ORIGINE FRANCE GARANTIE

BVCert. 6012067

SOFTENERS

PERMO 5000

A5X

VERY IMPORTANT: Before any connection, supply of water and use, read the present manual carefully. Failure to follow this manual will **invalidate** the **BWT** guarantee.
The photos and diagrams are not contractual.

WWW.bwt-group.fr

For You and Planet Blue.

BWT BEST WATER TECHNOLOGY

NOTICE

Dear Customer,

Please read this manual attentively before undertaking installation, commissioning and maintenance of this appliance. It is the responsibility of the owner of the appliance to ensure that persons having access to this appliance are familiar with this manual and understand it.

This appliance must be installed in a clean, dry, correctly ventilated location that is not accessible to unauthorised persons.

This appliance must be protected from weather, sources of heat and chemical product vapours.

The electrical units must only be opened by an authorised person understanding the dangers of electrical current – **DANGER OF ELECTROCUTION**.

The operation and maintenance of the appliance must be done by a duly authorised person having the required knowledge for this type of operation.

It is the responsibility of the owner of the appliance to ensure that the persons working on it are provided with suitable tools and equipment for these operations.

It is necessary to use chemical products in certain appliance maintenance operations. It is the responsibility of the user to ensure that he knows any dangers from these products and to use collective or individual protection to protect themselves against these dangers.

This appliance must not be modified without prior written authorisation from the manufacturer.

The surfaces of this appliance must not be cleaned with alcohol or an alcohol based product, or with a product containing plastic solvents.

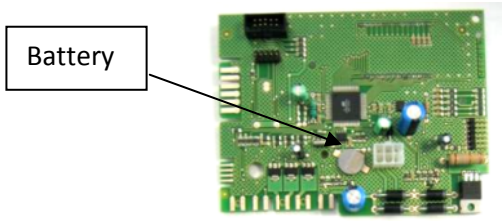
Battery replacement:

In accordance with decree 2009-1139 concerning the marketing of batteries and accumulators and their disposal, this appliance contains a 3 volt Lithium type battery, reference P0019905. This battery complies with the decree.

If this battery must be replaced, it is imperative to use a battery of the same type as that installed.

This battery is soldered on the electronic board in the location indicated below. To replace it:

- Disconnect the unit from the electricity supply.
- Open the casing.
- Remove the electronic board from its support.
- Unsolder the old battery taking care not to overheat the surrounding components.
- Dispose of the old battery according to the current regulations (WEEE).
- Put a new battery in place taking care to comply with the polarity.
- Resolder the new battery taking care not to overheat the surrounding components.



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IMPORTANT: The water and electrical connections must be made in accordance with the rules of the art and applicable standards in the premises where the softener is installed. In particular, in the case where the water inlet and softened water outlet pipes will be fitted with equipment that could cause water hammer (notably electromagnetic valves), effective water hammer arresters must be installed.

In addition, the control unit electronics unit is sensitive, like any electrical assembly, to electrical and magnetic disturbances. The control unit is fitted with a series of filters allowing the elimination of the usual disturbances. However, in the case of proximity to power circuit breakers, transformers or any other disturbance emitter, it will be necessary to make the connections with shielded cable and install suitable suppressors.

BWT reserves the right to modify the technical characteristics of its appliances without prior notice.

The CE marking of the PERMO 5000 series certifies its conformity with the requirements of:
- Directive 2004/108/CEE of 15/12/2004 on **electromagnetic compatibility.**

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

The PERMO 5000 softeners are subject to directive 97/23/CEE of 29/05/97 on 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, **arenot covered by CE marking for pressure equipment.**

1. PACKAGING

The PERMO 5000 softeners are delivered in one or two packages:

- The softener itself, premounted and loaded with its ion exchange resin,
- A salt tank and its accessories for connection to the softener,
- A control unit.

It is important to store the equipment after reception in a clean dry room at an ambient temperature between +3 and +35°C subject to the risk of deterioration of the ion exchange resins and some appliance components.

Non compliance with these conditions can invalidate the guarantee on the damaged items.

2. TECHNICAL DESCRIPTION

The PERMO 5000 is a range of automatic water softeners that can operate in either chronometric or volumetric mode.

They are fitted with cationic type ion exchange resins operating in a sodium cycle, in accordance with the current regulations.

All the materials used are of food quality.

To optimise the effectiveness of the appliances, the regeneration of the ion exchange resins is done using the backflow principle (regeneration from bottom to top).

The electronic unit allows self checking of the softener and control of the different regeneration steps.

Fitted with microprocessors, it can be programmed through the 5 button keypad on the front panel. It controls the solenoid valves (double insulation) using very low voltage safety current (24 volts alternating).

3. DIMENSIONS

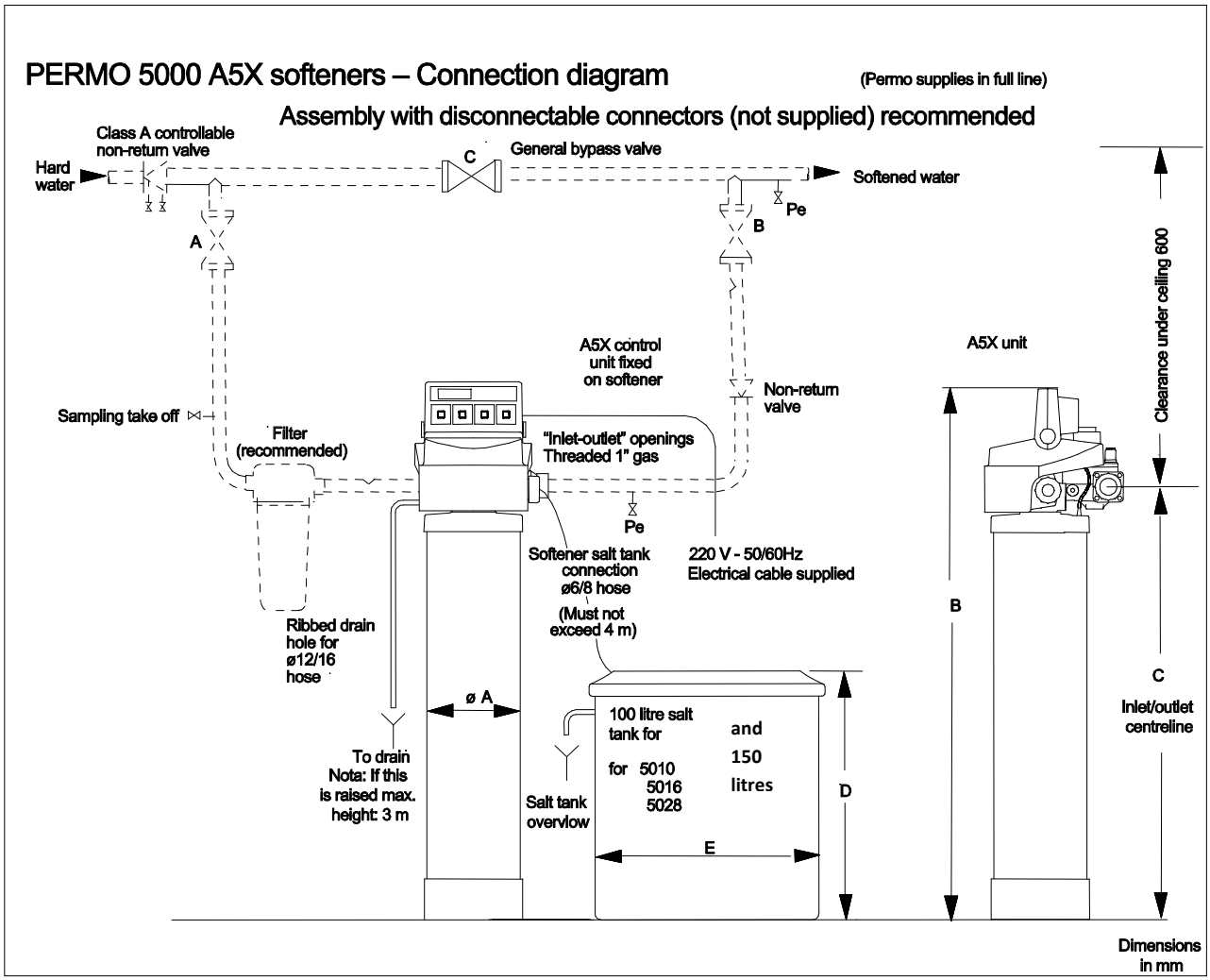


Diagram no. I –"5000 series softeners connection"

Type	A	B	C	D	E
Appliance	Ø Body	Total height	Inlet/Outlet Axes	Salt tank height	Ø Salt tank
5010	210	690	495	680	530
5016	185	1140	943	680	530
5028	210	1380	1185	680	530
5075	333	1625	1423	800	550

Table no. I –"5000 Series Softeners dimensions mm"

4. TECHNICAL CHARACTERISTICS

5000 series softeners characteristics Automatic valve (5 step cycle)		**5010**	**5016**	**5028**	**5075**
Volume of resin	*litres*	10	16	28	75
Exchange capacity	*min. °m3*	40	64	112	300
	max. °m3	60	96	140	375
Salt consumption/regeneration	*min. kg*	1	1.6	2.6	9.4
	max. kg	1.8	2.9	3.5	11.3
Salt tank autonomy	*min.*	50	26	16	9
Number of regenerations	*max.*	100	56	34	12
Water consumption per regeneration (at 4 bars) *	*litres*	70	112	196	560
First salt tank charge	*kg*	75	75	75	150
Ground load	*kg*	120	130	150	330
Shipping weight	*kg*	27	34	48	110
Packaging	Cardboard boxes volume *m3*	0.2	0.26	0.34	0.42+0.29
	Dimensions in *cm*	49x49x106	49x49x106	49x49x177 59x59x83	49x49x177 59x59x83

Table no. II –"Technical characteristics"

***** Depending on the settings and the operating requirements related to the water to be treated and the conditions of use.

5. TECHNICAL CONDITIONS OF OPERATION

Supply voltage		Single phase 230 V 50/60 Hz
Minimum voltage		200 volts
Maximum voltage		250 volts
Consumption electrical	In operation	6 watts
	In regeneration	25 watts
Minimum operating pressure (in dynamic)		1.5 bars
Maximum allowable pressure (in static)		7 bars
Minimum flow rate required for good regeneration		0.5 m^3/h
Temperature of water	minimum	1°C
	maximum	35°C
Temperature of room	minimum	Above freezing
	maximum	40°C

Table no. III – "Technical operating conditions"

6. ASSEMBLY – CONNECTIONS

6.1. Installation

The PERMO 5000 softener must be installed in a clean, dry, well ventilated accessible place.

This place must be frost free and the atmosphere must not contain chemical vapours that risk hindering its operation.

It is the responsibility of the installer to check before installation that the dimensional conditions (*Table no. I*), the technical characteristics (*Table no. II*) and the technical operating conditions (*Table no. III*) are complied with.

The premises must have an adequately sized drain outlet for the regeneration water see paragraph 6.2.2 “Regeneration water drainage”.

The floor on which the softener rests must be perfectly horizontal.

Allow sufficient height under the ceiling to permit any maintenance operations (*Diagram no. I*).

The salt tank shall be placed as close as possible to the softener, preferably on the same horizontal plane (maximum allowable level difference of 0.5 to 1 metre depending on the pressure of the water to be treated) – Maximum acceptable separation on the same plane: 4 metres depending on the pressure of the water to be treated.

The salt tank must be easily accessible to allow recharging with salt for the regeneration.

TYPICAL INSTALLATION DIAGRAMS

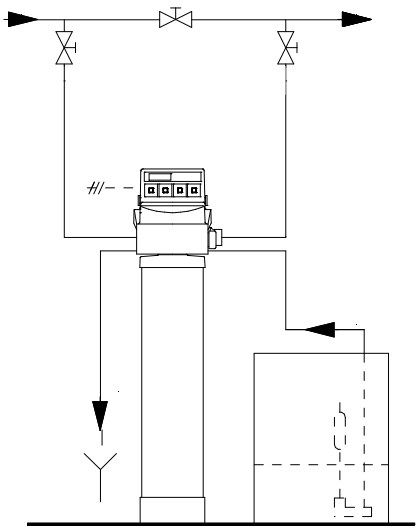


Diagram no. II: Simplex softener

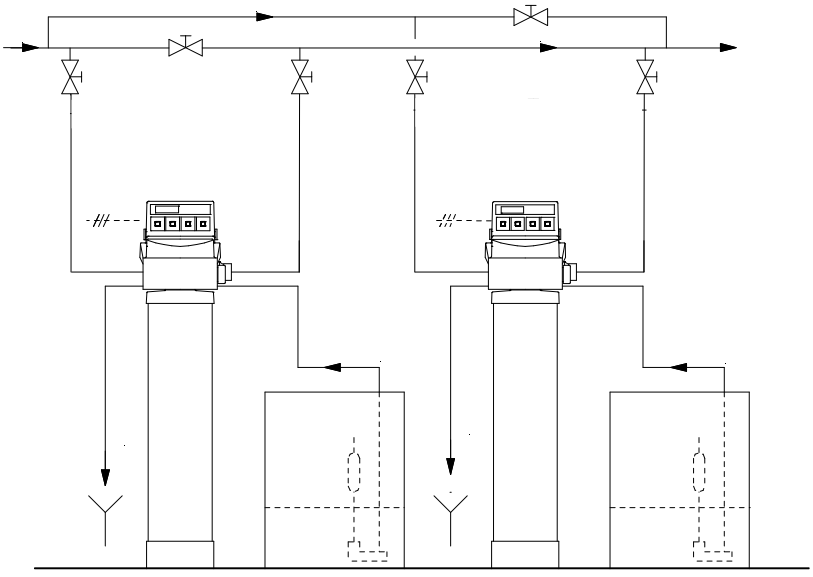
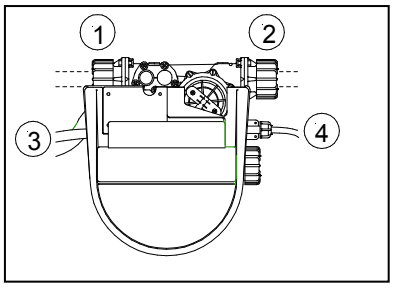


Diagram no. II: Softeners in parallel (chronometric operation without volume priority only)

6.2. Water connections

(*Diagram no. I and diagram no. IV below*)



① Inlet for water to be treated	threaded 1" gas
② Treated water outlet	threaded 1" gas
③ Regeneration water drain	ribbed end fitting for 12/16 hose
④ Connection to salt tank (in the salt tank)	wing nut end fitting

Diagram no. IV –"Water connection identification"

6.2.1. Water inlet and treated water outlet

The inlet pipe for the water to be treated must be sufficiently sized to be able to provide the required production flow rate and the minimum regeneration flow rate (0.5 m^3/h) under a minimum pressure of 1.5 bars in dynamic and 7 bars in static. In order to control this pressure, it is recommended to install a manometer upstream of the softener.

In addition, we advise fitting a filter upstream of the softener so as to protect it from foreign bodies that could disturb its operation.

In accordance with the current sanitary regulations, a class A controllable check valve will be placed upstream of the water treatment unit. It is the responsibility of the installer to verify all specific sanitary regulations that could be force on the installation location and comply with them.

Sampling must always be provided upstream and downstream of the softener.

The softener must be protected from any hot water backflow by a suitable backflow preventer device, fitted downstream of the appliance on the treated water pipe.

The installation upstream and downstream of the softener must not cause "water hammer" (as appropriate, provide effective water hammer arresters).

The softener will generally be fitted in a bypass and always fitted with isolation and bypass valves as indicated in *diagram no. I*.

Valve A = Softener inlet
Valve B = Softener outlet
Valve C = General bypass

The softener connections must be demountable and accessible to ease any maintenance operations.

These softener inlet and outlet pipes must be correctly supported so that no force or constraint is placed on the appliance.

6.2.2. Regeneration water drainage

(See *diagram no. IV)*

Drainage of softener regeneration water must be done using the 12/16 hose supplied.

ATTENTION: This hose being in pressure during regeneration, it must be fixed to the softener ribbed connector using the collar supplied. Also provide fixing for this hose along its length so as to avoid any force being applied to the softener valve.

The regeneration water drain pipe must use the shortest and simplest route possible. It must allow the drainage of at least 0.5 m^3/h without pressure loss (free flow).

In the case of a raised drain, the discharge height must not exceed 3 metres.

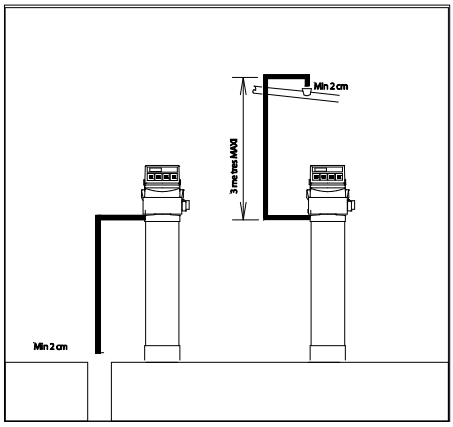


Diagram no. V –"Pressure failure"

In accordance with the requirements of the sanitary regulations, a pressure break at least equal to 2 cm must be provided between the softener drain pipe and the main drain in accordance with *diagram no. V* opposite.

In the event of drainage through a recovery sump and a lifting pump, dimension the equipment so as to avoid risks of flooding the room (in the event of unexpected stoppage of the lifting pump during regeneration). In the event of a mains power failure during regeneration, the flow to the drain from the softener is stopped.

6.2.3. Salt tank overflow drain

(See *diagram no. I)*

The salt tank is fitted with a safety overflow that must be connected into either a gutter or a drain collector. The discharge must be done by gravity without pressure loss. It is **imperative** that a pressure break of at least 2 cm is created in accordance with sanitary regulations.

6.2.4. Brine regulator connection

(*Diagram no. IV*)

The brine regulator is situated in the brine well (grey PVC cylinder) inside the salt tank. Connect the 6 x 8 hose supplied to the regulator (wing nut) and to the softener (wing nut item **4** on diagram IV).

6.3. Electrical connections

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 softener and filter close to the pipes to which is must be connected (water supply, softened water 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 bars).

An electrical socket (single phase 230 volts +10 -15% – 50/60Hz) must be provided less than one metre 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 softener is 25 watts.

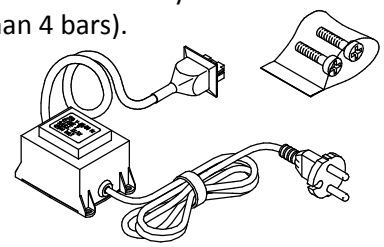


Diagram no. VI - "Transformer"

IMPORTANT: For safety reasons, the primary and secondary supply cables to the transformer cannot be replaced. If they are damaged, the complete transformer must be scrapped and replaced by a new one.

Choose a dry room, protected from frost, where there is no risk of the temperature exceeding 40°C. The floor must be flat and withstand the operating condition loads stated in the characteristics above.

6.3.1. General description of the electronic control unit

The A5X microprocessor control unit allows control of a softener.

A 5 button key pad on the front panel allows programming of the different sequences needed for operation of the softener and programming of the regeneration timing.

It is delivered with an external transformer delivering the very low voltage currents needed to operate the electronics and the regeneration solenoid valves. On the primary this transformer has a 1.9 metre electrical supply cable without earth pin, the unit and the solenoid valves it controls being double insulated class. A 230 volt single phase wall socket (European standards) should be brought close to the unit (also see table III "*technical operating conditions*" of chapter 5).

6.3.2. Fixing the control unit

The electronic control unit is fitted as standard. It is on the softener like the transformer. These two items are fixed on a specific cap (see *diagram no. VII*).

Diagram no. VII – "Unit fixing"

6.3.3. Electrical wiring

IMPORTANT : The electrical connections to the electronic unit must made using the cables supplied.

6.3.4. Description of Control Unit Connection

①Cable and ILS for meter

②Solenoid valve connections

③Transformer connections

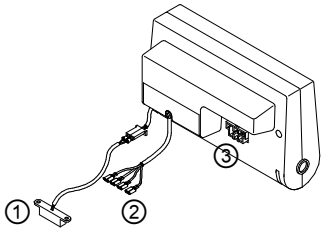


Diagram no. VIII – "Connections"

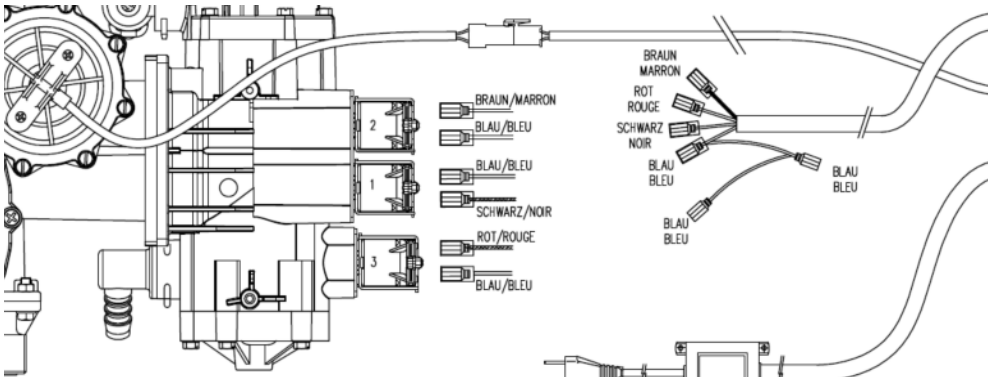


Diagram no. IX – "Connection diagram"

7. PROGRAMMING THE ELECTRONIC UNIT

Once the water and electrical connections have been made and checked, program the unit.

Unit description

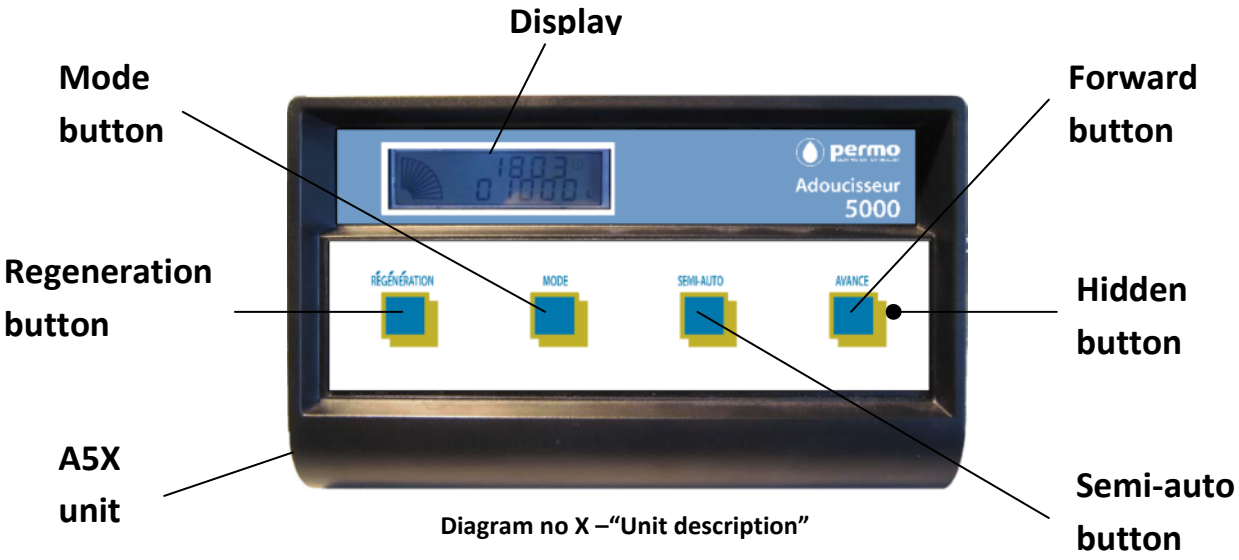


Diagram no X –"Unit description"

Symbol	Meaning
	- Display of remaining volume on scale to 10 in volumetric mode - Display of remaining time on scale to 10 in chronometric mode - Display of elapsed time during a regeneration on scale to 10
R 1 2 3	- R displayed during regeneration - 1, 2 and 3 successively lit during phases 1(backwashing), 2(brining and slow rinsing) and 3(fast rinsing)
☐	- No used
	- Alarm displayed after regeneration in the event of too low conductivity during brining
	- Alarm displayed when the number of regenerations associated with the maintenance is reached
	- Alarm displayed when the number of regenerations associated with After Sales Service follow up is reached
	- Displayed at the same time as the current time
	- Displayed when in Standby mode
m^3	- Displayed when a volume is expressed in m^3
L	- Displayed when a volume is expressed in litres
	- Display of current time in Service and Test modes - Program step display in Program mode
	- Program values input - Generic code input - Display of number of days before the next regeneration or the programmed time - Display of regeneration start or stop time - Display of whole volume remaining in litres if less than 99999, otherwise in m^3 - Display of number of regenerations - Display of total treated volume in m^3

Table no. IV –"Display description"

7.1. Choice of operating mode

The operating mode for PERMO 5000 softeners is selected using the programming buttons on the electronic unit.

The PERMO 5000 softeners can operate in different modes identified by the codes described below.

Operating mode	Program code	Description	Notes
Pure time	**10110**	Regeneration every “x” days (interval between two regenerations) at a predetermined fixed time.	
“Seven” time	**10310**	Programmable regeneration on the seven days of the week (14 possible ranges) at a predetermined time for each day.	Possible to do two regenerations per day on the seven days of the week.
Anticipated “Data” volume	**12120**	Regeneration depending on the programmable softener cycle and the average daily consumption at a predetermined time.	
Anticipated “Data” volume with priority to volume	**12620**	Regeneration depending on the programmable softener cycle at a predetermined time and the average daily consumption.	Immediate regeneration if the softener cycle =0
Pure volume	**11120**	Regeneration depending on the programmable softener cycle	Immediate regeneration when the softener cycle = 0

Table no. V –“List of generic codes”

7.2. Programming the code for the operating mode

A / Connect the appliance to a standard electrical socket in accordance with the softener operating characteristics described in this manual.

1/. First case:

When switched on the unit starts normally in regeneration:
- The first line displays a current time, to be set later.

- The second line alternates display of regeneration start time and end time

- The bar graph is in low position and the character “R” is visible.

To stop regeneration just press the “Mode” and “Regeneration” buttons simultaneously.

2/. Second case:

When switched on the unit displays five zeroes 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 described in table V. The “Mode” and “Regeneration” buttons are not active.

- Entering the generic code for the operating mode
  Press the “Semi-automatic” button to move to the right in the selection indicated by the flashing digit and modify its value with the “Forward” button.

- Enter the generic code for the selected operating mode.

Once the 5-figure operating mode code is displayed,

- Press the “hidden” button to confirm the selection.
  The next 2-line display states the current time and the softener cycle programmed by default.

Attention:

Each operating mode selection code described above corresponds to a well-defined program in the A5X unit microprocessor. Any code that is erroneous or that does not correspond to the list above can lead to malfunction of your appliance and possibly to the loss of the BWT-PERMO guarantee.

B / ***Modifying the operating mode***

To modify the five figure code

- Press the *“Mode”* and *“hidden”* buttons simultaneously for 5 seconds, then release.

- Modify the codes displayed, then confirm after input with the hidden button.

Reprogram the new operating mode according to paragraph 7.4.

C / *Return to factory parameters*

To reset the programmed operating mode:

- Press the *"hidden"* and *"Mode"* buttons simultaneously for 5 seconds, then release.
- Then press the *"hidden*" button briefly, the display shows "ini 0", choose "1" with the *"Forward"*key, then press the *"hidden"* button again to confirm the reset to zero.

7.3. Programming the operating phases

The explanations below give the meanings of the program steps and the value of the parameters to be programmed as a function of the operating mode (also see the functional flow diagrams at the end of the manual).

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 "Forward" button allows the value of the flashing figure to be modified.

- The "Semi-automatic" 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 marked below by the symbol "#".

7.3.1. Pure time based operating mode – code 10110

Switch on the control unit.

- 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

- Press the “Mode” button again. The display shows programme step P001(#) on the first line and the default current year on the second line.

  Set the value of the current year.

- Press the “Mode” button. The display shows programme step P002(#) on the first line and the default current day and month on the second line.

  Example: 01:02 for the 1st February.

  Set the current day and month value.

- 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: 1.01:02 for Monday at 01h02.

  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.

- Press the “Mode” button. The display shows programme step P020 on the first line and the default day number on the second line.

  Example: 004.

  Set the value according to the necessary interval.

- 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, according to Table VII “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.

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 according to table VI.

The value ”**0**” = alarm not active

The value “**1**” = alarm active

alarm type / configuration	Maintenance		AFTER SALES SERVICE	
	active	inactive	active	inactive
00010	X			X
00001		X	X	
00011	X		X	

Table no. VI: “Alarm configuration”

- 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.
- Then 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.
- Press the “Mode” button. The programming phase is complete and the display returns to the service configuration.

7.3.2. “Seven” pure time based operating mode – code 10310

- Press the “Mode” button for about five seconds.

  The display indicates the programme step P100(#) and the default commissioning date in weeks.
  Example*:* 03:08 for week 03 of year 2008.
  It is possible to change this value by entering the current week on commissioning

- Press the “Mode” button again. The display shows programme step P001(#) and the current default year.
  Set the value of the current year.

- Press the “Mode” button. The display shows programme step P002(#) and the default current day and month.
  Example*:* 01:02 for the 1st February.
  Set the current day and month value.

- Press the “Mode” button. The display shows programme step P003 and the default current day of the week and time.
  Example: 1.01:01 for Monday at 01h01.
  Set the current day and time value in the 24-hour clock.

- Press the “Mode” button. The display shows programme step P081 and a default regeneration time and day. This setting allows the regeneration to be planned depending on the consumption.
  Example: 1.01:00 for Monday at 01h00.
  Set the regeneration time value in the 24-hour clock.
  The following steps from P082 to P097 allow the setting of 13 other regenerations in the week.
  For one not to be taken into account, it is sufficient to enter the value 0 in the day location.

- Press the “Mode” button. The display then shows P050 and the value corresponding to the total regeneration time in minutes.
  Example: 064.
  Set the regeneration duration expressed in minutes, according to Table VII “Regeneration time”.

- Press the “Mode” button again. The display shows programme step P031(#) and the alarms to be selected as in table VI "alarm configuration".

- 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.

- Then 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.

- Press the “Mode” button. The programming phase is complete and the display returns to the service configuration.

7.3.3. Anticipated volume “Data” operating modes – code 12120

- Press the “Mode” button for about five seconds.
  The display indicates the programme step P100(#) and the default commissioning date in weeks.
  Example: 03:08 for week 03 of year 2008.
  It is possible to change this value by entering the current week on commissioning

- Press the “Mode” button again. The display shows programme step P001(#) and the current default year. Set the value of the current year.

- Press the “Mode” button. The display shows programme step P002(#) and the default current day and month.
  Example: 01:02 for the 1st February.

Set the current day and month value.

- Press the “Mode” button. The display shows programme step P003 and the default current day of the week and time.
  Example*:* 1.01:01 for Monday at 01h01.
  Set the current day and time value in the 24-hour clock.

- Press the “Mode” button. The display shows programme step P080 and the default time. This setting allows the regeneration to be started at a specific time.
  Example: 0.01:00 for 01h00.
  Set the regeneration time value in the 24-hour clock.

- Press the “Mode” button. The display then shows P050 and the value corresponding to the total regeneration time in minutes.
  Example: 064.
  Set the regeneration duration expressed in minutes, according to Table VII "Regeneration time".

- Press the “Mode” button again. The display shows programme step P040 and the default regeneration cycle.
  Example: L.1000 corresponds to a cycle of 1000 litres; H.1000 corresponds to a cycle of 1000 hectolitres
  Set the cycle corresponding to the volume of water produced between 2 regenerations.
  To calculate the cycle for your softener, divide the exchange capacity (see table II “Technical characteristics”) by the TH of the water to be treated.

- Press the “Mode” button. The display shows programme step P071(#) and the default average consumption for Monday.
  Example: L.0300 for Monday.
  This value is calculated automatically. It is therefore not necessary to modify it.
  The following steps from P072 to P077 allow averages for the rest of the days of the week to be obtained.

- Press the “Mode” button again. The display shows programme step P031(#) and the alarms to be selected as in table VI on alarm configuration.

- 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.

- Then 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.

- Press the “Mode” button. The programming phase is complete and the display returns to the service configuration.

7.3.4. Anticipated volume “Data” operating modes with Volume Priority – code 12620

- Press the “Mode” button for about five seconds.
  The display indicates the programme step P100(#) and the default commissioning date in weeks.
  Example: 03:08 for week 03 of year 2008.
  It is possible to change this value by entering the current week on commissioning

- Press the “Mode” button again. The display shows programme step P001(#) and the current default year. Set the value of the current year.

- Press the “Mode” button. The display shows programme step P002(#) and the default current day and month.
  Example: 01:02 for the 1st February.
  Set the current day and month value.

- Press the “Mode” button. The display shows programme step P003 and the default current day of the week and time.
  Example*:* 1.01:01 for Monday at 01h01.
  Set the current day and time value in the 24-hour clock.

- Press the “Mode” button. The display then shows P050 and the value corresponding to the total regeneration time in minutes.
  Example: 064.
  Set the regeneration duration expressed in minutes, according to Table VII “Regeneration time”.

- Press the “Mode” button again. The display shows programme step P040 and the default regeneration cycle.
  Example: L.1000 corresponds to a cycle of 1000 litres; H.1000 corresponds to a cycle of 1000 hectolitres
  Set the cycle corresponding to the volume of water produced between 2 regenerations.
  To calculate the cycle for your softener, divide the exchange capacity (see table II "Technical characteristics") by the TH of the water to be treated.

- Press the “Mode” button. The display shows programme step P071 and the default average consumption for Monday.
  Example: L.0300 for Monday.
  This value is calculated automatically. It is therefore not necessary to modify it.
  The following steps from P072 to P077 allow averages for the rest of the days of the week to be obtained.

- Press the “Mode” button again. The display shows programme step P031(#) and the alarms to be selected as in table VI on alarm configuration.

- 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.

- Then 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.

- Press the “Mode” button. The programming phase is complete and the display returns to the service configuration.

7.3.5. Pure volume based operating mode – code 11120

- Press the “Mode” button for about five seconds.
  The display indicates the programme step P100(#) and the default commissioning date in weeks.
  Example: 03:08 for week 03 of year 2008.
  It is possible to change this value by entering the current week on commissioning

- Press the “Mode” button again. The display shows programme step P001(#) and the current default year. Set the value of the current year.

- Press the “Mode” button. The display shows programme step P002(#) and the default current day and month.
  Example: 01:02 for the 1st February.
  Set the current day and month value.

- Press the “Mode” button. The display shows programme step P003 and the default current day of the week and time.
  Example*:* 1.01:01 for Monday at 01h01.
  Set the current day and time value in the 24-hour clock.

- Press the “Mode” button again. The display shows programme step P040 and the default regeneration cycle.
  Example: L.1000 corresponds to a cycle of 1000 litres; H.1000 corresponds to a cycle of 1000 hectolitres
  Set the cycle corresponding to the volume of water produced between 2 regenerations.
  To calculate the cycle for your softener, divide the exchange capacity (see table II “Technical characteristics”) by the TH of the water to be treated.

- Press the “Mode” button. The display then shows P050 and the value corresponding to the total regeneration time in minutes.

Example: 064.
Set the regeneration duration expressed in minutes, according to Table VII “Regeneration time”.

- Press the “Mode” button again. The display shows programme step P031(#) and the alarms to be selected as in table VI on alarm configuration.
- 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.
- Then 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.
- Press the “Mode” button. The programming phase is complete and the display returns to the service configuration.

7.3.6. Time for regeneration duration

The times shown in minutes on the table below are basic times that can be modified depending on the installation operating conditions.

Important :

The programming done in the previous paragraphs will only really be confirmed when the first regeneration is started, either automatically by the control unit, or manually by pressing the *“Regeneration”* button for 5 seconds. From this moment the recorded parameters can be displayed (except for the time of day, which is displayed instantly).

Type Softener	Time in minutes	
	Pressure less than 4 bars	Pressure greater than 4 bars
	Total regeneration duration	Total regeneration duration
5010	32	32
5016	42	33
5028	62	53
5075	75	65

Table VII –“Regeneration time”

7.3.7. Test program

To start the Test program, press the “Regeneration” and “Semi-automatic” buttons for about 5 seconds. The softener automatically starts regeneration, (displays R1). The bar graph 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 then changes to R2.

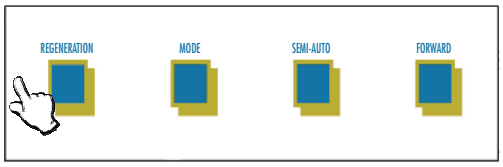
A new press on the “Mode” button allows a change to fast rinsing, the last regeneration phase. The display then changes to R3.

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.

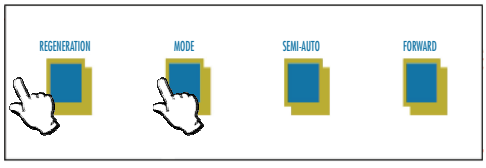
A final press on the “Mode” button terminates the Test program and allows a return to the initial display. The appliance goes hydraulically into operation or production of softened water.

Attention:
The “TEST” mode allows checking of the softener regeneration phases and must in no way be used to perform a regeneration. Similarly this mode does not reinitialise the volume remaining in volume programmed appliances.

Other functions:



Triggering a regeneration: Press the “Regeneration” button for at least 5 seconds. A complete regeneration starts when the button is released.



Stopping a regeneration in progress

Attention: This emergency stop mode will return the softener to the operating position. If the stop was done during the passage of brine or during rinsing, the bring risks being drawn towards the installations downstream of the softener.

To perform this type of stop: Press the “Regeneration” and “Mode” buttons simultaneously.

Softener history

If the softener is not currently regenerating, it is possible, at any time, to display the total volume of water softened and the number of regenerations done.

Just hold the “Forward” button down for 5 seconds. The total volume of softened water then appears. This indicative value is updated after each regeneration. The volume unit automatically changes from litres to m^3 when the value exceeds 99999 litres.

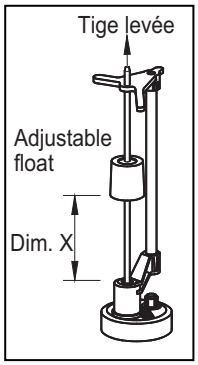
Pressing the “Forward” button a second time allows display of the total number of regenerations done.

The total volume total and number of regenerations can be reset to zero by simultaneously holding the 3 “Mode”, “Semi-automatic” and “Forward” buttons down for 5 seconds.

8. COMMISSIONING

8.1. Brine regulator adjustment

- Remove the regulator from the brine well placed in the salt tank.
- Check dimension "X" as on *diagram no. XI* and *table no. X III* below. Adjust it if necessary by sliding the float on the regulator rod.



Type Softener	"X" dimension setting in mm for salt in pellets	
	EC mini.	EC max.
5010	40	60
5016	70	100
5028	100	135
5075	220	270

Diagram XI –"Setting dimension "X"

Table no. VIII –"Setting dimension "X"
EC = Exchange capacity

8.2. Salt tank preparation

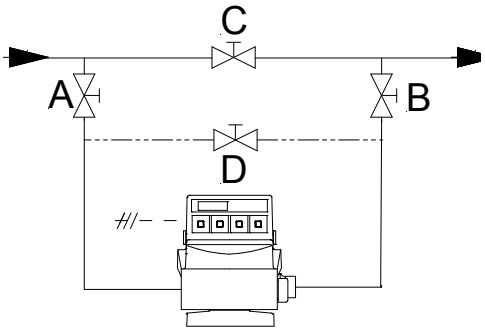
Fill the salt tank, do not exceed the chimney top so as to leave the brine regulator accessible. First ensure the correct positioning of the tank base and any supports.

8.3. Filling with water*(see diagram XI)*

In accordance with the requirements of the public health code, and to avoid the risk of undesirable microbiological proliferation, the softener must be disinfected using bleach employed in the following doses:

Volume of resin (in litres)	Quantity of concentrated bleach at 39° chlorometric (trade packs) to be used (in ml) in the salt tank (after filling with salt) for all types of softeners
10	5
16	5
28	5
75	10

Table no. IX – "Setting dimension "X"



The valves A – B being closed, C being open, start a regeneration by pressing the "Regeneration" button on the control unit.

Open valve A slowly to allow purging of the air contained in the installation. Once the air has been purged, open A completely.

Also purge the brine regulator by pushing the float rod (hold the rod at the bottom) and replace it in the salt tank brine well and replace the brine well plug.

Diagram no. XII

Open valve B, then close valve C. Leave the softener in regeneration.
Once the regeneration is complete, check the watertightness of the appliance. Check the TH and the softened water chlorides. If necessary, adjust the residual TH using valve D. Modify the slow and/or fast rinsing time if necessary.

8.4. Adjusting water hardness (residual TH)

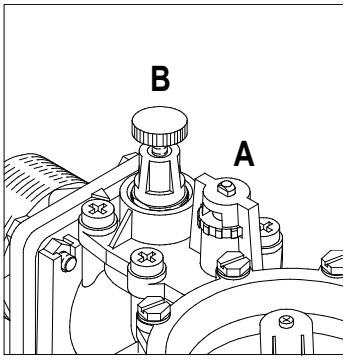
The softeners are equipped with a mixer, on the rear of the unit. The mixer enables hard water to be mixed with soft water, to provide the residual hardness required by the user.

Adjustement :

a) Screw knob **B** fully in, and then unscrew a 1/2 or 3/4 of a turn.

b) Slightly open the installation tap, downstream from the softener, and adjust the residual TH by turning knob **A** clockwise to increase the residual TH or anti-clockwise to reduce it.

c) When adjusted as required, fully open the tap, or several taps, to obtain a considerable water flow. Screw in knob **B** if the residual TH is too high or, conversely, unscrew the knob if the residual TH is too low.



9. OPERATION – GENERAL MAINTENANCE

Mains electricity failures

The programmed parameters are saved by the A5X board microprocessor.

- The screen goes dark.
- The solenoid valves are no longer supplied with power.
- The flow rate and average calculations are still used by the microprocessor.
- If the failure occurs during a regeneration, this stops and the appliance resumes operation.
  When the power supply returns the interrupted regeneration restarts at the start of the interrupted phase.

Nota:
When the current returns, solenoid valve EV3 is supplied with electricity for one minute to decompress the valve.
This solenoid valve is automatically supplied with electricity for one minute every two hours to ensure decompression of the valve.

Unprogrammed regeneration
It is possible to start a regeneration at any time by pressing the “Regeneration” button.

General maintenance

Periodically check the TH and the raw water and softened water chlorides and make consequent modifications, if necessary, to the softener regeneration parameters.

Whenever necessary, refill the salt tank. The salt level must always be greater than that of the water contained in the salt tank without exceeding the top of the brine well so as to leave free access to the brine regulator.

At least once every 6 months: take advantage of refilling the salt tank to empty, clean and disinfect it, after refilling with salt, by introducing bleach into the brine regulator chimney in the following dose:

Volume of resin (in litres)	Quantity of concentrated bleach at 39° chlorometric (trade packs) to be used (in ml)
10	5
16	5
28	5
75	10

Table no. X –"Setting dimension "X"

Then start a regeneration manually.

Incidents

INCIDENTS	CAUSES	REMEDIES
The softener no longer produces softened water	Bypass open.	Check the residual bypass setting. Check that the general bypass is not open.
	No regeneration salt.	Check that there is salt in the salt tank.
	Brine fault or poor brine suction.	Check the pressure (dynamic) at the softener inlet (min.) 1.5 bars).
	TH water to be treated > planned TH.	Check the TH of the water to be treated.
	Metering of volume of softened water drawn off absent.	Check the volume reading on the control unit (turbine/meter ILS fault)
Water flows to drain outside regeneration periods	Appliance internal valves or solenoid valves not watertight.	Replace the defective items.
	Decompression limiter blocked.	Clean the limiter.
	Insufficient pressure.	Check pressure (min. 1.5 b dynamic).
Water flowing from salt tank overflow	Brine regulator watertightness fault	Check the absence of deposits at the bottom of the salt tank. Clean the salt tank and the regulator.

10. PROGRAMMING FLOW DIAGRAMS

Programming depending on the operating mode

10.1. PURE TIME based operating mode – code 10110

FUNCTION	DISPLAY	DESCRIPTION
Operating mode	**10110**	Generic code programming (see § 7.1)
Factory programming	**01:01** **4.01:00**	➔Current time in 24-hour clock ➔Date of next regeneration
Program step P100	**P100** **01:01**	Press Mode for 5 seconds ➔Commissioning date (year: week = YY: WW) Modify with Forward and Semi-automatic
Program step P001	**P001** **2000**	Press Mode ➔Current year Modify with Forward and Semi-automatic
Program step P002	**P002** **01:01**	Press Mode ➔Current Day and Month (DD:MM) Modify with Forward and Semi-automatic
Program step P003	**P003** **1.01:01**	Press Mode ➔Current day of week and time Modify with Forward and Semi-automatic
Program step P020	**P020** **04**	Press Mode ➔Number of days between each regeneration Modify with Forward and Semi-automatic
Program step P050	**P050** **64**	Press Mode ➔Regeneration duration in minutes Modify with Forward and Semi-automatic
Program step P080	**P080** **0.01:00**	Press Mode ➔ Regeneration time (HH:MM) Modify with Forward and Semi-automatic
Program step P031	**P031** **00011**	Press Mode ➔Alarms configuration Modify with Forward and Semi-automatic
Program step P032	**P032** **070**	Press Mode ➔Maintenance frequency in number of regenerations Modify with Forward and Semi-automatic
Program step P033	**P033** **140**	Press Mode ➔After Sales Service frequency in number of regenerations Modify with Forward and Semi-automatic

10.2. SEVEN TIME based operation – code 10310

FUNCTION	DISPLAY	DESCRIPTION
Operating mode	**10310**	Generic code programming (see § 7.1)
Factory programming	**01:01** **4.01:00**	➔Current time in 24-hour clock ➔Date of next regeneration
Program step P100	**P100** **01:01**	Press Mode for 5 seconds ➔Commissioning date (year: week = YY: WW) Modify with Forward and Semi-automatic
Program step P001	**P001** **2000**	Press Mode ➔Current year Modify with Forward and Semi-automatic
Program step P002	**P002** **01:01**	Press Mode ➔Current Day and Month (DD:MM) Modify with Forward and Semi-automatic
Program step P003	**P003** **1.01:01**	Press Mode ➔Current day of week and time Modify with Forward and Semi-automatic
Program step P081	**P081** **1.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P082	**P082** **1.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P083	**P083** **1.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P084	**P084** **1.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P085	**P085** **1.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P086	**P086** **1.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P087	**P087** **1.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P091	**P091** **0.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
FUNCTION	DISPLAY	DESCRIPTION

Program step P092	**P092** **0.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P093	**P093** **0.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P094	**P094** **0.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P095	**P095** **0.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P096	**P096** **0.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P097	**P097** **0.01:00**	Press Mode ➔Regeneration day and time (D .HH: MM) Modify with Forward and Semi-automatic
Program step P050	**P050** **64**	Press Mode ➔Regeneration duration in minutes Modify with Forward and Semi-automatic
Program step P031	**P031** **00011**	Press Mode ➔Alarms configuration Modify with Forward and Semi-automatic
Program step P032	**P032** **070**	Press Mode ➔Maintenance frequency in number of regenerations Modify with Forward and Semi-automatic
Program step P033	**P033** **140**	Press Mode ➔After Sales Service frequency in number of regenerations Modify with Forward and Semi-automatic

10.3. ANTICIPATED VOLUME DATA operation – code 12120

FUNCTION	DISPLAY	DESCRIPTION
Operating mode	**12120**	Generic code programming (see §7.1)
Factory programming	**01:01** **1000 L**	➔Current time in 24-hour clock ➔Default softener autonomy
Program step P100	**P100** **01:01**	Press Mode for 5 seconds ➔Commissioning date (year: week = YY: WW) Modify with Forward and Semi-automatic
Program step P001	**P001** **2000**	Press Mode ➔Current year Modify with Forward and Semi-automatic
Program step P002	**P002** **01:01**	Press Mode ➔Current Day and Month (DD:MM) Modify with Forward and Semi-automatic
Program step P003	**P003** **1.01:01**	Press Mode ➔Current day of week and time Modify with Forward and Semi-automatic
Program step P080	**P080** **0.01:00**	Press Mode ➔ Regeneration time (HH:MM) Modify with Forward and Semi-automatic
Program step P050	**P050** **64**	Press Mode ➔Regeneration duration in minutes Modify with Forward and Semi-automatic
Program step P040	**P040** **L.1000**	Press Mode ➔Softener cycle in litres or hectolitres Modify with Forward and Semi-automatic
Program step P071	**P071** **L.0300**	Press Mode ➔Initial Monday average Modify with Forward and Semi-automatic
Program step P072	**P072** **L.0300**	Press Mode ➔Initial Tuesday average Modify with Forward and Semi-automatic
Program step P073	**P073** **L.0300**	Press Mode ➔Initial Wednesday average Modify with Forward and Semi-automatic
Program step P074	**P074** **L.0300**	Press Mode ➔Initial Thursday average Modify with Forward and Semi-automatic
Program step P075	**P075** **L.0300**	Press Mode ➔Initial Friday average Modify with Forward and Semi-automatic

FUNCTION	DISPLAY	DESCRIPTION
Program step P076	**P076** **L.0300**	Press Mode ➔Initial Saturday average Modify with Forward and Semi-automatic
Program step P077	**P077** **L.0300**	Press Mode ➔Initial Sunday average Modify with Forward and Semi-automatic
Program step P031	**P031** **00011**	Press Mode ➔Alarms configuration Modify with Forward and Semi-automatic
Program step P032	**P032** **070**	Press Mode ➔Maintenance frequency in number of regenerations Modify with Forward and Semi-automatic
Program step P033	**P033** **140**	Press Mode ➔After Sales Service frequency in number of regenerations Modify with Forward and Semi-automatic

10.4. ANTICIPATED VOLUME DATA WITH VOLUME PRIORITY operation – code 12620

FUNCTION	DISPLAY	DESCRIPTION
Operating mode	**12620**	Generic code programming (see §7.1)
Factory programming	**01:01** **1000 L**	➔Current time in 24-hour clock ➔Default softener autonomy
Program step P100	**P100** **01:01**	Press Mode for 5 seconds ➔Commissioning date (year: week = YY: WW) Modify with Forward and Semi-automatic
Program step P001	**P001** **2000**	Press Mode ➔Current year Modify with Forward and Semi-automatic
Program step P002	**P002** **01:01**	Press Mode ➔Current Day and Month (DD:MM) Modify with Forward and Semi-automatic
Program step P003	**P003** **1.01:01**	Press Mode ➔Current day of week and time Modify with Forward and Semi-automatic
Program step P080	**P080** **0.01:00**	Press Mode ➔ Regeneration time (HH:MM) Modify with Forward and Semi-automatic
Program step P050	**P050** **64**	Press Mode ➔Regeneration duration in minutes Modify with Forward and Semi-automatic
Program step P040	**P040** **L.1000**	Press Mode ➔Softener cycle in litres or hectolitres Modify with Forward and Semi-automatic
Program step P071	**P071** **L.0300**	Press Mode ➔Initial Monday average Modify with Forward and Semi-automatic
Program step P072	**P072** **L.0300**	Press Mode ➔Initial Tuesday average Modify with Forward and Semi-automatic
Program step P073	**P073** **L.0300**	Press Mode ➔Initial Wednesday average Modify with Forward and Semi-automatic
Program step P074	**P074** **L.0300**	Press Mode ➔Initial Thursday average Modify with Forward and Semi-automatic
Program step P075	**P075** **L.0300**	Press Mode ➔Initial Friday average Modify with Forward and Semi-automatic

FUNCTION	DISPLAY	DESCRIPTION
Program step P076	**P076** **L.0300**	Press Mode ➔Initial Saturday average Modify with Forward and Semi-automatic
Program step P077	**P077** **L.0300**	Press Mode ➔Initial Sunday average Modify with Forward and Semi-automatic
Program step P031	**P031** **00011**	Press Mode ➔Alarms configuration Modify with Forward and Semi-automatic
Program step P032	**P032** **070**	Press Mode ➔Maintenance frequency in number of regenerations Modify with Forward and Semi-automatic
Program step P033	**P033** **140**	Press Mode ➔After Sales Service frequency in number of regenerations Modify with Forward and Semi-automatic

10.5. PURE VOLUME based operation – code 11120

FUNCTION	DISPLAY	DESCRIPTION
Operating mode	**11120**	Generic code programming (see §7.2)
Factory programming	**01:01** **1000 L**	➔Current time in 24-hour clock ➔Default softener autonomy
Program step P100	**P100** **01:01**	Press Mode for 5 seconds ➔Commissioning date (year: week = YY: WW) Modify with Forward and Semi-automatic
Program step P001	**P001** **2000**	Press Mode ➔Current year Modify with Forward and Semi-automatic
Program step P002	**P002** **01:01**	Press Mode ➔Current Day and Month (DD:MM) Modify with Forward and Semi-automatic
Program step P003	**P003** **1.01:01**	Press Mode ➔Current day of week and time Modify with Forward and Semi-automatic
Program step P040	**P040** **L.1000**	Press Mode ➔Softener cycle in litres or hectolitres Modify with Forward and Semi-automatic
Program step P050	**P050** **64**	Press Mode ➔Regeneration duration in minutes Modify with Forward and Semi-automatic
Program step P031	**P031** **00011**	Press Mode ➔Alarms configuration Modify with Forward and Semi-automatic
Program step P032	**P032** **070**	Press Mode ➔Maintenance frequency in number of regenerations Modify with Forward and Semi-automatic
Program step P033	**P033** **140**	Press Mode ➔After Sales Service frequency in number of regenerations Modify with Forward and Semi-automatic

10.6. A5X electronic board program step coding

STEP	DESCRIPTION	DEFAULT VALUE
P001	current year	2000
P002	current day and month	01:01
P003	current time	1.01:01
P020	frequency in days	04
P031	alarm configuration	00011
P032	maintenance frequency and number of regenerations	070
P033	After Sales Service frequency in number of regenerations	140
P040	cycle	L.1000
P050	regeneration duration in minutes	64
P070	initial average	L.0300
P071	Monday initial average	L.0300
P072	Tuesday initial average	L.0300
P073	Wednesday initial average	L.0300
P074	Thursday initial average	L.0300
P075	Friday initial average	L.0300
P076	Saturday initial average	L.0300
P077	Sunday initial average	L.0300
P080	regeneration time	0.01:00
P081	regeneration time for 1st slot	1.01:00
P082	regeneration time for 2nd slot	1.01:00
P083	regeneration time for 3rd slot	1.01:00
P084	regeneration time for 4th slot	1.01:00
P085	regeneration time for 5th slot	1.01:00
P086	regeneration time for 6th slot	1.01:00
P087	regeneration time for 7th slot	1.01:00
P091	regeneration time for 8th slot	0.01:00
P092	regeneration time for 9th slot	0.01:00
P093	regeneration time for 10th slot	0.01:00
P094	regeneration time for 11th slot	0.01:00
P095	regeneration time for 12th slot	0.01:00
P096	regeneration time for 13th slot	0.01:00
P097	regeneration time for 14th slot	0.01:00
P100	date commissioned	01:01

11. SOFTENER PROGRAMMED PARAMETERS REPORT

Softener type : _____

Raw water TH : _____ °f

Residual TH : _____ °f

Selected operating mode:

1/ ❑ Pure time

2/ ❑ "Seven" pure time (*regeneration programmable on 7 days*)

3/ ❑ "Data" anticipated volume (*regeneration at fixed time obligatory*)

4/ ❑ "Data" anticipated volume with regeneration if the cycle is equal to "0"

5/ ❑ Pure volume, immediate regeneration when the cycle equals "0"

Regeneration time: _____ hours _____ minutes

Number of days between two regenerations: _____ days

Regeneration day and time:

❑ Monday	_____h_____m	❑ Monday	_____h_____m
❑ Tuesday	_____h_____m	❑ Tuesday	_____h_____m
❑ Wednesday	_____h_____m	❑ Wednesday	_____h_____m
❑ Thursday	_____h_____m	❑ Thursday	_____h_____m
❑ Friday	_____h_____m	❑ Friday	_____h_____m
❑ Saturday	_____h_____m	❑ Saturday	_____h_____m
❑ Sunday	_____h_____m	❑ Sunday	_____h_____m

Setting the regeneration duration:

- **Total regeneration duration:** _____ minutes

Metered units: ❑ 1 litre ❑ _____ litre (s)

Softener cycle: _____ litres

Average consumption: _____ litres

Alarms configuration: ❑ lack of water ❑ lack of salt

❑ maintenance ❑ AFTER SALES SERVICE

12. MAINTENANCE

Some 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 (unless excepted or in special cases).

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.

Operating and wearing parts:

Actuator train and membrane subassembly	code **P0012717**
Single 24 volt 50 Hz solenoid	code **P0012710**
Double 24 volts 50 Hz solenoid	code **P0012711**
Flexible blade switch for meter	code **P0012736**
Brine regulator without chimney	code **P0014854**

Other spare parts:

Complete 5000 valve (hydro no. 1) rear body with volume for 10 and 16 litres ***without housing***	code **P0101760**
Complete 5000 valve (hydro no. 2) rear body with volume for 28 litres ***without housing***	code **P0101761**
Complete 5000 valve (hydro no. 3) rear body with volume for 75 litres ***without housing***	code **P0101762**
hydraulic unit I/O (3 EV) with bracket, drain connector, rear seals, hydro no 1, ***without housing***	code **P0012173**
hydraulic unit I/O (3 EV) with bracket, drain connector, rear seals, hydro no 2, ***without housing***	code **P0012174**
hydraulic unit I/O (3 EV) with bracket, drain connector, rear seals, hydro no 3, ***without housing***	code **P0012175**
I/O hydro-ejector no. 1 (Ø 0.8)	code **P0012718**
I/O hydro-ejector no. 2 (Ø 1.3)	code **P0012719**
I/O hydro-ejector no. 3 (Ø 2.1)	code **P0012720**
intake connector I/O	code **P0012731**
5000 P 27 I/O rear block for volume with bracket, without valve and connection flanges	code **P0012127**
I/O flanges 1" + seals + screws	code **P0012701**
A5X electronic unit with transformer	code **P0012329**
A5X electronic board	code **P0017815**
Transformer A5X l	code **P0012754**

Other parts are available, please contact your BWT agency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