

Automatic^{SALT}



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1 Introduction

Congratulations on the purchase of your Automatic^{SALT}. You have chosen the best thing that can happen to your saltwater pool.



Please be sure to read the "Safety Instructions" supplement!

IMPORTANT: The Automatic^{SALT} must be installed by an experienced pool dealer to ensure proper functioning!

– Please read these instructions carefully and make sure that all necessary parts for installation as well as all required tools are at hand.

- Failure to comply with these instructions may result in health and/or equipment and installation hazards!
- Only use BAYROL water care products! The use of other products will invalidate the warranty!
- The housing of the Automatic^{SALT} does not have to be opened for installation.
- Be sure to observe all general and special hazard warnings when handling liquid water care products.
- Also observe all generally applicable safety regulations. Wear protective clothing if necessary.

2 Scope of delivery

1. Automatic^{SALT}
2. Pressure hose
3. Suction hose
4. Temperature sensor
5. Injection valve
6. Sensor holder, 2 pcs
7. Feed filter
8. Wall mounting set
9. Canister lid with hole for suction hose
10. pH sensor
11. Redox sensor
12. Electrolysis cell
13. Smart&Easy Connector
14. Paddle-Flow-Switch
15. Cleaning solution for sensors
16. Redox buffer solution 465 mV
17. pH 7 buffer solution



3 Water values

Preparation of the pool water

To ensure proper functioning of the Automatic^{SALT}, it is essential to check the following values of the pool water and to adjust them accordingly before starting the operation.

RECOMMENDATION

Start adjusting the water values as early as possible, as it may take a longer time to reach the mentioned values, depending on the pool volume.

If shock chlorination of your pool water is necessary, this should be carried out in advance.

In addition, take the Redox-Sensor out of the transport container as early as possible and place it in a glass of pool water.

This gives the electrode the opportunity to get used to the pool water and helps to shorten the run-in period of the Redox-Sensor.

3 Water values

The following water values must be set step by step in the pool water before the Automatic^{SALT} is put into operation:

	Step 1	Step 2	Step 3	Step 4	Step 5
	Salt level (g/l)	Alkalinity/TAC (mg/l)	pH value (pH)	Stabilizer (mg/l)	Chlorine DPD1 (mg/l)
Tolerable values	1.5 – 40	Min. 80	7.0 – 7.4	30 – 50	1.2 – 3.5
				Not needed	0.5 – 1.5
Recommended values	1.5 – 5.0	Min. 80	7.2	ca. 40	1.5 – 3.0
				Not needed	0.6 – 1.2
To increase	Add salt	Add BAYROL Alca-Plus®	Add pH-Plus	Add BAYROL Stabichloran®	Boost/ Add chlorine manually/ Increase production rate
To lower	Drain pool partly and refill with fresh water	–	Add pH-Minus Liquid Anti Calc	Drain pool partly and refill with fresh water	Lower production rate of cell
Test during the season	After refilling the pool and after the filter backwash	monthly	weekly	monthly	weekly

Outdoor pool Indoor pool

To save time when setting the values, you can carry out steps 1 – 4 simultaneously.
Make sure you start with step 5 not before the pH value is set.
In outdoor pools additionally the stabilizer needs to be added before dosing chlorine.
Set the desired chlorine value for operation already now.
It is essential that this value is set correctly at the time of commissioning the Automatic^{SALT}.

RECOMMENDATION

To effectively prevent possible calcification of the chlorine generation cell caused by the system, it is recommended to add BAYROL Calcinex® (300 ml/10 m³) to the pool water. The risk of calcification can be further reduced by using pH-Minus Liquid Anti Calc! The highly recommended addition of Calcinex® (see below) can be carried out at any time.

► Please note

The consistent use of Calcinex® and pH-Minus Liquid Anti Calc can extend the lifetime of the cell!

Please follow the general instructions below when carrying out the adjustment of the values in the pool water:

- Always determine the respective values of the pool water before starting to adjust the value.
- Make sure that the pool water is free of dissolved metals. Make sure that this is also the case for the entire operating time of the pool.
- Calculate the amount of water treatment product required to achieve the desired value before adding it. Consult the dosing instructions of the respective water care product.
- Always add the respective products to the pool water gradually and always with the circulation running. Open all inlets and outlets including the floor drain.

- Find a place in the pool with the best possible flow for the addition, e.g. from the inlet nozzles or directly into the skimmer. This way you will achieve a complete dissolution of the added water care products and an even distribution. Let the circulation run for 1 hours even after the last water value has been reached to ensure complete mixing.
- Occasional measurements during the addition of the respective water care products can help to prevent overdosing.

Additional instructions

For Step 1: Adding the salt

Add the salt granules directly to the pool. To do this, find a place in the pool where there is high flow, e.g. at the inlet jets. It is best to additionally swirl the salt with a brush with a long handle to accelerate the dissolving process.

IMPORTANT

Please use only salt approved for use in swimming pools! Choose salt in form of granules for faster solubility. The amount of salt required to achieve the desired salt content can easily be determined using the formulas given in the annex.

For Step 5: Manual adding of chlorine

When adding chlorine manually, please ensure that the chlorine is completely dissolved and mixed in the pool water before measuring the chlorine level manually.

IMPORTANT

For a quick increase of the chlorine level in the pool, Chloryte® is best suited. Alternatively, Chlorifix® can be used also.

3 Water values

Procedure for indoor pools

After the pH value is set please manually add chlorine (Chloryte®/Chlorifix®) until you can measure a chlorine value (DPD1) of 0.6 – 1.2 mg/l throughout the pool.

Procedure for outdoor pools

Before adding chlorine to the pool, the level of stabilizer must be set. The UV light of the sun causes a premature degradation of chlorine. To protect the chlorine from getting destroyed a stabilizer (BAYROL Stabichloran®) must be used.

Effect of the stabilizer

Part of the chlorine added to the pool or produced by the Automatic^{SALT} is immediately available as free chlorine for disinfecting the pool water. The rest is bound to the stabilizer and thereby safely protected.

IMPORTANT

It is most important that you keep the level of stabilizer stable throughout the season! Changing levels of stabilizer will cause incorrect readings for disinfection (mV) of your Automatic^{SALT}!

After the level of stabilizer is set you may start with manually adding chlorine.

► Please note

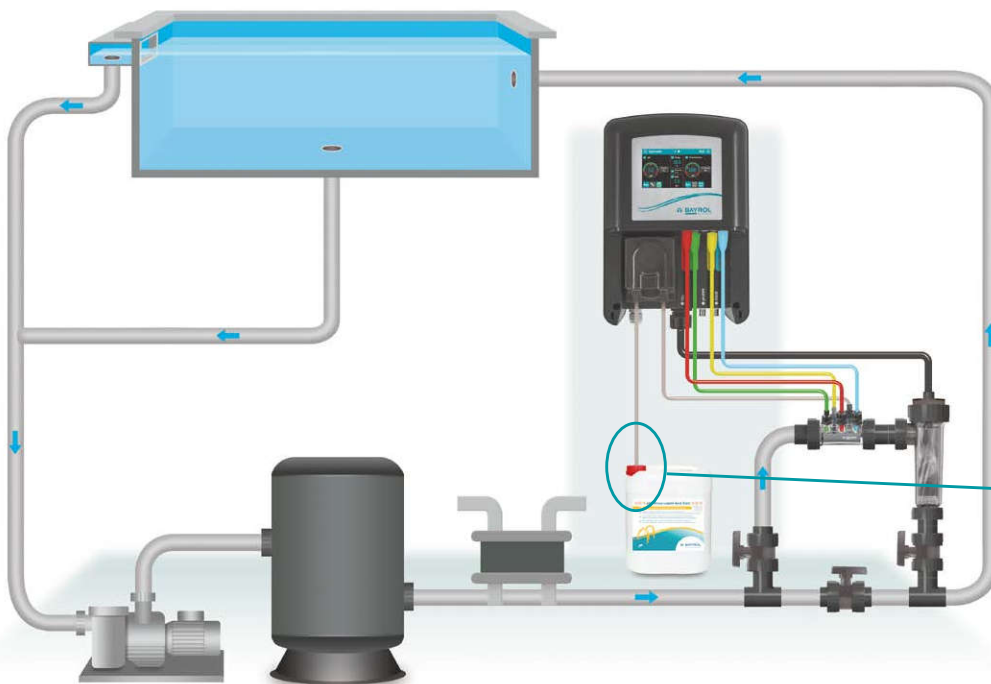
The manual chlorine measurement (e.g. with BAYROL Electronic Pool Tester or test kits) displays the sum of free and protected chlorine at the same time. The automatic determination of the disinfection capacity of your Automatic^{SALT} only takes the content of free chlorine into account. The protected part of the chlorine remains disregarded.

Therefore:

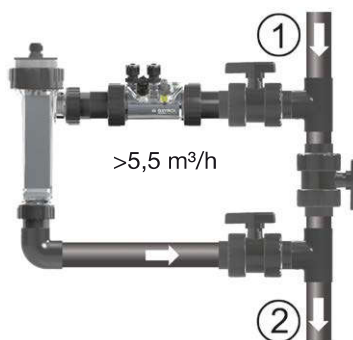
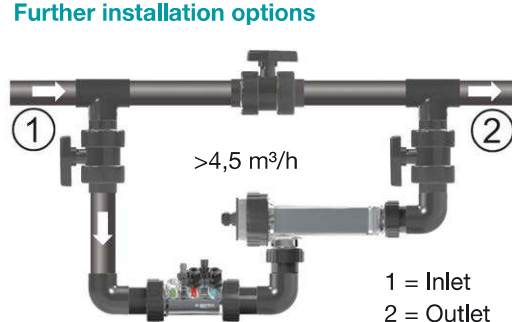
In the presence of stabilizer, the manually measured chlorine value (DPD1) needs to be higher than without stabilizer.

Please manually add chlorine (Chloryte®/Chlorifix®) until you can measure a chlorine value (DPD1) of 1.5 – 3.0 mg/l throughout the pool.

4 Installation scheme



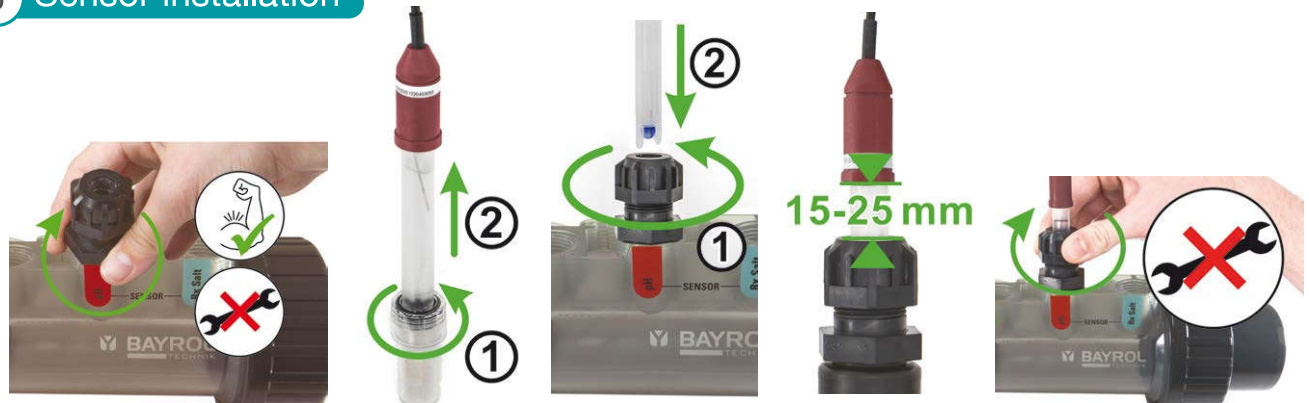
Further installation options



5 Injection valve installation



6 Sensor installation

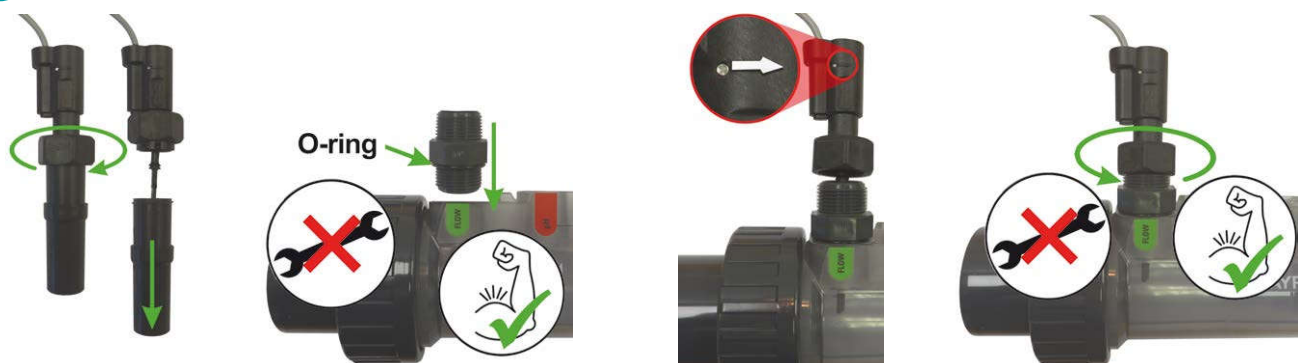


7 Connection of the hoses to the dosing pump



8 Installation Paddle-Flow-Switch

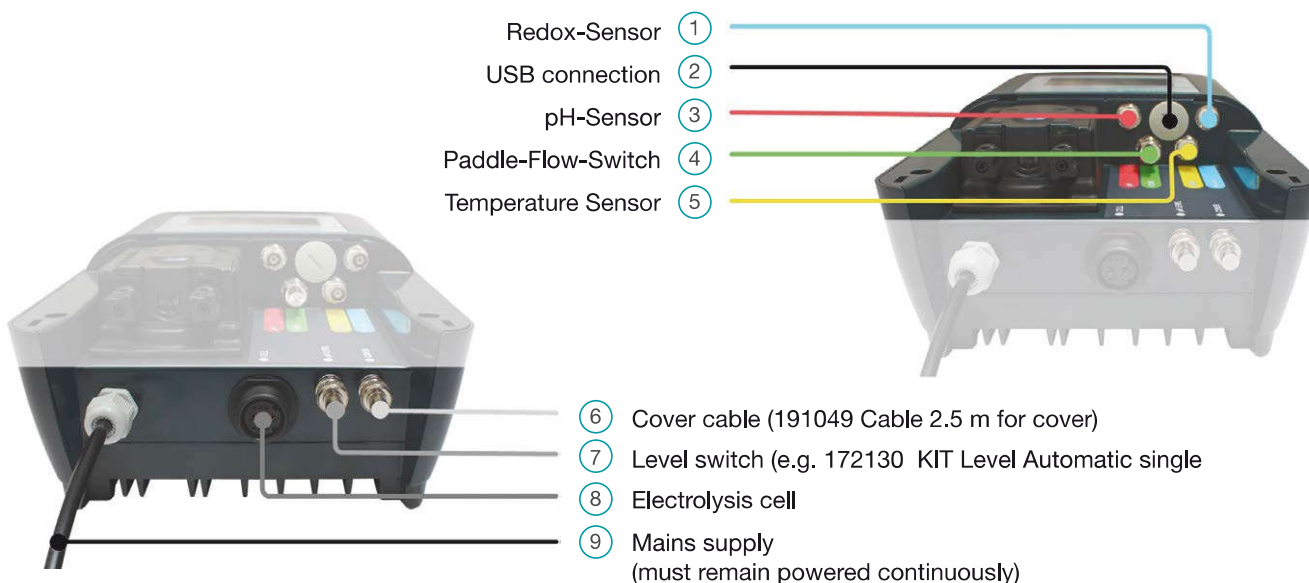
Please consider flow direction!



9 Electrical connections on the device

IMPORTANT

The controller must be grounded and the mains supply must be equipped with a residual current protection (30 mA).



10 Commissioning

As soon as the water values have been set and your unit with all its components has been installed, you can start commissioning your Automatic^{SALT}.

Switch on your Automatic^{SALT} and follow the instructions on the display. You will be taken through the initial Setup

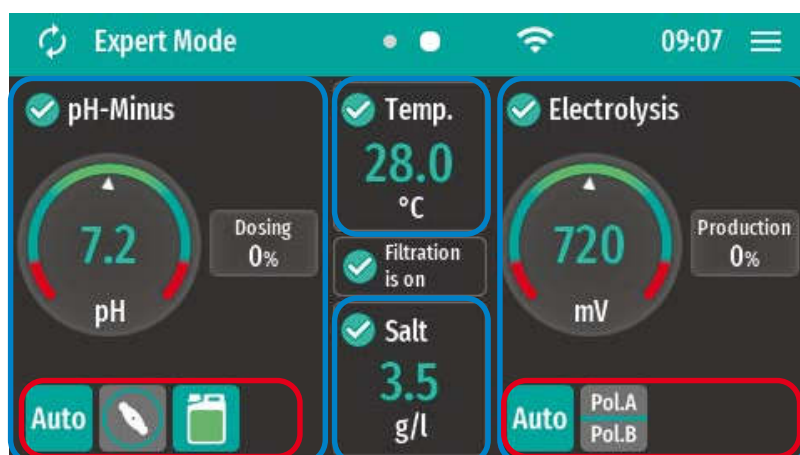
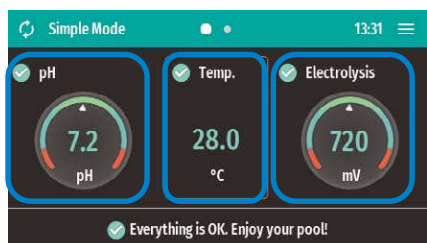
Wizard, which will help you with the essential settings.

Of course, you can also access all the settings you have made later and adjust them, if necessary.

As soon as the individual steps have been completed, the Automatic^{SALT} starts operation.

11 Operation

Tap in the blue frame areas to access the respective context menus.



Access codes

User code	Service code
1234	5678

Status icons pH

- Auto Operation mode
- Indicator dosing pump pH
- fill level of canister (red, if empty)

Status icons Electrolysis

- Auto Operation mode
- Pol.A Polarity
- Pol.B
- Cover open Cover
- Winter

11 Operation

Salt electrolysis operating mode

Auto	Auto The Automatic ^{SALT} automatically regulates the chlorine production depending on the desired redox value in the pool.
Auto plus+	Auto plus+ The Automatic ^{SALT} automatically regulates the chlorine production depending on the desired redox value in the pool. plus+: An additional chlorine production is triggered that in an adjustable way may overshoot the desired redox value in the pool. ATTENTION Since the use of this function allows higher redox values and therefore higher chlorine levels in the pool water a careful configuration of this function is mandatory. Please check the level of chlorine in your pool water manually from time to time and adjust the settings, if necessary. The pool may only be opened for bathing when it has been ensured that the chlorine level is on a normal level.
Const. mode	Constant Production In this operating mode, chlorine is produced at an adjustable production rate as long as the filter pump is switched on. In case the pool is equipped with a pool cover the production rate may be lowered in case of closed cover to meet the lower demand for disinfection.
Off	Off The automatic disinfection control and the chlorine production are switched off.

Salt electrolysis BOOST / time-limited production / pause

Boost	Boost Mode If as much chlorine as possible has to be produced in as short a time as possible (e.g. for high chlorination), the boost mode can be activated. In this mode, chlorine production is switched on at full power for 24, 48 or 72 hours. If the filter pump is switched off in the meantime and chlorine production is therefore not possible, the time stops and only starts again when the filter pump is switched on. After the boost time has elapsed, the Automatic ^{SALT} continues in the mode in which it was before starting. ATTENTION As the boost chlorine production does not stop when the desired redox value is reached in the pool water, an increase in the chlorine value above the desired value is to be expected. Before activating the Boost mode, make absolutely sure that nobody can be in the pool water both during and after the Boost chlorination. The pool may only be opened for bathing again when it has been confirmed by measurement that the chlorine level has dropped to a normal level.
Timer	Time limited constant production In „Activate time limited constant production“ you can switch on the chlorine production for a selectable period of time. You can choose whether production should stop when the desired value is reached or only after the selected time has elapsed. You can also stop production manually at any time.
Pause	Pause salt electrolysis In the „Pause salt electrolysis“, you can stop the automatic control for disinfection for a selectable period of time. After the pause has elapsed, the previously set automatic control starts again automatically. This mode can be advantageous, for example, when adding water care products manually.
Safe mode	Safe Mode In the „Salt electrolysis settings“ you can set whether the Automatic ^{SALT} stops or continues with reduced output in the event of discrepancies in the disinfection control (e.g. desired redox value is not reached).

pH control operation modes

Auto	Auto The Automatic ^{SALT} automatically regulates the pH value to the desired pH value in the pool.
Off	Off The automatic control of the pH value is switched off.

pH time-limited dosing / fill or rinse pump hoses / pause

	Fill pump hoses If the pH dosing hose is empty (e.g. before a canister change), you can start the pH pump manually here to fill the hose. Stop the process as soon as the dosing hose is completely filled (up to the injection piece).
Timer	Time limited pH dosing With this timer mode, the pH-Minus dosing is switched on for a selectable period of time. You can choose whether the dosing should stop when the selected set-point is reached or only after the selected time has elapsed. You can also stop the dosing manually at any time.
Pause	Pause pH dosing This mode allows to pause automatic control for a selectable period of time. After the pause has elapsed, automatic control starts again automatically. This mode can i.e. be used when adding water care products manually.

11 Operation

Message list

If relevant events occur during operation the Automatic^{SALT} displays corresponding messages.

Additionally, the Automatic^{SALT} files messages in the message list. For most of the messages the Automatic^{SALT} offers additional information and wizards that will guide you step by step to a solution. If you cannot find a solution despite following all instructions, please contact your dealer.

Calibration of the sensors

Please note that when calibrating the pH- and Rx-Sensor using the enclosed buffer solutions, you must remove the sensors from the Smart&Easy Connector. Make sure that not too much water can leak out during this process by closing the respective valves.

Follow the instructions on the display.

RECOMMENDATION

To avoid taking out the sensors you may do the calibration with pool water. Please measure the pool water values with a photometer (e.g. BAYROL Electronic Pool Tester).

ADDITIONAL FUNCTIONS

Winter mode

You can determine whether the Automatic^{SALT} should still produce chlorine below an adjustable water temperature.

RECOMMENDATION

Stop production of chlorine at a water temperature of below 15 °C. In cold water the demand of chlorine is very low. You may manually add some chlorine to the pool water from time to time.

At water temperatures lower than 15 °C the Automatic^{SALT} switches automatically to the self protection mode. The lower the water temperature is, the more the production is reduced in order to save lifetime of the production cell. The self protection mode will also switch off the production in case the salt level in the pool water is too low.

The setting of the cut-off temperature is done under: Salt electrolysis temperature and safety settings.

ADDITIONALS OPTIONS

Pool cover

Pool water that is protected by a pool cover against the influence of UV radiation from the sun and other environmental influences uses less chlorine than water that is not protected.

If the Automatic^{SALT} receives the potential-free signal whether the pool cover is open or closed, it can reduce the production of chlorine when the pool cover is closed. This is particularly useful when operating the Automatic^{SALT} in constant production mode.

To use this function, a potential-free signal must be given to the Automatic^{SALT}. The correct connection is shown in the diagram of the Automatic^{SALT} in point 9 – Electrical connection – on the device.

A corresponding connection cable is available in the BAYROL Technik range (191049 Cable 2.5 m for Cover). The setting is made in the initial start-up menu or later in Expert settings – System configuration & statistics – Pool cover switch.

KIT Level Automatic Single – Canister monitoring

By default, your Automatic^{SALT} recognises an empty pH canister by the fact that the pH value does not change despite the dosing pump being switched on. In this case, a message is displayed, and the empty canister should be replaced by a full one as soon as possible.

For even faster and more convenient detection of an empty pH-Minus canister, you can use the optional KIT Level Automatic single canister monitor on the Automatic^{SALT}. It enables direct monitoring of the filling level of the canister for pH-Minus Liquid Anti Calc by means of an easy-to-use suction lance. When the canister is empty, a corresponding message is output.

The KIT replaces the foot filter supplied and can thus be simply connected to the level pH connection provided and mounted on the corresponding liquid canister with the aid of a screw cap.



11 Operation

REMOTE ACCESS

To set up convenient remote access to your Automatic^{SALT}, please proceed as follows:

- Create a user account at www.bayrol-poolaccess.com
- Register your Automatic^{SALT} in your user account. You will need the serial number of your device, which you will find on the type plate on the side of the housing.
- You will be shown a 6-digit web portal PIN. Please make a note of this PIN, it must be entered once later in your device.
- Now tap on the WiFi icon in the home screen of your Automatic^{SALT} and connect it to the desired WLAN in the „WLAN (WiFi) Connection“ menu.



- Now connect your Automatic^{SALT} to the web portal by entering the previously noted web portal PIN in the „App & web portal connection“ menu. Now your Automatic^{SALT} is visible in your previously created user account and can be operated from the web portal.

If you would also like to operate your Automatic^{SALT} conveniently via app on your smartphone, please proceed as follows:

- In the device list of the web portal: Press app link button



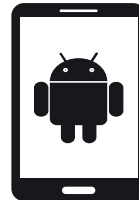
- A QR code with URL (<https://bayrol-poolaccess.com> ...) will now be displayed to you



- Please note the App Link Code displayed, it will be used later to enter it in the app.

- You have called up the webportal on your PC: Scan the QR-Code with your Smartphone or enter the URL in the Smartphone-Browser.
- You have called up the webportal on your Smartphone: Simply tap directly on the URL.

You are using a smartphone with **Android** operating system:



- You are using a smartphone with Android operating system:
- Tap the „Add to Home Screen“ button to install the app.
- In the „Install App“ dialog, confirm the installation.

You are using a smartphone with **iOS** operating system:



- Tap the icon (Share) and select the „To Home Screen“ option.
- In the „To Home Screen“ dialog, select the „Add“ option.

- Now the app is installed. Close the browser of your smartphone and launch the app from the home screen. When the app is started for the first time, a short guided sequence is run through. In this sequence, the app is linked to your Automatic^{SALT} by entering the app link code.

12 Winterizing

You can use the winterizing mode of your Automatic^{SALT} to winterize your pool. In colder conditions it is recommended to take the Automatic^{SALT} system out of operation.

The following procedures guide you to do so when either actively winterize your pool with a running filtration system or passively winterize your pool system by also taking the filtration system out of operation.

For active winterising (filtration system of the pool remains running)

- Stop the filter pump.
- Rinse pump hoses with clear water.
- Empty all pump hoses.
- Close and empty the bypass containing the Smart&Easy connector and the production cell.
- Remove the sensors from holders and store them in their container, preferably filled with KCl storage solution, or with pool water. Store the sensors in a dry and cool but frost-free place.
- Store your pH-Minus canister in a dry and cool but frost-free place.
- If there is no bypass, install ½" plugs in place of sensor holders.

For passive winterising (filtration system of the pool is shut off)

- Stop the filter pump.
- Rinse pump hoses with clear water.
- Empty all pump hoses.
- Close and empty the filtration system. Make sure to drain the entire circulation system of the pool as much as possible.
- Close and empty the bypass containing the Smart&Easy connector and the production cell.
- Remove the sensors from holders and store them in their container, preferably filled with KCl storage solution, or with pool water. Store the sensors in a dry and cool but frost-free place.
- Store your pH-Minus canister in a dry and cool but frost-free place.

13 Maintenance

The indicated amount of maintenance is just the minimum requirement. The frequency of maintenance depends on the intensity of use.

The frequency of maintenance is determined by the applicable, country-specific requirements! This may result in considerably shorter maintenance intervals; the relevant country-specific specifications and standards must be observed.

Cell cleaning

The Automatic^{SALT} is equipped with an adjustable automatic cell cleaning function. This function is based on the cyclic switching of the polarity of the chlorine generation cell and removes possible scale deposits on the cell sheets with each switching.

If you notice that your chlorine production cell tends to calcify, you can shorten the polarity cycles. Please note that a setting of 200 minutes or less will greatly reduce the typical life of the chlorine production cell and will void the warranty.

If you notice that your chlorine production cell remains perfectly clean even after prolonged operation, you may increase the polarity cycles. This may have a positive effect on the life of the chlorine production cell.

► Please note

The consistent use of Calcinex® and pH-Minus Liquid Anti Calc can extend the lifetime of the cell!

If, however, heavy limescale deposits have formed on the cell sheets, you may manually clean the cell. To do this, remove the cell from the cell holder (be sure to close the taps of the bypass beforehand. Caution, water may leak

out) and treat it with BAYROL Cell Renov. Follow the instructions on the product label.

Take the opportunity to also check the components in the Smart&Easy Connector holder, as they may also be calcified/dirty.

ATTENTION

Never try to remove the scale mechanically (e.g. with a brush or metallic objects)! This will irreparably damage the cell. A mechanically cleaned cell is excluded from the warranty.

13 Maintenance

MAINTENANCE PLAN

Weekly check

- Make sure you keep your filter system in perfect condition.
- After adding fresh water, check the salt content and add salt if necessary.
- Check the values for pH and chlorine, preferably with a BAYROL Technik Electronic Pool Tester.
- Carry out a visual inspection of the system for leaks in all components, lines and hose

Yearly maintenance

- Replace the pH sensor and calibrate it.
- Replace the Redox-sensor and set the correct setpoint mV. Make sure that the chlorine level in the pool water is at the desired level.
- Replace the dosing pump hoses.
- Check the pH injection valve and replace, if necessary.

► Please note

Only use original BAYROL Technik components. The use of third-party components can lead to malfunction during operation. BAYROL Deutschland GmbH disclaims all liability and warranty for this.

Dosing pump hose replacement



14 Technical data

Maximum Pool Volume

	Automatic ^{SALT} AS 5		Automatic ^{SALT} AS 7	
Salt content	2 g/l	3.5 g/l	2 g/l	3.5 g/l
Temperature < 28 °C	70 m³	80 m³	90 m³	140 m³
Temperature > 28 °C	45 m³	55 m³	65 m³	110 m³

Guideline values based on our experience with normal use, sufficient filter running time and a constant cyanuric acid content between 30 – 50 mg/l.

Technical Data

Display	4.3" TFT colour touchscreen, 32bit Microprozessor, enhanced graphic acceleration
Salt content	1.5 – 40 g/l
Production mode	Auto, Auto Plus+, Constant production, Safe, Pause, Boost
Automatic cell cleaning	Reverse of polarity, cycles adjustable
Flow rate electrolysis cell	Horizontal installation: 4.5 m³/h – 30 m³/h; Vertical installation: 5.5 m³/h – 30 m³/h
Flow control	Paddle-Flow-Switch, gas sensor in electrolysis chamber
Dimension cell holder	350 x 115 mm
Cable length electrolysis cell	2 m
Max. pressure electrolysis cell	3.5 bar
Cable length sensors	2.5 m
Cell material	Titanium plates, coated with Ruthenium/Iridium
Range of water temperature	3 °C – 45 °C
Measurement of temperature	PT1000-Sensor, PVC, BNC
Measurement of pH value	Single-rod sensor, BNC
Measurement of Redox value	Single-rod sensor, BNC
Measurement of Salt level	Titanium electrodes for measurement of conductivity
Electrical connection	240 V~, 50/60 Hz
Electrical power consumption	160 W
Protection class controller	IP 65
Weight of controller	Approx. 4.3 kg
Dimension controller	325 x 210 x 120 mm (H x W x D)

15 EC Declaration of Conformity

We, **BAYROL Deutschland GmbH**
Robert-Koch-Str. 4
82152 Planegg/Steinkirchen
Germany

hereby declare that the product models named hereafter and distributed by us meet the requirements of the EC directive mentioned below.

Product designation: **Measurement, control, and dosing system for swimming pools**
 Product model: **Automatic^{SALT}**
 Series no.: **see type label on equipment**
 EC directives: **EC – Low Voltage Directive (2014/35/EU)**
EC – Radio Equipment Directive (2014/53/EU)
EC – EMC Directive (2014/30/EU)
 Harmonizing standards used: **EN 60730-1:2011, EN 55022:2010, EN 55014-1:2006 + A1:2009 + A2:2011**
EN 61000-3-2:2006 + A1:2009, EN 61000-3-3:2008
EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11

Date, manufacturer signature: **01.03.2022**



Signer's information: **Lars Birkenstaedt, Managing Director BAYROL Group**