Electrical wiring diagram of the LAGUNA Unit, 230 VAC

LAGUNA Control of the 230 VAC filter

ELECTRODES FILTRATION PUMP

Wiring diagram of the LAGUNA Unit incorporated in the filtering circuit.

LAGUNA PUMP FILTER

User Instruction and Technical Report to the LAGUNA Unit

Mechanical Installation of the LAGUNA Unit

On the Laguna Unit's upper back side there are two clamps designed to hold the unit on the wall. Use the two self-tapping screws and brickwork plugs included in the paskage to fasten the unit. Locate the Laguna unit in the vicinity of the swimming pool filtration systém's time control. Container with the electrodes has its standard inlet and outlet tubes fitted with the PVC sockets with the clearance of 52 mm and outer diameter of 63 mm. Should it be necessary, the clearance may be modified with a reduction pieces inserted and cemented inside, sized as required in order to match the intake line of the filtration pump. The electrodes-containing vessel shall be placed and sealed in the intake line upstream the pump's hair filter. CAUTION: The installation is not allowed at the pump's delivery part or downstream the sand filter.

Electrical Installation of the LAGUNA Unit

The Laguna Unit is located in the plastic box with the IP 40 covering, protecting the circuitry against the spraying water, though not being watertight. This unit can only be installed in the dry surrounding, beyond the reach of weather conditions. Connection to the 230 VAC power supply has to be carried out to the control unit which is responsible for the swimming pool filtration pump's functionality. In other words: the Laguna Unit is on while the filtration pump is operating and while the filtration pump is inactive the Laguna Unit must also be off. The Laguna Unit will take not more than 0.1 A from the power supply, and can therefore be powered from the circuit-breaker protecting the motor of the filtration unit. At the end of the output line for the electrodes, there are two connectors to be slid onto the electrode terminals located on the vessel. As required, the length of the input line can be extended up to 15 meters with the wire cross-section of 2x0.5 mm retained. The electrical installation of the Laguna Unit may only be entrusted to the person qualified properly to connect the electrical appliances.

Setting the Laguna Unit

The Laguna Unit can be set for its reliable operation in the swimming pools with the capacity of 10,000 liter to 300,000 liter, using the variable current between the electrodes within the range from about 00 - 98 mA, depending on the amount of water in the swimming pool and on the filtration time. The values listed in the below table are given just for your information,

as they depend on the swimming pool specifications and location (whether outdoor or indoor, under the canvass shelter on a short-term or long-term basis).

Swimming pool capacity/filters	Time schedule				
	on	off	on	off	mA
10,000 - 25,000	4	8	4	8	35-65
25,000 - 50,000	5	7	5	7	40-75
50,000 - 70,000	4	8	4	8	50-80
70,000 - 100,000	5	7	5	7	80-86
100,000 - 200,000	10	2	10	2	70-75
200,000 - 300,000	12	0	12	0	75-80

In the case of the swimming pools sheltered with canvass the lower values should be set. Example: swimming pool 30 m3 --- cca 30-40 mA

Water Treatment Instructions for the Swimming Pool with chlorine-free water

The Laguna Unit is the device which makes it possible to maintain the swimming pool water with the 90% savings on chlorine or similar substances used to disinfect the swimming pool water.

In its operation the Laguna unit relies on the controlled release of the copper, silver, and zinc ions that are killing bacteria and algae.

The Laguna Unit operates in cooperation with the filtration unit where there are the electrodes installed that release the copper, silver, and zinc ions, letting them into the intake pipeline. Prior to setting the unit in operation the swimming pool water must be treated to the below listed values:

pН	6.8 - 7.4
Alkalinity	80 – 120 ppm
CL	$0.3-0.1\ mg/liter$

After the 1st week with the Laguna Unit in operation reduce the CL to 50 % and carry out the pH test of the swimming pool water (where necessary, make corrections to get the above values).

After the 2nd week with the Laguna Unit in operation reduce the CL to 25 % of its initial dosage and carry out the pH and alkalinity tests of the swimming pool water.

After the 3rd week with the Laguna Unit in operation the CL dosing can be reduced to 0.1 mg/liter. Carry out again the pH and alkalinity tests of the swimming pool water. Following these 3 weeks of operation, the Laguna Unit is able to fully compensate for the 90 % of the usual contents of CL and other chemical substances necessary to maintain the swimming pool water.

It is only necessary to keep the pH value within the range from 6.8 to 7.4.

Caution: The installation of the unit may only be entrusted to a trained personnel who shall set the unit depending on the swimming pool size. The unit is sealed and set in the factory. With the seal damaged, the purchaser shall lose all the warranties.

Technical data:

Dimensions:H140 mm, W190 mm, D45 mmWeight:550 gSupply voltage:230 VACPower requirement:3 W max.Protection:IP 40Class of protection:I

Length of electrodes feeding cables: 15 m max. The unit has been approved by the EZU state testing laboratory