



hydrolysis + ultraviolet INSTALLATION GUIDE

NEW MODEL 2016 FAN LESS

from **1,5g SALT/L**

PORTABLE COLOR DISPLAY (TFT)

WORLDWIDE REMOTE CONTROL

WIFI and MODBUS

UPGRADE POSSIBLE

SELF CLEAN

SEA WATER

1 DESCRIPTION

Water treatment system and a controller for swimming pools. This water treatment is a combination of oxidizing agents such as oxygen, hydrogen peroxide, OH, ozone and chlorine. These oxidants combat and eliminate pathogenic agents and organic matter present in the water. Additionally, the UV light of the system reinforces the process of disinfection. The necessary salinity for the process (1,5 to 2,5 g per liter) maintains a residual chlorine level which is imperceptible for eyes and skin. The system controls centrally all the components of your pool, ensuring an efficient interaction.

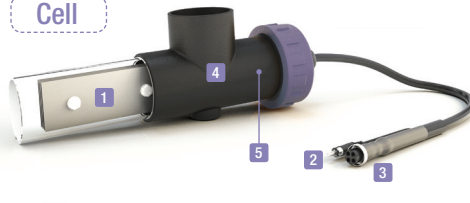


Electronic box



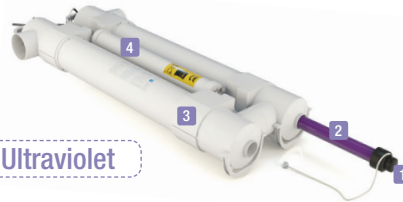
- 1 Hydrolysis 110-230 V
- 2 RCA flow detector
- 3 Main connection 230 V
- 4 ON/OFF switch
- 5 Fuse for device and cell 4 A
- 6 Fuse relays 4 A

Cell



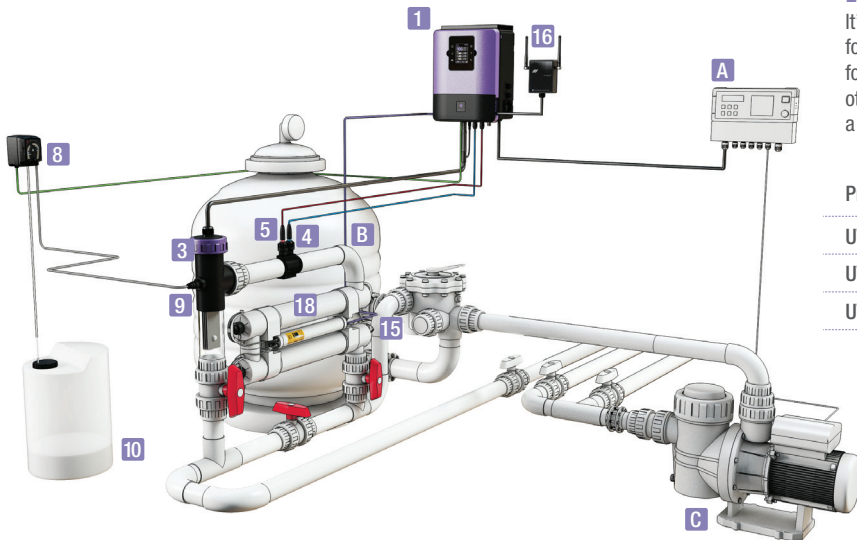
- 1 Hydrolysis cell
- 2 RCA flow detector
- 3 Cell connection
- 4 Cell housing
- 5 Flow/gas detector (internal)

Ultraviolet



- 1 UV lamp 55 W
- 2 Quartz crystal
- 3 White ABS Support
- 4 Power transformer

2 SYSTEM INSTALLATION



- A Filtration pump timer
- B Silix / glass / diatom filter
- C Recirculation pump
- 1 Electronic box
- 3 Hydrolysis cell (always in vertical position)
- 4 pH probe (optional - for models with pH control)
- 5 redox probe (optional - for models with redox control)
- 8 Acid dosing pump (optional - for models with pH control)
- 9 Acid injector (optional - for models with pH control)
- 10 Hydrochloric acid container (optional, for models with pH control, not supplied with unit)
- 15 Other pool equipment
- 16 Module RF or RF/WIFI or WIFI
- 18 Ultraviolet

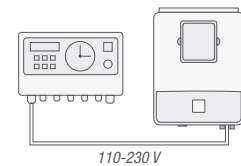
Electrical consumption

It's recommended to use a time delay circuit breaker of 25 A for domestic devices and a time delay circuit breaker of 40 A for industrial devices. In case of sharing the power supply with other devices please consult a technician in order to dimension a correct installation.

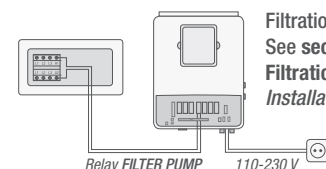
Product	Maximum consumption	Producto	Maximum consumption
UV 16	230 W	UV 85	790 W
UV 33	260 W	UV 125	1100 W
UV 50	510 W	UV 175	1360 W
Domestic devices		UV 250	2000 W
Industrial devices			



* Filtration control by external timer



Filtration mode: "Manual/ON"



Filtration mode: See section 5 - Filtration of the General Installation Guide

3 INITIAL WATER ADJUSTMENTS

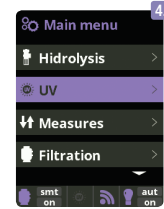
Water adjustments

- 1 Alkalinity between 90 and 110 ppm's.
 - 2 pH between 7,2 and 7,5.
 - 3 Chlorine between 1 y 1,5 ppm's.
- If water comes from a well: Shock chlorination with trichloroisocyanuric acid (2 kg / 50 m³ of water).

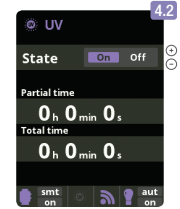
Conductivity adjustments

- 1 In poorly conductive waters we recommend to add 2 kg of sodium chloride (NaCl) for every m³ of pool water.
- In pools that receives large amounts of strong sunlight, add 30 gr/m³ of stabiliser (isocyanuric acid).

4 ULTRAVIOLET



OK



4.1 Ultraviolet: Programming UV system.
4.2 Status ON: Whenever the filtration is working the UV will switch on.

4.2 Status OFF: The UV system will never switch on. Furthermore on this display the partial and total working hours of the UV lamps can be verified.

5 MAINTENANCE

First days of maintenance

During the first 10-15 days your pool system will require more attention and the following care:

- 1 Make sure the pH remains on the ideal level (7,2 - 7,5). If the pH is unusually unstable and uses a lot of acid, check the alkalinity (recommended levels between 80 - 120 ppm).
- 2 The pool must be vacuumed and the skimmers cleaned whenever necessary to ensure perfect water conditions.

REMEMBER that the system requires a certain amount of time to adapt to your swimming pool and will require additional chemicals during the first 3-5 days.

Cleaning the titanium cell

If necessary, carry out a monthly visual inspection. To clean the cell:

- 1 Remove the cell from its support (after turning off the filtration system and closing off the necessary valves).
- 2 Place the cell for no more than 10 minutes in 15% hydrochloric acid (1,5 l of acid for each 8,5 l of water).
- 3 Once the incrustations have softened remove with a hose to complete cleaning the cell.

DO NOT USE METALIC OR SHARP OBJECTS TO REMOVE INCRUSTATIONS. Scratching the edges or surface of the cell will make it vulnerable to chemicals, deteriorate the cell and cancel the guarantee.

Fortnightly checks

FREE CHLORINE: 1,0 ppm
pH: 7,2 - 7,5

Monthly checks

TOTAL ALKALINITY (TAC) pH: 80 - 120 ppm
SALT CONCENTRATION: 1.500 - 2.500 ppm

CYANURIC ACID: 30 - 50 ppm
TITANIUM CELL: Visual inspection to detect incrustations.

General maintenance

- 1 The pool must be vacuumed as usual and the skimmers emptied whenever necessary.
- 2 **FILTER BACKWASHING:** The system requires only occasional filter backwashing; once every 20 days should be sufficient (providing the filter pressure does not exceed 1 bar, in which case a backwash may be necessary).
VERY IMPORTANT: Make sure the cell is off while cleaning the filter. If the system controls the filtration pump, use the option "filter cleaning" of the programmed filtration mode. See section 5- Filtration / Filter Cleaning of the General Installation Guide.
- 3 **ADDING NEW WATER:** Always through the skimmers so that the new water passes through the system before entering the pool. Remember to add the necessary salt (2 gr) per added liter of water.
- 4 In winter changing the pool water is not recommendable. We recommend that the system runs 2-3 times per week (2-3 hours per day).
- 5 **DOSING PUMPS:** Check regularly to ensure that the container contains liquid to prevent the dosing pump of running dry. The dosing pump requires maintenance (SEE INSTRUCTIONS ON BOX).
- 6 **pH PROBES / redoX / CONDUCTIVITY:** Probes must be cleaned whenever necessary (check every 5-6 months). To clean the probe insert in distilled water (clear liquid). After each cleaning the probes must be calibrated. Also: the probes should never dry out and must be kept wet if stored (when emptying the pool for winterizing, make sure to store the measuring head in water).

6 FUNCTIONING OF THE UV SYSTEM

IMPORTANT SAFETY INFORMATION:

- Never look directly into a lamp while UV light is ON.
- Do not operate in dry. Do not cover the unit.
- Always disconnect the unit from the power supply and cut the water supply before performing maintenance.
- The unit may not be immersed in water.
- If the quartz sleeve is cracked, replace it immediately.

⚠ The unit should be protected against frost or stored in indoor enclosures during the winter months.

OPERATION: The UV system will always work together with the filtration. In the main menu, option Ultraviolet, the accumulated working hours of the lamps can be verified (see section 4- Ultraviolet).

MOUNTING ON A WALL OR OTHER VERTICAL SURFACE: This unit can be mounted on a wall or other vertical surface. When the unit is full of water it might be too heavy for mounting on a wooden panel of a conventional fence and therefore should be mounted on a wall.

CAUTION: To prevent the unit from falling into the water, do not install over or adjacent to the pool. Do not electrically connect the unit until the plumbing has been completed and is securely fixed.

EFFICIENCY: For optimal performance we recommend that the total volume of the pool water passes through the UV unit every four hours.

Routine maintenance of UV system

Under normal conditions, the UV lamps placed inside the UV will last 8,000 hours. In the main menu, option Ultraviolet, the accumulated operation hours of the lamps can be verified (see section 4- *Ultraviolet*).

- 1 For the annual lamp replacement, use new O-rings. When reassembling the unit, make sure the female threads of the compression fittings and male threads of the main structure are clean.
- 2 Reassemble and firmly hand tighten the compression fittings. Replace the lamp or fit a new one. Now reassemble the lampholders and the blue lampholder coating ensuring to match the correct numbered lampholders.

NOTE: When reassembling the unit, pinch the blue coating of lampholder to release trapped air. If the trapped air is not released, it may cause the disconnection of the lamp holder. Reconnect and turn the water supply on to ensure there are no leaks before you reconnect the power supply.

7 TROUBLESHOOTING

Blank display

- Check if ON/OFF switch is illuminated.
- Check the connection wire between display and motherboard.
- Check fuse of the device 3.15 A – it could have tripped due to overload.
- Check the power supply 110V/60Hz – 230V/50Hz.
- If problem persists contact TECHNICAL SERVICE

Hydrolysis does not reach maximum intensity

- Low water temperature.
- Check sodium bromide or common salt concentration in water.
- Check cell status (may be incrustated or calcified).
- Clean the cell according to the instructions in section 5.
- Clean the flow detector situated in the cell housing.
- Check titanium cell is not worn out (remember that the cell is guaranteed for 5.000 hours, approx. 2-3 years of summer usage).

Free chlorine levels don't reach 0,2 ppm

- Increase filtration interval.
- Increase hydrolysis level.
- Check levels of sodium bromide or common salt in the pool (2 gr NaCl/l).
- Check level of isocyanuric acid in pool (30-50 ppm), only if using common salt.
- Check if reactive agents in test kit are expired.
- Check if the temperature or amount of users has risen.
- If the water pH is above 7,8 it must be adjusted.

Hydrolysis display shows LOW

- Water lacks conductivity (see section 3 - Initial water adjustments).
- Check for incrustations on cell.
- See section 7 - Hydrolysis does not reach maximum intensity.

Hydrolysis display shows FLOW

- Check flow detector cable.
- Clean incrustations of flow detector at the top of cell housing.
- Check if system is free of air (probe must be always submerged).

Polarity 1 reaches maximum intensity, but polarity 2 (auto clean) does not reach maximum intensity

- If salt level is correct (2 kg/m³): Cell is reaching its end of life. As of this moment check intensity every 15-30 days.
- When polarity 2 does not reach medium intensity, we recommend substituting the cell for a new one if it happens during the summer period. If it happens during winter, change the cell before the next summer period.

Excess of chlorine in the water

- Lower hydrolysis cell intensity.
- If your system includes automatic redoX control, check redoX setpoint.
- Check redoX probe and calibrate it if necessary.

Titanium cell incrustated in less than 1 month

- Very hard waters with a high pH and total alkalinity: balance water adjusting pH and total alkalinity.
- Check to ensure the system automatically changes polarity every 300 minutes approximately.
- Consult with our technical service to consider accelerating the polarity change (auto-cleaning). **WARNING:** Accelerating the polarity change decreases the cell life (5.000 hours) proportionally.

Alarm AL3 and pH dosing pump stopped

- The maximum dosing time (standard 200 min.) is accomplished and the acid dosing pump stops in order to avoid the acidification of the water.
- To delete the message and to restart the metering press ESC (⊙). Do the following verifications in order to preclude errors on the device: Verify if the pH probe reading is correct (if not, calibrate the probe or substitute it with a new one); Verify if the acid/base deposit is full and if the dosing pump is working correctly; Verify the variable speed of the dosing pump.

White flakes in the water

- The water is excessively hard and it is unbalanced.
- Balance the water and check the cell, proceeding to clean it if necessary.
- Put 1 small bag of flocculant in the skimmer and recirculate 24 hours.

Rust on metallic components in the pool

- Metallic elements lack standardized earth connection. Contact an electrician to solve the problem.
- Rusted components are not stainless steel (minimum 304 – recommended 316).

WARNING

Keep chemical levels in pool as instructed in this manual.

CLEANING FILTER

Very Important: Make sure the cell is off while cleaning the filter. If the system controls the filtration pump, use the option "filter cleaning" of the programmed filtration mode. See section 5 – Filtration / Filter Cleaning of the General Installation Guide.

VERY IMPORTANT

Remember that the system needs some time to adapt to your pool and that you will have to increase chemical levels for the first 5 days.

EARTHING

All metallic components in the pool such as lamps, ladders, heat exchangers, drains or similar elements within 3 m from the pool (10 feet) must be connected to an earth below 37 Ohms. If using heat exchangers, we recommend them to be made of titanium.

SECURITY

To avoid accidents, children should not handle this product unless supervised by an adult. Children should be supervised at all times when in or near a spa, pool or jacuzzi.

HANDLING AND DOSING DANGEROUS CHEMICALS

Chemicals should be handled with extreme precaution. When preparing acid, always add acid to water, never add water to acid, because very dangerous gases may be produced.

