NAUTILUS PRO
USER GUIDE

www.altom.com.tr

NAUTİLUS PRO

- 5 inch touch screen
- Altom pH control option
- Altom ORP (Redox) control option
- Bipolar cell design
- Self cleaning cell
- Prevent waterless run
- Backwash warning
- Low production warning
- Full automatic pool pump
- Full automatic pool lights
- Additional two extra automatic control for your use
- Two distinct timers for each control
- Language support (Turkish – English)

5000 hours cell lifespan

Service on your premises

What is the Electrolysis Process?

Electrolysis of saltwater is the process of producing chlorine in saltwater with a low salinity rate (4-6 g/L).

By integrating the Altom Nautilus device into the swimming pool system:

- The salt-containing pool water passes through the electrolysis cell
- During this process, chlorine in the salt (NaCl) in the water is released
- The released chlorine eliminates the contaminants in the pool water

Why Altom Salt Generator?

The Altom Salt Chlorine Generator system is an ecological system that disinfects pool water by converting natural salt into chlorine gas through electrolysis. This system offers numerous benefits:

- **Automatic Chlorine Production**:

Ensures continuous chlorine production, automatically regulating the chlorine level in the pool water. This provides an easier solution compared to traditional methods that require manual addition of chlorine tablets or liquid chlorine.

- **Prevents Chlorine Odor and Skin Irritation:**

Unlike traditional chlorination methods, it does not produce an unpleasant chlorine smell. It also eliminates the irritating effects of chemical chlorine, preventing stains and hardening of clothes, resulting in a more comfortable pool experience.

- **Long-Term Cost Savings:**

Eliminates the need for chlorine tablets or liquid chlorine. Instead, salt needs to be added to the system as required. This process reduces costs in the long run.

- **More Stable Chlorine Levels:**

Since the system produces chlorine regularly and continuously, the chlorine level in the pool water remains stable. This ensures healthier and cleaner pool water.

- **Reduced Chemical Usage:**

The use of a salt chlorine generator minimizes the use of other chemicals typically used alongside traditional chemical chlorine. This means fewer chemicals are needed to maintain the balance of the pool water.

- **Less Manual Intervention:**

This system automatically adjusts the chlorine level and water balance in the pool.

Altom Salt Chlorine Generators offer pool owners numerous benefits, including easier use, better water quality, more comfortable maintenance, and long-term cost savings.

However, for the system to function properly, it is important to maintain the correct salt levels and perform regular pool water maintenance.

Important Points to Consider

Factors that will affect the life of the Salt Cell:

- NEVER operate the salt chlorine generator system without salt.
- NEVER shock your pool with Sodium Hypochlorite (Liquid Chlorine) and/or add liquid chlorine
- DO NOT clean the salt cell with HARD objects
- DO NOT operate the Electrolysis at temperatures below 10° C
- At the end of the season, clean the salt cell with water and store it in a dry environment for the next season.

To protect against the negative effects of excessive salt use (Alkalinity, pH, water hardness level, etc.), your system should have a maximum salinity of 10 gr/L. The recommended salinity rate is 4-6 gr/L.

Use Hydrochloric Acid (HCl) to reduce the pH value of the pool. Do not use Sulfuric Acid (H_2SO_4), Sodium BiSulfate ($NaHSO_4$, also known as Powder pH reducer) or other forms of pH reducer. The use of these products will cause the formation of unwanted by-products during electrolysis.

High pH values (above 7.8) will reduce the effectiveness of chlorine in the water. Therefore, make sure that the pH value of the pool water remains between 7.2 - 7.8.

If the chlorine level of your pool is high, it is recommended that you reduce the electrolysis level. This will both increase the life of the salt cell and reduce acid usage.

Pool Water Settings

- Alkalinity should be between 90 and 110 ppm
- pH should be between 7.2 and 7.4
- Chlorine level should be between 1-1.5 ppm

Before use, shock should be done with Trichloroisocyanuric acid (4 kg / 50 m3 water)

Adding Salt to Pool Water

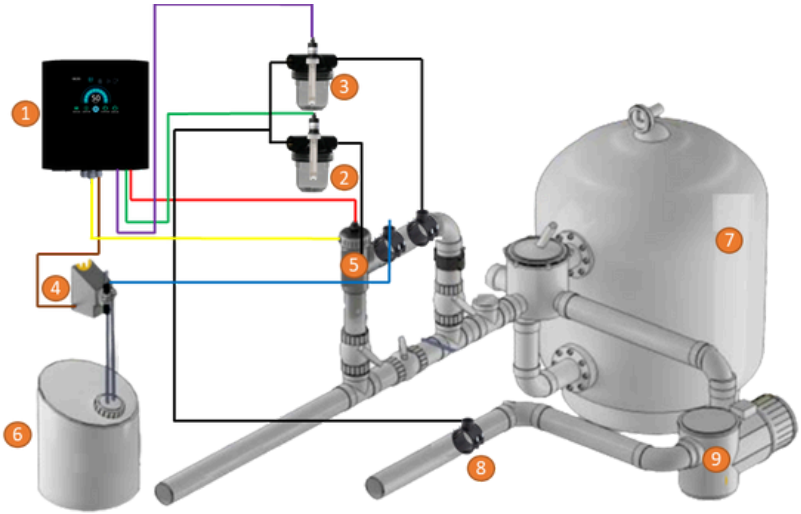
- Add 4-6 grams of Salt (Non-Iodized) for every liter of water in your swimming pool (4-6 kg of Salt for 1 m3).
- Open the bottom valve of the pool and add salt directly to the pool.
- Run the circulation pump for 24 hours.

The system will work smoothly with a salt concentration between 2.5 grams and 10 grams.

Central System and Salt Cell

1. Display
2. Power connection (220 V)
3. Cable connections
4. ORP connection
5. pH connection
6. Electrode connection
7. Electrolysis cable inlet
8. Electrodes
9. Cell housing
10. Flow Sensor

System Diagram



1. Nautilus Pro
2. Redox Cup
3. pH Cup
4. Acid Pump
5. Electrod Cell / Flow Sensor
6. Acid Tank
7. Filter Tank
8. pH anD Redox Sample
9. Circulation Pump

Electrode chamber hose line (sample will be taken from the outlet on the salt cell for the pH container, and from the socket necklace before acid injection for the ORP container. It will return to the suction line by combining with the Ye connector at the outlets)

pH probe connection (To be connected to the BNC connector on the right of the control unit)

ORP probe connection (To be connected to the BNC connector on the right of the control unit)

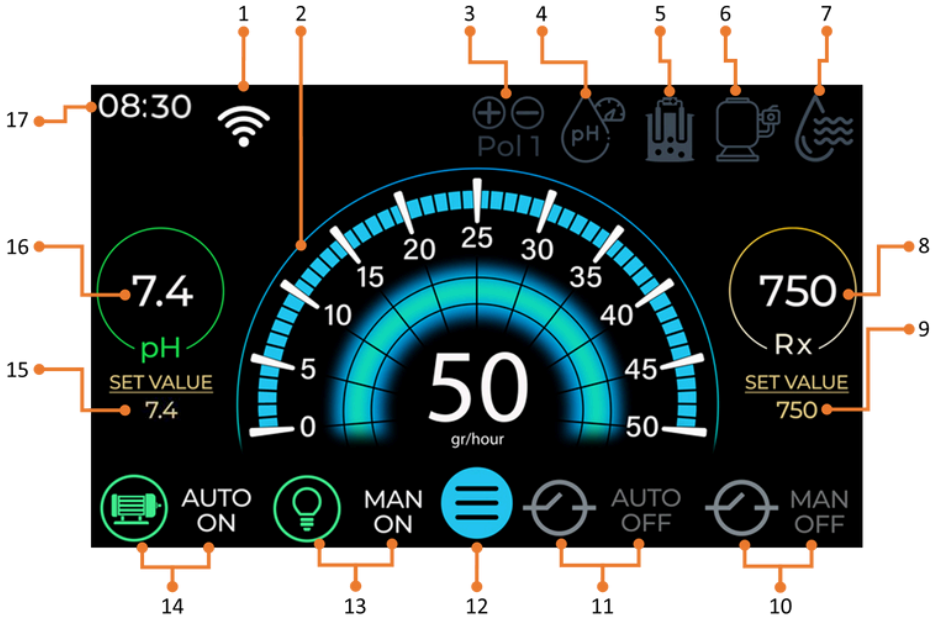
Flow sensor connection (To be connected to the appropriate jack on the control unit)

Salt Cell energy line

Acid injection line

Acid pump sensor line (To be connected to the brown wires coming out of the control unit)

Main Display



1. **WiFi signal strength indicator**
2. **Chlorine production amount**
3. **Electrode Polarity status**
4. **PH Alarm status**
5. **Production Alarm status**
6. **Backwash Alarm status**
7. **Flow Alarm Status**
8. **Instant ORP (Redox) value**
9. ORP (Redox) Set value
10. AUX-2 Connection status
11. AUX-1 Connection status
12. Menu
13. Pool lights status
14. Filtration status
15. pH Set value
16. Instant pH value

When your device is turned on, the main display will greet you. On this screen, you can see the current status of your device and perform all relevant checks.

*If the pH and ORP options are integrated in your system, the sections related to pH and ORP will be active on the screen and you will be able to perform checks. Otherwise, these sections will not be reflected to you.

*If the WiFi option is integrated in your system, the sections related to WiFi will be active and you will be able to perform checks. Otherwise, these sections will not be reflected to you.

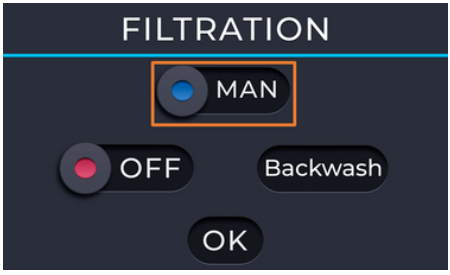
Ana Menü

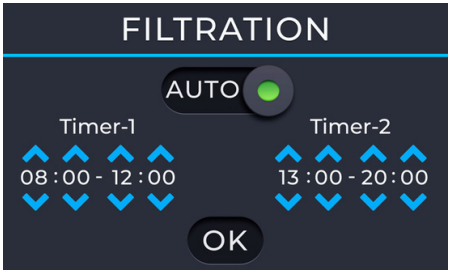
Filtration Manual

If the filtration is Manual and Off, press the OFF button to turn it on and then press the OK button to bring it to the ON position.

If the filtration is Manual and On, press the ON button to turn it off, then bring it to the OFF position and press the OK button.

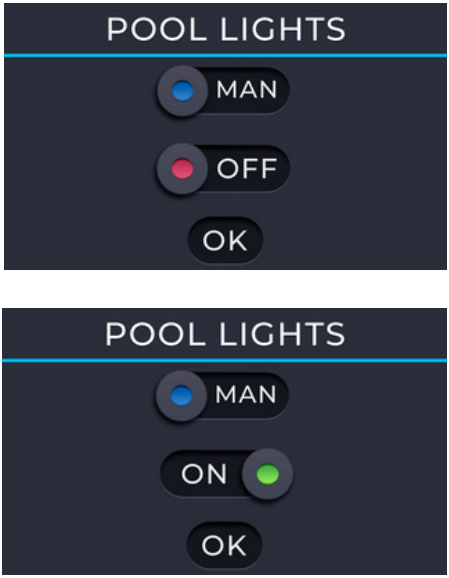
Filtration Automatic





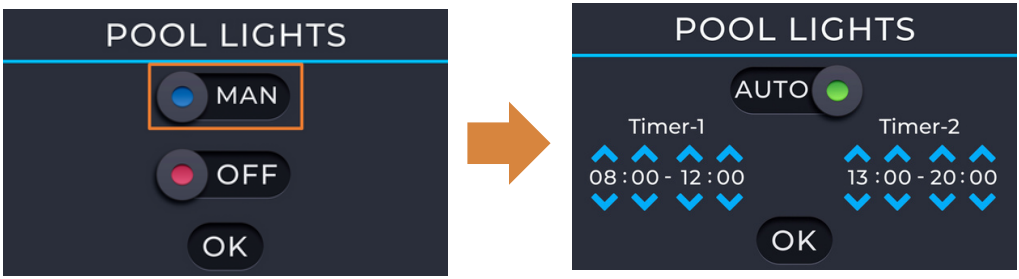
Pool Lights Manual

If the lighting is manual and off, press the OFF button to turn it ON and then press the OK button to turn it on.



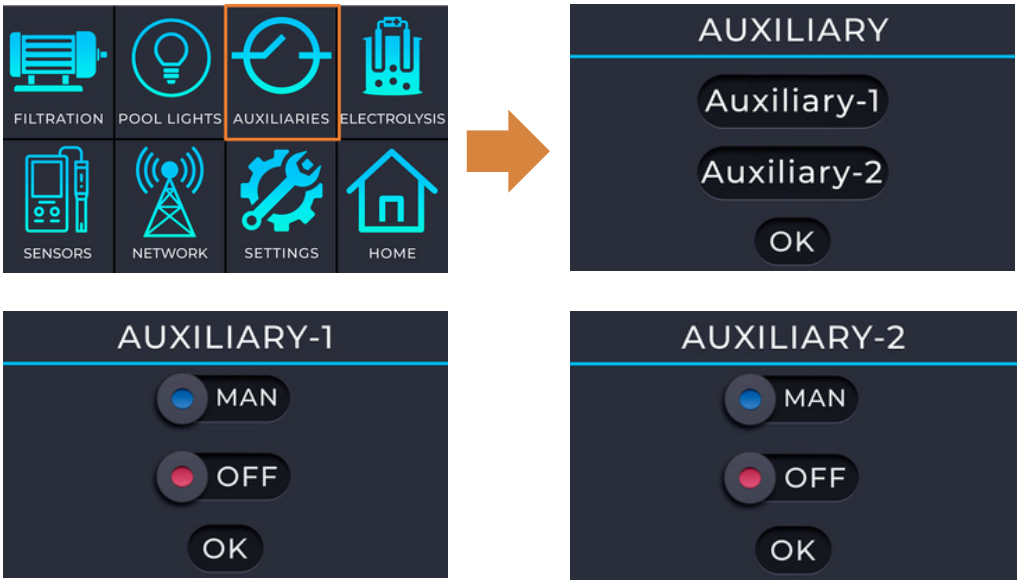
If the lighting is Manual and on, press the ON button to turn it to OFF position and press the OK button to turn it off.

Pool Lights Automatic



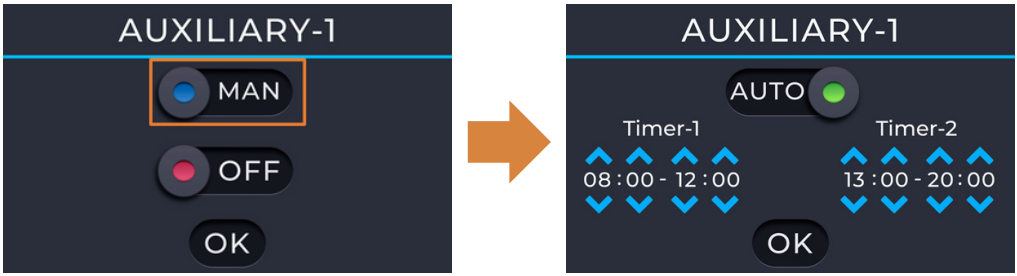
On the Pool Lighting screen, press the Manual button to switch to the automatic setting screen. On this screen, the desired time for the lighting to start and end is set and the confirmation button is pressed. From this moment on, the lighting will be turned on and off according to these hours.

AUX-1 and AUX-2 Manual



On the Pool Lighting screen, press the Manual button to switch to the automatic setting screen. On this screen, the desired time for the lighting to start and end is set and the confirmation button is pressed. From this moment on, the lighting will be turned on and off according to these hours.

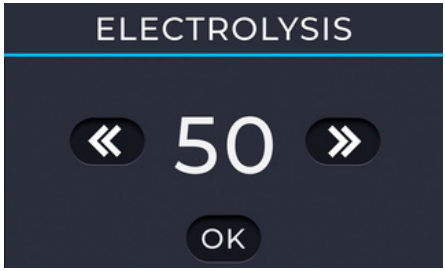
AUX-1 and AUX-2 Automatic



When the relevant additional control is selected for the automatic settings of your system integrated with the additional control connection you are interested in, the automatic settings screen is accessed by pressing the MAN key on the screen that appears.
The desired time for the system to start and end is set on the relevant automatic additional control screen and the confirmation key is pressed.
From this moment on, the relevant additional control will be opened and closed according to these hours.

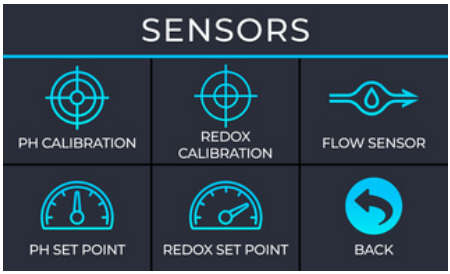
Electrolysis Production Target Setting

You can switch to the desired production value setting screen by either pressing the production value indicator on the main screen or by pressing the Electrolysis button in the menu.



If you set and confirm the desired production value using the right or left buttons on this screen, the system will start working according to the production value you set from that moment on.

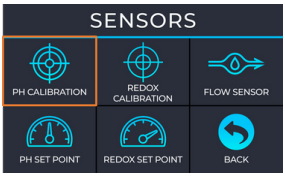
Sensor Menu

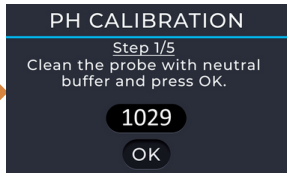


You can perform operations related to the sensors in your system with the sensors button in the main menu. The screen that greets you will vary depending on the sensors in your system.

Options that are not available in your system will not be active.

pH Calibration





You need to calibrate the pH sensors when you first install the device, at the beginning of each season and when you renew or add to the pool water.
Before starting this process, you need to prepare the pH solutions provided to you with your system.
Sensors are selected from the main menu for the pH calibration process. The calibration process is started with the PH Calibration button on the screen that appears.

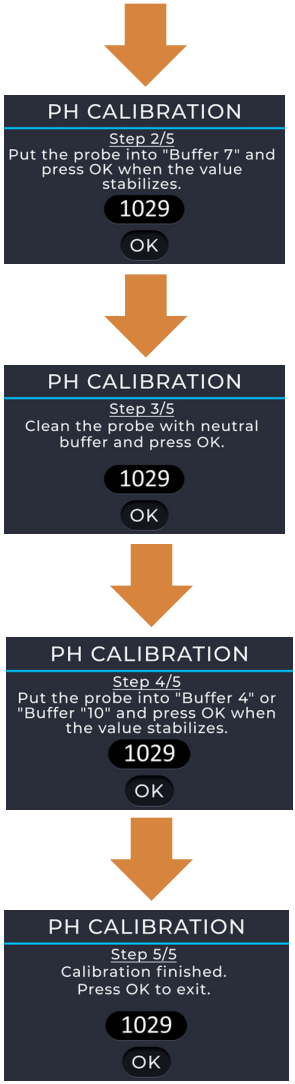
Step 1:
- Clean and dry the pH electrode with pure water
- Go to the next step with the OK button

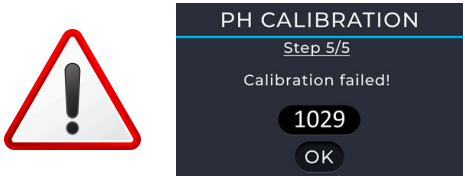
Step 2:
- Immerse the pH electrode in the solution that says ‘pH 7’ and wait
- The reading value on the screen will change
- If the value read on the screen remains constant for 5 seconds, go to the next step by pressing the OK button.

Step 3:
- Clean the pH electrode with pure water and dry it
- Go to the next step with the OK button

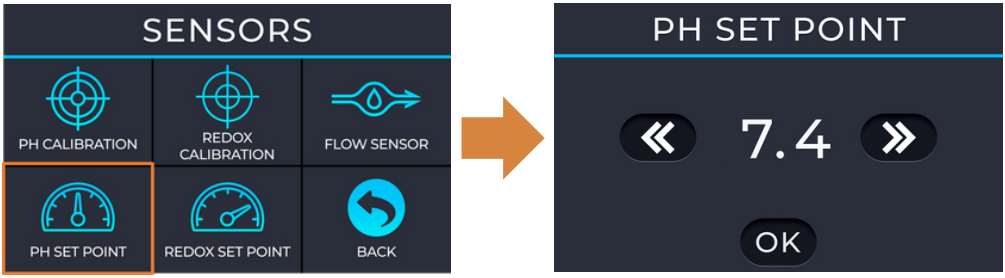
Step 4:
- Immerse the pH electrode in the solution that says ‘pH 4’ or ‘pH 10’ and wait
- The reading value on the screen will change
- If the value read on the screen remains constant for 5 seconds, go to the next step by pressing the OK button.

Step 5:
- If the readings are valid, the calibration will be completed successfully and the system will start to reflect the real pH values of your pool water on the main screen.
- If the readings are invalid, the screen will give an ‘Incorrect Calibration’ warning. In this case, you need to check the pH solutions and repeat the calibration process.





pH Set Value

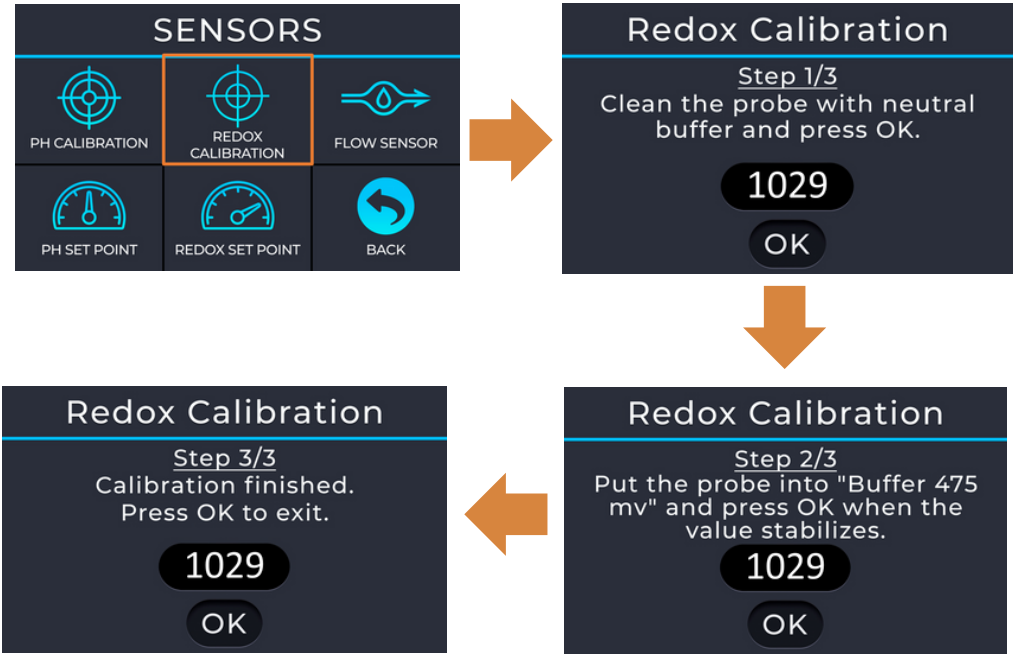


To set the target pH Set value:

- Sensors are selected in the main menu
- PH Set Value is selected on the screen that appears
- The target pH value is selected with the help of the right and left keys on the screen that appears and the setting is completed with the OK key

From this moment on, your system will turn the dosing pump on and off according to the pH level you have set.

ORP (REDOX) Calibration



You need to calibrate the redox sensors during the initial installation of the device, at the beginning of each season and when the pool water is renewed or added.

Before starting this process, you need to prepare the redox solutions provided to you with your system.

For the redox calibration process, the sensors are selected from the main menu. The calibration process is started with the Redox Calibration button on the screen that appears.

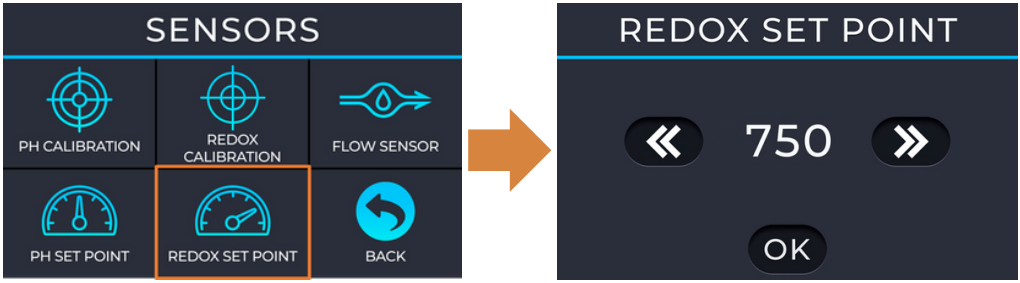
Step 1:
- Clean and dry the redox electrode with pure water
- Go to the next step with the OK button

Step 2:
- Immerse the redox electrode in the solution that says '475 mV' and wait
- The reading value on the screen will change
- If the value read on the screen remains constant for 5 seconds, go to the next step by pressing the OK button.

Step 3:
- If the reading values are at an acceptable level, the calibration process will be completed successfully
- If the reading value is not at an acceptable level, you need to check the Redox solution and repeat the calibration process.

If the calibration process is completed successfully, your system will reflect the Redox value of your pool water on the main screen from this moment on and will act according to the redox level.

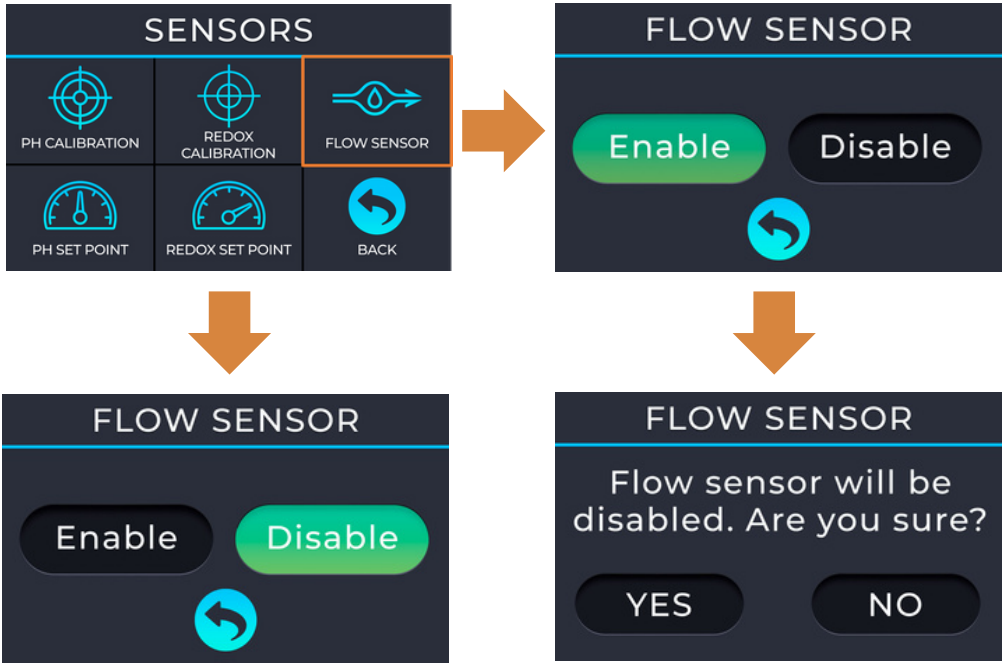
Redox Set Değeri



To set the target Redox Set value:
- Sensors are selected in the main menu
- Redox Set Value is selected on the screen that appears
- The target Redox value is selected on the screen that appears with the help of the right and left keys and the setting is completed with the OK key

From this moment on, your system will move to the redox level you have set.

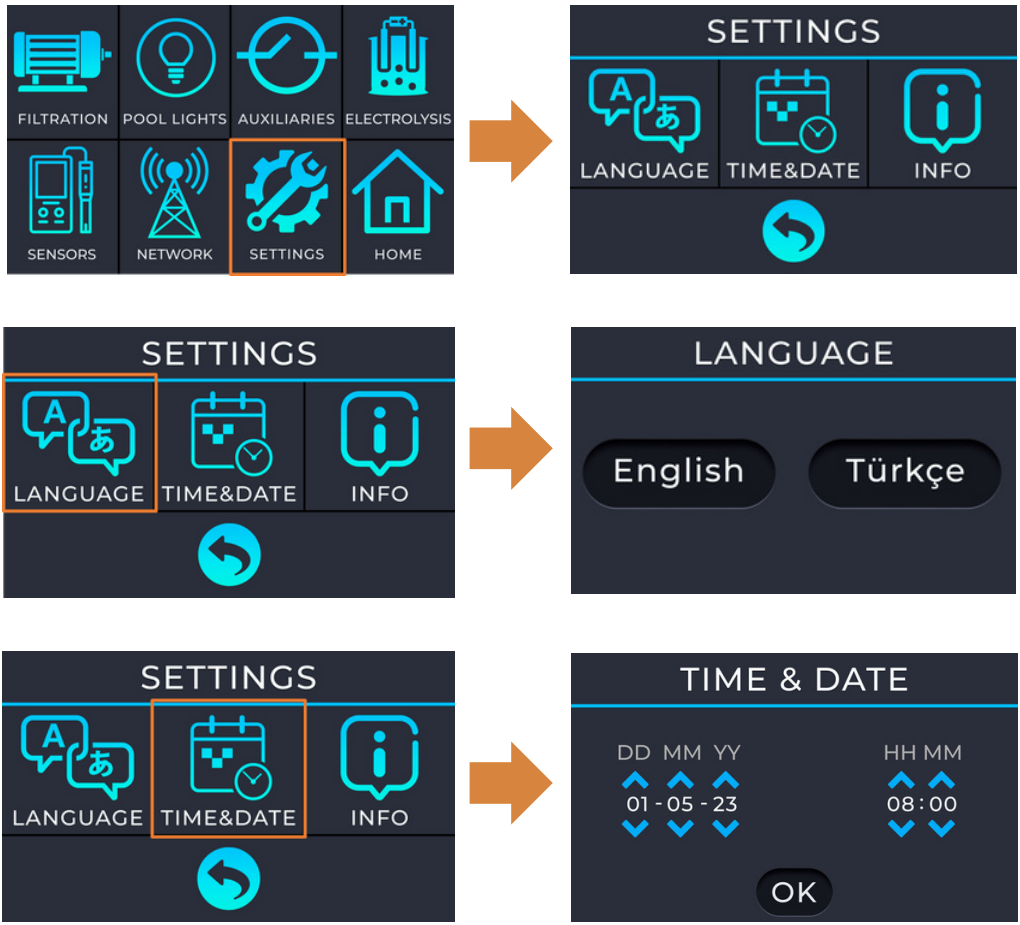
Flow Sensor



There is an active flow sensor in your device. This sensor checks whether there is enough water flow from the salt cell for electrolysis. If there is not enough flow, it stops the electrolysis process. To disable this sensor if it is active or enable it if it is disabled, follow these steps:

- Select sensors from the main menu
- Select 'Flow Sensor' on the sensor screen
- The current status of the Flow Sensor will be shown in green on the screen
- If it is active, select Disabled and confirm on the screen that appears, the flow sensor will be disabled
- If it is disabled, select Enabled to enable it, the flow sensor will be active.

Settings Page



Maintenance

The Early Days of the System

For your pool system during the first 15 days:

- Check frequently that the pH level remains within ideal levels (7.2 - 7.4). Check the alkalinity if the pH is unusually unbalanced and using TOO MUCH acid. (80 - 125 ppm is recommended.)
- If alkalinity is high, acid use will increase. Over time, alkalinity will balance and acid use will normalize.
- To maintain perfect water conditions, the pool should be vacuumed and filters cleaned as needed.

Salt Cell Care

Maintenance of the electrolysis system should be done every month when deemed necessary by visual inspection. During this maintenance, the salt cell is cleaned.

Salt Cell cleaning:

- Close the filtration system and other valves
- Remove the Salt Cell by turning it
- Soak the electrodes in water containing 15% Hydrochloric acid (1.5 units of acid for every 8.5 units of water) prepared in advance for a maximum of 10 minutes.
- After the calcification has softened, water the salt cell with a hose to clean it completely.

DO NOT USE ANY METALLIC OR SHARP OBJECTS TO CLEAN THE CALCIFICATION!
Scratching the edges and surface of the salt cell will make the cell vulnerable and will destroy the salt cell structure and end its life.

Every 2 day treatments

Check free chlorine and pH values periodically.

- **Free Chlorine:**
  - **1.0 - 3.0 PPM**
- **pH:**
  - **7.2 - 7.4**

Monthly Care

Periodically check total alkalinity, salt concentration, cyanuric acid and electrode cell.

- **Toplam alkalinite:**
  - **80 - 120 PPM**
- **Salt Concentration:**
  - **4.000 - 6.000 PPM**
- **Cyanuric acid:**
  - **30 - 50 PPM**
- **Electrode :**
  - **Visual limescale control**

General Maintenance

- **The pool should be vacuumed as usual and filters should be cleaned when necessary.**
- **Backwash:**
  - **Do not forget to backwash when the Backwash Alarm is activated on your device.**
- **Adding Water:**
  - **Salt loss in the pool will decrease with the water removed by backwashing..**
- **CHANGING POOL WATER IS NOT RECOMMENDED IN THE WINTER MONTHS. We recommend running the system 2-3 times a week (2-3 hours a day).**
- **pH / ORP probes:**
  - **Cleaning the probes when necessary will be beneficial to the system. It is recommended to check them every 5-6 months.**
  - **Probes should only be cleaned with water.**
  - **After each cleaning, pH and Redox(ORP) should be calibrated.**
-

Matters to be Considered

Factors that will affect the life of the Salt Cell:

- NEVER operate the salt chlorine generator system without salt.
- NEVER shock your pool with Sodium Hypochlorite (Liquid Chlorine) and/or add liquid chlorine
- Do not clean the salt cell with HARD objects
- Do not operate the Electrolysis at temperatures below 10° C
- At the end of the season, clean the salt cell with water and store it in a dry environment for the next season.

To protect against the negative effects of excessive salt use (Alkalinity, pH, water hardness level, etc.), your system should have a maximum salinity of 10 gr/L. The recommended salinity rate is 4-6 gr/L.

Use Hydrochloric Acid (HCl) to reduce the pH value of the pool. Do not use Sulfuric Acid (H_2SO_4), Sodium BiSulfate ($NaHSO_4$, also known as Powder pH reducer) or other forms of pH reducer. The use of these products will cause the formation of unwanted by-products during electrolysis.

High pH values (above 7.8) will reduce the effectiveness of chlorine in the water. Therefore, make sure that the pH value of the pool water remains between 7.2 - 7.8.

If the chlorine level of your pool is high, it is recommended that you reduce the electrolysis level. This will both increase the life of the salt cell and reduce acid usage.

Troubleshooting

Device Won't Turn On

- Make sure that there is power in the device's power line
- Make sure that the power button located at the bottom left of the device is on
- If the light does not light up in the ON position, check the fuse located between the button and the power cable
- If the fuse is blown, replace it with the spare fuse located next to it and turn on the device.

Electrolysis is not Max

- Make sure the salt concentration in the pool water is 4-6 gr/L
- If there is calcification in the salt cell, clean it
- Make sure the flow sensor is working and the relevant valve is open
- Check if the salt cell is worn out
- The life of the salt cell is approximately 5,000 hours. (Approximately 2 years of use)

Chlorine Below 1 ppm

- Increase filtration time
- Make sure cyanuric acid level is between 30 - 50 ppm
- If you have not shocked your pool with TriKlor, chlorine loss will be very rapid as there is no stabilizer in the water
- Check the expiration dates of your test equipment
- Intensive pool use and high temperatures significantly increase chlorine consumption

Excess Chlorine in Water

- Reduce the electrolysis level and observe the chlorine level in the pool water for the next few days.

White Particles in Water

- Water hardness level may be too high
- Perform bottom cleaning and then Backwash

Conductivity Alarm

- Check the salt concentration in the water
- Check for cell calcification
- Clean the cell according to the instructions
- Make sure the valves to the cell are fully open
- Check the cell wear (Cell is guaranteed for 5,000 hours)

Flow Alarm

- Check the flow sensor cable
- Make sure the valves to the cell are fully open
- Make sure there is rotation in the sensor
- If the sensor is faulty, disable the sensor from the Settings menu until you replace it with a new one
- This alarm will remain on until the flow sensor is reactivated

Backwash Alarm

- **Indicates that the water flow rate is decreasing**
- **Check that the check valve is clean and perform Backwash**
- **Reset the alarm after Backwash is completed**