# WATER SOFTENERS

# 9000 CC ALCYO

# A5X CONTROL

**VERY IMPORTANT:** Before any connection, filling with water and operation, read this manual carefully. Non compliance with these instructions will lead to cancellation of the BWT guarantee.

CE

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BWT

BEST WATER TECHNOLOGY

**WARNING**

**Dear Customer,**

Read this manual carefully before installing, operating or carrying out maintenance operations on this equipment. It is advisable that the owner of this equipment ensure that anyone having access to this equipment be fully conversant and have fully understood the contents of this manual .

This equipment must be installed in clean and dry premises, suitable ventilated and not accessible to unauthorised personnel.

This equipment must be protected from adverse weather conditions, heat sources and the vapours of chemical substances.

The electrical panels must only be accessed by personnel that is trained and fully aware of the dangers of electrical currents. **DANGER OF ELECTROCUTION**

The equipment must be used and maintained by personnel duly trained and with the required know-how for this kind of operation.

It is advisable that the owner of the equipment ensure that anyone involved be provided with the most suitable tools and equipment for these operations.

In certain maintenance operations for this equipment, it may be necessary to use chemical products. It is advisable that the user be sure to know all possible hazards these products may entail and to use collective or individual protections in order to protect themselves from these dangers.

This equipment must not be modified without advance written authorisation from the manufacturer.

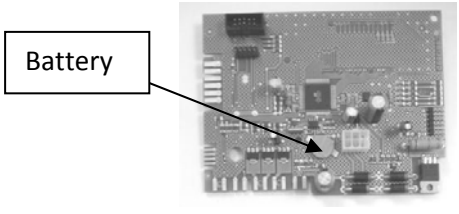
The surfaces of this equipment must not be cleaned with alcohol or alcohol based products, or with any products containing plastic solvents.

**Battery replacement :**

In compliance with legislative decree 2009-1139 on the sale of batteries and accumulators and their disposal, this equipment contains a 3 volt Lithium batter with reference code P0019905 The specifications of this battery comply with the legislation.

If this battery must be replaced, it is essential that an identical battery be installed.

This battery is soldered to the electrical board at the position shown below. To replace:




- Disconnect the electricity from the battery
- Open the casing
- Dismantle the electronic board from its support
- Unsolder the old battery taking care not to heat the nearby components
- Dispose of the old battery as prescribed by current regulations (DEEE).
- Put the new battery in place taking care to comply with the polarity indications.

Solder the new battery in place taking care not to heat the nearby components.

## CONTENTS

**IMPORTANT:** The hydraulic and electrical connections must be carried out in a workmanlike fashion and in compliance with the regulations that apply to the water softener premises. In particular, if the inlet water conduits and the outlet softened water conduits are equipped with devices which may cause "thumping" (notably electromagnetic valves), effective surge chambers must be installed.

Furthermore, the electronics of the control panel are sensitive, as is all the electrical assembly, to electrical or magnetic interference. The control panel is equipped with a series of filters which remove the majority of electronic parasites. However, if close to contactor starters, transformers or other parasite emitters, it will be necessary to implement connections with screened cable and to install a customised interference suppression device.

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

# 1 - CONTENTS OF PACKAGE

The 9000, CC, ALCYO SOFTENERS are delivered, in their standard versions in 5 packages or pallets.

- 1 containing the softener body
- 1 box containing the softener valve,
- 1 packaged salt container and connecting accessories,
- 1 pallet containing quantities of silex and ion exchange resins as detailed in table no. 1 below.

| Type of unit | No. of 25 kg sacks of silex | No. of 25 l. containers of resin |
|---|---|---|
| 9125 CC | 1 | 5 |
| 9175 CC | 1 | 7 |
| 9225 CC | 2 | 9 |
| 9300 CC | 3 | 12 |

***Table no. 1 - "Silex and resin consumables"***

**IMPORTANT: It is important to store the material after receipt in a clean dry room at an ambient temperature between +3 et +35°C to avoid the risk of deterioration of the ion exchange resins and certain equipment components.**

**Non compliance with these conditions can void the guarantee on the damaged components.**

# 2 - Technical specifications

9000 CC ALCYO is a range of 4 automatic water softeners that can operate either in time or volume mode (with an optional flow meter).

They are equipped with cationic ion exchange resins that operate in a sodium cycle, as prescribed by current regulations.

All materials used are food quality guaranteed.

The electronic A5X Control panel enables the softener to be self-monitoring and to control the various stages of regeneration.

Equipped with micro-processors, it can be programmed through a 5 key touch panel. It controls the electro valves (double isolation) by means of very low safety currents (24 volts alternating).

# 3 - DIMENSIONS

| | Ø A | Ø B | C | D | | E | | F | G | H |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Mini | Maxi | Mini | Maxi | | | |
| 9125 CC | 425 | 720 | 1400 | 1690 | 1725 | 1960 | 1995 | 118 | 1600 | 1650 |
| 9175 CC | 460 | 720 | 1400 | 1805 | 1840 | 2075 | 2110 | 118 | 1600 | 1700 |
| 9225 CC | 550 | 720 | 1400 | 1660 | 1695 | 1930 | 1965 | 118 | 1600 | 1750 |
| 9300 CC | 610 | 820 | 1400 | 1900 | 1935 | 2170 | 2205 | 118 | 1700 | 1750 |

Sides D and E vary according to the expansion of the bottle

Sides in mm

***Table No.. II - "Dimensions"***

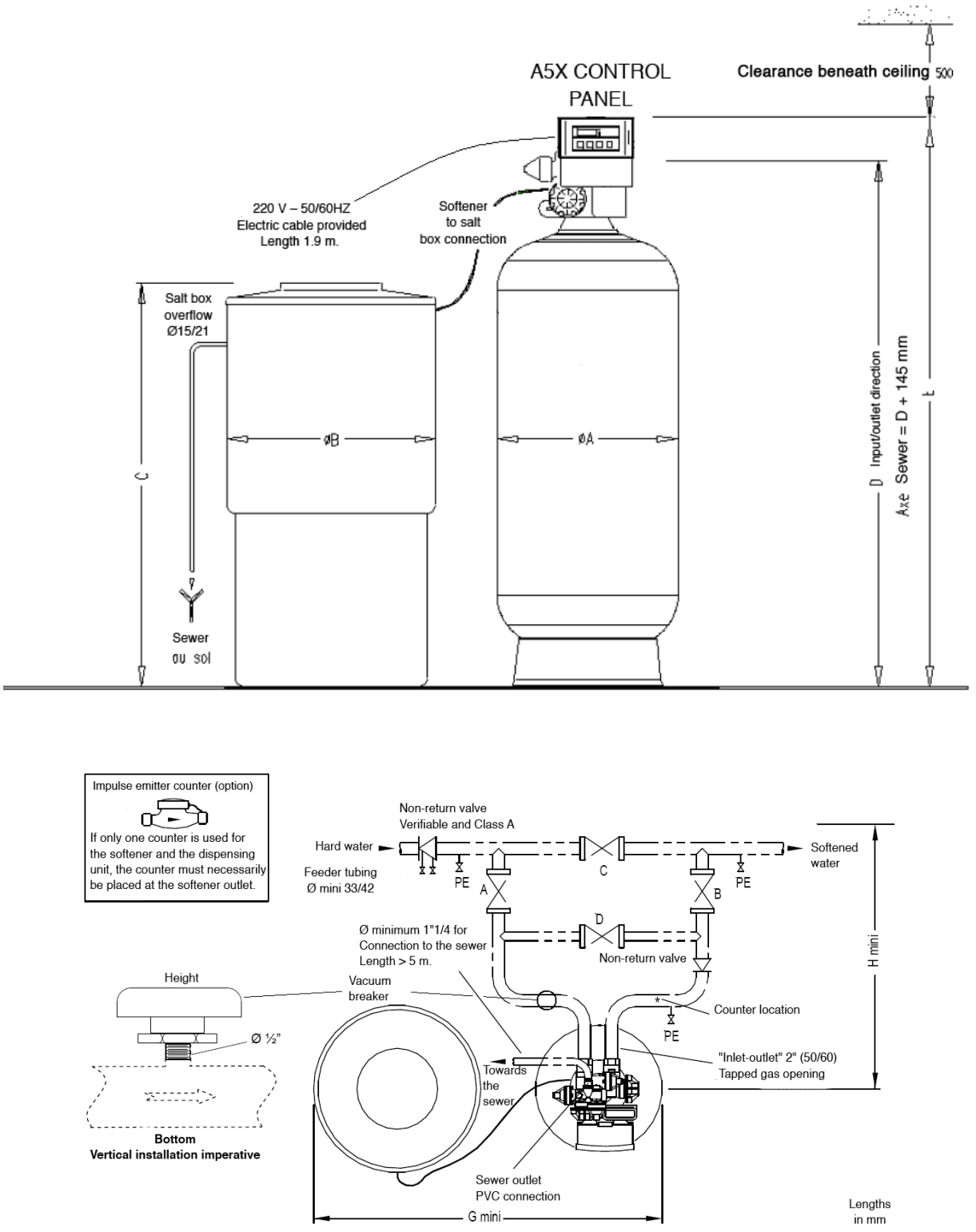



***Diagram no. I - "Dimensions"***

**<u>IMPORTANT:</u> The installation of the Hydraulic input/Output softener assembly must be performed using the flexible pipes provided, and it is equally essential to install the vacuum breaker provided.**

# 4 - TECHNICAL SPECIFICATIONS

| **Characteristics of the PERMO 9000 CC ALCYO** | **9125 CC** | **9175 CC** | **9225 CC** | **9300 CC** |
|---|---|---|---|---|
| Volume of resin *(litres)* | 125 | 175 | 225 | 300 |
| Silex mass kg. | 25 | 25 | 50 | 75 |
| Capacity *standard ° f/m³* | 750 | 1050 | 1350 | 1800 |
| Weight of salt *standard kg* per regeneration | 22.5 | 31.5 | 40.5 | 54 |
| First load kg | 300 | 300 | 300 | 400 |
| Reload kg | 200 | 200 | 200 | 350 |
| Salt box load duration Number of regenerations u | 22 | 15 | 12 | 10 |
| Ground load during operation *t/m²* | 650 | 900 | 1000 | 1150 |

***Table no. III - "Technical Specifications"***

# 5 - TECHNICAL OPERATING CONDITIONS

| | | |
|---|---|---|
| Supply voltage: | | Single phase 230 V 50 Hz |
| Minimum voltage | | 200 volts |
| Maximum voltage | | 250 volts |
| Consumption electrical | In service | 11 VA |
| | during regeneration | 32 VA |
| Minimum operating pressure (in dynamic operation) | | 1.5 bars |
| Maximum allowed pressure (when static) | | 7 bars |
| Minimal flow rate for good regeneration | | between 4.5 and 6 $m^3/h$ |
| Lowest of water | temperature | 1°C |
| | maximum | 35°C |
| Minimum of premises | temperature | Above freezing |
| | maximum | 40°C |

***Table no. IV - "Technical operating conditions"***

# 6 - ASSEMBLY - CONNECTIONS

## *6.1 Installation*

The 9000 CC ALCYO must be installed in accessible clean, dry and well ventilated premises.

These premises must be above freezing and the atmosphere must not contain chemical vapours which could be detrimental to its operation.

It is advisable that before installation the installer verify that the appropriate dimensions (Diagram no. I), technical specifications (Table no. III) and technical operating conditions (Table no. IV) have been complied with.

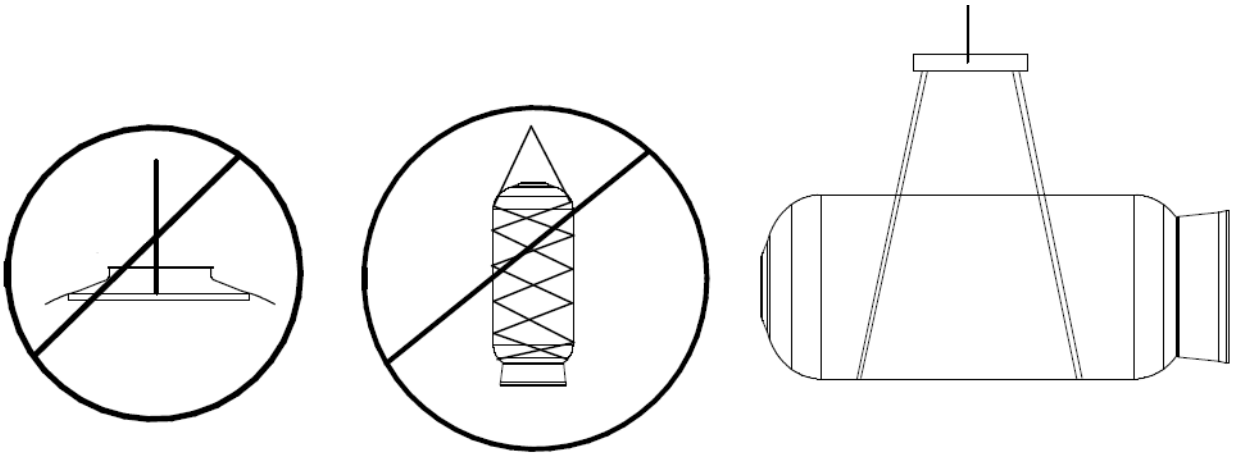
The premises must be provided with a connection to the drain of the regeneration waters that is of an appropriate size, view paragraph 6.5.2. "Evacuation of regeneration waters".
The ground on which the softener is placed must be perfectly level.

Ensure that sufficient space beneath the ceiling is available to enable all necessary maintenance operations to be performed (Diagram no. I).

The salt box will be placed as close as possible to the softener, preferably on the same horizontal level (maximum allowed level difference 0.5 to 1 meter in the direction of treatment of the water) - Maximum acceptable distance on the same level: 4 meters in the direction of the water to be treated.

The salt box must be easily accessible in order to reload it with the regeneration salt.

The handling of the softener body must comply with the diagrams shown below:



# INSTALLATION TYPE DIAGRAMS

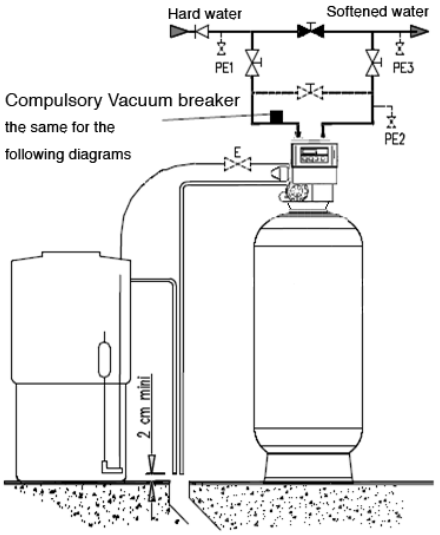



***Diagram no. II - "Simplex time based regeneration parallel regeneration softeners"***

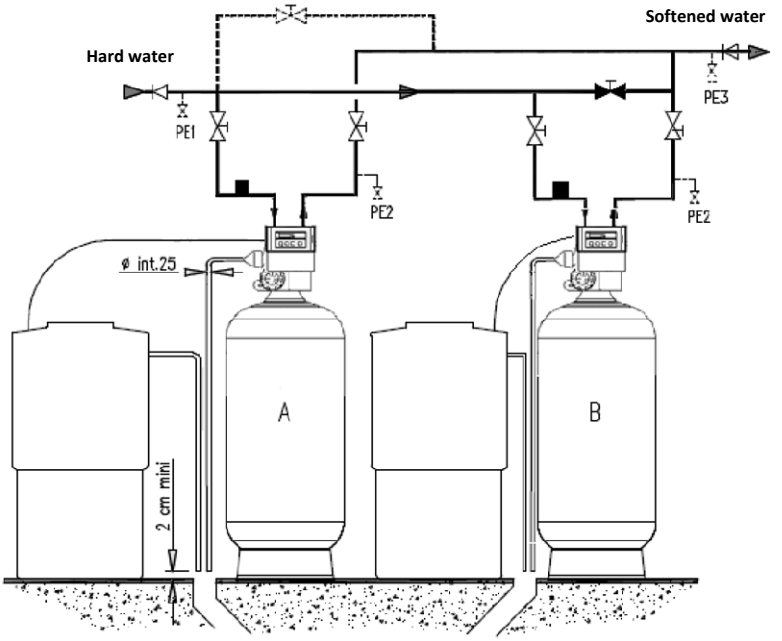



***Diagram no. V - "Duplex alternating parallel regeneration softeners"***

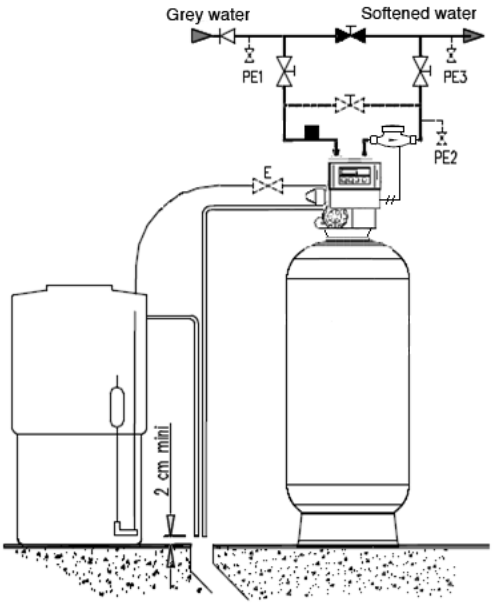



***Diagram no. IV - "Simplex time based regeneration softener"***

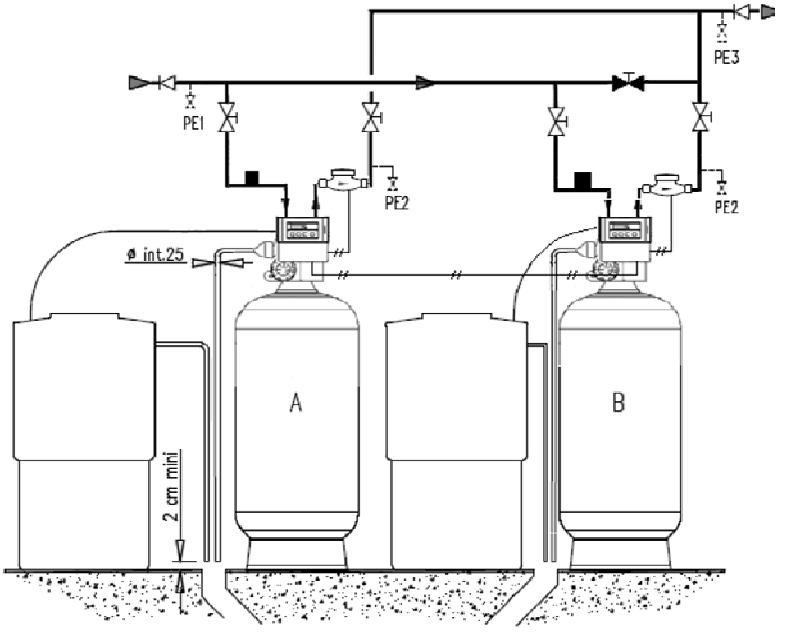



***Diagram no. V - "Duplex alternating volume based regeneration softeners"***

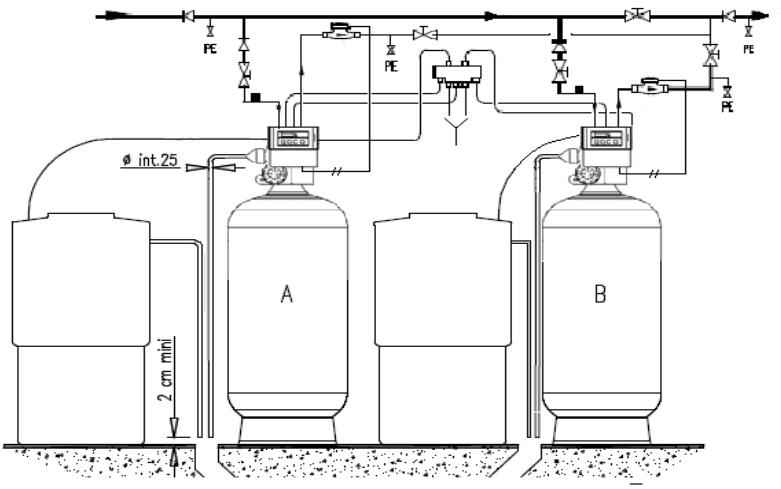



***Diagram no. VI - "Duplex alternating volume based softeners, 2 impulse counters"***

PE - Sampling

Note:

For counters used for softening and the dosage assembly, the counter must **necessarily** be placed at the softener output.

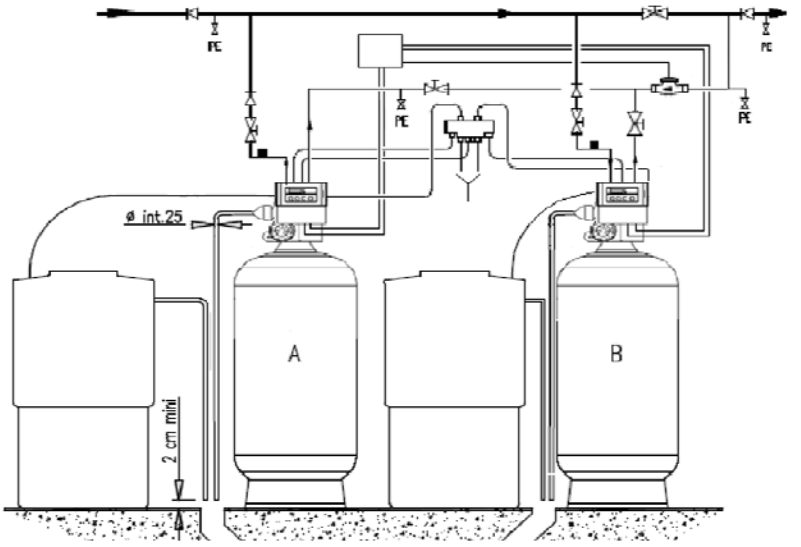
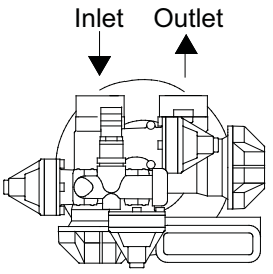



***Diagram no. VI - "Duplex alternating volume based softener, 1 impulse counter"***

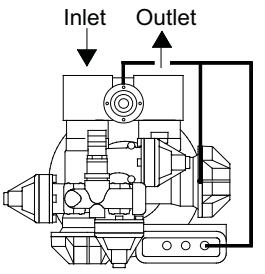
## ***6.2 Automatic by-pass during regeneration***

For 9000, CC, type softeners, the hydraulic valve of the softener is equipped with an automatic bypass that enables hard water to be delivered during regeneration.

This kind of assembly does not entail any kind of change to the basic installation procedure.




***Installation without bypass***




***Installation with bypass***

## *6.3 Assembly of the hydraulic control block (softener valve) on the body and installation of the unit*

Fasten the softener valve to the body while verifying the positioning of the central drop tube.

Place the softener in the established location.

Subsequently dismantle the valve in order to introduce the silex and the resins then replace. The positioning of the softener and the valve must be performed before loading.

## *6.4 Grounding of the chassis*

Seeing as the body is made out of a composite material, there is no need for it to be grounded.

## *6.5 Hydraulic connections*

(diagram no. I and diagram no: VIII, above)

5 connections have to made to the softener's hydraulic control unit

**IMPORTANT: The inlet and the outlet must be connected using the supplied pipes.**
**It is equally essential that the supplied vacuum breaker be installed.**

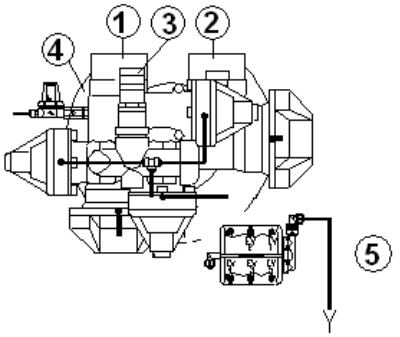



***Diagram no. VIII - "9000 type hydraulic connections"***

| | |
|---|---|
| ① Entry of water to be treated | 2" gas thread |
| ② Output of treated water | 2" gas thread |
| ③ Regeneration water evacuation | 3/4" gas thread |
| ④ Connection with the brine regulator (in the salt box) | 3/8" gas thread connection (see paragraph 6.5.4 regulator connection) |
| ⑤ Evacuation of valve control water | Connection for rilsan Ø 6/8 pipe |

### 6.5.1 Treatment water inlet and treated water outlet

The inlet pipes for the water to be treated must be suitably sized in order to ensure the production flow rate required thereby providing a regeneration flow below a minimal pressure of 1.5 bars in dynamic conditions and a maximum pressure of 7 bars in a static ones. In order to control this pressure, it is advisable to place a pressure gauge upstream of the softener.

We similarly advise you to install a filter upstream of the softener in order to protect from foreign bodies which could obstruct operation.

In compliance with current sanitary prescriptions, a class A check valve will be installed upstream of the water treatment station. It is advisable that the installer verify all specific sanitary regulations currently in force on the place of installation and to ensure that they are complied with.

Samples will nevertheless be expected to be taken upstream and downstream of the softener.

The softener must be protected against any water backflow by the customized backflow devices provided and installed downstream of the equipment on the treated water outlet conduit.

The installation upstream and downstream of the softener should not give rise to any "thumping" (and if this is the case, effective surge chambers should be envisaged).

The softener should, generally speaking, be installed with a bypass and always provided with an isolation valve and possibly with a residual hardness regulating bypass valve as indicated in diagram no. IX opposite.

VALVE A = Softener inlet

VALVE B = Softener outlet

VALVE C =General bypass

VALVE D = Residual fH bypass, needle valve (if using particularly soft water (sanitary water)).

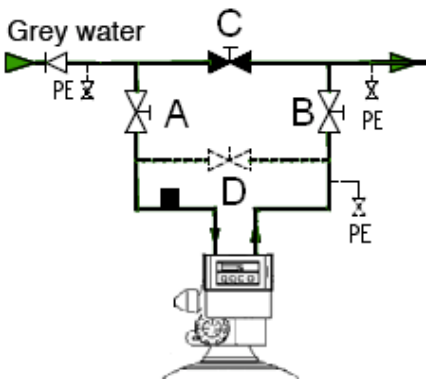



***Diagram no. IX "Valve positioning"***

The table below indicates the Ø of the bypass conduits in relation to the main conduits.

| | | | |
|---|---|---|---|
| Ø inlet<br>untreated water | 33 x 42<br>1"1/4 | 40 x 49<br>1"1/2 | 50 x 60<br>2" |
| Ø bypass<br>additional | 20 x 27<br>3/4" | 26 x 34<br>1" | 33 x 42<br>1"1/4 |

The connections to the softener must imperatively be easily disassembled and accessible in order to facilitate any required maintenance operations

The conduits must be correctly supported in order that no stress or constraints affects the equipment.

**<u>Beware</u>: The Inlet and Outlet conduits must be installed using hydraulic piping.**

### 6.5.2" Regeneration water evacuation

The sewer connection pipes (installed ③ according to the diagram (diagram VIII) must follow the simplest and shortest course possible. It should enable evacuation of the regeneration waters at the flow rates indicated in table no. V opposite "*Maximum instantaneous flow rate at sewer*" depending on the type of equipment installed and with a pressure drop (conduit pressure drop + dynamic head) that must not exceed a 3 metre column of water (0.5 bars).

In compliance with current sanitary regulations, a pressure drop of at least 2 cm must be guaranteed for the sewer connection of the softener and the main sewer conduit as prescribed by diagram no. X.

| Softener type | Flow rate in **l/mn** |
|---|---|
| 9125CC | Between 40 and 75 |
| 9175CC | |
| 9225CC | |
| 9300CC | |

***Table no. V***

***"Maximum instantaneous flow at sewer"***

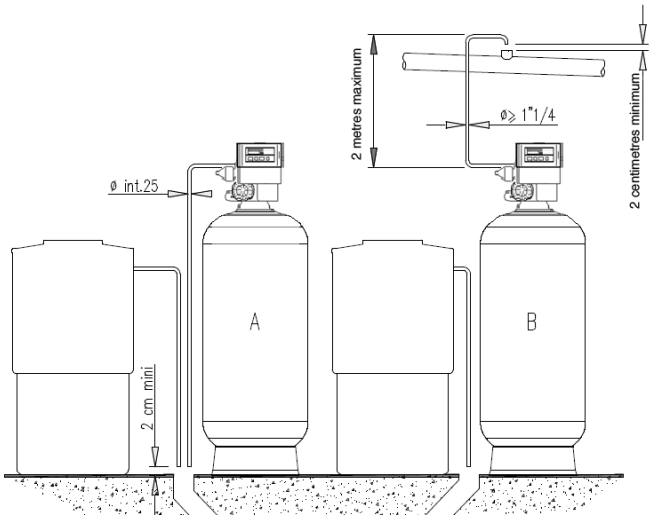



***Diagram no. X - "Pressure breaker"***

If a sump pit is evacuated using a sump pump and a recovery pit, be sure to size this equipment in order to prevent the risk of flooding of the premises (in the event of an unforeseen stoppage of the sump pump during regeneration). If a blackout occurs during regeneration, the flow to the sewer from the softener is cut.

All the same the 6x8 flexible piping should be channelled towards the sewer of the main water supply.

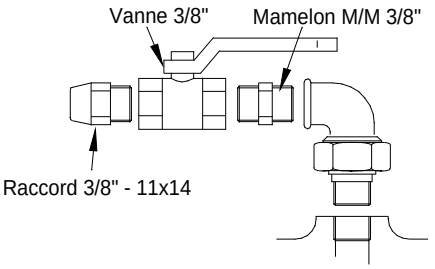
### 6.5.3. Evacuation(s) of an excessively full salt box

(see *diagram no. I*)

Where the salt boxes are equipped with an overfill security system which needs to be connected either to a gutter or a sewer conduit. The discharge must be performed by gravity and without loss of pressure. It is essential nevertheless to create a pressure break of at least 2 cm as prescribed by sanitary regulations.

### 6.5.4. Connection of the brine regulator(s)

The brine regulator(s) is (are) located in the brine tanks (grey PVC cylinder) inside the salt boxes. It is advisable to connect the flexible white pipe supplied Ø 11 x 14 to the controller and then connect the other end to the brine suction opening ④ as shown in diagram VIII while placing the installation accessories and the isolation valve provided between the hydraulic control unit and the pipe as shown in *diagram XI "suction connections"* shown below.




Installation for 8550 and type 9000

***Diagram no. XI - "Suction connections"***

## *6.6 Connection of the different options*

### 6.6.1. Connection of an impulse counter

(option for volume based regeneration control) - see electrical wiring diagrams.

The counter must be installed downstream of the softener before the residual fH regulator bypass.

In order to avoid counter errors and a premature wear of the internal mechanism, the counter must be installed horizontally with the track head upwards. It is advisable, in order to do a proper job, to use straight sections of pipe both up and downstream.

| | | |
|---|---|---|
| As a reminder: | upstream | 10 x Ø of the pipe |
| | Downstream | 5 x Ø of the pipe |

### 6.6.2. Hydraulic connections for alternating kits (option)

Of which there are 2: - Alternating kit, 1 counter,
- or Alternating kit, 2 counters,

These kits enable switching of 3 softeners (1 softener in operation, while the others are in regeneration or in standby).

After having connected the impulse counter or counters provided with the kits according to the instructions previously outlined and the diagrams, fix the alternating distributor to the wall.

Connect the flexible pipes 6 x 8 and 2 x 4 provided according to the *diagrams no. XII "Alternating hydraulic connections" below.*

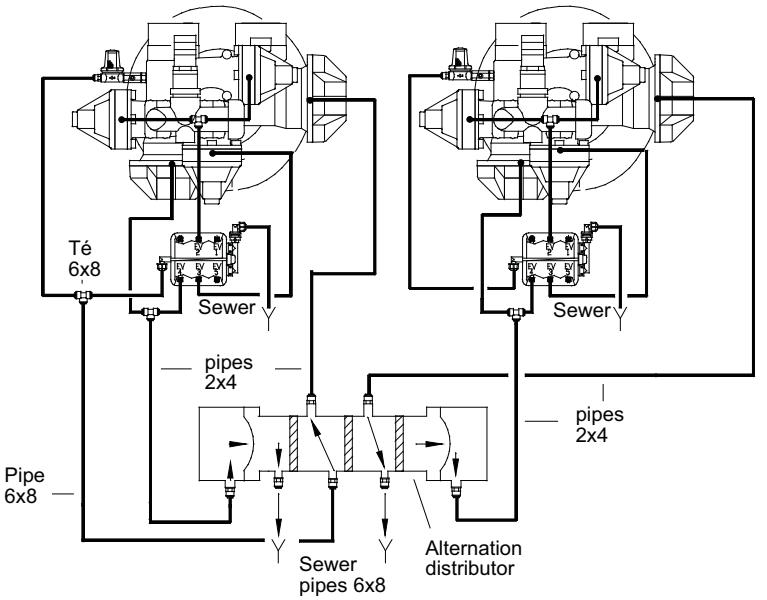



***Diagram no. XII " Alternating hydraulic connections for 9000 series"***

## *6.7 Electrical connections*

The 9000 CC ALCYO softeners are controlled by an electronic switch panel which, it its standard version, is mounted on the softener.

It is up to the installer to ensure that the cables used comply with the regulations that apply to the premises where the equipment is installed and to replace them if necessary.

**IMPORTANT**: In compliance with directives 87/308/CEE for safety reasons, the primary and secondary power cables of the transformer cannot be replaced. If they are damaged, the entire transformer must be discarded and replaced by a new one.

### 6.7.1. Overall description of the electronic control panel

The softener is controlled from the electronic control panel equipped with an A5X CONTROL micro-processor.

A 5 touch key pad provides access to the different programming sequences that are required to run the softener and program the timing of the regeneration.

It is delivered with an external transformer which provides the very low voltage current required to operate the electronics and the regeneration electro valves. This transformer is equipped with a primary electrical power cable of 1.9 meters without ground pin, seeing as the the panel and the electro valves it controls are in a double insulation class. It is advisable to provide a 230 volts single phase electric socket (European standard) in the vicinity of the panel (see chapter 5 "*Technical operating conditions")*

### 6.7.2. Electrical wiring

The 9000 CC ALCYO softener is delivered with 2 stranded cables and DIN plugs to connect the electro valves. If the cables need extending, use only flexible 0,5 or 0,75 $mm^2$ cable. Also use the same kind of cable used for the other connections required.

### 6.7.3. Description of the control terminal

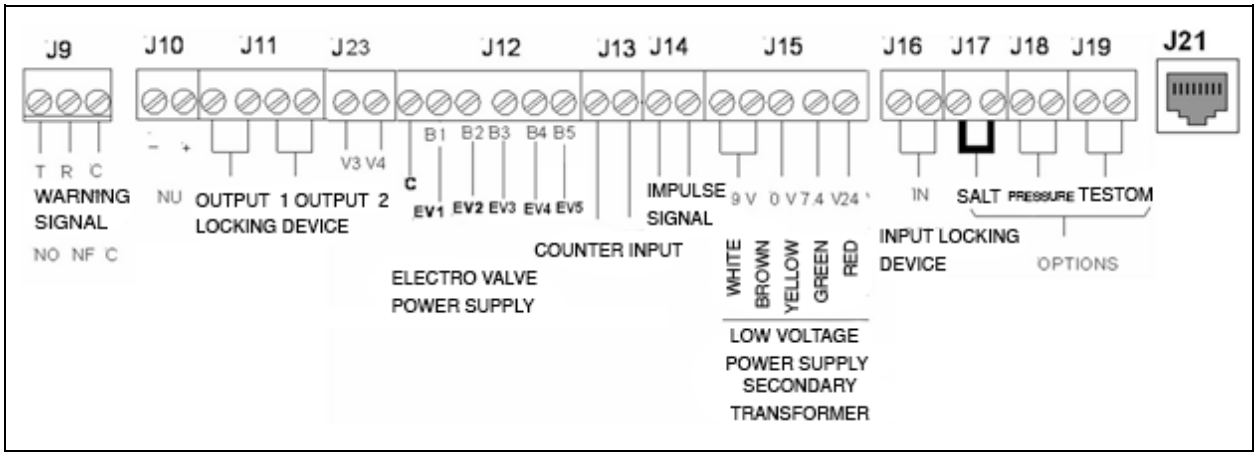



***Diagram no. XIII - "Connection terminal"***

Description from left to right: Input =  Output = 

| *Terminal No.* | *Nature of the cable* | *Description* |
|---|---|---|
| **J9**  | 2 x 05 or 0,75 mm$^2$<br>or<br>3 x 0.5 or 0.75 mm$^2$<br>depending on the contacts required | A5X CONTROL panel warning report in the event of:<br>- Electrical power failure<br>- Low salt level (option)<br>- Low pressure level (option)<br>With no power from left to right:<br>NO = Free contact normally open<br>NC = Free contact normally closed<br>C = Neutral<br>Under power from left to right:<br>NC = Free contact normally closed<br>NO = Free contact normally open<br>C = Neutral |
| **J10** | | Unused |
| **J11**  | 4 x 0.5 or 0.75 mm$^2$ | OUT 1 : output1 Free contact<br>Locking dialogue of softener no. 2<br>Instance of 2 communicating softeners (in parallel), inhibition of regeneration of No. 2 when No. 1 is regenerating and vice-versa.<br>OUT 2 : output 2 Free contact<br>Locked communication softener No.3, where 3 softeners communicate (in parallel). |
| **J23**  | 3 x 0.5 or 0.75 mm$^2$ Control of dosage pumps (option) | J12Control C connection = Shared Neutral<br>V3 = contact active during brining ⌉ 24 V alt.<br>V4 = contact active when in service ⌋ 9W max |
| **J12**  | Provided with the panel:<br>2 x cables No. 1 and No. 2 with DIN plugs - If the cables need extending, use 0.5 or 0.75 mm$^2$ flexible cable. | |
| **J13**  | 2 x 0.5 or 0.75 mm$^2$<br>Screened if longer than 5 metres or near to power cable | Input for external volume impulse counter impulse<br>For BWT PERMO counters:<br>- White wire = Neutral, to be connected to the middle terminal<br>- Other colours = to be connected to the left terminal and the right terminal |

| No. of DIN connectors | 2 | | | 1 | | |
|---|---|---|---|---|---|---|
| No. of cables | 18 | 24 | 23 | 22 | 21 | 20 |
| Colours | Blue | Brown | Black | Black | Brown | Blue |
| No. of terminals | C | B1 | B2 | B3 | B4 | B5 |
| No. EV | - | EV1 | EV2 | EV3 | EV4 | EV5 |

| *Terminal No.* | *Nature of the cable* | *Description* |
|---|---|---|
| **J14** | 2 x 0.5 or 0.75 mm$^2$ screened if longer than 5 metres or near to power cable | External impulse counter impulse report<br>Free contact. Maximum charge 10 watts with 100 volt - 0.4 Ampere limits |
| **J15** | Supplied with the transformer | Secondary input for external transformer<br>9 volts = White and brown wires<br>0 volt = Yellow wire<br>7.4 volt = Green wire<br>24 volt = Red wire |
| **J16** | 2 x 0.5 or 0.75 mm$^2$ | IN = Locked dialogue from OUT 1 or OUT 2 of another A5X - CONTROL panel. |
| **J17** | 2 x 0.5 or 0.75 mm$^2$ | - Low salt level input (option)<br>Terminals delivered with a jumper wire (contact open at low level) |
| **J18** | 2 x 0.5 or 0.75 mm$^2$ | Low pressure at input (option)<br>Contact closed when pressure too low (Pressure switch upstream of softener).<br>Regeneration stoppage when pressure too low. |
| **J19** | 2 x 0.5 or 0.75 mm$^2$ | Input of remote regeneration start up (Testomat or other option)<br>Free contact: closed for regeneration start up<br>Re-loading by re-opening of contact in order to avoid a regeneration loop |

***Table No. VI - "Description of the control terminal board"***

## 6.7.4. Electrical connection diagrams

***Simplex version***

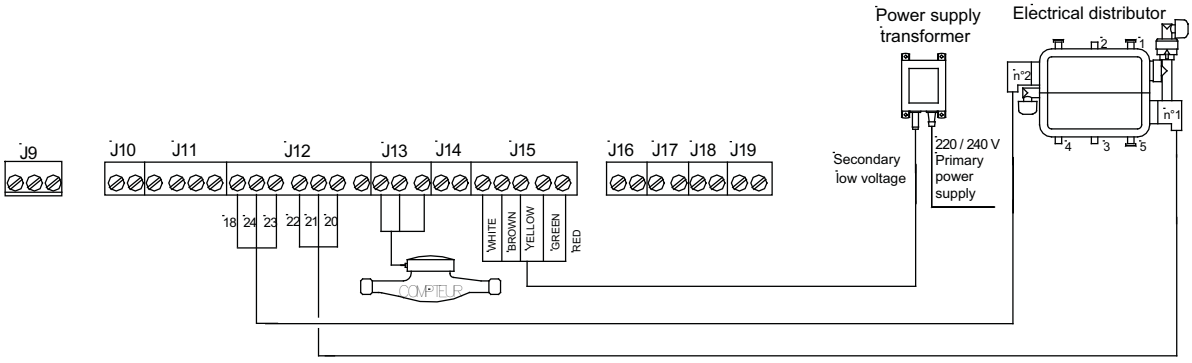



***Diagram No. XIV - "Simplex version connections"***

***Parallel version***

Connect each softener as previously indicated for the simplex version Also connect the dialogue function according to the *diagrams No. XV "Electrical dialogue connection - parallel" below.*

***Alternating version***

- *2 Counter alternating softener* Carry out electrical connection of each softener as previously indicated for the simplex version Do not connect the dialogue
- *1 Counter alternating softener* An additional panel (delivered with the kit), termed selection panel, is to be connected after having been fixed to the wall as indicated in *diagram No. XVI "Electrical connection of 1 counter alternating softener" below.*

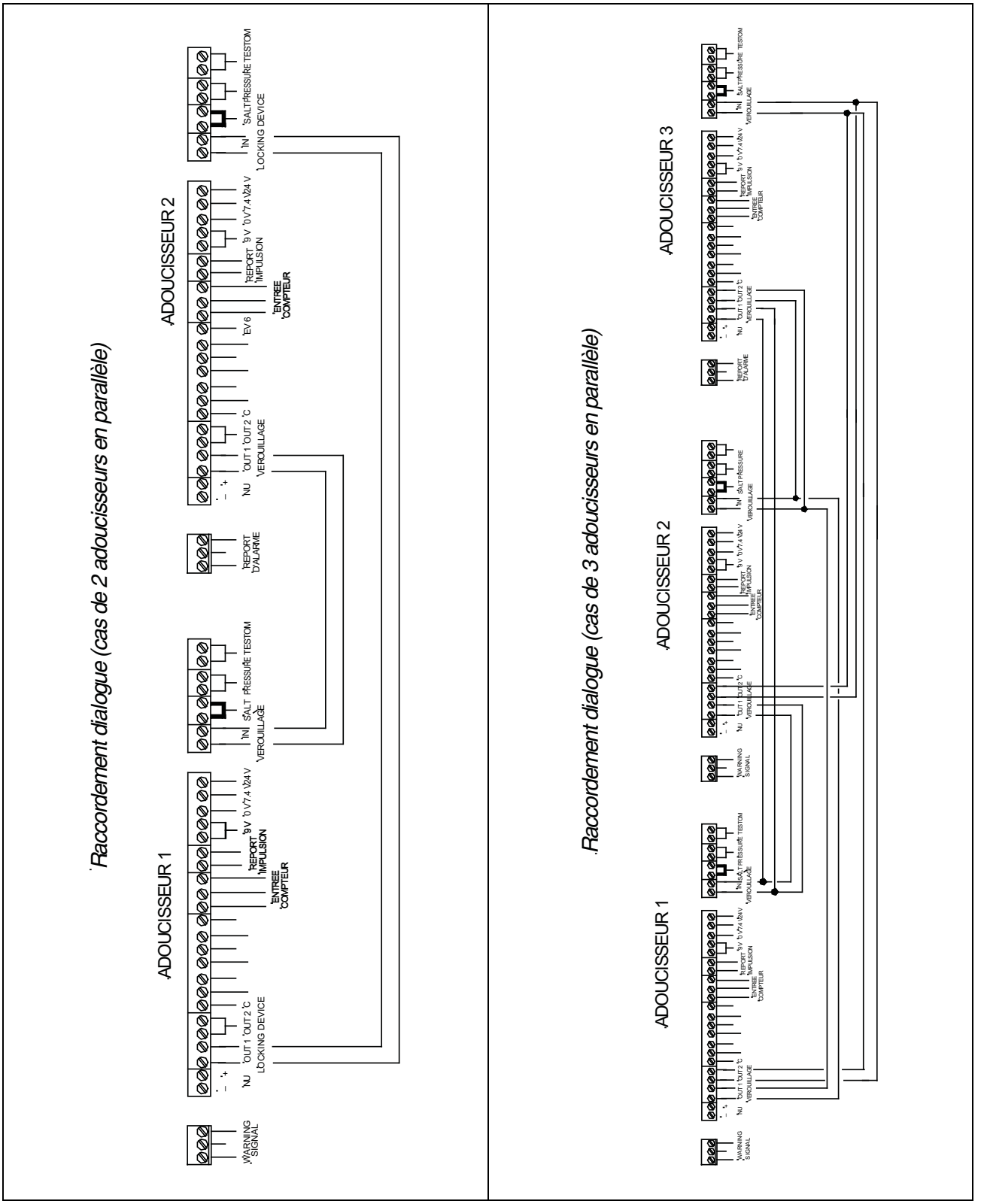



***Diagram No. XV - "Electrical dialogue connection - parallel"***

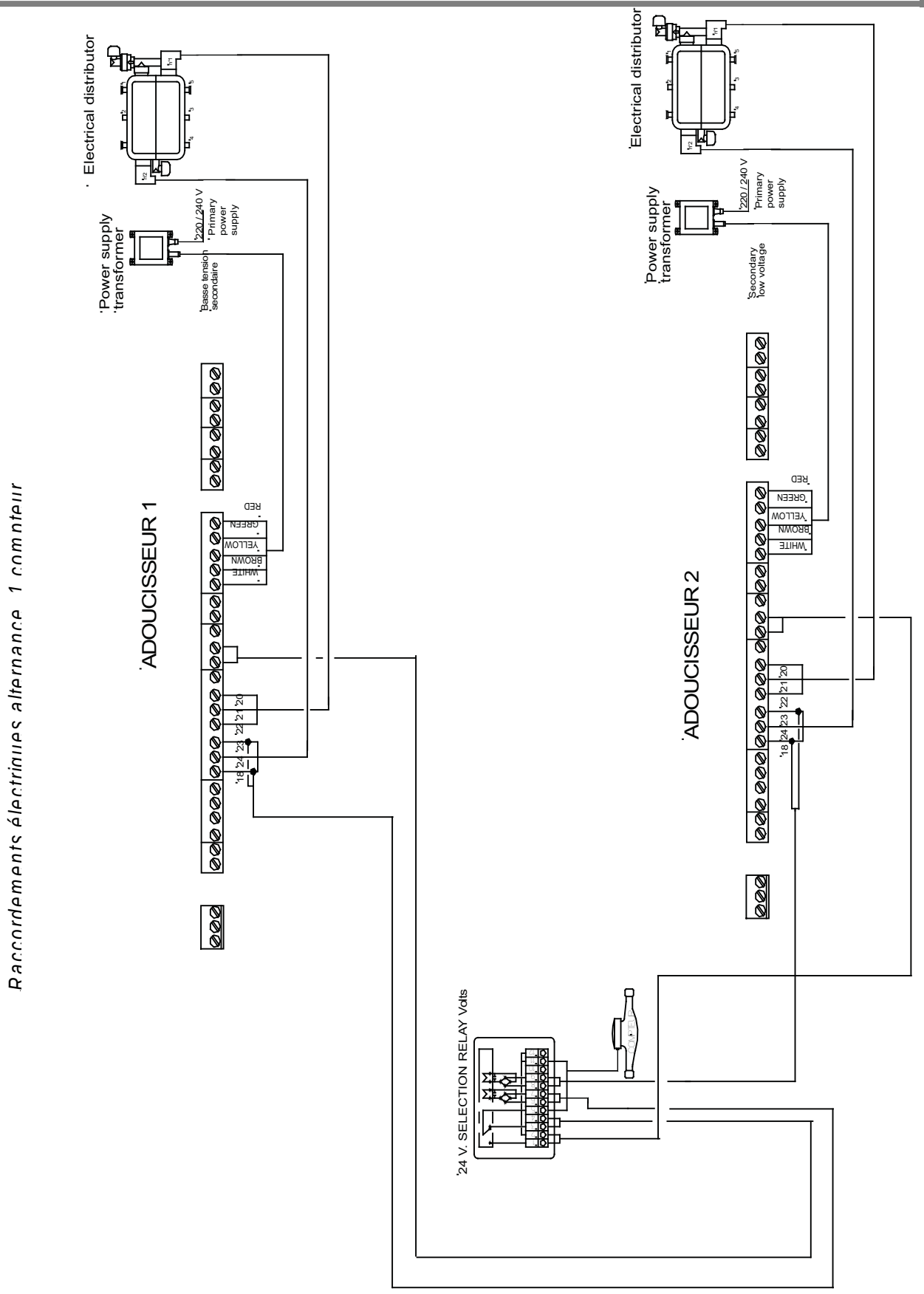



***Diagram No. XVI - "Alternating Electrical connection, 1 counter"***

# 7 - PROGRAMMING OF A5X- CONTROL PANEL

Once the hydraulic and electrical connections have been completed and verified, one can proceed with the programming of the panel.

***Panel presentation.***

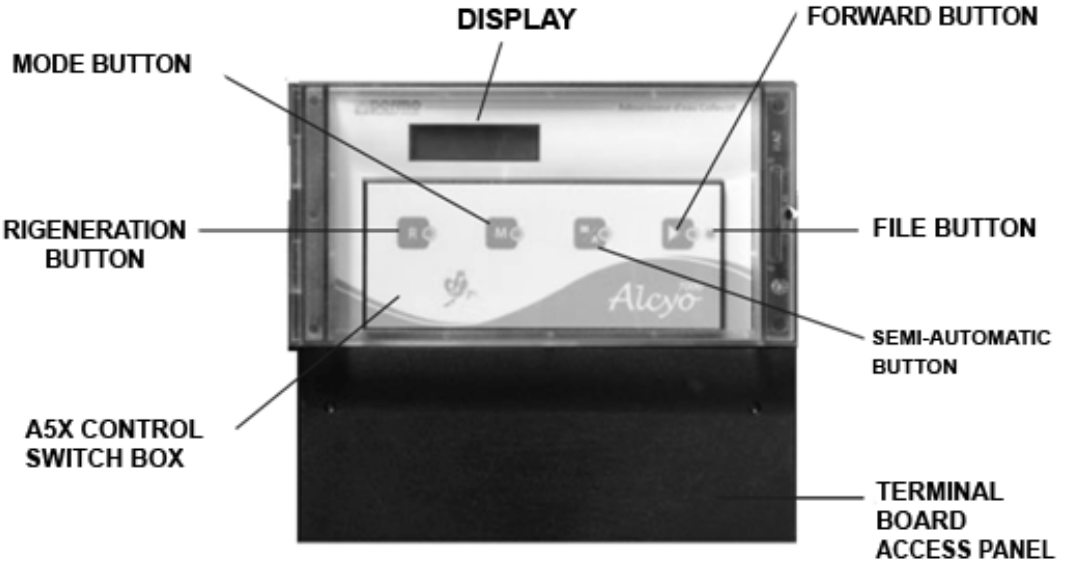



***Diagram No. XVII - "Panel description***

| symbol | meaning |
|---|---|
|  | - visualisation of remaining volume on a scale of 10 in volume mode<br>- visualisation of remaining volume on a scale of 10 in time mode<br>- visualisation of time elapsed during regeneration on a scale of 10 |
| R<br>1<br>2<br>3 | - R displayed during regeneration<br>- 1, 2 and 3 subsequently light up during phase 1(backflow washing), 2(brining and slow rinsing) et 3(fast rinsing) |
|  | - warning displayed if salt or water levels low (options) |
|  | - warning displayed after regeneration if conductivity is too low during brining |
|  | - warning displayed when the number of regenerations linked to maintenance program is reached |
|  | - warning displayed when the number of regenerations linked to SAV follow up is reached |
|  | - displayed at the same time as the current time |
|  | - displayed when the Old mode is in operation |
| $m^3$ | - 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 mode<br>- program steps displayed in Programme mode |
|  | - program data acquisition<br>- generic code and No. of OF acquisition<br>- displays the number days prior to the next regeneration or time programmed<br>- displays the time or start or end of the regeneration<br>- displays the entire volume remaining in litres when below 99999, in $m^3$ or<br>- display of number of regenerations<br>- display of total volume treated in $m^3$ |

***Table No. VII - "Description of the display panel"***

## *7.1 Selecting the mode of operation*

The mode of operation of the 9000 CC ALCYO softeners is selected by means of the programming keys of the A5X - CONTROL panel

The BWT Permo 9000 CC ALCYO softeners can operate in different modes (identified by the codes described below.

| Mode of operation | Programming Code | Designation | Observation |
|---|---|---|---|
| Time purification | **60210** | Regeneration every "x" days (interval between two regenerations) at a prearranged time. | |
| Time purification "Seven" | **60410** | Regeneration can be programmed over the seven days of the week (14 available slots) at a prearranged hour for each day. | Possibility of performing two regenerations a say on the seven days of the week. |
| Pure volume | **61230** | Immediate regeneration according to the programmed cycle of the softener without taking into account the time. | Immediate regeneration when the softener cycle = 0 |
| Volume anticipated in "Data" | **62230** | Regeneration depending on the cycle programmed for the softener and of the average daily consumption at an established hour. | |
| Volume anticipated in "Data" with volume priority | **62730** | Regeneration depending on the cycle programmed for the softener at a pre-set time and the average daily consumption. | Immediate regeneration when the softener cycle = 0 |
| Advanced volume mode "Seven" | **62530** | Regeneration depending on the cycle programmed for the softener at a pre-set time and the average daily consumption calculated over a seven day period. | |

***Table No. VIII - "List of generic codes"***

## *7.2 Code programming for the mode of operation*

**A /** Connect the appliance to a standard electrical socket in accordance with the operating instructions provided in this manual .

1/. First instance

Once under power, the panel normally kicks off in regeneration mode.

- The first line displays the current time, to be set later.

- the second line alternates display of regeneration start time and end time.

- the bar graph is in the low position and the "R" character is visible.

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

2/. Second instance

Once under power, the panel displays five zeros of which the one to the left flashes. It will remain in this configuration until the operating mode for your appliance is entered and identified by a generic code described in Table VIII. The ‘Mode’ and ‘Regeneration’ buttons are not active.

Inputting the generic code for the operating mode.
Press the ‘Semi-auto’ button to move to the right in the selection indicated by the flashing digit and modify its value with the ‘Forward’ button.

Input the generic code relative to the chosen mode of operation.

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

**Beware:**

The operating mode code described above corresponds to a well-defined programme in the control unit microprocessor of the A5X- Control panel All incorrect codes or ones that do not correspond to any of the codes indicated above can lead to malfunction and possibly to the loss of the BWT guarantee.

## B / Changing the mode of operation

To change the five figure code, press the "*Mode*" and "*file*" buttons simultaneously for five seconds, then release. Change the code, then validate after having inserted the data with the file key.

Renew the operating mode programming procedure as prescribed by paragraph 7.4.

## C / Return to factory parameters

*To reset the programmed operating mode to zero, press the "*file*" and "*Mode*" keys for five seconds, then release.*

*Subsequently press the "*file**" key briefly, the display shows "**ini 0**". Choose "**1**" the "*Forward*" key , then press the "*file*" key to confirm the reset to zero.*

## *7.3 With 2 or 3 softeners connected in parallel*

If you have two or three softeners operating purely in volume mode, it is necessary to carry out a multiplex electrical connection between each panel in order to prevent the regeneration of other softeners while one is regenerating. The programming code is then the same for each piece of equipment. (61230)

**Beware:**
If during the regeneration of one of the softeners, a second softener reaches exhaustion, it will display the "R" letter. Once the regeneration of the first is complete, the machine in standby will not set its regeneration in motion without a new time setting.

## *7.4. Programming of operating phases*

The explanations below give the meanings of the programme steps and the value of the parameters to be programmed depending on your softener's operating mode (be sure to check the software operating notes at the end of the manual none the less).

**Beware:**
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 performed 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 information will only 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-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 "#".

### 7.4.1. Time operating mode - code 60210

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

The display shows the programme step P100 (#) and by default the 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 the programme step P001(#) and by default the current year.

Set the value of the current year.

Press the "Mode" button. The display shows programme step P002(#) as well as the current day and month by default.

*example:* 01:02 for the 1st February.

Set the current day and month value.

**Important:**
The data programmed in P001(#) & P002(#) are used if the communication option is installed.

Press the "Mode" button. The display shows programme step P003 as well as the current day and month by default.

*example:* 1.01.01 for Monday at 01:01.

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

Press the "Mode" button. The display shows programme step P020 as well as the number of days of each regeneration cycle.

Press the ‘Mode’ button. The display shows P051 and the value 04 which corresponds to the lifting, the first phase of the regeneration procedure, given in minutes (see table X - "Generation times")

Press the "Mode" button. The display shows P052 and the value 00. This step is used if the brine is sent to the softener from a salt silo. The value of this step therefore corresponds to the activation time of the brine pump (terminal V3).

Press the "Mode" button once more. The display shows P053, a program step which corresponds to the brine suction and slow rinse time, as well as the value "40" (minutes) (see table x - "Regeneration times"),. If P052 is not zero, the duration of the brining+slow rinsing corresponds to the sum of the P052 and P053 values.

Press the "Mode" button once again. P054 is displayed as well as the duration in minutes of the final rinse "08" (see table X - "Regeneration times")-

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

*example:* 0.01:00 for 01:00.

Set the regeneration time value in the 24 hour clock.

Press the "Mode" button again. The display shows programme step P031(#) and the warnings to be selected.as prescribed by table IX below :

| Type of warning / configuration | Salt | | pressure | | Maintenance | | SAV | |
|---|---|---|---|---|---|---|---|---|
| | active | inactive | active | inactive | active | inactive | active | inactive |
| 10000 | | X | X | | | X | | X |
| 01000 | X | | | X | | X | | X |
| 00010 | | X | | X | X | | | X |
| 00001 | | X | | X | | X | X | |
| 11000 | X | | X | | | X | | X |
| 10010 | | X | X | | X | | | X |
| 10001 | | X | X | | | X | X | |
| 01010 | X | | | X | X | | | X |
| 01001 | X | | | X | | X | X | |
| 00011 | | X | | X | X | | X | |
| 11010 | X | | X | | X | | | X |
| 11001 | X | | X | | | X | X | |
| 10011 | | X | X | | X | | X | |
| 01011 | X | | | X | X | | X | |
| 11011 | X | | X | | X | | X | |

***Table no. IX : "Warning configuration"***

Press the "Mode" button again. The display shows programme step P032(#) and the default number of regenerations after which the maintenance warning is displayed.

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

Subsequently press the "Mode" button. The display shows programme step P033(#) and the default number of regenerations after which the after sales service warning is displayed.

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

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

### 7.4.2. "Seven" Time operating mode - code 60410

Press the "Mode" key for approximately five seconds.

The display shows the programme step P100 (#) and by default the 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 the programme step P001(#) and by default the current year.

Set the value of the current year.

Press the "Mode" button. The display shows programme step P002(#) as well as the current day and month by default.

*example:* 01:02 for the 1st February.

Set the current day and month value.

**Important:**
The data programmed in P001(#) & P002(#) are used if the communication option is installed.

Press the "Mode" button. The display shows programme step P003 as well as the current day and month by default.

*example:* 1.01.01 for Monday at 01:01.

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

Press the "Mode" button. The display shows programme step P080 and a regeneration hour and day by default. This setting allows the regeneration to be planned based on consumption.

*example:* 1.01.0 for Monday at 01:00.

Set the regeneration time value in the 24 hour clock.

The following steps from P082 to P097 enable the regulation of 13 other regenerations during the week.

In order for a step to be complete, it is sufficient to enter the value 0 as the value for the day.

Press the "Mode" button. The display shows P051 and the value 04 which corresponds to the lifting, the first phase of the regeneration procedure, given in minutes (see table X - "Generation times")

Press the "Mode" button. The display shows P052 and the value 00. This step is used if the brine is sent to the softener from a salt silo. The value of this step therefore corresponds to the activation time of the brine pump (terminal V3).

Press the "Mode" button once more. The display shows P053, a program step which corresponds to the brine suction and slow rinse time, as well as the value "40" (minutes) (see table x - "Regeneration times"),. If P052 is not zero, the duration of the brining+slow rinsing corresponds to the sum of the P052 and P053 values.

Press the "Mode" button once again. P054 is displayed as well as the duration in minutes of the final rinse "08" (see table X - "Regeneration times")-

Press the "Mode" button again. The display shows programme step P031(#) and the alarms to be selected.as prescribed by table IX below :

Press the "Mode" button again. The display shows programme step P032(#) and the default number of regenerations after which the maintenance warning is displayed.

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

Subsequently press the "Mode" button. The display shows programme step P033(#) and the default number of regenerations after which the after sales service warning is displayed.

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

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

### 7.4.3. Volume operating mode set by "Data" - codes 62230 and 62730

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

The display shows the programme step P100 (#) and by default the 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 the programme step P001(#) and by default the current year.

Set the value of the current year.

Press the "Mode" button. The display shows programme step P002(#) as well as the current day and month by default.

*example:* 01:02 for the 1st February.

Set the current day and month value.

**Important:**
The data programmed in P001(#) & P002(#) are used if the communication option is installed.

Press the "Mode" button. The display shows programme step P003 as well as the current day and month by default.

*example:* 1.01.01 for Monday at 01:01.

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 regeneration time. This setting allows the regeneration to be planned based on consumption.

*example:* 0.01:00 for 01:00.

Set the regeneration time value in the 24 hour clock.

Press the "Mode" button. The display shows P051 and the value 04 which corresponds to the lifting, the first phase of the regeneration procedure, given in minutes (see table X - "Generation times")

Press the "Mode" button. The display shows P052 and the value 00. This step is used if the brine is sent to the softener from a salt silo. The value of this step therefore corresponds to the activation time of the brine pump (terminal V3).

Press the "Mode" button once more. The display shows P053, a program step which corresponds to the brine suction and slow rinse time, as well as the value "40" (minutes) (see table x - "Regeneration times"),. If P052 is not zero, the duration of the brining+slow rinsing corresponds to the sum of the P052 and P053 values.

Press the "Mode" button once again. P054 is displayed as well as the duration in minutes of the final rinse "08" (see table X - "Regeneration times")-

Press the "Mode" button again. P060 is displayed as well as "0-001".

The "0" on the left establishes the counter mode: multiplier (value 1) or divider (value 0).

The 3 figures on the right establish the relationship between the counter impulses and the number of litres.

recorded by the panel.

*examples:* 1 counter impulse corresponds to 5 litres -> parameter 1-005
5 counter impulses corresponds to 1 litres -> parameter 0-005

Press the "Mode" button. P062 is displayed as well as "0-001".

This function enables to set the parameters for the external acquisition of the impulses.

The "0" on the left establishes the counter mode: multiplier (value 1) or divider (value 0).

The 3 figures on the right establish the relationship between the counter impulses those indicated at the panel output.

*example:* 1 counter impulse corresponds to 5 output impulses.-> parameter 1-005

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

*example:* L. 1000 corresponds to a 1,000 litre cycle, H 1000 corresponds to a 1000 hectolitre cycle.

Adjust the cycle corresponding to the volume of water produced between two regenerations.

To calculate the cycle of your softener, divide the exchange capacity (see table III "Technical specifications" by the fH of the water to be treated.

Press the "Mode" button. The display shows P070 and the value "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 value based on the consumption. The average is calculated daily at the regeneration time programmed in step P080.

Press the "Mode" button again. The display shows programme step P031(#) and the warnings to be selected.as prescribed by table IX on warning configuration.

Press the "Mode" button again. The display shows programme step P032(#) and the default number of regenerations after which the maintenance warning is displayed.

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

Subsequently press the ‘Mode’ button. The display shows programme step P033(#) and the default number of regenerations after which the after sales service warning is displayed.

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

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

### 7.4.4. Volume operation mode programmed for "Seven" - code 62530

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

The display shows the programme step P100 (#) and by default the 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 the programme step P001(#) and by default the current year.

Set the value of the current year.

Press the "Mode" button. The display shows programme step P002(#) as well as the current day and month by default.

*example:* 01:02 for the 1st February.

Set the current day and month value.

**Important:**

The data programmed in P001(#) & P002(#) are used if the communication option is installed.

Press the "Mode" button. The display shows programme step P003 as well as the current day and month by default.

*example:* 1.01.01 for Monday at 01:01.

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 regeneration time. This setting allows the regeneration to be planned based on consumption.

*example:* 0.01:00 for 01:00.

Set the regeneration time value in the 24 hour clock.

Press the "Mode" button. The display shows P051 and the value 04 which corresponds to the lifting, the first phase of the regeneration procedure, given in minutes (see table X - "Generation times")

Press the "Mode" button. The display shows P052 and the value 00. This step is used if the brine is sent to the softener from a salt silo. The value of this step therefore corresponds to the activation time of the brine pump (terminal V3).

Press the "Mode" button once more. The display shows P053, a program step which corresponds to the brine suction and slow rinse time, as well as the value "40" (minutes) (see table x - "Regeneration times"),. If P052 is not zero, the duration of the brining+slow rinsing corresponds to the sum of the P052 and P053 values.

Press the ‘Mode’ button once again. P054 is displayed as well as the duration in minutes of the final rinse "08" (see table X - "Regeneration times")-

Press the "Mode" button again. P060 is displayed as well as "0-001".

The "0" on the left establishes the counter mode: multiplier (value 1) or divider (value 0).

The 3 figures on the right establish the relationship between the counter impulses and the number of litres recorded by the panel.

*examples:* 1 counter impulse corresponds to 5 litres -> parameter 1-005
5 counter impulses corresponds to 1 litres -> parameter 0-005

Press the ‘Mode’ button. P062 is displayed as well as "0-001".

This function enables to set the parameters for the external acquisition of the impulses.

The "0" on the left establishes the counter mode: multiplier (value 1) or divider (value 0).

The 3 figures on the right establish the relationship between the counter impulses those indicated at the panel output..

*example:* 1 counter impulse corresponds to 5 output impulses -> parameter 1-005

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

*example:* L. 1000 corresponds to a 1,000 litre cycle, H 1000 corresponds to a 1000 hectolitre cycle.

Adjust the cycle corresponding to the volume of water produced between two regenerations.

To calculate the cycle of your softener, divide the exchange capacity (see table III "Technical specifications" by the fH of the water to be treated.

Press the "Mode" button again. The display shows programme step P071 and the average consumption by default for Monday.

*example:* L.0300 corresponds to an average consumption of 300 litres;
H 0300 corresponds to an average consumption of 300 hectolitres.

For each day of the week (P071=Monday, P072= Tuesday,..., P077= Sunday), enter the average consumption volume.

If the average volumes are unknown, skip the P071 to P077 steps by pressing the "Mode" button repeatedly. The default value of 300letres will then be taken into consideration at the beginning and the averages will be recalculated at the end of the week. The calculated values can be consulted at any time by reading the programme steps P071 to P077.

Press the "Mode" button again. The display shows programme step P031(#) and the warnings to be selected.as prescribed by table IX on warning configuration.

Press the "Mode" button again. The display shows programme step P032(#) and the default number of regenerations after which the maintenance warning is displayed.

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

Subsequently press the "Mode" button. The display shows programme step P033(#) and the default number of regenerations after which the after sales service warning is displayed.

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

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

### 7.4.5. Pure volume operation mode - code 61230

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

The display shows the programme step P100 (#) and by default the 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 the programme step P001(#) and by default the current year.

Set the value of the current year.

Press the "Mode" button. The display shows programme step P002(#) as well as the current day and month by default.

*example:* 01:02 for the 1st February.

Set the current day and month value.

**Important:**

The data programmed in P001(#) & P002(#) are used if the communication option is installed.

Press the ‘Mode’ button. The display shows programme step P003 as well as the current day and month by default.

*example:* 1.01.01 for Monday at 01:01.

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 1,000 litre cycle, H 1000 corresponds to a 1000 hectolitre cycle.

Adjust the cycle corresponding to the volume of water produced between two regenerations.

To calculate the cycle of your softener, divide the exchange capacity (see table III "Technical specifications") by the fH of the water to be treated.

Press the "Mode" button. The display shows P051 and the value 04 which corresponds to the lifting, the first phase of the regeneration procedure, given in minutes (see table X - "Generation times")

Press the "Mode" button. The display shows P052 and the value 00. This step is used if the brine is sent to the softener from a salt silo. The value of this step therefore corresponds to the activation time of the brine pump (terminal V3).

Press the "Mode" button once more. The display shows P053, a program step which corresponds to the brine suction and slow rinse time, as well as the value "40" (minutes) (see table x - "Regeneration times"),. If P052 is not zero, the duration of the brining+slow rinsing corresponds to the sum of the P052 and P053 values.

Press the "Mode" button once again. P054 is displayed as well as the duration in minutes of the final rinse "08" (see table X - "Regeneration times")-

Press the "Mode" button. The display shows P056, a programming step which corresponds to the interval in minutes between the end of the softener's regeneration procedure and the beginning of the regeneration of another softener of the installation. This softener is connected electrically to the J11 terminal (see paragraph 6.7.3).

Press the "Mode" button again. P060 is displayed as well as "0-001".

The "0" on the left establishes the counter mode: multiplier (value 1) or divider (value 0).

The 3 figures on the right establish the relationship between the counter impulses and the number of litres.

recorded by the panel.

*examples:* 1 counter impulse corresponds to 5 litres -> parameter 1-005
5 counter impulses corresponds to 1 litres -> parameter 0-005

Press the "Mode" button. P062 is displayed as well as "0-001".

This function enables to set the parameters for the external acquisition of the impulses.

The "0" on the left establishes the counter mode: multiplier (value 1) or divider (value 0).

The 3 figures on the right establish the relationship between the counter impulses those indicated at

the panel output.

*example:* 1 counter impulse corresponds to 5 output impulses. -> parameter 1-005

Press the "Mode" button again. The display shows programme step P031(#) and the warnings to be selected.as prescribed by table IX on warning configuration.

Press the "Mode" button again. The display shows programme step P032(#) and the default number of regenerations after which the maintenance warning is displayed.

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

Subsequently press the "Mode" button. The display shows programme step P033(#) and the default number of regenerations after which the after sales service warning is displayed.

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

Press the ‘Mode’ button. The programming phase is completed and the display returns to the service configuration.

**Important :**

The programming performed above will not be finally validated until the first regeneration is begun, either automatically by the control panel, or through a manual start achieved by pressing the "Regeneration" button for five seconds. From this moment on the recorded parameters will be displayable (except for the day when the display is immediate).

The times in minutes shown in the table below are basic times which can be modified depending on the operating conditions of the plant.

| Type Softener | Time in minutes | | | | | |
|---|---|---|---|---|---|---|
| | Pressure below 4 bars | | | Pressure above 4 bars | | |
| | Duration of lifting | Suction duration slow rinsing | Duration of fast rinsing | Duration of lifting | Suction duration slow rinsing | Duration of fast rinsing |
| *9125 CC* | *5* | *27* | *7* | *5* | *27* | *7* |
| *9175 CC* | *6* | *38* | *9* | *6* | *35* | *9* |
| *9225 CC* | *8* | *47* | *12* | *8* | *42* | *12* |
| *9300 CC* | *10* | *63* | *15* | *10* | *55* | *15* |

***Table No. X - "Regeneration times"***

### 7.4.6. Program test

To launch the "Test" programme, press the "Regeneration" and "Semi-auto" buttons simultaneously for about five seconds. The softener starts regeneration automatically (display R1). The bar graph remains in the high position during the entire duration of the test.

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

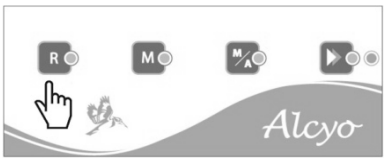
A new press on ‘Mode’ allows a change to fast rinse, the last regeneration phase. The display changes to "R2".

**Beware:**
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.

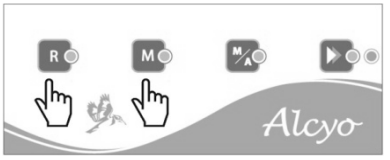
A final press on the "Mode" button terminates the Test programme and allows a return to the initial display. The equipment skips hydraulically into service or into production of softened water.

**Beware:**
The "TEST" mode is designed to check the softener's regeneration phases and in no case can it be used to carry out a regeneration. Similarly, this mode does not reinitialise the remaining volume of the volume programmed equipment.

Other functions




Starting a regeneration, press for at least 5 seconds on the "Regeneration" button. A complete regeneration is started as soon as the button is released.




Stopping a regeneration in process.

Beware: This emergency stoppage mode will put the softener back into service mode. If the stoppage is performed during the brine passage or during the rinses, there's a risk that the brine could be carried towards the installations downstream of the softener.

To perform this kind of stoppage press on the "Regeneration" and "Mode"buttons simultaneously.

**Softener recorded data**

If the softener is not performing a regeneration, it is possible to view the total volume of water softened and the number of regenerations performed.

This is achieved by simply pressing on the "Forward" button for 5 seconds. The display then shows the total volume of water softened. This indicative value is updated after each regeneration. The measurement unit shifts between litres and $m^3$ as soon as the value exceeds 99999 litres.

A second press of the "Forward" button enables the display of the total number of regenerations performed.

The total volume and number of regenerations can be reset at zero by holding down the 3 buttons "Mode", "Semi-automatic" and "Forward" simultaneously.

**Controlling an outside pump**

A 24 volt contact is available on the V4 terminal to be used to run a dosage pump providing

the softener is not in regeneration mode.

# 8 - COMMISSIONING

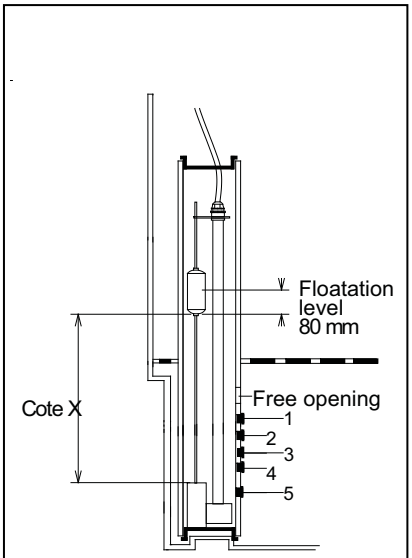
## *8.1. Brine regulator adjustment:*

- Remove the brine tanks place in the salt box.
- Verify the "X" side by following the *diagram No. XXIV and the table No. XI below.* Adjust the side by letting the floater slide down the regulator stem.
- Remove the side panels of the brine tanks as indicated in the diagrams.

Take the opportunity to check the correct positioning of the salt box floor.

| Type Standard | Side X standard in cm | Panels to be removed to be able to change the standard |
|---|---|---|
| 9125CC | 48 | 1-2 |
| 9175CC | 50 | 1-2-3-4 |
| 9225CC | 55 | 1-2-3-4-5 |
| 9300CC | 52 | 1-2-3-4-5 |

***Table No. XI - "Regulator calibration"***




***Regulator adjustment diagrams XVIII***

## *8.2. Filling with water )*

As prescribed by the public health code, and to prevent undesirable microbiological proliferations, the softener must be disinfected using Javel water in the following concentrations:

| Volume of Resin: (in litres) | Quantity of Javel concentrate at 39° chlorometric (commercially available tetrapak) to be used (in ml) | |
|---|---|---|
| | In the salt box (after loading salt) for all types of softener | In the tank (after loading of silex) |
| 9125CC | 10 | 30 |
| 9175CC | 15 | 30 |
| 9225CC | 20 | 30 |
| 9300CC | 20 | 30 |

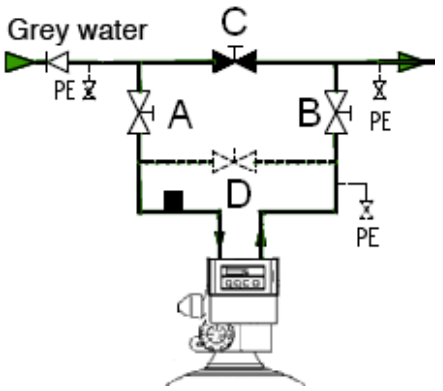



***Diagram No. XIX "Valve positioning"***

With Valve A - B shut, C open, start a regeneration by pressing the "Regeneration" button of the A5X - CONTROL electronic control panel.

Open the valve A slowly to bleed the air out of the plant. Once all the air has been removed, open A completely.

Bleed the brine controller as well by pressing on the float stem (hold the stem at it lowest point).

Open valve B, then shut valve C. Leave the softener in regeneration.

Once the regeneration is complete, verify the water tightness of the equipment. Check the fH and the chlorides of the softened water. Change the slow and/or fast rinse times if necessary.

If necessary adjust the residual fH regulating valve D.

## 9 - OPERATION - GENERAL MAINTENANCE

***Cutting out electrical sectors***

The programmed parameters are stored by the micro-processor of the electronic board.

- The displays go out.
- The electro valves are no longer powered.
- If the power cut takes place during regeneration, it stops, and the equipment does not stay in service. Once power is returned, the interrupted regeneration resumes from the beginning of the phase that has been interrupted.

***Unprogrammed regeneration***

It is possible to trigger a regeneration at any time by pressing the "Regeneration" button.
If one presses the "Regeneration" button of the 2nd softener during the regeneration of the 1st one the regeneration request will be stored in the control panel memory and the regeneration of the 2nd device will start once the 1st one has finished.

***General maintenance***

Check the fH and the chlorides of the grey waters and the softened waters on a regular basis and if necessary change the regeneration parameters of the softeners.

Whenever necessary, reload the salt box. The salt level must always be above that of the water contained in the salt box without however exceeding the height of the brine tank in order to leave free access to brine controller.

*At least every 6 months,* when reloading the salt of the salt box, take the opportunity of emptying it to clean and disinfect it before reloading it with salt, by introducing into the shaft of the brine controller some Javel water in the following concentration.

| Volume of resin (in litres) | Quantity of Javel concentrate at 39° chlorometric (commercially available tetrapak) to be used (in ml) |
|---|---|
| 9125CC | 10 |
| 9175CC | 15 |
| 9225CC | 20 |
| 9300CC | 20 |

***Warning signal***

- *Electrical power failure:* the warning switch is triggered.

  The switch remains active even after the power is restored. In order to reboot it one must press the «Mode» button (press for at least 5 seconds) and to skip through the various program steps in order to verify that no data has been lost.

- *Pressure loss:* the warning switch is triggered.

  The switch is automatically restored to its previous state once a correct pressure is restored. If the pressure drop takes place during regeneration the countdown of the regeneration time is blocked and resumed only when the pressure is restored.

- Low salt level*:* the warning switch is triggered.

  The switch is restored to its original position once the default has been remedied and then by pressing the «Mode» button.

***Accidents***

| **ACCIDENTS** | **CAUSES** | **REMEDIES** |
|---|---|---|
| The softener no longer produces softened water | Bypass open. | Check the setting of the residual bypass.<br>Make sure the general bypass is not open. |
| | Lack of Salt for regeneration | Make sure there is salt in the salt box. |
| | Failure or insufficient drawing of the brine. | Check the (dynamic) pressure at the softener inlet (minimum 1.5 bars) |
| | fH of the water to be treated greater than fH expected. | Check the fH of the water to be treated. |

| | | |
|---|---|---|
| | Absence of countdown of softened water volume extracted. | Check the countdown of the volume on the control panel (default ILS turbine/counter) |
| Water flowing into the sewer outside regeneration periods. | Valves or electro valves internal to the equipment are not watertight. | Replace the faulty parts. |
| | Decompression limiter blocked. | Clean the limiter. |
| | Insufficient pressure. | Check the pressure (minimum 1.5 bars in dynamic state) |
| Water seepage from the overflow of the salt box. | Brine controller is not watertight. | Check to make sure there are no deposits at the bottom of the salt box.<br>Clean the salt box and the controller. |

# 10) – PROGRAMMING FLOWCHARTS

## *10.1. Time operating mode - code 60210*

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| **Mode of operation** | **60210** | Programming of generic code (see §7.2) |
| Factory programming | **01:01**<br>**4.01:00** | ➔Current time on 24 hour clock<br>➔Date of the next regeneration |
| Program step P100 | **P100**<br>**01:01** | Press Mode for five seconds<br>➔Commissioning date (year:week= AA:SS)<br>Change using Forward and Semi-Automatic |
| Program step P001 | **P001**<br>**2000** | Press Mode<br>➔Current year<br>Change using Forward and Semi-Automatic |
| Program step P002 | **P002**<br>**01:01** | Press Mode<br>➔Current day and month (dd,mm)<br>Change using Forward and Semi-Automatic |
| Program step P003 | **P003**<br>**1.01:01** | Press Mode<br>➔Current day of the week and time<br>Change using Forward and Semi-Automatic |

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| Program step P020 | **P020**<br>**04** | Press Mode<br>➔Number of days between each regeneration<br>Change using Forward and Semi-Automatic |
| Program step P051 | **P051**<br>**04** | Press Mode<br>➔Duration of backflow washing in minutes<br>Change using Forward and Semi-Automatic |
| Program step P052 | **P052**<br>**00** | Press Mode<br>➔Brine pump options |
| Program step P053 | **P053**<br>**40** | Press Mode<br>➔Duration of slow rinse in minutes<br>Change using Forward and Semi-Automatic |
| Program step P054 | **P054**<br>**08** | Press Mode<br>➔Duration of fast rinse in minutes<br>Change using Forward and Semi-Automatic |
| Program step P080 | **P080**<br>**0.01:00** | Press Mode<br>➔Regeneration time<br>Change using Forward and Semi-Automatic |
| Program step P031 | **P031**<br>**00111** | Press Mode<br>➔Warning configuration<br>Change using Forward and Semi-Automatic |
| Program step P032 | **P032**<br>**070** | Press Mode<br>➔Maintenance frequency in number of regenerations<br>Change using Forward and Semi-Automatic |
| Program step P033 | **P033**<br>**140** | Press Mode<br>➔SAV frequency in number of regenerations<br>Change using Forward and Semi-Automatic |

## ***10.2. TIME SEVEN operating mode – code 60410***

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| **Mode of operation** | **60210** | Programming of generic code (see §7.2) |
| Factory programming | **01:01**<br>**4.01:00** | ➔Current time on 24 hour clock<br>➔Date of the next regeneration |
| Program step P100 | **P100**<br>**01:01** | Press Mode for five seconds<br>➔Commissioning date (year:week= AA:SS)<br>Change using Forward and Semi-Automatic |
| Program step P001 | **P001**<br>**2000** | Press Mode<br>➔Current year<br>Change using Forward and Semi-Automatic |
| Program step P002 | **P002**<br>**01:01** | Press Mode<br>➔Current day and month (dd,mm)<br>Change using Forward and Semi-Automatic |
| Program step P003 | **P003**<br>**1.01:01** | Press Mode<br>➔Current day of the week and time<br>Change using Forward and Semi-Automatic |
| Program step P081 | **P081**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P082 | **P082**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P083 | **P083**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| Program step P084 | **P084**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P085 | **P085**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P086 | **P086**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P087 | **P087**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P091 | **P091**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P092 | **P092**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P093 | **P093**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P094 | **P094**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P095 | **P095**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P096 | **P096**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P097 | **P097**<br>**1.01:00** | Press Mode<br>➔Day and time of Regeneration (J,HH,MM)<br>Change using Forward and Semi-Automatic |
| Program step P051 | **P051**<br>**04** | Press Mode<br>➔Duration of backflow washing in minutes<br>Change using Forward and Semi-Automatic |

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| Program step P052 | **P052**<br>**00** | Press Mode<br>➔Brine pump options |
| Program step P053 | **P053**<br>**40** | Press Mode<br>➔Duration of slow rinse in minutes<br>Change using Forward and Semi-Automatic |
| Program step P054 | **P054**<br>**08** | Press Mode<br>➔Duration of fast rinse in minutes<br>Change using Forward and Semi-Automatic |
| Program step P031 | **P031**<br>**00111** | Press Mode<br>➔Warning configuration<br>Change using Forward and Semi-Automatic |
| Program step P032 | **P032**<br>**070** | Press Mode<br>➔Maintenance frequency in number of regenerations<br>Change using Forward and Semi-Automatic |
| Program step P033 | **P033**<br>**140** | Press Mode<br>➔SAV frequency in number of regenerations<br>Change using Forward and Semi-Automatic |

## ***10.3. ADVANCE DATA VOLUME operation - codes 62230 & 62730***

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| **Mode of operation** | **42230 or 42730**<br>**52230 or 52730** | Programming of generic code (see §7.2) |
| Factory programming | **01:01**<br>**1000 L** | ➔Current time on 24 hour clock<br>➔softener default self-sufficiency |
| Program step P100 | **P100**<br>**01:01** | Press Mode for five seconds<br>➔Commissioning date (year:week= AA:SS)<br>Change using Forward and Semi-Automatic |
| Program step P001 | **P001**<br>**2000** | Press Mode<br>➔Current year<br>Change using Forward and Semi-Automatic |
| Program step P002 | **P002**<br>**01:01** | Press Mode<br>➔Current day and month (dd:mm)<br>Change using Forward and Semi-Automatic |

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| Program step P080 | **P080**<br>**0.01:00** | Press Mode<br>➔Regeneration time<br>Change using Forward and Semi-Automatic |
| Program step P051 | **P051**<br>**04** | Press Mode<br>➔Duration of backflow washing in minutes<br>Change using Forward and Semi-Automatic |
| Program step P052 | **P052**<br>**00** | Press Mode<br>➔Brine pump options |
| Program step P053 | **P053**<br>**40** | Press Mode<br>➔Duration of slow rinse in minutes<br>Change using Forward and Semi-Automatic |
| Program step P060 | **P060**<br>**0-001** | Press Mode<br>➔Conversion of the water counter impulses<br>Change using Forward and Semi-Automatic |
| Program step P062 | **P062**<br>**0-001** | Press Mode<br>➔ External communication of impulses |
| Program step P040 | **P040**<br>**L.1000** | Press Mode<br>➔Softener cycle in litres or hectolitres<br>Change using Forward and Semi-Automatic |
| Program step P070 | **P070**<br>**L.0300** | Press Mode<br>➔Initial daily average<br>Change using Forward and Semi-Automatic |
| Program step P031 | **P031**<br>**00111** | Press Mode<br>➔Warning configuration<br>Change using Forward and Semi-Automatic |
| Program step P032 | **P032**<br>**070** | Press Mode<br>➔Maintenance frequency in number of regenerations<br>Change using Forward and Semi-Automatic |
| Program step P033 | **P033**<br>**140** | Press Mode<br>➔SAV frequency in number of regenerations<br>Change using Forward and Semi-Automatic |

## *10.4. TIME SEVEN ADVANCE operating mode – code 62530*

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| **Mode of operation** | **62530** | Programming of generic code (see §7.2) |
| Factory programming | **01:01**<br>**1000 L** | ➔Current time on 24 hour clock<br>➔softener default self-sufficiency |
| Program step P100 | **P100**<br>**00:00** | Press Mode for five seconds<br>➔Commissioning date (year:week= AA:SS)<br>Change using Forward and Semi-Automatic |
| Program step P001 | **P001**<br>**2000** | Press Mode<br>➔Current year<br>Change using Forward and Semi-Automatic |
| Program step P002 | **P002**<br>**01:01** | Press Mode<br>➔Current day and month (dd,mm)<br>Change using Forward and Semi-Automatic |
| Program step P003 | **P003**<br>**1.01:01** | Press Mode<br>➔Current day of the week and time<br>Change using Forward and Semi-Automatic |
| Program step P080 | **P080**<br>**0.01:00** | Press Mode<br>➔Regeneration time<br>Change using Forward and Semi-Automatic |
| Program step P051 | **P051**<br>**04** | Press Mode<br>➔Duration of backflow washing in minutes<br>Change using Forward and Semi-Automatic |
| Program step P052 | **P052**<br>**00** | Press Mode<br>➔Brine pump options |
| Program step P053 | **P053**<br>**40** | Press Mode<br>➔Duration of slow rinse in minutes<br>Change using Forward and Semi-Automatic |
| Program step P054 | **P054**<br>**08** | Press Mode<br>➔Duration of fast rinse in minutes<br>Change using Forward and Semi-Automatic |
| Program step P060 | **P060**<br>**0-001** | Press Mode<br>➔Conversion of the water counter impulses<br>Change using Forward and Semi-Automatic |

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| Program step P062 | **P062**<br>**0-001** | Press Mode<br>➔ External communication of impulses |
| Program step P040 | **P040**<br>**L.1000** | Press Mode<br>➔Softener cycle in litres or hectolitres<br>Change using Forward and Semi-Automatic |
| Program step P071 | **P071**<br>**L.0300** | Press Mode<br>➔Initial average for Monday<br>Change using forward or Semi-automatic |
| Program step P072 | **P072**<br>**L.0300** | Press Mode<br>➔Initial average for Tuesday<br>Change using forward or Semi-automatic |
| Program step P073 | **P073**<br>**L.0300** | Press Mode<br>➔Initial average for Wednesday<br>Change using forward or Semi-automatic |
| Program step P074 | **P074**<br>**L.0300** | Press Mode<br>➔Initial average for Thursday<br>Change using forward or Semi-automatic |
| Program step P075 | **P075**<br>**L.0300** | Press Mode<br>➔Initial average for Friday<br>Change using forward or Semi-automatic |
| Program step P076 | **P076**<br>**L.0300** | Press Mode<br>➔Initial average for Saturday<br>Change using forward or Semi-automatic |
| Program step P077 | **P077**<br>**L.0300** | Press Mode<br>➔Initial average for Sunday<br>Change using forward or Semi-automatic |
| Program step P031 | **P031**<br>**00111** | Press Mode<br>➔Warning configuration<br>Change using Forward and Semi-Automatic |
| Program step P032 | **P032**<br>**070** | Press Mode<br>➔Maintenance frequency in number of regenerations<br>Change using Forward and Semi-Automatic |
| Program step P033 | **P033**<br>**140** | Press Mode<br>➔SAV frequency in number of regenerations<br>Change using Forward and Semi-Automatic |

## *10.5. PURE VOLUME operating mode – code 61230*

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| **Mode of operation** | **61230** | Programming of generic code (see §7.2) |
| Factory programming | **01:01**<br>**1000 L** | ➔Current time on 24 hour clock<br>➔softener default self-sufficiency |
| Program step P100 | **P100**<br>**00:00** | Press Mode for five seconds<br>➔Commissioning date (year:week= AA:SS)<br>Change using Forward and Semi-Automatic |
| Program step P001 | **P001**<br>**2000** | Press Mode<br>➔Current year<br>Change using Forward and Semi-Automatic |
| Program step P002 | **P002**<br>**01:01** | Press Mode<br>➔Current day and month (dd,mm)<br>Change using Forward and Semi-Automatic |
| Program step P003 | **P003**<br>**1.01:01** | Press Mode<br>➔Current day of the week and time<br>Change using Forward and Semi-Automatic |
| Program step P040 | **P040**<br>**L.1000** | Press Mode<br>➔Softener cycle in litres or hectolitres<br>Change using Forward and Semi-Automatic |
| Program step P051 | **P051**<br>**04** | Press Mode<br>➔Duration of backflow washing in minutes<br>Change using Forward and Semi-Automatic |
| Program step P052 | **P052**<br>**00** | Press Mode<br>➔Brine pump options |
| Program step P053 | **P053**<br>**40** | Press Mode<br>➔Duration of slow rinse in minutes<br>Change using Forward and Semi-Automatic |
| Program step P054 | **P054**<br>**08** | Press Mode<br>➔Duration of fast rinse in minutes<br>Change using Forward and Semi-Automatic |
| Program step P056 | **P056**<br>**00000** | Press Mode<br>➔Minimum regeneration interval in minutes |

| OPERATION | DISPLAY | DESIGNATION |
|---|---|---|
| Program step P060 | **P060**<br>**0-001** | Press Mode<br>➔Conversion of the water counter impulses<br>Change using Forward and Semi-Automatic |
| Program step P062 | **P062**<br>**0-001** | Press Mode<br>➔ External communication of impulses |
| Program step P031 | **P031**<br>**00111** | Press Mode<br>➔Warning configuration<br>Change using Forward and Semi-Automatic |
| Program step P032 | **P032**<br>**070** | Press Mode<br>➔Maintenance frequency in number of regenerations<br>Change using Forward and Semi-Automatic |
| Program step P033 | **P033**<br>**140** | Press Mode<br>➔SAV frequency in number of regenerations<br>Change using Forward and Semi-Automatic |

## ***10.6. Coding of programming steps ofor the A5X card***

| step | Description | default value |
|---|---|---|
| P001 | current year | 2000 |
| P002 | Current Day and Month | 01:01 |
| P003 | current hour | 1.01:01 |
| P020 | frequency in days | 04 |
| P031 | warning configuration | 00011 if not bio |
| P032 | maintenance frequency in number of regenerations | 070 |
| P033 | SAV frequency in number of regenerations | 140 |
| P040 | cycle: | L.1000 |
| P051 | lifting duration in minutes | 04 |
| P052 | brine pump duration in minutes | 00 |
| P053 | slow rinse duration in minutes | 40 |
| P054 | fast rinse duration in minutes | 08 |
| P056 | regeneration interval in seconds | 00000 |

| | | |
|---|---|---|
| P060 | counter conversion | 0-001 |
| P062 | counter report | 0-001 |
| P070 | initial average | L.0300 |
| P071 | initial average Monday | L.0300 |
| P072 | initial average Tuesday | L.0300 |
| P073 | initial average Wednesday | L.0300 |
| P074 | initial average Thursday | L.0300 |
| P075 | initial average Friday | L.0300 |
| P076 | initial average Saturday | L.0300 |
| P077 | initial average Sunday | L.0300 |
| P080 | regeneration time | 1.01:00 |
| P081 | regeneration time, 1st time slot | 1.01:00 |
| P082 | regeneration time, 2nd time slot | 1.01:00 |
| P083 | regeneration time, 3rd time slot | 1.01:00 |
| P084 | regeneration time, 4th time slot | 1.01:00 |
| P085 | regeneration time, 5th time slot | 1.01:00 |
| P086 | regeneration time, 6th time slot | 1.01:00 |
| P087 | regeneration time, 7th time slot | 1.01:00 |
| P091 | regeneration time, 8th time slot | 1.01:00 |
| P092 | regeneration time, 9th time slot | 1.01:00 |
| P093 | regeneration time, 10th time slot | 1.01:00 |
| P094 | regeneration time, 11th time slot | 1.01:00 |
| P095 | regeneration time, 12th time slot | 1.01:00 |
| P096 | regeneration time, 13th time slot | 1.01:00 |
| P097 | regeneration time, 14th time slot | 1.01:00 |
| P100 | Commissioning date | 00:00 |

## 11 - PROGRAM PARAMETER READING FOR THE SOFTENER

**Softener type**: _____

Raw water fH: _____ °f

Residual fH: _____ °f

**Mode of operation selected:**

1/ ❑ Purification time

2/ ❑ "Seven" purification time *( regeneration programmable over 7 days )*

3/ ❑ Volume regeneration if the cycle equals "0"

4/ ❑ Advanced volume regeneration at a fixed compulsory time

5/ ❑ Advanced volume with volume priority

6/ ❑ Advanced "Seven" volume regeneration at fixed time following average calculation

**Regeneration time:** _____ hours _____minutes

**Number of days between two regenerations** _____ days

**Day(s) and hour(s) of regeneration:**

❑ Monday _____h_____ mn

❑ Tuesday _____h_____ mn

❑ Wednesday _____h_____ mn

❑ Thursday _____h_____ mn

❑ Friday _____h_____ mn

❑ Saturday _____h_____ mn

❑ Sunday _____h_____ mn

**Regeneration duration setting:**

- Lifting _____ minutes
- suction and slow rinse _____ minutes
- Fast rinse : _____ minutes

**Impulse emitting counter:** _____ Impulse(s) per _____ litre

Diameter: _____ Nominal flow _____ m3}/hr

**Softener cycle:** _____ litres

**Average consumption:** Monday (1) : _____ litres Tuesday (2) : _____ litres

Wednesday (3) _____ litres Thursday(4) : _____ litres Friday (5) : _____ litres

Saturday (6) _____ litres Sunday (7) : _____ litres

**Warning configuration :** ❑ lack of water ❑ lack of salt

❑ bio probe ❑ maintenance ❑ SAV

**Note**: - The above parameters need to be imputed precisely once the equipment has been commissioned.

- Place a cross to the options which match the mode of operation, day and time of the regeneration

# 12 - MAINTENANCE

Certain components are expected to suffer 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 (except 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 part and wear:**

| | |
|---|---|
| Lot of 3 muffs 50µ | **P0003735** |
| Brine regulator | **P0014822** |
| S/E valve maintenance DN50 | **P0070331** |
| Driver DN25 1 - 2 - 6 | **P0019007** |
| Driver DN25 5 | **P0019017** |

– **Other spare parts:**

| | |
|---|---|
| Composite 9000 valve complete without casing - without inlet filter | **P0019019** |
| Electronic A5X control box | **P0024458** |
| A5X Transformer | **P0012434** |
| Vacuum breaker | **P0098526** |
| Water-ejector | **P0019010** |
| | |
| **Other pieces are available, please contact your BWT agent** | |
| | |
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## 13 - COMMUNICATION

The PERMO 9000 CC ALCYO softener is equipped with an A5X communication card which thanks to a specific MODEM and software, can transmit information either locally or at a distance via dedicated telephone line.

It is possible to control the operating parameters of your equipment remotely as well as that of certain associated devices such as for example the lack of product in a dispensing unit.

BWT can also offer contracts for the remote monitoring of your equipment via its central monitoring platform.

We can also suggest our technical assistance contracts for the regular follow up and maintenance of your water treatment installations.

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