



Cillit

Traitement de l'eau

Automatic water softeners **AQUIUM**



Assembly and maintenance manual

Important:

Before any connection and use, read these instructions carefully
Non compliance with these instructions will lead to cancellation of the **Cillit** guarantee.

Cillit reserves the right, depending on developments in knowledge and techniques,
to modify the composition of this note without warning

GLOSSARY

Softening: Treatment procedure intended to eliminate 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 (exchanges calcium ions with sodium ions) regenerated with sodium chloride.

Cation: Positively charged ion.

Cycle: (for an ion exchanger): 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 milliequivalent per litre or 10mg/l of CaCO_3

Hydrometric degree (TH): Unit of water hardness expressed in French degrees.

Hardness (of water): Calcium and magnesium content, opposing 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, either of salt water (it is then water with low dissolved mineral content), or hard water (in this case, 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 limey water.

Milliequivalent 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, so as to return it to its initial condition. Regeneration consists of 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. Among the salts used in water treatment we can cite: sodium chloride, sodium silicate, ferric chloride, aluminum sulphate. The salt used for regenerating water softeners comprises 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 limey water.

TH: (total hardness) see water hardness.

Dear customer,

You have placed your confidence in **Cillit** and you are now the owner of an automatic water softener of **AQUIUM bio compact** or **AQUIUM bio dual unit type** .

This complies with directive 87/308/CEE.

The CE marking of **Cillit AQUIUM bio compact** and **AQUIUM bio dual unit** certifies their compliance with the requirements of:

- Directive 2004/108/CE of 20/07/2007 on **electromagnetic compatibility**.
- Directive 2006/95/CE of 16/01/2007 on **electrical equipment intended for use within certain voltage limits**.

Cillit AQUIUM bio compact and **AQUIUM bio dual unit** water softeners are subject to directive 97/23/CE of 29/05/97 concerning pressure equipment. They fulfil the requirements of article 3 point 3 (design and manufacture within the rules of the art and use) but do not come into categories I to IV and, consequently, **are not covered by CE marking for pressure equipment**.

We have done everything so that it will give you satisfaction.

It is simple to use: we advice you to read this booklet carefully before commissioning it.

You have the benefit of a guarantee defined on the attached coupon. It only applies if the guarantee coupon is returned to us.

You should also be aware that our **After Sales Service** is available to you.

SAFETY

The descriptions are written in light text.

The highlighted zones **WARNING**, **ATTENTION** and **REMARK** have the following meaning:



REMARK

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



REMARK

Recyclable item



ATTENTION:

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

Please read these instructions carefully before using your softener.

- This manual contains very important remarks about the installation, use and maintenance of your appliance.
- Check that the equipment and its packaging have not been damaged during transport.
- In the event of damage do not use the appliance and contact our distributor immediately.

DURING INSTALLATION:

- The electrical connections must be made in accordance with the information stated on the appliance identification plate and the information contained in these instructions.
- This appliance is designed to be connected to a cold water inlet.
- This appliance must be installed so that the electrical socket remains accessible.
- This appliance must be connected to the water circuit with new pipes.
- The connection of the appliance to the water circuit must be done with hoses.
- Never reuse used pipes.



WARNING:

Concerns the electrical power supply cable.

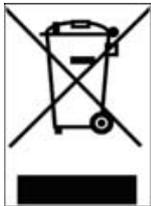
For most electrical appliances, it is advisable to make the connection to a dedicated circuit, meaning a single socket that only supplies the appliance in question and to which no other socket or branch circuit is added.

Do not overload the wall sockets. Check the electrical cable for your equipment regularly. If it appears to be damaged or deteriorated, disconnect it, stop using the appliance and ask an approved repairer to replace the cable by a strictly identical cable.



KEEP THESE INSTRUCTIONS

DISPOSING OF YOUR OLD APPLIANCE



1. This symbol, representing a wheeled bin struck through by a cross, 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 the 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.

ELECTRICAL WIRING



ATTENTION:

For the safety of persons, remove the fuse from the electrical circuit or disconnect the circuit breaker before connecting the installation. Check that electrical voltage is not present on the electrical socket.

Do not use an extension of socket adapter with this appliance. Electrical connections must be made in accordance with national, regional and/or local electrical standards.

This appliance must be continuously supplied with power at suitable voltage and frequency as specified in this notice and on the softener identification plate. It must be connected to an individual circuit, protected by a circuit breaker or fuse appropriate for the appliance installed.

The power supply socket must be accessible and situated beside the appliance within a maximum of 1.20 metres. In no case must it be placed behind the appliance. No other appliance must be connected to the same socket using a multiple socket or any other procedure.

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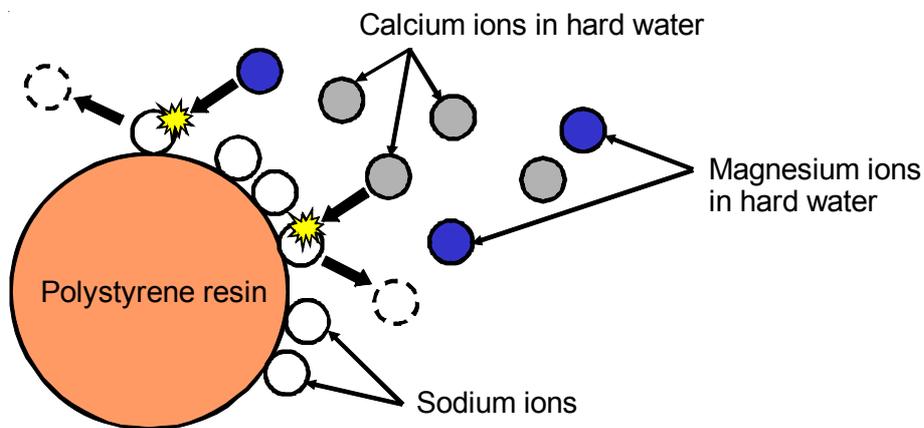
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1 - PRINCIPLE OF SOFTENING

Softening is the technique used to remove the TH from water (due to the presence of alkaline-earth salts: calcium and magnesium carbonates, sulphates and chlorides). The softener is an appliance that uses an ion exchange resin and the principle consists of exchanging calcium and magnesium ions that constitute the hardness of the water for sodium ions bound to the softener resin.

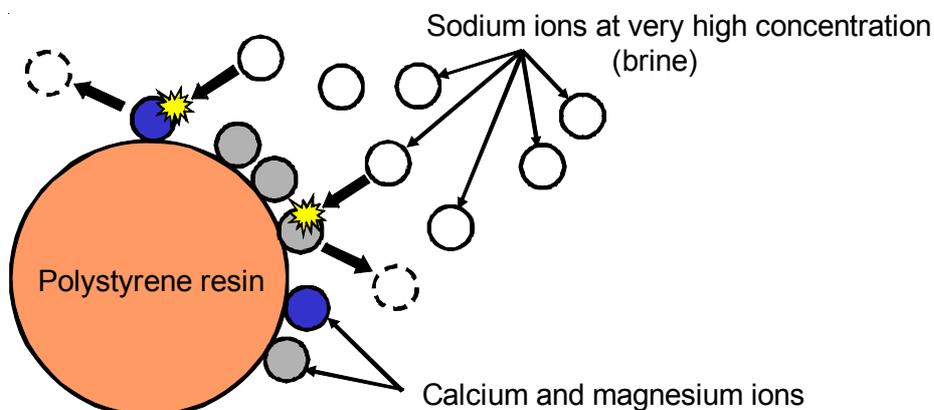
When all the sodium ions have been exchanged, the resin is said to be saturated and must be regenerated. The resin is then regenerated using brine (saturated solution of NaCl or sodium chloride). So the sodium ions are again placed on the resins, while the calcium and magnesium ions are discharged to the drain as chlorides. A succession of rinses allows the brine to be removed.

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 place on the resin. The expelled Calcium and Magnesium ions return to the water, which is discharged to the drain.

2 - QUICK GUIDE

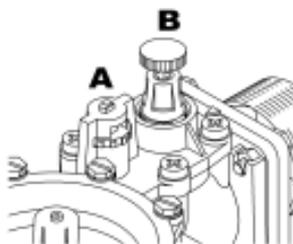
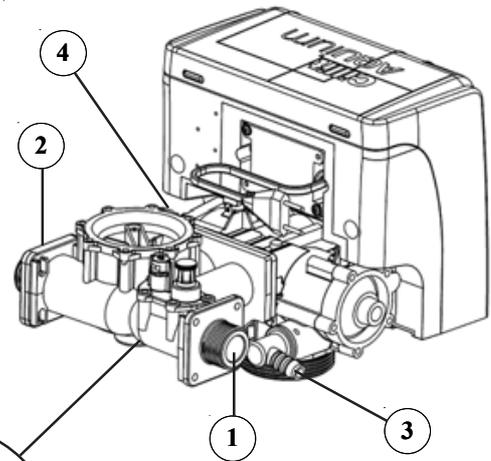
Connecting the AQUium bio compact softener:

Filtered mains water inlet **item 1** (min. pressure 1.5b and max. 7b), 1" threaded situated at the rear.

Softened water outlet **item 2**, 1" threaded end fitting, situated at the rear.

Regeneration water outlet **item 3**, Ø16 mm.

Brine regulator connection **item 4**, end fitting with wing nut.

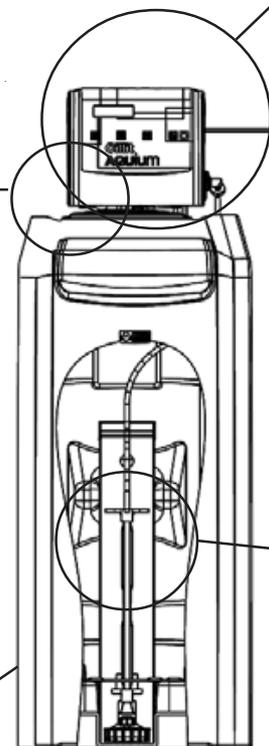
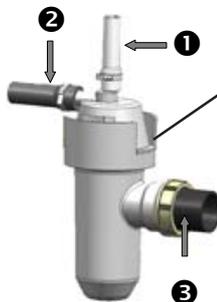


Adjusting residual TH:

Screw the thumbwheel tight **B**, then slightly open a downstream valve and adjust the residual TH by turning button **A** to the right increase or in the opposite direction to reduce the TH.

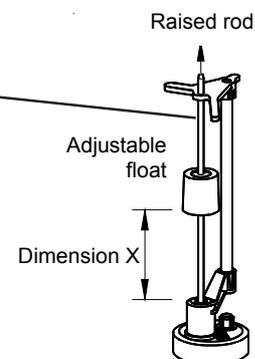
With adjustment completed, open the valve completely and tighten the thumbwheel **B** if residual TH is too high and conversely.

Check the residual TH with an analysis kit.



Electrical supply:

230 volts +/- 10% 50-60Hz
35 watts max.



Brine regulator adjustment:

Adjust the brine regulator float situated in the chimney or brine well inside the tank. To do this, refer to table «Dimensions X» taking care to pull the float rod upwards.

Connect the siphon:

The Ø12/16 transparent pipe for the regeneration water is connected to the ribbed orifice **item 1**.

On the orifice **item 2**, connect the Ø15/21 flexible pipe to the salt tank overflow.

On the self-sealing connection **item 3**, Ø40 mm, fix a PVC pipe to the drain.

Dimension 'X' in millimetres	Softeners bio compact
AQUium 60	90
AQUium 90	140
AQUium 120	160

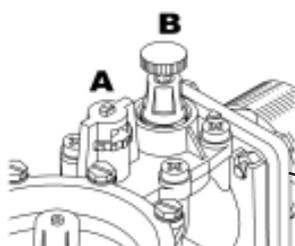
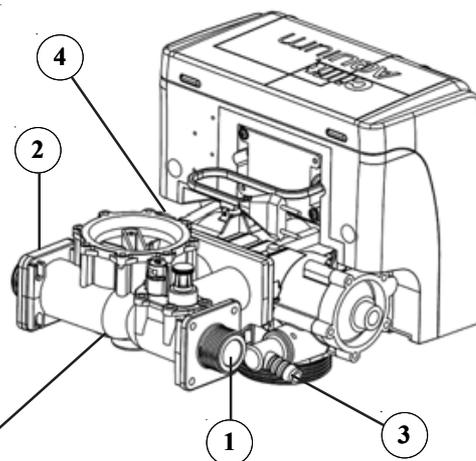
Connecting the AQUium bio dual unit softener:

Filtered mains water inlet **item 1** (min. pressure 1.5b and max. 7b), 1" threaded situated at the rear.

Softened water outlet **item 2**, 1" threaded end fitting, situated at the rear.

Regeneration water outlet **item 3**, Ø16 mm.

Brine regulator connection **item 4**, end fitting with wing nut.



Adjusting residual TH:

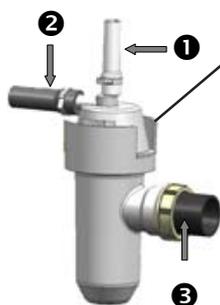
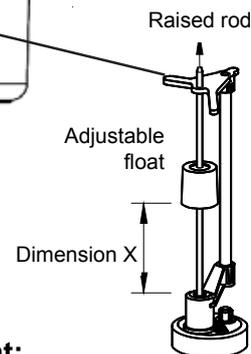
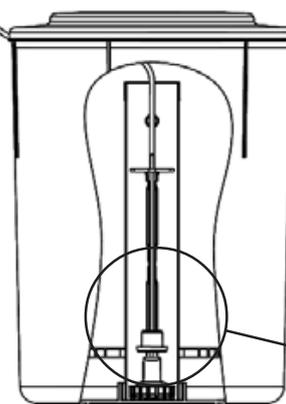
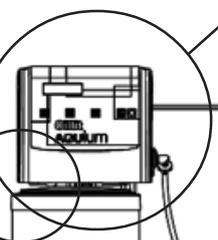
Screw the thumbwheel tight **B**, then slightly open a downstream valve and adjust the residual TH by turning button **A** to the right to increase the residual TH or in the opposite direction to reduce the TH .

With adjustment completed, open the valve completely and tighten the thumbwheel **B** if residual TH is too high and conversely.

Check the residual TH with an analysis kit.

Electricity supply:

230 volts +/- 10% 50-60Hz
35 watts max.



Connect the siphon:

The Ø12/16 transparent pipe for the regeneration water is connected to the ribbed orifice **item 1**.

On the orifice **item 2**, connect the Ø15/21 flexible pipe to the salt tank overflow.

On the self-sealing connection **item 3**, Ø40 mm, fix a PVC pipe to the drain.

Brine regulator adjustment:

Adjust the brine regulator float situated in the chimney or brine well inside the tank. To do this, refer to table «**Dimensions X**» taking care to pull the float rod upwards.

Dimension 'X' in millimetres	Softeners bio bi-corps
AQUium 90	100
AQUium 160	135

Programming AQUiUM softeners:

Button 'R':

Pressing the button for 5 seconds starts regeneration. The combination of buttons 'R' and 'M' stops regeneration.

Button 'M':

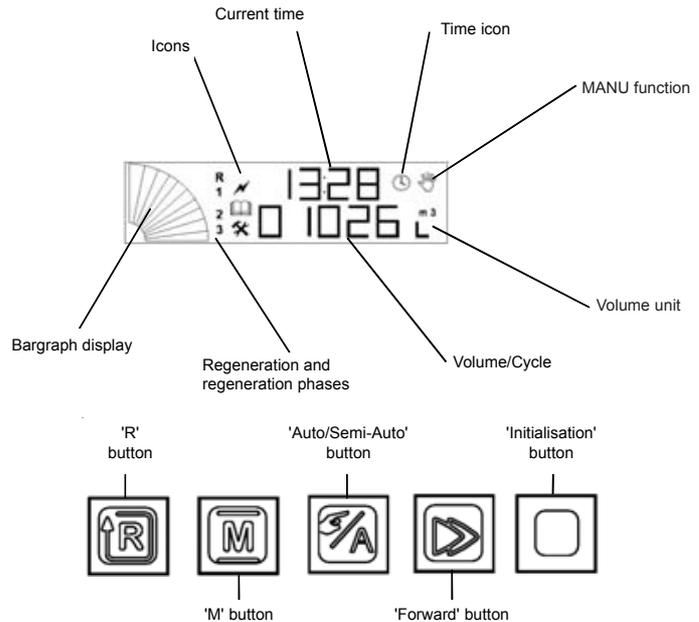
Pressing the button for 5 seconds allows change to programming mode.

'Auto/Semi-auto' button:

Pressing the button for 5 seconds changes to manual or to automatic mode. In programming mode, pressing it briefly allows the flashing digit to be moved.

'Forward' button :

In programming mode, pressing it briefly allows the digit value to be modified.



- **Current Day and Time:** Press the 'Mode' button to display 'P003'. Set the current date and time (24 hour). The first figure = day of the week (Monday 1, Tuesday 2, etc.)

- **Regeneration time:** Press the 'Mode' button to display 'P080'. Set the regeneration time in 24 hours. The first figure cannot be adjusted.

- Regeneration duration

Press the 'Mode' button, display 'P050'. Set the regeneration duration expressed in minutes (see table opposite) according to the mains pressure.

- Cycle (vol. water produced between 2 regenerations)

Press the 'Mode' button, display 'P040'. Set the cycle corresponding to the volume of water produced between two regenerations (in litres).

Formula to calculate the cycle:

$$\frac{5 \times V}{TH \text{ (}^\circ\text{f) mains water}} = \text{Cycle (remove the decimals).}$$

Softener	Mains pressure	
	Less. 4 bar	Great. 4 bar
AQUiUM 60 bio compact	32	32
AQUiUM 90 bio compact	42	33
AQUiUM 120 bio compact	52	43
AQUiUM 90 bio-dual unit	42	33
AQUiUM 160 bio-dual unit	62	53

Softener	Value "V"
AQUiUM 60 bio compact	10000
AQUiUM 90 bio compact	16000
AQUiUM 120 bio compact	20000
AQUiUM 90 bio bio-dual unit	16000
AQUiUM 160 bio-dual unit	28000

- **Consumption averages:** Press the 'Mode' button, display 'P070'. The value 'L.0300' corresponds to the initial average. The mean is calculated automatically everyday at the programmed regeneration time, so it is not necessary to modify the programming. Press the 'Mode' button in pulses up to 'P077', default value 'L.0300'.

- **End of programming:** Press 'Mode', the display returns to service configuration.

- **Additional regeneration:** After programming we advise you to perform a regeneration by pressing the 'R' button for five seconds and releasing it.

3 - LIST OF PROGRAMMED PARAMETERS

Softener:

type: _____

Raw water TH: _____ °f

Residual TH: _____ °f

Regeneration time:

_____ hour _____ minutes

Regeneration duration setting:

Total regeneration duration: _____ minutes

Softener cycle:

_____ litres

Brine regulator dimension 'X' setting:

_____ millimetres

Maintenance alarm setting:

_____ (number of regenerations), or a frequency of: _____

Operations to be performed: _____

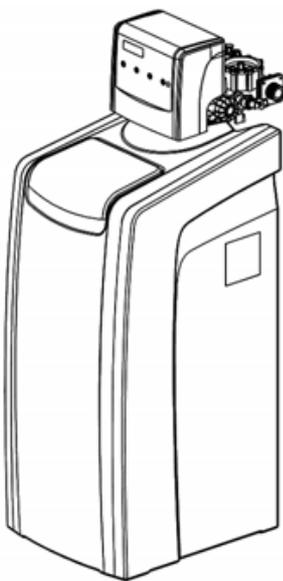
After Sales Service alarm setting:

_____ (number of regenerations), or a frequency of: _____

Operations to be performed: _____

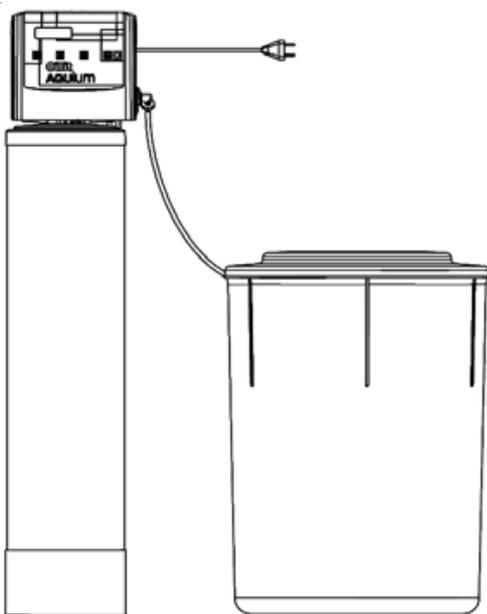
4 - DESCRIPTION OF RANGE

The **Cillit** residential softener range comprises five appliances. The **AQUiUM bio compact** softeners with three models and the **AQUiUM bio dual unit softeners** with two models. All operate in volumetric mode with the electrochlorination sensor (production of gaseous chlorine during the brining for sterilising the ion exchange resin). The volumetric mode appliance calculates the quantity of water that passes through the softener and determines the average consumption. The turbine installed at the softener output is fitted with a flow sensor to transmit information to the electronic control unit. This 'intelligent' operating mode characterises the **Cillit AQUiUM** water softener.



		Cillit bio compact softener		
		AQUiUM 60	AQUiUM 90	AQUiUM 120
Resin volume	In litres	10	16	20
Exchange capacity	In °f.m ³	60	90	120
Salt mass per regeneration	In kg	1,25	2,00	2,50
Average salt tank autonomy	Number rege.	9	14	11
First salt filling	In kg	16	60	60
Packaging dimension	In cm	57 x 49 x 72	57 x 49 x 118	57 x 49 x 118
Floor load in working order	In kg	55	115	120

Technical characteristics (*) Cillit AQUiUM bio compact

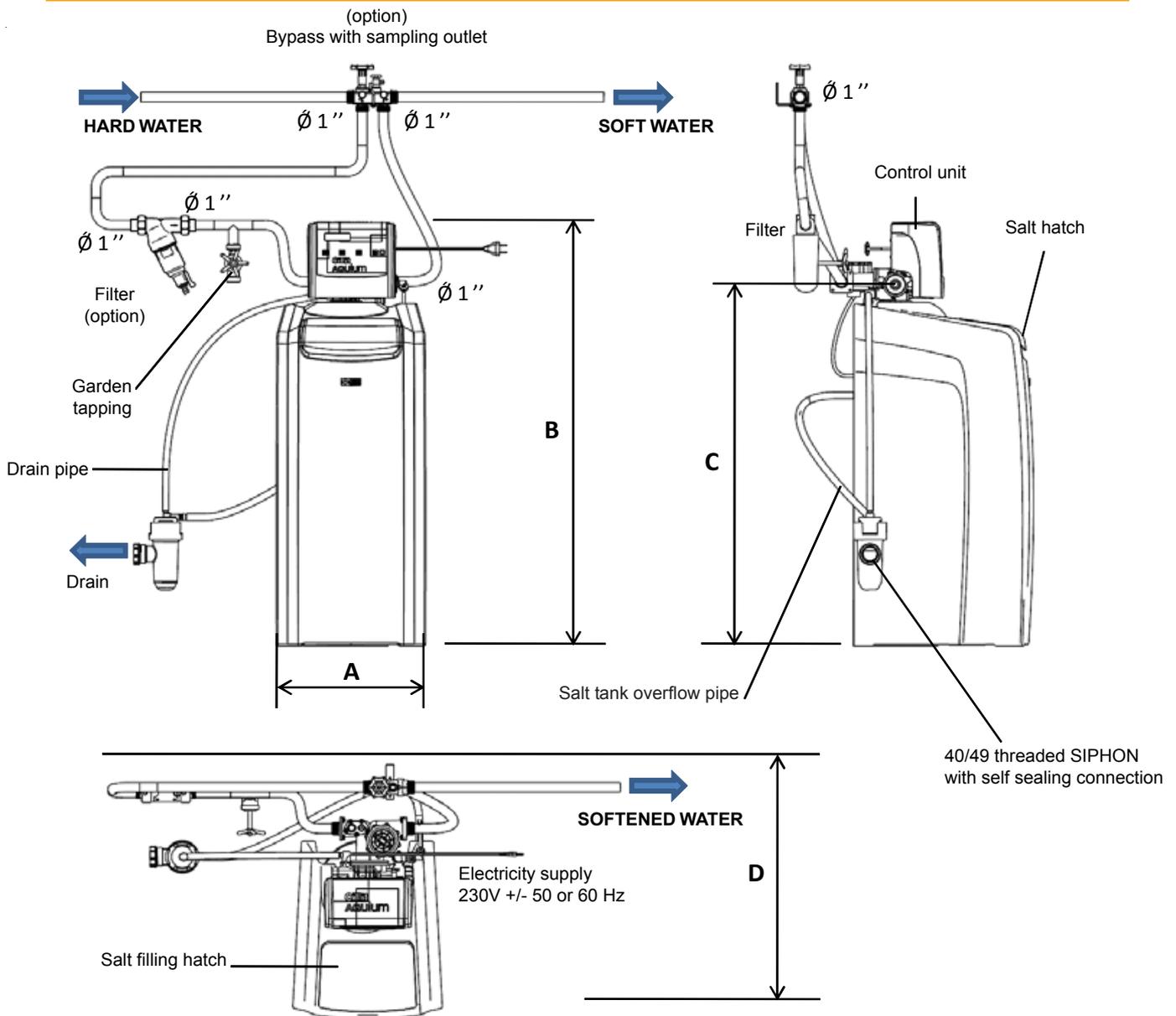


		Cillit bio dual unit softener	
		AQUiUM 90	AQUiUM 160
Resin volume	In litres	16	28
Exchange capacity	In °f.m ³	90	160
Salt mass per regeneration	In kg	2,00	3,50
Average salt tank autonomy	Number rege.	18	9
First salt filling	In kg	75	75
Packaging dimension	In cm	50 x 50 x 136	50 x 50 x 150
Floor load in working order	In kg	130	150

**Technical characteristics (*)
Cillit AQUiUM bio dual unit**

(*) - Some of the data stated are mean values and depend on the settings made

5 - BIO COMPACT CONNECTION DIAGRAM

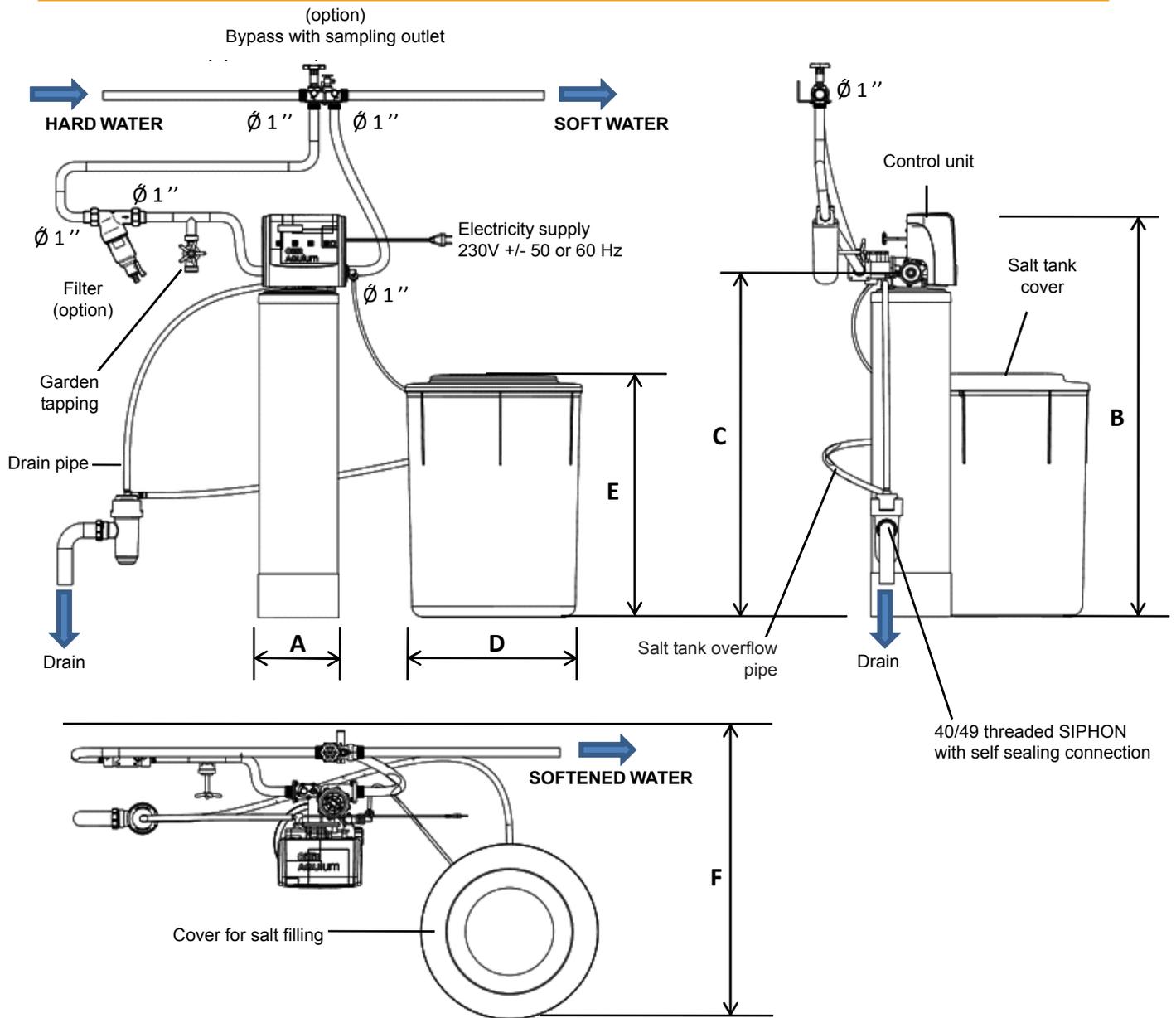


	Cillit bio compact softener		
	AQUium 60	AQUium 90	AQUium 120
Dimension A (in mm)	385	385	385
Dimension B (in mm)	655	1110	1110
Dimension C (in mm)	500	960	960
Dimension D (in mm)	Appr. 680	Appr. 680	Appr. 680

Limit of supplies:

- The inlet / outlet connections of the By-pass (as option), filter (as option) and softener are not supplied by **Cillit**.
- Pipes other than the softener inlet / outlet connection hoses (as option), the salt tank overflow and the regeneration water drain are not supplied by **Cillit**.

6 - BIO DUAL UNIT CONNECTION DIAGRAM

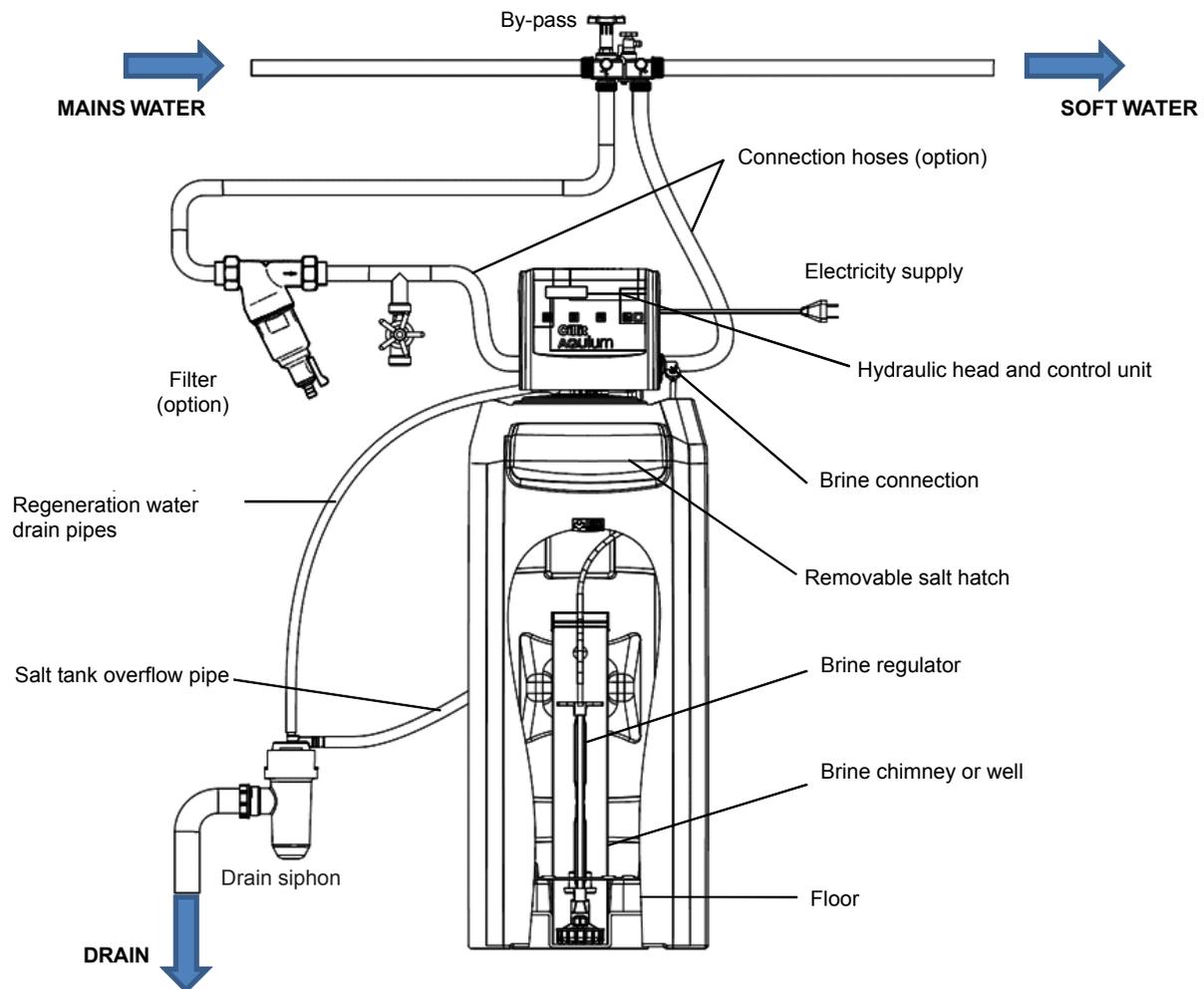


	Cillit bio dual unit softener	
	AQUium 90	AQUium 160
Dimension A (in mm)	195	220
Dimension B (in mm)	1115	1335
Dimension C (in mm)	960	1180
Dimension D (in mm)	480	480
Dimension E (in mm)	670	670
Dimension F (in mm)	Appr. 820	Appr. 820

Limits of supplies:

- The inlet / outlet connections of the By-pass (as option), filter (as option) and softener are not supplied by Cillit.
- Pipes other than the softener inlet / outlet connection hoses (as option), the salt tank overflow and the regeneration water drain are not supplied by Cillit.

7 - BIO COMPACT SOFTENER COMPOSITION



IMPORTANT:

To limit the forces on your appliance in the event of water hammer, we advise you to use flexible connections. A hose kit and a bypass kit are available as options, consult your Cillit reseller or distributor.

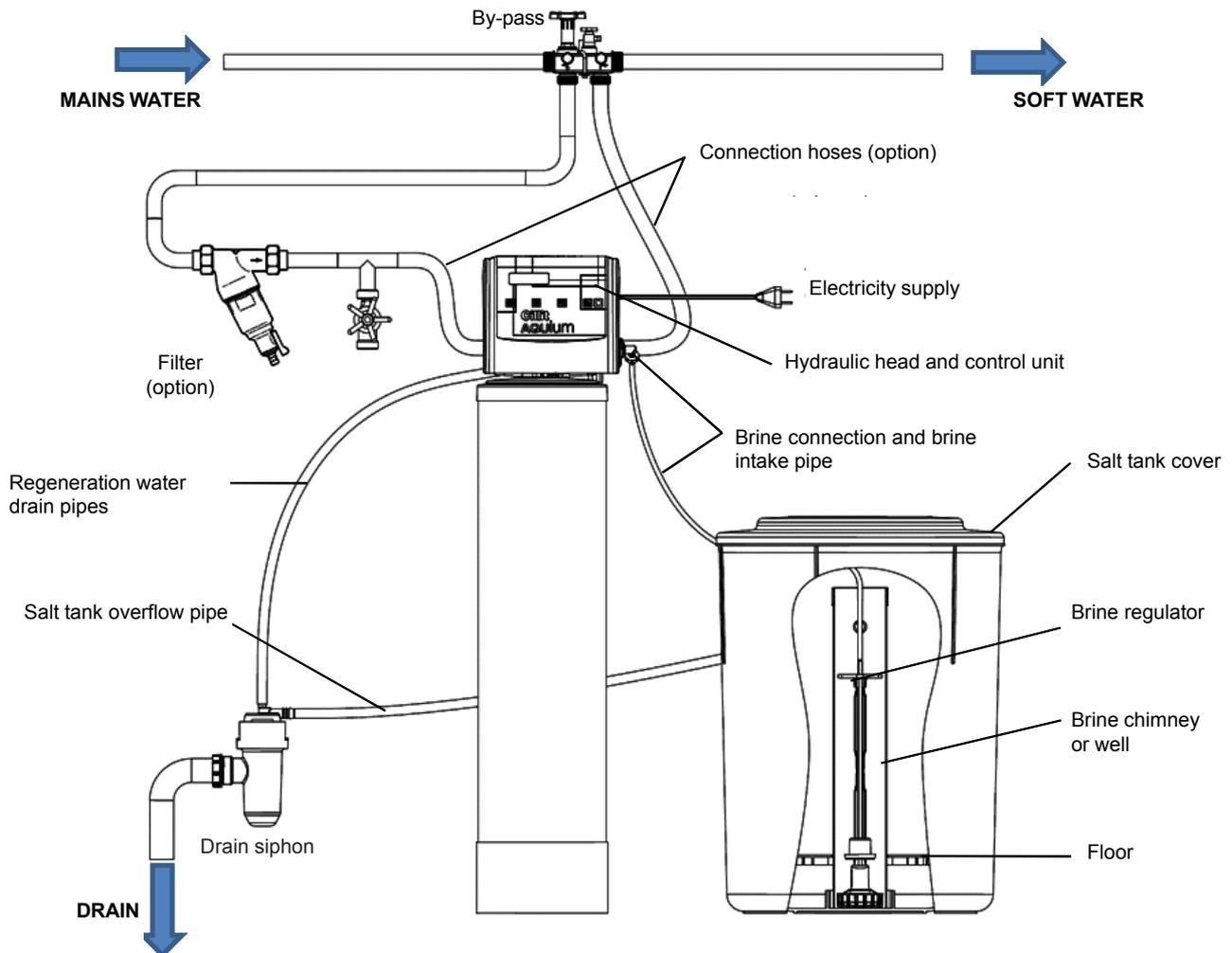
8 - BIO COMPACT PACKING LIST

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

After unpacking you will find:

- this assembly and maintenance manual.
- the salt tank with its filling hatch.
- in two plastic bags, the different hoses, siphon connection accessories.
- the bottle containing the ion exchange resin, and the **AQUIUM** softener hydraulic and electronic control head.

9 - DUAL UNIT SOFTENER COMPOSITION



IMPORTANT:

To limit the forces on your appliance in the event of water hammer, we advise you to use flexible connections. A hose kit and a bypass kit are available as options, consult your Cillit reseller or distributor.

10 - BIO DUAL UNIT PACKING LIST

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

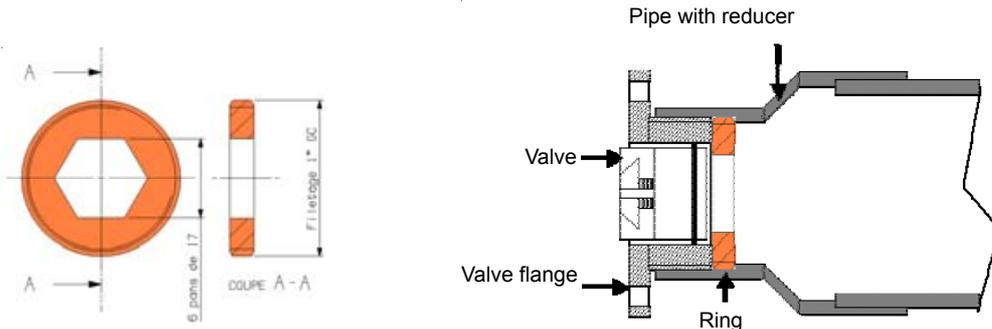
After unpacking you will find:

- this assembly and maintenance manual.
- the salt tank and its lid.
- in two plastic bags, the different hoses, siphon connection accessories.
- the bottle containing the ion exchange resin, and the **AQUiUM** softener hydraulic and electronic control head.

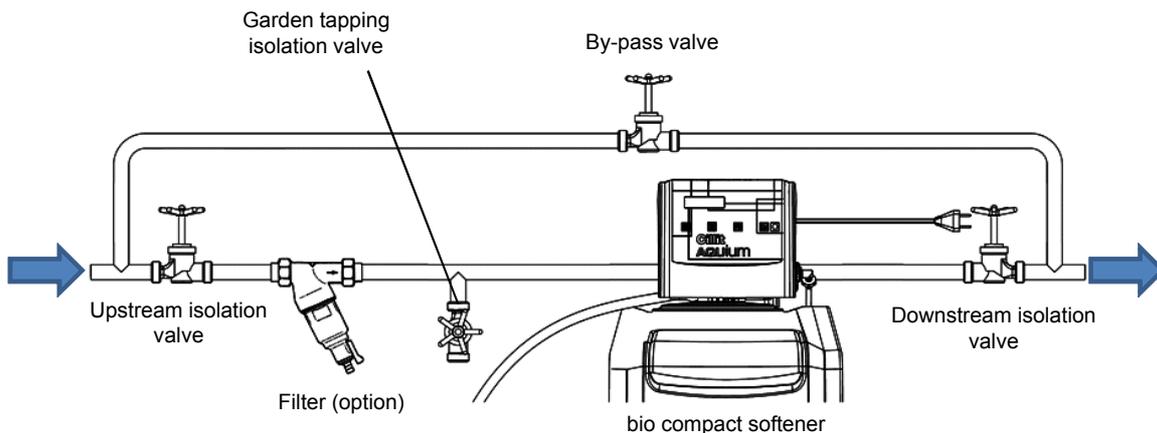
11 - ASSEMBLY, SPECIAL CASE

All our **Cillit AQUiUM** softeners are fitted with a check valve placed at the mains water inlet on the head connection flange. The check valve can come out of the flange in certain extreme operating and assembly conditions (sketch below).

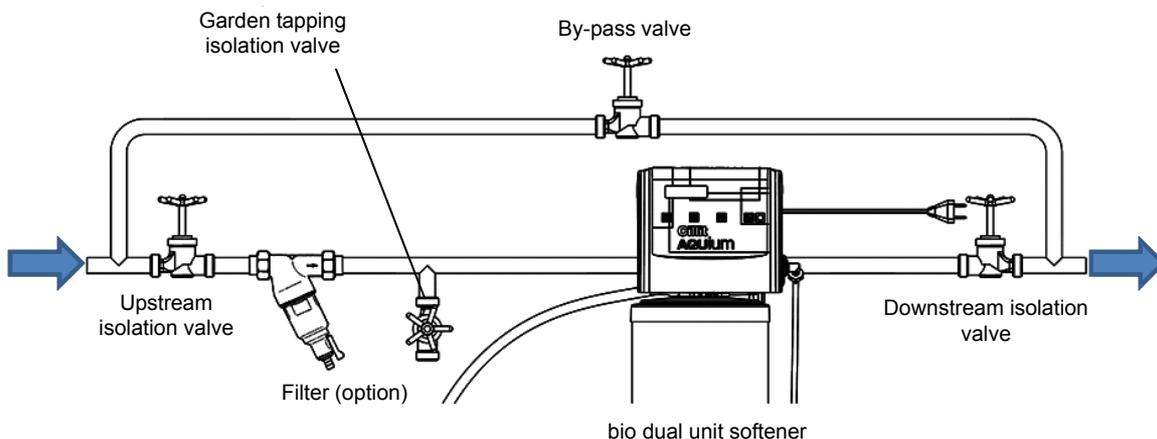
To avoid this phenomenon we recommend connecting the softener with hoses or fitting a special adapter (ring) against the inlet flange, which locks and prevents the valve from coming out of its housing, code P0072127.



1) – Rigid mounting the AQUiUM bio compact softener



2) – Rigid mounting the AQUiUM bio dual unit softener



12 - TECHNICAL CHARACTERISTICS

Supply voltage	230 volts +/- 10%	50 or 60 Hz
Electricity consumption:	operating 6 VA	
	in regeneration 25 VA	
maximum pressure:	7 bars static	
minimum pressure:	1.5 bar dynamic	
minimum flow rate:	0.5 m ³ /h	
water temperature:	35°C max.	
ambient temperature:	40°C max.	

13 - INSTALLATION - ELECTRICAL



Attention, check the tightening of the valve to the bottle before connecting the appliance to the mains. To tighten, turn the valve clockwise. Tightening must be done by hand, without using tools or a lever.

Place the **Cillit AQUiUM bio compact or AQUiUM bio dual unit** softener close to the pipes to which it must be connected (water supply, softwater distribution and drain).

Check the mains pressure; the appliance works on pressure between 1.5 bar dynamic and 7 bars static (install a pressure reducer upstream if the pressure is greater than 4 bar).

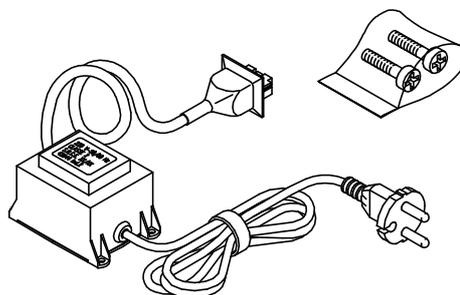
Provide a supply (unsoftened water) for watering the garden, the car and possibly the sink (see connection diagram).

An electrical socket (single phas 230 volts +/- 10% - 50/60Hz) must be provided less than 1.2 metres from the softener, for the electrical supply to the control unit, which is continuously switched on. An earth connection is not necessary, the appliance being double insulation type.

The maximum power consumption of the **Cillit AQUiUM** softener is 25 VA.



Important: for safety reasons the softener electrical supply cable cannot be replaced. If it is damaged, the complete transformer must be discarded and replaced by the transformer subassembly, available in your agency or from your reseller.



Choose a dry room, protected from frost, where there is no risk of the temperature exceeding 40°C maximum. The floor must be flat and resist the loads in working order stated in the chapter concerning the appliance technical characteristics.

14 – HYDRAULIC CONNECTION

1) – The softener

Four orifices are to be connected to the softener head:



Important: To protect your appliance in the event of excess pressure or water hammer, we advise you to use flexible fixing.

A hose kit, and a bypass kit are available as options.

① **filtered mains water inlet:**

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

②

softened water outlet:

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

③

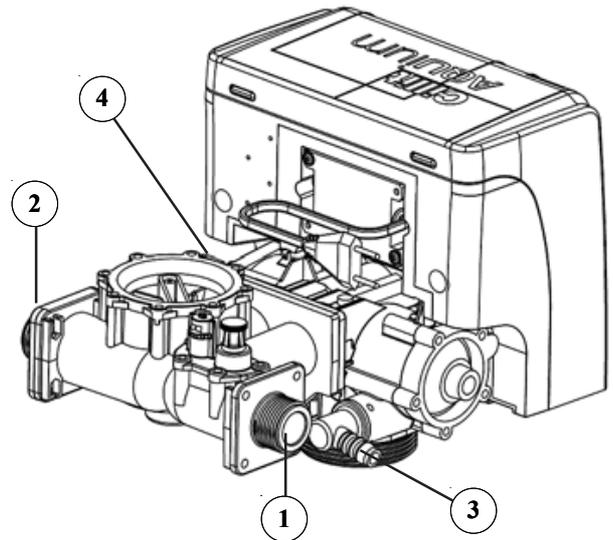
regeneration water outlet:

- Ø16 mm plastic ribbed elbow end fitting (at left).

④

brine regulator connection:

- (in the salt tank) end fitting with wing nut (see 'salt tank' and 'brine regulator' paragraphs).



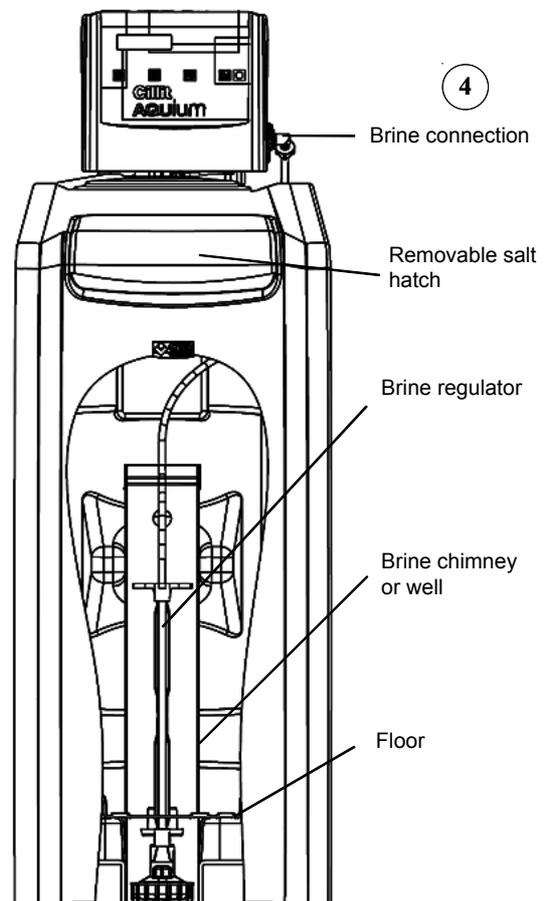
2) - Bio compact softener salt tank

The **Cillit AQUiUM bio compact softener** has a special salt tank that forms a one piece assembly with the softener body.

1/ With the 6/8 diameter grey flexible pipe, connect the softener to the brine regulator. Slide the nut onto the grey pipe, push the pipe well onto the end fitting, then tighten the nut by hand without using a tool. Check that the ends of the grey pipe are accurately cut straight

2) Adjust the brine regulator float situated in the chimney or brine well inside the one piece tank. To do this, refer to table 'Dimensions X' taking care to pull the float rod upwards.

3/ After adjustment, refit the brine regulator in the chimney or brine well against the bottom. Finally, reclose the brine well with the red cover taking care not to bend the 6/8 diameter grey flexible pipe.



When commissioning, insert a special softener pellet salt bag and check that the chimney cover is in place.

Add 10 to 20 litres of water (according to models) to prepare the brine; a minimum of one hour is needed to dilute the salt correctly, so as to have effective brine.

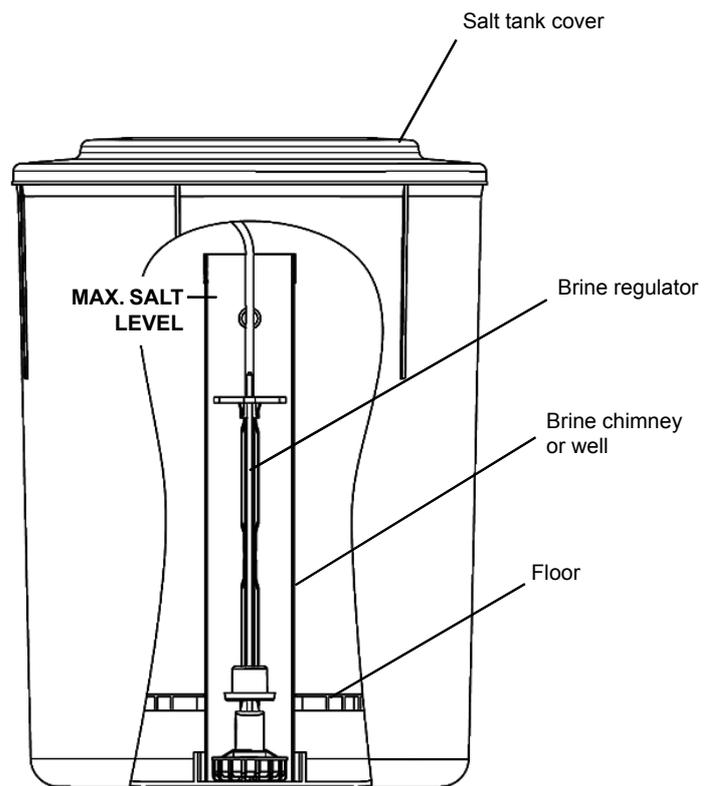
3) - Bio dual unit softener salt tank

The **Cillit AQUiUM bio dual unit softener** has a salt tank that is separate from the softener body. It allows greater autonomy for the installation due to its greater reserve of salt pellets than in a compact softener (one piece salt tank).

1/ With the 6/8 diameter grey flexible pipe, connect the softener to the brine regulator. Slide the nut onto the grey pipe, push the pipe well onto the end fitting, then tighten the nut by hand without using a tool. Check that the ends of the grey pipe are accurately cut straight

2) Adjust the brine regulator float situated in the chimney or brine well inside the one-piece tank. To do this, refer to table 'Dimensions X' taking care to pull the float rod upwards.

3/ After adjustment, refit the brine regulator in the chimney or brine well against the bottom. Finally, reclose the brine well with the red cover taking care not to bend the 6/8 diameter grey flexible pipe.



When commissioning, insert a 25 kg special softener pellet salt bag and check that the chimney cover is in place. Add 10 to 20 litres of water (according to models) to prepare the brine; a minimum of one hour is needed to dilute the salt correctly, so as to have effective brine.

4) - Brine regulator

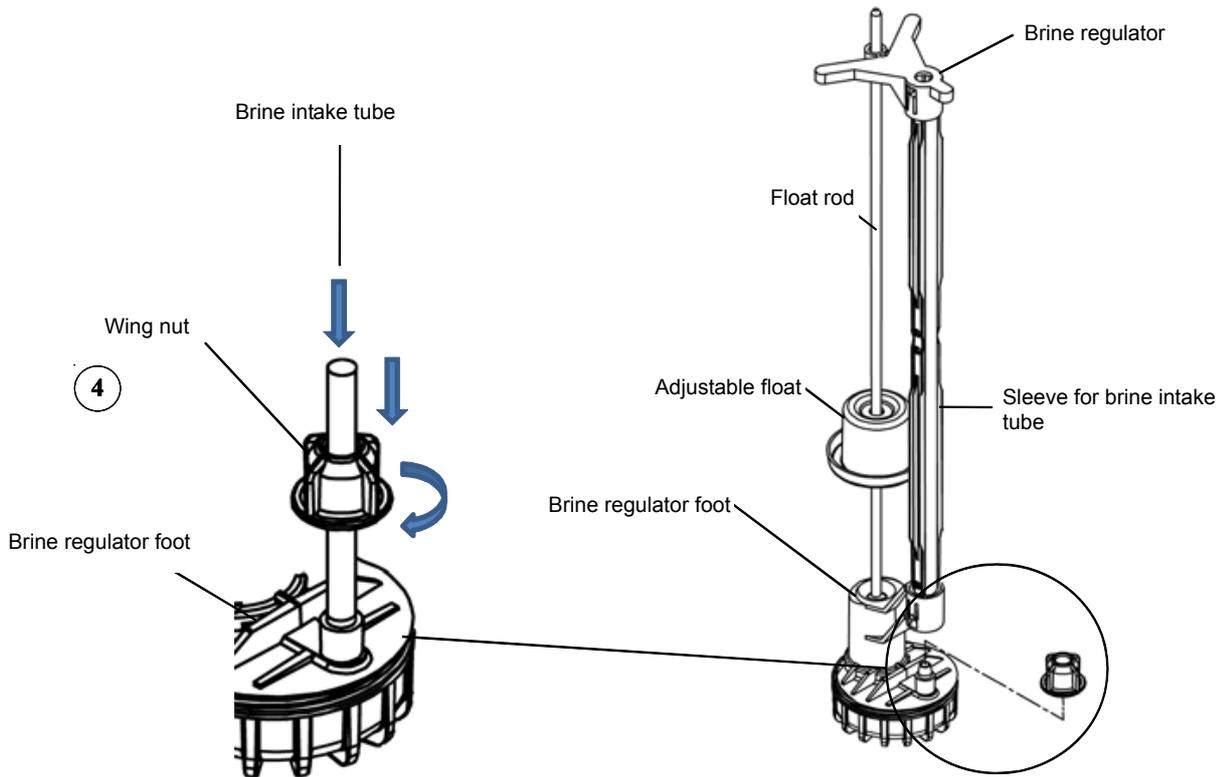
To connect the brine suction hose correctly to the regulator and the valve connection, refer to the drawing on the previous page and perform the following operations.

Cut the end of the grey flexible tube accurately straight, it must not be deformed.

Thread the wing nut into the tube, observing the direction for tightening it.

Insert the grey flexible tube onto the conical connection end fitting and press sufficiently to hold it in place. With the other hand, take hold of the wing nut and tighten it on the waiting connection whilst holding the grey pipe firmly.

Tighten the wing nut correctly without using a tool, then release your hold on the grey flexible tube. Check the assembly by a moderate pull on the grey tube. Restart the operation if the tube does not hold in place.



Dimension 'X' in millimetres	Softeners	
	bio compact	bio dual unit
AQUium 60	90	-
AQUium 90	140	-
AQUium 120	160	-
AQUium 90	-	100
AQUium 160	-	135

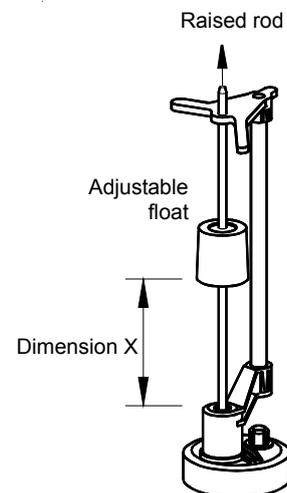


Table of settings for dimension 'X'

5) - Drain connection



Important: the drain connection must be done with a pressure break complying with the regulations between the regeneration water drain hose and the drain pipe, to avoid any risk of pollution of the 'drinking water' circuit by the drain system; to do this, use the siphon delivered with the appliance.

Connect the 12/16 diameter transparent pipe, item 1 (length supplied 1.5 metre) to the upper grooved orifice, to remove the regeneration water, and refix the 'Serflex' collars to both ends.

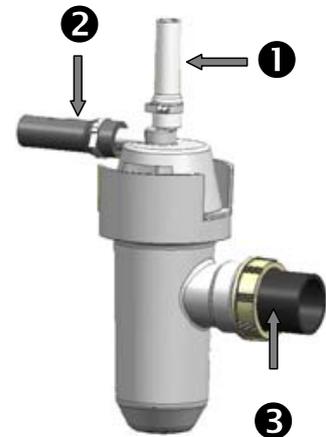


important: this flexible pipe must not be more than four metres long and must be free of cracks.

If the drain is more than four metres away, provide a 40 millimetre diameter rigid PVC pipe between the drain and the siphon. Provide at least a 2% slope for gravity discharge.

on the side orifice, item 2, connect the 15/21 flexible pipe to the salt tank overflow (see connection diagram).

on the 40 millimetre diameter self-sealing connection, item 3, fix a PVC pipe to the drain (minimum diameter 40 mm).



SIPHON



Note : The siphon can be placed in a raised position (up to four metres above the floor). In this case, the minimum mains supply pressure must be greater than 2.5 bars. Provide drainage for the salt tank overflow by any appropriate means.



Important: the salt tank overflow must use gravity drainage.

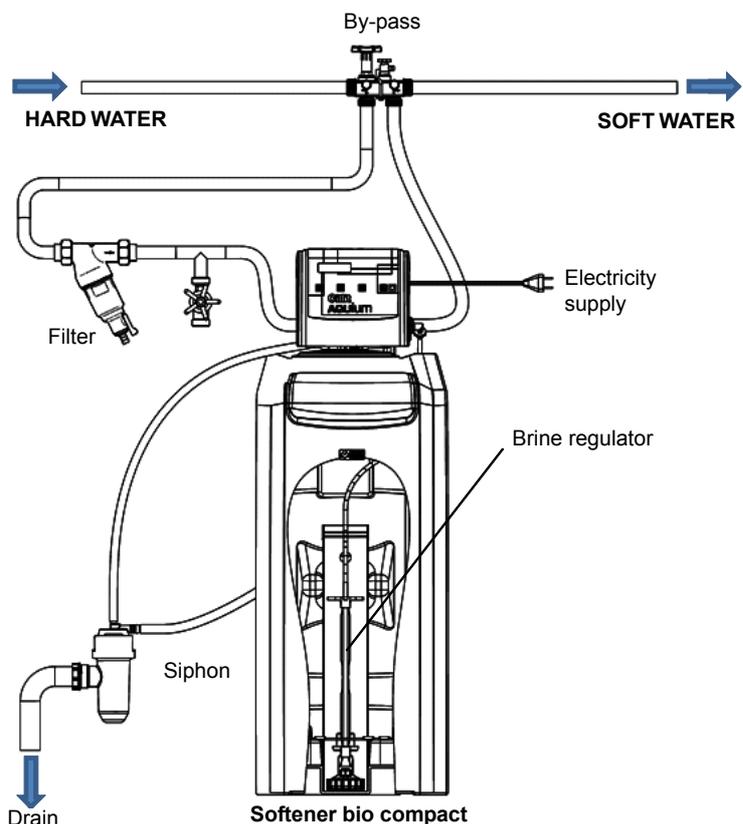
6) - Bleeding the installation

It is imperative to take some precautions before definitive water connection of the installation.

Any plumbing work on the pipes upstream of the softener must be subject to correct rinsing before refilling the installation with water. This means that the equipment (by-pass, valves, isolation valves and softener, must be removed and disconnected from the mains to perform this operation.

With the appliance hydraulically and electrically connected, press the 'Regeneration' button for five seconds, then release (see control unit description)

Then, progressively open the upstream isolation valve. If the by-pass is fitted (option), turn the handwheel to direct the water to the filter and softener.

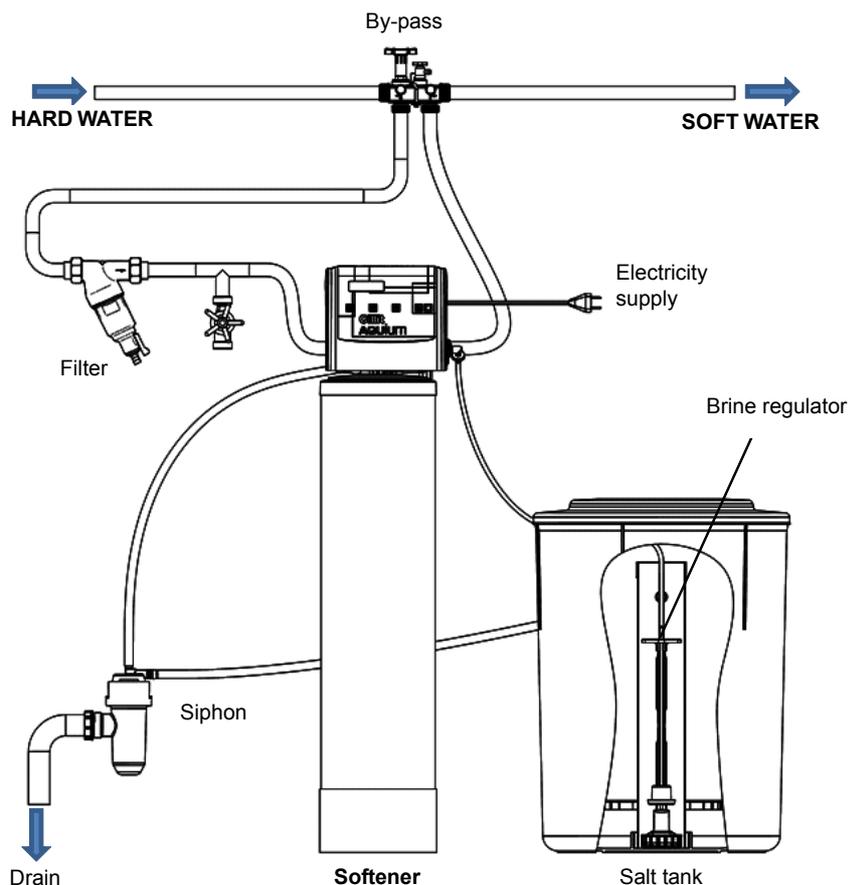
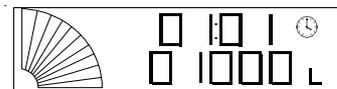


Purging the softener.

After a few seconds, the water will flow into the drain at a high rate. Wait three to four minutes before stopping the regeneration by pressing the 'Regeneration' and 'Mode' buttons simultaneously, then release. The water stops flowing to the drain.

If you do not observe any water flow to the drain, restart the procedure.

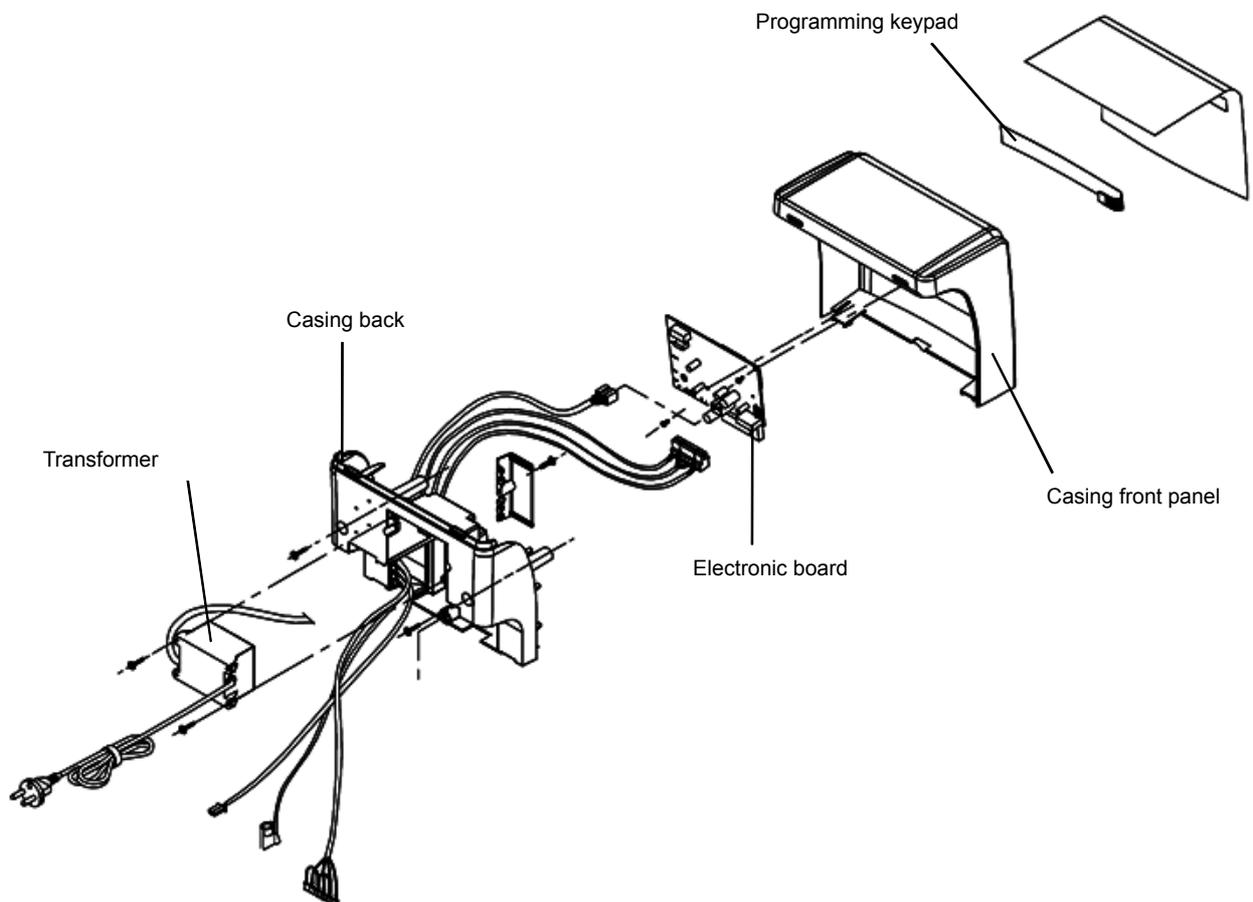
Also bleed the salt tank water-filling pipe. Remove the salt tank filling hatch or cover. Inside the tank, the chimney or brine well protects the regulator. Remove the red or blue cover and press the float guide rod to insert it. The slight resistance is due to mains pressure. When the float is in the low position, the water penetrates the salt tank and must stop at the float level previously adjusted to dimension 'X'



15 - CONTROL UNIT

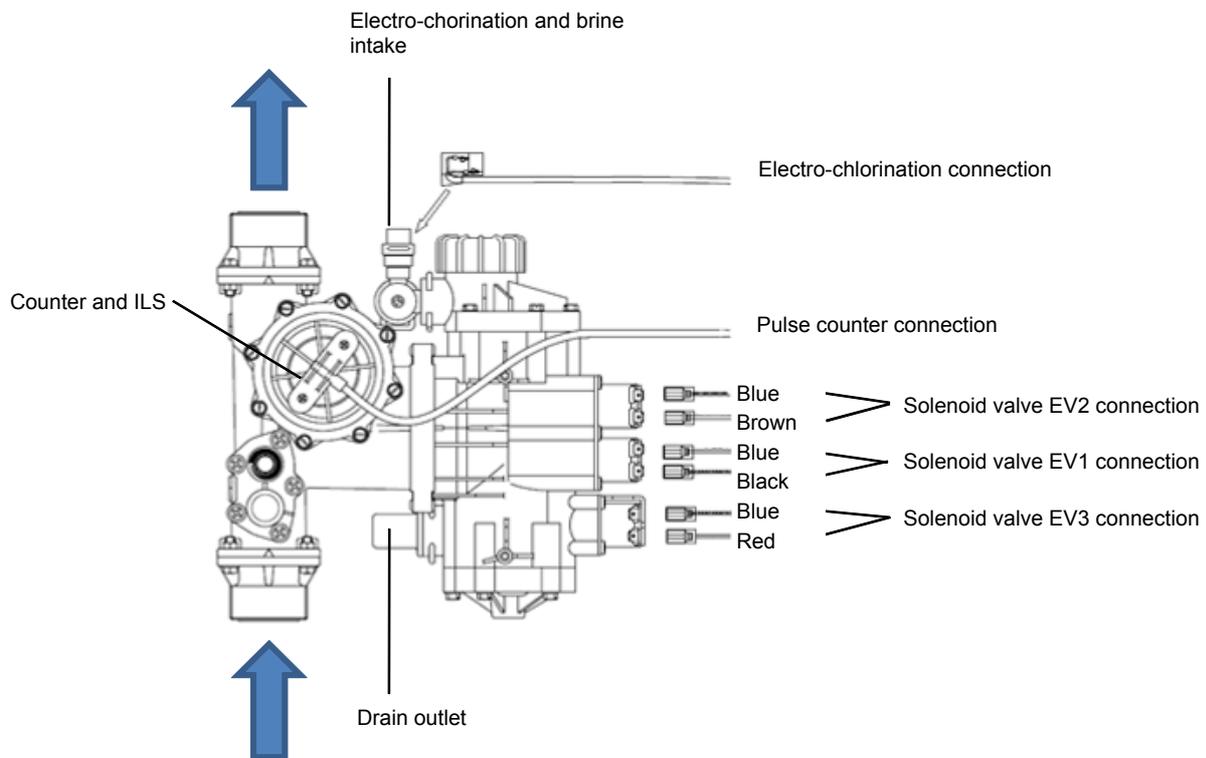
1) - Description of control unit

The **Cillit AQUiUM** 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 supply failure.

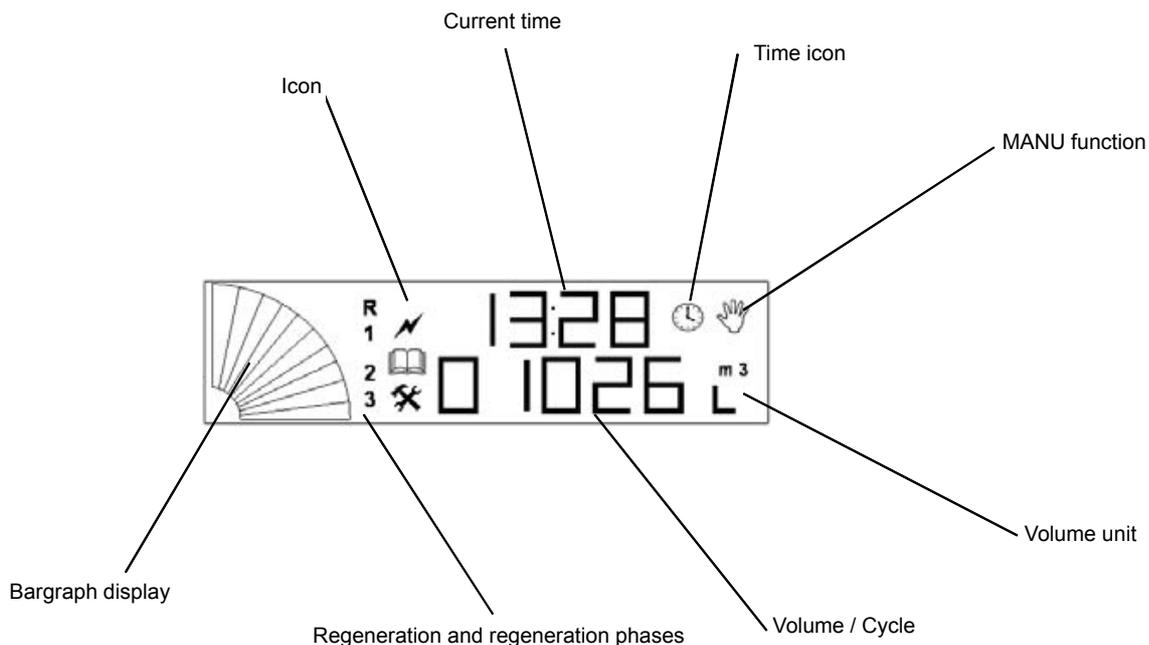


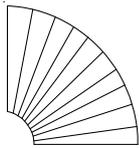
2) - Electrical connection

The softener works with three solenoid valves supplied with 24 volts AC. The diagram below shows the connection to be made when replacing the control unit.



3) - Electronic board display




Bargraph:

- Display of remaining volume (1 dial = 1/10th of the cycle)
- Elapsed time display during regeneration

R
1
2
3
Regeneration:

- 'R' symbolises a regeneration in progress (displayed throughout regeneration).
- '1' backwash phase (displayed during the first phase of regeneration)
- '2' brine drawing and slow rinsing phase (displayed during the second regeneration phase)
- '3' fast rinse phase (displayed during the third regeneration phase)


Brining alarm:

- Displayed when the electrochlorination sensor has not detected brine during the second regeneration phase, at the start of brine drawing.


Maintenance alarm:

- Displayed when maintenance must be done on your installation (for example, filter cartridge replacement). 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.


After Sales Service alarm:

- Displayed when specialised maintenance must be done on your installation by our technicians. 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.

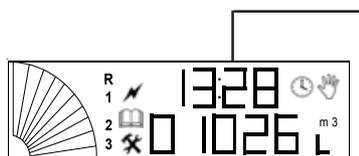

Time (fixed icon)

Manu:

- Indicates that your appliance operating mode is suspended. Softener regeneration is not possible in automatic or manual.

m3
Unit:

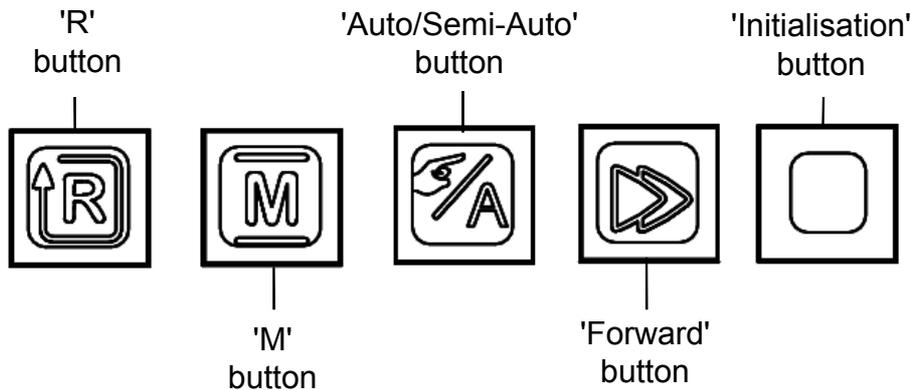
- Displays the unit for the displayed volume.

L


- Displays the current time in 'Service' and 'Test' modes.
- Displays the programming step in programming mode.

- Remaining volume display (depending on programmed unit and cycle).
- Alternating display of regeneration start time and end time display when this is in progress.
- Display of number of regenerations performed since commissioning.
- Display of total volume of water treated since commissioning.
- Programming values input.
- Control unit operating mode code entry.
- Enter the appliance commissioning date.

4) - Keypad keys description and function



'R' button

Pressing the button for at least five seconds starts softener regeneration.
The simultaneous combination of buttons 'R' and 'M' stops the current regeneration.

'M' button

Pressing the button for five seconds allows a change to unit programming mode.
The simultaneous combination of buttons 'M' and 'R' stops the current regeneration.

'Auto/Semi-auto' button

Press the button for about five seconds changes the softener into suspended mode, displaying the specific icon (see display detail). A further five second press returns the softener operation to automatic mode, the icon disappears from the display.

In control unit programming mode, pressing the 'Auto/Semi-auto' button briefly allows the selection to be moved to the right. Modifying the value of the flashing digit is possible with the 'Forward' button.

The simultaneous combination of the 'Main/Auto' and 'R' button starts the 'Test' mode. Pressing the 'M' button next allows all the regeneration phases to be skipped.

'Forward' button

In control unit programming mode, pressing the 'Forward' button briefly allows the value of the flashing digit to be modified. A sustained press of the 'Forward' button runs the value steadily from 0 to 9.

Except when programming, pushing the button for three seconds allows the consumption history to be displayed, meaning the volume of water treated since commissioning. Pressing the 'Forward' button briefly displays the number of regenerations performed since commissioning (regeneration started manually by pressing the 'R' key for five seconds or automatically).

The simultaneous combination of 'Forward' and 'Initialisation' buttons deletes the display of the 'Maintenance' icon (see display detail), the regeneration counter then goes to zero.

'Initialisation' button

The 'Initialisation' button must be combined with another button.

The combination of the 'Initialisation' button and:

- the 'M' button for five seconds allows the generic code that defines the operating mode for your softener to be programmed. When the generic code is programmed, the combination of buttons allows reinitialisation to factory settings.
- the 'Forward' key deletes display of the maintenance 'icon' and resets the regeneration counter to zero.

16 - PROGRAMMING THE CONTROL UNIT

1) - Switching on

Connect the appliance to a standard electrical socket in accordance with the operating characteristics described in this notice.

When the appliance has not been used, or if it is disconnected for at least five consecutive days, on switching on, the unit normally starts in regeneration from the first draw off of treated water equivalent to at least one litre.

- The first line displays the current time, to be set later.
- the second line alternates display of regeneration start time and end time.
- the bargraph is in low position and the characters 'R' and '1' are visible.

To stop regeneration just press the 'Regeneration' and 'Mode' buttons 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 done every day at midnight by the control unit.

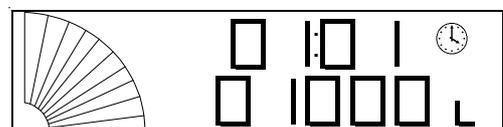
The parameters to be set are as follows:

- a/ - the current time:
 - day 1 for Monday, 2 for Tuesday, etc.
 - then the time from 00:00 to 23:59
- b/ - the regeneration time:
 - from 00:00 to 23:59
- c/ - the total regeneration duration in minutes:
 - see the 'setting regeneration duration' table
- d/ - the mean consumptions:
 - optional because the averages are automatically calculated by the electronics according to the daily treated water consumptions

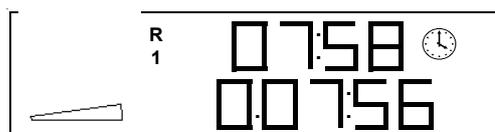
3) - Operating parameters

To programme your **AQUiUM** softener correctly, it is necessary to know the mains water hardness expressed in French degrees. The analysis can be done easily with a water hardness measuring kit available from your distributor or reseller.

After analysing the mains water hardness, refer to the 'Volume of water produced between two regenerations' to adjust the cycle of your softener (visible on the second line of the display).



The second parameter that also needs to be known is the total regeneration duration. It is programmed according to the equipment type and also as a function of your mains pressure. The 'Regeneration duration' allows this value to be set for your **Cillit AQUium** softener.



Softener type	Mains pressure	
	Less than 4 bar	Over 4 bar
AQUium 60 bio compact	32	32
AQUium 90 bio compact	42	33
AQUium 120 bio compact	52	43
AQUium 90 bio dual unit	42	33
AQUium 160 bio dual unit	62	53

'Total regeneration duration in minutes' table

Hardness in °f (TH)	AQUium 60 bio compact	AQUium 90 bio compact	AQUium 120 bio compact	AQUium 90 bio dual unit	AQUium 160 bio dual unit
18	2500	4700	5850	4700	8600
20	2250	4250	5250	4250	7750
22	2050	3850	4750	3850	7050
24	1900	3550	4400	3550	6450
26	1750	3250	4050	3250	5950
28	1600	3050	3750	3050	5550
30	1500	2850	3500	2850	5150
32	1400	2650	3300	2650	4850
34	1300	2500	3100	2500	4550
36	1250	2350	2900	2350	4300
38	1200	2250	2750	2250	4100
40	1150	2100	2650	2100	3900
42	1050	2000	2500	2000	3700
44	1000	1950	2400	1950	3500
46	1000	1850	2300	1850	3350
48	950	1750	2200	1750	3250
50	900	1700	2100	1700	3100

'Volume of water treated between two regenerations'



Note: The values stated above are optimised using the cycle calculation formula described in the 'Quick start' chapter at the start of this manual.

4) - Special cases

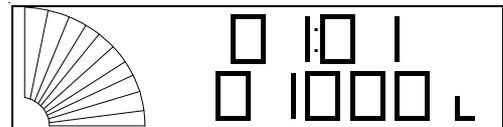
Summary of parameter setting button functions. Press the 'Auto / Semi-auto' button to move to the right in the selection indicated by the flashing digit and modify its value with the 'Forward' button.

If the card is accidentally deprogrammed or when the electronic board is being replaced, and on switching on, the unit displays five zeros with the first on the left flashing. It will remain in this configuration until the operating mode for your appliance is entered and identified by a generic code. The 'Mode' and 'Regeneration' buttons are not actives.

Press the 'Auto / Semi-auto' button to move to the right in the selection indicated by the flashing digit and modify its value with the 'Forward' button.

- Entering the generic code: 22126

Once the five figure operating mode code is displayed, press the 'Initialisation' button to confirm the selection. The next 2 line display states the current time and the softener cycle programmed by default.



Attention: The operating mode code described above corresponds to a well-defined programme in the control unit microprocessor. Any code that is erroneous or that does not correspond to your softener can lead to malfunction and possibly to the loss of the Cillit guarantee.

5) - Displaying the operating mode

To display and check the five figure code, press the 'Mode' and 'Initialisation' buttons simultaneously for five seconds, then release. Check and/or modify the code displayed, then confirm after entering by pressing the 'Initialisation' button twice.

If the code is modified, the control unit programming must be repeated (see 'programming parameters' paragraph).

6) - Return to factory parameters

To reset the programmed operating mode to zero, press the 'Initialisation and 'Mode' buttons simultaneously for five seconds, then release. The press the 'Initialisation' button briefly, the display shows 'ini 0'. Choose '1' with the 'Forward' key, then press the 'Initialisation' button again to confirm the reset to zero.

Then repeat the control unit programming (see 'programming parameters' paragraph).

7) - Semi-automatic operation

This operating mode is advised for discontinuous use where regenerations are started manually. Just press the 'Auto / Semi-auto' button for five seconds. The symbol  for semi-automatic mode is then displayed alongside the clock  symbol.

The 'Regeneration' button is inactive during this mode.

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



Note: It is imperative to leave the semi-automatic mode by pressing the 'Auto / Semi-auto' button for five seconds to be able to start a manual or automatic regeneration.

17) – PROGRAMMING PARAMETERS

The explanations below give the meanings of the programme steps and the value of the parameters to be programmed for your **AQUiUM** softener's operating mode.



Attention: From this moment, to avoid any incorrect setting, the parameter values set remain displayed for 20 seconds; after this and without pressing a button, the display automatically returns to the initial display.



Important: With the exception of the current time, the programming done above will only really be confirmed when the first regeneration is started, either automatically by the electronic unit, or manually by pressing the 'Regeneration' button for 5 seconds. The updated parameters such as the cycle will be displayed correctly from this moment.

In the following steps, use the following buttons to modify the displayed value.

- The 'Avance' button allows the value of the flashing figure to be modified.
- The 'Auto / Semi-auto' button allows the selection cursor to be moved to the right.

To simplify the softener parameter setting, certain programming steps are only accessible after a delay of one hour following the entry of the generic code. The steps are then marked by the symbol '# '.

Switch on the control unit.

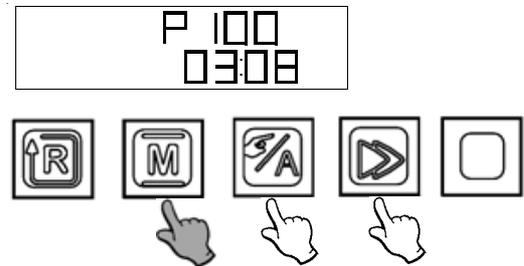
1) - Date commissioned

Press the 'Mode' button, for about five seconds.

The display shows programme step P100 on the first line and the by default commissioning date in weeks on the second line.

example: 03:08 for week 03 of year 2008.

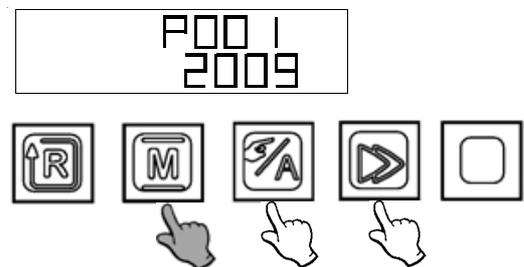
It is possible to change this value by entering the current week on commissioning



2) – Current year

Press the 'Mode' button again. The display shows programme step P001 on the first line and the by default current year on the second line.

Set the value of the current year.

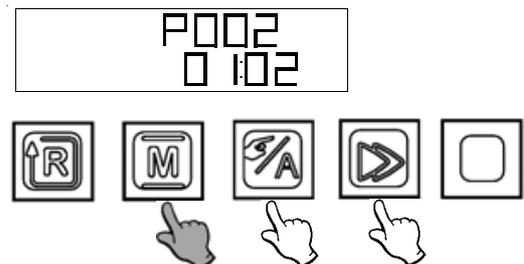


3) – Current Day and Month

Press the 'Mode' button. The display shows programme step P002 on the first line and the by default current day and month on the second line.

example: 01:02 for the 1st February.

Set the current day and month value.



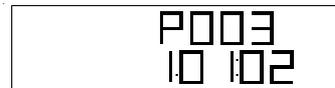
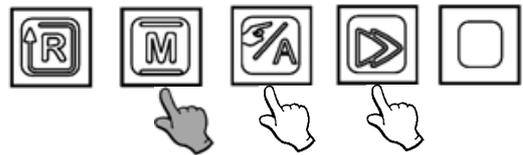
4) - Current Day and Time

Press the 'Mode' button. 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: 1.0102 for the Monday at 01:02.

the first figure corresponds to the day of the week number from 1 to 7 days. Monday is equal to 1, Tuesday to 2, Wednesday to 3, etc.

Set the current day and time value in the 24 hour clock.

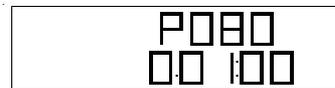
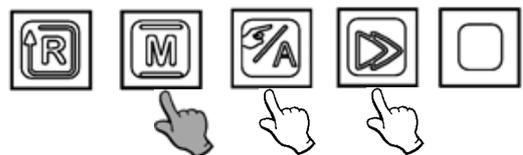
5) - Regeneration time

Press the 'Mode' button. The display shows programme step P080 and the default regeneration time. This setting allows the regeneration to be planned depending on the consumption.

example: 0.01:00 for 01h00.

Set the regeneration time value in the 24 hour clock.

The first figure cannot be adjusted.

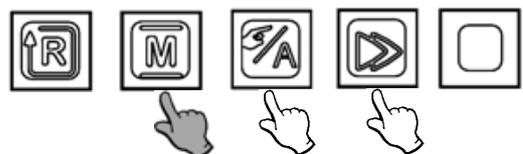



6) - Regeneration duration

Press the 'Mode' button. The display shows programme step P050 and the value corresponding to the total regeneration time in minutes.

example: 064.

Set the regeneration duration expressed in minutes. To make this setting, refer to the 'Total regeneration duration' table in the 'Unit programming, operating parameters' chapter.

7) - Cycle or water produced between 2 regenerations

Press the 'Mode' button again. The display shows programme step P040 and the default regeneration cycle.

example: L.1000 corresponds to a 1000 litre cycle

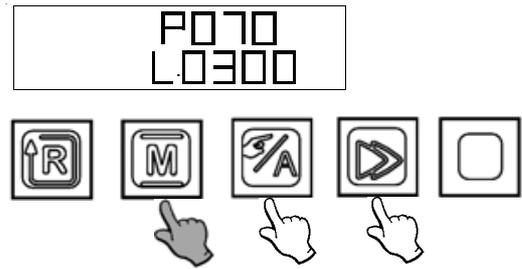
Set the cycle corresponding to the volume of water produced between two regenerations. Refer to the 'Total regeneration duration' table in the 'Unit programming, operating parameters' chapter.

To calculate the cycle for your softener, it is necessary to know the mains water TH in French degrees.

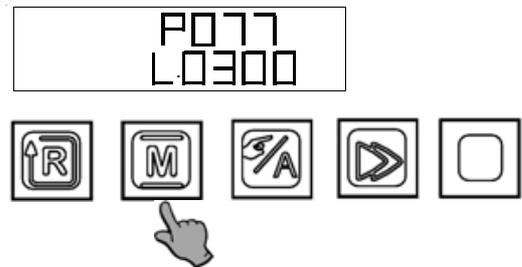



8) – Consumption averages

Press the 'Mode' button. The display shows 'P070' and the value in 'L.0300'. This value corresponds to the initial average. It can be programmed if the daily consumptions are known. The A5X electronic unit will automatically record and modify this depending on the consumption. The average is calculated daily at the regeneration time programmed in step P080.



Then press the 'Mode' button in pulses to set the averages if necessary up to programme step P077, default value L.0300.

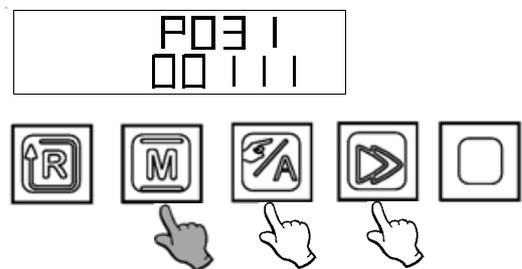


9) – Alarm activation

Press the 'Mode' button again. The display shows programme step P031 and the alarms to be selected. See the table below to configure the alarms that will be shown on the display.

The value '0' = alarm not active

The value '1' = alarm active

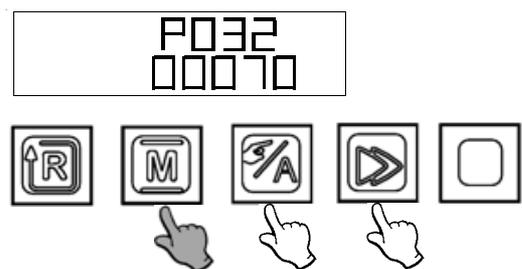


0	0	1	1	1
Pressure switch alarm not used	Low salt alarm not used	Electrochlorination sensor alarm	Maintenance alarm	After Sales Service alarm
		If problem detected by the electronics after an 80 second delay at the start of the brining phase, activation of the alarm on the display after regeneration	Programming at programme step 'P032' expressed in number of regenerations	Programming at programme step 'P033' expressed in number of regenerations
		⚡		
		Acknowledge the fault by pressing the 'Forward' button	Acknowledge the fault by pressing the 'Forward' and 'Initialisation' buttons simultaneously	Fault acknowledgement only by our technicians

10) – Maintenance alarm

Press the 'Mode' button again. The display shows programme step P032 and the default number of regenerations after which the maintenance alarm is displayed.

If necessary set the maintenance alarm parameter from 1 to 999 regenerations. If the alarm was not selected during parameter setting in programme step P031, no maintenance alarm can be displayed.



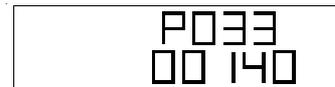
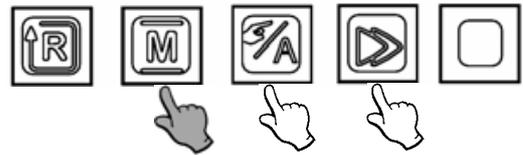
Complete the 'programmed parameters list' page 12.

11) – After sales service alarm

Press the 'Mode' button. The display shows programme step P033 and the default number of regenerations after which the after sales service alarm is displayed.

If necessary set the After Sales Service alarm parameter from 1 to 999 regenerations. If the alarm was not selected during parameter setting in programme step P031, no After Sales Service alarm can be displayed.

Complete the 'programmed parameters list' page 12.

12) - End of programming

Press 'Mode'. The programming phase is completed and the display returns to the service configuration.

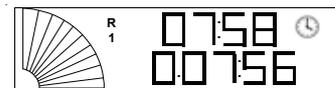
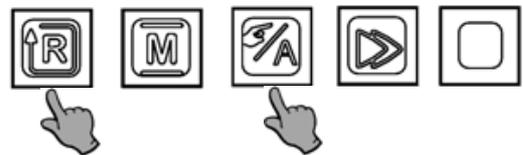



13) - Additional regeneration

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

This does not modify any setting and the microprocessor takes it into account for the calculations below.

The additional regeneration counts for the 'maintenanc' and 'After Sales Service' alarms.

14) – 'TEST' Programme

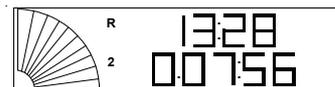


Attention: This test is reserved for technicians and allows the correct operation of the softener and the different regeneration phases to be checked.

To start the 'Test' programme, press the 'Regeneration' and 'Auto / Semi-auto' buttons simultaneously for about five seconds.

The softener starts the regeneration, and displays 'R1'. The bargraph remains in the top position throughout the duration of this test.

To go to the next regeneration phase (brine intake and slow rinsing), press the 'Mode' button briefly. The display changes to 'R2'.




Note: To confirm the operation of the Bio sensor, this step must be maintained for at least two minutes.





A new press on 'Mode' allows a change to fast rinse, the last regeneration phase.



Attention: We advise allowing the completion of this last phase if the brine intake phase was tested for several minutes, this is to rinse the resin contained in the softener bottle correctly.

A final press on the 'Mode' button terminates the Test programme and allows a return to the initial display.



Note: The electronics do not handle the summer and winter time changes in use in France. Consequently it is necessary to make the change manually using the procedure described in step 4, programme step P003.

15) – Electricity failure

Each softener is protected against accidental or intentional electricity failures, with a lithium battery incorporated in the electronic circuit. 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. The water consumption is done according to the averages recorded before the mains electricity failure and the duration of the failure.

If a regeneration should have happened during the electricity failure, it will be started automatically when the electricity supply returns.

18 - FIRST REGENERATION

To perform a regeneration, proceed as described in the 'Additional regeneration' paragraph. The regeneration water will flow to the drain. The second line of the display shows the regeneration start time and end time alternately.



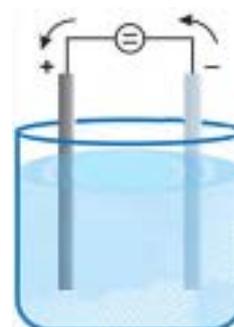
The regeneration phases (described below) will be done automatically one after the other.



- 1 = backwash,
- 2 = brine drawing,
- 3 = slow rinse
- 4 = fast rinse.

Electrochlorination (bio):

The electrochlorination procedure consists of in situ production of chlorine by electrolysis of a sodium chloride rich solution. The preparation of this brine requires the use of softened water, to avoid the cathodes of the electrolysis cells (where the OH⁻ ions are produced) furring up rapidly.



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

Similarly, at the end of regeneration, the salt tank receives water through the small flexible pipe of the brine regulator. This water is intended to make the brine for the next regeneration, the level will be controlled by the float that is located inside the salt tank chimney (grey tube).

19 - OPERATION

1) - Adjusting the softened water (residual TH)

The softened water is measured with an analysis kit (not supplied), as follows. Take the water from the softener outlet after closing the general bypass and bled the downstream circuit.

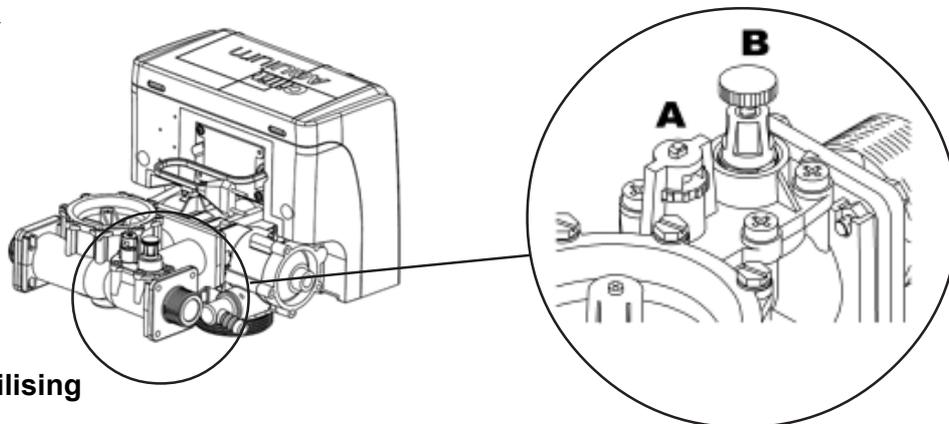
The softeners are fitted with a mixer tap situated at the back of the appliance. The mixer allows the hard water and softened water to be mixed to create the residual hardness desired by the user.



Note: There is no recommended value for this adjustment. It is a user choice between 0°f and 15°f, the latter value being used in public and shared buildings.

2) - Adjusting the residual TH

- Tighten the handwheel **B** completely, then unscrew it by 1/2 turn or 3/4 turn.
- Slightly open an installation valve downstream of the softener and adjust the residual TH by turning button **A** clockwise to increase the residual TH or in the opposite direction to reduce it.
- With adjustment completed, open the valve or several valves completely to obtain a large flow rate and tighten the thumbwheel **B** if the residual TH is too high and conversely, unscrew it if the TH is too low.
- The check can only be done with an analysis kit.



3) - Sterilising

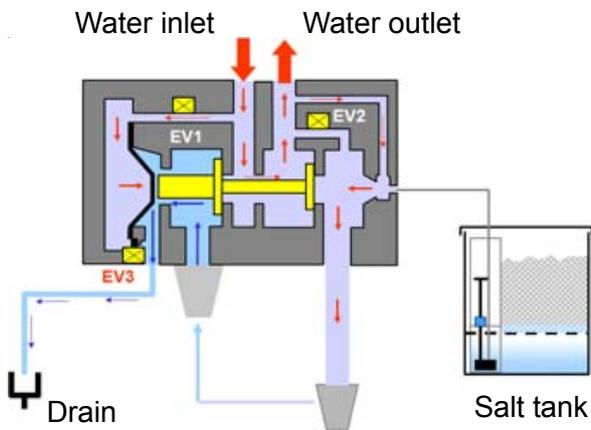
To avoid the risk of undesirable microbiological proliferation, the softener must be disinfected using bleach employed in the doses stated in the table below.

At least once every six months, take advantage of refilling the salt tank to disinfect the softener installation.

Introduced a dose of bleach into the brine regulator chimney and then manually start a regeneration by pressing button 'R' for five seconds.

Softener type	Quantity of concentrated bleach at 39° chlorometric (trade packs) to be used (in ml) in the salt tank (after filling with salt).
AQUIUM 60 bio compact	3
AQUIUM 90 bio compact	5
AQUIUM 120 bio compact	5
AQUIUM 90 bio dual unit	5
AQUIUM 160 bio dual unit	6

20 - VALVE OPERATION



BACKWASHING

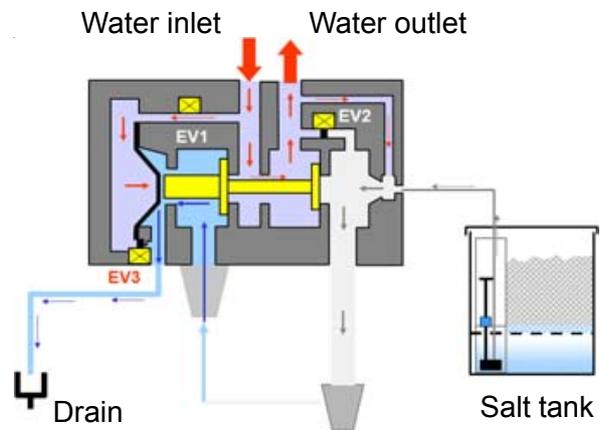
First regeneration phase.

Backwashing is done from bottom to top in the bottle and prepares the resin bed for the passage of the brine.

This stage only lasts for a few minutes, the water will run to the drain at a high rate.

Solenoid valve no 1 controls the membrane that moves the mechanism inside the valve.

Solenoid valve no 2 is also open to increase the water flow to the drain.

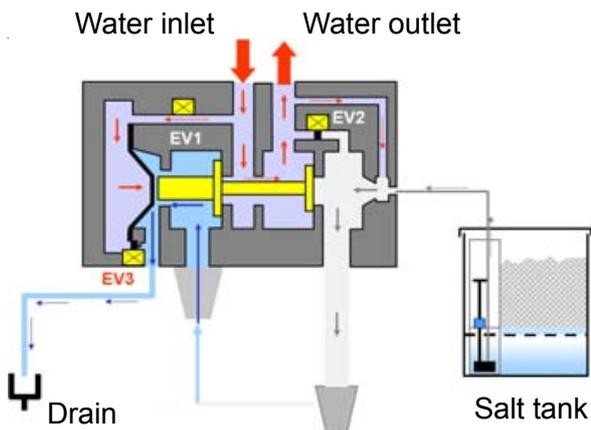


BRINE DRAWING

The important phase of regeneration, brine drawing is done from bottom to top and provides the resin with a saturated brine solution. The sodium ions will replace the calcium and magnesium ions previously fixed by the resin.

The water flows to the drain at low rate.

Solenoid valve no 2 is closed to force the water to pass through the hydro-ejector. This forms a pressure drop to suck up the brine previously prepared in the salt tank.



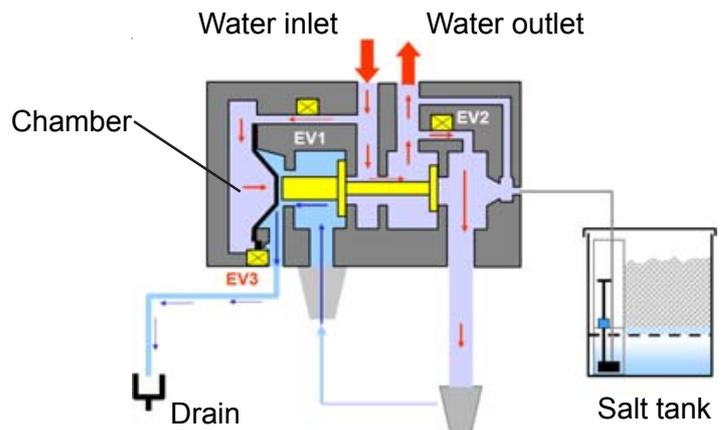
SLOW RINSING

When the brine content of the tank has been completely sucked up, a quantity of water is held in the resin to remove the residual sodium ions.

The water flows to the drain at low rate.

Solenoid valve no 2 remains closed.

Solenoid valve no 1 holds the mechanism in the regeneration position.



FAST RINSING

Final regeneration phase. Rinsing is done from bottom to top, it allows the removal of any sodium residues still present in the bottle.

This stage only lasts for a few minutes, the water runs to the drain at a high rate.

Solenoid valves no 1 and no 2 are switched on.

Following this stage, solenoid valve no 3 opens for several minutes to decompress the chamber and the water must stop flowing to the drain.

21 - INCIDENTS, CAUSES AND REMEDIES

Concerns	Incidents	Causes	Remedies
Control unit	Additional regeneration impossible	Incorrect generic code recorded an regeneration blocked in wait position	Interrupt the regeneration and check the generic code
		'Semi-automatic' mode started.	Press the 'Auto/ Semi-auto' button for five seconds, then release. The hand icon should disappear and the bargraph stop flashing. If the fault persists call the After Sales Service.
	Flashing bargraph in operation	'Semi-automatic' mode started.	Press the 'Auto/ Semi-auto' button for five seconds, then release. The hand icon should disappear and the bargraph stop flashing. If the fault persists call the After Sales Service.
		There is an active alarm	Locate the alarm icon being displayed and refer to the chapter on the control unit.
	Flashing bargraph during regeneration	Electrochlorination sensor fault	Check the salt level in the tanks. If the fault persists, call the After Sales Service.
	Incorrect time displayed	Time reset to 00:01 after a power failure, backup battery U.S.	Call the After Sales Service.
No display	Mains electricity failure.	Check that electrical voltage is present on the electrical socket. If the fault persists, call the After Sales Service.	
Abnormal water flow to drain			Check that the appliance is not in regeneration, if not call the After Sales Service.
Abnormal flow at salt tank overflow		Incorrectly closed brine regulator, leaks.	Remove the brine regulator from the salt tank, check tightening. Check that the connectors and seals are watertight and refit the assembly. If the fault persists call the After Sales Service.
Regeneration outside the programmed times		Standby mode activated.	To preserve the quality of water produced by the softener, additional regenerations can take place if the water consumption is too low. Regeneration is then started either at the first drawoff after a long period of absence, or after a maximum time since the last regeneration.
Exceptional cases		The softener does not produce softened water.	Check that the different isolation and bypass valves are in the correct positions. Check that the appliance is connected to the electricity supply. Check that there is salt in the salt tank. Check that the filter cartridge is not clogged.

Once these checks have been done, start a manual regeneration and if you still do not have softened water after this regeneration, call the After Sales Service.



IMPORTANT: after any work on the softener water system, sterilise it as described in the 'Operation' paragraph of chapter 3 'Sterilising'.

22 - MAINTENANCE

For the correct operation of your softener and so that this gives you all possible comfort and safety, it is important to ensure regular maintenance.

In fact, certain components undergo normal ageing inherent to the operation of the appliance. These components, also called operating and/or wearing parts must be regularly replaced by someone qualified and authorised to perform this operation.



The operating and wearing parts are excluded from our general guarantee conditions. Also see our applicable guarantee conditions, 'Exclusion from guarantee' paragraph.

The replacement frequency is determined in accordance with the equipment installation and operating conditions. A visual examination of the appliance must be done at least once a year to determine the condition of the connections, connectors, display, etc.

Our appliances are guaranteed from the date of commissioning (see our applicable guarantee conditions).

In any case, the legal guarantee, which obliges a professional seller to guarantee the buyer against all consequences of hidden faults or defects of the thing sold or service rendered, applies.

- Check regularly

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

To check the TH hardness, **Cillit** can offer you TH kits allowing these analyses to be done easily.

- Every six months

Before any use, recommissioning and after any work on the water system, sterilise the softener installation as described in the 'Operation' paragraph of chapter 3 'Sterilising'.



We also advise you to clean the resins using the '**RESINET**' product.

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

- Annually

Check the absence of excessive quantities of insoluble salt deposits. Completely clean the salt tank and the brine regulator.

For this work, it is necessary for the salt tank to be empty, to ease the work, do not add salt. Isolate the appliance by closing the installation upstream and downstream valves and bleed the system correctly. Disconnect the electrical socket that supplies the softener.

Check the correct operation of the brine regulator, replace the parts if necessary.

- 'Maintenance' Alarm

This alarm is indicated by the  icon on the display

It stipulates, for example, the replacement of the filter cartridge of the filter installed upstream of the softener or any other event mentioned at the start of the instruction paragraph 'List of programmed parameters' and completed during commissioning.

- 'After Sales Service' Alarm

The alarm symbolised on the display  means that you must call our technician for an After Sales Service activity. This can be linked to the replacement of operating and/or wearing parts that guarantee the correct operation of your installation. Refer to the start of the instructions at the paragraph 'List of programmed parameters' completed during commissioning.



Important:

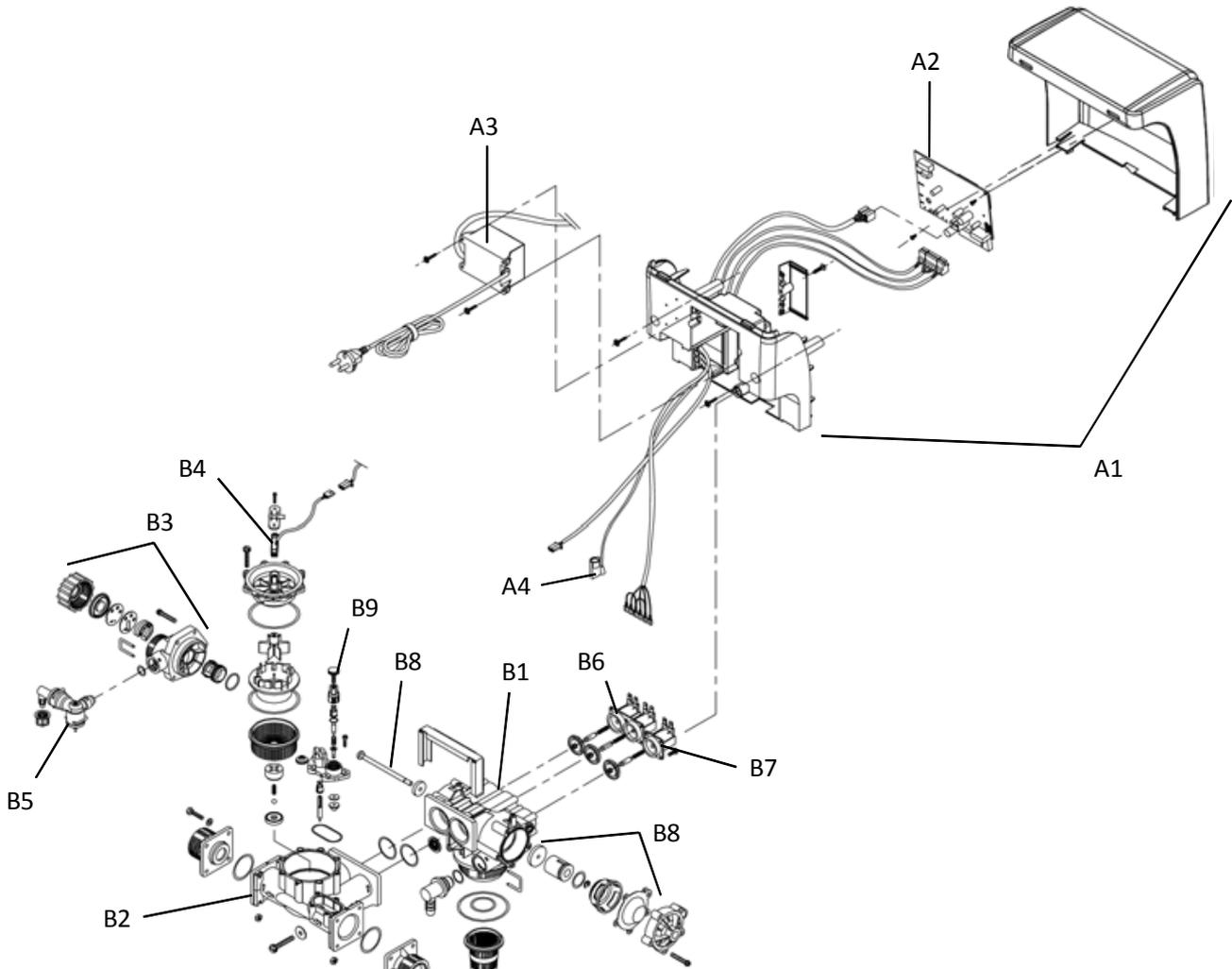
Have operating and wearing parts checked and replaced as necessary by someone authorised to work on the appliance. Check the sealing, the control unit programming and the regeneration cycles and perform a test. It is imperative that your softener should be correctly and regularly maintained by a professional.



Note: The information stated below is a minimum. Depending on the quality of the water to be treated and its change over time, the appliance type and installation location, upstream or downstream processes, it can be necessary to provide increased maintenance in different periods.

Our Cillit regional agencies are available to you to offer a tailor made technical support contract for your appliance if you want it.

23 - EXPLODED VIEW



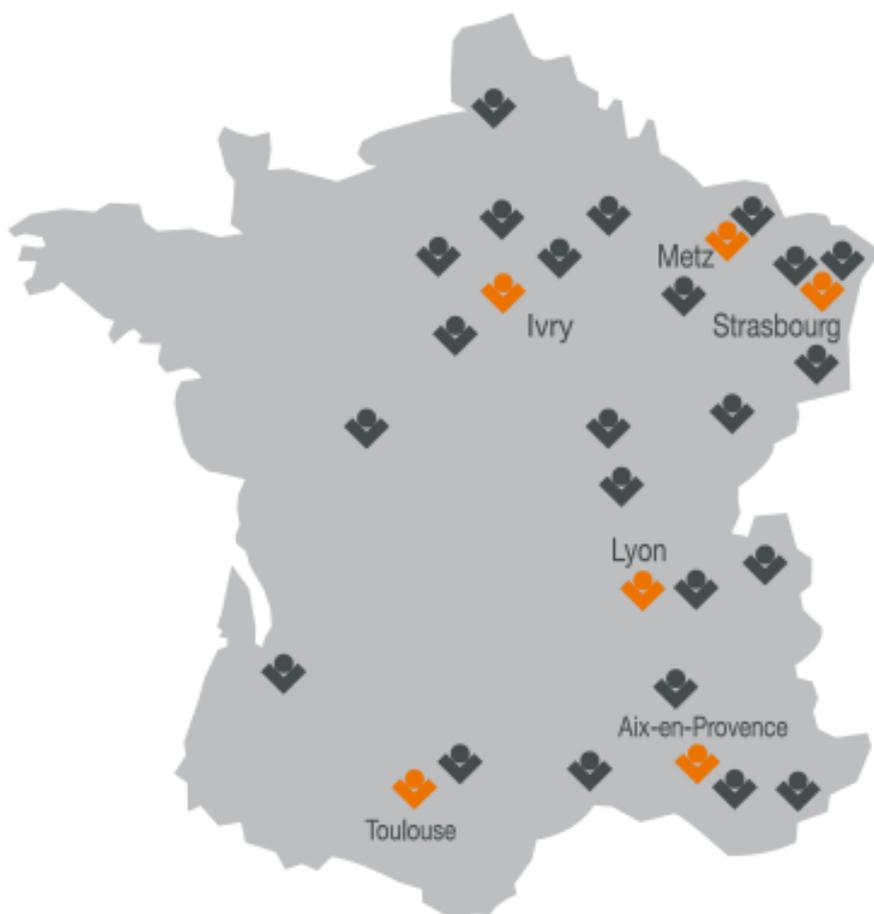
Items	Description	Recommended replacement frequency	Operating and wearing parts
A1	Complete control unit	spare	no
A2	Electronic board A5X	spare	no
A3	transformer	spare	no
A4	Connection cable for electrochlorination sensor	3 years	yes
B1	S/E front hydraulic unit	spare	no
B2	S/E rear hydraulic unit	spare	no
B3	Complete hydro-ejector	spare	no
B4	ILS for counter pulse transmitter	3 years	yes
B5	S/E electrochlorination sensor	3 years	yes
B6	Double solenoid valve (EV1 + EV2)	2 years	yes
B7	Single solenoid valve (EV3)	2 years	yes
B8	S/E moving unit and membrane	1 year	yes
B9	S/E residual TH setting	spare	no
NR	Brine regulator	3 years	yes

Attention: The operating and wearing parts are excluded from our general guarantee conditions.
The recommended replacement frequency varies depending on the appliance use.



For information, advice,
study of your installation

Contact the Cillit team in
your regional branch



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