



**Electrochlorination
system**

SANIRÉSINE

VERY IMPORTANT :

Before any connection, filling with water and use read this manual carefully.
Non compliance with these instructions will invalidate the BWT guarantee.

www.bwtpermo.fr



PERMO SANIRÉSINE technical manual
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Dear Customer,

You have shown your confidence in **Permo** and are now the owner of a **Permo SANIRESINE** collective softener unit.

The **Permo SANIRESINE** automatic disinfection unit for collective softeners produces active chlorine by electrolysing brine during regeneration.

This chlorine being in contact with the ion exchange resin at the same time as the brine guarantees regeneration and chlorination; the excess chlorine is eliminated at the end of the softener regeneration process.

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

It is simple to use: we advise you to read this manual carefully before using and commissioning it.

You can also be sure that our **Permo** After Sales Service is at your service.

www.bwtpermo.fr

VERY IMPORTANT :

Before any connection, filling with water and use read this manual carefully. Non compliance with these instructions will invalidate the Permo guarantee.

In no case must the softener be connected from a lead pipe. We reserve the right to make any technical modifications to this manual without prior notice. The characteristics mentioned are given as an indication, the photos or drawings are not contractual.

SAFETY

The descriptions are written in light text.

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



REMARK

Indicates a special feature or important information



WARNING

Risk related to the presence of electrical current



ATTENTION

Risk of incorrect operation



WARNING

Risk of injury or accident



REMARK

Recyclable item



ATTENTION :

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

Please read these instructions carefully before using your softener.

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



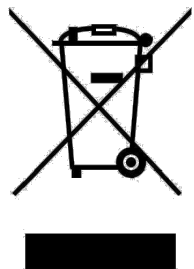
WARNING :

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



KEEP THESE INSTRUCTIONS

Disposing of your old appliance



1. This symbol, representing a wheeled bin struck through by a cross, means that the product is covered by European directive 2002/96/EC.
2. The electrical and electronic components must be disposed of separately in containers provided for this.
3. Disposal in accordance with these instructions will help to reduce negative consequences and any risks for the environment and human health.

INSTALLATIONS INSTRUCTIONS



ATTENTION :

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



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

WIRING



ATTENTION :

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

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

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

The hydraulic connections must be done in accordance with the rules of the art and applicable standards in the premises where the equipment is installed.

Furthermore the electronics are sensitive, like any electrical assembly, to electrical or magnetic interference. In the case of proximity to power switches, transformers or any other interference emitter, it will be necessary to make the connections with suitable cable and possibly to fit an interference suppressor.

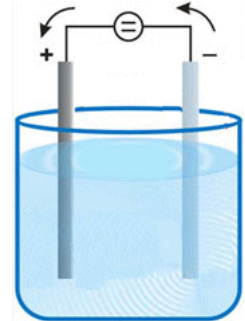
PRINCIPLE

Electro chlorination :

The electro chlorination procedure consists of in situ production of chlorine by electrolysing a sodium chloride rich solution. The electrodes are titanium. The polypropylene box protects the electronics. Electrode polarisation is automatic for each new cycle.

The **Permo SANIRESINE** automatic disinfection unit for collective softeners produces active chlorine by electrolysing brine during regeneration. This chlorine being in contact with the ion exchanger resin at the same time as the brine guarantees regeneration and chlorination; the excess chlorine is eliminated at the end of the regeneration process.

This patented system starts electrolysis only during brine intake and stops the process automatically during slow rinsing.



TECHNICAL CHARACTERISTICS

Probe technical characteristics :

- Supply voltage : 230VAC +/- 10%
- Output voltage : 2-6 VDC
- Dimensions (height / width / depth) : 230 x 110 x 73 mm
- Titanium electrolysis electrodes
- Glass fibre reinforced polypropylene electrolysis chamber
- Connection to brine intake pipe
- Maximum operating pressure : 7 bars
- Weight : 1.5kg
- Protection IP54
- Complies with directives CE23/73 & 336/89

Probe support technical characteristics :

- Weight : 0.5kg
- Material: stainless steel
- Dimensions (height / width / depth) : 250 x 115 x 76 mm

OPERATION

The brine is electrolysed during the intake phase by the production of active chlorine (resin disinfection).

The **Permo SANIRESINE** unit for collective softeners automatically detects the presence of brine and starts production of chlorine.

A potentiometer accessible on the top of the unit permits adjustment of the current transmitted to the probe electrodes.

- The current is adjustable from 0 to 2.5 Amperes.
- The electrical supply time from 2 to 20 minutes.



For safety, starting electrolysis is prohibited during the 2 hours after the last electrode to avoid damage to the electrodes.

INSTALLATION

Before anything else adjust the settings of the two potentiometers to suit the collective softener on which the **Permo SANIRESINE** disinfection unit will be used.

To do this :

- Unscrew the unit cover.
- Adjust the "TIME" potentiometer to set the chlorine production time (see "Settings" chapter and "Time" adjustment).
- Adjust the "AMPERE" potentiometer to control the quantity of chlorine produced during brine electrolysis (see "Settings" chapter and "Ampere" adjustment).
- Then refasten the unit cover.
- Install the **Permo SANIRESINE** disinfection unit on its wall support and close to a 230 VAC / 50Hz electrical socket. To do this, remove the two stainless steel unions (one on the valve and one on the regulator) and replace them by those delivered in the kit. The flexible tube is also to be replaced by the 3/8" PE tube. Open the intake line and connect it to the electrolysis chamber (3/8" BSP). Ensure that the electrical supply cannot be cut off by a switch upstream of the installation.

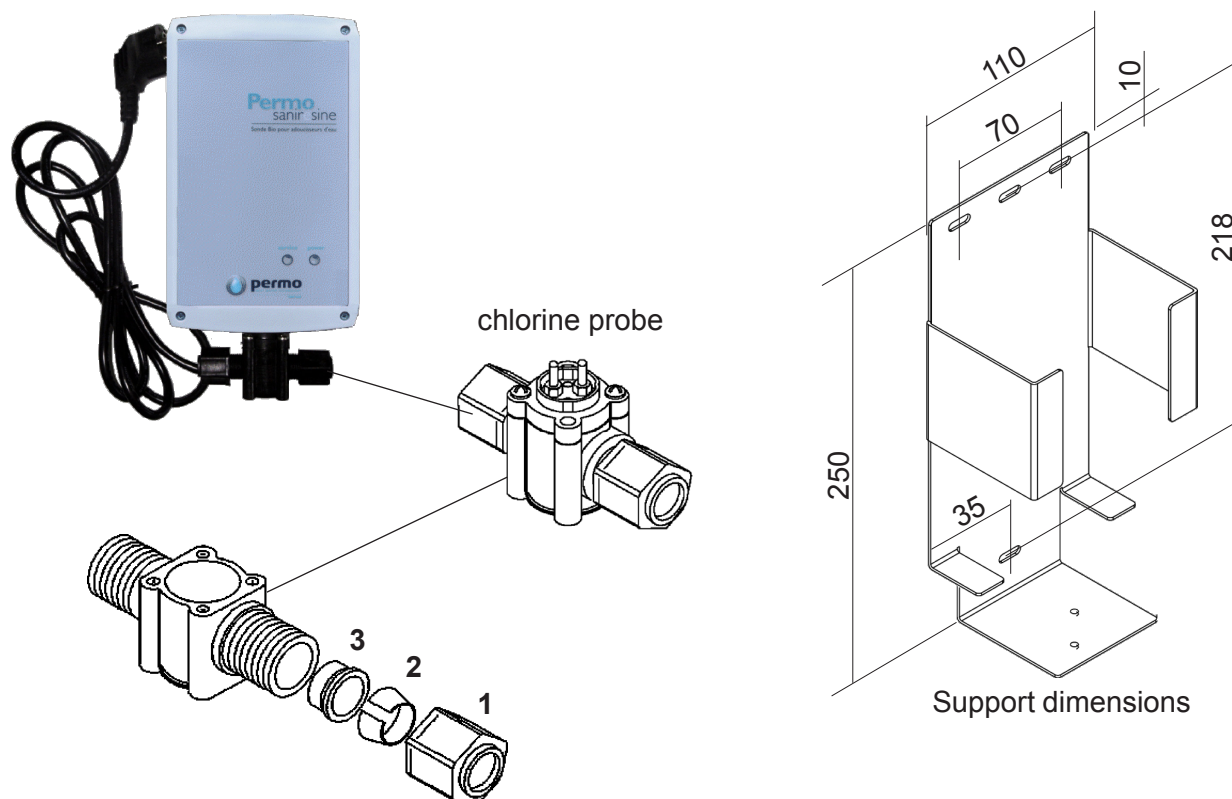
(To connect to the intake line on the electrolysis chamber also see the indications on the installation diagram between the **Permo** collective softener valve and the salt tank).



When the **Permo SANIRESINE** unit is connected to the mains, the green diode indicates that the appliance is powered on. The red diode indicates chlorine production and only lights during brine intake.

Your **Permo SANIRESINE** disinfection unit for collective softeners is now ready for use.

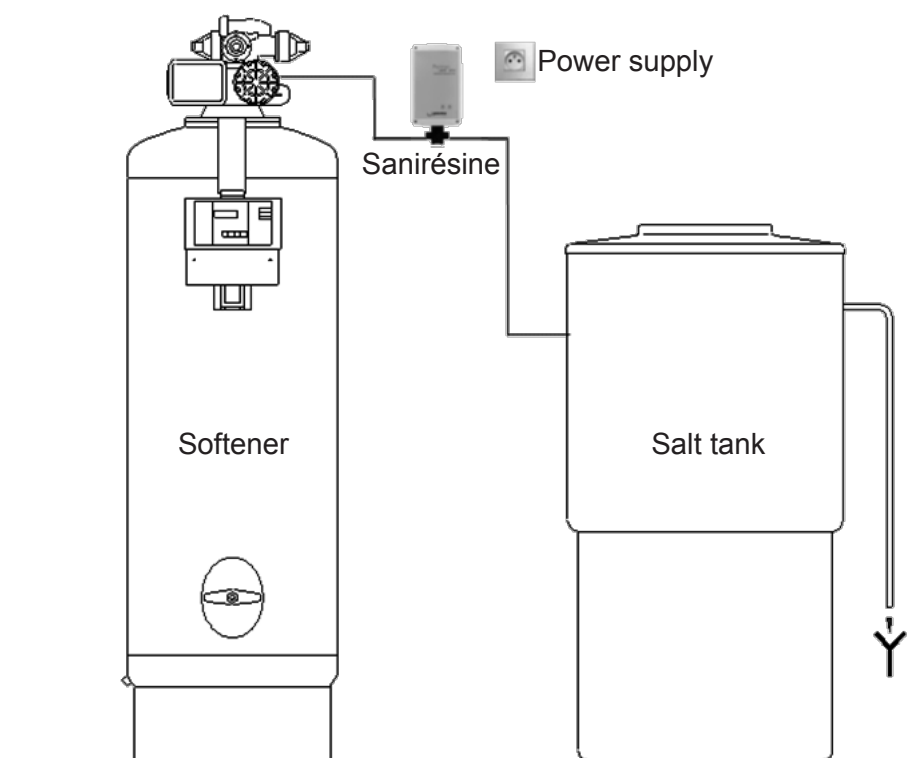
INSTALLATION DIAGRAM



Mounting fittings

Mount the nut (1) on the tube of brine, then the plastic ring (2) and the insert (3). Lightly tighten the nut (1). Lightly tighten the nut without tools.

Perform the operation on the input and output connections of the chlorine probe.



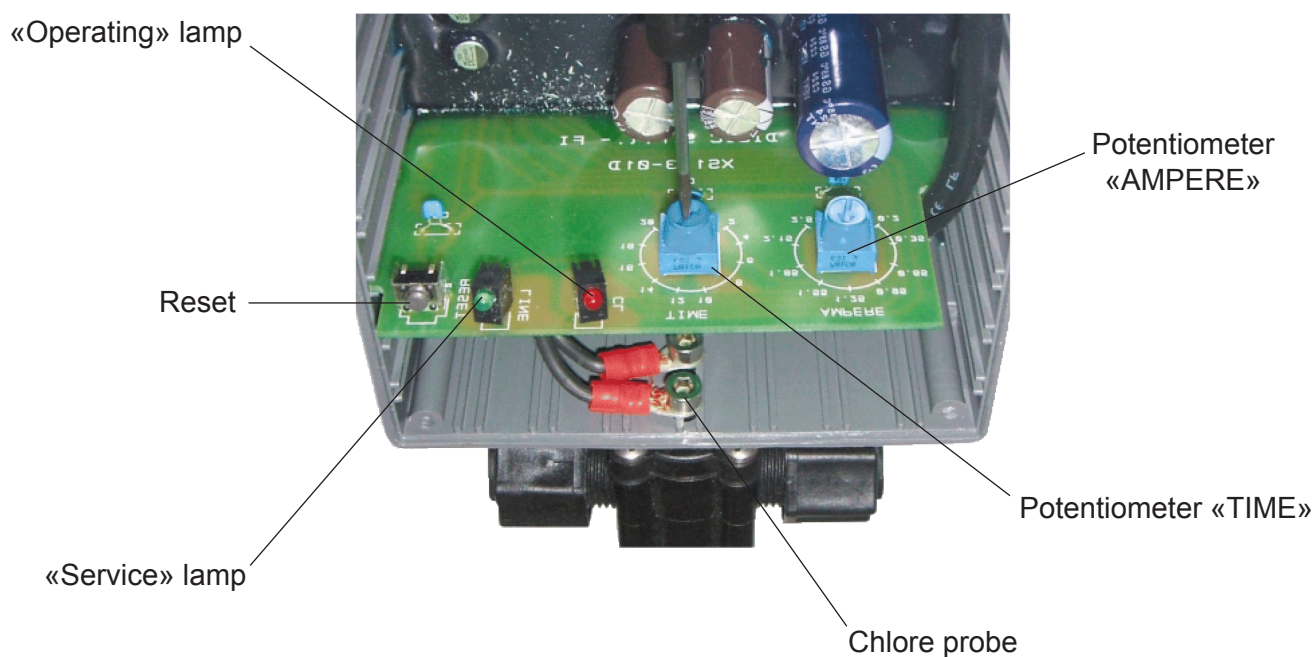
SETTINGS

The **Permo SANIRESINE** is designed to be installed on softeners with up to 350 litres of resins. Its correct operation is intrinsically linked to the softener hydraulic parameters (intake time, hydro-injector used, resin volume to be disinfected, operating pressure...). This is why it is necessary to adjust the "TIME" and "AMPERE" potentiometers in the most suitable manner.

- The AMPERE potentiometer permits adjustment of the quantity of active chlorine produced (in ppm or mg/l) during brine intake. The greater the resin volume, the greater the required chlorine production in order to maintain a sufficient chlorine concentration in the resin and so disinfect it effectively.
- The TIME potentiometer permits adjustment of the duration of active chlorine production. The maximum time is 20 minutes.



In all cases, it must be less than the brine intake time on pain of overheating and electrode damage.



«Ampere» and «Temps» potentiometer settings



Maintenance :

Due to its operation, lime deposits can occur in the electrolysis chamber. Plan for annual maintenance by simple fresh water rinsing.

«TIME» adjustment



Indicative values are proposed below for the probe setting as a function of the softener model used.

Appliance	Intake time in minutes	Intake flow rate in liters/minutes	Time setting in liters/minutes
7150	13	4,0	12
7200	20	4,0	19
7300	28	4,0	20
8150	10	6,5	9,0
8200	12	6,5	11
8250	14	6,5	13
8300	17	6,5	16
8350	19	6,5	18
9200	18	6,5	17
9250	23	4,0	20
9300	26	4,0	20
9350	31	4,0	20

«AMPERE» adjustment



On the same appliance and at constant pressure, chlorine production is directly proportional to the electrolysis amperage.

The table below gives the amperage for chlorine production (about 2.0 ppm).

Mains pressure	Max. AMPERE setting
3 bars	1,70 A
4 bars	1,45 A
>7 bars	2,15 A

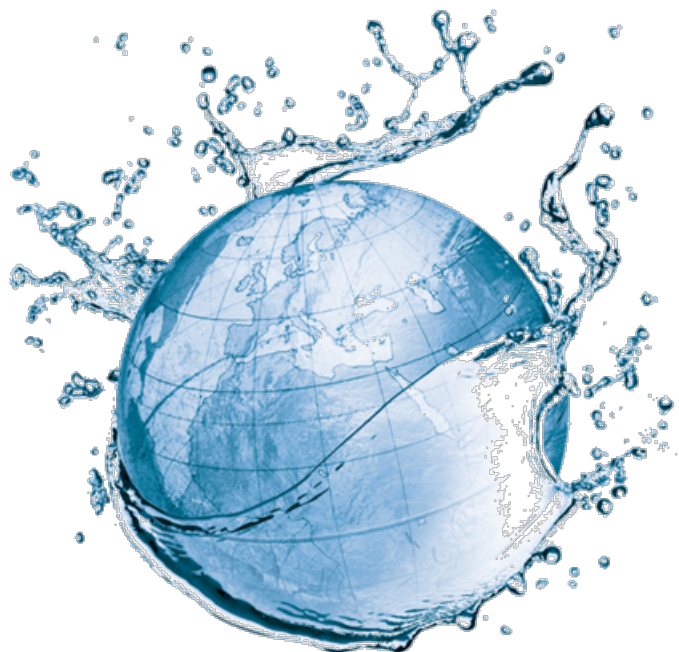


The values are given as an indication and depend on the models used and the softener operating conditions.

Above 2 ppm, the active chlorine produced being excessive, it can damage the ion exchange resin.

NOTES

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



For You and Planet Blue. **BWT**
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