Technical specifications for **BWT AQA VISEO** code **P0011031GB révision 6** du 02/01/2014

ORIGINE FRANCE® GARANTIE

BVCert. 6012067

# Automatic water softeners

# AQA VISEO

**VERY IMPORTANT: Read this manual carefully before connecting the unit to the mains supply, filling it with water or operating it. Failure to comply with these instructions will invalidate the BWT warranty.**

afaq ISO 9001 Qualité AFNOR CERTIFICATION

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CE

For You and Planet Blue.

BWT BEST WATER TECHNOLOGY

For over 90 years, **BWT PERMO**, leader on the French market for point-of-use water treatment, has been giving the general public the benefit of its experience and know-how, gained through designing technical solutions, equipment and products for the most demanding industrial companies (pharmaceuticals, bio-technological, cosmetics, agro-food, etc).

**BWT PERMO**, a French designer and manufacturer, offers a complete range of products to meet water treatment problems in industry and the public services

BVCert. 6012067

# Water is our business!

## Water treatment is our speciality...

**BWT PERMO : 500 staff at your service in France.**

**The head office of BWT PERMO is close to Paris in Saint Denis, and comprises several divisions: the production site, design office, industrial projects engineering, and Research and Development, specialising in the design and standardisation of industrial equipment.**

Point-of-use water treatment: water softening and antiscaling to preserve your systems and processes from scaling; filtration to eliminate the particles and micro-organism responsible for many problems.

Analysis and product injection systems to manage and secure your technical equipment; a wide range of domestic and industrial osmosis units enabling the demineralisation of raw water to produce high quality water; wide choice of chemicals for the protection and treatment of all water quality problems.

**BWT PERMO** is the chosen partner of many design offices, installers and industrial corporations. This confidence, acquired from many years experience, is founded not only on the quality of our products, but also on a highly-effective organisation dedicated to our customers, with a sales department and after-sales-service comprising over 90 technicians in 13 branches throughout France.

# INDEX

Dear Customer,

Thank you for showing your confidence in **BWT PERMO** by choosing an **AQA VISEO** water softener.

We have made every effort to ensure that it gives you complete satisfaction.

This is a technical device: read this manual carefully before installing or operating it, and prior to any work on the unit. Comply with the instructions and operating constraints. The owner of the unit should ensure that any persons having access to it are familiar with this manual and have understood it.

The unit should be installed in a clean, dry location with adequate ventilation and which is inaccessible to unauthorised persons.

The unit must be protected from bad weather, sources of heat and chemical vapours.

The electrical junction boxes should only be opened by qualified persons familiar with the danger of electric current - **RISK OF ELECTROCUTION**.

The operation and maintenance of the unit should be undertaken by a duly qualified person who has the required knowledge for this kind of operation.

The owner of the unit should ensure that persons working on it have the appropriate tools and equipment.

Chemicals may be necessary for certain servicing operations. The user must be fully aware of any risks involved in the use of these chemicals and should employ the appropriate PPE or CPE (personal or collective protective equipment).

The unit must not be modified without the manufacturer's prior written approval.

The unit's surfaces must not be cleaned with alcohol or an alcohol-based product, or with any product containing plastic solvents.

Our after-sales service department is at your disposal for any technical assistance you may require.

The CE label on our **AQA VISEO** water softeners certifies their compliance with the requirements of:

- Directive 2004/108/CEE of 15/12/2004 regarding electromagnetic compatibility.

- Directive 2006/95/CEE of 12/12/2006 regarding electrical equipment intended for use within certain voltage limits.

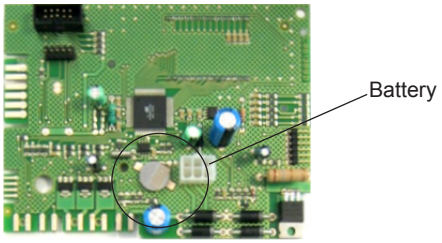
**AQA VISEO** water softeners are subject to Directive 97/23/CEE dated 29/05/97 regarding pressurised equipment. They fulfil the requirements of article 3 point 3 (design and manufacture complying with current professional practice) but do not come into categories I to IV and, consequently, are not covered by CE marking for pressure equipment.

**ENVIRONMENTAL INFORMATION**

**French decree n° 2009-1139 dated 22nd September 2009 regarding the sale of batteries and the disposal of used batteries, modifying the French Environment Code.**

This appliance contains a 3-volt lithium battery, reference CR 1220. The characteristics of this battery are in compliance with the decree. If it is necessary to replace the battery an identical type of battery must be fitted.

The battery is soldered to the printed circuit board (PCB) at the location shown on the diagram opposite.




To replace it:

- disconnect the unit from the mains supply.
- open the electrical junction box and remove the PCB from its mounting.
- unsolder the old battery, taking care to avoid heating the surrounding components, and dispose of it in compliance with current regulations (WEEE).
- Install the new battery, taking care to respect its polarity.
- solder the new battery in place without heating the surrounding components.

**IMPORTANT:**

Hydraulic connections must comply with good professional practice and the standards applying where the equipment is installed. It is especially important to fit efficient water-hammer arresters if the water input and output piping is fitted with devices likely to to generate water-hammer effects (for example, solenoid valves).

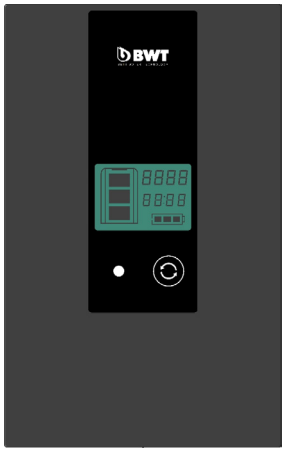
**IMPORTANT:**

Moreover, like any electrical device, the control box electronics are subject to electrical or magnetic interference. The control box is fitted with a series of filters to eliminate the most common parasites. However, when the unit is close to power switches, transformers or any other source of interference, shielded cable should be used for connections, and a suitable interference suppressor fitted.

**Radio frequency:**

The radio frequency system used for the transfer of data between the unit and the remote control box comprises a miniature stabilised transmitter based on ceramic substrate technology, in compliance with ETSI EN 300-220.

French regulations regarding permitted frequencies for low power / short range devices come within the framework of the European recommendation ERC/REC 70-03 (use of short-range devices - SRD), and the reference texts are included in Appendix A7 of the "National frequency band allocation table" issued by the "Agence Nationale des Fréquences" (French National Frequency Agency).




The range of the system can attain several dozen metres. This depends on the power of the transmission, the size of the aerial and the presence of any obstacles such as walls, equipment etc.

The power of the transmisison (effective radiated power - ERP) is limited to 10 mW in the 433 MHz band (for a 10 % utilisation factor).

# SAFETY

The descriptions are written in light text. The highlighted zones **WARNING, ATTENTION and REMARKS** have the following meaning:

**REMARKS**

Indicates a special feature or important information

**WARNING**

Risk related to the presence of electrical current

**ATTENTION**

Risk of incorrect operation

**WARNING**

Risk of injury or accident

**REMARKS**

Recyclable item

**IMPORTANT:**

Please take special note of the following points:

| RISKS | RECOMMENDATIONS |
|---|---|
| **ELECTRICAL RISKS:**<br><br>This device is electrically powered | Before any servicing or other work on the device, disconnect it from the mains electricity supply and, if necessary, isolate it electrically. |
| **MECHANICAL RISKS:**<br><br>This device may have moving parts (e.g. a centrifugal pump) | Stop the device and, if necessary, isolate it electrically before any work on it or servicing. Do not remove the protective covers from the device when it is operating. Wear the appropriate PPE (personal protection equipment). |

**ATTENTION:**

For your safety and that of the appliance, take care to comply with the elementary operating precautions and the following instructions:

- Check that the equipment and its packaging have not been damaged during transport.
- If any damage is visible, do not use the appliance and contact your dealer immediately.

**WARNING:**

For most electrical appliances, it is advisable to make the connection to a dedicated circuit, meaning a single socket that only supplies the appliance in question and to which no other socket or branch circuit is added.

**KEEP THESE INSTRUCTIONS IN A SAFE PLACE**

Disposing of your old appliance

1. This symbol, representing a crossed wheeled dustbin, means that the product is covered by European directive 2002/96/EC.

2. The electrical and electronic components must be disposed of separately in containers provided for this.

3. Disposal in accordance with these instructions will help to reduce negative consequences and any risks for the environment and human health.

## INSTALLATION INSTRUCTIONS

**ATTENTION:**

Any electrical work necessary for the installation of this appliance must be done by a qualified electrician or by competent persons. Any plumbing work necessary for the installation of this appliance must be done by a qualified plumber or by competent persons.

## WIRING

**ATTENTION:**

To ensure personal safety, remove the fuse from the electrical circuit or disconnect the circuit breaker before connecting the appliance. Ensure that the electrical socket is not live.

Do not use an extension cord or socket adapter with this appliance. Electrical connections and earth connections must comply with national, regional and/or local electrical standards.

This appliance must be supplied with power at the voltage and frequency specified in this manual. It must be connected to a correctly earthed individual circuit, protected by a circuit breaker or fuse appropriate for the appliance installed.

The hydraulic connections must comply with good professional practice and standards applying where the equipment is installed.

Moreover, like any electrical equipment, the appliance electronics are subject to electrical or magnetic interference. If the appliance is close to power switches, transformers or any other source of interference, shielded cable should be used for connections, and an interference suppressor may be fitted.

# GLOSSARY

**Softening:** Treatment for the elimination of water hardness (due to the presence of alkaline earth salts, carbonates, sulphates and calcium and magnesium chlorides). Soft water does not create scale and foams easily with soap. Softening is done by passing water through a cation exchanger (which exchanges calcium ions with sodium ions) regenerated with sodium chloride.

**Cation:** Positively charged ion.

**Cycle:** volume of water produced by an ion exchanger between two regenerations.

**French degree:** Unit of concentration of chemical substances in an aqueous solution. A French degree (1°f) is equivalent to 0.2 milli-equivalents per litre or 10mg/l of CACO3

**Hydrotimetric concentration (TH - total hardness):** Unit of water hardness expressed in French degrees.

**Hardness (of water):** Calcium and magnesium content, preventing the formation of foam with soap and allowing deposits of insoluble and scaling salts (fur or scale).

**Soft water:** Water defined as being the opposite of either salt water (when it is water with low dissolved mineral content), or hard water (when it is water with low calcium and magnesium content).

**Furring:** Formation on the walls of containers or pipes of a layer of fur (a generally hard and adherent deposit, sometime porous) essentially comprising salts (calcium carbonates, sulphates, silicates, etc.) from hard or calcareous water.

**Milli-equivalent per litre:** (meq/l) Unit of concentration of dissolved matter in an aqueous solution: 1 meq/l corresponds to the concentration of a normal solution diluted one thousand times. 1 meq/l is equivalent to 5 French degrees.

**Regeneration:** Operation performed on a saturated ion exchange resin to return it to its initial condition. Regeneration consists in percolating a high purity salt solution through the resin.

**Resin:** A partly incorrect term designating the granular materials used in ion exchange (cation exchangers, anion exchangers).

**Salt** Substance resulting from the action of an acid on a base. The following salts are most frequently used for water treatment: sodium chloride, sodium silicate, ferric chloride and aluminium sulphate. The salt used for regenerating water softeners is very high purity sodium chloride.

**Fur:** A generally hard and adherent deposit, sometimes porous, essentially comprising salts (calcium carbonates, sulphates, silicates, etc.) from hard or calcareous water.

# THE ION EXCHANGE PRINCIPLE

Softening eliminates water TH (due to the presence of alkaline earth salts: carbonates, sulphates and calcium and magnesium chlorides).

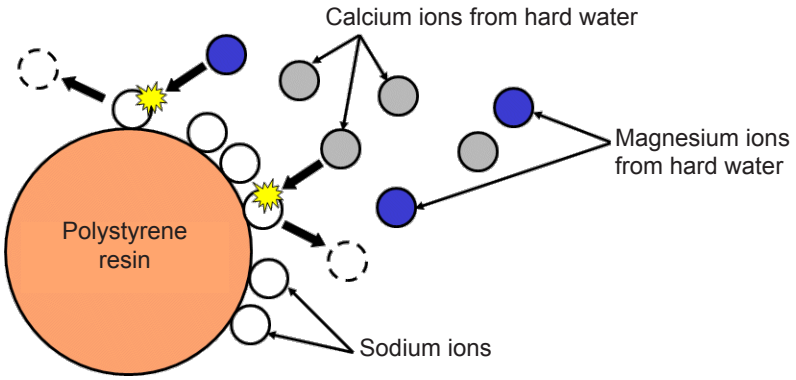
The softener is an appliance that uses an ion exchange resin and the principle consists of exchanging the calcium and magnesium ions, that constitute the hardness of the water, for sodium ions bound to the softener resin.

When all the sodium ions have been exchanged, the resin is said to be saturated and must be re-generated. The resin is then regenerated using brine (saturated solution of NaCl or sodium chloride).

Sodium ions are again positioned on the resins, while the calcium and magnesium ions are discharged to the drain in the form of chlorides. A series of rinses removes the brine.

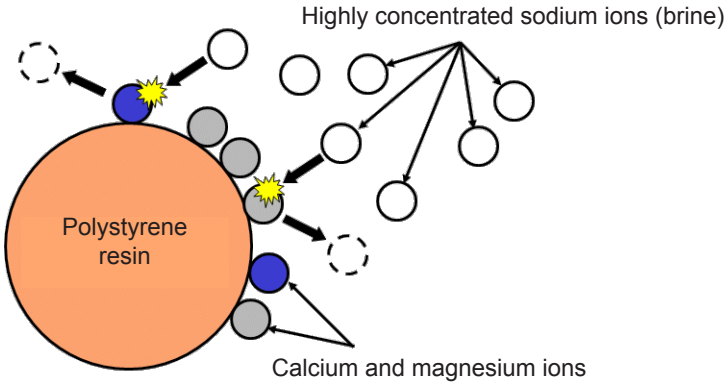
**1) – Ion exchange**

The calcium and magnesium ions replace the sodium ions on the resin. These are released into the water, which becomes soft.




**2) - Regeneration**

The sodium ions regain their position on the resin. The expelled calcium and magnesium ions return to the water, which is discharged to the drain.



# OVERVIEW

The **AQA VISEO** water softener is a compact appliance comprising a salt tank surrounding a bottle containing the ion exchange resin. It operates in anticipated volumetric mode with the bio-system function (production of gaseous chlorine during the brining phase for sterilisation of the ion exchange resin).

When in anticipated mode, the appliance calculates the quantity of water passing through the softener and the average consumption. The turbine installed at the softener output is fitted with a flow sensor to transmit information to the electronic control unit.

A remote console with a display can be mounted several metres away, and enables the addition of salt to the tank to be controlled. It is cordless and operates by radio frequency. It may be either wall-mounted or placed on a flat surface.

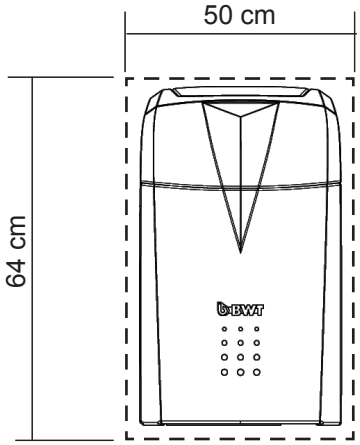
The display shows the previous day's water consumption, the availability of regenerating salt, the current time, the future salt filling requirement (one month's autonomy) and a warning light for low salt level.

# PACKING LIST

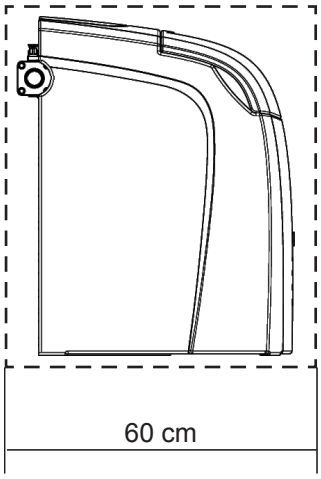
The **AQA VISEO** softener and its accessories are delivered in a strapped carton.

It contains:

- this assembly and maintenance manual.
- the salt tank with its filling hatch and the bottle containing the ion exchanging resin, together with the hydraulic and electronic control unit.
- the tubes for the brine connection, the regeneration water outlet to the drains and the connection for the salt tank overflow.
- the Permosiphon,
- the remote control unit,
- the canister filter and its filter element.




Weight of package = 30 kg



**Not supplied:**

The connection hoses for the softener unit input/output and regeneration water from the siphon to the drain are not supplied by **BWT PERMO**.

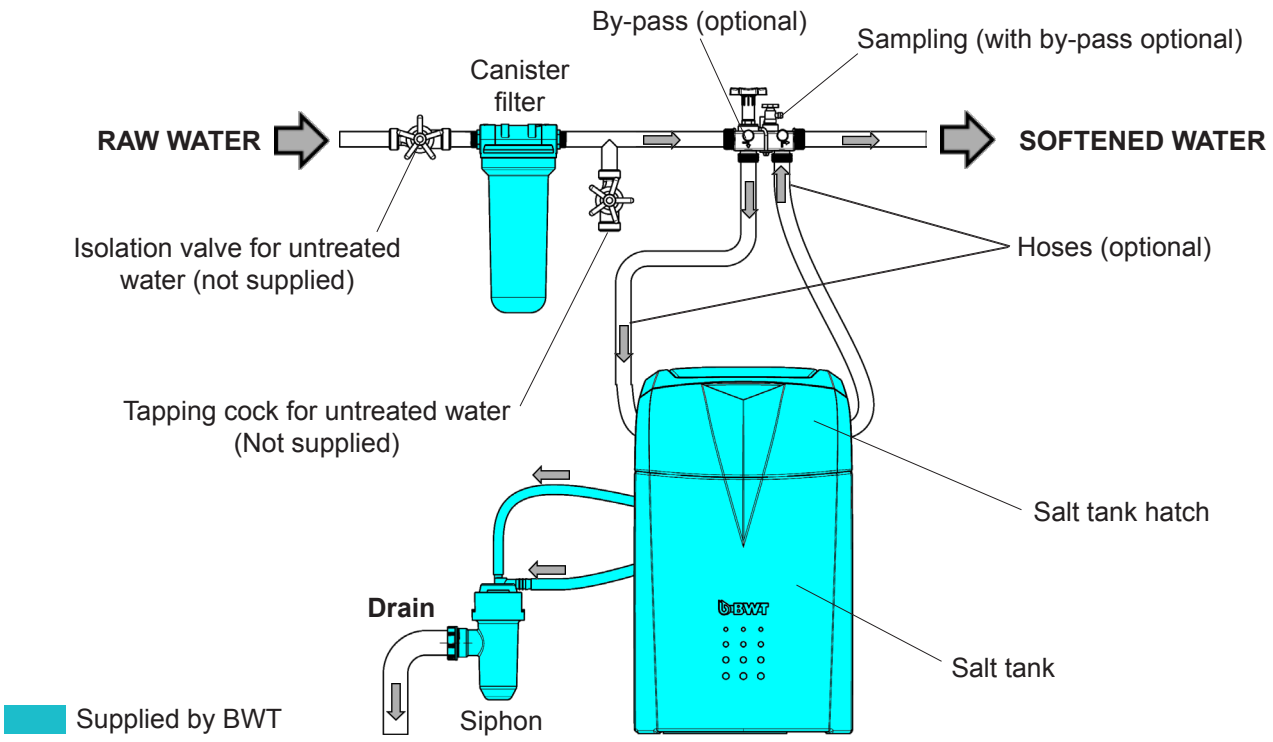
**IMPORTANT:**

To limit stress to your appliance and protect it against water hammer effects, we strongly recommend the use of flexible hoses for connections.

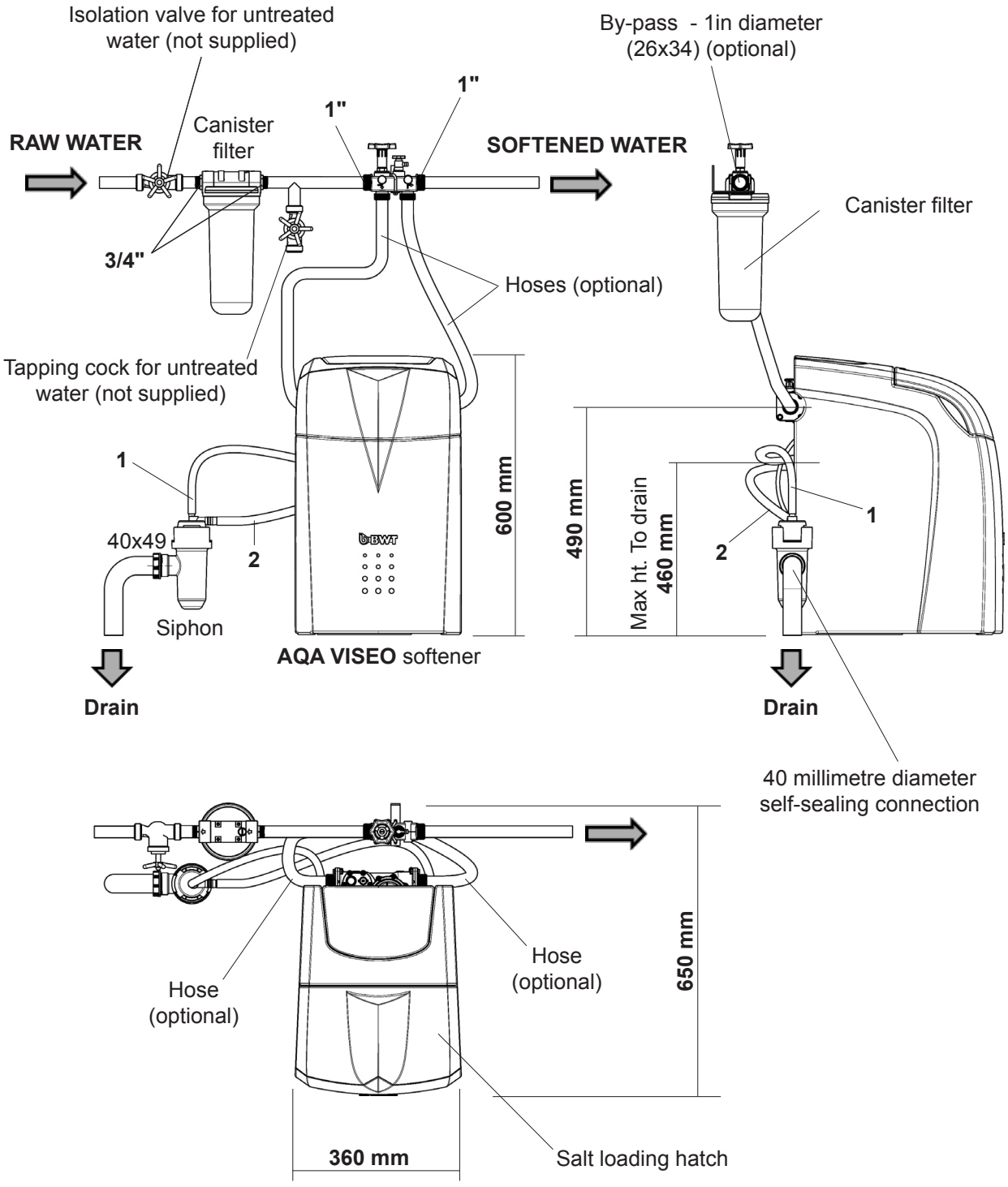
# SPECIFICATIONS

| | |
|---|---|
| Volume of resin: | 5.4 litres |
| Exchange capacity: | 28 m3 |
| Salt consumption per regeneration: | 0.48 kg (*) |
| Salt tank autonomy: | 55 to 60 regenerations (*) |
| First salt load: | 30 kg of tablet salt |
| Dimensions: | (see dimensions) |
| Ground load in operating condition: | 55 kg |
| Supply voltage: | 230 volts +10% -15% 50/60 Hz |
| Electricity consumption: | Service 6VA - Regeneration 25VA |
| Max / min pressure: | 7 bar in static mode / 2.5 bar in dynamic mode |
| Minimum flow rate: | 0.5 m3/hr |
| Water/ ambient temperature: | min. 1°C - Max.35°C / 1°C min. - 40°C Max. |

(*) - This figure may change depending on the proportional regeneration mode.



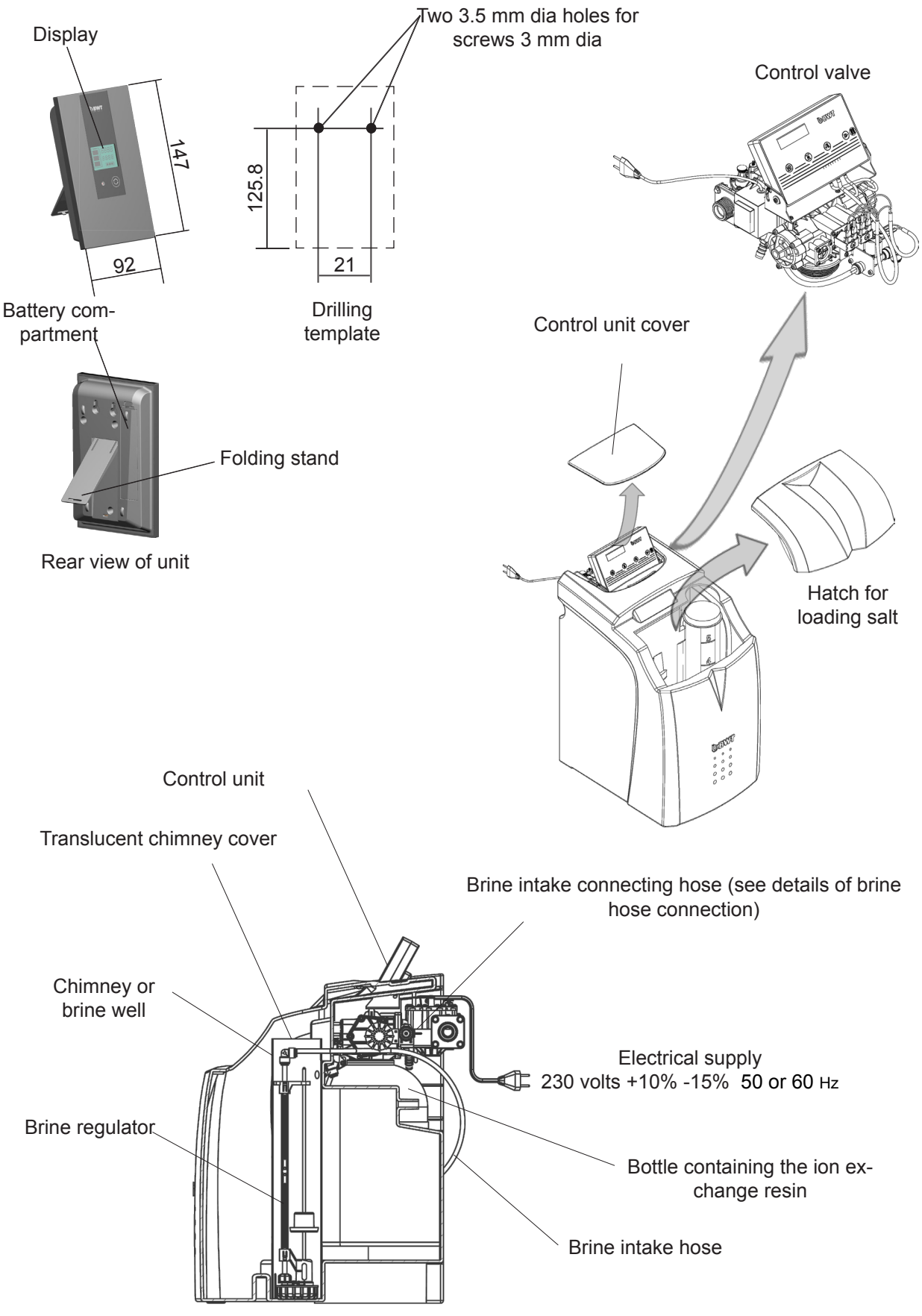
# DIMENSIONS / CONNECTIONS




**1** = drain hose for regeneration water

**2** = salt tank overflow hose (gravity flow required)

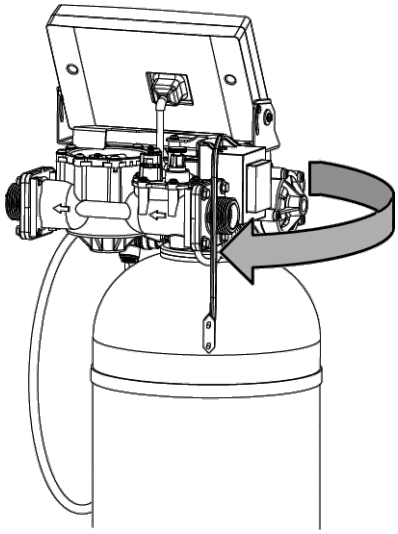
**Remote data display**



# INSTALLATION

**Note:**

Check that the valve is screwed tightly on the bottle before connecting the appliance to the water supply. To tighten, turn the valve clockwise. Tighten by hand, without using tools or a lever.



Place the softener unit and filter close to the pipes to which it must be connected (water supply, soft water distribution and drain).

Check the pressure of the water supply. The appliance operates at a pressure between 2.5 bars in dynamic and 7 bars in static (fit a pressure reducer upstream if the pressure is greater than 4 bars).

Provide a supply of unsoftened water for watering the garden, cleaning your car or the sink (see connection diagram).

An electrical socket (single phase 230 volts +/- 10% - 50/60Hz) must be installed less than 1.2 metres from the softener for the permanent electrical supply to the control unit. Earthing is not necessary since the appliance is double insulated. The maximum power consumption of the softener is 25 VA.

**Important:**

For safety reasons the electrical supply cable to the appliance cannot be replaced. If it is damaged, the complete transformer must be discarded and replaced by the transformer sub-assembly, available from your agency or dealer.

Choose a dry room, protected from frost, where there is no danger of the temperature exceeding a maximum of 40°C . The floor must be flat and able to support the operating loads given in the Specifications section.

The height of the salt tank overflow pipe above the support surface must not exceed 460 mm (see "Dimensions/Connections").

**1) - Canister filter**

This must be positioned upstream of the softener unit (see connection diagram).

Respect the water flow direction (arrow on the softener head, showing fluid flow direction). The canister has a specific direction. Follow the instructions below to ensure that it is correctly fitted.

Place the canister vertically in the tank. Place the tank and its sealing gasket below the head of the filter and tighten.

Do not use tools.

After positioning the softener unit, install the angle bracket (supplied with the filter) vertically on a wall. Pay attention to the length of the hose between the filter and the softener water input. It must not be twisted or cracked (pay attention to the curve radius of the hoses).

Use suitable fixings for the angle bracket, according to the nature of the support. Then fix the filter head on the bracket using the appropriate screws, without tightening too much, to avoid breaking the plastic head. Check that the elements are firmly mounted.

Then mount the bracket bypass Multiblock (see instructions specific to the hardware). respect the direction of flow of fluid indicated by the arrows on the body of the bypass. Attention to the length hose between the bypass and Multiblock the water supply to the softener. There should be no constraint or breakage (note the bend radius of hose).

**2) - AQA VISEO Water Softener**

Place the softener unit on its permanent location (see "Dimensions / Connections").

Check that there is easy access to the control unit for programming and maintenance. Leave enough room for access to the loading hatch for regular additions of regenerating salt.

The softener head has four orifices for connections:

**Filtered mains water input (1):**

- 1" threaded end fitting, located on the left at the rear.

**Softened water outlet (2):**

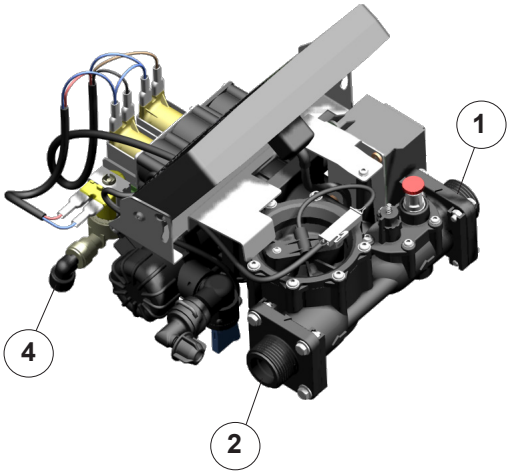
- 1" threaded end fitting, located on the right at the rear.

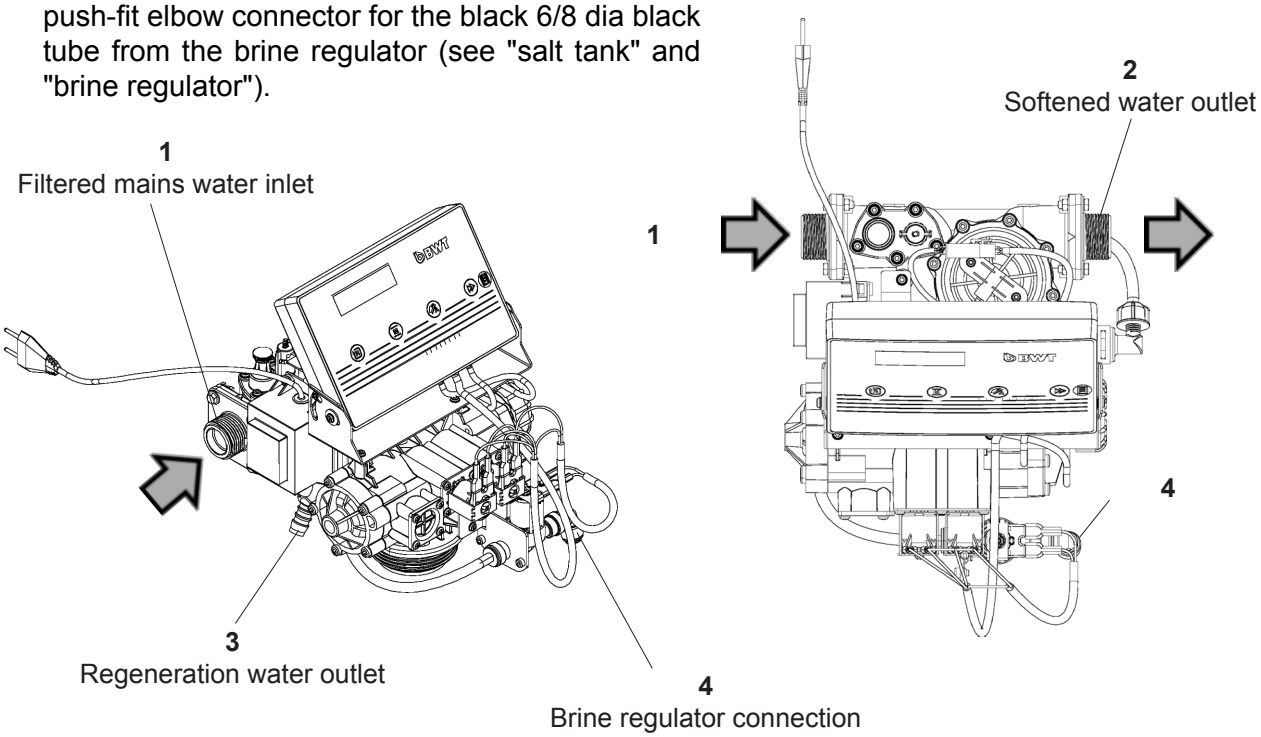
**Evacuation of regeneration water (3):**

- 16 mm dia grooved plastic elbow end fitting (left-angled).

**Brine regulator connection (4):**

- A solenoid valve on the softener unit valve, with a push-fit elbow connector for the black 6/8 dia black tube from the brine regulator (see "salt tank" and "brine regulator").



### 3) - AQA VISEO Softener Unit Salt Tank

The **AQA VISEO** water softener has special salt tank which is an integral part of the unit body.

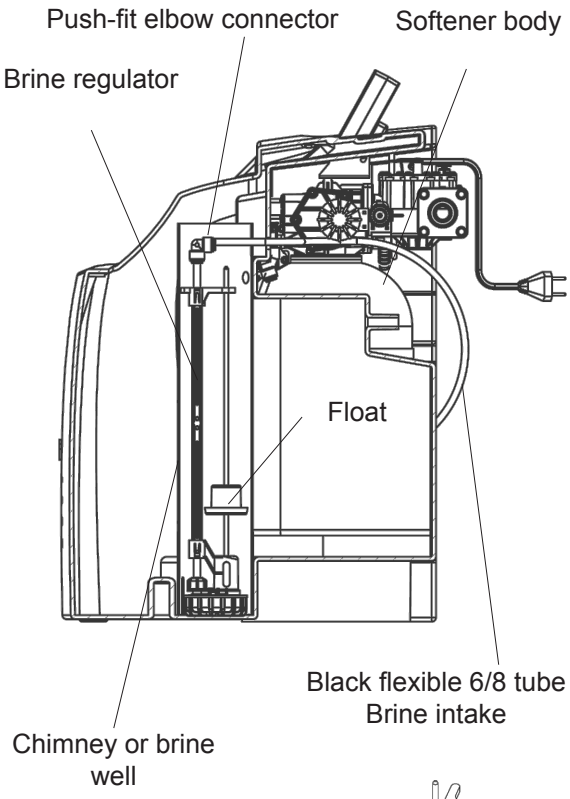
3.1 - Connect the softener to the brine regulator with the 6/8 diameter black hose. Check that the ends of the black hose are cut cleanly at right angles. Push one of the ends of the 6/8 black hose into the push-fit elbow connector. Make a loop, as shown opposite, then connect the other end of the hose to the solenoid valve elbow fitting (4).

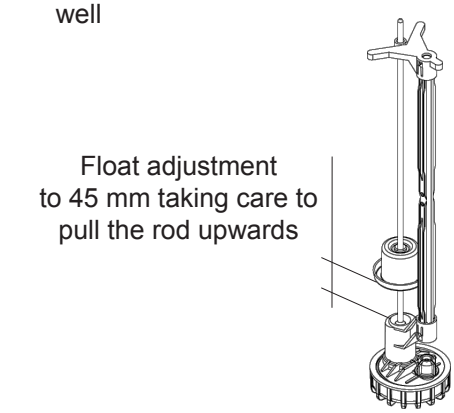
3.2 - Set the brine regulator float in the brine chimney or well to 45 mm (see drawing opposite), taking care to pull the float guide rod upwards.

3.3/ After adjusting the float, replace the brine regulator at the bottom of the chimney or brine well. Finally, close the brine well with the translucent cover, taking care not to bend the 6/8 diameter black hose.

When starting the unit for the first time, check that the chimney cover is in place before adding the salt pellets to the tank.

When preparing the brine, a minimum of one hour is needed to dilute the salt correctly and obtain the brine required.



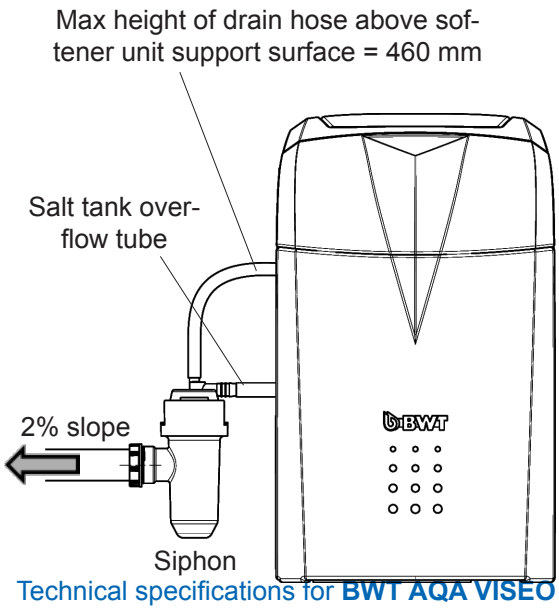

### 4) - Drain connection

**Important:**

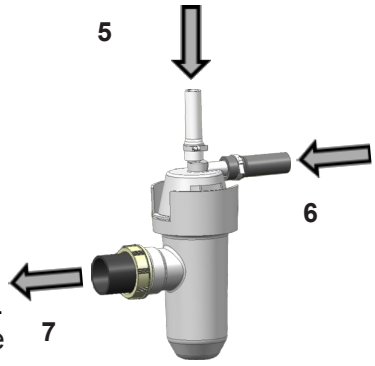
The drain connection must be made with a regulatory pressure break fitting between the regeneration water outlet hose and the drainpipe. Use the siphon supplied with the appliance to avoid any risk of pollution of the "drinking water" circuit from the sewage system.

Those used for connecting the regeneration water must be undamaged and without cracks.

Use a rigid 40 mm PVC pipe between the drains and the siphon, with a slope of at least 2% for gravity flow.



Connect the 12/16 diameter transparent pipe, (5) (length supplied 1.5 metre) to the upper grooved orifice, to evacuate the regeneration water, and fix the 'Serflex' collars to both ends. Connect the 15/21 dia hose between the side orifice (6) and the salt tank overflow (see connection diagram). Fix a PVC tube from the self-locking 40 mm connector (7) to the drain (minimum diameter 40 mm).




**Important:**

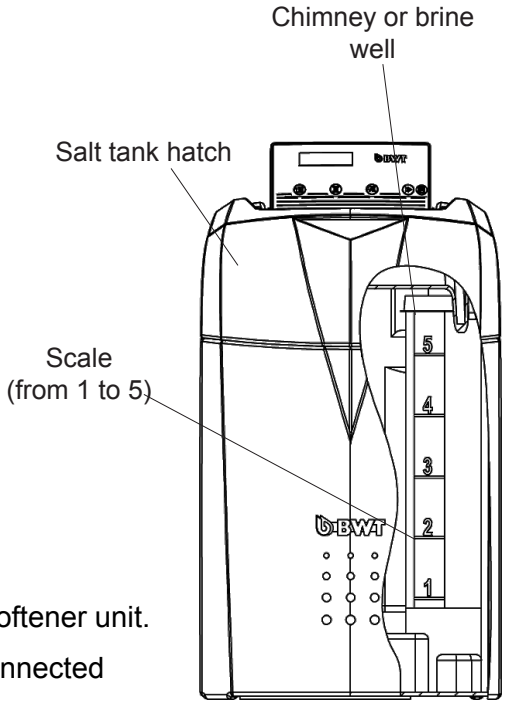
The salt tank overflow must be under gravity drainage. Remember that the maximum height of the drain hose must not exceed 460 mm above the support surface of the softener unit.

### 8) - Loading with salt

Remove the hatch above the salt tank, checking that the translucent cover which closes the brine well is in place, and that the black 6/8 hose has no kinks in it. If the hose is connected in compliance with the instructions above, with a loop, it must not be situated in the path of the salt when being filled, but if so, renew the connection correctly, as described in "Installation", paragraph 3.

Pour the salt gently into the tank, using water softener salt tablets.

Note the level of the salt on the scale inside the salt tank (1 to 5).




### 9) - Finalising the installation

Carry out the final checks before introducing water into the softener unit.

With the appliance connected hydraulically, the hoses are connected to the by-pass (if fitted) and to the water inlet/outlet.

The by-pass is fitted as shown in the installation drawing, with the control wheel turned fully clockwise (softener unit by-pass position).

The salt tank overflow pipe and the regeneration water pipe must be correctly connected to the siphon, without splits or cracks.

The salt tank overflow pipe and the regeneration water pipe must be correctly connected to the siphon, without splits or cracks.

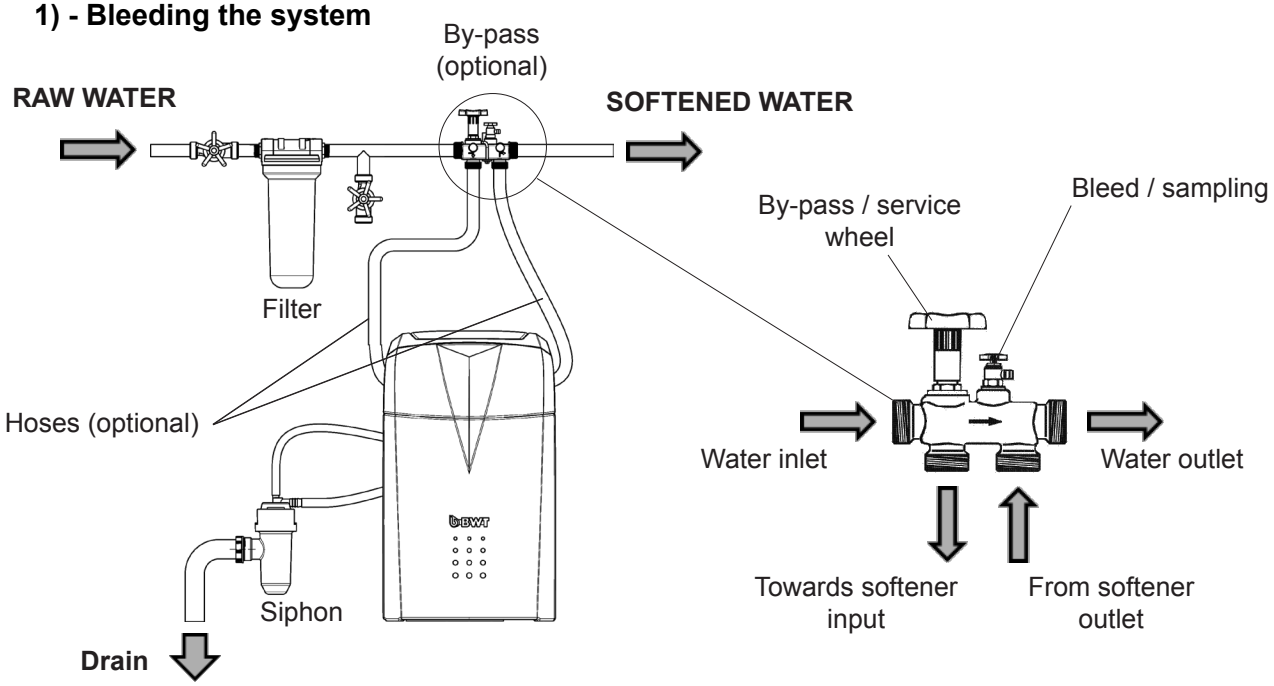
Check that the filter element is in place in the filter bowl. If not, loosen the bowl and remove. Fit the new filter element correctly in the filter bowl.

Place the bowl with its filter element and O-ring under the filter head, and tighten moderately - excessive force will break the bol. If a leak appears when the unit is being filled with water, tighten the bolt further (a special wrench is available for this operation as an option).

# CONNECTION TO THE MAINS WATER SUPPLY

Proceed as follows to connect the softener unit to the mains water supply:

**1) - Bleeding the system**




Open the main water inlet gradually, then slowly turn the by-pass wheel fully anti-clockwise. Raw water is now directed to the softener unit inlet.

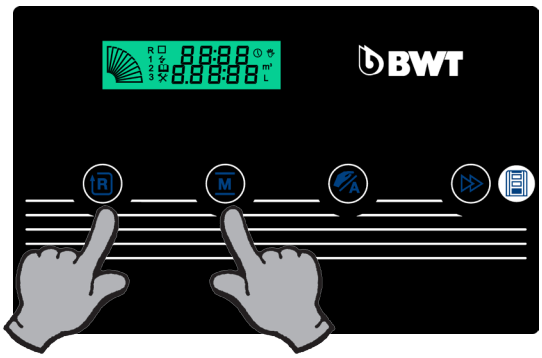
Then open the bleeder screw situated above the filter head, and wait for the water to flow. Then close the bleeder screw.

Connect the control unit to the 230 v 50 Hz mains supply.

The appliance will start a regeneration cycle automatically.

Stop the regeneration by pressing simultaneously on keys 1 and 2 on the keyboard then releasing them.

The regeneration cycle stops, emitting a low hum for about 30 seconds.



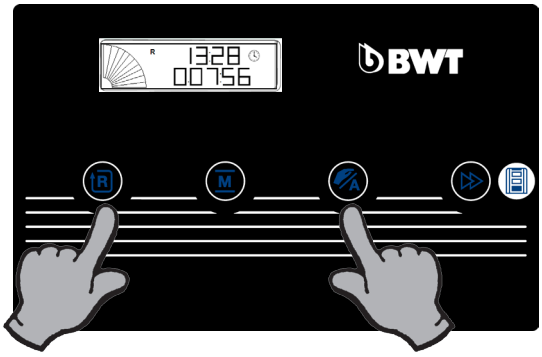

**2) - Bleeding the brine intake**

Press and hold keys 1 and 3 simultaneously until the screen displays "R" next to the bar chart.

Then remove the salt loading hatch and the translucent cover from the brine chimney or well.

Press the float rod to make it descend and bleed the tube. The rod and float must remain lowered.

Replace the translucent cover on the brine chimney or well and the salt loading hatch.



### 3) - Bleeding the softener unit

Press briefly on key n°2 to display "R2". After a few seconds the bar chart begins to flash.

Press on key n°2 again, and the screen displays "R3". Check that water is flowing through the siphon connected to the drain.

The softener has been completely purged when all the air has escaped When bleeding is complete the bar chart continues to flash, and the brining icon is visible. Press briefly on key n°2 to delete this information.

If the softener has not been bled correctly, repeat the procedure by pressing keys 1 and 3 until "R" is displayed next to the bar chart.

Release keys 1 and 3 then press key n°2 firmly twice to display "R3".

Let the cycle proceed automatically. After a few minutes the screen displays "R" again for 30 seconds.

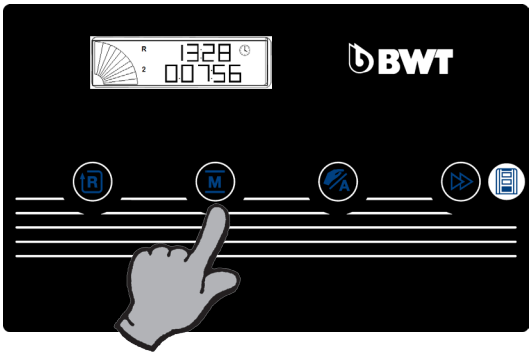
The water stops flowing to the drain.

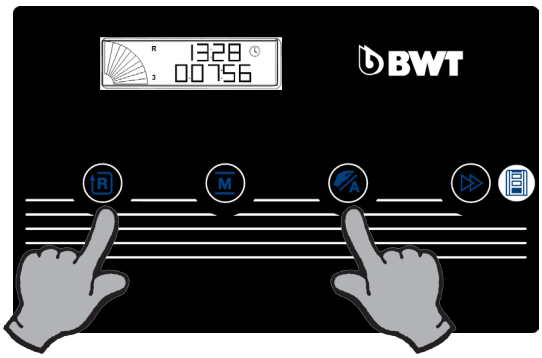
At the end of the cycle the bar chart continues to flash, and the brining icon is visible.

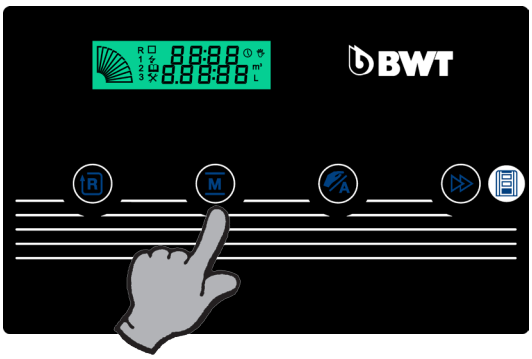
To delete this display,press key n°2 briefly.

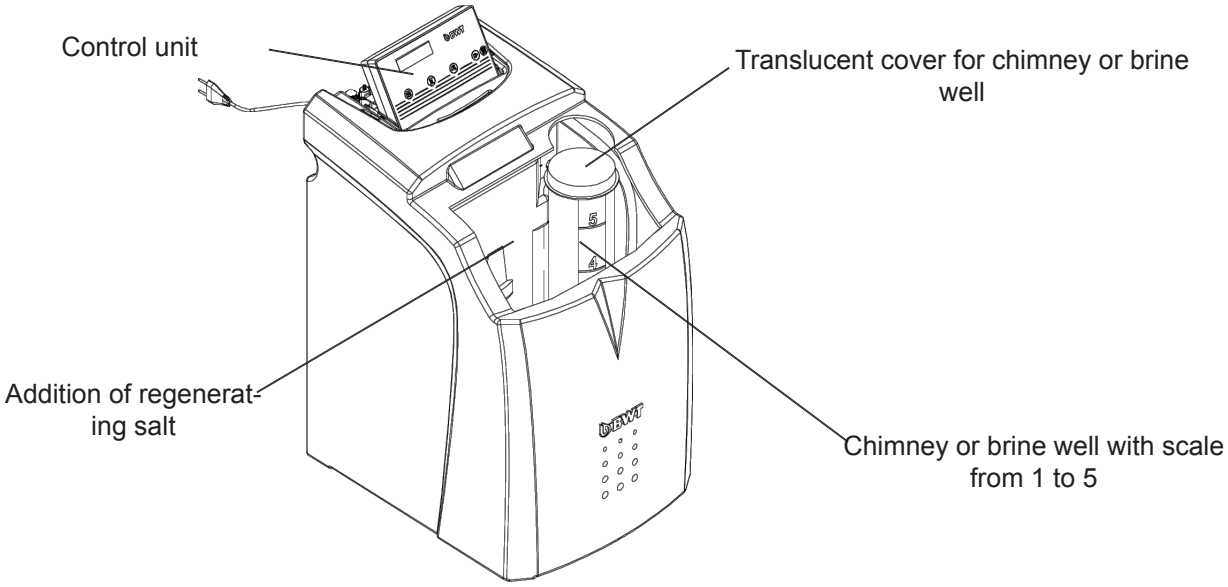
Open the bleed valve on the by-pass (if fitted) and close it once water begins to flow.

When all the above operations have been completed your **AQA VISEO** softener unit is ready to produce softened water.



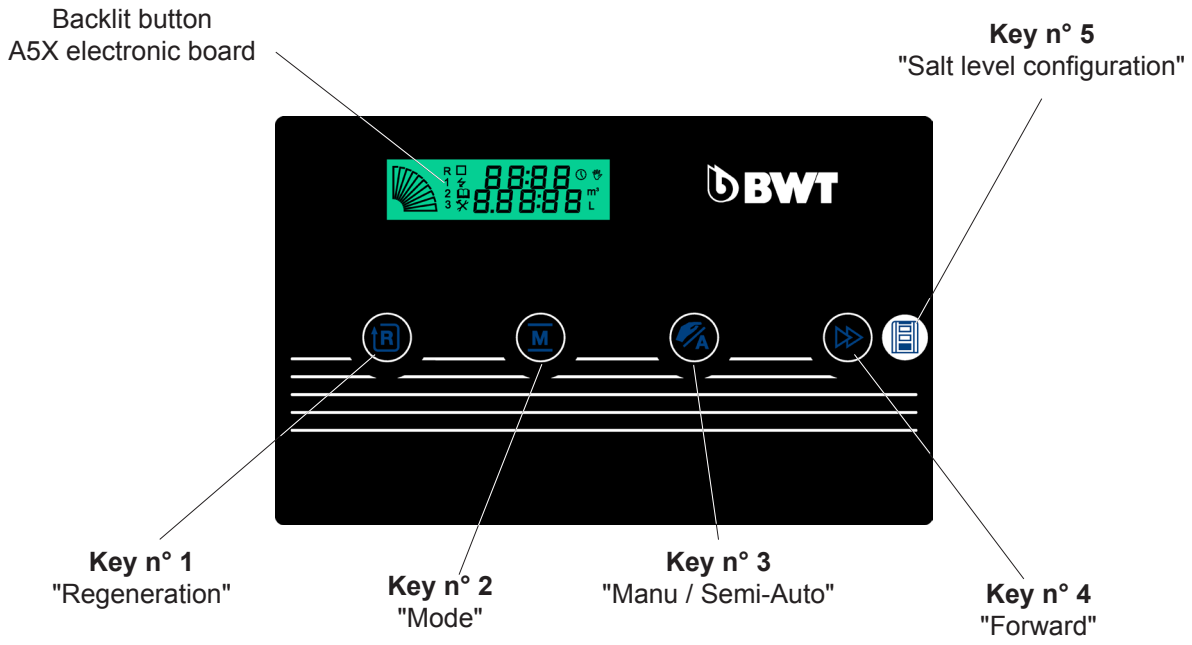
# PRESENTATION OF CONTROL UNIT

### 1) - Description of control unit

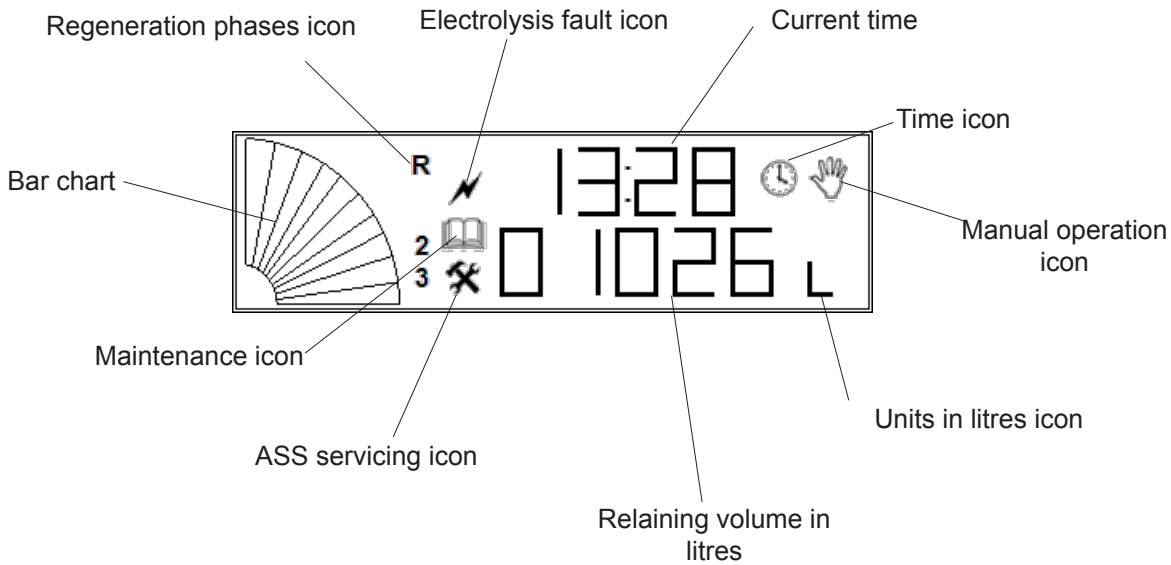
The **AQA VISEO** water softener is fitted with an electronic control unit and a lithium battery allowing the information needed for correct operation of the appliance to be stored for several hours in the event of a power cut.

The softener operates with three 24 volts AC solenoid valves.

The digram below shows the control unit with the cover removed.




### 2) - A5X electronic board display



**The Bar chart** provides:

Display of remaining volume (1 dial = 1/10th of the cycle)

Display of time elapsed during regeneration

The **Regeneration** icons:

"R" signifies brine preparation under way (tank being filled with water).

"R2" indicates brining and slow rinsing (displayed during the second phase)

"R3" signifies fast rinsing (displayed during the third regeneration phase)

**Brining** alarm:

Displayed when the electro-chlorination sensor has not detected brine during the second regeneration phase, at the start of brine intake.

**Maintenance** alarm:

Displayed when maintenance is due (e.g. replacement of a filter element). This function is defined by the number of regenerations programmed when the unit is installed. At each regeneration (automatic or by manual start), the internal counter increments and displays the alarm indication on the screen when the figure is equal to the programmed value. This alarm may be deactivated according to the softener unit operating mode.

**ASS** alarm:

Displayed when specialised maintenance by our technicians is required. This function is defined by the number of regenerations programmed during commissioning. At each regeneration (automatic or by manual start), the internal counter increments and displays the alarm indication on the display when the figure is equal to the programmed value. This alarm may be deactivated according to the softener unit operating mode.

The **Manu** icon:

Indicates that the operating mode is suspended. Softener regeneration is not possible in automatic or in manual. Programming of the control unit is also blocked.

The screen also shows two lines displaying:

Top line: the current time in ‘Service’ and ‘Test’ modes,

and the programming step in programming mode.

Bottom line: remaining volume (depending on programmed unit and cycle),

alternatively, the regeneration start time and end time when this is in progress,

the number of regenerations performed since the unit was installed,

total volume of water treated since the unit was installed.

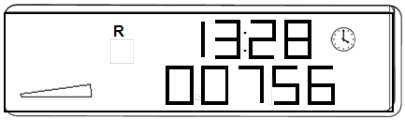
Bottom line: input of programming parameters,

input of code for control unit operating mode,

input of date the unit was installed.

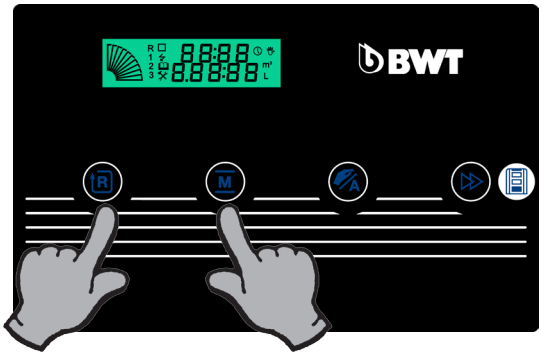
# PROGRAMMING THE CONTROL UNIT

### 1) - Switching on



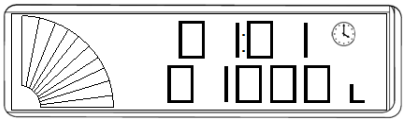

When the appliance is switched on, if it is being used for the first time or has not been used, or if it has been disconnected for at least five consecutive days, it normally switches to regeneration mode after the first litre of treated water has been drawn off.

- The first line displays the current time, to be set later.
- The bar chart is in the low position and the letter "R" is visible.
- The unit is in stand-by phase. The salt tank is filled with water to produce brine.




To stop regeneration, press keys 1 and 2 simultaneously, then release them. The display then shows the current time on the top line and the volume of water to be treated before the next regeneration on the bottom line.

### 2) - "Expected volume" operating mode




The expected volume operating mode starts regenerations at the programmed time if the available volume is less than the consumption for the next 24 hours.

A daily mean is calculated every day according to the corresponding daily consumption for the previous week. The calculation is made by the control unit daily at midnight.

The parameters to be set are as follows:

**a/ P003 - Current day and time:**

- Monday = day 1, Tuesday = 2, etc.
- and the time from 00:00 to 23:59

**b/ P080 - regeneration time:**

- from 00:00 to 23:59

The time of regeneration entered is the time when the softener begins the regeneration phases. These are, in sequence: backwash, brine intake, slow rinsing and fast rinsing.

The salt tank is supplied with water to dilute the salt about 3 hours before the regeneration program is triggered at the P080 point.

**c/ P042 - system pressure** (from 2 to 7)**:**

- e.g. 4b for a system under 4 bars of pressure.

The system pressure automatically determines the time required for regeneration and filling the salt tank with water.

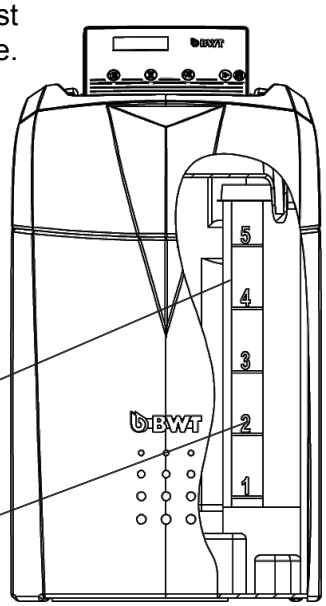
**d/ P044 - hardness of water entering the softener unit** (from 11 to 99)**:**

- Water hardness is measured with the TH kit supplied with the appliance. The user guide accompanying the product explains its use. The value obtained must be entered for the automatic calculation of the softener unit cycle.

**e/ P045 - residual hardness at softener outlet:**

- residual hardness at the softener outlet is measured with the TH kit used for measuring input hardness. The value obtained must be entered for the automatic calculation of the softener unit cycle.

- There is no recommended value for this setting. The user may choose a value between 0°f and 15°f, the latter value being used in public installations. The value entered must correspond to the setting made using the mixer at the rear of the unit (see "Setting residual TH").




### 3) - Programming the salt level

When the softener unit is installed and started for the first time, the salt tank is filled to the first level on the chimney scale.

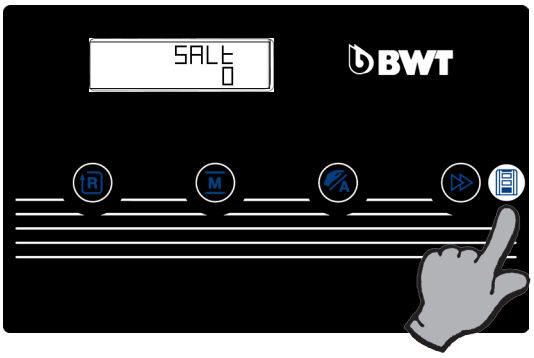
This must be carried out each time the salt tank is filled, according to the amount added and the level reached on the chimney scale.

Programming is done as follows:

a/ - Press key n°5 for five seconds. The display shows "SALt 0".

b/ - Press key n° 4 repeatedly until you have selected the number corresponding to the mark on the chimney just above the salt.

c/ - Confirm by pressing key n° 5 again.

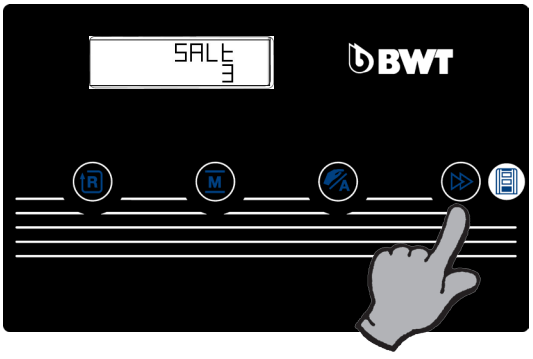



**Attention:**

Remember that depending on the amount of salt added, and the level reached on the chimney, the corresponding number must be entered at step "b" above.

**Example:**

Level on chimney = "3", select "3" (max 5) on the control unit by pressing repeatedly on key n°4.



# OPERATING PARAMETERS

### 1) - Operating parameters

To program your softener correctly it is necessary to know the mains water hardness expressed in French degrees. This analysis is carried out using the kit supplied.

When the hardness of the mains water supply has been analysed, the second parameter required is the system pressure, expressed in bars. To complete the operating parameters, the residual TH must be set and entered in the control unit.

**Attention:**

The operating mode described below corresponds to a well-defined program in the A5X control unit microprocessor. Any erroneous modification or action or that does not correspond to your softener can cause its malfunction and may lead to loss of the warranty.

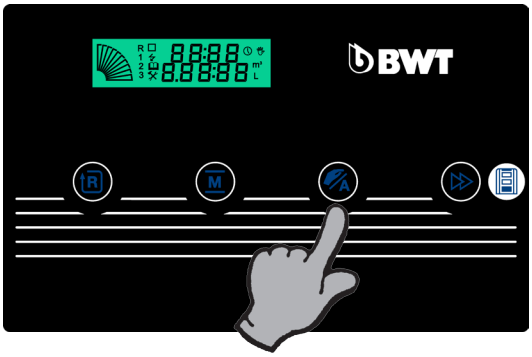
### 2) - Semi-automatic operation

This operating mode is recommended for intermittent use when regenerations are started manually.

Press on key 3 for five seconds to display the symbol corresponding to semi-automatic mode alongside the clock icon.

The regeneration key (n°1) and programming key (n°2) do not function during this operating mode.

The softener continues to produce softened water, but automatic regeneration is not started at the end of the cycle.



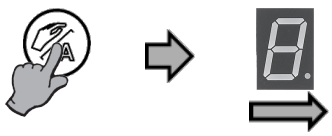

**Note:**

To be able to start a manual or automatic regeneration it is essential to quit the semi-automatic mode by pressing the "Auto / Semi-auto" key for five seconds.

In the steps below, use the following keys to modify the displayed value.

- Key n°4 allows the value of the flashing figure to be modified.

- Key n°3 allows the selection cursor to be moved to the right.



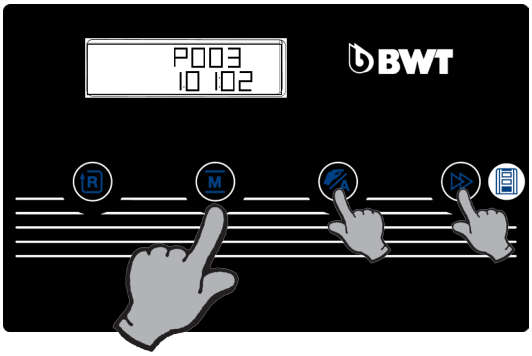
### 3) - Current Day and Time

Press key n°2 for five seconds. The display shows programme step P003 on the first line and the default current day of the week and time on the second line.

example: 1.01:02 for 01:02 a.m. on Monday.

The first figure corresponds to the day of the week (1 - 7). Monday = 1, Tuesday = 2, Wednesday = 3, etc.

Set the 24 hour clock to the current day and time.



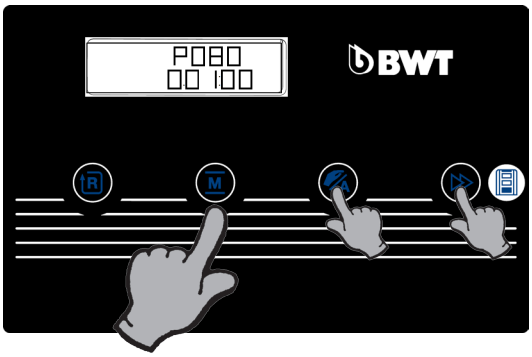

### 4) - Regeneration time

Press key n°2 briefly. The display shows program step P080 and the default regeneration time. This setting allows regeneration to be planned as a function of consumption.

example: 0.01:00 for 01h00.

Set the regeneration time in the 24 hour clock.

The first figure cannot be modified.

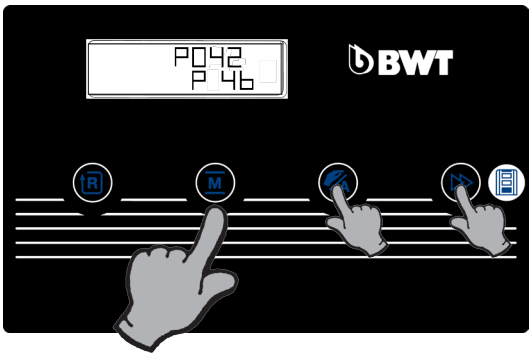



### 5) - System pressure

Press key n°2 briefly. The display screen shows program step P042. This setting automatically establishes the time taken for regeneration according to system pressure. The lower the pressure, the longer the regeneration.

example: P 4b for pressure of 4 bars.

Set the pressure in bars (from 2 to 7 bars).

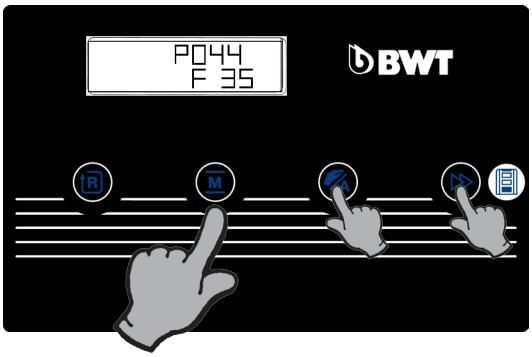



### 6) - Mains water TH (on input to softener)

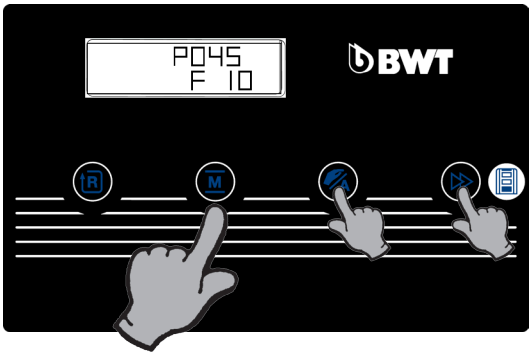
Press key n°2 briefly again. The display screen shows program step P044. This setting automatically establishes the volume of water produced between two regenerations. The calculation is made automatically with the setting of the following program step p045.

example: F 35 for a measured TH of 35°f.

Set the mains water TH in °f (11 to 99).



### 7) - Residual TH (on output from softener)

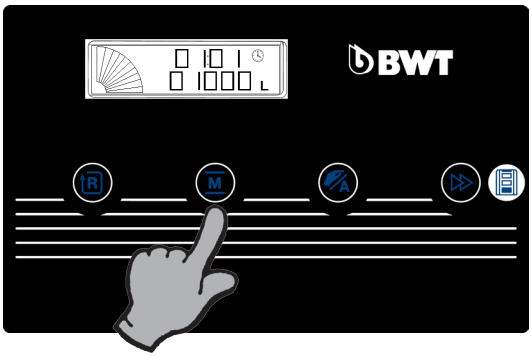



Press key n°2 briefly. The display screen shows program step P045. This setting automatically establishes, with programme step P044, the volume of water produced between two regenerations.

example: F 10 for a TH set and measured at 10°f (see the paragraph about setting residual TH).

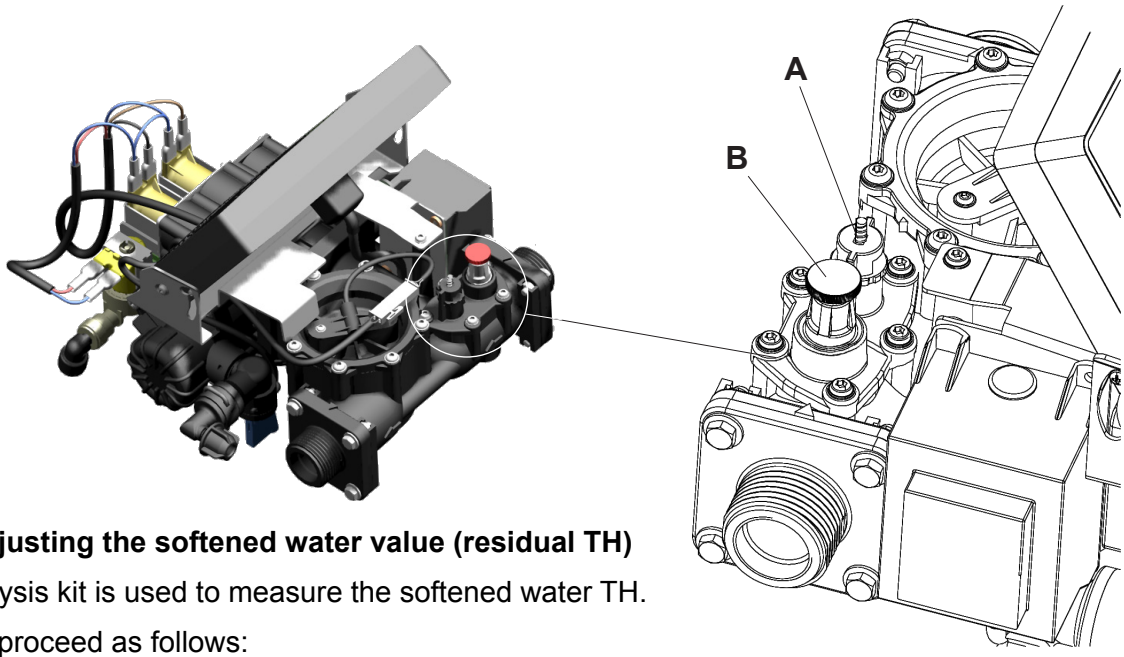
Set the residual TH expressed in °f.

### 8) - End of programming




Press key n°2 to terminate and quit the programming function.

## SETTING RESIDUAL TH




### 1) - Adjusting the softened water value (residual TH)

A TH analysis kit is used to measure the softened water TH.

To do so, proceed as follows:

Draw water from the softener outlet after closing the general bypass and bleeding the downstream circuit.

Softeners are fitted with a mixer tap at the rear. The mixer allows hard and softened water to be mixed to create the residual hardness desired by the user.

**Note:** There is no reference value for this setting. The user may choose a value between 0°f and 15°f, the latter value being used in public installations.

**2) - Adjusting residual TH**

a) Fully tighten the thumbwheel wheel **B**, then unscrew it by 1/2 or 3/4 turn.

b) Slightly open a valve on the unit downstream of the softener, and turn button **A** clockwise to increase residual TH or in the opposite direction to reduce it.

c) When you have completed the adjustment, open the valve or several valves completely to obtain a large flow rate and tighten the thumbwheel **B** if TH too high, and conversely if it too low.

d) The check can only be done with an analysis kit.

**3) - Sterilising**

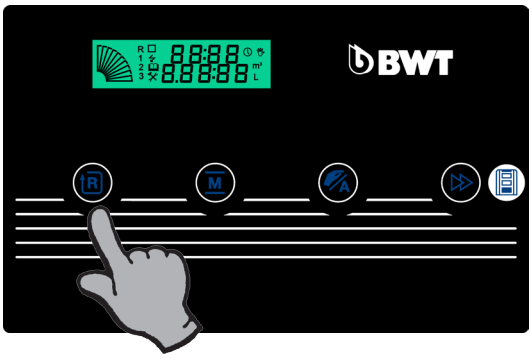
To avoid the risk of microbiological proliferation, the softener must be disinfected with bleach.

After loading the salt tank, add 3 ml of concentrated bleach at 35°/36° chlorometric (sachets are sold retail at 9.6% strength).

At least once every six months, take advantage of refilling the salt tank to disinfect the softener installation. Introduce a dose of bleach into the brine regulator chimney and then manually start a regeneration by pressing button n°1 for five seconds.

**4) - Additional regeneration**

To perform an additional regeneration after exceptional water consumption, press the 'Regeneration' button for five seconds and release it.




After about 3 hours the regeneration water will flow to the drain. The second line of the display then shows the regeneration start time and end time alternately.

The regeneration phases (described below) will follow each other automatically.

1 = filling of salt tank with water,

2 = waiting phase (3 hours) for production of brine,

3 = brine intake,

4 = slow rinse,

5 = fast rinse,

6 = return to service.

At the end of regeneration, the flow to the drain stops and the display shows the time and the calculated volume of water available between two regenerations.

**5) - Electro-chlorination**

Electro chlorination is the in situ production of chlorine by the electrolysis of a concentrated solution of sodium chloride. The preparation of this brine requires the use of softened water, to avoid rapid furring of the cathodes of the electrolysis cells (where the OH- ions are produced).

**6) - Power cut**

Each softener has a lithium battery incorporated in the electronic circuit to protect it against accidental or intentional power cuts. During electricity failures, the display disappears and regeneration cannot be done; on the other hand, the programming remains in memory.

When the control unit is switched on again, a short wait phase allows the information during the electricity mains failure to be updated. Water consumption is calculated using the averages recorded before the power cut and its duration. If a regeneration occurs during the power cut, it will be re-started automatically when power returns.

# REMOTE DATA DISPLAY

The remote data display can stand on a stable base or be mounted on a wall.

**Free-standing**

**Wall-mounted**

A folding stand is fitted at the rear to allow it to be placed on a table, for example. To fix it on a wall please see "Dimensions / connections" for the drilling template.

The remote data unit displays the softener time, autonomy and salt level alarm, as well as the previous day's water consumption.

It uses two AA batteries (supplied). To activate the unit, carefully remove the battery compartment cover at the rear. Place the batteries in their mounting, taking care to respect the polarities. Replace the cover.

Wait about ten seconds for the display to stabilise. All the segments flash, with the exception of the battery status. If the data reception is incomplete only the time will flash, once every six seconds.

In this case update the display using the synchronisation key (see presentation of remote data unit, below). If the time continues to flash, move closer to the water softener and start the synchronisation process again. The maximum distance between the remote data unit and the softener (depending on any obstacles) can be up to ten metres or more.

**- Description of remote data unit**

The screen always displays:

a/ - The previous day's water consumption in litres

This information is transmitted automatically by the softener unit and cannot be modified.

b/ - Current time

This information is transmitted automatically by the softener unit. It is only possible to modify the time displayed on the remote unit by using the control unit - see "Parameters and operation", paragraph 3 - current day and time.

c/ - The battery charge level

When the batteries are exhausted, or if there is no display, replace the batteries with the same type of batteries as described in "Remote data unit". After replacing the batteries, always synchronise the unit by pressing the corresponding key.

d/ - Bar chart showing the volume of salt remaining.

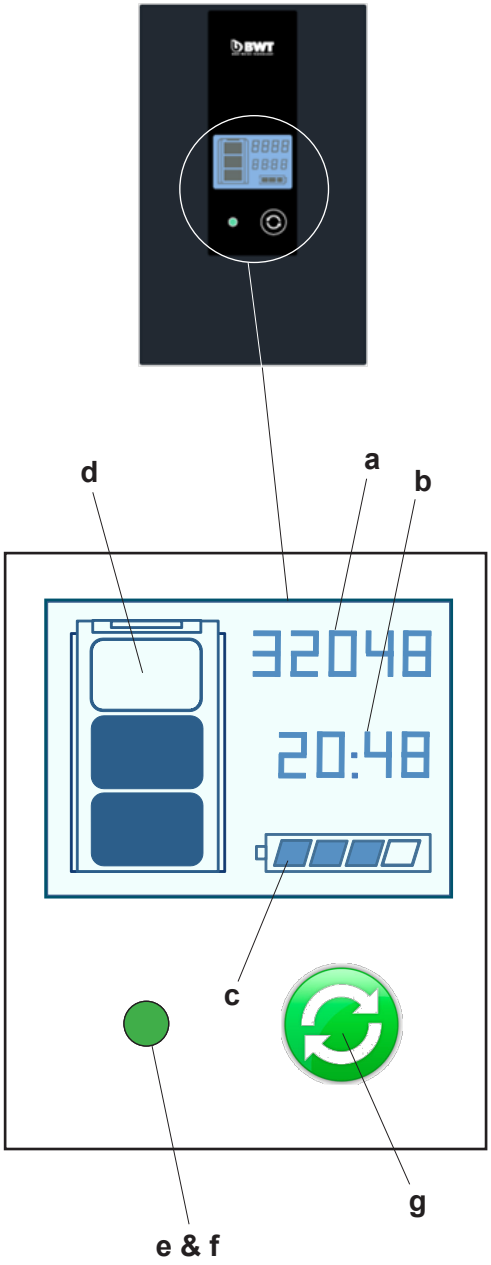
The display depends on the level of salt programmed into the softener control unit during loading. See "Programming the control unit", chapter 3 - programming the level of salt.

e/ - Green indicator light

The green indicator light flashes when there remains no more than 1 month's salt consumption and it is advisable to add more salt. Having done so, do not forget to program the level of salt - see "Programming the control unit", chapter 3 - programming the level of salt.

f/ - Red indicator light (tank empty)

The red indicator light flashes when there is no more salt in the tank. If salt is not added at the end of the production cycle the water will not be softened. After adding salt to the tank, do not forget to enter the level in the softener control unit - "Programming the control unit", chapter 3 - programming the level of salt.




g/ - Softener data synchronisation key

This allows the remote data unit to be synchronised with the softener control unit. it should only be used when the softener is started for the first time, when batteries are replaced, or if the information shown is incorrect. Take care not to place the remote data unit too far from the softener (maximum of 10 metres, depending on the presence of any obstacles), so as not to lose the radio contact.

# INCIDENTS, CAUSES REMEDIES

| Subject | Incidents | Causes | Solutions |
|---|---|---|---|
| **Softener control unit** | Additional regeneration impossible | “Semi-automatic” mode initiated | Press the “Auto/Semi-Auto” key for 5 seconds, then release. The icon of the right hand disappears, and the bar chart stops flashing. If the fault continues call After Sales Service. |
| | Bar chart flashes during service | “Semi-automatic” mode initiated | Press the “Auto/Semi-Auto” key for 5 seconds, then release. The icon of the right hand disappears, and the bar chart stops flashing. If the fault continues call After Sales Service. |
| | | An alarm is activated. | Identify the alarm icon displayed and call After Sales service. |
| | Bar chart flashes during regeneration | Electro chlorination sensor defect. | Check the level of salt in the tank. If the fault continues call After Sales Service. |
| | Incorrect time displayed | After a power cut, the backup battery is U/S. | Update the clock and call After Sales Service if the fault persists. |
| | No display | Power cut. | Check that the electrical socket is live. If the fault continues call After Sales Service. |
| **Remote data display unit** | No display | Batteries are flat | Replace with the same type of batteries. If the fault continues call After Sales Service. |
| | | Battery polarity not respected | Remove the batteries and check that polarities correspond to the symbols in the battery compartment. If the fault continues call After Sales Service. |
| | Incorrect display | Remote display unit too far from the softener. | Move the remote data unit closer to the softener and synchronise with the key. Check the battery charge and replace if necessary. |
| | | Batteries are flat | Replace with batteries of the same type, and synchronise with the key on the remote data unit. If the fault continues call After Sales Service. |
| | | Obstacles in the path of the radio waves. | Move the remote data unit and repeat the synchronisation. Check the condition of the batteries and replace if necessary. Check that the softener unit is connected to the mains power supply. |
| | Green warning light flashes | Quantity of salt equal to one month’s supply or less. | Top up the salt tank. Enter the level of salt (from 1 to 5 on the chimney scale) in the control unit and synchronise the remote data unit. |
| | Red warning light flashes | Salt tank empty. | Fill the tank with regenerating salt. Enter the level of salt (from 1 to 5 on the chimney scale) in the control unit and synchronise the remote data unit. |
| | Salt tank bar chart still empty. | Salt level has not been entered. | Enter the level of salt (from 1 to 5 on the chimney scale) in the control unit and synchronise the remote data unit. |
| **Abnormal water flow to drain** | Abnormal water flow to drain | Solenoid valves, mechanism | Ensure that the unit is not in regeneration phase, otherwise call After Sales Service. |
| | Abnormal salt tank overflow | Brine regulator not properly closed, leaks. | Remove the brine regulator and check tightness. Check that connections and seals are tight and reassemble. If the fault continues call After Sales Service. |
| **The water produced has not been softened** | The softener is no longer producing soft water. | Brine solenoid valve, by-pass valve, lack of salt. | Check that the isolating and by-pass valves are in the correct position. Check that the appliance is powered-up. Check that there is salt in the salt tank. Check that the filter element is not clogged. |
| | The softener output TH is too high. | Residual TH setting: | Using the TH control kit, check the residual TH setting at the rear of the softener unit. Check the use-by date on your TH kit ans replace it if necessary. |

# MAINTENANCE

Regular maintenance is essential to ensure that your softener functions correctly and gives you the maximum of comfort and safety.

Some components are subject to normal wear and tear due to the operation of the appliance. These components, also called operating and/or wearing parts must be regularly replaced by a person qualified and authorised to perform this operation.

**Operating and wearing parts are excluded from our general warranty conditions. See also the paragraph "Warranty exclusion" in our applicable warranty terms and conditions.**

The frequency of replacement depends on the conditions of installation and operation. A visual examination of the appliance must be made at least once a year to assess the condition of the connections, connectors, display, etc.

Our appliances are guaranteed with effect from the date of their initial start-up after installation (see our applicable warranty conditions).

The statutory warranty shall apply in any case, and obliges the professional seller to guarantee the buyer against all possible consequences of latent faults or defects in the goods sold or in the service rendered.

**- Regularly**

- Check the upstream water hardness (TH)
- Any variation of +/- 10% in the hardness of the water to be treated must be taken into account and the appliance settings modified if necessary.
- Check the downstream water hardness (TH).
- Check the hardness of the mixer water and correct the mixing unit settings if necessary.

Always employ the easy-to-use TH kit (supplied as an option) to check the upstream and downstream TH.

**- Every six months**

Before using, restarting and after any work on the water system, sterilise the softener unit as described in the "Sterilising" paragraph. We also advise cleaning the resins with a product specifically developed for this operation (consult your dealer).

Replace the canister filter upstream of the softener every 6 months or more frequently if necessary. Isolate the appliance and reduce the pressure either by opening a downstream valve or starting a regeneration.

**- Annually**

Check the absence of excessive quantities of insoluble salt deposits. Clean the salt tank and the brine regulator thoroughly.

The salt tank must be empty during this procedure. Do not add salt to facilitate the operation. Isolate the unit with the by-pass and bleed the system correctly. Disconnect the softener from the mains socket.

Check that the brine regulator is functioning correctly and replace any parts if necessary.

Check the siphon and clean if neccessary.

**- "Maintenance" Alarm**

This alarm is shown by an icon on the display screen

For example, it calls for the replacement of the filter element installed upstream of the softener, or any other event mentioned at the top of the "List of programmed parameters" and completed when the unit was installed.

This alarm may not be activated on your softener unit.

**- "ASS" (After Sales Service) Alarm**

This alarm is shown by an icon on the display screen

It means that a technician should be called in for after sales service. This may be related to the replacement of operating and/or wearing parts that ensure the correct operation of your installation. Refer to the top of the "List of programmed parameters" completed when the unit was installed.

This alarm may not be activated on your softener unit.

**Important:**

Have operating and wearing parts checked and replaced as necessary by a person authorised to work on the appliance. Check water-tightness and seals, and the programming of the control unit and remote data unit. Your softener must be correctly and regularly maintained by a professional.

Replace the remote data unit batteries when the low battery warning is displayed - do not wait for the batteries to become flat.

**Note:**

The information shown above is a minimum. It may be necessary to increase maintenance frequency at different periods, depending on the quality of the water to be treated and its change over time, the nature of the location of the unit, and the presence of upstream or downstream processes.

Our regional branches are at your disposal to provide you with a customised technical support contract for your appliance if you require. See our web site:

**www.bwtpermo.fr**

# WARRANTY

**Register your warranty at:**

**www.bwtpermo.fr**

The following guarantees apply with effect from the date the unit is installed and operated.

- **1 YEAR** for labour and travelling costs in mainland France.

- **3 YEARS** for spare parts, **EXCLUDING PARTS SUBJECT TO NORMAL WEAR AND TEAR**, listed in the manual.

- **10 YEARS** for the softener body, the salt tank and the resin*.

*The statutory warranty shall apply in any case, and obliges the professional seller to guarantee the buyer against all possible consequences of latent faults or defects in the goods sold or in the service rendered.*

Warranty exclusion:

- Any use other than for drinking water

- Any use which does not comply with the technical specifications supplied with the appliance.

- Any lack of periodical servicing as recommended in the specifications (e.g. failure to replace the filter element).

- Damage caused by frost or by heat exceeding the stated maximum temperature.

- Storms or any other cause of current surges in the mains power supply.

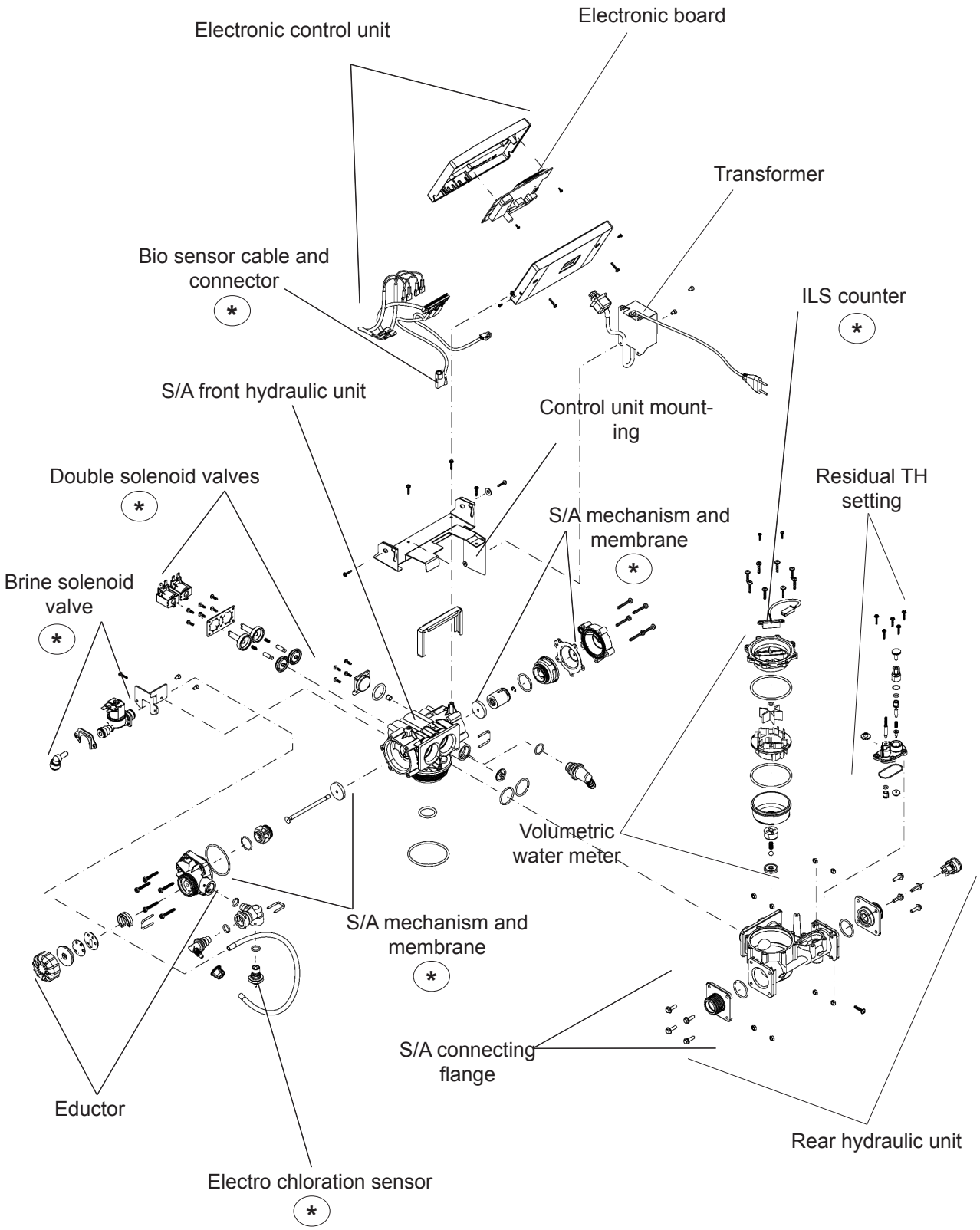
- Cleaning with any product other than water or those recommended by BWT Permo.

- Pressure exceeding the maximum pressure stated in the technical specifications.

- Splashing with any liquid.

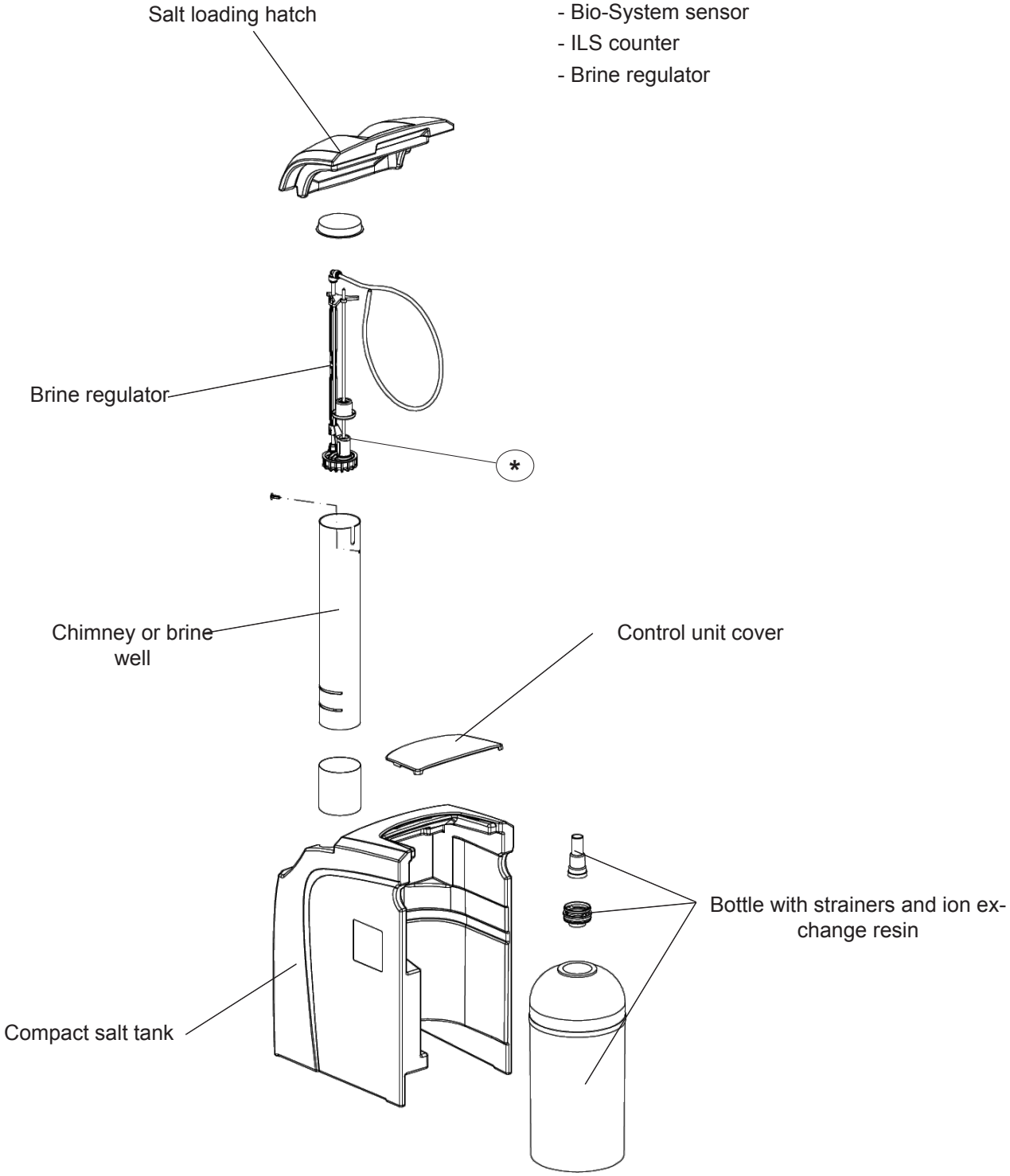
** The resin is guaranteed for10 years, unless damaged by an oxidising agent, a metal oxide, frost, use other than with drinking water, or the failure to replace the upstream filter element.*

# EXPLODED VIEW OF THE AQA VISEO WATER SOFTENER



*** Operating and/or wearing parts.**

- Double solenoid valves, 24 volts 50Hz
- Brine solenoid valve, 24 volts 50Hz
- S/A mechanism and membrane
- Bio-System sensor cable and connector
- Bio-System sensor
- ILS counter
- Brine regulator



# AQA VISEO PARAMETERS

## 1) - Specifications of AQA VISEO softener

- Exchange capacity: 28°/m3
- Supply voltage: 230 volts +/- -15% 50/60 Hz
- Electricity consumption: 6 VA in service and 25 VA in regeneration
- Minimum pressure: 2.5 bar dynamic
- Maximum pressure: 7 bar static
- Minimum flow rate: 0.5 m3/hr
- Water/ ambient temperature: 35°C / 40°C

## 2) – Sequential programming functions

- Expected volume operating mode
- Set current date and time
- Set regeneration time
- Set system pressure
- Set raw water hardness
- Set residual water hardness
- Program regenerating salt level

## 3) - Programmed parameters

Regeneration time _____

System pressure _____

Raw water hardness _____

Residual hardness _____

# NOTES

# NOTES

# OFFICES

**33187 LE HAILLAN (Bordeaux)**
Z.A. Toussaint Catros
Rue Ariane
Tél : 05 56 13 02 18 - Fax : 05 56 55 94 92

**06580 PEGOMAS (Cannes)**
Le triangle du Bâteau
138, chemin de l'hopital
Tél : 04 93 40 59 00 - Fax : 04 93 40 59 09

**38320 EYBENS LES RUIRES (Grenoble)**
3c, rue Irène Juliot Curie
Tél : 04 76 14 77 20 - Fax : 04 76 14 77 29

**59175 TEMPLEMARS (Lille)**
Z.I. - 15A, rue de Plouvier
Tél : 03 20 16 03 80 - Fax : 03 20 16 03 89

**69007 LYON**
Les Jardins d'Entreprise
213, rue de Gerland
Tél : 04 78 72 99 17 - Fax : 04 78 72 88 07

**13012 MARSEILLE**
112, Traverse de la Serviane
Tél : 04 91 44 87 86 - Fax : 04 91 45 25 62

**37170 CHAMBRAY LES TOURS (Tours)**
10, rue des frères Lumière
Tél : 02 47 74 74 48 - Fax : 02 47 74 74 49

**54500 VANDOEUVRE (Nancy)**
Parc d'activités de Brabois Nord
2, allée d'Auteuil
Tél : 03 83 67 61 89 - Fax : 03 83 44 65 81

**35890 LAILLE (Rennes)**
16, rue de la Plaine
ZA des 3 près
Tél : 02 23 61 48 50 - Fax : 02 23 61 48 51

**51370 LES MESNEUX (Reims)**
Parc d'activités
Lieu dit les Vianneries
Tél : 03 26 84 00 52 - Fax : 03 26 84 05 04

**27400 HEUDEBOUVILLE (Rouen)**
Ecoparc 2
Allée de la Fosse Moret
Tél : 02 32 63 32 32 - Fax : 02 32 63 32 30

**92000 NANTERRE (PARIS IDF)**
191, rue du 1er Mai - Hall n°3
Tél : 01 46 49 01 01 - Fax : 01 46 49 50 69

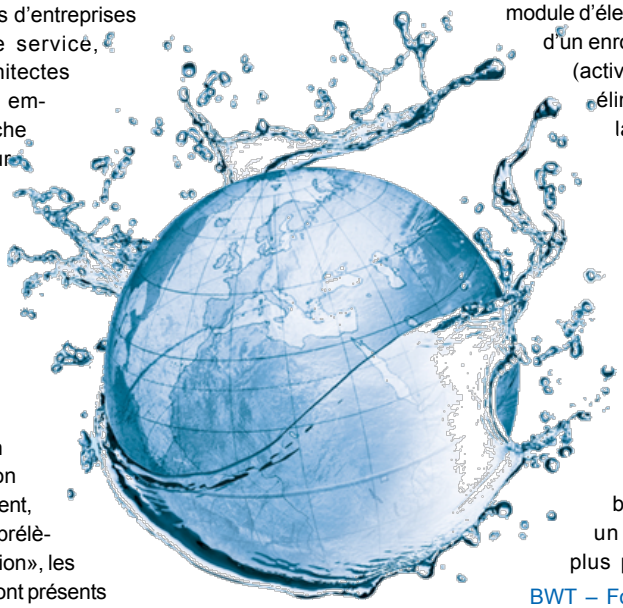
**SERVICE EXPORT**
103, rue Charles Michels
93206 Saint - Denis Cedex
Tél : +33 1 49 22 46 51 - Fax : +33 1 49 22 45 30

**AGENCE OCEAN INDIEN**
**(La Réunion)**
ZAC du Portail
9,rue de l'usine
97424 PITON SAINT LEU
Tél : 02 62 32 52 77 - Fax : 02 62 22 77 46

**BWT Permo MAROC**
**CASABLANCA**
Impasse Route Cotière 111KM
11,5 Sidi Bemoussi
Tél : 212 522 666 42

# Le groupe BWT

Le groupe Best Water Technology a été fondé en 1990 et est aujourd'hui l'une des entreprises leaders en Europe en matière de technologie de l'eau. Plus de 2800 employés travaillent dans les 70 filiales et sociétés affiliées, mais le réseau BWT est également constitué de milliers d'entreprises partenaires, collaborateurs de service, installateurs, planificateurs, architectes et spécialistes en hygiène. Les employés du département Recherche et Développement travaillent sur de nouveaux procédés et matériaux avec des méthodes avancées, en ayant pour objectif la mise au point de produits écologiques ainsi qu'économiques. La réduction de la consommation d'énergie et des émissions de $CO_2$ tient particulièrement à coeur de BWT. Presque partout où l'eau entre en question, que ce soit à l'admission d'une conduite d'eau dans un bâtiment, le «Point d'Entrée» ou au point de prélèvement de l'eau, le «Point d'Utilisation», les produits révolutionnaires de BWT sont présents et ont déjà largement prouvé leur efficacité. Que ce soit pour le traitement de l'eau potable, de l'eau minérale et de l'eau déminéralisée pour les applications pharmaceutiques, pour l'eau de piscine, de chauffage et de processus, pour l'eau de chaudière et de refroidissement ou encore pour l'eau de climatisation.



Une multitude d'innovations qui garantissent à nos clients un maximum de sécurité, d'hygiène et de santé lors de leurs contacts quotidiens avec l'eau, cet élixir de vie précieux. Parmi ces innovations, on retrouve notamment le SEPTRON®, le premier module d'électrodéionisation (EDI) au monde doté d'un enroulement en spirale, le procédé MDA (activation de l'oxyde manganeux) pour éliminer efficacement le manganèse, la technologie bipolaire AQA total qui offre une protection contre le calcaire sans ajout de produits chimiques, SANISAL, le premier sel régénérant au monde pour installations d'adoucissement qui désinfecte en même temps et la nouvelle technologie révolutionnaire Mg2+ qui garantit un meilleur goût des eaux filtrées, ainsi que des thés et cafés. Avec ses membranes uniques à haut rendement pour piles à combustible et batteries, BWT apporte un approvisionnement énergétique plus propre et durable au XXIe siècle.

BWT – For You and Planet Blue, c'est notre mission de prendre la responsabilité écologique, économique et sociale de fournir les meilleurs produits, systèmes, technologies et services dans tous les domaines du raitement des eaux à nos clients et de contribuer ainsi à protéger efficacement les ressources globales de notre planète bleue.

BWT BEST WATER TECHNOLOGY | For You and Planet Blue.