

Operating and installation manual



NATURALLY SALT

by  BAYROL

Content

1	General safety instructions	3	4.4.4	Sound	12
2	Content of the packaging	4	4.4.5	Password	12
3	Installation	4	4.4.6	Cell hours.....	12
3.1	Wall installation.....	4	4.4.7	System info.....	12
3.2	Electrical connection.....	5	4.4.8	Service menu.....	12
3.2.1	Supply via the filter control.....	5	4.5	Service menu.....	13
3.3	Connecting the chlorine production cell.....	5	4.5.1	Service settings	14
3.4	Installation diagram.....	6	4.5.2	Extra settings	15
3.5	Installing the additional flow switch.....	6	4.5.3	Reset settings	15
3.6	Earthing.....	7	4.5.4	Reset counters.....	16
3.7	Setting the water.....	7	5	Description of the device	16
3.7.1	Water chemistry	7	5.1	Connections and fuses on the Salt Relax	17
3.7.2	The right salt	8	5.2	Removing the housing front cover.....	17
3.7.3	Calculating the pool volume.....	8	5.3	Replacing the battery.....	18
3.7.4	Calculating the amount of salt to add	8	5.4	Installing a cable grommet.....	18
3.8	Adding the salt to the pool	8	5.5	Connecting terminals.....	19
4	Operating the Salt Relax	9	6	Troubleshooting and fault elimination	20
4.1	Main screen	9	7	Maintenance	21
4.2	Quick access to salt electrolysis	9	7.1	Cell cleaning	21
4.3	The main menu	10	7.2	General maintenance	21
4.3.1	Electrolysis.....	10	7.3	Cleaning.....	21
4.4	Settings menu	11	8	Taking out of service for the winter	22
4.4.1	Language	11	9	Decommissioning	22
4.4.2	Time	11	10	Technical Data	22
4.4.3	Screen.....	11	11	EC Declaration of Conformity	23

1 General safety instructions

This operating manual contains important information which must be observed during installation, commissioning, operation and servicing. This operating manual must therefore be read by the installation engineer and the operator of the device prior to installation and commissioning and must be kept in a location where it is accessible to all users.

Sensitive settings are correspondingly marked, and such settings may only be made by a specialist with both in-depth knowledge of swimming pool construction and in-depth knowledge of the installation of electrical and electronic devices.

Compliance with all other safety instructions in this document is also mandatory.

Read and follow all instructions.

To minimise the risk of injury, do not allow children to use this product.

Failure to follow the safety instructions may result in danger to persons, the environment and the device itself. Failure to observe the safety instructions will also lead to the forfeiture of claims for damages and loss of warranty.

The Salt Relax is intended exclusively for use in private swimming pools.



DANGER!

Danger resulting from inadequate qualification of personnel/service technicians/installation technicians. Possible consequences are serious or even fatal injury and severe damage to material assets. The following conditions therefore apply:

- The operator of the plant must ensure that personnel are adequately qualified.
- All tasks must be performed exclusively by correspondingly trained personnel.
- The system must be protected against access by persons who are not adequately qualified, e.g. by means of access codes and passwords.



IMPORTANT!

The operator of the plant must ensure compliance with the relevant accident prevention regulations, other legal provisions and the generally accepted rules of safety engineering!

2 Content of the packaging

2 Content of the packaging



- 1 Salt Relax
- 2 Installation material
- 3 Salt Quicktest
- 4 Reducer 75-50 mm
- 5 Reducer 63-50 mm
- 6 Chlorine production cell (cell and housing)

3 Installation



NOTE!

Ensure that all components of the pool system which may come into contact with the pool water are resistant to salt water. In particular, make sure that the filtration pump is resistant to salt water.

Note that even water with a low salt content can be corrosive, and take this into account when selecting components for use (e.g. steel ladders etc.).



Necessary qualification:

The Salt Relax must be installed by a specialist with both in-depth knowledge of swimming pool construction and in-depth knowledge of the installation of electrical and electronic devices!



Danger caused by electrical current

The Salt Relax is live as soon as voltage is applied to the power input. The chlorine production cell or additional functions may be switched on or switched over. Contact with live components can lead to an electric shock.

This may result in serious or even fatal injury and damage to material assets, and the following therefore apply:

- All such tasks must be carried out exclusively by adequately trained and experienced personnel!
- The device must always be de-energised before performing installation and maintenance work on it!
- Secure the device against being switched on while work is being performed on it!
- Additional modules must be installed/removed in de-energised state!
- Cables must also be connected in de-energised state!
- A safety feature which is independent of the device should always be present!
- Where necessary, password protection for the main menu must be activated!
- The relevant country-specific safety regulations must be complied with!
- All safety features and protective devices must be refitted or rendered functional again immediately after completing work!
- Failure to follow the safety instructions can cause the device to malfunction, may lead to the risk of fatal injury and renders the warranty invalid!

3.1 Wall installation

Notes on installation:

- The device must be mounted on a flat, vertical surface protected against moisture.
- There must be adequate free space around the device to allow correct operation and maintenance of the device. It must be possible to remove the front cover of the device.
- A space of at least 20 cm below and to the side of the device is required for routing cables.
- A wet room Schuko socket with continuous current is required at a distance of not more than 1.5 m.
- All cables must be routed without kinks and chafing points.
- Avoid exposure to direct sunlight, heat radiation, frost and moisture. Ensure adequate ventilation.
- No live cables, contactors, electric motors etc. in the immediate vicinity.
- The installation location should be as close as possible to that of the chlorine production cell (note cable length).

3 Installation

- The Salt Relax with the mounted holders can be used as a template for drilling by holding it up against the mounting location and marking the position of the drill holes on the wall.



3.2 Electrical connection

The Salt Relax has been designed and constructed according to the applicable regulations. It was carefully inspected before leaving the factory and left the factory in a safe and technically flawless condition.

The equipment can only be operated safely if all of the instructions contained in this manual are followed.

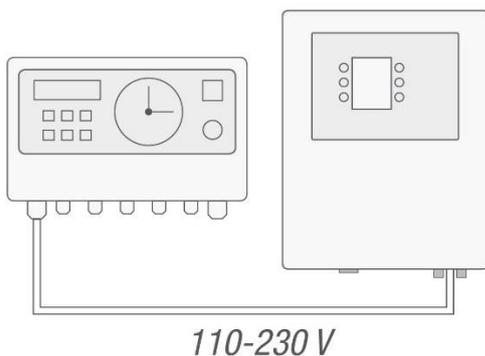
The supply voltage for the device must not exceed 110 - 240V/60 Hz. The permissible operating temperature range is from 0 to 50 °C, the permissible humidity level 0-90 %.

As is standard practice for electrical connections, ensure that all plug-in connections and cable grommets are protected against water.

3.2.1 Supply via the filter control

If the Salt Relax is activated via an external timer (e.g. filter control), it must be ensured that the circulating pump and the Salt Relax are precisely synchronised. The Salt Relax must be switched off if there is no flow of water.

Make sure that the external timer (e.g. filter control) meets the performance requirements of the Salt Relax!



Attention:

Connection of the Salt Relax in this way must be performed by a specialist technician with in-depth knowledge of the installation of electrical and electronic devices!

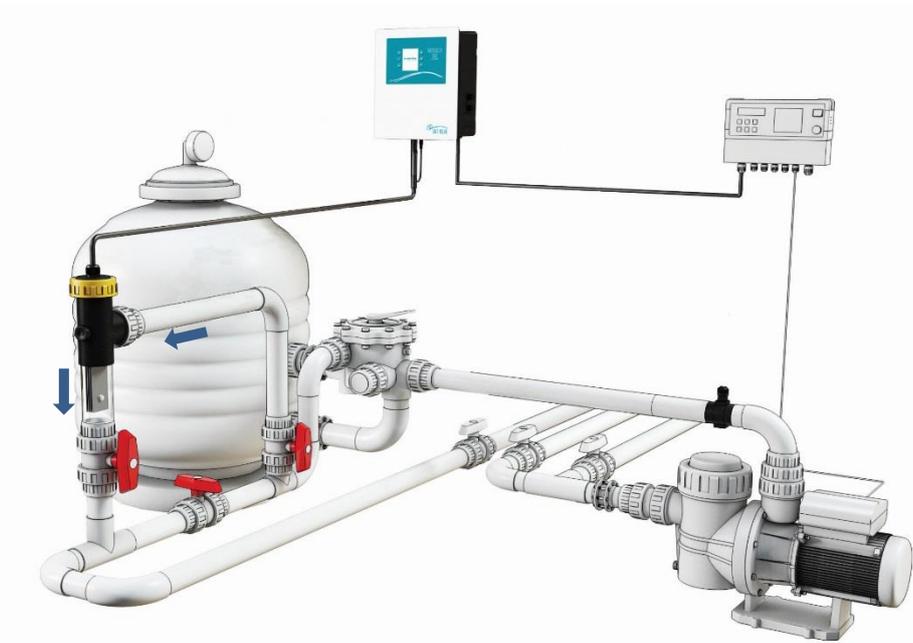
When connecting the power supply cable of the Salt Relax to the filter control, it is imperative to follow the instructions (connection diagram) provided with the filter control.

3.3 Connecting the chlorine production cell

When connecting the cell supply cable to the control unit, make sure that the cable is inserted firmly at the points provided, with no loose contact. The cap nut of the plug-in connection must be securely tightened. If this is not the case, there is a risk of overheating at this connection.

Also insert the second, thinner cable (gas flow sensor) of the chlorine production cell carefully into the connection point provided (see Connections and fuses on the Salt Relax).

3.4 Installation diagram



NOTE

We recommend that the cell is always installed in the bypass. Installation in this way is mandatory if the flow rate exceeds 15 m³/hour, in order to avoid load losses. Installation in the bypass makes it much easier to carry out maintenance on the chlorine production cell and the optionally installed sensors.

If you install the cell in the bypass, you should fit a non-return valve in the bypass line after the cell in place of a manual valve, in order to rule out the danger of accidental actuation.

It is imperative to note that the chlorine production cell must always be the last element installed on the return line to the pool (see sketch above).

To enable use of the integrated gas flow sensor, the cell must be positioned vertically. The sensor will only function correctly if this is the case. If installation in vertical position is not possible, must be used the optional available paddle flow switch!

Please note that the water flows through the chlorine production cell as shown in the diagram and not in the reverse direction.

The chlorine production cell itself is attached inside the bypass piping with adhesive. Depending on the diameter of the pipe, it may be necessary to use the reducer supplied.



NOTE

When inserting the cell into the cell holder, make sure that the cell blades are positioned in the direction of flow of the water. This ensures that the blades offer the lowest possible resistance to the water flowing through the cell.

3.5 Installing the additional flow switch

It must be ensured that the chlorine production cell is only in operation when pool water is flowing through it.

The Salt Relax is equipped with a gas flow sensor integrated in the chlorine production cell. This sensor only functions if the cell is installed in vertical position. If, for technical reasons, it is not possible to install the cell vertically, or if a double dosing lock is to be used, the paddle flow switch provided can be installed; see installation diagram above.

This paddle sensor must be installed directly in front of the chlorine production cell. The electrode holder supplied has a drilled hole for the paddle switch on its underside and is used as the holder for the paddle switch. Ensure that the holder is mounted in the bypass line in front of the cell.



NOTE

When installing the paddle flow switch, it is essential to ensure that the arrow printed on the switch matches the direction of flow of the water!

Connecting the paddle flow switch in the Salt Relax

An additional cable grommet must be created in order to connect the paddle flow switch inside the device. To do this, follow the instructions in "Installing a cable grommet."

3 Installation

3.6 Earthing

Note that even water with a low salt content can be corrosive. To minimise the corrosive effect, BAYROL recommends the installation of a "sacrificial electrode" in the pumping system of the pool. Ask your specialist swimming pool dealer for details.



NOTE

When selecting components (e.g. steel ladders etc.), always take into account that corrosion may occur. It is essential to select components which are suitable for use with salt water. BAYROL expressly refuses to accept liability for damage caused by corrosion!

3.7 Setting the water

3.7.1 Water chemistry

The table below lists the recommended main water values:

	Salt content (g/l)	pH value (pH)	Free chlorine content (mg/l or ppm)	Alkalinity/TAC (ppm)	Total hardness/TH (ppm)	Stabiliser/ isocyanuric acid (ppm)
Permissible values	1.5 - 100 g/l	7.0 - 7.5	0.5 - 2	80 - 120	100 - 500 (5.6 - 28 °dH)	25 - 60
Recommended values	3,3 – 4.5	7.2	0.6 - 1.2	90 - 110	100 - 300	approx. 30
To increase	Add salt	Add pH-Plus	Increase output of the cell; trigger Boost function; add chlorine manually	Add Alca-Plus	Add calcium chloride	Add cyanuric acid
To reduce	Partly drain pool and refill	Add pH-Minus	Decrease output of the cell	Add pH-Minus	Use a water softening plant	Partly drain pool and refill
Test during the bathing season	after backwashing (after refilling the pool)	weekly	weekly	monthly	monthly	monthly

When filling your pool from scratch, it should be noted that initial adjustment of the water can take some time. You may need to add water care products (e.g. pH-Minus) several times within the first 1 - 2 weeks.

Please consult your specialist swimming pool dealer if you are uncertain about the adjustment of the water quality in your pool.

Please ensure that the values given in the table are complied with beyond the end of the bathing season by regularly testing and if necessary correcting the water quality. The required test sets and the respective water care products are available from your specialist BAYROL swimming pool dealer.



TIP

Check the cyanuric acid content when you check the salt content. These two values usually drop at the same time.

3 Installation

3.7.2 The right salt

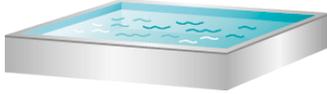
Use only salt intended for use in swimming pools with salt electrolysis systems. Such salt has a high level of purity and is usually sold by specialist swimming pool dealers in 25 kg sacks.

Never use rock salts, de-icing salts, salts with sodium ferrocyanide, salts with separating agents or iodised salts!

The Salt Relax is suitable for operation with sea water.

3.7.3 Calculating the pool volume

Rectangular pools



Length (m) x width (m) x depth* (m) = pool volume (m³)

Oval pools



Longest length (m) x greatest width (m) x depth* (m) x 0.89 = pool volume (m³)

Round pools



Diameter (m) x diameter (m) x depth* (m) x 0.79 = pool volume (m³)

Longest length (m) x greatest width (m) x depth* (m) x 0.85 = pool volume (m³)

*Depth = average depth of the water

Figure-8 pools



3.7.4 Calculating the amount of salt to add

The amount of salt to be added to a freshly filled pool (salt-free water) is calculated with the following formula:

$$\text{Desired salt content (g/l) x pool volume (m}^3\text{) = amount of salt to be added (kg)}$$

The amount to be added to water which already contains salt is calculated with the following formula:

$$[\text{Desired salt content (g/l) - existing salt content (g/l)}] \text{ x pool volume (m}^3\text{) = amount of salt to be added (kg)}$$

3.8 Adding the salt to the pool

Before adding the salt:

Check that the pH value of the water is within the optimum range (pH 7 to pH 7.4).

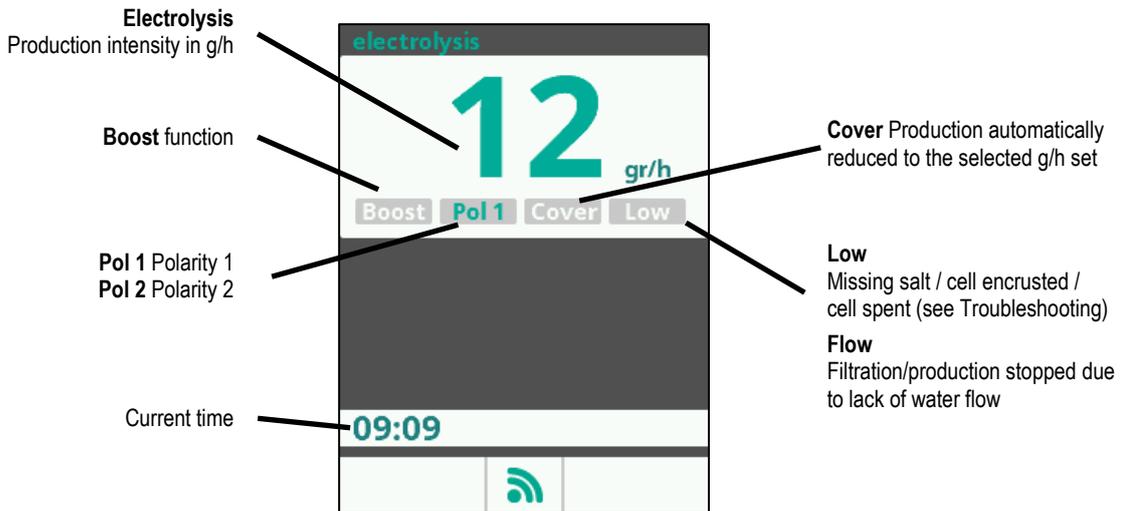
Also check that the water in the pool is free from metals and of perfect quality. If necessary, carry out shock chlorination of the water. It is best to do this when the water is at a temperature of at least 20°C.

Adding the salt:

Switch the circulating pump on and open all inlets and outlets to ensure the greatest possible flow of water through the pool. If fitted, also activate the bottom drain. Pour the salt directly into the pool. Do this at a point where there is high flow, e.g. at the inlet jets. Ideally, swirl the salt around with a long-handled broom to accelerate the dissolving process. After adding the salt, run a filtration process continuously for at least 24 hours to ensure that the salt is fully dissolved and evenly distributed.

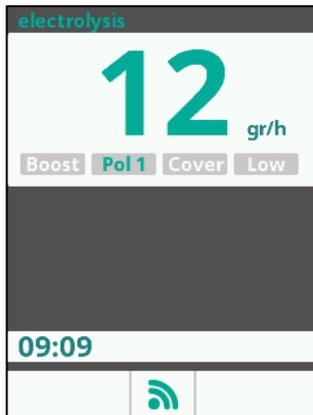
4 Operating the Salt Relax

4.1 Main screen

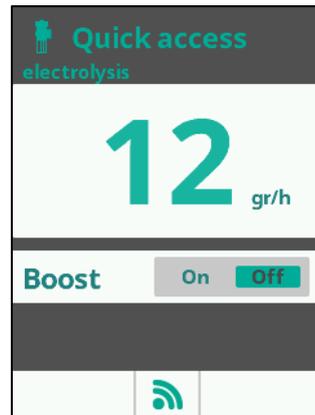


4.2 Quick access to salt electrolysis

The Quick Access function allows rapid activation of the Boost function and easy adjustment of the output of the chlorine production cell.



Hold key pressed for at least 3 seconds.



Electrolysis output

Set the output (large flashing g/h value) with \oplus / \ominus keys of your Salt Relax. Adjust the system output to suit the requirements of your pool. This setting corresponds to the setting in the Electrolysis menu.

Boost

Activate the Boost function by using \downarrow / \uparrow to select On and confirming with OK . The Boost function increases chlorine production to the maximum value (16 gr/h) for the following 24 hours of filtration time, after which it automatically returns to the programmed filtration cycle. In most cases, this is sufficient to bridge times of increased chlorine requirement. If Salt Relax is controlled via the external timer, please ensure that the timer runs continuously for 24 hours.



Note

If your pool needs a chlorine shock, we recommend that you administer it by adding chlorine manually.

4.3 The main menu

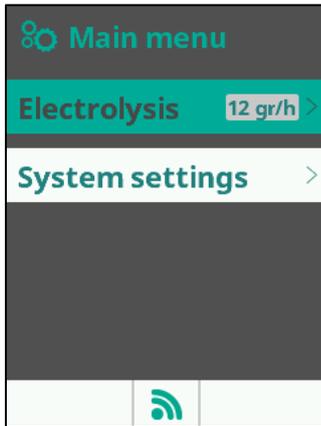


NOTE!

BAYROL generally recommends to choose the filter times as long as possible. Long filter runtimes allow a high filtering performance of the sand filter and allow sufficient production of the disinfectant.

For short filters maturities inevitably lead to problems with the water disinfection (eg algae, etc.).

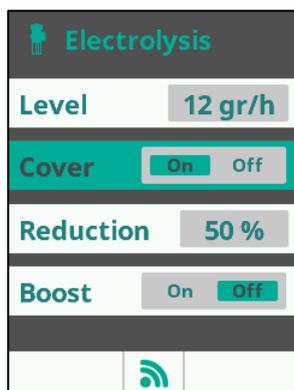
4.3.1 Electrolysis



The menu Electrolysis is used to make all settings relating to chlorine production.

The Electrolysis bar displays the set production capacity in g/h.

To set, select Electrolysis with / and confirm with .



Output (Level)

Set the output of the chlorine production cell with / . Adjust the production capacity of the system to suit the requirements of your pool.

This setting corresponds to the setting in the menu Quick access.

Cover

Using / , select whether you wish to reduce the production capacity with the pool cover closed. The precondition for use of this function is a closing signal when the cover is closed. It is connected as described in the chapter Connecting terminals.

When this function is activated, you can set the option of reducing production if the cover is closed. The %age value adjustable with / is based on the set production capacity.

Boost function

Activate the Boost function by using / to select "On" and confirming with .

The Boost function increases chlorine production to the maximum value (16 gr/h) for 24 hours, after which it automatically returns to the programmed filtration cycle. In most cases, this is sufficient to bridge times of increased chlorine requirement.



Note

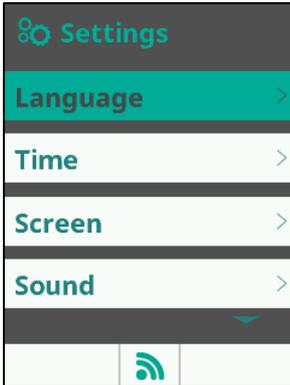
If your pool needs a chlorine shock, we recommend that you administer it by adding chlorine manually.

Settings

Please refer to the next chapter

4.4 Settings menu

4.4.1 Language



Set the desired menu language.

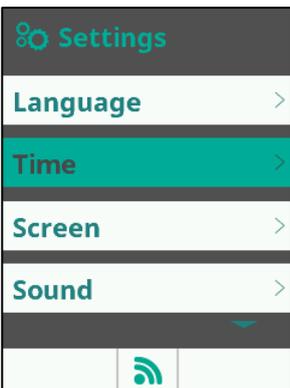
To set, select the language with / and confirm with



Language

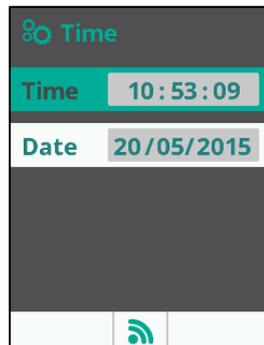
Select the desired language with / and confirm with

4.4.2 Time



Setting for the system time.

To set, select Time with / and confirm with



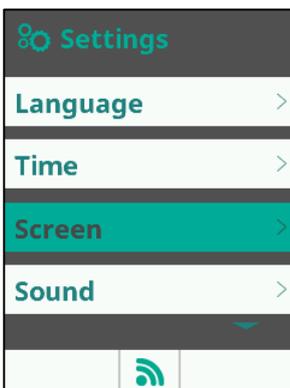
Time

Press or to activate entry of the time. Use and to set the hour. opens the input window for the minutes, which you can set using and . opens the input window for seconds, which you can set using and . Press to confirm the entered time.

Date

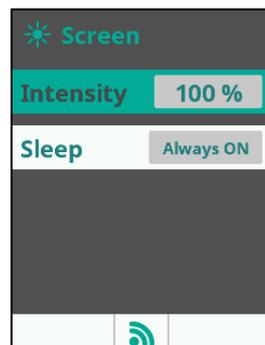
Press or to activate entry of the date. Use and to set the day. opens the input window for the month, which you can set using and . opens the input window for the year, which you can set using and . Press to confirm the entered date.

4.4.3 Screen



Setting the screen brightness and switch-off time.

To set, select Screen with / and confirm with



Intensity

To change the brightness of the display, select the desired value with and .

Sleep (screensaver)

Using and , select the time after which the display switches off if no key is pressed.

4.4.4 Sound



Defines the events which trigger an acoustic signal.

To set, select Sound with / and confirm with .



Keyboard

To activate a confirmation tone when a key is pressed, select On using and .

Pop-ups

To activate the acoustic signal when pop-up messages are displayed, select On using and .

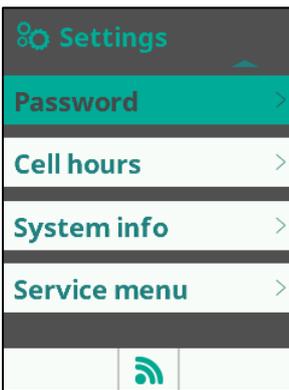
Alerts

To activate the acoustic signal when alerts are issued, select On using and .

Filtration

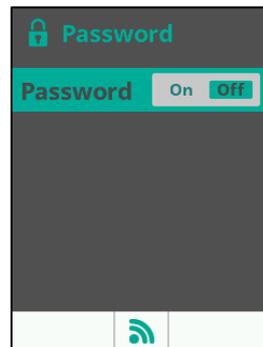
To activate the acoustic signal at the start of a filtration cycle, select On using and .

4.4.5 Password



This setting defines whether access to the menus from the basic screen is password-protected.

To set, select Password with / and confirm with .



Password

To activate password protection, select On using and . You will be prompted to enter a 5-key password. Enter a key combination of your choice. You will be asked to enter this password each time you want to access the menu level from the main screen. Remember your password.

To deactivate password protection, select Off using and , and confirm with . If you should forget your password, the Service password can be used to override your forgotten password. In this way, you can return to the menu item Password and deactivate it by selecting Off. Then press On, and you will be asked to set a new password.

4.4.6 Cell hours

Time info displays the switch-on time of the chlorine production cell in hours/minutes/seconds.

4.4.7 System info

System info provides detailed information on the screen used in the system and the power unit. This information is only relevant for servicing of the devices.

4.4.8 Service menu

The Service menu and all settings which can be made therein are reserved exclusively for the use of specialist service technicians.

4.5 Service menu



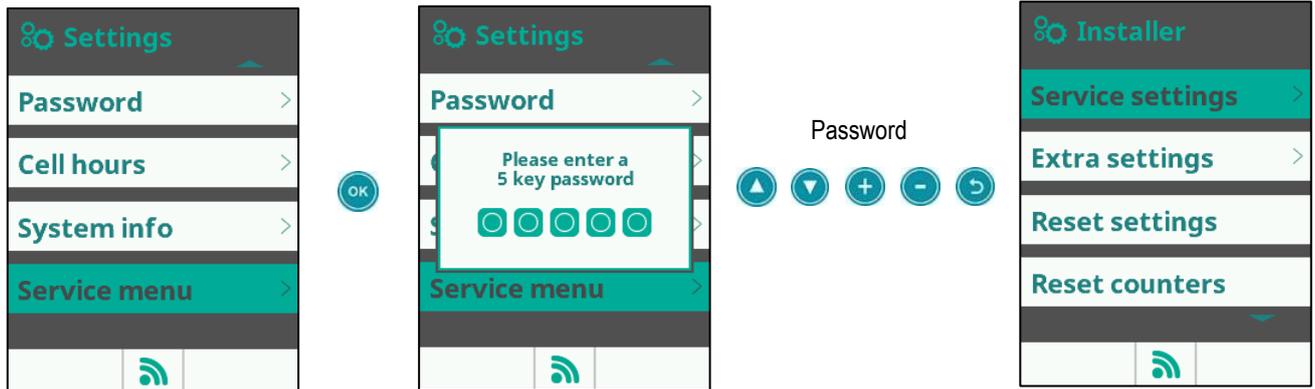
Necessary qualification:

The Service menu and all settings made therein are reserved exclusively for the use of specialist service technicians/installation engineers. Improper or incorrect settings will result in the loss of warranty!

This menu allows the following actions:

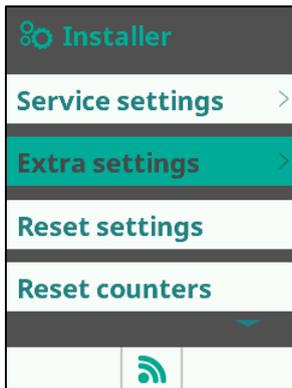
- Fine adjustment of the Salt Relax
- Configuration of the reactions of the Salt Relax
- Resetting of the operating hour counter

Access to the Service menu (for specialist service technicians/installation engineers only):



4 Operating the Salt Relax

4.5.1 Service settings



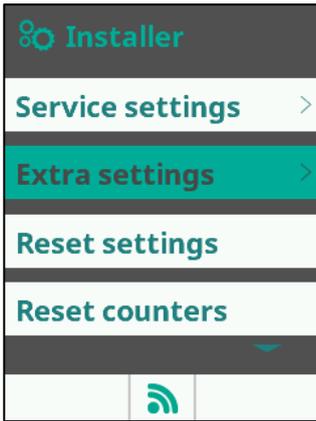
Setting of basic functions.

To access, select Service settings with / and confirm with

When you exit the menu, confirm your settings again with

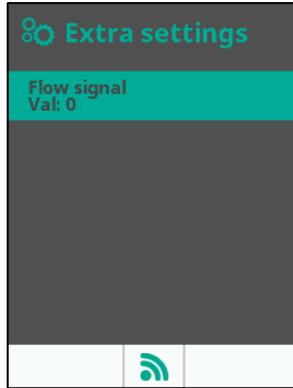
Service settings	Range	Unit	Default	Description
3 Flow mode select Val: 0	0 - 1	-	1	Controls the reaction of the Salt Relax when the gas flow switch or (if installed) paddle flow switch reports no flow. Setting 0: FL1 flow switch only stops the chlorine production cell. Setting 1: FL1 flow switch also stops the connected pumps pH and where applicable Disinfection and Heating. Time-controlled functions (e.g. Lighting) are not switched off.
5 Elect pol 1 time Val: 30	0...999	Min.	300	Defines the duration of the cycle for which the chlorine production cell is switched on to polarity 1. Although it is possible to set polarity 1 and 2 separately, we recommend that you set the cycles for both polarities to the same value. Attention: Setting a time shorter than 200 minutes drastically shortens the service life and voids the warranty on the chlorine production cell.
6 Elect pol 2 time Val: 30	0...999	Min.	300	Defines the duration of the cycle for which the chlorine production cell is switched on to polarity 2. Although it is possible to set polarity 1 and 2 separately, we recommend that you set the cycles for both polarities to the same value. Attention: Setting a time shorter than 200 minutes drastically shortens the service life and voids the warranty on the chlorine production cell.
7 Elect dead time Val: 0	0...5	Min.	1	Defines the duration of the dead time (cell is switched off, display of the output switches to 0) when the polarity of the chlorine production cell is changed. A time of at least 1 minute must be set here!

4.5.2 Extra settings



Activation of the flow signal FL1 is defined in Extra settings.

To switch over, select Extra settings with / and confirm with .



Setting of the flow signal:

Setting 0: The signal FL1 is only activated by the gas sensor of the cell (the external flow switch is deactivated).

Setting 1: Signal FL1 is never activated.

Setting 2: Signal FL1 is only activated by the external flow switch (the gas sensor of the cell is deactivated).

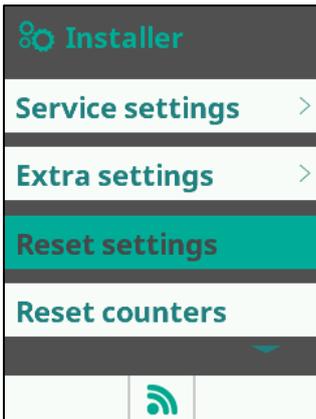
Setting 3: Signal FL1 is activated if either the gas flow sensor of the cell OR the external flow switch trips.

If you attach an external flow switch (e.g. the paddle flow switch supplied) to the screw terminals (see Connecting terminals), please set the value 3 (default setting).

Never set values greater than 3 in this menu.

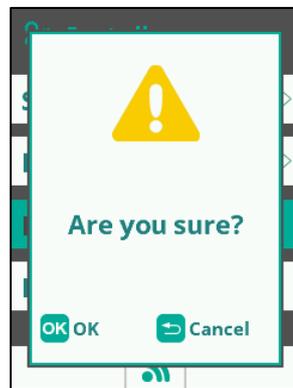
If necessary, change the setting with / and confirm with .

4.5.3 Reset settings



In Reset settings, all settings made can be reset to the as-delivered status.

To do this, select Reset settings with / and confirm with .

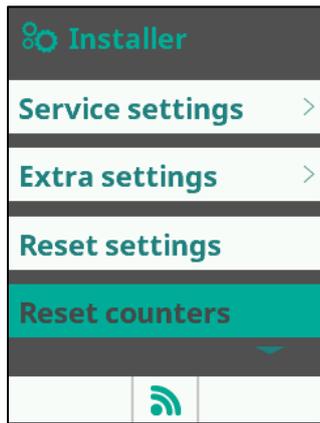


If you are sure you wish to restore the factory settings, answer the confirmation prompt with .

If you wish to retain the settings, exit the confirmation prompt with .

5 Description of the device

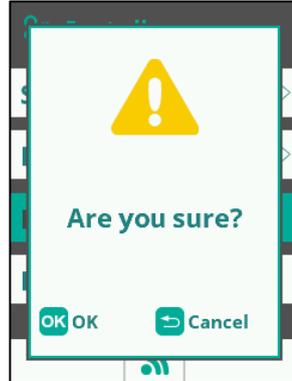
4.5.4 Reset counters



In Reset counters, the operating hour counter of the chlorine production cell can be reset.

To access the settings, select Reset counters with / and confirm with

In the next screen, select Electrolysis with / and confirm with



If you are sure you wish to restore the factory settings, answer the confirmation prompt with

If you wish to retain the settings, exit the confirmation prompt with

Connection

The menu item Connection is without function.

5 Description of the device



Necessary qualification:

Only specialists with both in-depth knowledge of swimming pool construction and in-depth knowledge of the installation of electrical and electronic devices may open the Salt Relax or perform the connection work described below!



Danger caused by electrical current

The Salt Relax is live as soon as voltage is applied to the power input. The chlorine production cell or additional functions may be switched on or switched over. Contact with live components can lead to an electric shock.

This may result in serious or even fatal injury and damage to material assets, and the following therefore apply:

- All such tasks must be carried out exclusively by adequately trained and experienced personnel!
- The device must always be de-energised before performing installation and maintenance work on it!
- Secure the device against being switched on while work is being performed on it!
- Additional modules must be installed/removed in de-energised state!
- Cables must also be connected in de-energised state!
- A safety feature which is independent of the controller should always be present!
- Where necessary, password protection for the main menu must be activated!
- The relevant country-specific safety regulations must be complied with!
- All safety features and protective devices must be refitted or rendered functional again immediately after completing work!
- Failure to follow the safety instructions can cause the device to malfunction, may lead to the risk of fatal injury and renders the warranty invalid!



ATTENTION

To prevent electrostatic discharge damaging the sensitive electronic components when you are performing work on the opened device

- If possible, earth yourself when working on the opened device.
- Avoid touching the electronic components unnecessarily.

5 Description of the device

5.1 Connections and fuses on the Salt Relax



- 1 Cable grommet for temperature sensor
- 2 not available
- 3 not available
- 4 Connection for gas flow sensor (thin cable)
- 5 Connection for chlorine production cell (thick cable)
- 6 On/Off switch
- 7 Cable for power supply 230 V/60 Hz



- 1 not available
- 2 Fuse 3.15 A / slow-blow for power and control unit

5.2 Removing the housing front cover



ATTENTION

Disconnect the Salt Relax from the power supply before opening it. It is not enough to simply switch the device off at the On/Off switch. Secure the device against being switched on unintentionally.

Proceed as follows to open the housing cover:

- Carefully push the two lower clips downwards and the two upper clips upwards and remove them.
- Carefully pull the housing front cover forwards until it is about 15 cm from the device. Carefully pull the connecting cable between main board and display out of the connector on the main board.
- Now you can carefully pull the cover further forwards.



Fitting the housing front cover

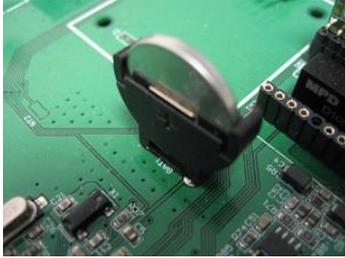
Carry out the steps described above in reverse order to fit the front cover. Make sure that all cables of connected external devices are routed cleanly behind the front housing cover. Check that the front housing cover is securely seated in the seal before sliding on the clips. It must be possible to slide the clips on easily.

5 Description of the device

5.3 Replacing the battery

Should you discover that settings, e.g. the time, are no longer correct when you switch the device on after leaving it switched off (de-energised) for some time, the battery may be empty.

In this case, replace the battery (lithium battery, Type CR2032). It is essential to observe the correct polarity (+ left, - right) when inserting the new battery.



5.4 Installing a cable grommet

An additional cable feed-through must be created in order to connect an external device (e.g. lighting) or an external sensor (e.g. paddle flow switch) to the Salt Relax. There are push-outs on the bottom and sides of the front housing cover of the Salt Relax for this purpose.

Proceed as follows:

- Select the push-out closest to the connecting terminal you wish to use.
- Press from the inside against the centre of the push-out until you can see the round shape on the outside of the housing. Now press from the outside against the centre of the circle. Repeat this step until the circular push-out is detached, leaving a round hole. If the hole is not perfectly circular, you can round it off carefully using a suitable file.
- Now place the cable gland in the hole from the outside and lock it in position from the inside with the cap nut.



Press from the inside



Press from the outside



Opening



Grommet from the outside



Cap nut inside

Proceed as follows to feed a cable through the cable grommet:

- Unscrew the nut of the cable gland until it is positioned on the very end of the thread. Alternatively, you can remove it completely.
- Remove the plug, leaving the seal in the screw fitting.
- Feed the cable through the nut and the cable gland into the clamping cavity. Make sure there is an adequate length of cable on the inside of the housing cover.
- Connect the cable as shown in the connection diagram.
- Tighten the nut (without exerting excessive force) to achieve reliable sealing.

6 Troubleshooting and fault elimination

Nature of the fault	Possible cause	Remedial action
Salt Relax controller		
The display of the Salt Relax remains dark	Device is not supplied with power	Insert the mains plug.
	Device is switched off (On/Off switch does not light up)	Switch the device on
	Cable connection between display and main board faulty, e.g. connector not plugged in	Check the connection
The message FLOW appears on the display	Plug-in/ cable connection is loose	Check the plug-in connection of the gas flow switch and, if installed, check that the paddle flow switch is correctly connected
	Gas flow switch crusted over	Clean the gas flow switch in the upper area of the cell.
	Paddle flow switch crusted over	Clean the paddle flow switch.
	Air in the gas flow switch	Check whether there is air in the pipes.
Chlorine production / cell		
Low indicator lights up in the main view of the display	Water in the pool is very cold	Check the water temperature: If the water is very cold, the display is normal and can be ignored. Less chlorine is produced, but very little disinfection agent is required for cold water.
	Low salt content in the pool	Check the salt concentration in the water and if necessary, add salt (3,3 - 4 g NaCl/l)
	High amount of limescale on the cell plates	Clean the cell plates of the chlorine production cell as described in the chapter Maintenance. At the same time, clean the paddle flow switch.
	Chlorine production cell is spent (very few or no gas bubbles on the cell blades)	Check whether the chlorine production cell is spent and replace it with a new one if necessary. Note: When "Low" is displayed for the first time, indicating that the cell is spent, the cell will operate for approx. 3 more weeks before it ceases to function
Excess of chlorine in the water	Output of the chlorine production cell is set too high	Reduce the production intensity.
	In the case of manual chlorine dosing: overdosage (e.g. through manual shock chlorination)	Allow chlorine value to "sink" to suitable level
The level of free chlorine in the pool does not reach 0.8 ppm	Filtration runtime too short	Increase filtration hours
	Output of the chlorine production cell is set too low	Increase the intensity of electrolysis
	Salt concentration too low	Check the salt concentration in the water and if necessary, add salt (3,3 - 4 g NaCl/l)
	Isocyanuric acid content too high	Check the level of isocyanuric acid in the water (30-50 ppm) – if it is too high, dilute the water by backwashing the filter and then adding fresh water (check/adjust salt content)
	Measurement of free chlorine content faulty	Check whether the reagent of your measuring equipment has expired
	Unusually high number of people using the pool or increase in the water temperature	Trigger the Boost function. If the water temperature remains high for an extended period or a large number of people are using the pool, increase the output of the chlorine production cell.
The electrolysis system does not achieve maximum intensity	The pH value of the water is higher than 7.8	Adjust the pH value of the water to approx. pH 7.2
	Salt concentration too low	Check the salt concentration in the water and if necessary, add salt (3,3 - 4 g NaCl/l)
	Chlorine production cell contaminated or crusted over.	Clean the cell plates of the chlorine production cell as described in the chapter Maintenance. At the same time, clean the paddle flow switch.
	Chlorine production cell is spent (very few or no bubbles on the cell blades)	Check whether the chlorine production cell is spent and replace it with a new one if necessary.

7 Maintenance

Nature of the fault	Possible cause	Remedial action
The titanium cell crusts over within one month	Very hard water and increased pH value and total hardness	Adjust the pH and total hardness
	Chlorine production cell does not clean itself, no polarity reversal	Check whether automatic polarity reversal is functioning (default setting: change pol 1 to pol 2 every 300 min)
	Polarity reversal too long for hardness of the water	Accelerate polarity reversal (automatic self-cleaning function) ATTENTION: If you accelerate the polarity change (to 200 minutes or less), the life of the cell will be reduced and the warranty on the cell will be lost. Have this setting performed by a specialist service technician/installation engineer.
Swimming pool		
Oxidation on metallic parts of the swimming pool	The oxidised elements and/or the swimming pool are not adequately earthed	Have the earthing checked by a specialist.
	The oxidised elements are not made from stainless steel of an appropriate quality.	Use elements made from stainless steel of an appropriate quality.

7 Maintenance

The maintenance schedule lists only the minimum maintenance requirement. The frequency at which maintenance is required depends on the intensity of use.

The maintenance intervals are defined by the relevant, country-specific regulations! This means that maintenance intervals may be considerably shorter than those given here. The relevant country-specific regulations and standards must be complied with.



NOTE!

Only the manufacturer's spare parts and sensors may be used. Failure to observe this will result in loss of warranty.

7.1 Cell cleaning

The Salt Relax is equipped with a programmable automatic cell cleaning function. This function is based on cyclical reversal of the polarity of the chlorine production cell. Reversing the polarity allows limescale crystals deposited on one side of the cell plates in operation to be removed automatically. The procedure for setting this function is described in the menu "Service settings."

You can shorten the polarity cycles if you find that limescale deposits tend to form in your chlorine production cell. However, please note that a setting of 200 minutes or less will greatly reduce the typical life of the chlorine production cell and void the warranty.

If, on the other hand, you find that your chlorine production cell remains clean even after extended periods of operation, you can extend the polarity cycles, which increases the service life of the chlorine production cell.

If limescale deposits nevertheless form on the cell blades, you can remove the cell from the cell holder (it is imperative to close the bypass valves before doing this. Caution! Water may emerge) and immerse it in a bath of BAYROL Decalcit. Clean the paddle flow switch at the same time, as it may also have limescale deposits or soiling.



NOTE!

It is imperative to remove the cell from the cleaning bath as soon as the deposits have been dissolved. Leaving the cell in the solution for longer will result in damage which is not covered by the warranty!

Never try to remove the deposits mechanically (e.g. with a brush or metal instruments). This may result in irreparable damage to the cell.

7.2 General maintenance

- Check the water values as listed in the table in the chapter Water chemistry.
- Perform regular backwashing to maintain filter performance. Check the salt content after adding fresh water. If necessary, add salt to compensate for the loss due to backwashing.
- Clean the skimmer/overflow channel of your pool regularly.
- Use your floor cleaner as usual.
- From time to time, carry out a visual inspection of the system. In particular, examine all components for leakage and check the condition of the chlorine production cell.

7.3 Cleaning

If necessary, clean the surface of the device with a soft, lint-free cloth. You can moisten it with a little water if required. Never use aggressive cleaning agents.

8 Taking out of service for the winter

No special measures are required if you are taking the equipment out of operation for a short period (e.g. a few days).

If operation is to be interrupted for several weeks, for example during the winter, the following work must be performed:

- Protect circulation lines and the bypass against freezing by draining off the water.
- Disconnect the device from the mains.

To put the unit back into operation after the winter, proceed as for initial installation.

In addition, all components must be inspected for correct functioning.

All dismantled parts (electrodes, dosing hoses) must be refitted in their correct positions.

Check the settings of the Salt Relax. Follow the procedure for initial commissioning and calibrate the electrodes as described.

9 Decommissioning

Before disposing of the device at the end of its service life, it must be thoroughly rinsed and drained. The device was manufactured in accordance with the ROHS Directive and the Electrical and Electronic Equipment Act. It must not be disposed of with household waste.

Hand the device in to a suitable and designated collection facility.

10 Technical Data

Display	2.8" TFT colour display
Operation	Software-based operation via 6 keys
Electronics	32bit microprocessor
Operational safety	Password protection for Service level
Language selection	German, English, French, Spanish, Italian
Salt content	3,3 g/l – 100 g/l
Recommended pool size	Up to 70m ³ (moderate climate)
Adjustment of cell output	0 – 16 g/h, adjustable in increments of 1 g steps
Reduced production with pool cover closed	Yes, reduction freely adjustable via external signal from the pool cover
Increased production	Boost function
Automatic cell cleaning	Polarity reversal, cycles adjustable from 1 to 24 hours
Operating hour counter	Yes, can be viewed by the user
Flow, electrolysis cell	4 m ³ – 30 m ³
Flow monitoring	Gas sensor in the electrolysis cell (Paddle switch optionally additionally used)
Dimensions, electrolysis cell holder	310 x 63 mm
Cable, electrolysis cell	1.5 m
Max. pressure, electrolysis cell	3.5 bar
Cell service life	Typical 5,000 hours
Cell material	Titanium, coated with ruthenium/iridium
Permissible water temperature	1 °C – 45 °C
Alerts	<ul style="list-style-type: none"> • Too little salt in the water • No flow through electrolysis cell
Electrical connection	110 – 240 V~, 50/60 Hz
Power consumption	Max. 120 W
Protection class, controller	IP 54
Weight, controller	approx. 2.8 kg
Dimensions, controller	237 x 300 x 152 mm (W x H x D)

Transport damage

Our devices and spare parts are always transported at user's risk. Prior to accepting the goods, the user must check that they are in perfect condition. Transport damage must be entered on the forwarding agent's consignment note.

BAYROL accepts no liability for transport damage.

11 EC Declaration of Conformity

EC Declaration of Conformity

We,

**Bayrol Deutschland GmbH
Robert-Koch-Str. 4
82152 Planegg/Steinkirchen
Germany**

, hereby declare that the models of the product named in the following that we bring into circulation meet the requirements of the indicated EC directive.

This declaration will lose its validity in the event of uncoordinated modifications to the product.

Product model: **Salt Relax**

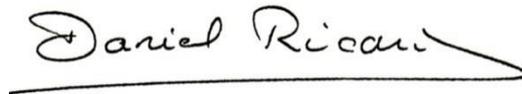
Brand: **BAYROL**

Series no.: **See type plate**

EC directives: **EC - Low Voltage Directive (2006/95/EC)
EC - EMC Directive (2004/108/EC)**

Harmonizing standards used: **UNE-EN 60335-1: 2002 + A1: 2004 + A11: 2004 + A1: 2005 + CORR: 2007 + ERR: 2005 + A2: 2006 + A12: 2006 + A2: 2007 + A13: 2008 + CORR2010 + CORR2: 2010 + A15: 2011 (PARTIAL)
UNE-EN 60335-2-108: 2008
UNE-EN 61000-6-1: 2007
UNE-EN 61000-6-3: 2007
UNE-EN 61000-3-2: 2006 + A1: 2010 + A2: 2010
UNE-EN 61000-3-3:2009
UNE-EN 55014-1: 2008 + ERR: 2009 + / A1 / 2009 + A2: 2012
UNE-EN 55014-2: 1998 / A1:2002 / A2: 2009
EN 301489-1 v1 8.1 (2008-02)**

Date, manufacturer signature: **01.03.2015,**



Signer's information: **Managing Director Bayrol Group**