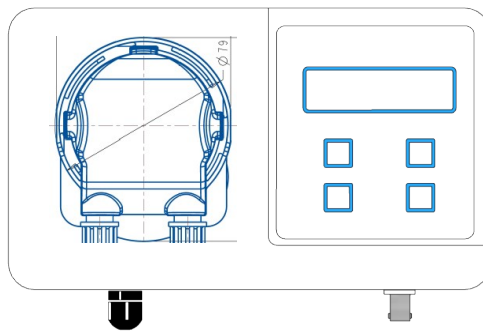
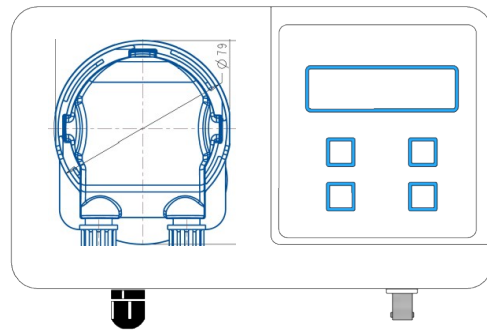


**MANUAL SMC**  
**pH BASIC**



**MANUAL**  
**pH Basic**





## **WARNINGS**

The pH function allows you to measure the pH of your pool and dose acid for correction in an automatic way. However, pH probes are subject to wear, their measures may deteriorate over time and they are a delicate component that can easily be damaged. Likewise, like any other device, the pH measurement system could suffer any failure that could cause an incorrect pH reading. Therefore, you should check periodically by manual pH measures, using approved means to ensure that the pH is correct.

INNOWATER TRATAMIENTOS INTERGRALES DEL AGUA S.L., declines all responsibility for material and personal damages caused by an excessive or insufficient dosage of acid or due to its handling.

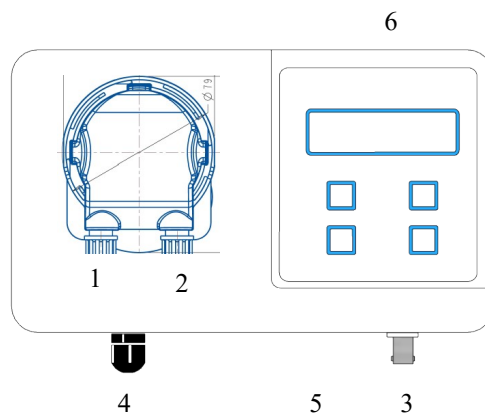
**ATTENTION!** The acid is corrosive and can severely damage eyes and skin. Wear protective glasses and gloves when handling the pump and acid.

## DESCRIPTION

The pH option allows you to measure the pH by means of an electrode connected to the equipment and correct it by means of the **pH Basic** acid dosing pump. The equipment will mediate the pH and send a control signal to the dosing pump.

All the control and measurement functions are performed and accessible through the Display to the device.

To access, press the **MENU** key from the main screen and scroll with the help of the arrows.



1. Pump suction inlet
2. Pump injection outlet
3. BNC Input for level sensor (from acid tank)
4. Input power cable 230 VAC
5. PH Electrode Input
6. Display

## INSTALLATION

**pH Basic pump.** Install the pump on the wall using the supplied bracket. Before screwing it into the pump, use the bracket to mark the location of the holes in the wall that you will need to make. Choose a place near the injection point. You can choose the place freely. Connect the power cable to a 230 VAC outlet.

**PH electrode.** Install the supplied collar on the pipe **BEFORE** the chlorinator cell and as far away as possible from it. Try to choose a section of the circuit that won't be empty of water when the filtration pump stops because if the probe is not permanently immersed in water it will deteriorate. Insert the pH electrode into the collar until the end and connect its cable to the bottom of the device.

**Injection.** Install the injector using the collar supplied in the pipeline after the chlorinator cell and just before returning to the pool. Connect one end of the opaque PVC rigid tube to the injector fitting. Connect the other end of the tube to the injection inlet fitting of the pump (2) marked with an arrow pointing downwards.

**Aspiration.** Connect one end of the transparent tube to the suction inlet fitting of the pump (1) marked with an arrow pointing upwards and the other end of the tube to the suction filter fitting. Do not immerse the filter in the acid tank yet.

**Acid tank.** We strongly recommend that you do not place the acid tank and salt chlorinator in the same room. The vapors that emanate from it will quickly deteriorate any metallic element and electronic equipment.

**Level probe.** Attach the end of the cable from the level probe that carries the float to the suction filter using the supplied bracket. Connect the other end of the cable to the BNC connector (3) of the pH Basic pump. Immerse the suction filter together with the level probe that you have fixed to it in the acid tank and make sure that it remains upright and stable on the bottom. Close the acid tank, and keep it as sealed as possible.

## **FUNCTIONING**

### **Start up.**

Once all the elements are installed (pH electrode, injection / suction tubes, level probe) press the manual pumping button (OK button), 3 seconds, to operate the pump until the acid has been sucked up to the injection point . Then proceed to the set point and Calibration of the probe procedures, as detailed in the next section.

The equipment will permanently measure a signal and will command the pump, which will dose according to the values established in the set points and the pH measured. The farther measure from the pH set point, the higher the dosing frequency.

### **Manual Pump Priming.**

For manual priming of the pump, press and hold the **OK** key for 3 seconds, and hold down the time you want the pump to be operating manually.

### **Level alarm.**

-If the float drops down due to the lack of acid in the acid tank, the level alarm will be activated and the pump will stop dosing so that the peristaltic membrane and the motor will not be damaged.

This is indicated by a beep and an intermittent flash on the Display screen, indicating EMPTY TANK ...

-Fill the tank, decanter or drum, and the pump will be activated and functioning again.

-The manual activation of the pump by means of OK key, keeps on enabled even in the level alarm.

-If you want to Switch Off the level alarm, simply disconnect the Level probe from the device.

## CONFIGURATION AND CALIBRATION

To access the Configuration Menu, press the **MENU** key from the main device screen and scroll with the help of the arrows.

```
MAIN MENU
1 pH Config.
```

Press **OK** key to enter the pH configuration sub-menu. Use the arrows to scroll through the different functions.

### 1 PH Configuration.

The first function of the pH configuration sub-menu is Set Point.

Press the **OK** key....it will show the following screen:

### 1 Configuration - Set Points

```
pH configuration
1 Set Points
```

Press **OK** key....it will show the following screen:

```
A: pH 7.0 0%
B: pH 9.0 80%
```

The calculation of the dosage is made by establishing the two set points, A and B, and the relative volume of dosage that is required in each of these points.

- When the pH is below the lower set point, the pump will not dose acid.
- When the pH is between both points, the chlorinator will send a proportional signal defined by both points. For example, in the case of the figure, if the pH is at 8 the pump will dose at 40%.

- When the pH is above the upper set point, the pump will dose to the fixed volume defined for the upper point. In the case of the figure, 80%.

You can set both points and choose the percentage of dosage for each of them. To do this, press the cursor with the **MENU** key in the parameter you want to modify and act with the arrows to change the value. Press **OK** to save the data and exit the sub-menu.

By choosing the set points you will be defining at the same time the required dosing volume and the response delay after dosing, both of them depending on the size of your pool. For example, if your pool has a high volume you should establish high percentages of dosing. The response time in the pH measurement of your pool can be considered when setting point A of the setpoint, stopping the dosage before reaching the desired pH value. For example, to obtain a pH = 7.0 and avoid overdosing, set the dosage stop in a higher value:

**A: pH 7.2 0%**

Each pool needs more or less acid, as they are more or less reactive to the dosage, at the beginning at least, you may need to correct the set points several times.

## 2 y 3 Probe Calibration

pH configuration 2 Cal pH 4
--------------------------------

pH configuration 3 Cal pH 7
--------------------------------

The pH probes require a calibration before their first use and then they need to be calibrated periodically. It is because different probes can have different answers and because the response of the same probe inevitably varies with time.

The calibration consists of measuring the response of the probe introducing it in two buffer solutions and recording this response in order to deduct the pH of any other solution, in our case, the pH of the pool water.

The calibration of the probe is carried out using the two buffer solutions supplied (pH4 and pH7) and entering the submenus "**2 Cal pH4**" and "**3 Cal pH7**" respectively.



Enter the sub-menu 2 Cal pH 4 by pressing **OK** key, it will show the following screen:

<b>pH 4 Calibration</b> <b>Lec: 4.05    4.00</b>
---

The value to the right **Lec** (on the left): indicates the current pH value measured by the probe.

The value below the pH4 (on the right) indicates the value of the buffer pH4 solution. You can adjust this value using the arrows to adapt it to the temperature and the sample used.

Insert the probe in the calibration solution at pH 4, remove it slightly with the probe and wait for a stable reading value to be reached.

Once the reading value has stabilized press the **OK** key to save the calibration and exit the sub-menu.

Next, remove the probe from the buffer solution pH 4, rinse its bottom with clean water and shake gently to remove excess water.

Repeat the above process with the buffer solution pH 7 and submenu **3 Cal pH 7**.

<b>pH 7 Calibration</b> <b>Lec: 7.05    7.00</b>
---

**Note:** If in the pH calibration process, the measure valued of the probe, **Lec**, differs by more than 2 units from the theoretical value of the buffer solution (pH4 or pH7), the calibration of that point won't be saved and it will go back to Factory values.

For example, if when calibrating with the pH4 solution the reading value, **Lec**, indicates 6.05, the calibration won't be saved and the value 4.00 will be maintained.

#### 4 Factory Calibration

```
pH Configuration
4 Factory calib
```

The submenu **4 Factory calib**, gives you the possibility to reset general calibration parameters that correspond, approximately, with those of a new probe and which are the ones programmed by the chlorinator from factory values. This can be useful if you have saved successive calibrations and do not have the buffer solutions for a correct calibration. Press **OK** key to enter the sub-menu **4 Factory calib**, it will show the following screen:

```
Factory calib?
yes:OK EXIT:MENU
```

Press **OK** key to set Factory values or **MENU** to Exit.

#### 5 Dosing Alarm

```
PH Configuration
6 Dosing alarm
```

```
Dosing Alarm OFF
Max. Dos. 20 min
```

Press **OK** key to enter.

To activate or deactivate, scroll with arrow keys up or down to ON or OFF. Then, Press MENU key to program time desired (up to 20 minutes).

**MAIN MENU**

MAIN MENU  
2 Language

Choose Language  
English

Press **OK** key to enter and scroll with the help of the arrows to choose the desired Language.

Press **OK** key to confirm and Exit.

**MAIN MENU**

MAIN MENU  
3 LCD Contrast

LCD contrast  
- ■ ■ ■ ■ +

Press **OK** key to enter and scroll with the help of the arrows to choose the desired LCD contrast.

Press **OK** key to confirm and Exit.