Installation and operations manual

VIESMANN

for the device User

Water softening station

AQUAHOME 20-N / 30-N

1 / 2012

Please retain this manual!

Important notice:
The price of this device includes free of charge commissioning of the device to be performed by an authorised service provider.
Transportation cost of a service technician is not included in the offer of free of charge commissioning of the device.

Table of contents

Tip!
Before installing the device, please read carefully this instruction and comply with all safety rules relating to commissioning and operation of the device. In case of any questions please inquire with the service team of your supplier or with the manufacturer of the device.

Basic data

Prior to connecting, commissioning and operation of the device, please fill in the following information:

MODEL NO.*	**SERIAL NO.***

*Information on model number and serial number can be found on the label, accessible after lifting of the brine tank cover.

Commissioning date		-
Water hardness		dH (German water hardness scale)
Water pressure		bar

Section I

1. Hydraulic assembly

A. Safety information

- Before installing and commissioning of the water softener,, please read carefully this instruction Compliance with the guidelines provided in the instruction will ensure safe and full use of the device you acquired. Failure to comply with this instruction may result in material and health damage.
- Water softener removes from water calcium and magnesium cations responsible for water hardness and it can also remove divalent (bivalent) iron compounds dissolved in water at the acceptable concentration up to 0.7 mg Fe per litre. The device is not capable of removing iron in any other form (such as organic form) neither is it capable of improving the taste and smell of water.
- Ambient temperature, suitable for water softener operation, must not be lower than 4°C and higher than 40 °C.
- Maximum temperature of water, that can be softened by the device, must not be higher than 49 °C.
- The device can be supplied together with a mechanical filter (optional), which should be installed on the water pipe supplying water to the softener, in accordance with the schematic diagram shown in figure 1.
- Operating voltage of the device is 24 V. Please use the transformer that is supplied together with the device.
- In case of damage of the power cable the transformer must be immediately disconnected. Prior to reconnecting the transformer, damaged power cable must be replaced or repaired.
- Prior to removing the outer valve cover, power supply of the device must be unconditionally disconnected.
- Water softener must not be used for softening of water with abnormal physical and chemical as well as bacteriological parameters.

B. Unpacking of water softener

The first step is to remove all components of the device from the cardboard box, remove protection styrofoam and adhesive tapes. The device should be checked for possible damages occurring during transportation. In case of any damage the device supplier must be notified immediately.
The device must be removed from the packaging with outmost care. The device is delivered as assembled, ready for use unit and therefore is rather heavy. When moved the device should be supported “at the bottom” and must not be dragged across the floor. Do not turn the device upside down, drop the device or put it on edgy or sharp surfaces.

C. Checking hydraulic fittings at installation site

- Tap water pressure

In order for the water softener to function properly the pressure in the water supply network must not be lower than 1.4 bar and higher than 8.0 bars. If water pressure is below the former, pressure raising pressure tank must be used; if water pressure exceeds the maximum value, pressure regulator (pressure reducing valve) must be installed.

→ ***Important notice!***
If during daytime water pressure is high it is very likely that during night time it will exceed the maximum value of 8.0 bars. In such case pressure regulator (pressure reducing valve) is recommended. It is recommended to fit pressure gauges on the installation, in accordance with the schematic diagram (figure 1), in order to control operating water pressure in the installation.

- Water flow rate

In order for the water softener to function properly the minimum water flow rate at the water inlet should be 11.0 litres per minute.

D. Selecting installation site for the device

- The water softener should be located as close as possible to hydrophore (in case of supplying water from private well [intake]) or water meter measuring the whole water in the household (in case of supplying the household with tap water). The device should be located in the immediate vicinity of the outlet drain (floor drain, stub pipe, laundry tub).

- Installing the device upstream from water heater (or boiler unit), make sure that the temperature of water at the connection point does not exceed 49^0C. It is recommended that a back - pressure valve is fitted between the water softener and the water heater (or boiler unit) in order to prevent hot water backflow to the water softener. Too hot water may cause damage of control valve elements as well as the ion-exchange resin.

- Make sure that the valve for water used outside of the house (such as water used for garden watering) is installed upstream from the water softener. Softening water that will be used outside of the house is not cost effective (unless necessary).

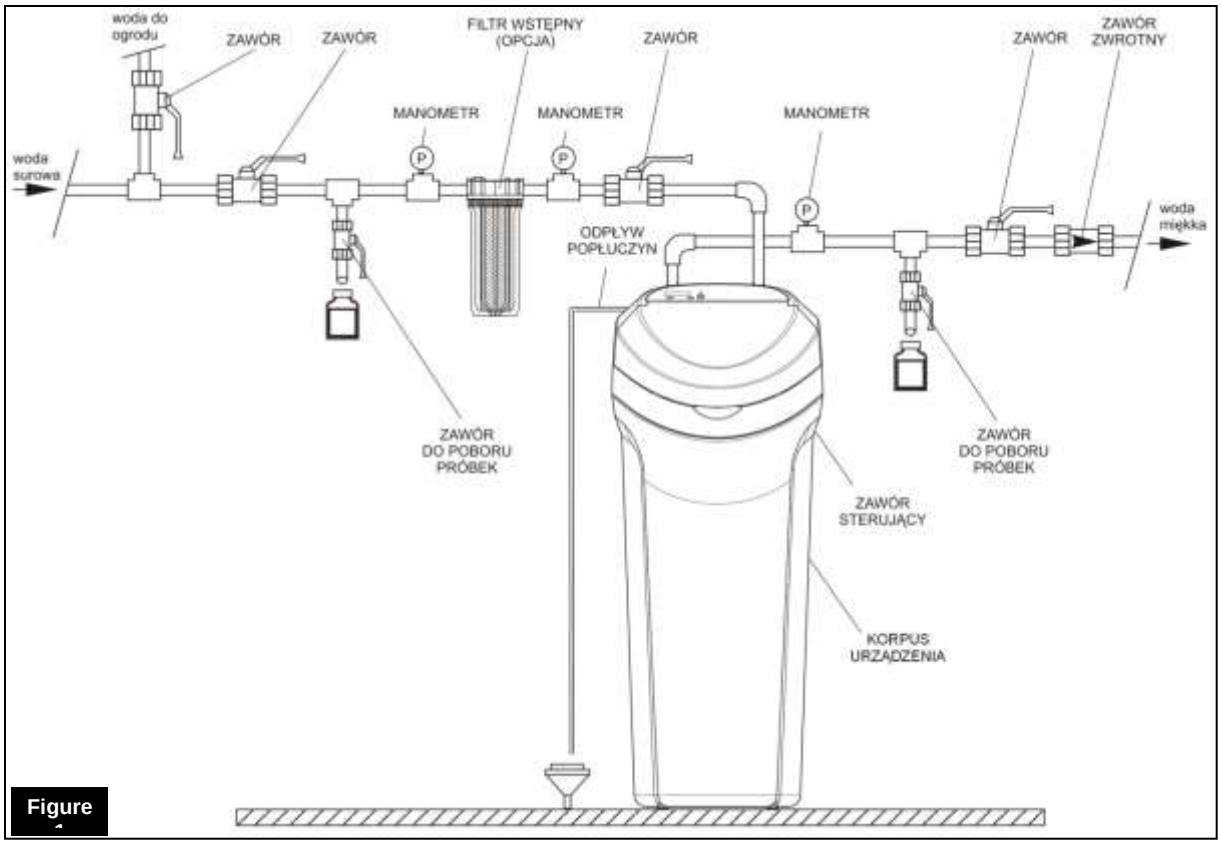
- Installation site of the water softener must be prevented from being exposed to freezing. If frozen, the water softener will be damaged. Any damage resulting from freezing is not covered by the warranty.

- The water softener is powered with 24 V. Direct plug - in transformer and power cable are provided along with the device. Earthed power socket for the water softener should be located within the immediate vicinity of the device and should be protected against rain and subzero temperatures. The water must be always connected to the power supply source; the power socket must not be fitted with a controller that could be incidentally switched off.

E. Materials

Before commencing installation of the device, it is important to check relevant connection of inflow and outflow of water to the water softener. Water "inflow" connection is located on the right side of

the device and water “outflow” connection on its left side, when facing the device (figure 2).



Figure

Descriptions in English: - (above vertical hose in figure 1) -> raw water; garden watering water, shut-off valve; shut – off valve, pressure gauge; preliminary filter (option); pressure gauge; shut – off valve; pressure gauge; shut – off valve; check valve; softened water ->
(below vertical hose in figure 1) sampling valve; washings drain (discharge); device control valve; sampling valve; device casing

Hydraulic connection of the water softener should be implemented in accordance with a specimen connection diagram shown by figure 1. The water softener is fitted with a by - pass valve with fitting elements as well as a washings discharge hose. The water softener may also be fitted with a mechanical filter (as an option). Hydraulic installation accessories such as valves, pressure gauges, water sampling valve etc. are not, as standard, supplied with the device and should be provided by the person implementing the installation.

F. Regeneration washings discharge connection

1. Regeneration washings discharge connection.

- Use the hose supplied together with the device to connect the installation of washings discharge from the water softener. Place one end of the hose on the washings discharge stub pipe, located at the rear part of the control head, and place the other end of the hose in the outlet drain (floor drain, stub pipe, laundry tub; figure 2). Make sure to provide for at least 4 cm air gap between the end of the hose and the outlet drain. This gap is needed to prevent backflow of sewer water into the water softener.

- Install the hose in a manner preventing its movement during intense flow of washings. The hose must not be bent, twisted or punctured.

- The hose must be located below the outflow stub pipe from the control valve.

2. Installation of flow elbow pipe of the brine tank.

- place the rubber connecting piece in the hole of brine tank (from the bottom) in such way that part of the connecting piece is located inside and part outside of the brine tank (figure 2).

- insert thick end of the elbow pipe to the connection piece from the outer side of the brine tank

- <u>discharge hose - connection point diameter 3/8", outer thread (not supplied with the device) - can be connected in the way identical to the one referred in point 1.</u>

→ ***Important notice:***
- *overflow hose of the brine tank serves only as additional safety feature in case when filling of the brine tank with water is not ended in accordance to the program.*
- *no part on the overflow hose can be placed above the outflow level.*
- *the overflow hose of the brine tank must not be connected to the outflow stub pipe of the control valve (see point 1 above).*

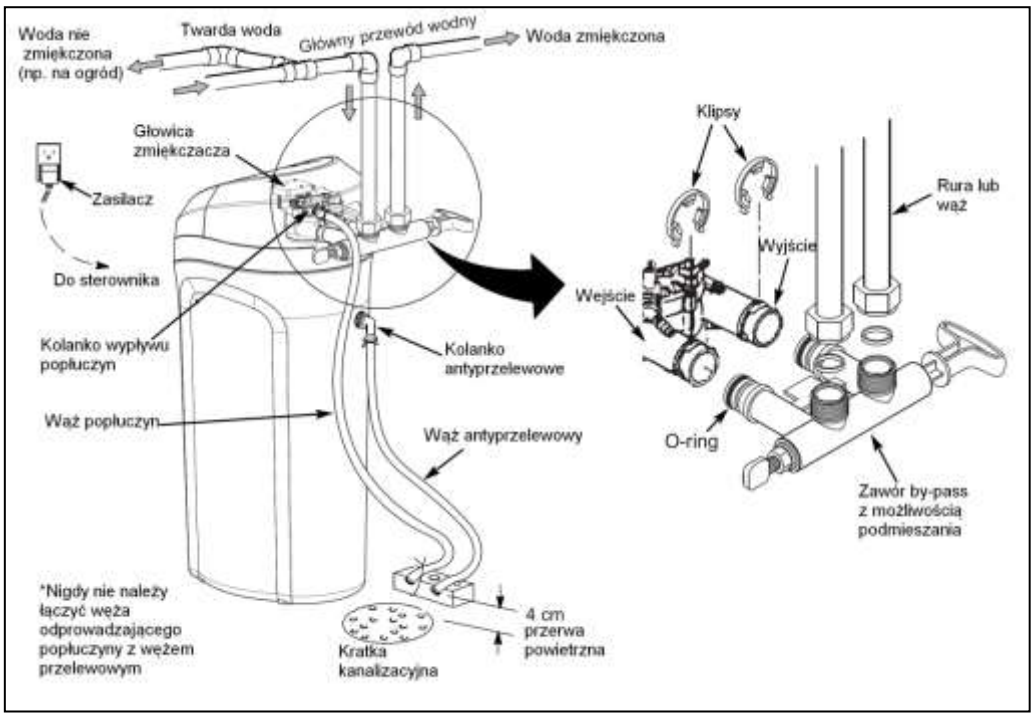


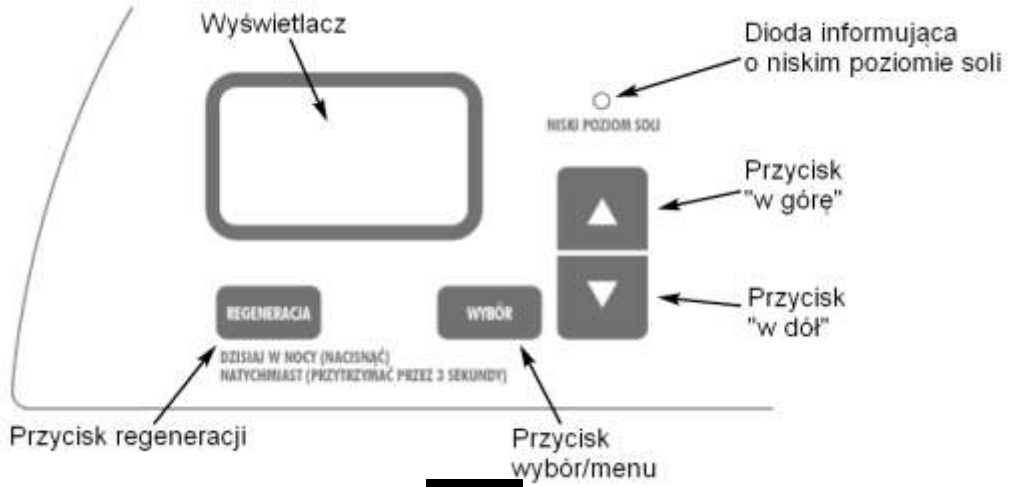
Figure 2

Descriptions in English: hard water (for example used for watering the garden); hard water; main water pipe; softened water; softening head; (left of softener housing) electric power supply, connection to control panel, washings elbow, washings discharge hose *never connect together the washings discharge hose and overflow hose, (right of softener housing) overflow elbow, overflow hose, 4 dm gap, drain hole, clips, inlet, outlet, O'ring, pipe or hose, by-pass valve with premixing feature

2. Programming the control panels

→ ***Important notice!***
It is recommended that the water softener is commissioned by an authorised service provider.
Commissioning of the device is included in its price.

A. Programming the control panel of Aquahome 20-N water softener



Figure

Descriptions in English: display screen, LED indicating low salt level, "up" button, "down" button, regeneration button (tonight – press; immediately (hold for 3 seconds), set/menu button

- Upon plugging the transformer into a power socket the display screen will show a model code of a given model of the device (u20) for a few seconds as well as the software version (such as J3.5 or similar).
- Then the display screen will show the *SET TIME* caption as well as flashing 12:00.
- When the display screen shows ----, press ▲ or ▼ buttons until caption **u20** appears on the display screen. Disconnect and then reconnect the power supply to the water softener to confirm correctness of the code entered. If the code appearing on the display screen is different than expected, please contact the service team of your supplier.
- Audio signaller **(BIP):** the signaller will activate each time the button is pressed. Single audio signal indicates one change on the display screen. Series of audio signals indicates wrong button being pushed and the need to push another button.

Setting Time

In order to set time, press ▲button to move ahead or ▼ button to set time back.

If a twelve-hour clock is set, the "ante meridiem" ("AM") caption will appear on the display screen for the after midnight part of the clock - hours between 0^{00} and 11^{59} and the "| 9 ıeridiem" ("PM") caption for the after midday part of the clock - hour between 12^{00} and 23^{59}.

With each pressing of one of the ▲ or ▼buttons the time will increase or decrease with one minute increments. If any of the buttons remains pressed the time will change at a faster rate.

Programming water hardness

Single press of the *SET* button (in Set Time mode) will move programming to the *SET HARDNESS* mode (Water hardness); the value flashing on the display screen should be 25 (default value).

Now code the hardness of used water in grains per American gallon - gpg (water hardness expressed in, for example, °dH - in accordance with the German scale, should be multiplied by 1.036). Water hardness can be expressed in different units. Below is the table showing water hardness units most commonly used in the country:

Hardness unit	mg $CaCO_3$/l	0f French degree of water hardness	°dH German degree of water hardness	gpg
1 mg $CaCO_3$/l	1	0,1	0.056	0.058
1 French degree of water hardness (°f)	10	1	0.56	0.58
1German degree of water hardness (°n)	17.8	1.78	1	1.036
1 gpg	17.2	1.72	0.96	1

- In case when the results of the physical and chemical analysis are not available, water hardness information should be obtained from local water supply company or from relevant regional office of the State Sanitary Inspectorate or it should be self determined with the use of a test which can be obtained from the vendor. Please enter the results obtained on page 4 of this manual as well as on a separate label, which should be placed under the brine tank cover with the use of adhesive tape.

- If raw water contains iron in concentration exceeding 0.2 mg/l please use adjusted water hardness instead of water hardness. The adjusted water hardness is calculated with the following formula:

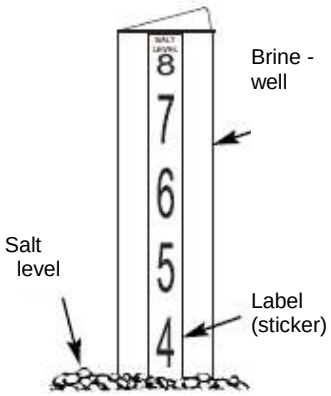
Adjusted water hardness [°f] = water hardness [°f] + 4.8 × iron content in Fe mg/l

- Enter the water hardness number or adjusted water hardness number (expressed in gpg) to the water softener software as operational water hardness. In order to enter the water hardness number press ▲ or ▼ button until the relevant number appears on the display screen. Pressing the ▼ button will reduce the displayed

water hardness number by 1. Pressing the ▲ button will increase the displayed water hardness number to the maximum water hardness number for given device. Between water hardness numbers of 1 and 25, each pressing of ▲ or ▼ buttons will respectively increase or reduce water hardness number by increments of one unit. Between water hardness numbers of 25 and the maximum water hardness number, the increments are 5 units. If the button remains pressed, the number will change twice within one second.

Setting regeneration hour

- Single press of the *SET* button (in Set Water Hardness mode) will move programming to the *SET RECHATHE TIME* mode; the value flashing on the display screen should be 02:00 (2 a.m.) as default value.
- If this setting is confirmed (by pressing the “SET” button), the water softener will activate the regeneration process at 2 a.m. Due to water consumption reduced to minimum at night, 2:00 a.m. is the optimum regeneration hour.
- In order to change the regeneration hour settings, press the ▲ or ▼ buttons to set new regeneration process start time. If a twelve-hour clock is set, please take note that the “ante meridiem” (“AM”) part of the clock indicates hours between 00^{00} and 11^{59} and the "post meridiem” (“PM”) part of the clock indicates hour between 12^{00} and 23^{59}. Pressing the “SET” button will confirm the changes introduced.
- With each pressing of one of the ▲ or ▼ buttons the time will increase or decrease with one unit increments. If the button remains pressed, the time will change by two units within one second.



Setting salt level

Single press of the *SET* button (in Set Regeneration Hour mode) will move programming to the *SET SALT LEVEL* mode. Control panel features the system of salt level control in the brine tank. In order to set the system of salt level control in the brine tank proceed as follows:

- Open the brine tank cover for visual inspection of the actual salt level.
- The salt level indicator, on the brinewell inside the brine tank features the range between 0 and 8. Take note of the actual salt level.

Press ▲ or ▼ button to set the actual salt level. In the example provided, the salt level is 4. LED indicating low level of salt will light up when the salt level is 2 or below. Prevent the salt level in the brine tak to drop below that level.

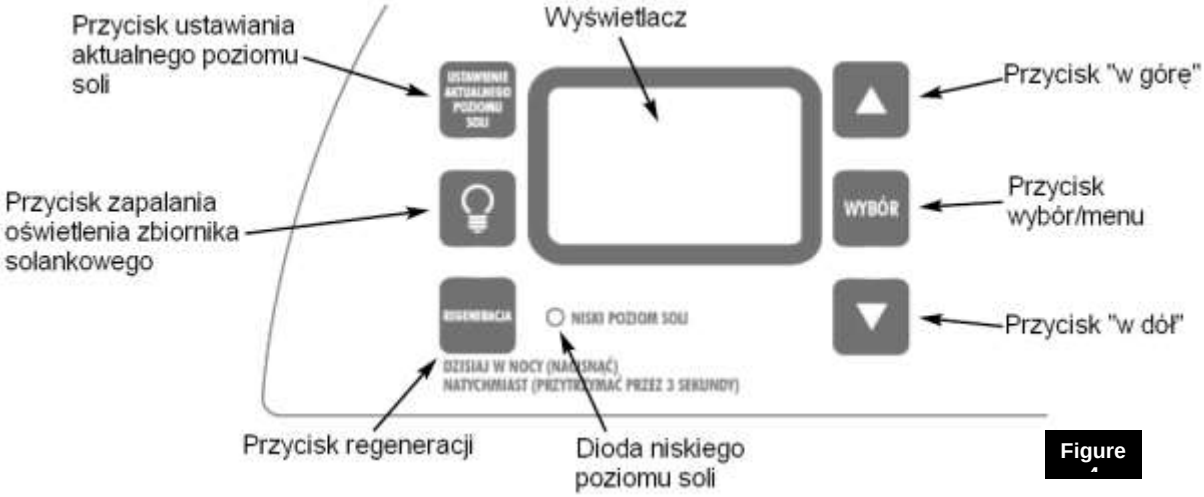
→ ***Important notice!***

Make sure to set the actual salt level each time the brine tank is refilled with salt.

In order to cancel the salt level control feature, press ▲ or ▼ button until the display screen shows OFF. Pressing the “SET” button will confirm the changes introduced.

The description of the remaining functions available at the control panel is provided in section II.

B. Programming the control panel of Aquahome 30-N water softener



Figure

Descriptions in English: display screen, current salt level button, brine tank illumination button “up” button, menu selection button; “down“ button, regeneration button (tonight – press; immediately (hold for 3 seconds), set/menu button

- Upon plugging the transformer into a power socket the display screen will show a model code of a given model of the device (u30) for a few seconds as well as the test number (such as J30 or similar).
- Then the display screen will show the *PRESET TIME* caption as well as flashing 12:00.
- When the display screen shows --:--, press ▲ or ▼ buttons until caption **u30** appears on the display screen.

Setting Time

Then press the “SET” button, the display screen will show *PRESENT TIME* caption as well as flashing 12:00.

- Audio signaller **(BIP):** the signaller will activate each time the button is pressed. Single audio signal indicates one change on the display screen. Series of audio signals indicates wrong button being pushed and the need to push another button.

In order to set time, press ▲button to move ahead or ▼ button to set time back.
If a twelve-hour clock is set, the "ante meridiem" ("AM") caption will appear on the display screen for the after midnight part of the clock - hours between 0^{00} and 11^{59} and the "post meridiem" ("PM") caption for the after midday part of the clock - hour between 12^{00} and 23^{59}.
With each pressing of one of the ▲ or ▼ buttons the time will increase or decrease with one minute increments. If any of the buttons remains pressed the time will change at a faster rate.

Programming water hardness
Single press of the *SET* button (in Set Time mode) will move programming to the *SET HARDNESS* mode (Water hardness); the value flashing on the display screen should be 25 (default value).

Now code the hardness of used water in grains per American gallon - gpg (water hardness expressed in, for example, ^{o}dH - in accordance with the German scale, should be multiplied by 1.036). Water hardness can be expressed in different units. Below is the table showing water hardness units most commonly used in the country:

Hardness unit	mg $CaCO_3$/l	**0**f French degree of water hardness	^{o}dH German degree of water hardness	gpg
1 mg $CaCO_3$/l	1	0,1	0.056	0.058
1 French degree of water hardness (^{o}f)	**10**	1	0.56	0.58
1German degree of water hardness (^{o}n)	17.8	1.78	1	1.036
1 gpg	17.2	1.72	0.96	1

- In case when the results of the physical and chemical analysis are not available, water hardness information should be obtained from local water supply company or from relevant regional office of the State Sanitary Inspectorate or it should be self determined with the use of a test which can be obtained from the vendor. Please enter the results obtained on page 4 of this manual as well as on a separate label, which should be placed under the brine tank cover with the use of adhesive tape.

- If raw water contains iron in concentration exceeding 0.2 mg/l please use adjusted water hardness instead of water hardness. The adjusted water hardness is calculated with the following formula:

Adjusted water hardness [^{o}f] = water hardness [^{o}f] + 4.8 × Iron content in Fe mg/l

- Enter the water hardness number or adjusted water hardness number (expressed in gpg) to the water softener software as operational water hardness. In order to enter the water hardness number press ▲ or ▼ button until the relevant number appears on the display screen. Pressing the ▼ button will reduce the displayed water hardness number by 1. Pressing the ▲ button will

increase the displayed water hardness number to the maximum water hardness number for given device. Between water hardness numbers of 1 and 25, each pressing of ▲ or ▼ buttons will respectively increase or reduce water hardness number by increments of one unit. Between water hardness numbers of 25 and the maximum water hardness number, the increments are 5 units. If the button remains pressed, the number will change twice within one second.

Setting regeneration hour

- Single press of the *SET* button (in Set Water Hardness mode) will move programming to the *SET RECHARGE TIME* mode; the value flashing on the display screen should be 02:00 (2 a.m.) as default value.

- If this setting is confirmed (by pressing the "SET" button), the water softener will activate the regeneration process at 2 a.m. Due to water consumption reduced to minimum at night, 2:00 a.m. is the optimum regeneration hour.

- In order to change the regeneration hour settings, press the ▲ or ▼ buttons to set new regeneration process start time. If a twelve-hour clock is set, please take note that the "ante meridiem" ("AM") part of the clock indicates hours between 00^{00} and 11^{59} and the "post meridiem" ("PM") part of the clock indicates hour between 12^{00} and 23^{59}. Pressing the "SET" button will confirm the changes introduced.

- With each pressing of one of the ▲ or ▼ buttons the time will increase or decrease with one unit increments. If the button remains pressed, the time will change by two units within one second.

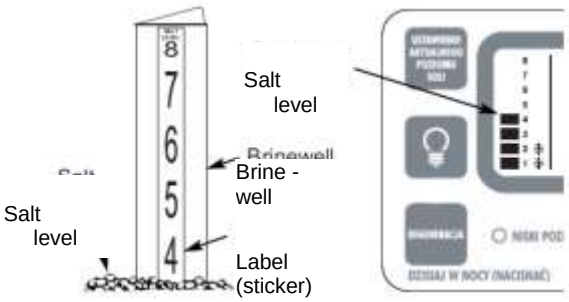
- Pressing the "SET" button will confirm the changes introduced and will move the control panel to the home screen.

Salt level control system

Control panel features the system of salt level control in the brine tank. In order to set the system of salt level control in the brine tank proceed as follows:

- Open the brine tank cover for visual inspection of the actual salt level.

- The salt level indicator, on the brinewell inside the brine tank features the range between 0 and 8. Take note of the actual salt level.



Press the "SET SALT LEVEL" button as many times as it is necessary for the salt level indicator to match the actual salt level noted. In the example provided, the salt level is 4. LED indicating low level of salt will light up when the salt level is 2 or below. Prevent

the salt level in the brine tak to drop below that level.

Important notice!

Make sure to set the actual salt level each time the brine tank is refilled with salt.

In order to cancel the salt level control feature, press "SET SALT LEVEL" button as many times as it is necessary for the display screen to show OFF.

The description of the remaining functions available at the control panel is provided in section II.

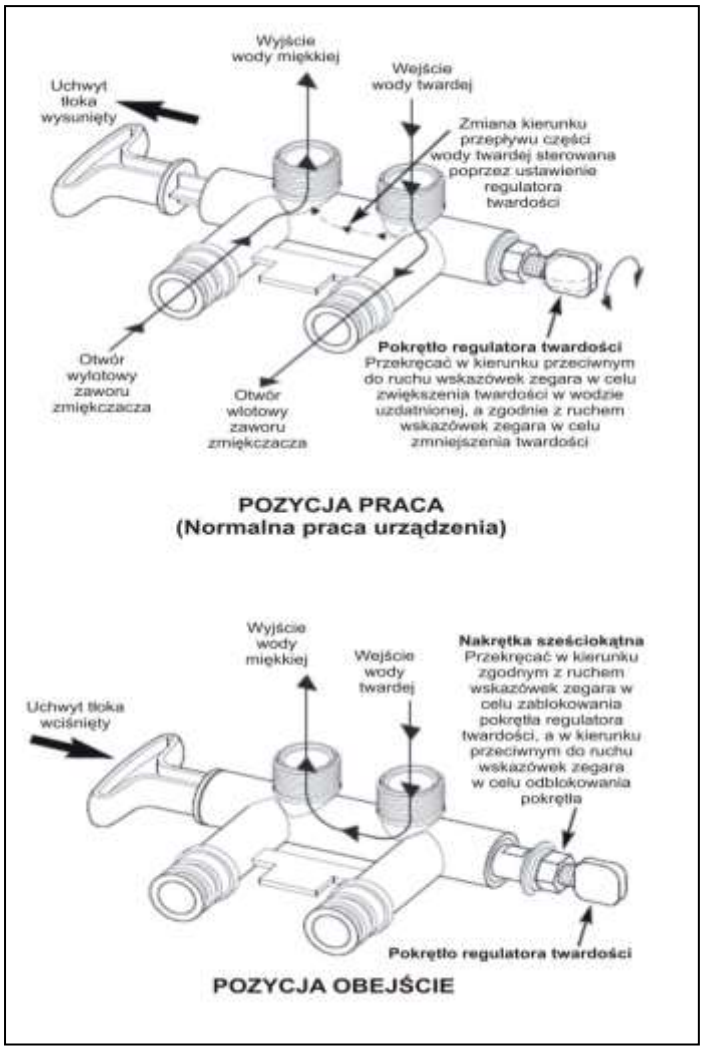
C. Filling the brine tank with salt

Regeneration of the ion exchange resin is implemented with the use of brine or in other words - aqueous salt solution. The process utilises special regenerative salt in tablets. The brine tank is filled with salt tablets for which the brine tank cover must be lifted. For wet (humid) premises it is recommended to only half fill the brine tank and refill the brine tank more often. The above recommendation results from the possibility of so called salt bridges (concrements) being formed in humid environment (figure 7). For premises with standard humidity the brine tank can be filled in full that is up to the level of the brine valve well height. During normal operation of the device the control valve allows certain volume of water into the brine tank in order to generate aqueous salt solution that is later used for regeneration of the medium.
Due to specific requirements for quality of the regeneration agent only regeneration salt approved by the water softener manufacturer should be used (regeneration salt in tablets complying with the requirements of the PN 973 norm). Use of edible salt is not recommended.

Prior to filling the brine tank with salt make sure that the cover of brine valve cover is tightly closed. No salt tablet should be allowed to this part of the device.
The brine tank capacity is provided in section IV - "Dimensions and technical specifications".

Upon filling the brine tank with salt, the regeneration process should be activated manually. Activities which must be performed for manual activation of the regeneration process are described in section II. Once the regeneration process in complete the device is ready for use.

D. Setting the desired water hardness number of the by - pass valve



Figure

Any standard by - pass valve, fitted on the water softener, features water hardness adjusting knob (blend adjusting knob; figure 5). The blend adjusting knob is used to adjust the hardness of softened water. For households it is recommended to use water with hardness in the range between 3 and 6 degrees (according to the German water hardness scale). Prior to any setting, loosen the hex nut of the water hardness adjusting knob (turning it counter - clockwise) in order to unlock it and to set it in motion.

In order to increase the water hardness number in the softened water, turn the water hardness adjusting knob counter - clockwise, while holding the by - pass valve handle. From fully closed position of the water hardness adjusting knob the water hardness number can be increased with the maximum of six full turns. Exceeding the maximum of 6 counter - clock turns of the water hardness adjusting knob may result in the screw's internal o'rings being pulled out of their seat and water leak from the bypass valve. If water hardness exceeds the desired water hardness, turn the water hardness adjusting knob clockwise, while holding the by - pass valve handle. Once the desired hardness is set, the water hardness adjusting knob may be locked in place by tightening the hex nut (turning it clockwise) until stop. Make sure that each time the by - pass valve is set in the by-pass position (i.e. with piston handle fully pushed in), the water hardness adjusting knob must be fully closed (turn it clockwise until stop).

Descriptions in English: (Serv position, normal operation of the softener) handle extended, softened water outlet, hard water inlet, redirection of part of hard water, controlled by water hardness adjusting knob, softener valve outlet, softener valve inlet, water hardness adjusting knob - in order to increase the water hardness number in the softened water, turn counter – clockwise; in order to reduce the water hardness number in the softened water, turn clockwise
(by-pass position) handle retracted, softened water outlet, hard water inlet, hex nut – turn clockwise to lock water hardness adjusting knob, turn counter - clockwise in order to unlock water hardness adjusting knob

Section II

1. Control panel functions

A. Manual activation of regeneration process

During operation of the water softener situations may occur when manually activated, additional regeneration process is

necessary. Such additional regeneration process is required when:

- actual water usage exceeds planned water usage (for example due to guests' visit in the household). Such situation poses a threat that the ion exchange capacity of the resin will be used before the device activates the regeneration process automatically,

- the brine tank is short of salt (the brine tank was not refilled with salt) - the brine tank must be immediately topped up with salt

- it is the first operation of the device (commissioning of the device).

Immediate regeneration
Press the *RECHARGE* button (see figure no. 3 and 4) and hold it until the display screen shows flashing caption reading *RECHARGE NOW* or *RECHARGE*. The first phase of the regeneration process will begin - filling the brine tank with water. Subsequent phases will be activated automatically. Upon completion of the regeneration process water softening capacity of the device will be restored.

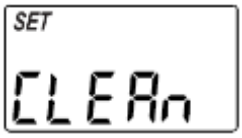
If the "Clean Feature" is set ON, the normal regeneration process is preceded by a cleaning backwash and rinse (in case of Aquahome 30-N the words "CLEAN" and "Bkwsh" or "Rinse" will flash on the display screen, along with the minutes of the clean cycle remaining).

Regenerate tonight
Press the *RECHARGE* button (see figure no. 3 and 4). The *RECHARGE TONIGHT* caption will begin flashing. The regeneration process will begin on the preset hour (2.00 AM as default). In order to cancel the regeneration instruction press the *RECHARGE* button again (but do not hold it). The *RECHARGE TONIGHT* caption will disappear from the display screen.

→ ***Important notice!***
During the course of the regeneration process the device will not generate softened water.

→ ***Important notice!***

B. Additional functions featured by Aquahome 20-N



- **SALT EFFICIENCY (Lower salt consumption mode),**
- **CLEAN FEATURE (cleaning function),**

- **CLEAN FEATURE MINUTES (Duration of cleaning),**
- **MAXIMUM DAYS BETWEEN REGENERATIONS (Maximum time period between regenerations in days during water uptake idle**

period),

- **97% FEATURE (Automatic activation of the regeneration process after the ion exchange capacity of the resin has been used in 97%),**
- **12/24 HOUR CLOCK (12 or 24 - time display mode),**
- **BACKWASH & FAST RINSE TIMES (Duration of backwash and fast rinse),**
- **SECOND OUTPUT CONTROL (Additional output of the control panel)**

To set any of the functions listed above, press the "SET" button and hold it, until the display screen shows "000".

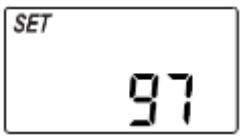
Press again the "SET" button, but do not hold it– the display screen will show the *SALT EFFICIENCY* mode (the display screen will show the *SET* caption and the letter *E*). In order to activate or deactivate the above function, press ▲ or ▼ button, until the display screen shows *ON* or *OFF.*

Salt efficiency (reduced salt consumption) mode
When the salt efficiency (reduced salt consumption) mode is *ON,* the device will run the regeneration process more often, consuming less salt and water for the process. The use of salt efficiency mode will depend on the quality of water used in the household.

Setting of this function can only be implemented by the service team of the supplier or manufacturer.

Press again the "SET" button (but do not hold it) – the display screen will show *SET CLEAN* caption*.*

Cleaning
This must be activated *(ON)*. If the clean function is set ON, the normal regeneration process is preceded by a backwash cleaning and fast rinse, enabling removal of sediments, such as mechanical sediments from the filtering mesh, which is located in the main distributor. If the display screen shows (OFF), then use the ▲ or ▼ button to change it to (ON).



Press again the "SET" button (but do not hold it) – the display screen will show *SET TIME CLEAN* caption*.*

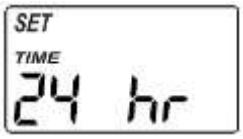
Duration of cleaning
The display screen will show a flashing number, such as 5, which indicates that duration of backwash cleaning and fast rinse will be 5 minutes. It is recommended to set the cleaning time to one minute as a standard. In the case when the input water contains increased amounts of impurities such as sand, sludge, slurry, etc., the duration of cleaning may be extended to a maximum of 15 minutes. In order to change the value on the display screen, press the ▲ button to reduce cleaning duration time or the ▼ button to reduce it.

Press again the "SET" button (but do not hold it) – the display screen will show *SET RECHARGE* caption*.*

Maximum period between regenerations in days during water uptake idle period
Automatic regeneration during water uptake idle period helps maintaining microbiological cleanliness of the medium (during water uptake idle period the medium may become inhabited by microorganisms and bacteria). With factory settings the (*AUTO*) function will be inactive which means that the device will not regenerate during the water uptake idle period. Press the ▲ or ▼ button until the desired number appears on the display screen. Available range of settings is between 1 and 15 days *(DAY).*

Press again the "SET" button (but do not hold it) – the display screen will show alternately flashing *SET* as well as 97 and OFF captions*.*

Automatic activation of regeneration process when the ion exchange capacity of the resin has been used in 97%



With factory settings *(97 and OFF)* this function is not active. When activated by pressing the ▲ or ▼ buttons (the display screen will show alternately flashing 97 and OFF captions) the device will activate regeneration process each time when the ion exchange capacity of the resin has been used in 97%, regardless of the time of day.

Setting of this function can only be implemented by the service team of the supplier or manufacturer.

Press again (but do not hold) the "SET" button, until the display screen shows 12-hour or 24-hour clock mode.

Setting clock mode (12-hour clock or 24-hour clock)
Press the ▲ or ▼ button until the display screen shows the desired value, in order to 24-hour clock mode to 12-hour clock mode and vice versa.
Backwash and fast rinse duration time
Press again (but do not hold) the SET button until the display screen shows DURATION TIME caption.
press again (but do not hold) the SET button until the display screen shows the duration time of backwash *SET TIME bA* and a number such as 5, that will begin to flash. This means that the backwash duration time is set to 5 minutes. If the "SET" button is pressed again the display screen will show *SET TIME Fr* and a number, such as 2 that will begin to flash, to set the fast rinse duration time. This means that the fast rinse duration time is set to 2 minutes.

The change of duration time of the regeneration cycles referred to above can only be implemented by the service team of the supplier or manufacturer.

Then press again (but do not hold) the *SET* button until the display screen reads *SET* as well as Ctrl.

Additional output of the control panel
Additional signal output to control peripherals. Press the ▲ or ▼ until the display screen shows OFF caption.
Press again (but do not hold) the "SET" button, until the display screen shows current time (hour).

Setting of the functions referred to above can only be implemented by the service team of the supplier or manufacturer.

C. Additional functions featured by Aquahome 30-N

- **SALT EFFICIENCY (Lower salt consumption mode),**
- **CLEAN FEATURE (cleaning function),**
- **CLEAN FEATURE MINUTES (Duration of cleaning),**
- **MAXIMUM DAYS BETWEEN REGENERATIONS (Maximum time period between regenerations in days during water uptake idle period),**
- **97% FEATURE (Automatic activation of the regeneration process after the ion exchange capacity of the resin has been used in 97%),**
- **12/24 HOUR CLOCK (12-hour or 24-hour time display mode),**
- **BACKWASH & FAST RINSE TIMES (Duration of backwash and fast rinse),**
- **Salt tank illumination**
- **Water flow through the device**
- **Time remaining for completion of regeneration and indicators of valve position**

To set any of the functions listed above, press the "SET" button and hold it, until the display screen shows "000".

Then press again the "SET" button, but do not hold it– the display screen will show the *SALT EFFICIENCY* mode (the display screen will show letter *E*). In order to activate or deactivate the above function, press ▲ or ▼ button, until the display screen shows *ON* or *OFF.*

Salt efficiency (reduced salt consumption) mode
When the salt efficiency (reduced salt consumption) mode is *ON,* the device will run the regeneration process more often, consuming less salt and water for the process. The use of salt efficiency mode will depend on the quality of water used in the household.

Setting of this function can only be implemented by the service team of the supplier or manufacturer.

Press again the “SET” button (but do not hold it) – the display screen will show *CLEAN* caption.

Cleaning
This must be activated *(ON)*. If the clean function is set ON, the normal regeneration process is preceded by a backwash cleaning and fast rinse, enabling removal of sediments, such as mechanical sediments from the filtering mesh, which is located in the main distributor. If the display screen shows (OFF), then use the ▲ or ▼ button to change it to (ON).

Press again the “SET” button (but do not hold it) – the display screen will show *CLEAN TIME* caption.

Duration of cleaning
The display screen will show a flashing number, such as 6, which indicates that duration of additional backwash cleaning and fast rinse will be 6 minutes. It is recommended to set the cleaning time to one minute as a standard. In the case when the input water contains increased amounts of impurities such as sand, sludge, slurry, etc., the duration of cleaning may be extended to a maximum of 15 minutes. In order to change the value on the display screen, press the ▲ button to reduce cleaning duration time or the ▼ button to reduce it.

Press again the “SET” button (but do not hold it) – the display screen will show *RECHARGE DAY* caption.

Maximum period between regenerations in days during water uptake idle period
Automatic regeneration during water uptake idle period helps maintaining microbiological cleanliness of the medium (during water uptake idle period the medium may become a habitat for microorganisms and bacteria). With factory settings the (*AUTO*) function will be inactive which means that the device will not regenerate during the water uptake idle period. Press the ▲ or ▼ button until the desired number appears on the display screen. Available range of settings is between 1 and 15 days *(DAY).*

Press again the “SET” button (but do not hold it) – the display screen will show alternately flashing *RECHARGE* as well as 97 and OFF captions.

Automatic activation of regeneration process when the ion exchange capacity of the resin has been used in 97%
With factory settings *(97 and OFF)* this function is not active. When activated by pressing the ▲ or ▼ buttons (the display screen will show alternately flashing 97 and OFF captions) the device will activate regeneration process each time when the ion exchange capacity of the resin has been used in 97%, regardless of the time of day.
Setting of this function can only be implemented by the service team of the supplier or manufacturer.

Press again (but do not hold) the “SET” button, until the display screen shows 12-hour or 24-hour clock mode.

Setting clock mode (12-hour clock or 24-hour clock)
Press the ▲ or ▼ button until the display screen shows the desired value, in order to 24-hour clock mode

to 12-hour clock mode and vice versa.

Backwash and fast rinse duration time
Press again (but do not hold) the SET button until the display screen shows the duration time of backwash *Bkwash TIME* and a number such as 6, that will begin to flash.
This means that the backwash duration time is set to 6 minutes. If the "SET" button is pressed again the display screen will show *Rinse TIME caption* and a number, such as 2 that will begin to flash. This means that the fast rinse duration time is set to 2 minutes.

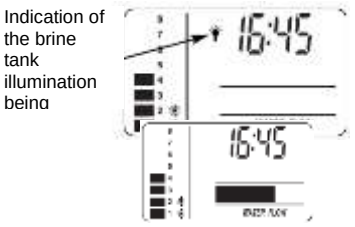
The change of duration time of the regeneration cycles referred to above can only be implemented by the service team of the supplier or manufacturer.

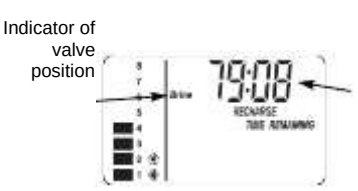
Press again (but do not hold) the "SET" button, until the display screen shows current time (hour).

show a light bulb symbol. If the illumination switch is pressed again the illumination of the inside of the salt tank will be switched off.

Water flow through the device
If softened water is being uptaken (used), the flow of water will be indicted by and indicator that will be shorter or longer, depending on the water flow rate. If softened water is not being used by any household device, the indicator will not appear.

Time remaining to completion of regeneration process and indicators of valve position
When the device is in the course of regeneration process, the display screen shows one of the indicators of the valve position (such as *Serv, Fill, Brine, Bkwsh, Rinse*) RECHARGE caption will flash on the display screen and starting from *Brine* the display screen will show the number of minutes until completion of the regeneration process (in other words the moment when the device proceeds to the *Serv* mode). When the valve changes its position (proceeds from one cycle to another), relevant indicators will begin to flash.





Salt tank illumination
In order to illuminate the inside of the salt tank press the illumination switch of the brine tank (figure 4). At the same time the display screen will

D. Basic diagnostics data

Indicator of softened water flow
This indicator enables to diagnose if the treated (softened) water counter of the device works. It also enables reading of the flow rate of flowing treated (softened) water. Press and hold the SET button until the display screen shows "000 - - ". If

water flows through the device the display screen will show changing values in the range between 000 and 199. The value of 199 appearing on the display screen will indicate that the device generated 1 gallon (3.78 litres) of treated (softened) water. Upon exceeding the number of 199 the counter will resume measuring of subsequent gallon of treated (softened) water (range between 000 and 199).
Press the SET button the number of needed for the display screen to show current time, to return to the main screen.

Activation date memory
Press and hold the SET button until the display screen shows “000 - - ”. When the ▲ button is pressed, the display screen will show a number and the TIME or DAY caption. The digit will indicate the number of days since commissioning of the water softener. When the ▲ button is released, the display screen will show ”000 - - ” again. Press the SET button the number of times needed for the display screen to show current time, to return to the main screen.

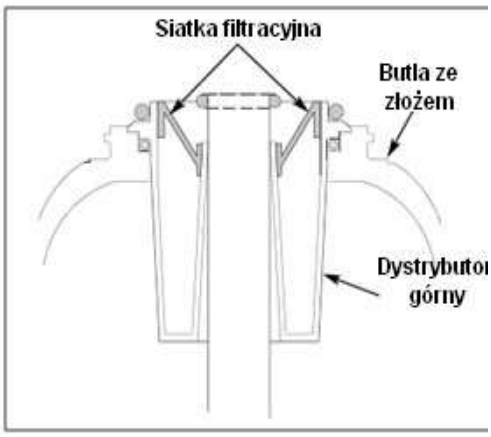
Regeneration counter
Press and hold the SET button until the display screen shows “000 - - ”. When the ▲ button is pressed, the display screen will show a number and the RECHARGE caption. The digit will indicate the number of regenerations carried out by the water softener since the date of commissioning of the device.
When the ▲ button is released, the display screen will show „000 - - ”.
Press the SET button the number of needed for the display screen to show current time, to return to the main screen.

E. Protective filtration (cleansing)

Filtration (cleansing) screen in the basket of the device main distributor (figure no. 6) prevents mechanical contamination from entering the filtration tank of the device. As water flows through the device, larger sediment particles are collected in the integrated basket and then rinsed to the drain before each regeneration process begins.

If the CLEAN ON is activated, it will enable automatic removal of sediments from the filtration screen before each regeneration process begins.

→ ***Important notice!***
The filtration screen in the basket of the device main distributor is not intended to replace the preliminary filter, installed at the raw water pipeline.



Cone screen; resin tank; main distributor

Figure 6

F. Power outage

If electrical power to the water softener is lost, the display screen will turn off but the microprocessor will keep all settings for several hours. When electrical power is restored, verify and reset time, if the hour on the display screen is flashing or incorrect. The preset values of : water hardness and the hour of activation of the regeneration process should never be reset unless a change is desired. Even if the time information displayed after long period of power interruption is incorrect the device will still function properly and will soften water. Incorrect time information will result in the regeneration process being activated at wrong hour until the time information is reset to the correct one.

G. Error codes

An error code may appear on the display screen whenever only of the electronic components of the device malfunctions. If the display screen shows an error code instead of current time, seek assistance of an authorised service provider.

Section III

1. Service (maintenance) activities

Operation of the water softener is entirely automatic.
Basic maintenance activities for which the user of the water softener is responsible, include:

- control of salt level in the brine tank - once every week
- periodical refill of regeneration salt if low salt level needs to be topped up
- control of hardness of water treated by the water softener - once every week
- control of water pressure in the installation (control of installed pressure gauges) - once every fortnight
- control of purity of filter screen of the preliminary filter, periodical replacement of the filter screen and / or control of pressure upstream and downstream of the preliminary filter - once every week or every fortnight
- control of clock indications in terms of current hour and possible resetting of clock indications (resetting time - see above).

→ ***Important notice!***
Due to specific requirements for quality of the regeneration agent only regeneration salt approved by the water softener manufacturer should be used (regeneration salt in tablets complying with the requirements of the PN 973 norm).

A. Refilling salt in brine tank

The salt level control device will indicate the need to refill salt. Check periodically (recommended once every week) if the tank needs to be refilled with salt. Refill the tank with salt each time when the indicator shows level "2". Refilling the tank with salt is considered to be a service (maintenance) activity . In case when the brine tank is empty (no regeneration salt), the ion exchange resin will not regenerate and as a result the water softener will not soften water. Make sure to set the actual salt level each time the brine tank is refilled with salt.
If possible refill regeneration salt by entire packaging (25 kg packaging). When refilling regeneration salt make sure to prevent any contaminants from penetrating into the brine tank. In case the brine tank is contaminated, rinse the tank with clean water. Also make sure that there are not regeneration salt tablets in the brine valve well. In order to prevent any tablets from getting into the brine valve well, refill the brine tank with tablets only if the well is covered with purposely provided cover..

B. Salt bridges (concrements)

A hard crust or salt bridge is caused by increased humidity within the water softener installation site. It can also be caused by the use of regeneration salt with wrong parameters. A salt bridge forms over

water surface and creates an empty space between water and salt and preventing their contact, hence salt will not dissolve in water to make brine. As a result the resin will not regenerate. If the brine tank is full of salt, it is difficult to determine if a salt bridge was created. Loose, normal - looking salt may be on top, but for example half way to the bottom of the brine tank an empty space may occur. In order to determine whether or not a salt bridge was created, proceed as follows: use a stick (such as broom handle) and insert it into the device (see figure no. 7). Mark a reference point on the broom handle, 3 - 5 cm below the edge of the brine tank. Then push the broom handle down into the brine tank to its bottom. If stronger resistance can be felt on the broom handle before it strikes the tank bottom, it will be most likely a salt bridge. Push the broom handle into the salt bridge in a number of spots this way breaking the bridge. Never break the salt bridge by pounding on the walls of the brine tank. It may damage the tank.
If the use of wrong kind of salt resulted in the salt bridge, remove it from the brine tank, then carefully rinse the tank and refill it with salt of appropriate quality.

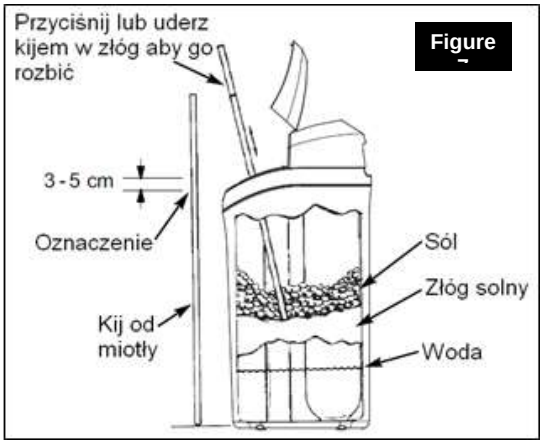


Figure 7

Description in English: Press of pond the salt bridge with the broom stick to break salt bridge, marking of brine level, broom stick, salt, salt bridge, water

C. Control of hardness of water treated by the water softener

More frequent control of hardness of treated (softened) water (once every day) is required in the initial period of operation of the water softener (during the initial 10 days). The water hardness number depends on the setting of the mixing valve. For households the water hardness number should be set in the range between 3 and 6, according to the German water hardness scale.
Following that initial period, the water hardness parameter should be checked one every fortnight. Enter the results of water hardness measurement to the operation log book (see page 26). The instruction on performance of water hardness measurement is provided by relevant water hardness tests (available at the supplier or manufacturer of the water softener).

D. Control of water pressure in the installation

Pay attention to the value of water pressure during operation of the water softener. If the pressure of feed water drops below 1.4 bar, determine the cause of the drop and remove it. If the pressure of feed water exceeds 8.0 bars, install relevant pressure regulator (reducer) in the water feed system.

Please bear in mind that the control system (including the conditions of the REGENERATION process, which is carried out automatically) was set for water pressure value in the range between 1.4 bar to 8.0 bars.
Try to avoid water pressure hammers during operation of the device.

E. Mechanical filter operation

In order to secure proper operation of the water softener, the mechanical filter, supplied together with the device, must be installed on the raw water pipework (see figure no. 1). The mechanical filter is designed to protect the control head as well as the medium against mechanical impurities (contamination). Observation of contamination condition of the filter screen (water cleaning medium) is carried out by visual inspection. An additional element enabling control of the filter condition is monitoring of water pressure upstream and downstream of the filter. In case of a filter with replaceable screen, if the screen is used (contaminated), unscrew the filter sump holding the screen, replace it with a new filter screen and tighten the sump with the new filter screen back to the filter assembly. Bear in mind to cut off water upstream of the filter before carrying out the filter screen replacement.

→ ***Important notice!***
The filter screen must not be rinsed, cleaned or reclaimed (regenerated) in any other manner.

In case of a filter with a backwash feature, follow the instruction provided together with the filter.

Operating of a filter with an overused filter screen may undermine water quality and may cause damage to the water softener.

F. **Control of current hour clock indications**

Control of the time indications shown on the display screen of the water softener should be performed at least once every fortnight. It will prevent any movements in time of commencing the regeneration process. To eliminate any possible difference between current time and the time displayed by the device, follow the guidelines provided on page 9 (for Aquahome 20-N) or on page 12 (for Aquahome 30-N).

2. Automatic disinfection of the medium featured by Aquahome 30-N

As a standard, Aquahome 30-N is fitted with a special medium disinfection system that combines a probe with electrodes, cabling and an additional micro switch. This system is installed on the brine line and is automatically activated during the regeneration process. During the course of one of the regeneration stages - the brining, an electrolysis occurs in the flowing salt solution that generates a small quantity of free chlorine on one of the electrodes and chlorine generated this way is used as a disinfection agent. Then the salt brine with a small quantity of chlorine is directed to the resin tank. The salt brine is

used to regenerate the resin and chlorine is used for its disinfection. The chlorine generated as a result of the electrolysis is safe for human health and conforms European norms. The quantity of chlorine is not large enough to cause any damage to the ion exchange resin or to cause oxidation of the materials from which the device is made.
As soon as the regeneration process is completed the device is ready for use, the medium is disinfected and the remains of free chlorine is discharge into the drain together with the regeneration washings. Aquahome 30-N device is delivered to customer together with the medium disinfection system already installed and requires no additional actions by the customer.

3. Operational recommendations

Make sure to protect the device during operation against:

- excessive dusting of the water softener installation site,
- too low and too high ambient temperature in the vicinity of the device - the temperature must not drop below 4 °C and must not exceed 40 °C,
- incidental possibility of occurring of a sudden heat source,
- incidental possibility of hot water backflow (with temperature exceeding 49 °C) - in case when such situation may not be entirely avoided, install a check valve.

4. Operation logbook

An operation log book should be maintained during the operation of the water softener, in accordance with a sample log book provided below:

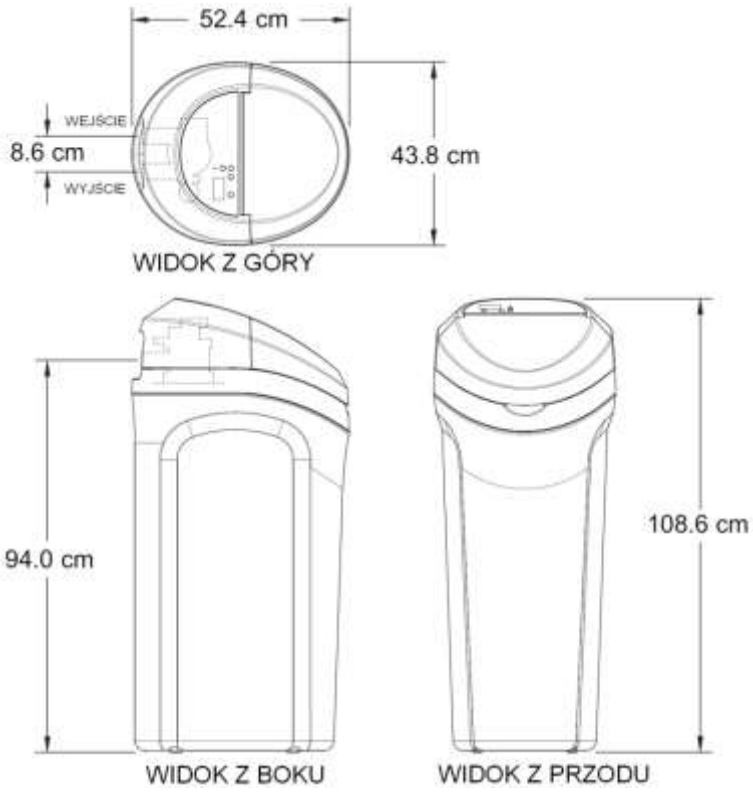
Item	**Date**	**Hour**	**Hardness of inflow (feed) water [°dH]**	**Remarks**
1	2	3	4	5

5. Troubleshooting table

Problem	Cause (Reason)	Removal (remedy) method
Water softener supplies water that is too hard or entirely unsoftened	No salt in the tank	Refill salt Activate manual regeneration
	No power supply	Restore power supply. Check displayed time. Activate manual regeneration
	Occluded outflow of sewage from the valve	Restore patency of washings discharge hose
Water softener supplies water; salt level remains unchanged	Salt bridge has been formed in the brine tank	Remove the salt bridge
	By - pass valve is in by-pass position	Set the by - pass valve in service position
Water is periodically hard	Incorrectly set hour.	Reset hour to correct one
	Too low raw water hardness has been programmed	Determine water hardness and program the correct water hardness number
	Incorrect code for a given model of water softener.	Contact the service team of your supplier.
	Soft water is fed during regeneration process	Such situation must be avoided. Check the settings of control panel for correctness
	Non-controlled water leakage Excessive consumption of water	Check all water intake points. Remove all water leakages

Section IV

1. Technical specifications and dimensions



Top view, side view, front view

	Dimensions	AQUAHOME 20-N/30-N
A	Total height	108.6 cm
B	Height of water connection points	94 cm
-	Depth	52.4 cm
	Width	43.8 cm
-	Inlet / outlet spacing	8.6 cm

Water softener parameters	AQUAHOME 20-N	AQUAHOME 30-N
Maximum water flow rate (m^3/h)	2.0	2.8
Water operating pressure range (bar)	1.4 - 8.0	1.4 - 8.0
Water temperature range (°C)	4 - 49	4 - 49
Maximum water hardness (°dH)	76.8	76.8
Resin quantity (l)	20	26
Average ion exchange capacity (m^3 x °f)	135	195
Maximum water output between regenerations at water hardness of 18°dH (l)	4 200	6 100
Estimated salt consumption per regeneration (kg)	3.2	3.9
Estimated water consumption per regeneration (l)	100 – 120	130 – 155
Connection point diameter (inch)	1	1
Regenerative salt		
Recommended salt types	regenerative salt in tablets PN 973	regenerative salt in tablets PN 973
Salt tank volume (kg)	50	50

Section V

1. Control activities prior to contacting a service provider

→ ***Important notice!***
Always keep this manual in vicinity of the water softener.

Maintenance inspection should always be carried out in accordance with the following points:

1. Check whether the display screen shows current time

- in case the display screen shows no information, check the power connection
- if the hour on display screen is flashing or incorrect time such information indicates power supply interruption for longer than 24 hours. The device will soften water but regeneration process may take place at times other than assumed.

2. Check whether the by = pass valve is set in “Service” position.
3. Check whether the water inlet hose and outlet hose are properly connected to the inlet and outlet hole respectively.
4. Check whether the transformer is properly connected to an earthed slot and whether the connection cable is properly fitted.
5. Check whether the washings discharge hose is twisted or bent or whether it is arranged at the height below 2.40 metres over ground along its entire length.
6. Checked whether the brine tank is filled with salt.
7. Check whether the brine suction hose is properly connected.

8. Make sure that the float in the brine well is set properly.

9. Check whether programmed water hardness corresponds to the actual water hardness. Determine water hardness number in order to perform this check.

If the above procedure failed to determine the cause of defect, contact the service team of the supplier or manufacturer.

2. Warranty card

Authorised service provider: **User:**

....

....

This warranty card has been issued for the following device:

Item	Device name	Type	Part name*	Part number
1	Preliminary filter (as an option)	I 25 – 50 (replaceable screen filter)		
		EPURION A25-2 (manual backwash filter)		
		EPURION PLUS (automatic backwash filter)		
2	Water softener	AQUAHOME 20-N or AQUAHOME 30-N	Mod. No	
			Ser. No	

* In case of a preliminary filter, if applicable, mark “x” in the column “Part name” next to the filter that has been provided with the device at the purchase.

Warranty conditions:

1. The supplier grants warranty of reliable operation of the delivered equipment, when used as intended and in accordance with the guidelines provided in this documentation.

2. Individual elements of the water softener are covered with warranty for the following periods, counting from their commissioning date:
   - ■ - external casing of the water softener - for the period of 5 years

- - resin tank - for the period of 5 years
- - control head - for the period of 3 years
- electronic subassemblies - for the period of 2 years

3. As a condition, warranty will apply only if hydraulic assembly and commissioning of the device is performed in accordance with the guidelines included herein.

4. The User shall agree to perform one warranty inspection during a year. Warranty review costs will include labour costs and costs of an employee delegation and transportation. The supplier shall perform such warranty inspection in return for remuneration upon notification by the User on warranty inspection deadline. The notification should be submitted in writing (via fax, email or regular mail) or should be performed via telephone not later than 7 days prior to the deadline of the warranty inspection.

5. The supplier shall remove all defects and malfunctions in operation of the devices covered by warranty within 7 business days of the notification date. Confirmation of receipt of the notification will be performed by stating the name and surname of the person, receiving the notification.

6. The warranty will not cover:

6.1. inspection services
6.2. change of the device program settings
6.3. consumables used during regular operation, including such materials as: filter screens, regeneration salt
6.4. damages resulting from: theft, fire, impact of external factors or weather conditions, use of inappropriate consumable materials, installation of additional parts and components without proper consent of the Supplier,
6.5. damages resulting from inappropriate usage (operation)
6.6. damages resulting from inappropriate storage of the device and consumables,
6.7.consequences resulting from withdrawing from commissioning of the device.

7. The Purchaser shall lose warranty rights in case of:

7.1. failure to adhere to the guidelines and recommendations included herein,
7.2. performing installation and commissioning of the device contrary to the guidelines and recommendations,
7.3. failure to timely perform warranty inspections,
7.4. self - performing by the Purchaser or third persons of repairs, alterations and modifications that will not comply with the conditions of Supplier's warranty

Commissioning date: .....

Date ..... Signature and stamp.....

Certification of performance of warranty inspections:

1. warranty inspection: date:..... stamp and signature:.....

2. warranty inspection: date:..... stamp and signature:.....

3. warranty inspection: date:..... stamp and signature:.....

4. warranty inspection: date:..... stamp and signature:.....

5. warranty inspection: date:..... stamp and signature:.....

6. warranty inspection: date:..... stamp and signature:.....

7. warranty inspection: date:..... stamp and signature:.....

8. warranty inspection: date:..... stamp and signature:.....

3. Device commissioning protocol (original copy) - for the User

Please contact the service team of the supplier or manufacturer in order to obtain more information on commissioning of the device.

Distributor (vendor): VIESSMANN Sp. z o.o.
Wrocław – phone no. 071/3607100, Komorniki – phone no. 061/8996200, Mysłowice – phone no. 032/2220300,
Piaseczno – phone no. 022/7114400, Rusocin – phone no. 058/3008500

Manufacturer: EPURO POLSKA Sp. z o.o.
Poznań – phone no. 061/8743782

Place (town)	
Date	
User	Address: Phone / fax no.:
Representative of the User	

Data of the party carrying out commissioning	Full company name: Address: Phone no.: E-mail:
Device undergoing commissioning * Information on model number and serial number can be found on the label, accessible after lifting of the brine tank cover.	Mod. No: Ser. No:
Device undergoing commissioning *Information provided on resin tank	Part No: Tank size: Date Code: Shift:
Quality of raw water	Hardness: Iron*: Manganese*:
Quality of treated (softened) water	Hardness: Iron*: Manganese*:
Remarks	
Refills	
User signature	
Signature of the person carrying out commissioning:	

* * not required in case of tap water

4. Device commissioning protocol (copy no. 1) - for the party performing commissioning of the device

Place (town)	
Date	
User	Address: Phone / fax no.:
Representative of the User	
Data of the party carrying out commissioning	Full company name: Address: Phone no.: E-mail:
Device undergoing commissioning * Information on model number and serial number can be found on the label, accessible after lifting of the brine tank cover.	Mod. No: Ser. No:
Device undergoing commissioning *Information provided on resin tank	Part No: Tank size: Date Code: Shift:
Quality of raw water	Hardness: Iron*: Manganese*:
Quality of treated (softened) water	Hardness: Iron*: Manganese*:
Remarks	
Refills	
User signature	
Signature of the person carrying out commissioning:	

* not required in case of tap water

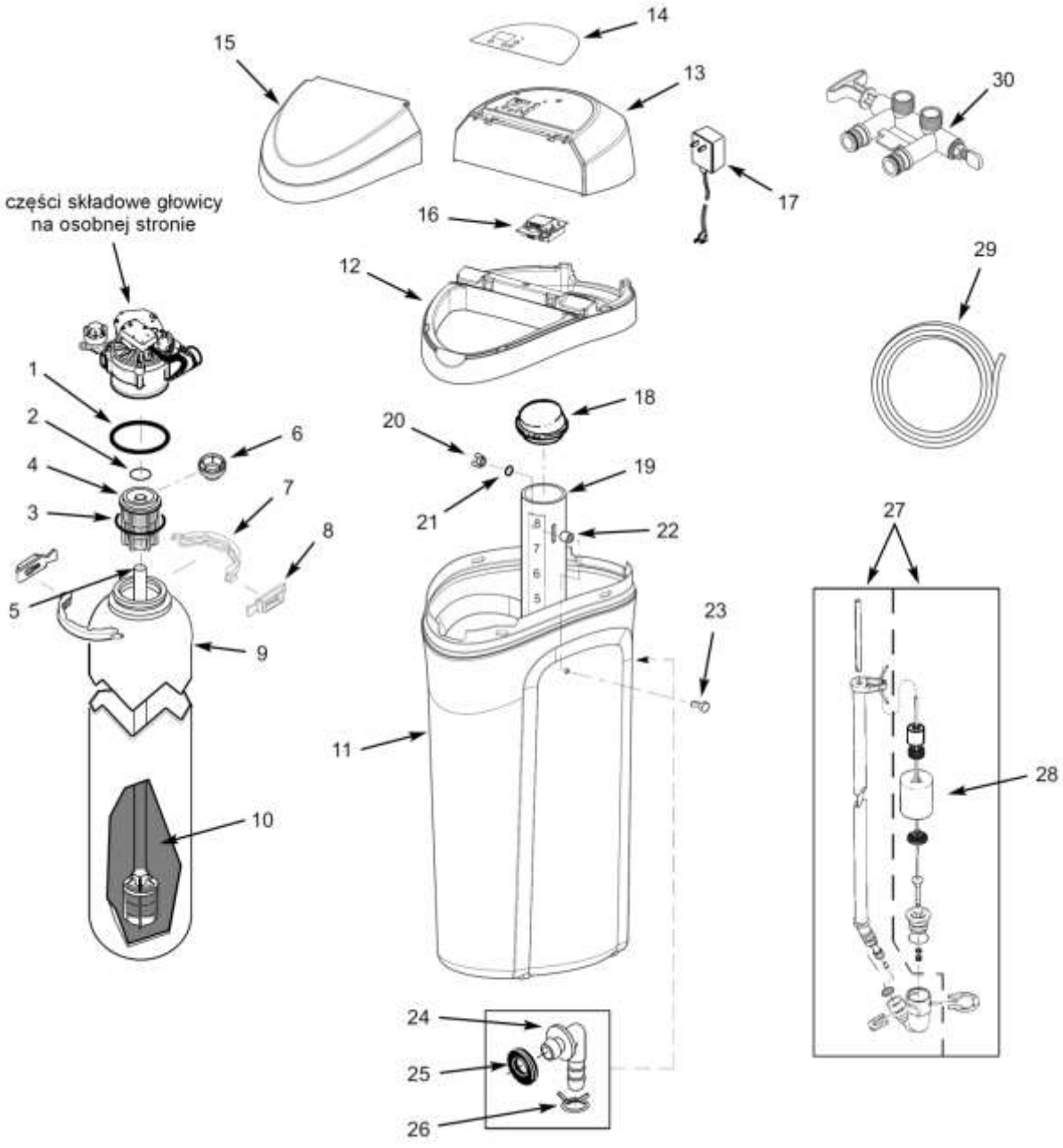
5. Device commissioning protocol (copy no. 2) - for the Supplier or Manufacturer

Place (town)	
Date	
User	Address: Phone / fax no.:
Representative of the User	
Data of the party carrying out commissioning	Full company name: Address: Phone no.: E-mail:
Device undergoing commissioning * Information on model number and serial number can be found on the label, accessible after lifting of the brine tank cover.	Mod. No: Ser. No:
Device undergoing commissioning *Information provided on resin tank	Part No: Tank size: Date Code: Shift:
Quality of raw water	Hardness: Iron*: Manganese*:
Quality of treated (softened) water	Hardness: Iron*: Manganese*:
Remarks	
Refills	
User signature	
Signature of the person carrying out commissioning:	

* not required in case of tap water

Section VI

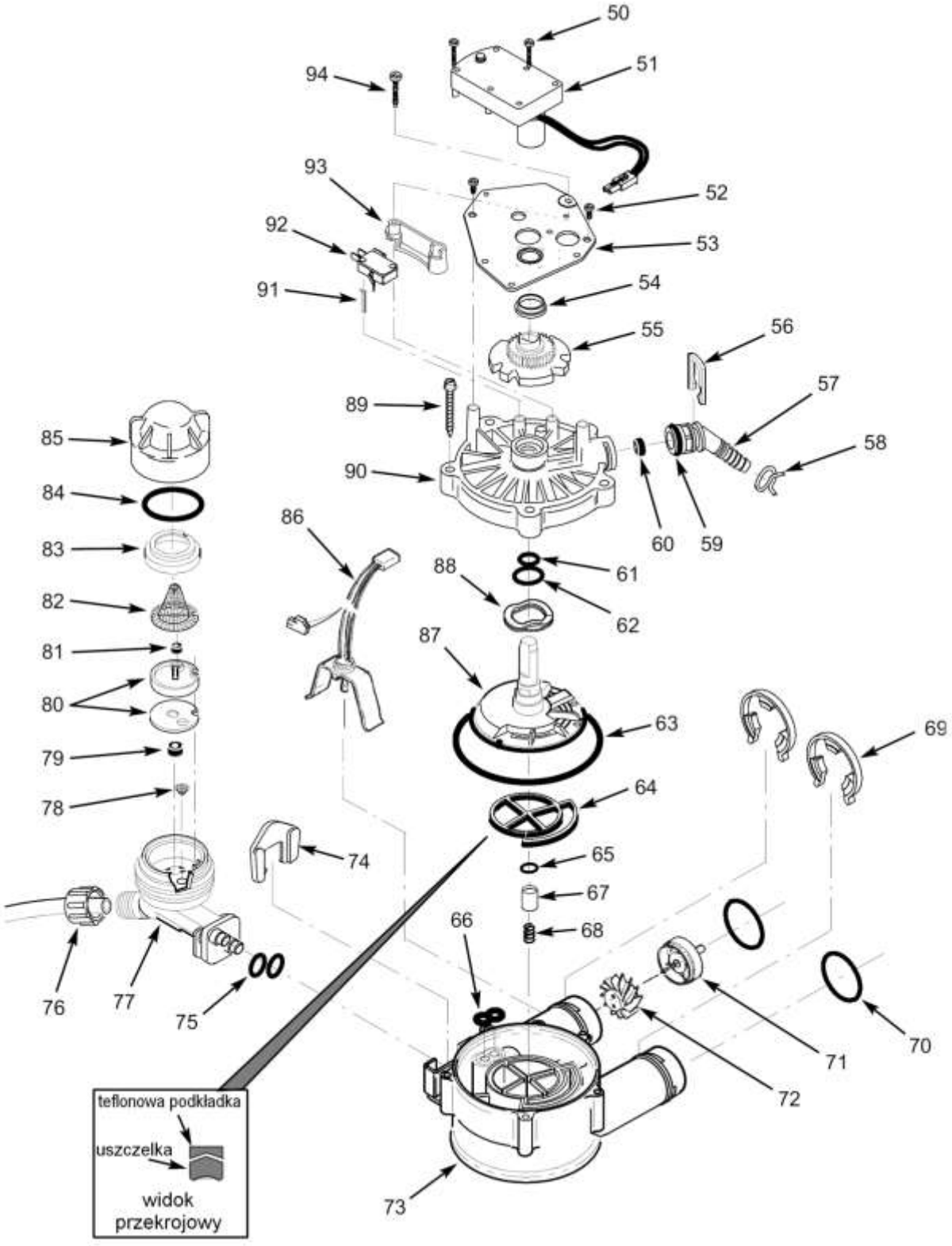
1. Components drawings



head assembly components – see separate page

ITEM	CATALOGUE NUMBER	DESCRIPTION
-	7112963	Distributor O-Ring Kit (head + tank; includes 1-3)
1	*	O-Ring, 73.0 x 82.6 mm
2	*	O-Ring, 20.6 x 27.0 mm
3	*	O-Ring, 69.9 x 76.2 mm
4	7077870	Top distributor
5	7105047	Bottom distributor
6	7265025	Cleansing Screen
-	7331177	Tank Neck Clamp Kit (includes 7 and 8)
7	*	Clamp section
8	*	Clamp retainer
9	7114787	Resin tank 8” x 35” Model 20-N
	7264922	Resin tank 9” x 35” Model 30-N
10	*	Ion exchange resin
11	7331143	Brine tank
12	7334183	Rim, Model 20-N
	7333593	Rim, Model 30-N
13	7330985	Top cover - model 20-N (without control panel)
	7333585	Top cover - model 30-N (without control panel)
14	7333975	Repl. Electronic Control Board (PWA) – model 20-N
	7333569	Repl. Electronic Control Board (PWA) – model 30-N
15	7330993	Brine tank cover

ITEM	CATALOGUE NUMBER	DESCRIPTION
16	7334303	Repl. Electronic Control Board (PWA), Model 20-N
	7334311	Repl. Electronic Control Board (PWA), including tank light, Model 30-N
17	T4BEWTRE22024VB	Transformer
18	7155115	Brinewell cover
19	7214375	Brinewell
-	7332204	Brinewell Mounting Hardware Kit (includes 20-23)
20	*	Wing nut
21	*	O-Ring, 6.4 x 12.7 mm
22	*	Washer
23	*	Bolt 1/4-20 x 15.9 mm
-	7331258	Overflow Hose Adaptor Kit (includes 24 - 26)
24	*	Elbow
25	*	Seal
26	*	Clamp
27	7310202	Brine valve
28	7327568	Float, Stem & Guide Assembly
29	7290509	Drain (washings) tube
30	T4BEWBPP025MIXB	By - pass valve with water hardness control
-		
-		
-	7109041	Kit ASM 7 (24-26, 2x69, 2x70)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uszczelka
widok
przekrojowy
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ITEM	CATALOGUE NUMBER	DESCRIPTION
50	7224087	Bolt #6 – 20 x 7/8 in.
51	7286039	Motor (includes no. 50)
52	0900857	Bolt #6 – 20 x 3/8 in.
53	7231385	Motor plate
54	0503288	Bearing
55	7284964	Cam and gear
-	7331185	Drain Hose Adaptor Kit (includes 24 - 26)
56	7142942	Washings hose clip
57	7024160	Washings elbow
58	0900431	Washings hose clip
59	7170327	O-ring
60	0503228	Flow plug
-	7129716	Seal Kit, head (includes 61-66)
61	*	O-Ring, 11.1 x 15.9 mm
62	*	O-Ring, 19.1 x 23.8 mm
63	*	O-Ring, 85.7 x 92.1 mm
64	*	Rotor seal
65	*	O-Ring, 9.5 x 14.3 mm
66	*	Retainer (nozzle and Venturi)
67	7092642	Plug, Drain Seal
68	7129889	Spring
69	7116713	Clip
70	7170288	O-Ring, 23.8 x 30.2 mm
-	7113040	Turbine & Support Assembly (includes 71 and 72)
71	*	Turbine support
72	*	Turbine

ITEM	CATALOGUE NUMBER	DESCRIPTION
73	7082053	Valve Body
74	7081201	Retainer, Nozzle & Venturi
75	*	O-Ring, 6.4 x 9.5 mm
76	1202600	Nut
77	7081104	Housing, Nozzle & Venturi
78	7095030	Cone screen
79	1148800	Flow plug
80	7187772	Gasket kit - nozzle and Venturi
	*	Only housing and Venturi
81	0521829	Flow plug
82	*	Cone screen
83	*	Screen support
84	7170262	O-Ring, 28.6 x 34.9 mm
85	*	Venturi float
86	7309803	Wire Harness, Sensor
87	7199232	Disk
88	7082087	Spring
89	7074123	Bolt
-	7331266	Head cover - set (includes 90 - 91)
90	7085263	Head cover
91	*	Micro switch rest pin
92	7030713	Micro switch
93	7325702	Micro switch spacer
94	7070412	Bolt
*	7187065	Nozzle & Venturi Assembly (includes 77 - 85)
*	7290957	Venturi repair kit (2x75, 78, 80, 84)
*	7238921	¾" head assembly kit

Impact of washings from water softener regeneration to municipal sewage systems and home sewage treatment plants.

The regeneration process of the AQUAHOME ion exchange water softeners generates washings in the volume equivalent to 5% of the total volume of softened water, that are discharged to the sewage network. Regeneration washings are tap water containing elevated levels of chlorides in the range between 100 and 155 mgCl/dm^3.

Discharge of washings containing the above referred amount of chlorides to municipal sewage systems is in full compliance with regulations (the norm is set at 1000 mgCl/dm^3).

Discharge of regeneration washings to sewage chambers, cesspools or small biological home sewage treatment plants should be executed with certain precautions.

In case of home sewage treatment plants, biological sludge is a breeding ground for bacteria, which decompose the sediments into the liquid state. Naturally, but also due to the content of chlorines in regeneration washings, the amount of bacteria may be insufficient. This may adversely impact the efficiency of sewage treatment process. In order to prevent biodegradation processes it is recommended to use agents that contain a wide range of bacteria. Such agents are an effective way to aid the sewage treatment process.

Recommended bio preparations, that completed tests with positive results, include the following:

A. BACTI PLUS and ALPHA SEPTER
manufactured by GAMLEN INDUSTRIES S.A. of France and imported by Dakis Sp. z o.o. 42-693 Krupski Młyn, Zawadzkiego street number 9.
Enquiries on sales and prices– Dakis company; phone no. 032 2848540; e-mail: biotimex@com.pl

B. BIOLATRIN
manufactured by HANTPOL S.j.; 02-676 Warsaw, Postępu street number13; phone no. 022 8522582; 8521406;
e-mail: info@hantpol.pl

C. MICROBEC
Manufacturer: BROS, 61-619 Poznań, Karpia street number 24; phone no. 061 8262512; e-mail: biuro@bros.pl; www.bros.pl

Important notice:
Bio preparations can be purchased at manufacturer, distributors or at agricultural goods departments of shopping mall, such as CASTORAMA, LEROY MERLIN, etc. as well as at local shops with agricultural supplies.

Conditions of Technical Inspection of operation of pressure devices, fitted at ion exchange water softener of AQUAHOME type.

Pursuant to the Technical Inspection Act of December, 21st, 2000 (Journal of Laws no. 122, item 1321) as well as the Regulation of the Minister of Economy, Labour and Social Policy of July, 9th, 2003 (Journal of Laws no. 135, item 1269) with amendments art. 15 par. 45 point 1 of the Act of April, 20th, 2004 on amendments and repeal of certain laws due to obtaining membership in the European Union by the Republic of Poland (Journal of Laws no. 96 item 959), it is authoritatively stated hereby that pressure devices, fitted at ion exchange water softener of **AQUAHOME** type are subject to SIMPLIFIED TECHNICAL INSPECTION [Item 36 (TD [Technical Inspection ≤ +100°C i V ≤ 500 dm^3)], AND THEREFORE **SHALL NOT REQUIRE THE DECISION OF THE OFFICE OF TECHNICAL INSPECTION OF RELEASING THOSE DEVICES FOR SERVICE (OPERATION)**.

It is also declared hereby that pressure devices of the ion exchange water softeners, referred to above, fully conform with technical requirements of the DIRECTIVES OF THE EUROPEAN UNION: 97/23 EC and 89/336/EEC.

It is also confirmed that ECOWATER SYSTEMS, member of the Water Quality Association and manufacturer of the water softeners referred to above, has been awarded with ISO 9001 as well as valid hygienic certification authorising the use of water softeners for drinking water (issued by the NSF and PZH [National Institute of Hygiene] - CERTIFICATE OF HYGIENE HK/W/0526/01 / 2010).