ASIN Aqua® SALT

User Manual

ASIN Aqua SALT

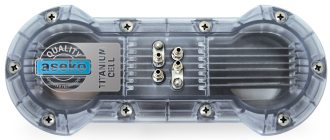
is an electrolysis system for slightly salted water. Salt water with a concentration of 4 kg salt per 1 m^3 is decomposed by the most advanced electrolytic system creating chlorine, which destroys all bacteria, viruses and algae in pool water.
The system consists of the TE25 electrode and ASIN Aqua SALT control unit, the first „all in one“ water quality management model. ASIN Aqua SALT is equipped with automatic regulation of operation of the electrolyser. It is also equipped with a programmable algaecide dosing pump. The resulting effect is continuously clean, clear water, without any odor, conforming to all hygienic requirements.
ASIN Aqua SALT also takes over direct control of the filtration pump, thanks to a filtration pump socket, allowing power supply to the pump of up to 1,4 kW / 230 V AC.
To regulate the content of chlorine in the water, the user can choose between using a free chlorine CLF probe or a REDOX potential probe for measurement. The third option is using simple time-control, without measuring the concentration of the disinfection.

- indicates if the electrolyser is overloaded
- measures salinity of water
- displays the output of the electrolyser in g Cl / h
- ensures self-cleaning of electrodes by switching polarity
- to regulate water heating by attaching a water temperature meter
- for automatic control of water level in accumulation tank by attaching a water level meter
- for remote monitoring of pool using option to connect to internet via a LAN network
- for pool status, water temperature and air temperature and relative humidity data transfer straight to the pool area by connecting an external display.

Power supply	230 V AC 50 Hz
Power input without filtration pump	190 VA
Total power input incl. pump	1449 VA
Apparatus fuse	T6,3A
Internal electronics fuse	T800 mA
Exterior sensor input fuse	T160 mA
Cover	IP30
Climate resistance	5 – 40 C
Input non-potential relay	load up to 230V/1A, it is not PERMISSIBLE to connect varying network phases to the relay.
Chlorination output	TE 25 12 g Cl/ hour, TE 35 22 g Cl/ hour
Filtration pump power supply	1,4 kW , 230 V AC
Peristaltic pump output	60 ml/min at max. counter-pressure 1 bar
Maximum pressure of measured water	1,5 bar
Dimensions	450 x 330 x 150 mm
Weight	10 Kg

Package contents

ASIN Aqua SALT



Electrode TE 25

Pool water tester

CLF probe for free chlorine

RX probe
for measuring redox potential

PH probe
for measuring pH

PE connecting tube
6x1

2x canister weights

2x water valves

2x injection valves

Dowels and screws

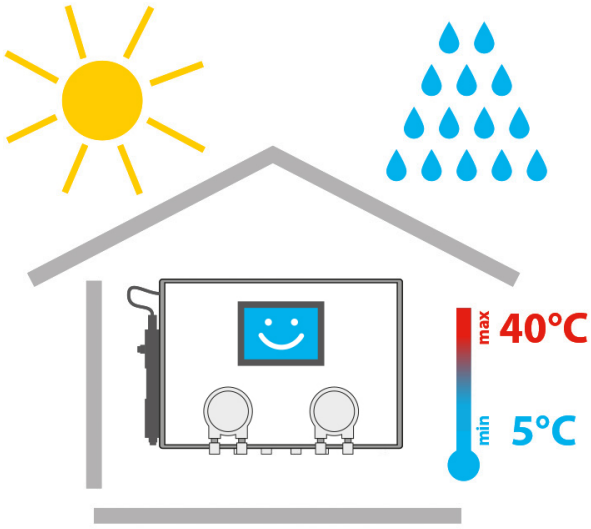
Sharp knife to cut
PE tube

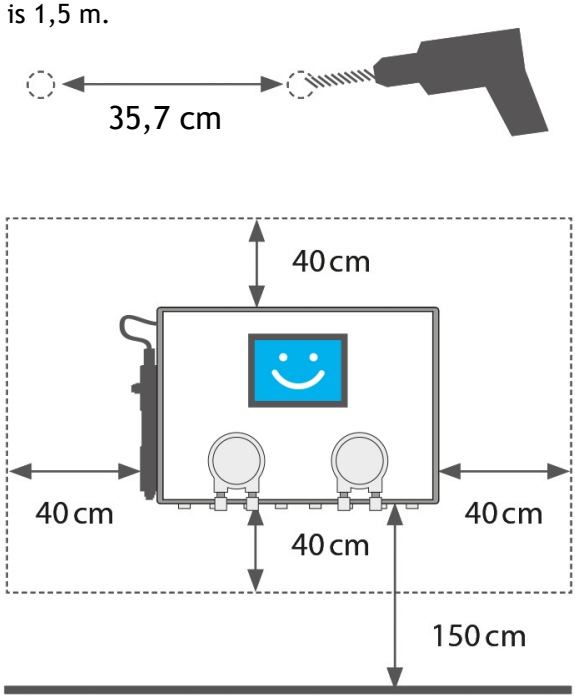
Installation

How the ASIN Aqua SALT system is connected to the filtration circuit is shown in *fig. Wiring diagram*
The input of measurement water to probes must be connected behind the filter pump and the output before the filtration pump or into the drain. Water is pushed around the probes by the pressure difference.

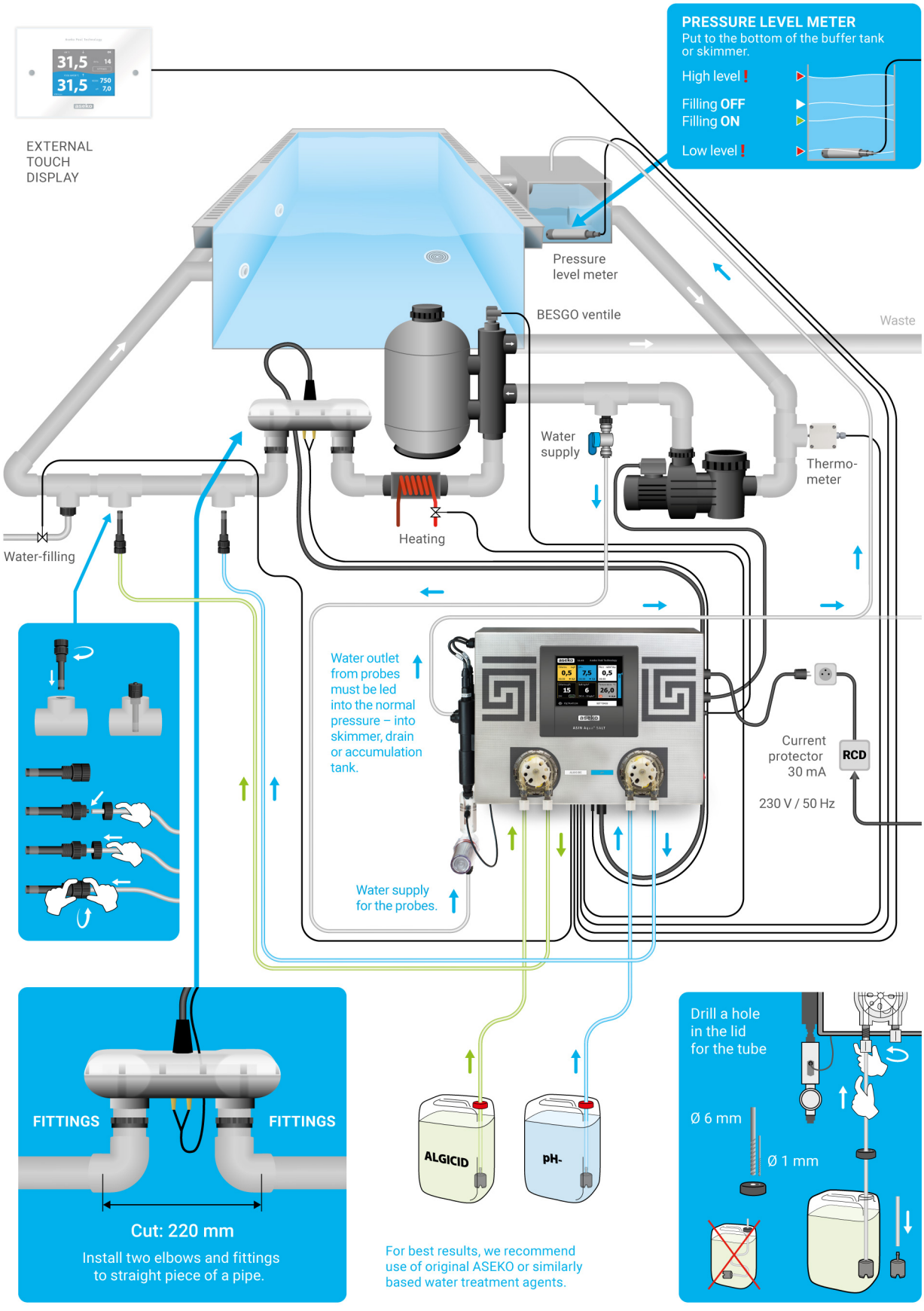
The probes for measuring pH and free chlorine (or alternatively redox) are screwed into the probe holder on the side of ASIN Aqua SALT. Tighten all only manually, without using pliers or spanners.

ASIN Aqua SALT is mounted onto the wall vertically by two 5 x 40 screws into 8 mm dowels. The maximum distance of ASIN Aqua SALT from the TE25 electrode is 1,5 m.





ASIN Aqua SALT is connected to the electrode TE25 by a bunch of cables, which are a part of the electrode **(they cannot be disconnected).**
ASIN Aqua SALT should never be placed near heat sources or in direct sun, ASIN Aqua SALT must always be mounted vertically. There is a deflector cooler on the back side of the ASIN Aqua SALT unit, around which air must flow freely to prevent overheating.
The TE25 electrode (fig.2) is glued into the DN50 output pipe between the filter and pool. It is put in by gluing or screwing the electrolyser into the pipe according to the diagram in fig. 1. The gluing or screwing set is not part of the delivery.


PRESSURE LEVEL METER
Put to the bottom of the buffer tank or skimmer.
High level !
Filling OFF
Filling ON
Low level !
EXTERNAL TOUCH DISPLAY
Pressure level meter
BESGO ventile
Waste
Water supply
Thermo-meter
Heating
Water-filling
Water outlet from probes must be led into the normal pressure – into skimmer, drain or accumulation tank.
Current protector 30 mA
RCD
230 V / 50 Hz
Water supply for the probes.
FITTINGS
FITTINGS
Cut: 220 mm
Install two elbows and fittings to straight piece of a pipe.
ALGICID
pH-
For best results, we recommend use of original ASEKO or similarly based water treatment agents.
Drill a hole in the lid for the tube
Ø 6 mm
Ø 1 mm

Electric connection and start-up

Putting into operation:

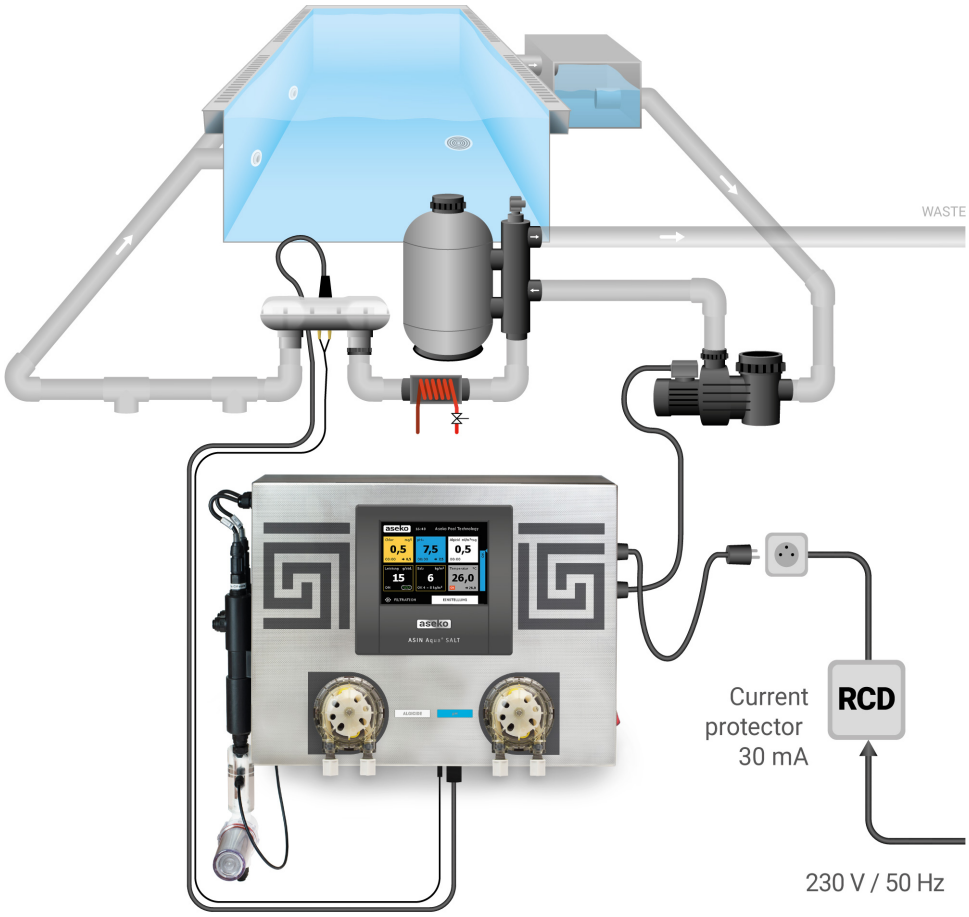
1. Leave the power switch in the off position.
2. Plug the filtration unit into the contact socket on the ASIN Aqua SALT (filtration power supply – max. output 1,4 kW / voltage 230 V AC).
3. Plug the 230 V/50 Hz power cable into ASIN Aqua SALT (on the right side). The power socket must be surge-protected (30 mA).
4. Turn the power switch to on.

After turning on, the display will light up and the ASIN Aqua SALT start-up screen will be visible for the duration of the start-up.

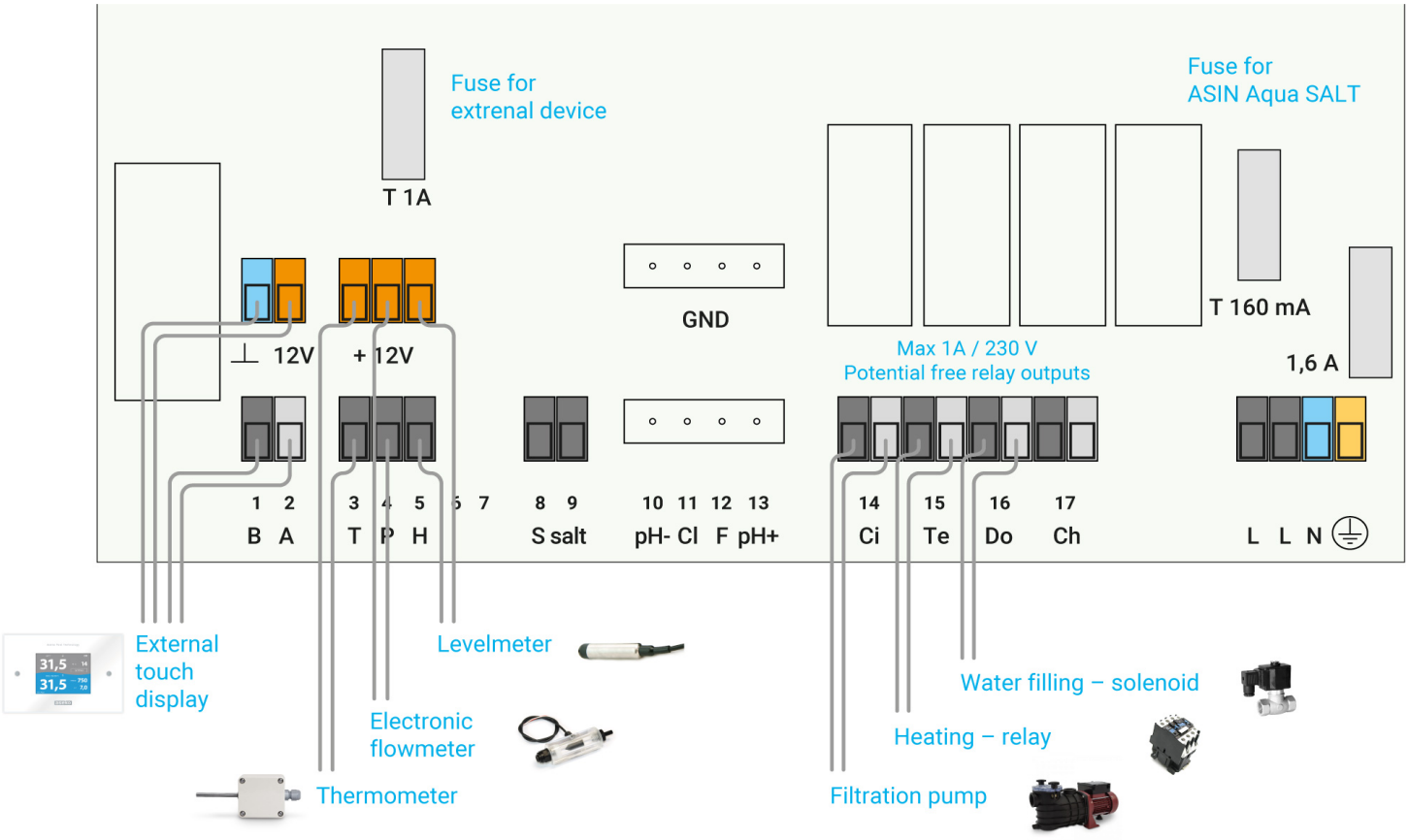
Turning off:

1. Put the power switch into the off position.
2. Unplug the power cable from the 230 V/50 Hz socket.
3. Unplug the power cable from the ASIN Aqua SALT unit.
4. Disconnect the filtration unit.

WARNING: If the ASIN Aqua SALT is used in a different manner, not specified by the manufacturer, the ASIN Aqua SALT may not provide the full protection it is designed for.



Electric wiring diagram



Start-up

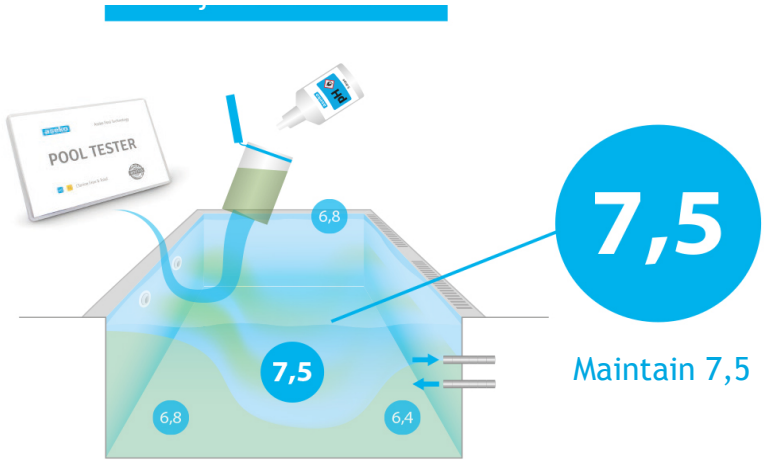
We recommend starting up operation with clean chlorinated water.
ASIN Aqua SALT only begins to produce a sufficient amount of chlorine several hours after first start-up. Since it is necessary to use a much larger quantity of chlorine for first chlorination than during regular operation, it may happen that **ASIN Aqua SALT** would not attain the required level. That is why we recommend chlorinating the water in the pool by pouring in approx. 30 ml chlorine disinfectant per each m^3 of water or 50 g of SUPERCHLOR per every 10 m^3.

Example: If the capacity of your pool is 33,6 m^3, pour 30 x 33,6 = 1008 ml, i. e. approx. 1 liter of chlorine disinfectant into the pool.

Put 4 kg of salt per every 1 m^3 of water into the pool.

Example: The dimensions of the pool are 4 m x 7 m and water depth is 1,2 m. Its capacity is than 4 x 7 x 1,2 = 33,6 m^3. The amount of salt to be put in is 33,6 x 8 = 268,8 kg.

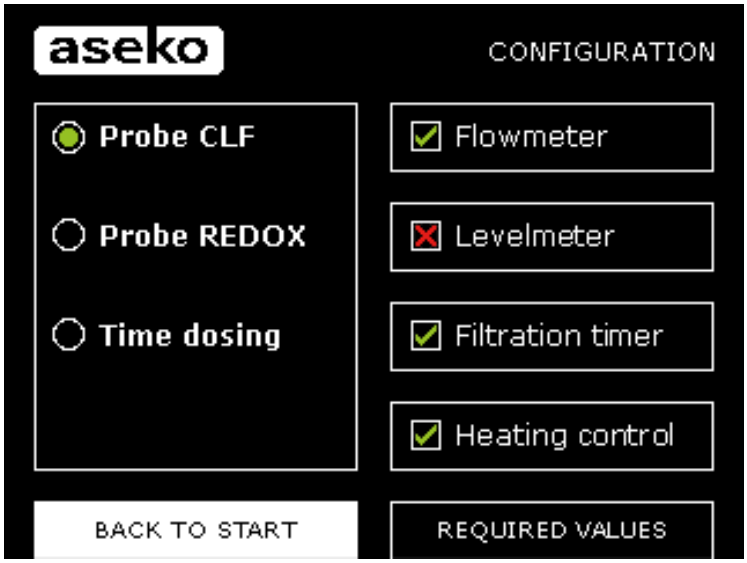
Before plugging the ASIN Salt SALT into the power supply, you must let the salt dissolve completely (approx. 24 hours) and check the pH level. **If it is less than 7,3 (the optimum value is 7,5), treatment with a pH+ agent is necessary.**
Unsuitable pH values reduce the life of electrodes.



How to set the ASIN Aqua SALT

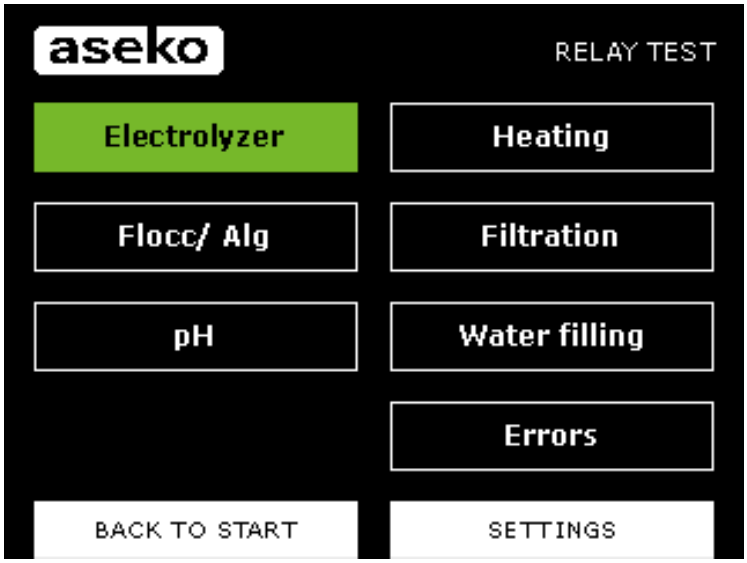
Configuration

You can configure the ASIN Aqua SALT through the **CONFIGURATION** menu. In the menu, choose what probe will be used to measure chlorine content. Further, choose what optional functions you will be using



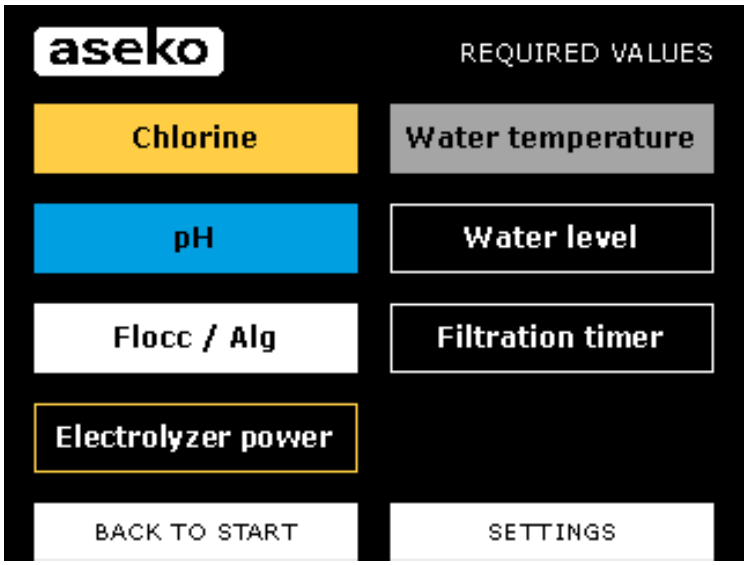
Installation test

You can check if the dosage pumps and external apparatuses are fully connected in the test menu for manual dosage. It also allows one-off dosage of chlorine disinfectant.

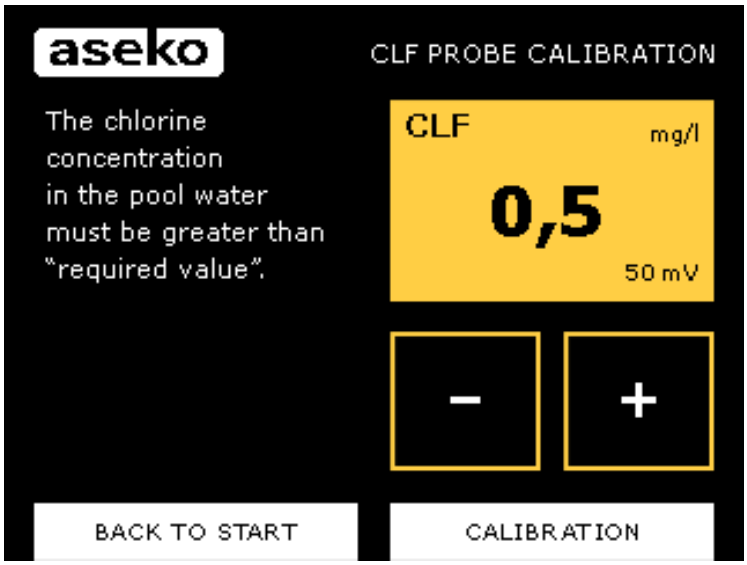


Required values

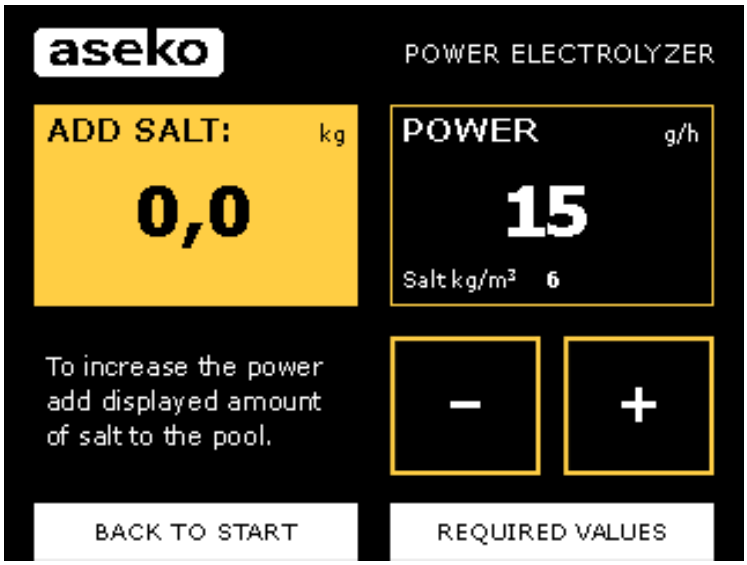
You can set the values you want ASIN Aqua SALT to maintain automatically in the REQUIRED VALUES menu. When starting up, set **Chlorine to** 0,3 mg/l (**redox** to 650) and the **pH** to 7,6.



After 24 hours, calibrate the CLF chlorine probe, or REDOX setting, according to the manual tester measurement. It is only possible to calibrate if the chlorine concentration in the water is higher or the same as the concentration you will want to use as your required value.



Chlorine production depends on the quantity of salt in the water and water temperature. The lower the water temperature, the less chlorine is produced. To increase the electrolyser output, use the menu REQUIRED ELECTROLYSER OUTPUT.



If it is not possible to further increase output this way, you can achieve it by adding an extra quantity of salt. 1 kg of salt per every 1 m^3 of water increases output by approx. 10%. The maximum amount of salt that can be used is approx. 4 kg per m^3. If you exceed this concentration, you could overload the power source part of the ASIN Aqua SALT. In order to prevent this, the ASIN Aqua SALT is equipped with automatic maximum power control. It will automatically disconnect upon overloading. Before it is turned on again, the water in the pool must be diluted. Never use salt concentration below 4 g per liter – that would significantly decrease electrode life. Concentrations higher than 4 g per liter are very corrosive and can cause corrosion of pool fixtures.

The need for disinfection is significantly influenced by factors such as:

- temperature
- intensity of sunlight
- number of bathers
- rain, wind
- organic pollution

When using the electrolyser, you must mainly follow these instructions:
Never turn on the ASIN Aqua SALT if there is at least 4 g of salt dissolved per every liter of water in the pool. This would destroy the electrodes. The optimum value is 4 grams per liter.
The quantity of disinfectant produced by the ASIN Aqua SALT depends on the quantity of salt in the water, the time for which the ASIN Aqua SALT is in operation and the set output of the electrolyser.

ASIN Aqua SALT must not be plugged in the power supply prior to the salt being completely dissolved in the pool. The electrode may only be connected to the ASIN Aqua SALT when turned off.

What kind of salt to use

We recommend using vacuum-packed kitchen salt.
You may not use rock salt. Any additives could significantly decrease the life of the electrode.
ASIN Aqua SALT is designed for electrolysis of water containing 4 kg/m^3 salt.
Using concentrations lower than 4 kg/m^3 could damage the electrode. That is why regular monitoring of salt content in water is necessasry. The concentration of salt in the water changes only marginally through the actual operation of the electrolyser.
The main losses of salt are due to filtering, splashing out and rain in case of outdoor pools.
The table shows the amounts of salt in kg, which must be added to increase concentration, given in the left column, to 4 kg/m^3 relative to pool capacity.

Salt content kg/m^3	Pool capacity in m^3									
	10	***15***	***20***	***25***	***30***	***35***	***40***	***50***	***60***	***70***
	Quantity of salt in kg to increase its content to 4 kg/m^3									
0	40	60	80	100	120	140	160	200	240	280
0,25	37,5	56,25	75	93,75	112,5	131,25	150	187,5	225	262,5
0,5	35	52,5	70	87,5	105	122,5	140	175	210	245
0,75	32,5	48,75	65	81,25	97,5	113,75	130	162,5	195	227,5
1	30	45	60	75	90	105	120	150	180	210
1,25	27,5	41,25	55	68,75	82,5	96,25	110	137,5	165	192,5
1,5	25	37,5	50	62,5	75	87,5	100	125	150	175
1,75	22,5	33,75	45	56,25	67,5	78,75	90	112,5	135	157,5
2	20	30	40	50	60	70	80	100	120	140
2,25	17,5	26,25	35	43,75	52,5	61,25	70	87,5	105	122,5
2,5	15	22,5	30	37,5	45	52,5	60	75	90	105
2,75	12,5	18,75	25	31,25	37,5	43,75	50	62,5	75	87,5
3	10	15	20	25	30	35	40	50	60	70
3,25	7,5	11,25	15	18,75	22,5	26,25	30	37,5	45	52,5
3,5	5	7,5	10	12,5	15	17,5	20	25	30	35
3,75	2,5	3,75	5	6,25	7,5	8,75	10	12,5	15	17,5
4	0	0	0	0	0	0	0	0	0	0

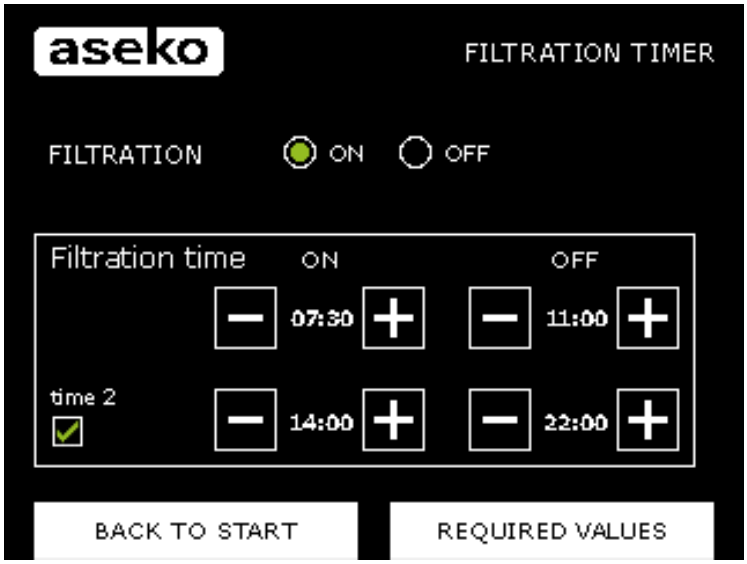
Table - Salt to be added to attain a concentration of 4 kg/m^3

Setting the date and time

You can set the current date and time in the DATE AND TIME menu.

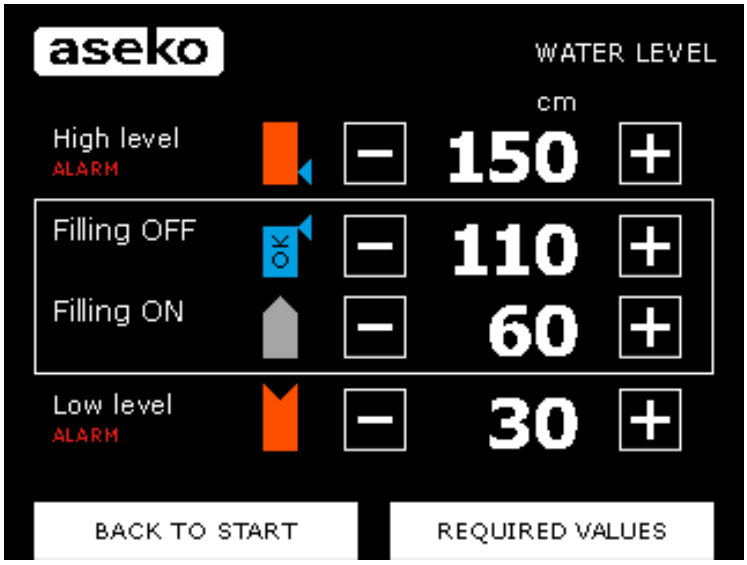
Setting operation times of the filtration pump

You can set the required times for turning filtration on in the menu REQUIRED VALUES/FILTRATION.



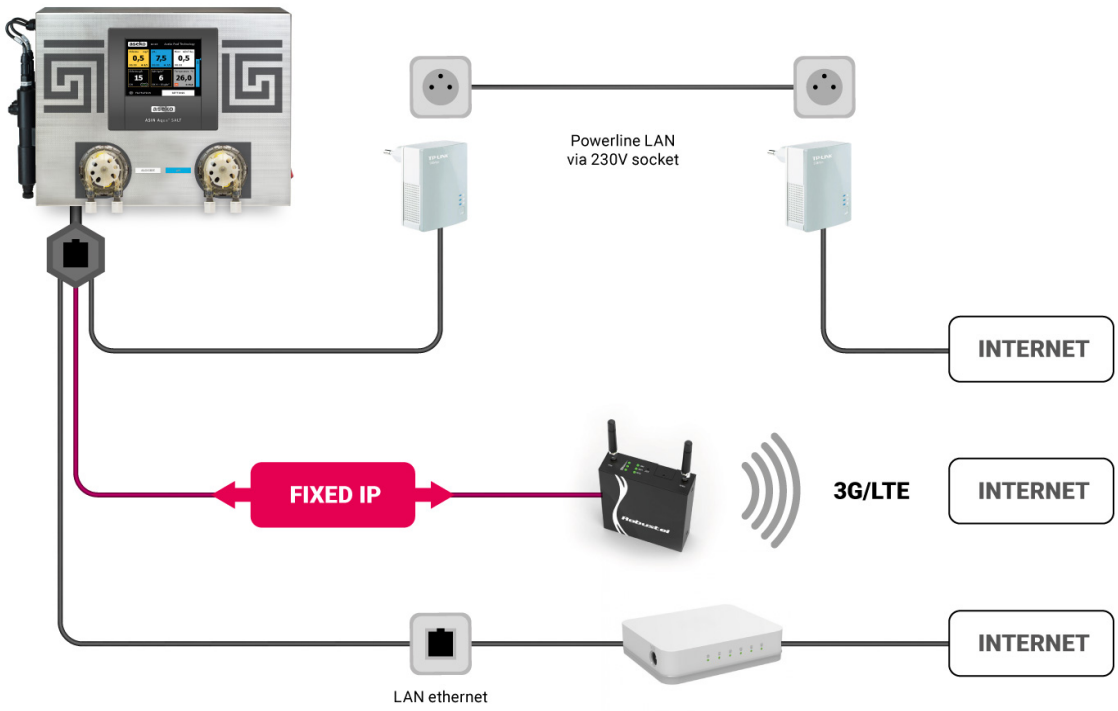
Setting the water level for water input control in the accumulation tank or skimmer

Set the required values in the menu REQUIRED VALUES/WATER LEVEL.



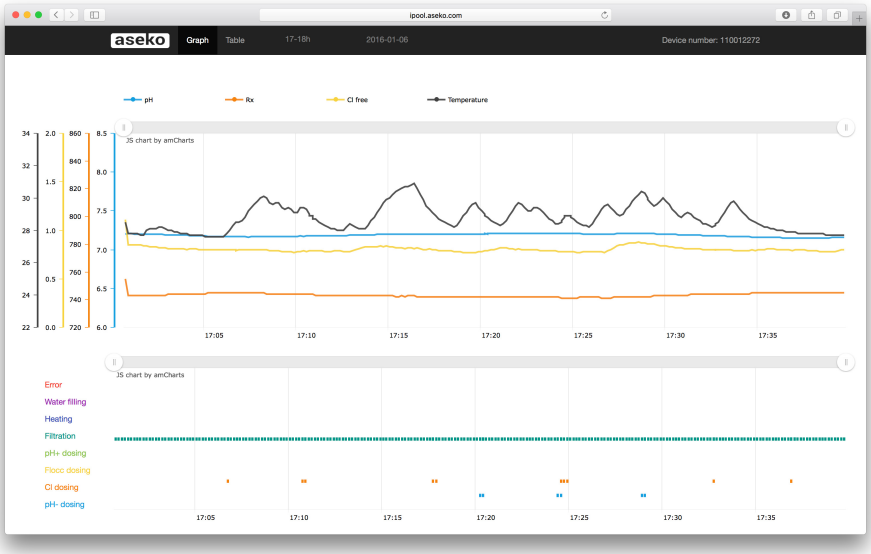
Connecting to the internet

The device is connected through LAN cable to the router. Data are send in 10 seconds intervals to IP 217.11.244.139, port 10004, must NOT be blocked by firewall.

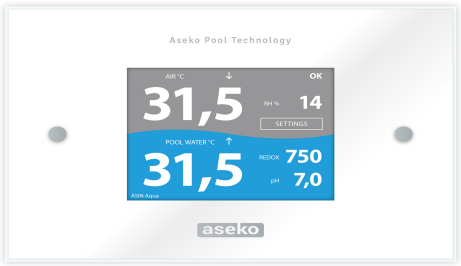


iPool Live a ipool.aseko.com

Connection to the internet can take advantage of our mobile app iPool live or our web page ipool.aseko.com for monitoring of your pool on your mobile device anywhere you are.



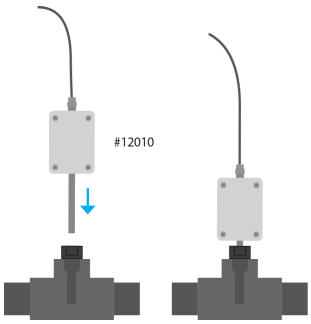
External touch display



Showing measured values of your pool water, humidity and temperature of the pool room where the display is installed and you can also change setup value of pH and chlorine. You can also chose which parameters you want to see on the display.

Thermometer connection

Install temp. holder to the pipe system then insert the thermometer. Connect the cable (2m as standard, other lengths on request) into nnector at the bottom side of the device.



Electrode life

The TE27 electrodes, which are a substantial part of the electrolyser, are made of titanium coated with a special layer of ruthenium and iridium, which are used up during operation. To minimize their consumption, you must beware of

- low and high salt content (optimal 4kg/m^3)
- water temperature under 10°C
- low water flow
- water is too hard
- pH values under 7,5
- use of additives containing metals

Electrode cleaning

During operation, the electrodes are gradually covered by sediments from hard water, which must be periodically removed. Electrode coverage by sediments leads to a lower output of the electrolyser, we can recognize this by the decreasing output (as shown on the ASIN Aqua SALT display) while the salt content remains the same. In this case we must turn off the system, take the electrodes out and soak them in the electrode cleaning tank, filled with electrode cleaning solution, for approx. 10 minutes. The whitish coating on the electrodes should disappear and the electrodes can be put back into the electrolyser.

Warranty

The manufacturer provides a two year warranty for ASIN Aqua SALT units as of the date of sale. If this date cannot be credibly documented, the warranty runs from the date of manufacture on the manufacturer's label.
The manufacturer is not liable for defects caused by use of the ASIN Aqua SALT in disregard of the manual. The manufacturer is further not liable for damages caused by inexpert installation of the unit. Before you call a service technician to claim the warranty, check the following points, which are under your liability:

1. electric supply is functional
2. the unit is mounted in compliance with the manual
3. the water meets the required pH and salt content parameters
4. the electrode is clean
5. there is sufficient water flow through the electrode
6. the apparatus fuse is all right.

Maintenance

The ASIN Aqua SALT and TE27 electrolyser do not require maintenance. However both apparatuses are in a highly corrosive environment and should be checked regularly, or the electric contacts should be cleaned. The electrolyser must be maintained in temperatures above zero, the water inside should not freeze under any circumstances!

Safety at work

The apparatus may be operated by persons withou electro-technical qualification. Taking off covers and exchanging any parts is not allowed. To clean the apparatus, you may use a cloth soaked in water or detergent. It is not admissible to use other organic solvents, nor to apply means that could cause mechanical damage to the surface of the plastic casing or face cover.

The person operating the ASIN Aqua SALT unit should be advised that should the apparatus be used in a manner different than that designated by the manufacturer, the unit may not provide the full protection it is designed for.