

Operating and maintenance instructions

Isipool pH L3



Isipool pH L3 is a peristaltic pump with an integral meter which can be directly connected to a pH probe. The programming is very simple.

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1.0 GENERAL COMMENTS

1.1 Warnings

The aim of the AQUA S.p.A. pump manual is to provide you with all the necessary information for a proper installation and maintenance in order to give you optimum results whilst in operation.

For this reason it is really important reading with attention the instructions given below since they furnish all the indications necessary for the sureness of the installation, use and maintenance

- This manual has to be preserved with care to be consulted in whatever occasion.
 - At the moment of the receipt you have to check the integrity of the pump and of all its components, in case of anomalies consult skilled staff before making interventions.
 - Before the installation of the pump check that all the data on the pump's label correspond to those of the electrical plant.
 - Do not operate with bare/naked hands or feet
 - Do not leave the equipment exposed to the action of the atmospheric agents.
 - The equipment has to be operated from skilled person.
 - In case of improper functioning of the pump switch off and contact our technical assistance for any necessary repairs.
 - For a correct functioning it is necessary to use original spare parts and original accessories.
- AQUA S.p.A. declines whatever responsibility in reference with break down due to tampering or the use of not original spare parts and accessories.
- The electrical plant has to be in conformity with the rules of the country where it is realised.
 - The room temperature of utilisation can't over take 45° C

1.2 Design standard

Our pumps are built according to the actual general directives endowed with CE mark in conformity with the following European directives:

- N° 89/336/CEE regarding "electromagnetic compatibility"
- N° 73/23/CEE regarding "low voltages", as also the subsequent modification N°93/68/CEE
- and according to the procedures preview from our quality manual that follows the ISO 14001:1996 and ISO 9001:2000 directives.

Granted this we think that in order to obtain a high trustworthiness and a lasting functioning of the pump it is necessary to follow with attention our manual particularly in reference with the maintenance.

AQUA S.p.A. declines all responsibility in reference with whatever intervention on the equipment from not skilled personnel.

2.0 TECHNICAL CHARACTERISTICS

2.1 General rules

Install the pump:

- On an horizontal reinforcement (ex: stoking tank) so that the pump head stays always in vertical position +/-15°.
- far from a hot source in dry places at maximum temperature of 45°C and minimum 0°C.
- In a ventilated place and easily accessible by an operator for periodical maintenance.
- At a suitable height above the chemical up to a maximum height of 1.5 meters. If for exigency of the plant it's necessary to install the pump under the level of the chemical, you need to use an injection valve or an anti siphon valve.
- Do not install the pump over the tank in presence of liquids that emanate fumes unless it is hermetically closed.

2.2 Electrical characteristics

Power supply: 230 VAC 50/60 HZ

2.3 Electric connection

Before installation ensure that the supply is adequately earthed and is fitted with a suitably sensitive circuit breaker . Connect the pump to the power supply respecting the values you can see on the identify label of the pump.

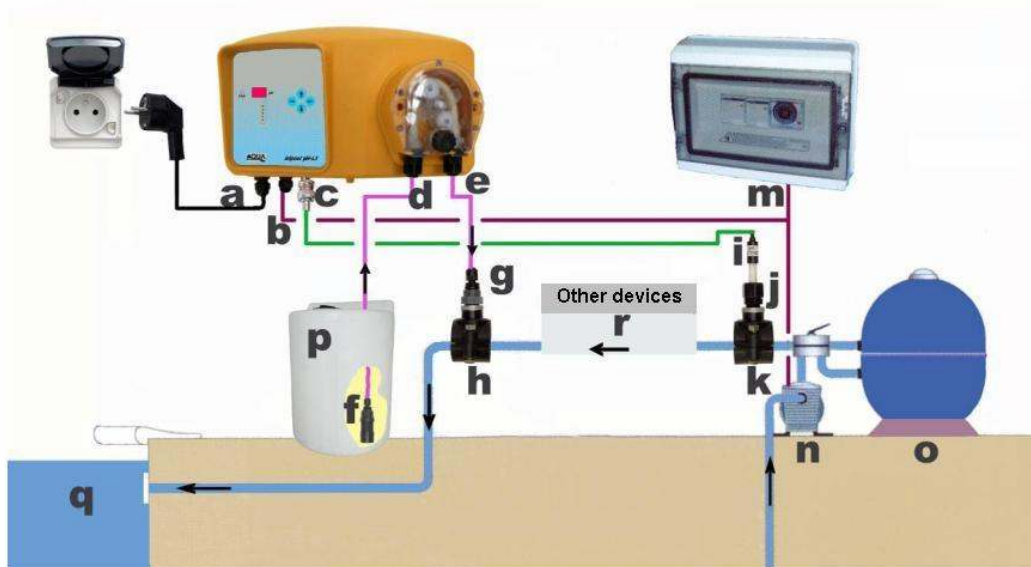
2.4 Standard accessories



1. Isipool pH L3 pump
2. Suction and delivery tubing
3. Buffer solutions pH4-pH7
4. Fixing slide clamp
5. Wall fixing screws

- i. pH probe
- j. Electrode holder
- k. Collar DN50
- g. Injection nipple
- h. Collar DN50
- f. Suction filter

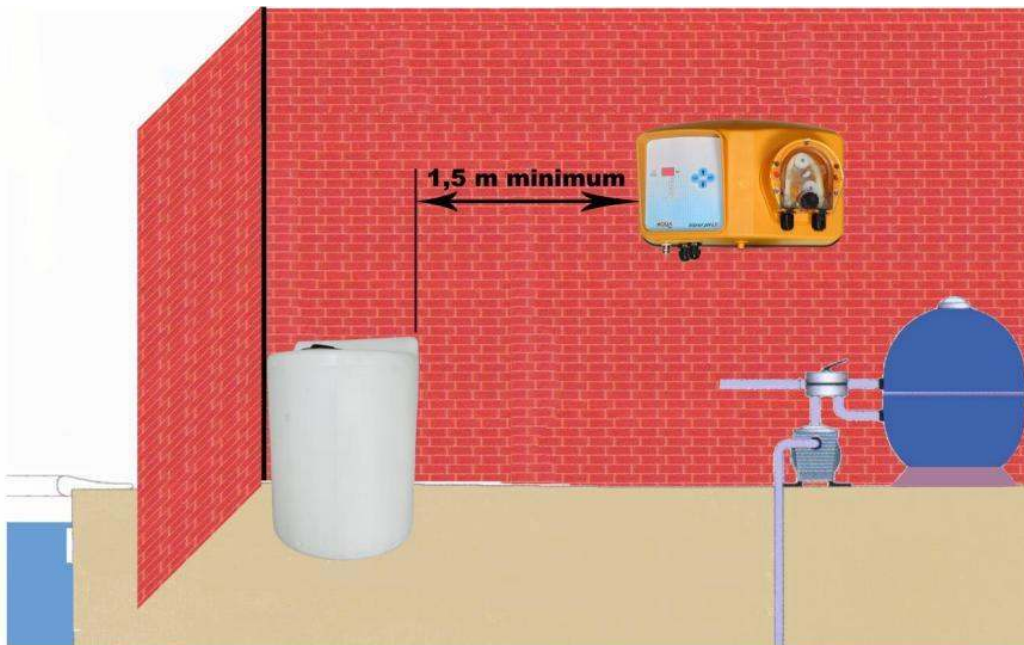
2.5 Electric and hydraulic connection scheme



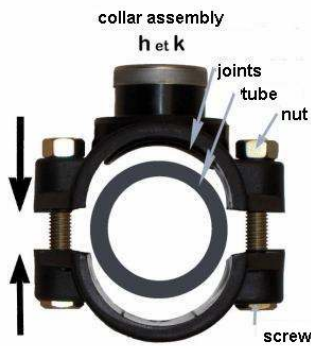
- A: Power cable with schuko plug for classic wall 230Vac socket
- B: Power cable without plug to be connected with the exit line of the filtration pump "n" with the electric box of the swimming pool "m"
- C: BNC male input to be connected to the BNC female of the probe "j"
- D: Suction hose of the pump connected to the foot filter "f" into the tank of the chemical "p"
- E: Delivery hose of the pump connected to the injection nipple "g"
- G: Injection valve fixed into the collar "h" (put on the threading some Teflon)

- H:** Collar connected to the injection valve “g” before the input of the recycle of the swimming pool.
- I:** pH probe into the electrode holder “j” and collar “k” to be positioned in vertical position with a tolerance of $\pm 45^\circ$
- K:** Collar for the electrode holder “j” positioned at the exit of the installation filter.
- M:** Electric box to drive the filtration plant
- N:** Filtration pump to suck the water from the swimming pool and send it into the filter “o”.
- O:** Filter for the filtration of the water of the swimming pool.
- P:** Tank of the chemical to feed the peristaltic pump through the foot filter “f”.
- Q:** Swimming pool representation.

2.6 Installation example.



2.7 Accessories construction



make a hole in the tube through the collar

Diameter 8 mm for the collar h
Diameter 14 mm for the collar k



Injection nipple assembly g upon the collar h



electrode holder assembly J upon the collar K



Electrode assembly :

1. Put off the cap of the electrode (Fill the cap with $\frac{3}{4}$ of water to store the electrode)
2. Assembly the electrode respecting the order of the pieces shown in the central figure. Insert the electrode into the electrode holder "j" pushing and rotating to the left and right. When all the pieces are in the electrode holder screw the nut but not totally to push the electrode till the foot of the tube and to retire it for 2 cm so to adjust the electrode at the centre of the hose.
3. Now it is possible to screw totally the nut of the electrode holder "j".

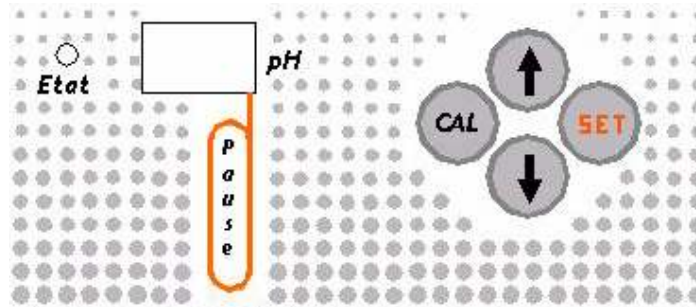









Hose assembly on the nipples of the pieces d,e,f,g



3.0 Isipool programming

3.1 Description of the frontal panel



	<p><u>If the light is:</u> Fixed green, the pH is correct Blinking green, the pump is dosing Fixed red, the pump is in calibration mode Blinking red, there is an error</p>
	<p><u>The display shows:</u> The pH value The state of the calibration The alarms</p>
	<p><u>Shows if the filtration is active or not:</u> The red point is blinking = the filtration is not active The red point is not lit up = the filtration is active</p>
	<p>Increase the desired pH value (with the SET button) Alkaline or acid dosing option (with the SET button)</p>
	<p>Decrease the desired pH value (with the SET button) Alkaline or acid dosing option (with the SET button) Put in stand by / work the Isipool</p>
	<p>Allows to show the setpoint Allows to change the set point Allows to change the dosing in Alkaline or acid</p>
	<p>Allows to do the calibration of the probe</p>

3.2 Isipool stand by/ work

Stand by:

Push the Down button till the display is switched of (about 5 seconds). Only the red point “pausa” blinks showing that the pump is powered but in stand by state.

Work:

To pass from the stand by state to the work state push one time the Down button and the display will light up and the Isipool is ready for pH regulation.

3.3 Default settings:

- pH set point 7,4 pH
- Acid Dosing to decrease the pH

3.4 pH probe calibration:

Accessories to calibrate the probe:

- An empty bottle to be refilled with drinkable water
- Buffer solution pH7
- Buffer solution pH4
- pH probe out of the hose of the plant

- Clean the electrode into the bottle of drinkable water.
- Dip the electrode into the pH7 buffer solution, move slowly for 3 seconds
- Push the CAL button till the display will show the value 7.0 ,
- Wait for about 1 minute till the display will show alternatively the word CAL and the number 4.0
- Clean the electrode into the bottle of drinkable water
- Dip the electrode into the pH4 buffer solution and move slowly for 3 seconds
- Wait for about 1 minute till the display will show the quality of the electrode (from 25% to 99%). If the value of the quality is under 50% it is suggested to change the electrode.
- Put the electrode into the hose of the swimming pool plant
- Push CAL button to switch the pump in working mode.

3.5 Modification of the default settings

Alkaline dosing to increase the pH:

- Push the SET button for some seconds (about ten seconds) till the display will show the word AC that means Acid dosing (pH -).
- Release SET button
- Push one time the Down button and the display will show the word AL that means Alkaline dosing (pH +).
- Push SET button to confirm the choice and to switch in work mode the pump.

Changing the set point:

- Push the SET button to read the value of the set point. If you want to change it keep pushing the SET button and in the same time push the Down button if you want to decrease the value of the set point or the Up button if you want to increase it. One touch on the button Down or Up will modify the value of 0.1 pH.
- When the value shown by the display will be the desired one, release the button SET.

4.0 Alarms

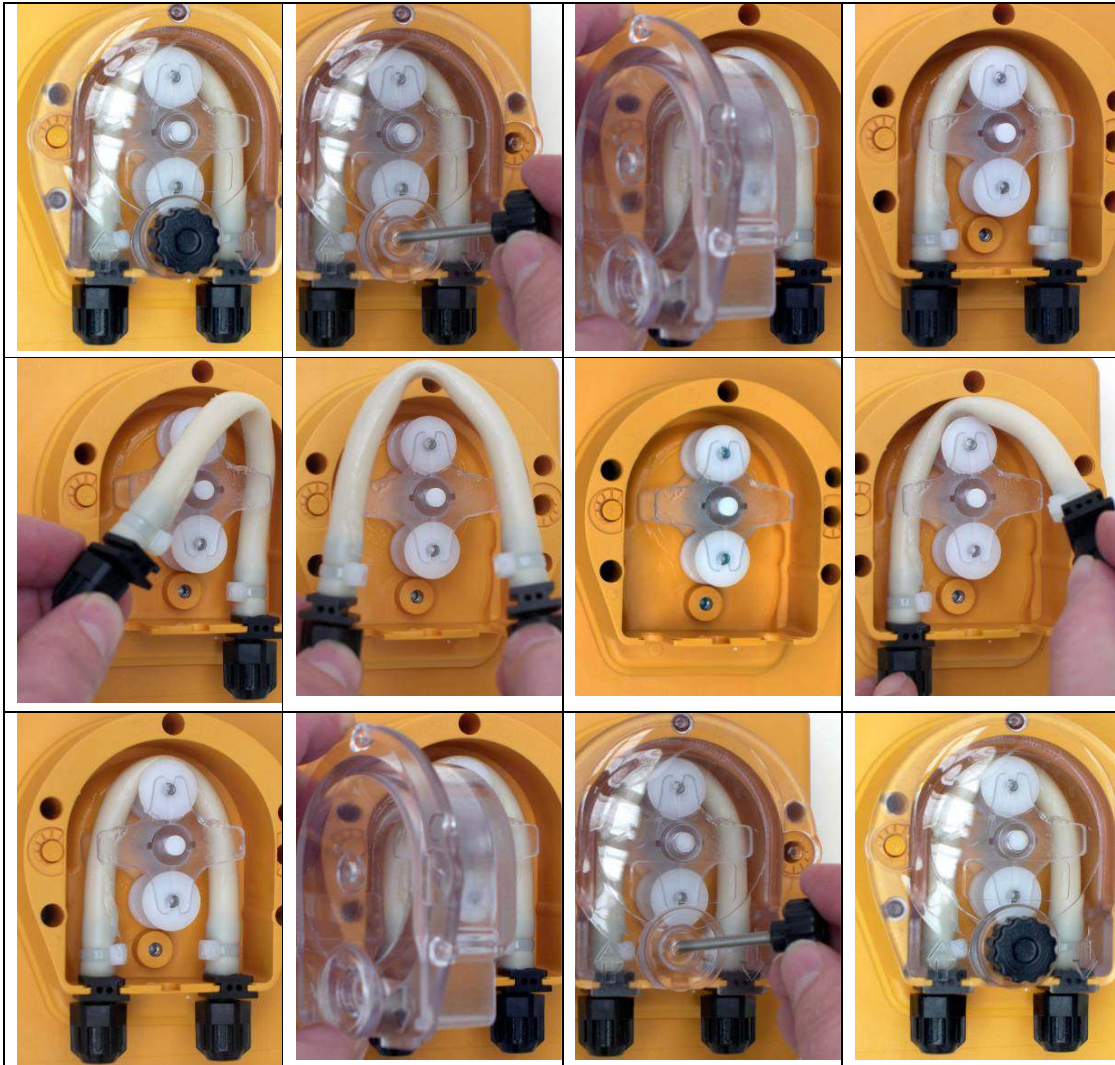
rE	The value of the measured pH cannot be lower than 6 pH and higher than 8 pH.
cE	The calibration cannot be done for different reasons: <ul style="list-style-type: none">-The buffer solutions are not good (replace them with new ones)-The pH probe doesn't work (replace it with a new one)-The probe's quality is lower than 25 % (replace it with a new one)
UL	The tank of the chemical is empty

5.0 Maintenance

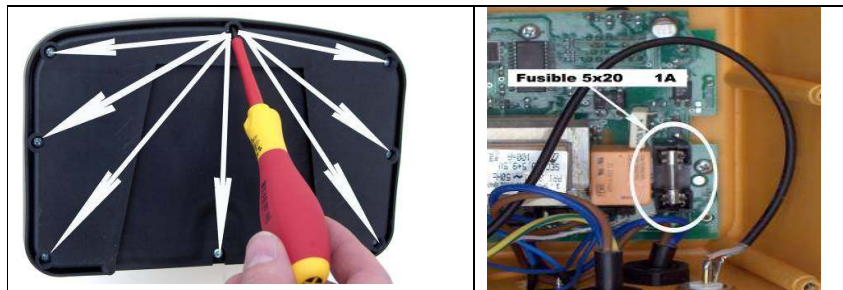
ATTENTION!

It's necessary to effectuate all the operations with the power off and with gloves and glasses suitable for the product used. Consult the supplier of the chemical product.

5.1 Peristaltic hose changing:



5.2 Fuse replacement



5.3 Pump storage

When you want to store the pump (in winter for example) you have to protect the peristaltic hose. It is recommended to dose clean water to avoid the chemical attack of the hose when the pump is stored. Rotate the roller holder in clockwise sense to move the pump to the position of the photograph above in fact it is recommended to not leave pressed the hose near the suction part



5.4 Probe storage

When the swimming pool is closed for long period (for example during the winter) the probe must be retired from the installation and stored with the cap on. The cap must be filled for 1/3 of clean water (see page 6).

6.0 Advices on the chemicals

6.1 Suggested chemicals

Use the most sold pH acid chemicals to decrease the pH (see installer/distributor suggestions).
Use the most sold pH alkaline chemicals to increase the pH (see installer/distributor suggestions).

6.2 Not suggested chemicals

Chlordric acid it is not recommended because it easily damages the pump. If anyway you want to use it we suggest to add 5 volumes of water for 1 volume of acid chloridric.

7.0 WARRANTY CERTIFICATE

The pumps manufactured by AQUA S.p.A. are warranted to be free from defects in workmanship and material for 12 months of operation starting from the delivery date to the first purchaser.

Within the above stated period AQUA S.p.A. will supply free of charge any part that upon examination by AQUA S.p.A. or by an authorised dealer, is disclosed to have been defective in workmanship or material, or at its option, it will repair the parts directly or through authorised workshops. It remains anyway excluded from whatever responsibility and obligation for others costs, damages and direct or indirect losses that come from the use or the not use availability, either total or partial.

The reparation or the supply in substitution will neither extend nor renew the period of guarantee. They remain anyway at charge of the purchaser the costs of plant pumps mounting and disassembling, transport cost and using materials (filters, valves, and so on). AQUA S.p.A.'s duties, as above, are not valid when:

- The pumps are not used according to the AQUA S.p.A. instructions as in the operating manual and maintenance instructions;
- The pumps are repaired, disassembled, modified by workshop not authorised from AQUA S.p.A.;
- They have used not original AQUA S.p.A. spare parts
- The injection plans are damaged by products that are not suitable;
- The electric plants have been damaged because of external causes such as whatever type of over tensions.

At the end of the twelfth month from the delivery date, AQUA S.p.A. will be free from any liability and from all the duties as above.