ALCYO 8000 9000 COMPOUND

PERMO WATER SOFTENERS

WITH A5X-CONTROL UNIT

VERY IMPORTANT: Prior to any connection, water supply and utilization, please carefully read this manual. The non-compliance with these prescriptions will **void** the **PERMO** warranty.

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WARNING

Dear customer,

Carefully read through this manual before undertaking installation, commissioning and maintenance tasks on this appliance. The appliance owner will be responsible for making sure that the persons allowed to gain access to this appliance know this manual and that the latter has been understood.

This appliance must be installed in a clean and dry place, correctly checked and access by unauthorized persons must be forbidden.

This appliance must be protected against weather conditions, heat sources and chemical vapors.

ELECTROCUTION HAZARD - Electrical units shall only be opened by an authorized person who is aware of electrical current hazards.

Operation and maintenance of the appliance shall be performed by a duly authorized person trained and qualified for this type of work.

The appliance owner will be responsible for making sure that intervening persons are provided with the tools and items of equipment suited to such work.

Some appliance maintenance operations may require the use of chemicals. The user will be responsible to make sure that he is aware of the various hazards bound to said products and to use collective or individual protections in order to protect himself against said hazards.

This appliance should not be modified without the prior manufacturer's written permission.

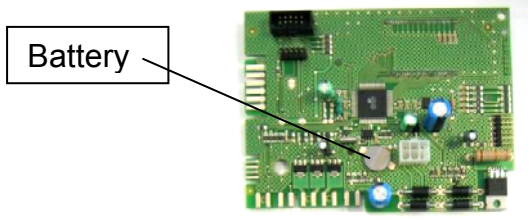
This appliance surfaces must be cleaned neither with spirits or spirit-based agents nor with a product containing plastic solvents.

Replacing the battery:

In compliance with Decree 2009-1139 related to battery and accumulator marketing and disposal, this appliance contains a Lithium type 3-volt battery P/N P0019905. This battery is compliant with the decree.

If this battery must be replaced, it is compulsory to use a battery of the same nature as the original one.

This battery is soldered to the PCB at the location shown below. To replace the battery:



- Electrically disconnect the unit
- Open the case
- Remove the PCB from its holder
- Unsolder the used battery taking care not to overheat the neighboring components
- Discard the used battery in compliance with the regulations in force (DEEE).
- Install the new battery taking care to comply with the polarity.

Solder the new battery taking care not to overheat the neighboring components

CONTENTS

IMPORTANT: Hydraulic and electrical connections must be performed in compliance with the state of the art and all standards applicable to the appliance installation room. In particular, should water inlet and outlet pipes be fitted with devices likely to generate surges (electromagnetic valves among others), efficient surge protectors must be installed.

Beside, as any electrical device, the control unit electronics is sensitive to electrical or magnetic interferences. The control unit is normally fitted with filters designed to eliminate usual interferences. However, if power switches, transformers or any other interference emitter are fitted next to the appliance, it will be necessary to make connections with shielded cables and install a suitable anti-spurious device.

Permo reserve the right to modify their appliance technical specifications without notice.

1- PACKAGING

ALCYO 8000 9000 COMPOUND WATER SOFTENERS are delivered in standard version in 5 parcels or pallets:

- 1 holding water softener body,
- 1 carton containing water softener valve,
- 1 salt tray packed with connecting hardware,
- 1 carton containing the A5X-Control electronic control unit and attaching hardware,
- 1 pallet containing flint and ion exchanging resin loads in accordance with Table 1 below.

Type of appliance	Nb 25-kg flint bags	Nb 25-l. resin bags
9250	2	10
9300	3	12
9400	6	16
9450	6	18
9550	9	22
9600	9	24
8550	9	22
8600	9	24
8700	12	28
8800	12	32

Table I - " Flint and resin loads "

IMPORTANT: It is important to store the received equipment in a clean and dry room at an ambient temperature ranging within +3 - +35°C failing which ion exchanging resins and some appliance components might be deteriorated.

Non-compliance with these requirements may void the warranty of the deteriorated items.

2- TECHNICAL DESCRIPTION

PERMO 8000 9000 COMPOUND is a range of 10 automatic water softeners which can operate either in the chronometric or volumetric mode (with an optional impulsing counter).

They are equipped with cationic ion exchange resins operating in sodium cycle in compliance with the regulations in force.

All materials used are the food quality grade.

The A5X-Control electronic control unit provides for water softener self-monitoring and controlling the various regeneration steps.

Owing to built-in microprocessors, it is programmable via the front panel 5-key keypad. It controls the solenoid valves (double isolation) using a very low voltage safety current (24 VAC).

3- SIZES

	Ø A	Ø B	C	D		E		F	G	H
				Mini	Maxi	Mini	Maxi			
9250	610	720	1400	2022	2042	2177	2197	118	1650	1750
9300	610	720	1400	2022	2042	2177	2197	118	1650	1750
9400	770	820	1400	2167	2197	2322	2352	118	1800	1830
9450	770	820	1400	2167	2197	2322	2352	118	1800	1830
9550	927	1300	1560	2243	2273	2398	2428	118	2300	1910
9600	927	1300	1560	2243	2273	2398	2428	118	2300	1910
8550	927	1300	1560	2291	2331	2446	2476	145	2300	1910
8600	927	1300	1560	2291	2331	2446	2476	145	2300	1910
8700	1074	1300	1560	2170	2210	2365	2365	145	2300	2000
8800	1074	1300	1560	2170	2210	2365	2365	145	2300	2000

Sizes D and E will vary according to bottle expansion

Sizes in mm

Table II - " Sizes "

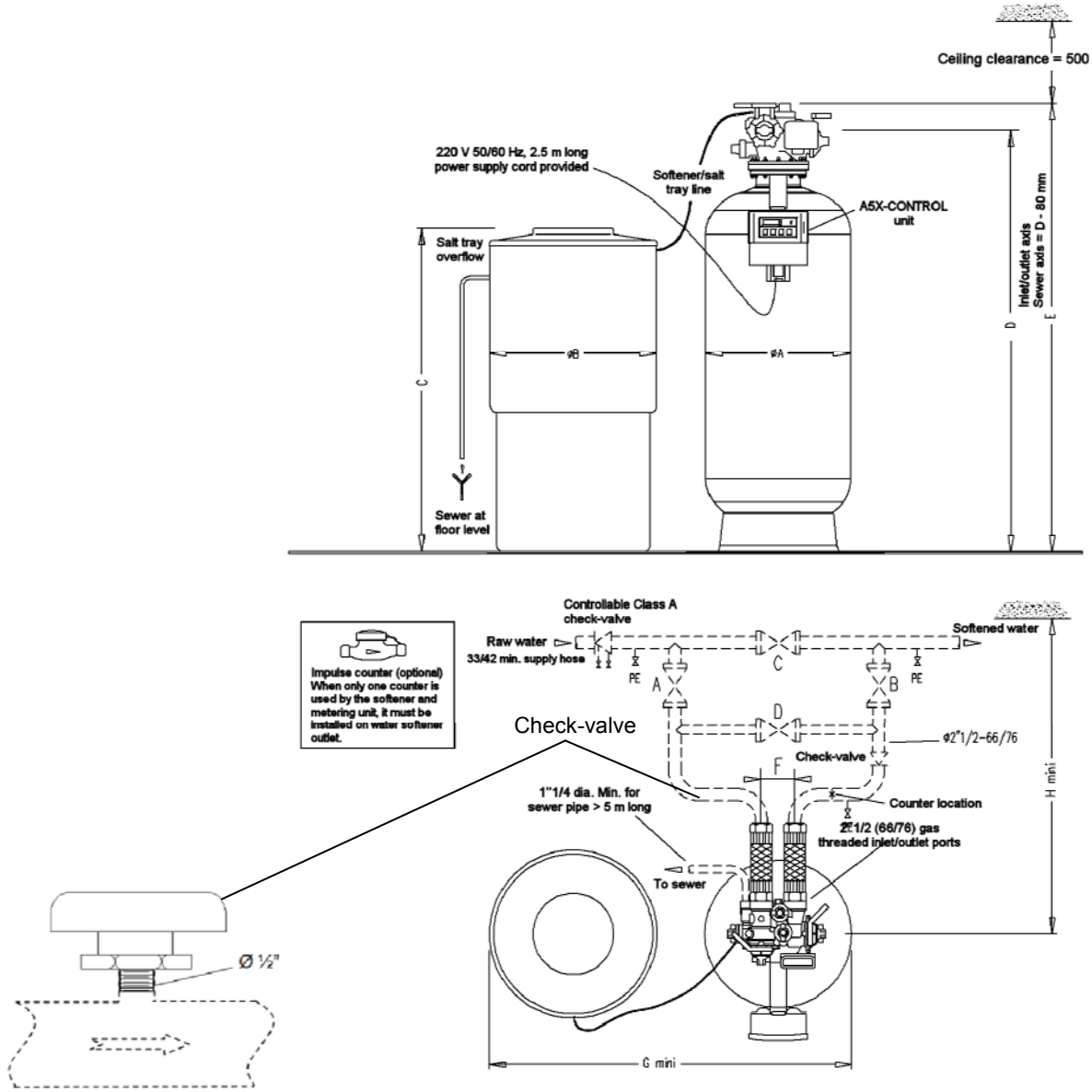


Figure I - " Sizes " (Sizes in mm)

The A5X-CONTROL unit and its transformer secured to the appliance can be wall-mounted using their holding plate.
<u>IMPORTANT:</u> Installation of the softener hydraulic inlet/outlet assembly must be performed using the supplied hoses. It is also essential to install the supplied vacuum breaker.

4- TECHNICAL CHARACTERISTICS

ALCYO COMPOUND characteristics		**9250**	**9300**	**9400**	**9450**	**9550**	**9600**	**8550**	**8600**	**8700**	**8800**
Resin volume	*liters*	250	300	400	450	550	600	550	600	700	800
Exchange Capability	*standard ° f/m³*	1 250	1 500	2000	2 250	2 750	3 000	2 750	3 000	3 500	4 000
	maxi possible ° f/m³.	1 500	1800	2 320	2 600	3 300	3 600	3 300	3 600	4 200	4 800
Salt weight Per regeneration	*mini kg*	32	37,5	50	57	70	76	69	75	88	100
	maxi kg	45	54	72	81	99	108	99	108	126	144
First salt tray Loading	*kg*	300	400	400	400	1000	1000	1000	1000	1000	1000
Salt tray reloading	*kg*	200	350	300	300	800	800	750	750	750	750
Salt tray autonomy (Number of regenerations)	*u*	8	9	8	6	11	10	10	10	8	7
Average water volume per regeneration *	*m³*	-	-	-	-	-	-	3,500	4,200	5,500	6,700
Shipment weight	*kg*	600	630	830	1000	1100	1150	1050	1150	1350	1650
Floor load in service	*t/m²*	4,8	4,8	3,5	3,5	3,0	3,0	de 3 à 4			

Table III - " Technical characteristics "

* Depending on settings and operating requirements related to the water under treatment and the operating conditions.

5- TECHNICAL OPERATING REQUIREMENTS

Power supply voltage		230 V 50 Hz single-phase
Minimum voltage		200 volts
Maximum voltage		250 volts
Electrical consumption	In service	11 VA
	In regeneration	32 VA
Minimum operating pressure (in dynamic mode)		1,5 bars
Maximum permissible pressure (in static mode)		7 bars
Minimum flow-rate for a good regeneration		type 8000: from 5 to 9 m^3/h type 9000: from 2.5 to 6 m^3/h
Water temperature	Minimum	1°C
	Maximum	35°C
Room temperature	minimum	Frost-proof
	maximum	40°C

Table IV - " Technical operating requirements"

6.1. Location

The ALCYO COMPOUND water softener shall be installed in an accessible, clean and dry, well ventilated room.

This room shall be frost-proof and the atmosphere shall not contain any chemical vapors potentially harmful to operation.

The fitter shall be responsible for checking before installation that dimensional requirements (*Figure I*), technical characteristics (*Table III)* and operating technical requirements (*Table IV*) are met.

The room shall be equipped with a suitably sized regeneration water sewer discharge, see paragraph 6.5.2 "Discharging regeneration waters".

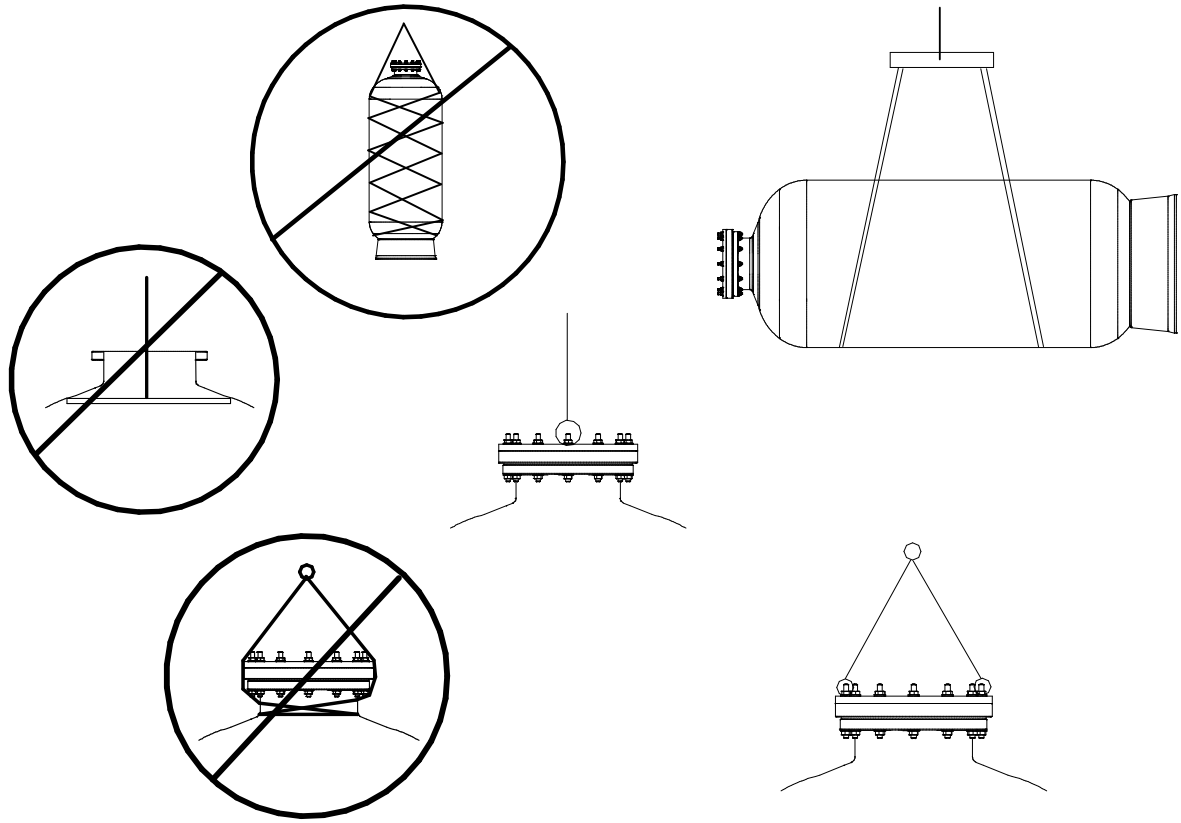
The water softener accommodating floor shall be thoroughly level.

Provide for a sufficient room height for performing the possible maintenance operations (*Figure I*).

The salt tray shall be located as near as possible to the water softener, preferably on the same level plane (maximum permissible level offset within 0.5 - 1 meter according to water under treatment pressure) – Maximum acceptable distance on the same plane of about 4 meters according to water under treatment pressure.

The salt tray shall be easily accessible for facilitating regeneration salt reloading.

The water softener body shall be handled in compliance with the following diagrams:



TYPICAL INSTALLATION DIAGRAMS

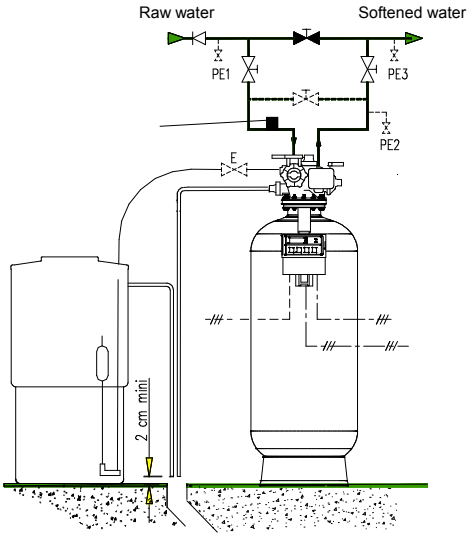


Figure II - " Simplex water softener with time-based regeneration "

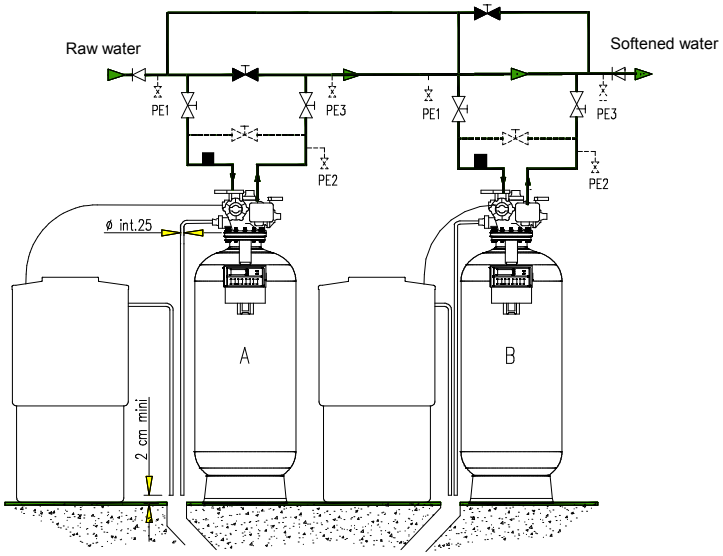


Figure III - " Parallel-mounted multiplex water softeners with time-based regeneration "

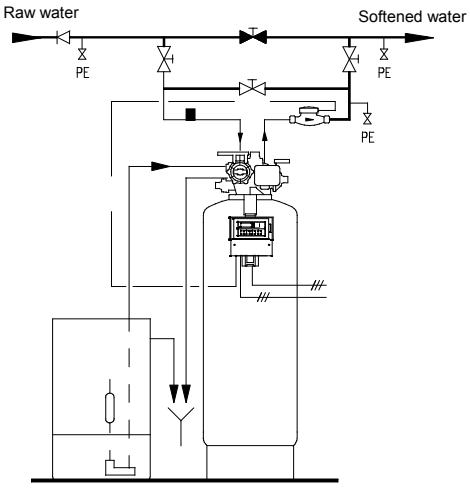


Figure IV - " Simplex water softener with volume-based regeneration "

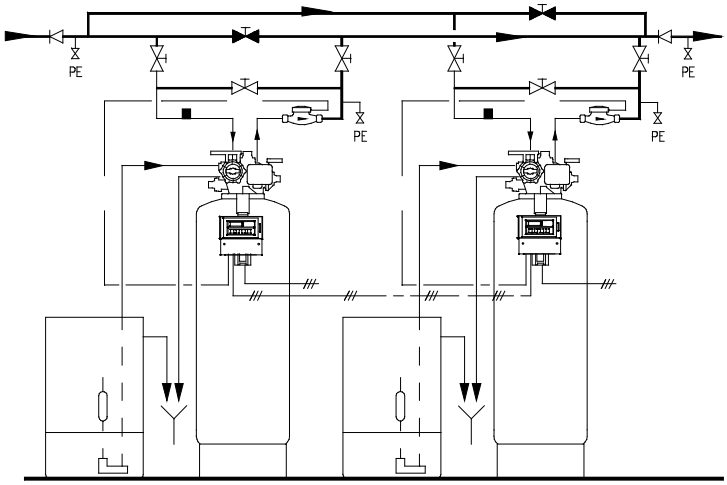


Figure V - " Parallel-mounted multiplex water softeners with volume-based regeneration "

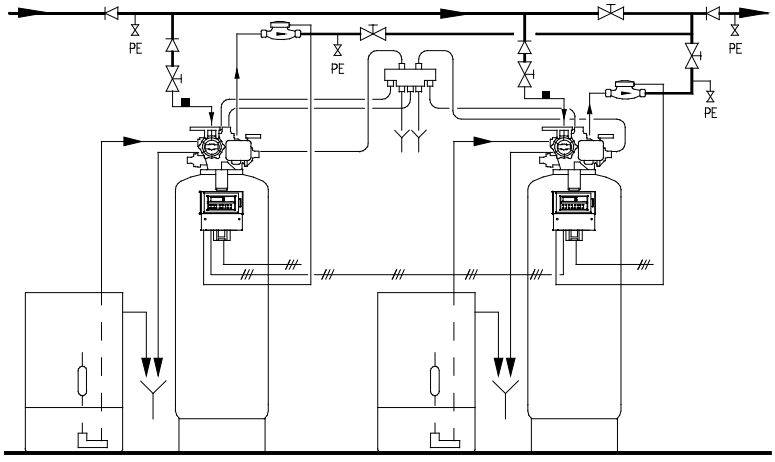


Figure VI - " Duplex water softeners with alternating volume, 2 impulsing counters "

PE = Sampling point

Note:

In the case of a single counter used for the water softener and the metering unit; the counter **must** be located on water softener outlet.

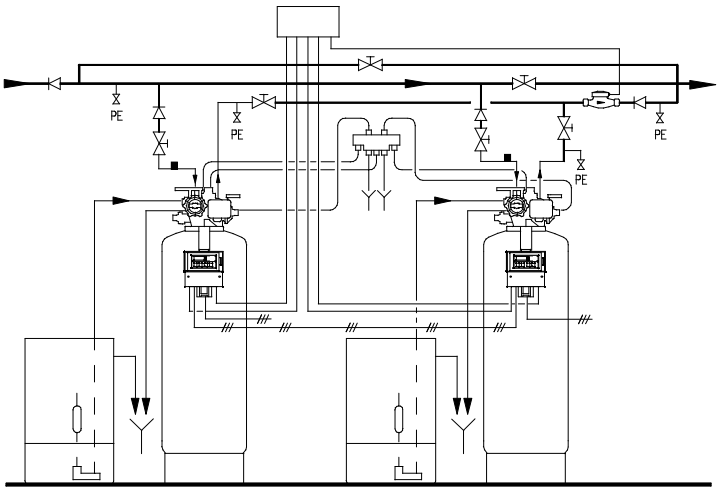
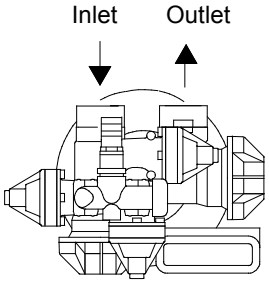


Figure VII - " Duplex water softeners with alternating volume, 1 impulsing counter "

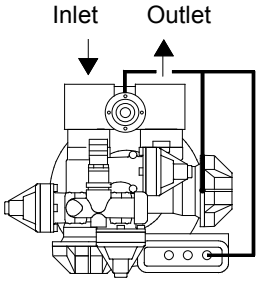
6.2. Automatic by-pass during regeneration for type 9000

On type 9000 softeners, the water softener hydraulic valve can be fitted with an automatic by-pass making it possible to deliver hard water during regeneration.

This type of assembly entails no modification to installation principle.



Assembly without by-pass



Assembly with by-pass

6.3. Assembling hydraulic control block (water softener valve) to body and installing the assembly

On body, loosen nuts and washers (to be retained) and remove metal attaching plate along with cardboard plate. Keep sealing flange gasket in place.

Fit hydraulic control block along with additional flange.

Attach hydraulic control block and additional flange to body using the supplied washers and threaded rods.

Install water softener at the final location.

Then, remove valve to fit flint and resins and put it back in place. Both water softener and valve must be positioned before loading.

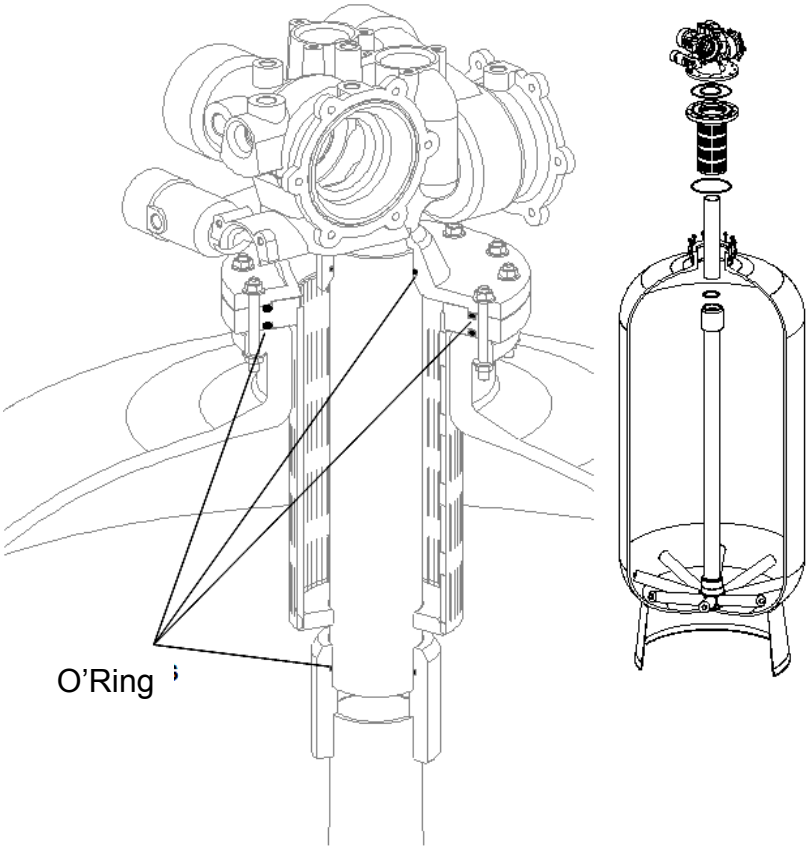


Figure VIII - "Assembling type 8000 hydraulic control block to softener body and installing the assembly"

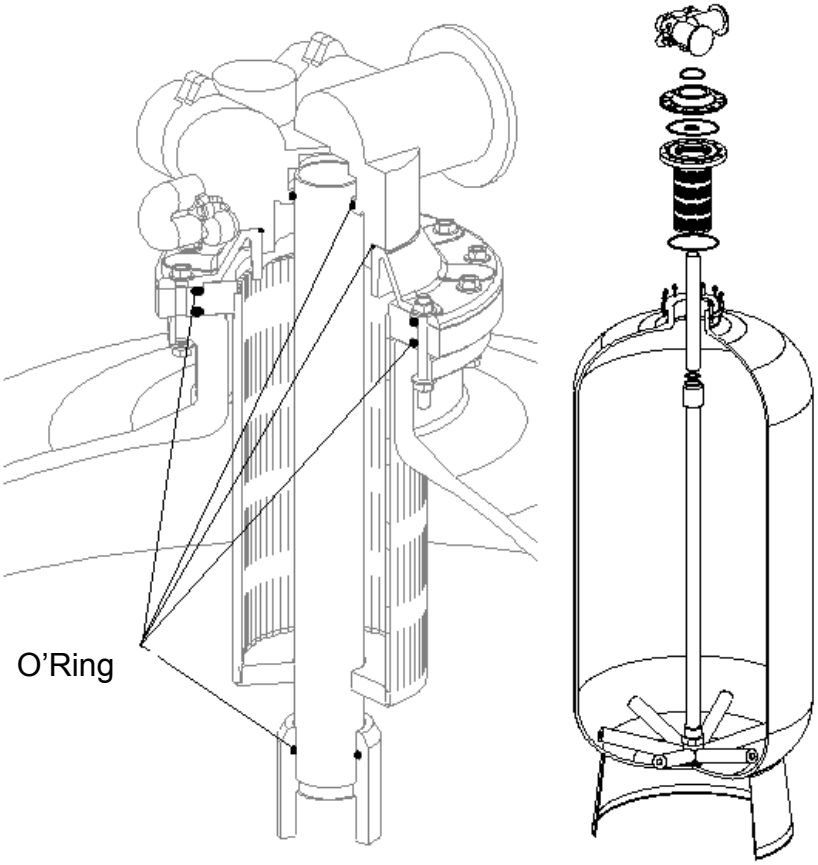


Figure IX - " Assembling type 9000 hydraulic control block to softener body and installing the assembly "

6.4. Connecting body to the earth

Since the water softener body is made of compound material, it is not necessary to connect it to the earth.

6.5. Hydraulic connections

(Figures I, X and XI hereafter)

Five connections are to be performed on the water softener hydraulic control block.
IMPORTANT: Inlet and outlet connections shall be performed with the supplied hoses. It is also essential to install the supplied vacuum breaker.

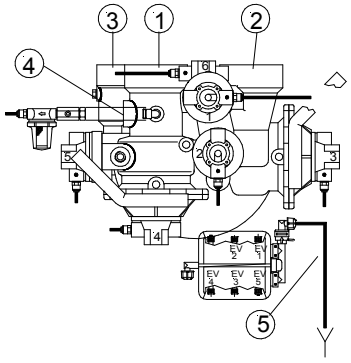


Figure X - " Type 8000 hydraulic connections"

① Water under treatment inlet	2"1/2 gas-type threaded union
② Softened water outlet	2"1/2 gas-type threaded union
③ Regeneration water discharge	1"1/4 gas-type threaded union
④ Link to brine regulator (in salt tray)	3/8 gas-type threaded union (See “Connecting the regulator” paragraph)
⑤ Valve piloting water discharge	6/8 Ø Rilsan tube union

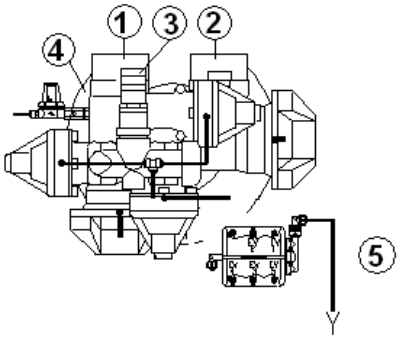


Figure XI - " Type 9000 hydraulic connections "

① Water under treatment inlet	2" gas-type threaded union
② Softened water outlet	2" gas-type threaded union
③ Regeneration water discharge	3/4 gas-type threaded union
④ Link to brine regulator (in salt tray)	3/8 gas-type threaded union (See “Connecting the regulator” paragraph 6.5.4)
⑤ Valve piloting water discharge	6/8 Ø Rilsan tube union

6.5.1. Non-treated water inlet and treated water outlet

The non-treated water inlet pipe must be large enough to accommodate the rated production flow-rate and regeneration flow-rates (see *Table XII - " Rated regeneration flow-rates ")* under a minimum pressure of 1.5 bar in dynamic mode and 7 bar in static mode. To monitor this pressure, it is recommended to install a pressure gage upstream of the water softener.

In addition, we recommend to install a filter upstream of the water softener in order to protect it against foreign materials that are likely to disturb operation.

In compliance with health regulations in force, a Class A controllable check-valve shall be installed upstream of the water treating station. The fitter shall be responsible to check all specific health regulations likely to be in force on the installation site and to comply with them.

In addition, water sampling points shall be provided for upstream and downstream of the water softener.

The water softener shall be protected against possible water backwashes by means of suitable non-return devices installed downstream from the appliance on the treated water pipe.

The installation upstream and downstream from the water softener shall generate no “surges” (efficient anti-surge devices to be provided for as applicable).

Generally, the water softener shall be installed in a by-pass layout and always fitted with shut-off and possibly of a residual hardness adjusting by-pass as shown on Figure IX opposite.

Valve A = Water softener inlet
Valve B = Water softener outlet
Valve C = General by-pass
Valve D = Residual by-pass TH with needle valve (when using a partially softened water (sanitary water)).

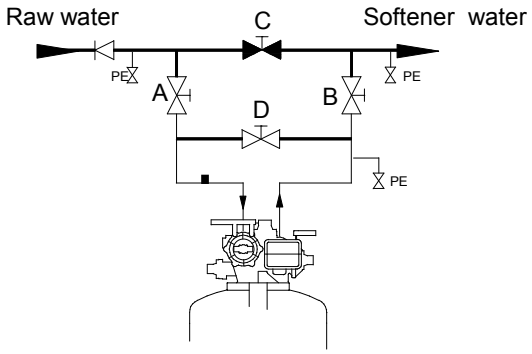


Figure XII - " Valve locations "

The tableau below indicates the by-pass pipe Ø in relation to that of the main pipe.

Inlet Ø	33 x 42	40 x 49	50 x 60
Raw water	1"1/4	1"1/2	2"
By-pass Ø	20 x 27	26 x 34	33 x 42
Additional	3/4"	1"	1"1/4

Connections to the water softener shall be removable and accessible in order to facilitate possible maintenance operations.
These water softener inlet and outlet pipes shall be correctly held so that no stress or constraint is transmitted to the appliance.

<u>Caution:</u> Inlet and outlet lines shall be made of hoses.

6.5.2. Discharging regeneration waters

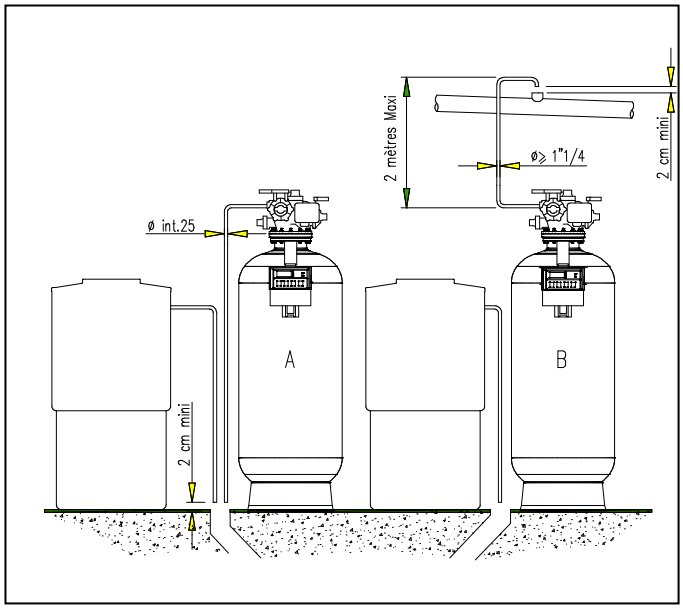
Regeneration waters discharge pipe (Figures X and XI, item ③) shall follow a path to be as straight and short as possible. It shall be designed to discharge regeneration waters at flow-rates shown in T*able V* opposite "***Maximum instantaneous flow-rate to sewer***" depending on the type of appliance installed and according to a load loss (pipe load loss + pressure head) not to exceed a 3-meter water column (0.3 bar).

In compliance with the Health Regulations prescriptions, a head drop of at least 2 cm shall be provided for between water softener and the main sewer system in accordance with Figure *XIII* " *Head drop* ".

Type of water softener	Flow-rate in ***l/min***
9250	67
9300	75
9400	83
9450	95
9550	100
9600	117
8550	150
8600	200
8700	200
8800	200

Table V

"Maximum instantaneous flow-rate to sewer"



In case of discharge via a disposal pit and lifting pump, these items of equipment shall be sized so as to avoid room flooding risks (case of lifting pump accidental shut-off during the regeneration process). In case of power failure during a regeneration process, water softener discharge to the sewer will be stopped.

The distributor 6 x 8 discharge hose should also be connected to the sewer system.

Figure XIII - " Head drop "

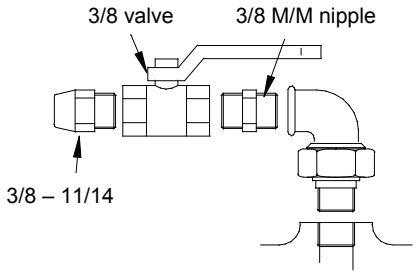
6.5.3. Discharging salt tray overflow

(See *Figure I*)

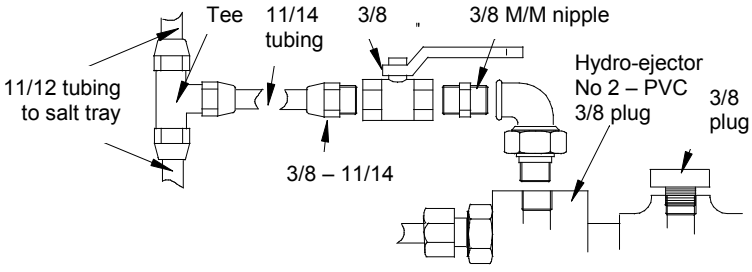
The salt tray(s) is(are) fitted with a safety overflow to be connected either to a gutter or to the main sewer. The outflow should take place by gravity with no load loss. In addition, it is compulsory to create a head drop of at least 2 cm in compliance with health regulations.

6.5.4. Connecting the brine regulator(s)

The brine regulator(s) is(are) located in the brine well (gray PVC cylinder) inside the salt tray(s). Connect the supplied 11 x 14 hose to the regulator on one side and to the water softener on the other side (item ④ on Figures X and XI) by inserting between the hydraulic control block and the hose the mounting hardware and the supplied shut-off valve in accordance with *Figure XIV " Connecting the suction line* " below.



Installation for types 8550 and 9000



Installation for types 8600 thru 8800

Figure XIV - " Connecting the suction line "

6.6. Connecting the various options

6.6.1. Connecting an impulsing counter (option for a volumetric operation) – See electric connection diagrams.

The counter shall be installed downstream from the water softener, before residual TH setting by-pass.

To avoid metering errors and early wear of the internal mechanism, the counter shall be mounted horizontally with the reading head directed upward. In accordance with the state of the art, it shall be necessary to use upstream and downstream straight sections.

For memory:
upstream section: 10 x pipe Ø
downstream section: 5 x pipe Ø

6.6.2. Hydraulically connecting the alternate kit (option)

2 kits: - Alternate kit 1 counter,
- or Alternate kit 2 counters,

These kits provide for change-over operation between 2 water softeners (1 water softener in service, the other in regeneration or in standby).

After connecting the impulsing counter(s) supplied with the kits in compliance with the above-described instructions and diagrams, secure the alternate distributor to the wall.

Connect both supplied 6 x 8 and 2 x 4 hoses in compliance with *Figures XV and XVI "Alternate hydraulic connections "* hereafter.

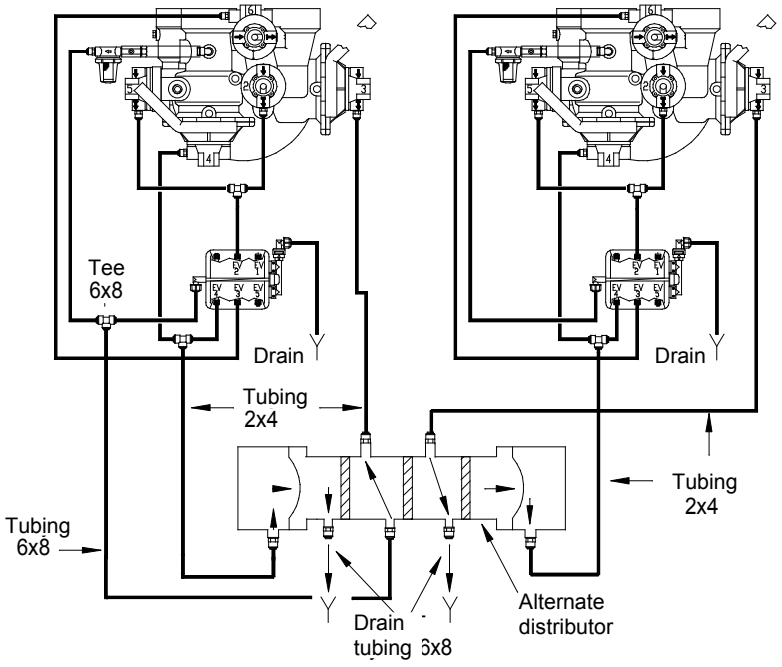


Figure XV - " Alternate hydraulic connections for type 8000 "

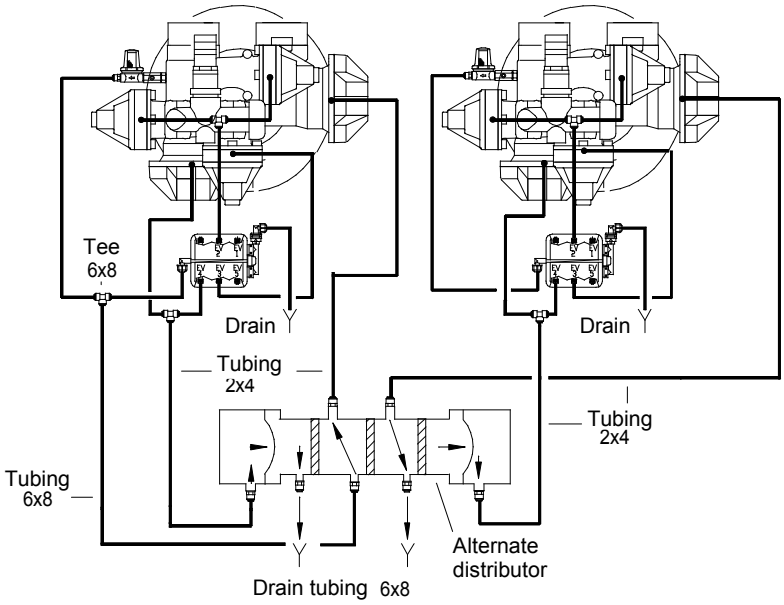


Figure XVI - " Alternate hydraulic connections for type 9000"

6.6.3. Deactivating the by-pass system during regeneration (option for type 9000)

While the water softener is in the regeneration mode, the set of drivers makes it possible to by-pass hard water during regeneration so as to always have water at appliance outlet.

It is possible to deactivate this automatic by-pass by modifying the hydraulic control block.

See F*igure XVII* opposite.

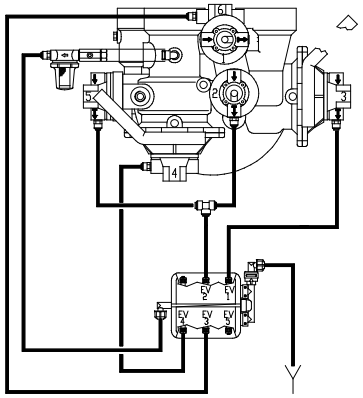


Figure XVII

" Deactivating the by-pass "

6.7. Electric connections

The ALCYO COMPOUND water softeners are controlled by an electronic unit which, in the standard version, is to be installed on the water softener by means of the supplied adjustable bracket to be secured to the hydraulic unit flange with attaching nuts.

When applicable, the unit can also be secured to the wall (see paragraph 6.7.2 “Securing the A5X-Control Unit”).

In both cases, the fitter shall be responsible for making sure that the cables used are compliant with the standard in force in the appliance accommodating room and to replace them as necessary.

IMPORTANT: In accordance with 87/308/CEE Directives and for safety’s sake, the transformer primary and secondary power supply cables cannot be replaced. If they are damaged, the whole transformer shall be discarded and replaced by a new one.

6.7.1. General description of the electronic control unit

The A5X-CONTROL microprocessor-driven electronic unit was designed to control a water softener.

A front panel 5-key keypad makes it possible to program the various sequences required to operate the water softener and the regeneration time-delays.

The control unit is delivered with an external transformer delivering very low voltage currents for operating the electronics and the regeneration solenoid valves. This transformer is equipped on the primary circuit with a 1.9-meter power supply cable without earth pin because the unit and the controlled solenoid valves are the double insulation class. It will be necessary to install a 230 volts single-phase wall socket (European Standards) next to the control unit (See also "Technical operating requirements") in Chapter 5.

6.7.2. Securing the A5X-CONTROL unit to the wall

The A5X-CONTROL unit is designed in standard to be secured to the water softener.

It can also be wall-mounted at an accessible place at a height of about 1.6 meters in accordance with the drilling jig as shown on *Figure XVIII* opposite.

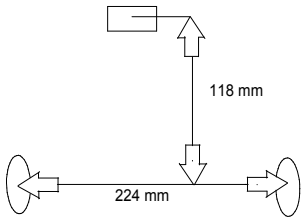


Figure XVIII
" Drilling jig "

To secure the unit, open terminal strip lower access hatch and secure control unit lower section using 2 side oblong holes and the upper section using the external “hook” on control unit rear face.

6.7.3. Electric cabling

The ALCYO COMPOUND water softener is delivered with 2 multiple wire cables and DIN pins for connecting the solenoid valves. If these cables must be extended, only use a 0.5 or 0.75 mm² flexible cable. Also use the same type of cable for the other connections to be made.

6.7.4. Control unit description

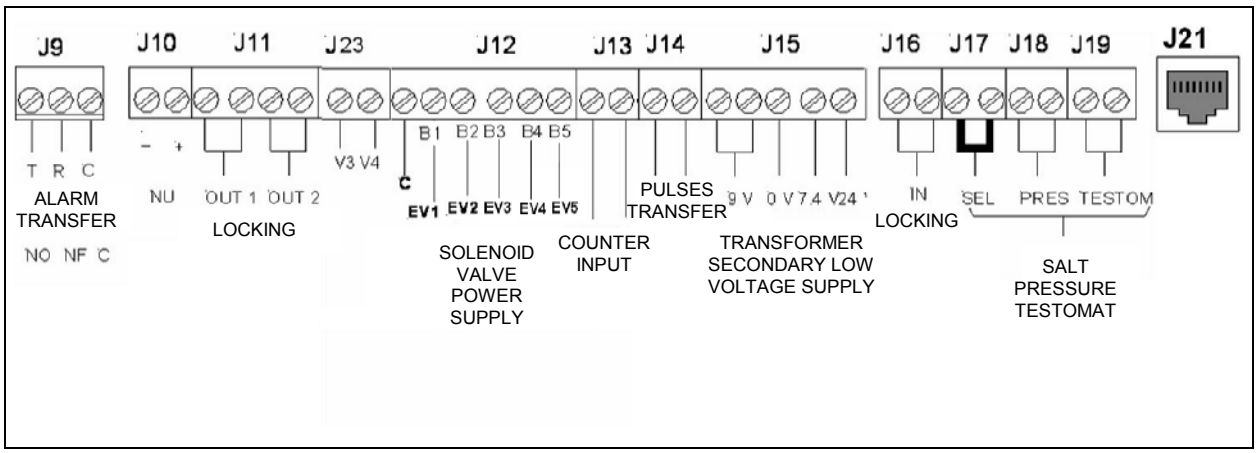


Figure XIX - " Terminal strip "

Description from left to right: Input = Output =

<table>
<tr><th>Terminal No</th><th>Type of cable</th><th>Description</th></tr>
<tr><td>J9
  </td><td>2 x 0.5 or 0.75 mm² or 3 x 0.5 or 0.75 mm² according to the desired contacts</td><td>A5X-CONTROL Unit alarm transfer in case of:
- Power supply failure
- Salt low level (optional)
- Lack of pressure (optional)
Power off from left to right:
NO = Normally open dry contact
NF = Normally closed dry contact
C = Common
Power on from left to right:
NF = Normally closed dry contact
NO = Normally open dry contact
C = Common</td></tr>
<tr><td>J10</td><td></td><td>Not used</td></tr>
<tr><td>J11
  </td><td>4 x 0.5 or 0.75 mm²</td><td>OUT 1 = output 1 Dry contact
Water softener No 2 dialogue lockout.
Case of 2 dialoguing water softeners (in parallel),
No 2 regeneration interlock when No 1 is regenerating and vice versa.
OUT 2 = output 2 Dry contact
Water softener No 3 dialogue lockout
Case of 3 dialoguing water softeners (in parallel)</td></tr>
<tr><td>J23
  </td><td>3 x 0.5 or 0.75 mm^2 Metering pump control (optional)</td><td>C of terminal J12 = Common
V3 = contact active in service 24 V
V4 = contact active in brining mode 9W maxi</td></tr>
<tr><td>J12
  </td><td>Supplied with control unit:
2 x cables 1 and 2 with DIN pins - If cables must be extended, use a 0.5 or 0.75 mm² flexible cable</td><td>
<table>
<tr><td>DIN pin No</td><td colspan="3">2</td><td colspan="3">1</td></tr>
<tr><td>Cables No</td><td>18</td><td>24</td><td>23</td><td>22</td><td>21</td><td>20</td></tr>
<tr><td>Colors</td><td>Blue</td><td>Brown</td><td>Blac k</td><td>Blac k</td><td>Brown</td><td>Blue</td></tr>
<tr><td>Terminal No</td><td>C</td><td>B1</td><td>B2</td><td>B3</td><td>B4</td><td>B5</td></tr>
<tr><td>SV No</td><td>-</td><td>EV1</td><td>EV2</td><td>EV3</td><td>EV4</td><td>EV5</td></tr>
</table>
</td></tr>
<tr><td>J13
  </td><td>2 x 0.5 or 0.75 mm²
Shielded if longer than 5 meters or power cable in the vicinity</td><td>Input for external volumetric impulsing counter pulses..
For Permo counters:
- White wire = Common to be connected to central terminal
- Other colors = to be connected to LH and TH terminals</td></tr>
<tr><td>J14
  </td><td>2 x 0.5 or 0.75 mm²
Shielded if longer than 5 meters or power cable in the vicinity</td><td>Transfer of external volumetric impulsing counter pulses.
Dry contact:
- maximum load 10 watts
- limits 100 volts
- 0.4 A</td></tr>
<tr><td>J15
  </td><td>Fitted to the transformer</td><td>External transformer secondary input
9 volts = White and brown wire
0 volt = Yellow wire
7.4 volts = Green wire
24 volts = Red wire</td></tr>
<tr><td>J16
  </td><td>2 x 0.5 or 0.75 mm²</td><td>IN = Dialogue interlock input from OUT 1 or OUT 2 of another A5X-CONTROL unit</td></tr>
<tr><td>J17
  </td><td>2 x 0.5 or 0.75 mm²</td><td>Salt low level input (optional)
Terminals delivered with a jumper (contact open at low level)</td></tr>
</table>

Terminal No	*Type of cable*	*Description*
J18	2 x 0.5 or 0.75 mm²	Pressure fault input (optional) Contact closed when pressure too low (Pressure switch upstream from water softener). Regeneration blocked in case of pressure too low
J19	2 x 0.5 or 0.75 mm²	Remote regeneration triggering input (TESTOMAT option or else) Dry contact: Closed for regeneration triggering. Resetting by re-opening the contact so as to avoid a closed-loop regeneration

Table VI - " Description of the connecting terminal strip "

6.7.5. Electric connection diagrams

Simplex version

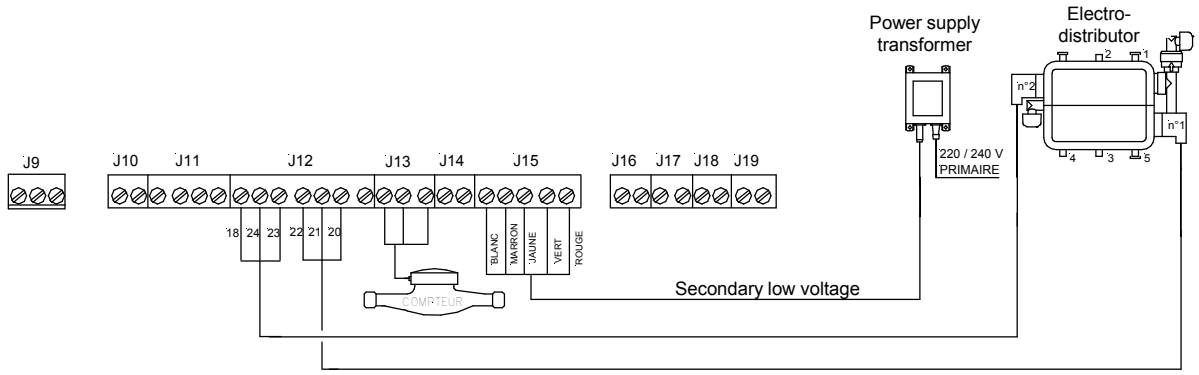


Figure XX - " Simplex version connections "

Parallel version

Connect each water softener as described above for the simplex version. In addition, connect the la dialogue function in compliance with *Figures XXI " Dialogue electric connections – parallel version"* hereafter.

Alternate version

- *2 alternate counters*: Electrically connect each water softener as described above for the simplex version. Do not connect the dialogue.
- *1 alternate counter*: An additional control unit (delivered with the kit), called selecting unit, shall be connected after wall-mounting as described in *Figure XXII "1 alternate counter electric connections* " hereafter.

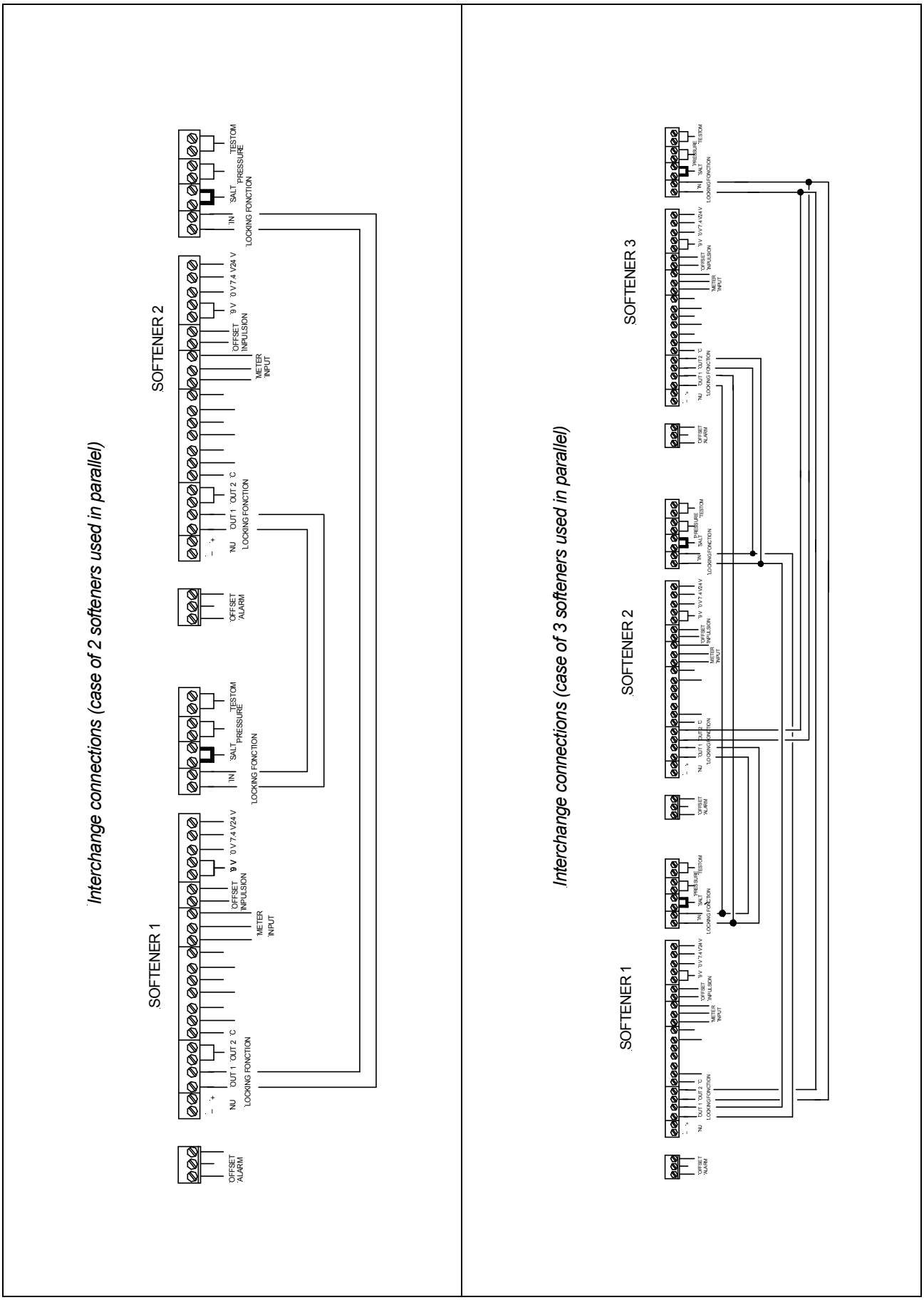


Figure XXI - " Dialogue electric connections – parallel version "

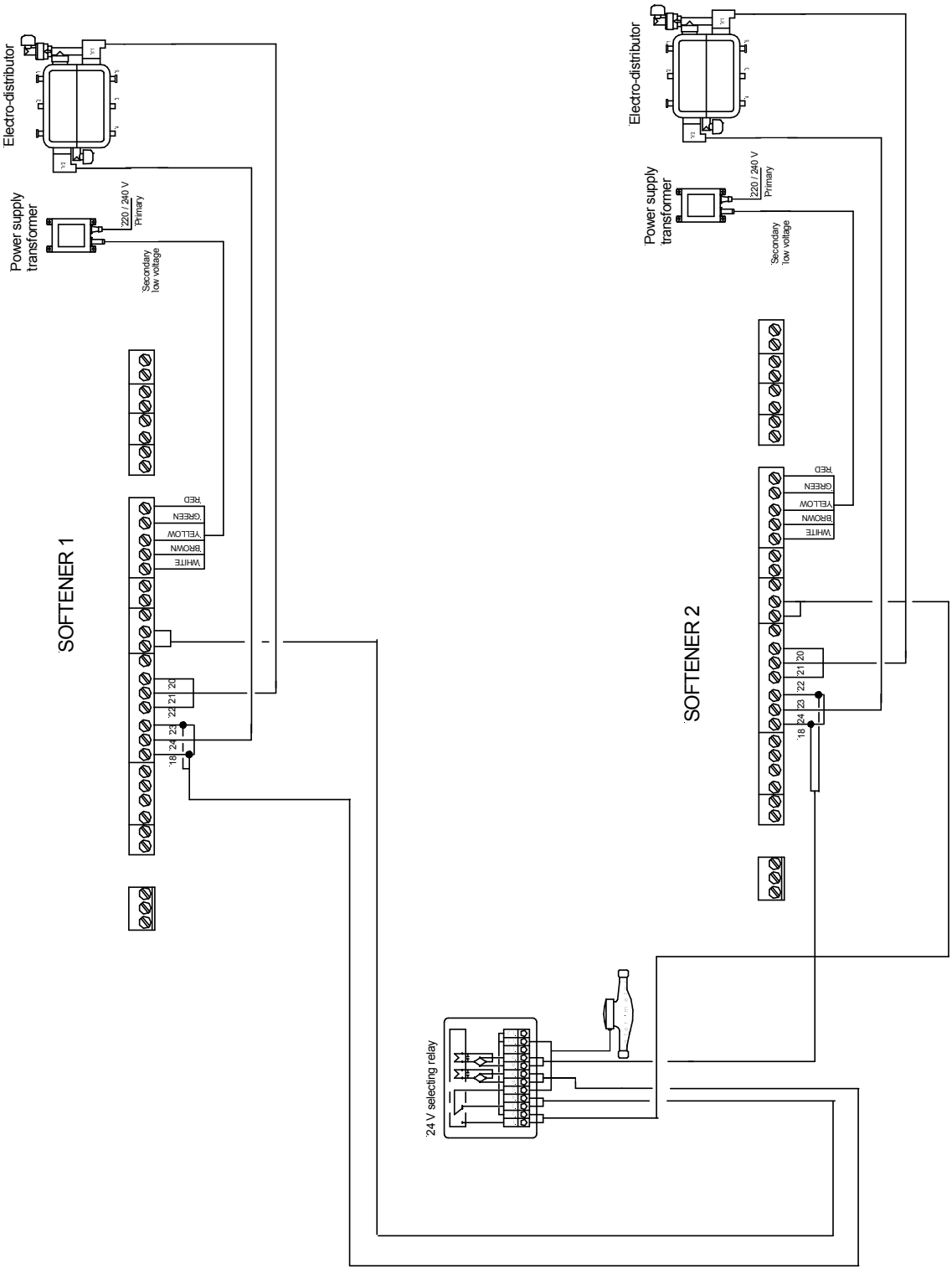


Figure XXII - " 1 alternate counter electric connections "

7- PROGRAMMING THE A5X-CONTROL UNIT

After making and checking hydraulic and electric connections, proceed to control unit programming.

Control unit layout

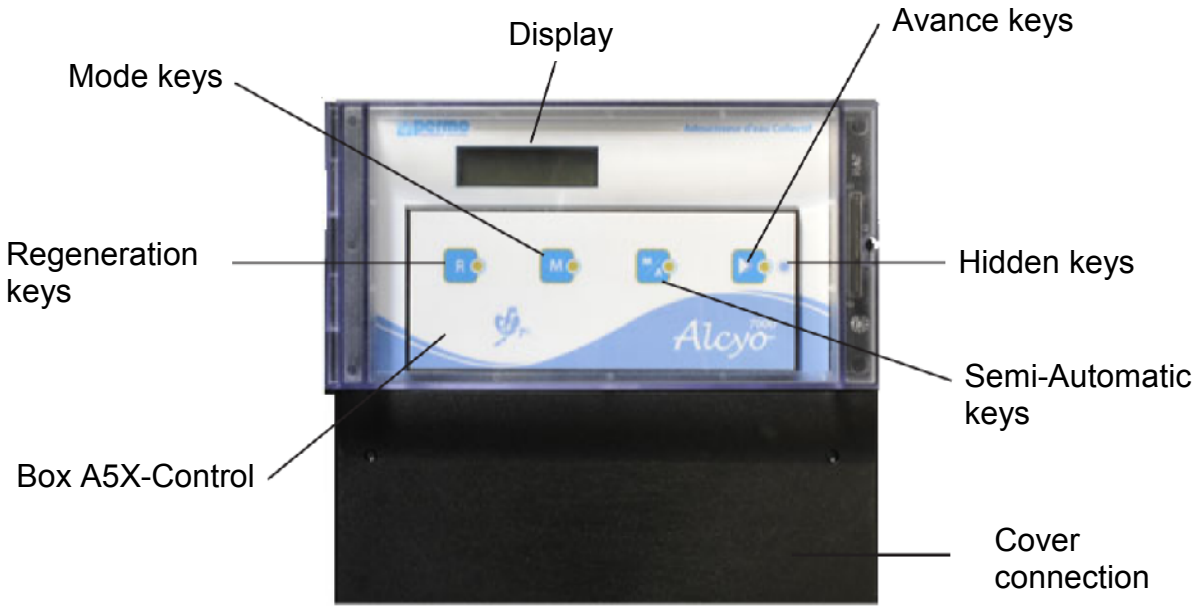


Figure XXIII - " Control unit description "

Symbol	Meaning
	- Displays the remaining volume on scale 10 in volumetric mode - Displays the remaining time on scale 10 in chronometric mode - Displays the elapsed time during a regeneration on scale 10
R 1 2 3	- R displayed during regeneration - 1, 2 and 3 successively come on during phases 1 (thinning-out), 2 (brining and slow rinsing) and 3 (fast rinsing)
	- Alarm displayed in case of salt failure or lack of water (optional)
	- Alarm displayed after regeneration in case of too low conductivity during brining
	- Alarm displayed when the number of maintenance regenerations is reached
	- Alarm displayed when the number of customer service regenerations is reached
	- Displayed with the current time
	- Displayed in the Standby mode
m^3	- Displayed when a volume is shown in m3
L	- Displayed when a volume is shown in liters
	- Current time displayed in Service and Test modes - Displays program step in the Programming mode
	- Program data entry - Entry of generic code and OF No - Displays the number of days before the next regeneration or the program. time - Displays the regeneration initial or final time - Displays the remaining integer vol. in liters if lower than 99999, in m3 otherwise - Displays the number of regenerations - Displays the total treated volume in m3

Table VII - " Display unit description "

7.1. Selecting the operating mode

The ALCYO COMPOUND water softeners operating mode is selected via the A5X Unit-Control programming keys.
The PERMO ALCYO 8000 / 9000 water softeners can operate in different modes identified by the codes described below.

Operating mode	Program code	Designation	Remark
Pure time	**60210**	Regeneration every "x" days (interval between two regenerations) at a fixed preset time..	
"Seven" pure time	**60410**	Regeneration programmable over the seven days of the week (14 ranges possible) at a preset time each day.	Possibility to perform two regenerations per day over the seven days of the week.
Pure volume	**61230**	Immediate regeneration depending on water softener programmed cycle irrespective of time.	Immediate regeneration when water softener cycle = 0
"Data" anticipated volume	**62230**	Regeneration depending on water softener programmable cycle and the average daily consumption at a preset time.	
"Data" anticipated volume with priority to volume	**62730**	Regeneration depending on water softener programmable cycle and the average daily consumption at a preset time.	Immediate regeneration if water softener cycle = 0
"Seven" anticipated volume	**62530**	Regeneration depending on water softener programmable cycle at a preset time and the average consumption calculated over seven days.	

Table VIII - " List of generic codes "

7.2. Programming the operating mode code

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

1/. First case:
At power-up, the unit normally starts in regeneration mode:
- the first line displays a current time to be set later
- the second line alternately displays regeneration initial time and final time
- the barograph is in low position and the "R" character is visible.

To stop regeneration, simply press both "Mode" and "Regeneration" keys simultaneously.

2/. Second case:
At power-up, the unit displays five zeros the first of which on the left is flashing. It will remain in this configuration until your appliance operating mode is entered and identified by a generic code described in Table VI. The "Mode" and "Regeneration" keys are not active.

Entering the operating mode generic code

Press the "Semi-automatic" key to move the flashing digit selection to the right and modify its value by pressing the "Forward" key.

Enter the generic code matching with the selected operating mode.

Once the operating mode 5-digit code displayed, press the "Hidden" key to validate the selection.

Caution:

Each operating mode selecting code described above corresponds to a program which is well defined in the A5X-Control unit microprocessor. Any code erroneous or not corresponding to the above list may result in a malfunction of your appliance and possibly in voiding the PERMO warranty.

B / Modifying the operating mode

To modify the five-digit code, press both "Mode" and "Hidden" keys simultaneously for 5 seconds, then release them. Modify the displayed code then validate after entry with the “Hidden” key.

Program again the new operating mode according to paragraph 7.4.

C / Restoring factory parameters

To reset the programmed operating mode, press both "Hidden" and "Mode" keys simultaneously for five seconds, then release them. Then press the "Hidden" key, the display unit indicates " ini 0 ", select 1 by pressing the "Forward" key, then press again the "Hidden" key to validate the resetting process.

7.3. Case of 2 or 3 dialoguing softeners - parallel link

When two or three water softeners are working in pure volume mode, it is necessary to make a multiplex electrical link between the various units so as to interlock regeneration of the other water softeners when one of them is regenerating. The programming code is then the same for each appliance (61230).

Caution:

If during regeneration of a water softener, another water softener becomes saturated, it will display letter "R". Once the first device regeneration is complete, the standby appliance will trigger its regeneration after a time-delay only.

7.4. Programming the operating phases

The explanations below provide the meanings of the program steps and the value of the parameters to be programmed depending on the operating mode (see also operating logic diagrams at the end of the manual).

Caution:

From this time onward, and to avoid any mishandling, the preset values will remain displayed for 20 seconds; beyond this time and if no key is pressed, the display unit automatically returns to the initial value.

Important:

Except for the current time, the above-described programming procedure will be effectively validated only when the first regeneration is triggered, either automatically by the electronic unit, or manually by pressing the "Regeneration" key for 5 seconds.

From this time onward, the updated parameters such as cycle data will be displayed.
In the next steps, use the following keys to modify the displayed value.
- The "Forward" key is used to modify the flashing digit value.
- The "Semi-automatic" key is used to move the selecting cursor to the right.

To simplify the water softener setting procedure, some program steps are no longer accessible after one hour delay following entry of the generic code.
Program steps will be marked with the « # » symbol hereafter.

7.4.1. Chronometric operating mode – code 60210

Press the «Mode» key for about five seconds.
The display unit indicates program step P100(#) and the defaulted setting to service date in week units.
Example: 03:08 for week 03 of year 2008.
It is possible to change this value by entering the current week number at setting to service date.

Press the «Mode» key again. The display unit indicates program step P001(#) and defaults to the current year.
Set the current year value.
Press the «Mode» key. The display unit indicates program step P002(#) as well as the default current day and month.

Example: 01:02 for February 1st.
Set the current day and month value.

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

Press the «Mode» key. The display unit indicates program step P003(#) as well as the default current day of the week and time.
Example: 1.01:01 for Monday at 01h01.
Set the current day of the week and time value over 24 hours.

Press the «Mode» key. The display unit indicates program step P020 as well as the number of days between the various regenerations.

Press the «Mode» key. The display unit indicates P051 and value 04 corresponding to lifting, the first regeneration phase, expressed in minutes (see Table X - "Regeneration time").

Press the «Mode» key. The display unit indicates P052 and value 00. This step is used in the case when brine is sent to the water softener from a salt silo. Then, this value corresponds to brine pump working time (terminal strip V3).

Press again the "Mode" key. The display unit indicates P053, program step corresponding to brine suction duration and slow rinsing, along with the "40" value (minutes) (see Table X - "Regeneration time"). If P052 is not nil, the brining + slow rinsing time corresponds to the sum of P052 and P053 values.

Press again the "Mode" key. P054 is displayed along with the duration in minutes of the final rinsing "08" (see Table X - "Regeneration time").

Press the «Mode» key. The display unit indicates program step P080 as well the default regeneration time. This setting makes it possible to anticipate regeneration depending on consumptions.
Example: 0.01:00 for 01h00.
Set the regeneration time over 24 hours.
Press the «Mode» key again. The display unit indicates program step P031 as well as the alarms to be selected in accordance with Table IX hereafter:

Alarm type	Salt		Pressure		Maintenance		Customer service	
configuration	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 IX : «Configuring the alarms»

Press the «Mode» key again. The display unit indicates program step P032 as well as the number of default regenerations on completion of which the maintenance alarm is displayed.
If necessary, set the maintenance alarm from 1 to 999 regenerations. If the alarm has not been selected when setting program step P031, no maintenance alarm will be displayed.

Then press the "Mode" key. The display unit indicates program step P033(#) as well as the default number of regenerations on completion of which the customer service alarm is displayed.
If necessary, set the customer service alarm from 1 to 999 regenerations. If the alarm has not been selected when setting program step P031(#), no customer service alarm will be displayed.

Press the «Mode» key. The programming phase is complete and the display unit is returned to the operating configuration.

7.4.2. "Seven" chronometric operating mode - code 60410

Press the «Mode» key for about five seconds.
The display unit indicates program step P100(#) and the default setting to service date in week units.
Example: 03:08 for week 03 of year 2008.
It is possible to change this value by entering the current week upon setting to service.

Press the «Mode» key again. The display unit indicates program step P001(#) and the default current year.
Set the current year value.

Press the «Mode» key. The display unit indicates program step P002(#) and defaults to the current day and month.
Example: 01:02 for February 1st.
Set the current day and month value.

IMPORTANT:
The data programmed in P001(#) & P002(#) will be used if the communication option is installed.

Press the «Mode» key. The display unit indicates program step P003 along with the day of the week and the default current time.
Example: 1.01:01 for Monday at 01h01.
Set the current day of the week and time value over 24 hours.

Press the «Mode» key. The display unit indicates program step P081 along with a default regeneration time and day. This setting makes it possible to anticipate regeneration depending on consumptions.
Example: 1.01:00 for Monday at 01h00.
Set the regeneration time over 24 hours.

The next steps from P082 to P097 make it possible to set 13 other regenerations of the week.
To override a program step, simply enter 0 in the day field.

Press the «Mode» key. The display unit then indicates P051 and value 04 corresponding to the lifting, first regeneration phase, expressed in minutes (see Table X – “Regeneration time”).

Press the «Mode» key. The display unit indicates P052 and value 00. This step is used in the case when brine is sent to the water softener from a salt silo. Then, this value corresponds to brine pump working time (terminal strip V3).

Press the «Mode» key again. The display unit indicates P053, program step corresponding to brine suction and slow rinsing time, along with "40" (minutes) (see Table X - "Regeneration time").
If P052 is not nil, the brining + slow rinsing time corresponds to the sum of P052 and P053 values.

Press the «Mode» key again. P054 is displayed as well as final rinsing duration in minutes "08" (see Table X - "Regeneration time").

Press the «Mode» key again. The display unit indicates program step P031(#) along with the alarms to be selected in accordance with Table IX - Configuring the alarms.

Press the «Mode» key again. The display unit indicates program step P032(#) along with the default number of regenerations on completion of which the maintenance alarm is displayed.
If necessary, set the maintenance alarm from 1 to 999 regenerations. If the alarm was not selected when setting program step P031(#), no maintenance alarm will be displayed.

Then press the «Mode» key. The display unit indicates program step P033(#) along with the default number of regenerations on completion of which the customer service alarm is displayed.
If necessary, set the customer service alarm from 1 to 999 regenerations. If the alarm was not selected when setting program step P031(#), no customer service alarm will be displayed.

Press the «Mode» key. The programming phase is complete and the display unit is returned to the operating configuration.

7.4.3. "Data" anticipated volume operating modes - codes 62230 and 62730

Press the «Mode» key for about five seconds.
The display unit indicates program step P100(#) and the default setting to service date in week units.
Example: 03:08 for week 03 of year 2008.
It is possible to change this value by entering the current week upon setting to service.

Press the «Mode» key again. The display unit indicates program step P001(#) and the default current year.
Set the current year value.

Press the «Mode» key. The display unit indicates program step P002(#) along with the default current day and month.
Example: 01:02 for February 1st.
Set the current day and month value.

IMPORTANT:
The data programmed in P001(#) & P002(#) will be used if the communication option is installed.

Press the «Mode» key. The display unit indicates program step P003 along with the default current day of the week and time.
Example: 1.01:01 for Monday at 01h01.
Set the current day of the week and time value over 24 hours.

Press the «Mode» key. The display unit indicates program step P080 along with the default regeneration time. This setting makes it possible to anticipate regeneration depending on consumptions.
Example: 0.01:00 for 01h00.
Set the regeneration time over 24 hours.

Press the «Mode» key. The display unit indicates P051 and value 04 corresponding to lifting, first regeneration phase, expressed in minutes (see Table X - "Regeneration time").

Press the «Mode» key. The display unit indicates P052 and value 00. This step is used in the case when brine is sent to the water softener from a salt silo. Then, this value corresponds to brine pump working time (terminal strip V3).

Press the «Mode» key again. The display unit indicates P053, program step corresponding to brine suction and slow rinsing duration, along with value "40" (minutes) (see Table X - "Regeneration time"). If P052 is not nil, the brining + slow rinsing time corresponds to the sum of P052 and P053 values.

Press the «Mode» key again. P054 is displayed along with final rinsing duration in minutes "08" (see Table X - "Regeneration time").

Press the «Mode» key again. P060 is displayed along with "0-001".
The LH side "0" stands for counter operating mode: multiplier (value 1) or divider (value 0).
The 3 RH side digits stand for the ratio of counter pulses to the number of liters recorded by the unit.
Examples:
1 counter pulse corresponds to 5 liters -> set 1-005.
5 counter pulses correspond to 1 liter -> set 0-005.

Press the «Mode» key. P062 is displayed along with "0-001".
This function makes it possible to set external pulse transfer.
The LH side "0" stands for counter operating mode: multiplier (value 1) or divider (value 0).
The 3 RH side digits stand for the ratio of counter pulses to the number of pulses transferred to unit output.
Example: 1 counter pulse corresponds to 5 output pulses -> set 1-005.

Press the «Mode» key again. The display unit indicates program step P040 along with the default regeneration cycle.
Example: L.1000 corresponds to a 1000 liter-cycle; H.1000 corresponds to a 1000 hectoliter-cycle.
Set the cycle corresponding to the volume of water produced between 2 regenerations.
To calculate your water softener cycle, divide the exchange capability (see Table I "Technical characteristics") by the water under treatment TH value.

Press the «Mode» key. The display unit indicates P070 and the value in "L.0300". This value corresponds to the initial average. It is programmable if daily consumptions are known. The electronic A5X-Control unit will automatically record and modify this value depending on consumptions. The average is calculated every day at the regeneration time programmed at step P080.

Press the «Mode» key again. The display unit indicates program step P031(#) along with the alarms to be selected in accordance with Table IX - "Configuring the alarms".
Press the «Mode» key again. The display unit indicates program step P032(#) along with the default number of regenerations on completion of which the maintenance alarm is displayed.

If necessary, set the maintenance alarm from 1 to 999 regenerations. If the alarm was not selected when setting program step P031(#), no maintenance alarm will be displayed.

Then press the «Mode» key. The display unit indicates program step P033(#) along with the default number of regenerations on completion of which the customer service alarm is displayed.

If necessary, set the maintenance alarm from 1 to 999 regenerations. If the alarm was not selected when setting program step P031(#), no maintenance alarm will be displayed.

Press the «Mode» key. The programming phase is complete and the display unit is returned to the operating configuration.

7.4.4. "Seven" anticipated volume operating mode - code 62530

Press the «Mode» key for about five seconds.
The display unit indicates program step P100(#) and the default setting to service date in week units.
Example: 03:08 for week 03 of year 2008.
It is possible to change this value by entering the current week upon setting to service.

Press the «Mode» key again. The display unit indicates program step P001(#) and the default current year.
Set the current year value.

Press the «Mode» key. The display unit indicates program step P002(#) along with the default current day and month.
Example: 01:02 for February 1st.
Set the current day and month value.

IMPORTANT:
The data programmed in P001(#) & P002(#) will be used if the communication option is installed.

Press the «Mode» key. The display unit indicates program step P003 along with the default current day of the week and time.
Example: 1.01:01 for Monday at 01h01.
Set the current day of the week and time value over 24 hours.

Press the «Mode» key. The display unit indicates program step P080 along with the default regeneration time. This setting makes it possible to anticipate regeneration depending on consumptions.
Example: 0.01:00 for 01h00.
Set the regeneration time over 24 hours.

Press the «Mode» key. The display unit indicates P051 and value 04 corresponding to lifting, first regeneration phase, expressed in minutes (see Table X - "Regeneration time").

Press the «Mode» key. The display unit indicates P052 and value 00. This step is used in the case when brine is sent to the water softener from a salt silo. Then, this value corresponds to brine pump working time (terminal strip V3).

Press the «Mode» key again. The display unit indicates P053, program step corresponding to brine suction and slow rinsing duration, along with value "40" (minutes) (see Table X - "Regeneration time"). If P052 is not nil, the brining + slow rinsing time corresponds to the sum of P052 and P053 values.

Press the «Mode» key again. P054 is displayed along with final rinsing duration in minutes "08" (see Table X - "Regeneration time").

Press the «Mode» key again. P060 is displayed along with "0-001".
The LH side "0" stands for counter operating mode: multiplier (value 1) or divider (value 0).
The 3 RH side digits stand for the ratio of counter pulses to the number of liters recorded by the unit.
Examples:
1 counter pulse corresponds to 5 liters -> set 1-005.
5 counter pulses correspond to 1 liter -> set 0-005.

Press the «Mode» key. P062 is displayed along with "0-001".
This function makes it possible to set external pulse transfer.
The LH side "0" stands for counter operating mode: multiplier (value 1) or divider (value 0).
The 3 RH side digits stand for the ratio of counter pulses to the number of pulses transferred to unit output.
Example: 1 counter pulse corresponds to 5 output pulses -> set 1-005.

Press the «Mode» key again. The display unit indicates program step P040 along with the default regeneration cycle.
Example: L.1000 corresponds to a 1000 liter-cycle; H.1000 corresponds to a 1000 hectoliter-cycle.
Set the cycle corresponding to the volume of water produced between 2 regenerations.
To calculate your water softener cycle, divide the exchange capability (see Table III "Technical characteristics") by the water under treatment TH value.

Press the «Mode» key again. The display unit indicates program step P071 along with the default average Monday consumption

Example: L.0300 corresponds to a 300 liter-average consumption; H.0300 corresponds to a 300 hectoliter-average consumption
For each day of the week (P071=Monday; P072=Tuesday,…,P077=Sunday), enter the average consumed volume.
If average volumes are not known, skip the various steps P071 to P077 by successively pressing the "Mode" key. The default value of 300 liters will then be taken into account at the beginning and the average values will be recalculated as weeks elapse. Such calculated values can be looked up at any time by reading program steps P071 to P077.

Press the «Mode» key again. The display unit indicates program step P031(#) along with the alarms to be selected in compliance with Table IX - Configuring the alarms.

Press the «Mode» key again. The display unit indicates program step P032(#) along with the default number of regenerations on completion of which the maintenance alarm is displayed.
If necessary, set the maintenance alarm from 1 to 999 regenerations. If the alarm was not selected when setting program step P031(#), no maintenance alarm will be displayed.

Then press the «Mode» key. The display unit indicates program step P033(#) along with the default number of regenerations on completion of which the customer service alarm is displayed.
If necessary, set the customer service alarm from 1 to 999 regenerations. If the alarm was not selected when setting program step P031(#), no customer service alarm will be displayed.

Press the «Mode» key. The programming phase is complete and the display unit is returned to the operating configuration.

7.4.5. Pure volume operating mode - code 61230

Press the «Mode» key for about five seconds.

The display unit indicates program step P100(#) and the default setting to service date in week units.
Example: 03:08 for week 03 of year 2008.
It is possible to change this value by entering the current week upon setting to service.

Press the «Mode» key again. The display unit indicates program step P001(#) and the default current year.
Set the current year value.
Press the «Mode» key. The display unit indicates program step P002(#) along with the default current day and month.
Example: 01:02 for February 1st.
Set the current day and month value.

IMPORTANT:
The data programmed in P001(#) & P002(#) will be used if the communication option is installed.

Press the «Mode» key. The display unit indicates program step P003 along with the default current day of the week and time.
Example: 1.01:01 for Monday at 01h01.
Set the current day of the week and time value over 24 hours.

Press the «Mode» key again. The display unit indicates program step P040 along with the default regeneration cycle.
Example: L.1000 corresponds to a 1000 liter-cycle; H.1000 corresponds to a 1000 hectoliter-cycle.
Set the cycle corresponding to the volume of water produced between 2 regenerations.
To calculate your water softener cycle, divide the exchange capability (see Table III "Technical characteristics") by the water under treatment TH value.

Press the «Mode» key. The display unit indicates P051 and value 04 corresponding to lifting, first regeneration phase, expressed in minutes (see Table X - "Regeneration time").

Press the «Mode» key. The display unit indicates P052 and value 00. This step is used in the case when brine is sent to the water softener from a salt silo. Then, this value corresponds to brine pump working time (terminal strip V3).

Press the «Mode» key again. The display unit indicates P053, program step corresponding to brine suction duration and slow rinsing, along with the "40" value (minutes) (see Table X - "Regeneration time"). If P052 is not nil, the brining + slow rinsing time corresponds to the sum of P052 and P053 values.

Press the «Mode» key again. P054 is displayed along with final rinsing duration in minutes "08" (see Table X - "Regeneration time").

Press the «Mode» key. The display unit indicates P056, program step corresponding to the minimum offset in minutes between the end of the water softener regeneration and the beginning of another water softener regeneration in the system. This water softener is electrically connected to terminal strip J11 (see paragraph 6.4.4).

Press the «Mode» key again. P060 is displayed along with "0-001".
The LH side "0" stands for counter operating mode: multiplier (value 1) or divider (value 0).
The 3 RH side digits stand for the ratio of counter pulses to the number of liters recorded by the unit.
Examples: 1 counter pulse corresponds to 5 liters -> set 1-005.
5 counter pulses correspond to 1 liter -> set 0-005.

Press the «Mode» key. P062 is displayed along with "0-001".
This function makes it possible to set external pulse transfer.
The LH side "0" stands for counter operating mode: multiplier (value 1) or divider (value 0).

The 3 RH side digits stand for the ratio of counter pulses to the number of liters recorded by the unit.
Examples: 1 input pulse corresponds to 5 output pulses -> set 1-005.

Press the «Mode» key again. The display unit indicates program step P031(#) along with the alarms to be selected in compliance with Table IX on alarm configuration.

Press the «Mode» key again. The display unit indicates program step P032(#) along with the default number of regenerations on completion of which the maintenance alarm is displayed
If necessary, set the maintenance alarm from 1 to 999 regenerations. If the alarm was not selected when setting program step P031(#), no maintenance alarm will be displayed.

Then press the «Mode» key. The display unit indicates program step P033(#) along with the default number of regenerations on completion of which the customer service alarm is displayed.
If necessary, set the customer service alarm from 1 to 999 regenerations. If the alarm was not selected when setting program step P031(#), no customer service alarm will be displayed.

Press the «Mode» key. The programming phase is complete and the display unit is returned to the operating configuration.

IMPORTANT:

The above-described programming procedure shall be actually validated only when the first regeneration is triggered, either automatically by the control unit, or manually by pressing the « *Regeneration»* key for five seconds . From this moment onward, the recorded parameters can be displayed (except for the time of the day which is instantaneously displayed).

The times given in minutes in the table hereafter are basic times which may be modified depending on installation operating conditions.

Softener type	Time in minutes					
	Pressure lower than 4 bars			Pressure higher than 4 bars		
	Lifting duration	Suction and slow rinsing duration	Fast rinsing duration	Lifting duration	Suction and slow rinsing duration	Fast rinsing duration
9250	*10*	*57*	*19*	*10*	*44*	*19*
9300	*10*	*51*	*16*	*10*	*40*	*16*
9400	*10*	*51*	*16*	*10*	*40*	*16*
9450	*10*	*60*	*20*	*10*	*46*	*20*
9550	*10*	*60*	*20*	*10*	*46*	*20*
9600	*12*	*57*	*19*	*12*	*44*	*19*
Softener type	**Time in minutes**					
	Pressure lower than 4 bars			**Pressure higher than 4 bars**		
	Lifting duration	**Suction and slow rinsing duration**	**Fast rinsing duration**	**Lifting duration**	**Suction and slow rinsing duration**	**Fast rinsing duration**
8550	10	60	20	10	46	*20*
8600	12	57	19	12	44	19
8700	12	68	24	12	52	24
8800	12	68	24	12	42	24

Table X – " Regeneration times "

7.4.6. “TEST” program

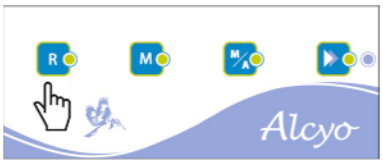
To start the Test program, press both "Regeneration" and "Semiautomatic" keys simultaneously for about 5 seconds. The water softener automatically triggers regeneration (R1 is displayed). The barograph will remain in high position throughout the test.
To skip to the next regeneration phase (brine suction and slow rinsing), briefly press the "Mode" key. The display then skips to R2.
Another action on the "Mode" key makes it possible to skip to fast rinsing, the last regeneration phase. The display then skips to R3.

Caution:
It is recommended to allow this last phase to fully take place if the brine suction phase has been tested during a few minutes in order to correctly wash the resin contained in the water softener bottle.

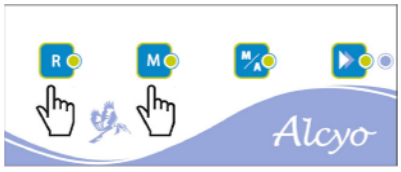
Another action on the "Mode" key will terminate the Test program and return to the initial display. The appliance is hydraulically set to service of softened water production.

Caution:
The "TEST" mode makes it possible to monitor the water softener regeneration phases and should in no case be used to run a regeneration. Similarly, this mode will not reset the volume remaining in volume-programmed appliances.

Other functions:



Triggering a regeneration: press the "R" key for at least 5 seconds. A complete regeneration phase is triggered when the key is released.



Stopping a regeneration in progress
Caution: This emergency stop mode will return the water softener to the service mode. If stopped during brine flow or during a rinsing phase, the brine might be discharged to installations downstream from the water softener.
To perform this operation: simultaneously press both "R" and "Mode" keys.

Water softener log
If the water softener is not in the regeneration phase, it is possible to visualize at any time the total volume of softened water and the number of regenerations performed.
Simply hold the "Forward" key pressed for 5 seconds.
The total volume of softened water is displayed. This indicative value is updated after each regeneration. The unit of volume automatically shifts from liter to m3 when the value exceeds 99999 liters.
Pressing the "Forward" key again makes it possible to display the total number of regenerations performed.
Both total volume and number of regenerations can be reset by holding the 3 "Mode", "Semi-automatic" and "Forward" keys simultaneously pressed for 5 seconds.

Controlling an external pump
A 24 volt-contact is available on terminal V3 to slave a metering pump as soon as the water softener is not regenerating.

8- SETTING TO SERVICE PROCEDURE

8.1. Setting the brine regulator

- Take the regulator out of the brine well located in the salt tray.
- Check size "X" in accordance with *Figure XXIV* and *Table XI* hereafter. Set size X by sliding the float along regulator rod.
- Remove brine well side plugs as illustrated.

Use this opportunity to check correct installation of salt tray bottom plate.

	Setting the salt tray			
Type of appliance	Standard Size X in mm	Max. Size X in mm	Plugs to be removed for enabling standard exchange	Plugs to be removed for enabling maximum exchange
9250	484	484	1 - 2 - 3	1 - 2 - 3 - 4 - 5
9300	435	484	1 - 2 - 3 - 4	1 - 2 - 3 - 4 - 5
9400	486	545	1 – 2 – 3	1 - 2 - 3 - 4 - 5
9450	442	545	1 - 2 - 3 - 4	1 - 2 - 3 - 4 - 5
9550	468	496	Nil	1
9600	445	457	1	1 – 2
8550	418	420	Nil	1 - 2
8600	445	457	Nil	1 - 2
8700	400	420	1	1 - 2 - 3 - 4
8800	390	410	1 – 2	1 - 2 - 3 - 4 - 5

Table XI - " Setting the regulator "

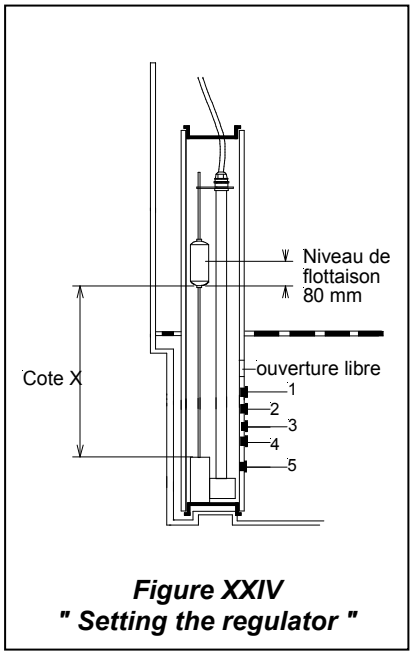


Figure XXIV
" Setting the regulator "

8.2. Setting the type 8000 hydraulic control block

The type 8000 valve control block hydraulic drivers must be adjusted upon setting to service depending on the treated water pressure and the type of appliance.

The hydraulic control block is fitted with 6 drivers (See Figure *XXV* opposite). Drivers 1 - 2 - 5 and 6 are the adjustable flow-rate type in order to match operating hydraulic specifications to the type of water softener installed (resin volume in liters).

To perform this setting, gently loosen 3 slotted head screws on each driver to be adjusted and turn the knurled part.

Five marks are provided: I - II - III - IIII - IIIII (position I corresponds to a nearly full closing).

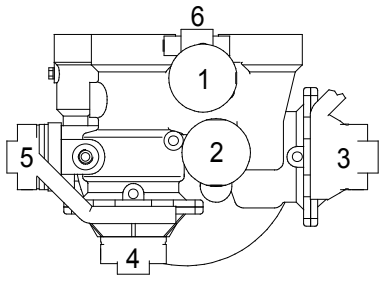


Figure XXV

All regeneration operations flow-rates are adjustable. However, both thinning-out and fast rinsing flow-rates must compulsorily be adjusted.

Table IX below, " *Rated flow-rates* " indicates the rated flow-rate required by both operations depending on the type of appliance and the chart makes it possible to determine this setting depending on **network** pressure.

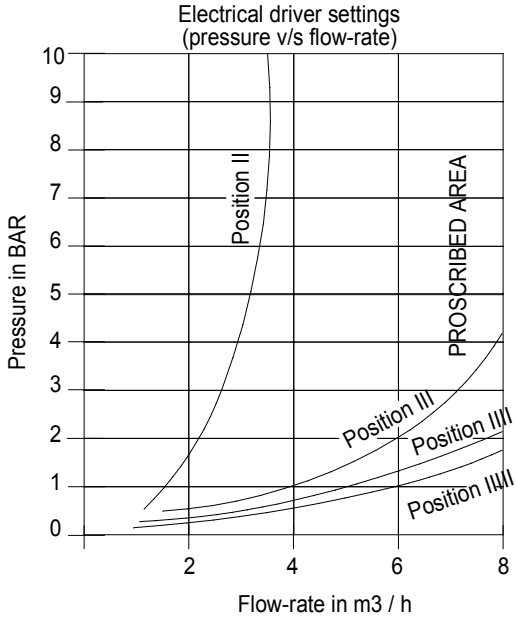
Example: For a Type 8000 ALCYO COMPOUND water softener using a network pressure of 5 bar:

- thinning-out setting: 125 l/min (driver No 5) on mark III,
- fast rinsing setting: 142 l/min (driver No 6) on mark IIII

Note: In all cases (Type of appliance and network pressure), drivers 2 and 1 shall be set to position IIIII.

	Rated flow-rates	
type 8000 ALCYO COMPOUND	Thinning-out l/min	Fast rinsing l/min
8550	117	133
8600	125	142
8700	133	150
8800	133	150

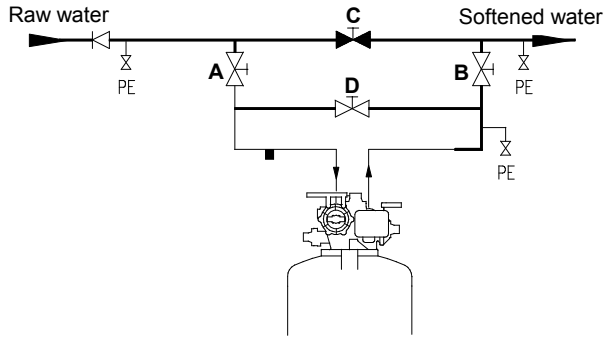
Table XII - " Rated flow-rates "



8.3. Flooding procedure (See Figure XXVI below)

In compliance with the prescriptions of Decree 89.3 as amended and to mitigate any risks of unwanted microbiological proliferations, the water softener must be disinfected with a bleach solution in the following proportions:

Volume of resin (in liters)	Quantity of bleach concentrate at 39 chlorometric degrees (commerce cartons) to be used (in ml)	
	In salt tray (after salt loading) for any type of water softener	In the body (after flint loading) for water softeners delivered empty
250	20	30
300	20	30
400	25	30
450	25	30
550	30	80
600	30	90
700	40	115
800	50	125



With valves A - B closed, C open, start a regeneration process by pressing the A5X-CONTROL electronic unit "Regeneration" key.

Slowly open valve A to bleed off the air contained in the system. After bleeding, fully open valve A.

Also bleed off the brine regulator by pushing on float rod (hold the rod by its low point).

Figure XXVI " Valve locations

Open valve B, then close valve C. Leave the water softener in the regeneration mode.

Once regeneration is complete, check for appliance tightness. Measure softened water TH and chlorides. Modify slow and/or fast rinsing times, if necessary.

Set residual TH setting valve D as required.

9- OPERATION - GENERAL SERVICING

Power supply failures

Programmed parameters are saved by the electronic PCB microprocessor.

- Display units go off.
- Solenoid valves are no longer supplied.
- If the failure occurs during a regeneration process, the latter stops, the appliance returns to service mode. When power is restored, the interrupted regeneration process restarts at the beginning of the halted phase.

Non-programmed regeneration

It is possible to trigger a regeneration process at any time by pressing the « Regeneration » key.

If the « Regeneration » key of the 2nd water softener is pressed during regeneration of the 1st one, the « regeneration request » information is stored by the control unit and regeneration of the 2nd appliance will be triggered after the first's.

Overall servicing

Periodically check both TH and chlorides of raw and softened waters and modify water softeners regeneration parameters as required.

Reload the salt tray whenever necessary. The salt level should always be higher than the level of the water contained in the salt tray, however do not overpass brine well brim in order to gain access to the brine regulator.

At least once every 6 months: take advantage of a salt tray reloading to drain it off, clean and disinfect it after reloading it with salt by introducing in the brine regulator stack a bleach solution in the following proportions:

Resin volume (in liters)	Quantity of bleach concentrate at 39 chlorometric degrees (commerce cartons) to be used (in ml)
250	20
300	20
400	25
450	25
550	30
600	30
700	40
800	50

Alarm transfer

- *Power failure*: alarm transfer contact closes.

  The contact remains closed event after power restoration. To override it, it is necessary to press the Mode key (for at least 5 seconds) and successively skip the various program steps to make sure that no data has been lost.

- *Pressure fault*: alarm transfer contact closes.

  The contact will be automatically deactivated as soon as a proper pressure is restored. In case of pressure fault during the regeneration process, the regeneration time countdown will be halted and resumed when a proper pressure is restored.
- *Salt low level*: alarm transfer contact closes.

  The contact will be automatically deactivated as soon as salt level is restored in salt tray.

Incidents

INCIDENTS	CAUSES	REMEDIES
The water softener delivers no more water.	By-pass open.	Check residual by-pass setting. Check that general by-pass is not open.
	Lack of regeneration salt.	Check for salt in salt tray.
	Brine suction faulty or poor.	Check pressure (in dynamic mode) at water softener inlet (1.5 bar minimum).
	Water under treatment TH higher than rated TH.	Check water under treatment TH.
	Extracted softened water volume not counted.	Check volume count on control unit (turbine/counter ILS faulty).
Water discharged to sewer out of regeneration periods	Appliance internal valves or solenoid valves not tight.	Replace defective elements.
	Decompression limiter clogged.	Clean limiter.
	Pressure too low.	Check pressure (1.5 bar minimum in dynamic mode).
Water flowing out of salt tray overflow.	Brine regulator tightness faulty	Check for deposits on salt tray bottom. Clean salt tray and regulator.

10- PROGRAMMING FLOW-CHARTS

10.1. Chronometric mode – code 60210

FUNCTION	DISPLAY UNIT	DESCRIPTION
Operating mode	**60210**	Programming the generic code (See §7.2)
Factory programming	**01:01** **4.01:00**	➔Moment time over 24 hours ➔Next regeneration date
Program step P100	**P100** **01:01**	Press Mode key for 5 seconds ➔Setting to service date (year : week = YY:WW) Modify with Forward and Semi-Automatic keys
Program step P001	**P001** **2000**	Press Mode key ➔Current year Modify with Forward and Semi-Automatic keys
Program step P002	**P002** **01:01**	Press Mode key ➔Current day and month (DD:MM) Modify with Forward and Semi-Automatic keys
Program step P003	**P003** **1.01:01**	Press Mode key ➔Current week day and time Modify with Forward and Semi-Automatic keys
Program step P020	**P020** **04**	Press Mode key ➔Number of days between regenerations Modify with Forward and Semi-Automatic keys
Program step P051	**P051** **04**	Press Mode key ➔Thinning-out duration in minutes Modify with Forward and Semi-Automatic keys
Program step P052	**P052** **00**	Press Mode key ➔Brine pump option
Program step P053	**P053** **40**	Press Mode key ➔Slow rinsing duration in minutes Modify with Forward and Semi-Automatic keys
Program step P054	**P054** **08**	Press Mode key ➔Fast rinsing duration in minutes Modify with Forward and Semi-Automatic keys
Program step P080	**P080** **0.01:00**	Press Mode key ➔Regeneration time (HH:MM) Modify with Forward and Semi-Automatic keys
Program step P031	**P031** **00111**	Press Mode key ➔Configuring the alarms Modify with Forward and Semi-Automatic keys
Program step P032	**P032** **070**	Press Mode key ➔Maintenance frequency in number of regenerations Modify with Forward and Semi-Automatic keys
Program step P033	**P033** **140**	Press Mode key ➔customer service frequency in number of regenerations Modify with Forward and Semi-Automatic keys

10.2. SEVEN Chronometric mode – code 60410

FUNCTION	DISPLAY UNIT	DESCRIPTION
Operating mode	**60210**	Programming the generic code (See §7.2)
Factory programming	**01:01** **4.01:00**	➔Moment time over 24 hours ➔Next regeneration date
Program step P100	**P100** **01:01**	Press Mode key for 5 seconds ➔Setting to service date (year : week = YY:WW) Modify with Forward and Semi-Automatic keys
Program step P001	**P001** **2000**	Press Mode key ➔Current year Modify with Forward and Semi-Automatic keys
Program step P002	**P002** **01:01**	Press Mode key ➔Current day and month (DD:MM) Modify with Forward and Semi-Automatic keys
Program step P003	**P003** **1.01:01**	Press Mode key ➔Current week day and time Modify with Forward and Semi-Automatic keys
Program step P081	**P081** **1.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P082	**P082** **1.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P083	**P083** **1.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P084	**P084** **1.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P085	**P085** **1.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P086	**P086** **1.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P087	**P087** **1.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P091	**P091** **0.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P092	**P092** **0.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P093	**P093** **0.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P094	**P094** **0.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P095	**P095** **0.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys

Program step P096	**P096** **0.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P097	**P097** **0.01:00**	Press Mode key ➔Regeneration day and time (D .HH:MM) Modify with Forward and Semi-Automatic keys
Program step P051	**P051** **04**	Press Mode key ➔Thinning-out duration in minutes Modify with Forward and Semi-Automatic keys
Program step P052	**P052** **00**	Press Mode key ➔Brine pump option
Program step P053	**P053** **40**	Press Mode key ➔Slow rinsing duration in minutes Modify with Forward and Semi-Automatic keys
Program step P054	**P054** **08**	Press Mode key ➔Fast rinsing duration in minutes Modify with Forward and Semi-Automatic keys
Program step P031	**P031** **00111**	Press Mode key ➔Configuring the alarms Modify with Forward and Semi-Automatic keys
Program step P032	**P032** **070**	Press Mode key ➔Maintenance frequency in number of regenerations Modify with Forward and Semi-Automatic keys
Program step P033	**P033** **140**	Press Mode key ➔customer service frequency in number of regenerations Modify with Forward and Semi-Automatic keys

10.3. ANTICIPATED VOLUME DATA operating mode – codes 62230 & 62730

FUNCTION	DISPLAY UNIT	DESCRIPTION
Operating mode	**42230 or 42730 52230 or 52730**	Programming the generic code (See §7.2)
Factory programming	**01:01** **1000 L**	➔Moment time over 24 hours ➔Water softener autonomy by default
Program step P100	**P100** **01:01**	Press Mode key for 5 seconds ➔Setting to service date (year : week = YY:WW) Modify with Forward and Semi-Automatic keys
Program step P001	**P001** **2000**	Press Mode key ➔Current year Modify with Forward and Semi-Automatic keys
Program step P002	**P002** **01:01**	Press Mode key ➔Current day and month (DD:MM) Modify with Forward and Semi-Automatic keys
Program step P080	**P080** **0.01:00**	Press Mode key ➔Regeneration time (HH:MM) Modify with Forward and Semi-Automatic keys
Program step P051	**P051** **04**	Press Mode key ➔Thinning-out duration in minutes Modify with Forward and Semi-Automatic keys
Program step P052	**P052** **00**	Press Mode key ➔Brine pump option

Program step P053	**P053** **40**	Press Mode key ➔Slow rinsing duration in minutes Modify with Forward and Semi-Automatic keys
Program step P060	**P060** **0-001**	Press Mode key ➔Water counter pulses conversion Modify with Forward and Semi-Automatic keys
Program step P062	**P062** **0-001**	Press Mode key ➔ External pulse transmission
Program step P040	**P040** **L.1000**	Press Mode key ➔Water softener cycle en liters ou hectoliters Modify with Forward and Semi-Automatic keys
Program step P070	**P070** **L.0300**	Press Mode key ➔Daily initial average Modify with Forward and Semi-Automatic keys
Program step P031	**P031** **00111**	Press Mode key ➔Configuring the alarms Modify with Forward and Semi-Automatic keys
Program step P032	**P032** **070**	Press Mode key ➔Maintenance frequency in number of regenerations Modify with Forward and Semi-Automatic keys
Program step P033	**P033** **140**	Press Mode key ➔customer service frequency in number of regenerations Modify with Forward and Semi-Automatic keys

10.4. ANTICIPATED VOLUME SEVEN operating mode – code 62530

FUNCTION	DISPLAY UNIT	DESCRIPTION
Operating mode	**62530**	Programming the generic code (See §7.2)
Factory programming	**01:01** **1000 L**	➔Moment time over 24 hours ➔Water softener autonomy by default
Program step P100	**P100** **01:01**	Press Mode key for 5 seconds ➔Setting to service date (year : week = YY:WW) Modify with Forward and Semi-Automatic keys
Program step P001	**P001** **2000**	Press Mode key ➔Current year Modify with Forward and Semi-Automatic keys
Program step P002	**P002** **01:01**	Press Mode key ➔Current day and month (DD:MM) Modify with Forward and Semi-Automatic keys
Program step P003	**P003** **1.01:01**	Press Mode key ➔Current week day and time Modify with Forward and Semi-Automatic keys
Program step P080	**P080** **0.01:00**	Press Mode key ➔Regeneration time (HH:MM) Modify with Forward and Semi-Automatic keys
Program step P051	**P051** **04**	Press Mode key ➔Thinning-out duration in minutes Modify with Forward and Semi-Automatic keys
Program step P052	**P052** **00**	Press Mode key ➔Brine pump option
Program step P053	**P053** **40**	Press Mode key ➔Slow rinsing duration in minutes Modify with Forward and Semi-Automatic keys

Program step P054	**P054** **08**	Press Mode key ➔Fast rinsing duration in minutes Modify with Forward and Semi-Automatic keys
Program step P060	**P060** **0-001**	Press Mode key ➔Water counter pulses conversion Modify with Forward and Semi-Automatic keys
Program step P062	**P062** **0-001**	Press Mode key ➔ External pulse transmission
Program step P040	**P040** **L.1000**	Press Mode key ➔Water softener cycle en liters ou hectoliters Modify with Forward and Semi-Automatic keys
Program step P071	**P071** **L.0300**	Press Mode key ➔Monday initial average Modify with Forward and Semi-Automatic keys
Program step P072	**P072** **L.0300**	Press Mode key ➔Tuesday initial average Modify with Forward and Semi-Automatic keys
Program step P073	**P073** **L.0300**	Press Mode key ➔Wednesday initial average Modify with Forward and Semi-Automatic keys
Program step P074	**P074** **L.0300**	Press Mode key ➔Thursday initial average Modify with Forward and Semi-Automatic keys
Program step P075	**P075** **L.0300**	Press Mode key ➔Friday initial average Modify with Forward and Semi-Automatic keys
Program step P076	**P076** **L.0300**	Press Mode key ➔Saturday initial average Modify with Forward and Semi-Automatic keys
Program step P077	**P077** **L.0300**	Press Mode key ➔Sunday initial average Modify with Forward and Semi-Automatic keys
Program step P031	**P031** **00111**	Press Mode key ➔Configuring the alarms Modify with Forward and Semi-Automatic keys
Program step P032	**P032** **070**	Press Mode key ➔Maintenance frequency in number of regenerations Modify with Forward and Semi-Automatic keys
Program step P033	**P033** **140**	Press Mode key ➔customer service frequency in number of regenerations Modify with Forward and Semi-Automatic keys

10.5. PURE VOLUME operating mode – codes 61230

FUNCTION	DISPLAY UNIT	DESCRIPTION
Operating mode	**61230**	Programming the generic code (See § 7.2)
Factory programming	**01:01** **1000 L**	➔Moment time over 24 hours ➔Water softener autonomy by default
Program step P100	**P100** **01:01**	Press Mode key for 5 seconds ➔Setting to service date (year : week = YY:WW) Modify with Forward and Semi-Automatic keys
Program step P001	**P001** **2000**	Press Mode key ➔Current year Modify with Forward and Semi-Automatic keys

Program step P002	**P002** **01:01**	Press Mode key ➔Current day and month (DD:MM) Modify with Forward and Semi-Automatic keys
Program step P003	**P003** **1.01:01**	Press Mode key ➔Current week day and time Modify with Forward and Semi-Automatic keys
Program step P040	**P040** **L.1000**	Press Mode key ➔Water softener cycle en liters ou hectoliters Modify with Forward and Semi-Automatic keys
Program step P051	**P051** **04**	Press Mode key ➔Thinning-out duration in minutes Modify with Forward and Semi-Automatic keys
Program step P052	**P052** **00**	Press Mode key ➔Brine pump option
Program step P053	**P053** **40**	Press Mode key ➔Slow rinsing duration in minutes Modify with Forward and Semi-Automatic keys
Program step P054	**P054** **08**	Press Mode key ➔Fast rinsing duration in minutes Modify with Forward and Semi-Automatic keys
Program step P056	**P056** **00000**	Press Mode key ➔Minimum offset between regenerations in minutes
Program step P060	**P060** **0-001**	Press Mode key ➔Water counter pulses conversion Modify with Forward and Semi-Automatic keys
Program step P062	**P062** **0-001**	Press Mode key ➔ External pulse transmission
Program step P031	**P031** **00111**	Press Mode key ➔Configuring the alarms Modify with Forward and Semi-Automatic keys
Program step P032	**P032** **070**	Press Mode key ➔ maintenance frequency in number of regenerations Modify with Forward and Semi-Automatic keys
Program step P033	**P033** **140**	Press Mode key ➔customer service frequency in number of regenerations Modify with Forward and Semi-Automatic keys

10.6. Program step codes on A5-X PCB

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	Configuration alarms	00011 if not bio / 00111 if bio
P032	Servicing frequency in number of regenerations	070
P033	Customer service 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 rinsing duration in minutes	40
P054	Fast rinsing duration in minutes	08
P056	Regenerations offset in seconds	00000
P060	Count conversion	0-001
P062	Count transfer	0-001
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 slot 1°	1.01:00
P082	Regeneration time slot 2°	1.01:00
P083	Regeneration time slot 3°	1.01:00
P084	Regeneration time slot 4°	1.01:00
P085	Regeneration time slot 5°	1.01:00
P086	Regeneration time slot 6°	1.01:00
P087	Regeneration time slot 7°	1.01:00
P091	Regeneration time slot 8°	0.01:00
P092	Regeneration time slot 9°	0.01:00
P093	Regeneration time slot 10°	0.01:00
P094	Regeneration time slot 11°	0.01:00
P095	Regeneration time slot 12°	0.01:00
P096	Regeneration time slot 13°	0.01:00
P097	Regeneration time slot 14°	0.01:00
P100	Setting to service date	01:01

11- WATER SOFTENER PROGRAMMED PARAMETERS RECORD

Water softener type : _____

Raw water TH: _____ °f

Residual TH : _____ °f

Operating mode chosen:

1/ ❑ Pure time

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

3/ ❑ Pure volume regeneration when cycle = "0"

4/ ❑ Anticipated volume regeneration at fixed time compulsory

5/ ❑ Anticipated volume with priority to volume

6/ ❑ "Seven" anticipated volume regeneration at fixed time depending on calculated average

Regeneration time: _____ hours _____minutes

Number of days between two regenerations: _____ days

Regeneration day(s) and hour(s):

❑ Monday _____h_____min

❑ Tuesday _____h_____min

❑ Wednesday_____h_____min

❑ Thursday _____h_____min

❑ Friday _____h_____min

❑ Saturday _____h_____min

❑ Sunday _____h_____min

Regeneration duration setting:

- Lifting: _____ minutes
- Suction and slow rinsing: _____ minutes
- Fast rinsing: _____ minutes

Impulsing counter pulses: _____ pulse(s) per _____ liters

Diameter: _____ Rated flow-rate: _____ m3/h

Water softener cycle: _____ liters

Average consumption: Monday (1) : _____ liters Tuesday (2) : _____ liters

Wednesday (3) : ____ liters Thursday (4) : ____ liters Friday (5) : _____ liters

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

Configuring the alarms: ❑ lack of water ❑ lack of salt

❑ bio probe ❑ maintenance ❑ CS

Note: - The above parameters must be accurately documented when setting the appliance to service.
- Out a cross in the boxes opposite the operating mode and regeneration day, hour(s).

12 - MAINTENANCE

Some components will be subjected to normal aging inherent to appliance operation. These components also called working and/or wear parts must be periodically replaced by a qualified person authorized to perform this task.

Working and wear parts are excluded of our general warranty conditions (unless exception or particular case).

The replacement frequency will be determined in accordance with equipment installation and operating conditions. The appliance shall be subjected to a visual inspection at least once per year in order to determine condition of unions, connectors, display unit, etc…

Working and wear parts:

Inlet and outlet servicing kit for type 8000 only	**P0011546**
Adjustable driver 1 - 2 - 5 and 6 for type 8000 only	**P0012635**
Adjustable driver 3 - 4 for type 8000 only	**P0012636**
Set of 3 50µ sleeves for types 8000 and 9000	**P0003735**
Brine regulator for types 8000 and 9000	**P0014822**
Valve DN50 servicing S/A for type 9000 only	**P0070331**
Driver DN25 1 - 2 - 6 for type 9000 only	**P0019007**
Driver DN25 5 for type 9000 only	**P0019017**

Other spare parts:

Type 8000 Compound valve assembly without control unit - without strainer	**PK0012566**
Type 9000 Compound valve assembly without control unit - without strainer	**P0019005**
A5X control unit for types 8000 and 9000	**P0024458**
A5X transformer for types 8000 and 9000	**P0012434**
Vacuum breaker for types 8000 and 9000	**P0098526**
Hydro-ejector N1 for type 8000 only	**P0011611**
Hydro-ejector N2 for type 8000 only	**P0020228**
Hydro-ejector for type 9000 only	**P0019010**

Other spare parts are available, please contact your PERMO agency

The PERMO ALCYO 8000 water softener is fitted with an A5X communication PCB which, when connected to a specific MODEM and a software package, can locally or remotely transmit data via a dedicated telephone line.

It is possible to remotely monitor the operating parameters of your appliance and some associated items such as product depletion in a metering group.

PERMO can offer you contracts about remote monitoring of your installations via their central monitoring platform.

We can also offer you our technical support contracts bearing on periodical servicing and maintenance of your water treating appliances.

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N° Indigo 0 825 00 07 26
0,15 euros TTC / mn

Agencies and Customer Service

BORDEAUX, CANNES, GRENOBLE, LILLE, LYON, MARSEILLE, NANCY,
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and SERVICE EXPORT