set? Yes No
- Time of regeneration: _____
- Water hardness: _____
- Continuous water flow: _____
- Peak flow: _____

3, After the regeneration is finished, check the hardness of the water coming out of the device.

- Without back-mixing, the hardness of the water is below 1°dh? Yes No

4, Set the water hardness value to a minimum of 5 °dh.

- The value of the set water hardness: _____ °dh

5, Fill the brine tank with the suitable water softening tablet salt.

- The brine tank has been filled with tablet salt? Yes No

NOTES:

_____
_____
_____
_____
_____