

BWT EasyDose

Models: pH / Redox / Floc

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1. Important note on safety

Learn life-saving techniques
Memorise and display the first aid numbers near the pool (FRANCE):

- Fire brigade : 18
- EMS : 15
- Poison Control Centres**(24/7):**

ANGERS	02 41 48 21 21
BURGUNDY	05 56 96 40 80
LILLE	08 00 59 59 59
LYON	04 72 11 69 11
MARSEILLE	04 91 75 25 25
NANCY	03 83 22 50 50
PARIS	01 40 05 48 48
TOULOUSE	05 61 77 74 47



CAUTION

This device may be used by children of at least 8 years of age and by persons with reduced physical, sensory or mental capabilities or lacking experience or knowledge, if they are properly supervised or if they have been given instructions on the safe use of the device and are aware of the risks involved. Children must not play with the device. Cleaning and maintenance by the user must not be carried out by children without supervision.

CAUTION

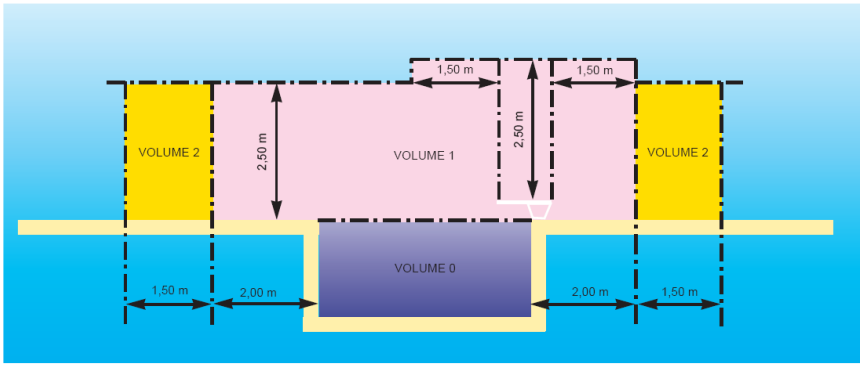
A means of de-energising all active poles (phase(s) and neutral) must be provided on the power supply, upstream of the device, so that the product can be systematically de-energised before any technical intervention. This device must be located close to the appliance.

CAUTION

If the power cable is damaged, it must be replaced by the manufacturer or its authorised distributor.

CAUTION

The EASYDOSE cabinet must be positioned at a minimum distance from the pool basin specified by the regulations applicable at the place of installation. In France, this distance is 3.5 metres. However, if the power supply to the device is specifically protected by a 30 mA residual current device, this distance can be reduced to 2.0 metres (volume 2 below).



standard NF C15-100, part 7-702.

WARNING
It is strongly recommended that your electrical installation be equipped with a lightning surge protection device. For any resulting damage to the electrical and electronic components of the EASYDOSE, the warranty shall be void.

2. General

The **BWT EasyDose** analysers/controllers you have just purchased are high-tech electronic devices, carefully designed and built for your pleasure and peace of mind. The simplicity, user-friendliness and technicality of the **BWT EasyDose** will guarantee you perfect control of the water quality of your pool.

They are designed to regulate the pH, and the disinfectant level via the ORP, of water in private family pools with a volume of between 10m3 and 120m3.

WARNING
It is strongly discouraged to use these devices to regulate the water treatment of spas that are hydraulically independent from a pool.

These devices can also directly regulate the free chlorine concentration in water with an "open cell" amperometric probe, rather than the ORP. It is **not supplied with the device as delivered**. This amperometric probe is mounted on a specific analysis chamber. Only equipment that matches the features of the **BWT EasyDose** is allowed.

Probes or interfaces that do not comply with the technical specifications in this manual must not be used.

The **BWT EasyDose** is available in 2 designs:
- Pre-mounted on panel assembly
- Free-standing unit

The **BWT EasyDose** series devices let the user choose between 2 control modes: proportional with cyclic control, or 'on/off' with hysteresis.

In the following instructions you will find all the information you need to install, use and maintain your new equipment.

2.1 Signs and symbols


Identification of a DC voltage or current


Identification of an AC voltage or current


Protective earth


Functional earth

2.2 Storage and Shipment

It is necessary to store and transport your **BWT EasyDose** in its original packaging to prevent damage.

Ambient conditions for shipment and storage:

Temperature: 0 °C to 60 °C
Air humidity: Maximum 90% non-condensing
Non-corrosive environment, no solvent vapours

Disposal of packaging :



Items such as paper, cardboard, plastic or any other recyclable item must be taken to a suitable sorting centre.

2.3 Warranty

This product benefits from the legal guarantees (called "compliance" and "against hidden defects") to the final consumer.

PROCOPI-BWT also grants a commercial guarantee, which can only be activated if the product has been stored, handled, installed, used and maintained in accordance with the recommendations in this manual.

This product then benefits from the following BWT commercial guarantee as of the date of its initial invoicing by ***PROCOPI-BWT*** to the client company:

3 years on the controller

OBSERVATION: The probes and their mounting kit, the injection kits, the tubing, the calibration solutions, the end of tank valves, are not covered by the manufacturer's commercial guarantee.

3. Package content



EasyDose pH

 **A**: PVC Crystal 4x6 suction hose (4 m)	 **B**: Polyethylene delivery hose (5m)	 **C**: FPM Lip valve (3/8" GAS)	 **D**: PSS3 probe-holder (1/2" GAS)	 **E**: Tapping saddle for securing PSS3 onto 2" hose (ϕ=50mm) (***2pcs***)	 **F**: Reducer for injection valve (1/2" M to 3/8" F)
 **G**: Foot filter (PP riser)	 **I**: Mounting bracket kit (ϕ=6 mm screws)	 **L**: pH probe	 **M**: pH 4 Buffer solution	 **N**: pH 7 Buffer solution	 **O**: Empty bottle for wash probe with water
 **P**: Two ferrules peristaltic tubes kit					

EasyDose Redox



 **A**: PVC Crystal 4x6 suction hose (4 m)	 **B**: Polyethylene delivery hose (5m)	 **C**: FPM Lip valve (3/8" GAS)	 **D**: PSS3 probe-holder (1/2" GAS)	 **E**: Tapping saddle for securing PSS3 onto 2" hose (ϕ=50mm) (***2pcs***)	 **F**: Reducer for injection valve (1/2" M to 3/8" F)
 **G**: Foot filter (PP riser)	 **I**: Mounting bracket kit (ϕ=6 mm screws)	 **L**: ORP probe (***Platinum electrode***)	 **M**: 465 mv Calibration solution	 **N**: Ferrules peristaltic tubes	

EasyDose Redox for Chlor Generator



 **A**: PSS3 probe-holder (1/2" GAS)	 **B**: Tapping saddle for securing PSS3 onto 2" hose (ϕ=50mm)	 **C**: Mounting bracket kit (ϕ=6 mm screws)	 **D**: ORP probe (***Gold electrode***)	 **E**: 465 mv Calibration solution

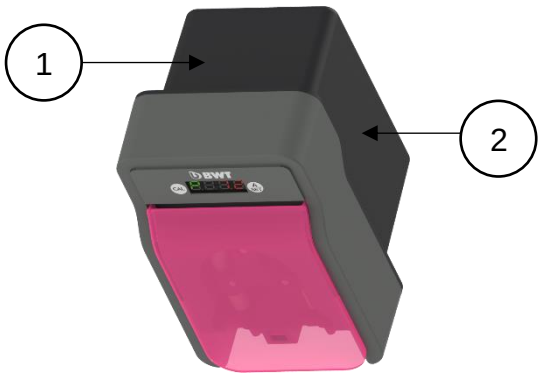
EasyDose Floc (flocculant dosing)



 **A**: PVC Crystal 4x6 suction hose (4 m)	 **B**: Polyethylene delivery hose (5m)	 **C**: FPM Lip valve (3/8" GAS)	 **D**: Tapping saddle for securing PSS3 onto 2" hose (ϕ=50mm) (***2pcs***)	 **E**: Reducer for injection valve (1/2" M to 3/8" F)	 **F**: Foot filter (PP riser)
 **G**: Mounting bracket kit (ϕ=6 mm screws)	 **I**: Ferrules peristaltic tubes				

3.1 Nameplate

1. Code and serial number
2. QR Code to download full instruction manual.



In accordance with the EU Directive 2012/19/EU, this symbol indicates that electrical devices may not be disposed of in household or industrial waste. According to the regulations in force, consumers in the European Union are obliged to return their old equipment to the manufacturer who will dispose of it free of charge.

In accordance with the Low Voltage Directive (2014/35/EU), the Electromagnetic Compatibility Directive (2014/30/EU) and the RoHs2 Directive (2011/65/EU), this symbol indicates that the device has been designed in compliance with the above-mentioned directives.

3.2 Technical specifications

Specifications	EasyDose pH	EasyDose Redox	EasyDose Redox Chlor Generator	EasyDose Floc
Range	3.8 ÷ 8.2 pH **(*1)**	400÷999 mV **(*1)**	400÷999 mV **(*1)**	---
Accuracy	± 0.02 pH	± 2 mV	± 2 mV	---
Device precision	± 0.1 pH	± 10 mV	± 10 mV	---
Pump flow rate	1.5 l/h	1.5 l/h	None	15 to 150 ml/h
Power supply	220 - 240 Vac 50/60 Hz			100 ÷ 240 Vac 50/60 Hz
Consumption	13.5 Watt	13.5 Watt	9 Watt	9 Watt
Dosage method	ON-OFF Set Point adjustable		None	Constant dosing adjust by digit
Pump state	Pause – Supply			
Display	4 digits with 7 segments			
Probe calibration	Automatic			None
Max. back-pressure	1.5 bar	1.5 bar	None	1.5 bar
Weight	1.3 kg			
Dimensions (W–H–D)	98 x 134 x 118 mm (3.85" x 5.3" x 4.6")			
Schuko plug (Female)	none	none	230 Vac 8A powered	none

(*1) The pump has galvanised electrical insulation and measure insulation.

4. Installation and connections

CAUTION
The installation and connection of the BWT EasyDose equipment should only be carried out by trained and qualified personnel.
The installation must comply with the applicable standards and safety regulations!

CAUTION
Always switch off the mains supply before switching on the device or manipulating the outputs.
Never open the device when it is powered up!
Maintenance and repairs must only be carried out by authorised and specialised personnel.

4.1 Choice of installation site

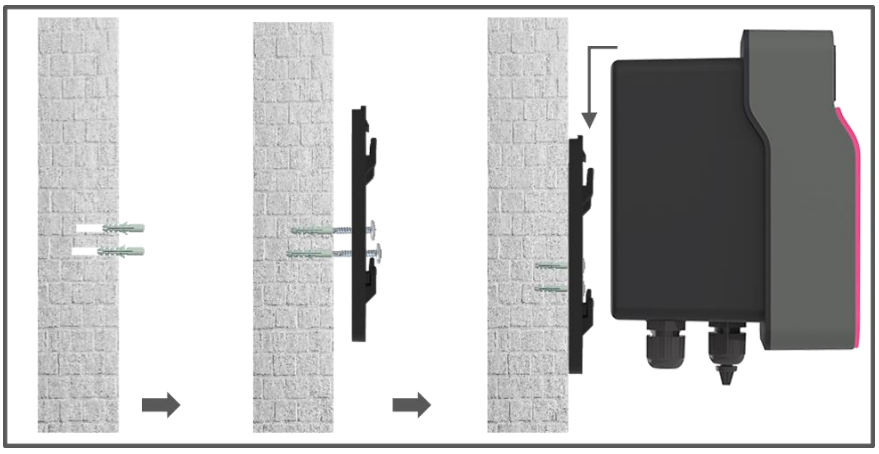
To ensure the safety of users and the proper operation of your **BWT EasyDose**, please observe the following guidelines for installation:

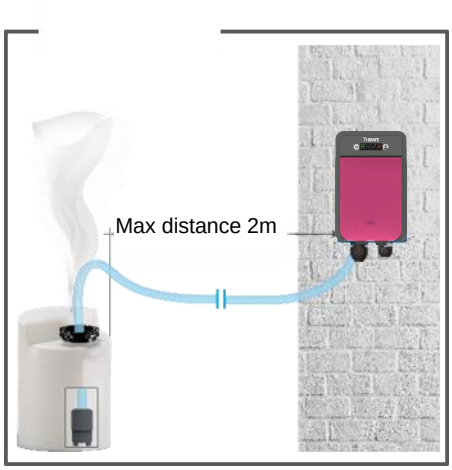
- The enclosure must be located at a distance from the pool in accordance with the regulations applicable at the installation site
- The device must be protected from rain and splashing water, frost and direct sunlight.
- The ambient temperature should be between 0 and 40°C
- Moisture should not be saturated
- The installation site must be properly ventilated, in particular to avoid corrosive atmospheres and environments with high concentrations of solvent vapours
- Choose an installation site that is free of vibration, on a stable and solid, clean and undistorted surface (level).

In case of non-compliance with these instructions:

- The device risks being damaged
- Measurements can be disrupted
- The guarantee shall be void!

4.2 Wall mounting bracket installation





WARNING
The IP54 protection rating of the BWT EasyDose enclosure is only guaranteed if the front cover is closed, the screws are tightened and the cables match the diameter of the cable glands!

4.3 Wall mounting procedure

1. Turn off the general power supply
2. Check that the filter pump is switched off.
3. Close the hydraulic valves and set the filter valve to "closed".
4. Drill the required number of holes (3 holes of ∅ 8 mm for free-standing installation, 4 holes of ∅ 10 mm for pre-installation) according to the pitch specified in §2.3
5. Insert the dowels with the help of a hammer.
6. Start by securing the device with the upper screws, then with the lower screws, without tightening them.
7. Once all the screws are in place, tighten them crosswise

WARNING
When closing the front cover, take care not to damage the seal or pull the cables between the cover and the PCB!

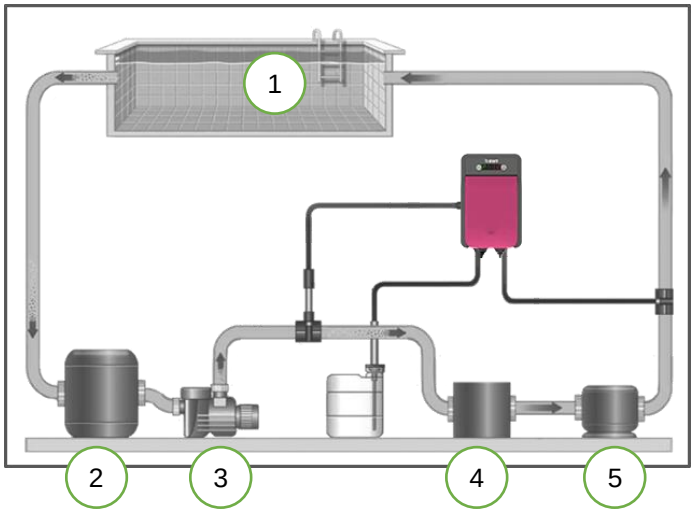
4.4 Installation of saddle tees for probes ("free-standing" version) and product injections

4.4.1 Recommended for installation in the "free-standing" version:

In order for the values measured by the probes to be as representative as possible of the water in the pool, the probes should be positioned between the pump discharge and the inlet to the filter's multi-way valve. In any case, they should be located before any heater device and before the injection of chemicals.

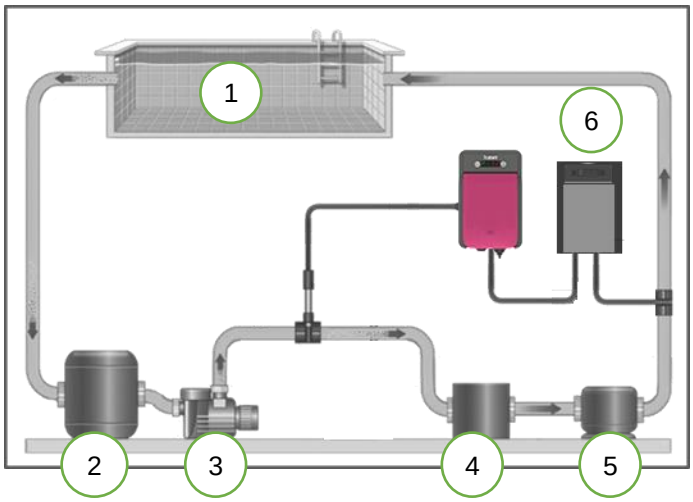
The injection of chemicals should be done after all devices, just before the water is returned to the pool.

BWT EasyDOSE pH and Redox



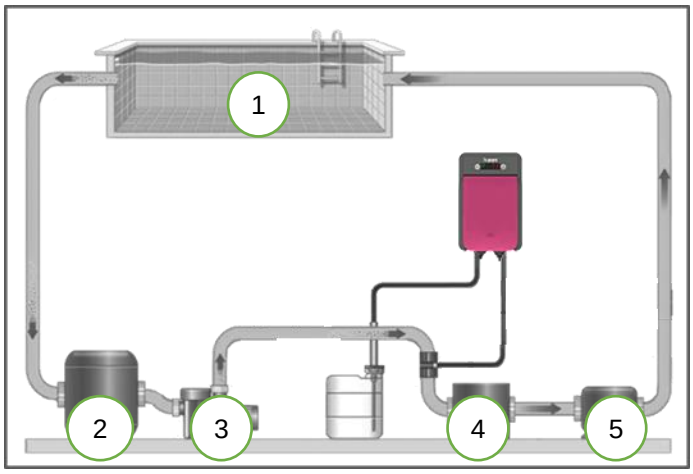
1. Swimming Pool
2. Balance basin
3. Circulation pump
4. Sand filter
5. Heatchanger

BWT EasyDOSE Redox Shuko plug for Chlor Generator



1. Swimming pool
2. Balance basin
3. Circulation pump
4. Sand filter
5. Heatchanger
6. Chlor Generator

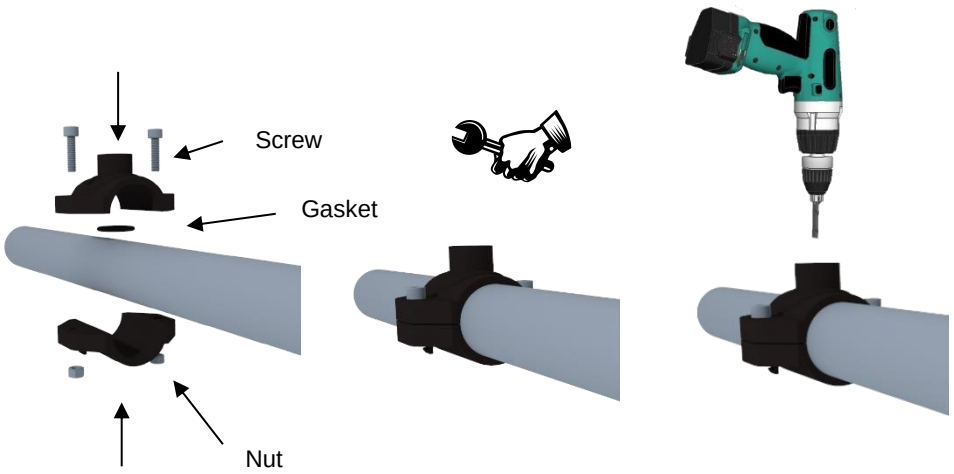
BWT EasyDose Floc



1. Swimming pool
2. Balance basin
3. Circulation pump
4. Sand filter
5. Heatchanger

It is possible to mount the saddle tees on a bypass circuit in order to isolate them hydraulically for easier and faster removal of the probes ("no water pressure") and to leave the filtration running (especially during active winterisation)

4.4.2 Procedure for mounting the saddle tees

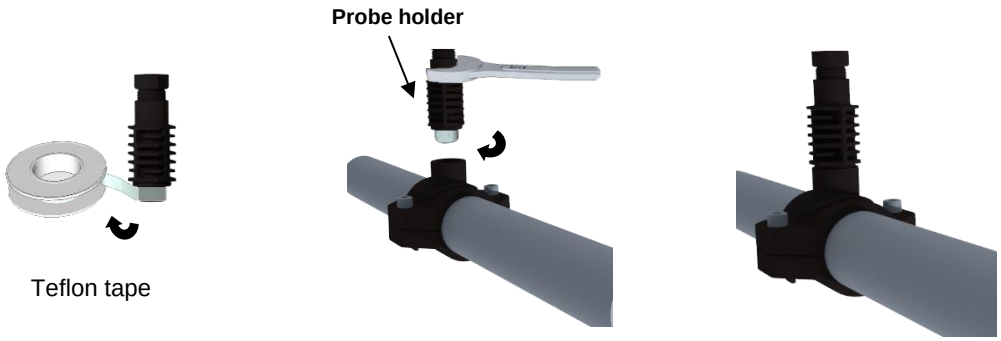


Step 1
Apply the saddle on both sides of the piping in a straight section of at least 15cm

Step 2
Tighten both sides at the same time to keep the saddle perfectly straight

Step 3
Once the saddle is attached, drill a 16mm hole properly centred

4.4.3 Procedure for mounting the probe connection kit



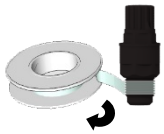
Step 4
Put Teflon on the threads of the "probe holder"

Step 5
Mount the "probe holder" on the saddle. Tighten gently and then complete the operation with a spanner.

Step 6
The "probe holder" is mounted, wait until the end of the installation to insert the probes!

NOTE: The pH and/or ORP probes can be mounted at +/- 90° to the vertical axis. However, we recommend that this is done vertically. This makes maintenance easier.

4.4.4 Procedure for mounting the injection kit

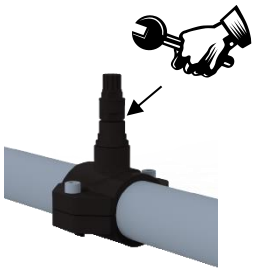


Teflon tape

Step 7
Apply Teflon to the threads of the fitting and the injection valve.



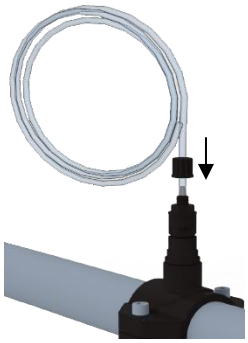
Step 8
Screw the fitting onto the saddle tees.



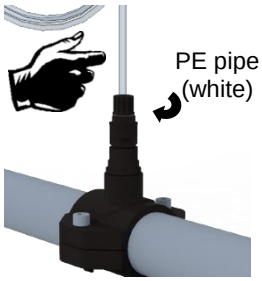
Step 9
Tighten the injection valve on the fitting.



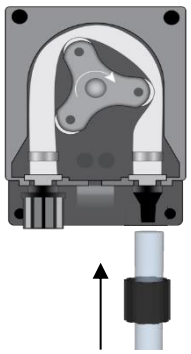
Step 10
Unscrew the injection valve nut.



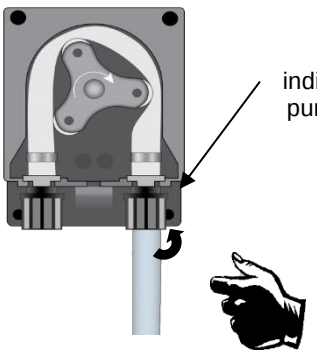
Step 11
Pass the PE pipe through the cap and fit it onto the valve cone.



Step 12
Screw the cap with the PE (white) pipe onto the valve.

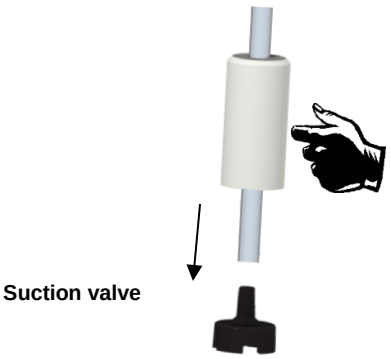


Step 13
Same operation on the dosing pump side.



Step 14
Screw the cap with the PE (white) pipe onto the pump.

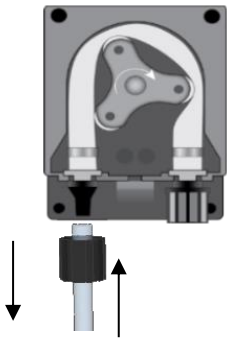
4.4.5 Procedure for mounting the suction kit



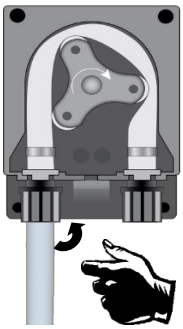
Step 15
Unscrew the cap and pass the light pipe.



Step 16
Tighten the nut on the cone.



Step 17
Screw the**PVC (transparent) pipe** on the dosing pump.



Step 18
Tighten the nut on the dosing pump.



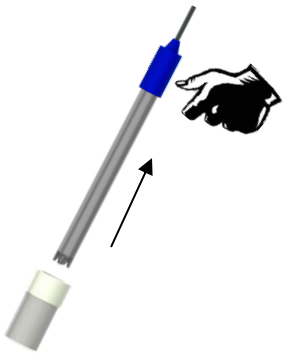
Step 19
Install the weighted bottom trap valve and adjust the depth.



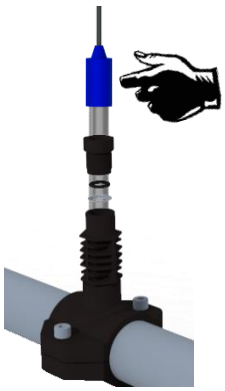
Step 20 (optional)
Place the level probe and its weight and adjust.

4.4.6 Procedure for mounting pH and/or redox probes

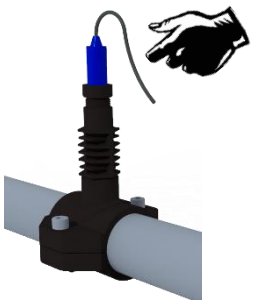
WARNING
Probes are sensitive elements. They should be maintained and calibrated regularly using the calibration solutions supplied with the device. In the event of a defect, there is a potential risk of excess chemical injection, or sanitary degradation of the water quality.



Step 21
Remove the probe from its protective sleeve and unscrew the "probe holder" nut.



Step 22
Slide the nut onto the probe and the clamp underneath, then place the probe.



Step 23
Screw on the "probe holder" nut by hand. The probe is ready!

WARNING
If the unit is installed in a bypass circuit, ensure that the shut-off valves are properly opened when the device is in operation.

WARNING
If the unit is installed in a bypass circuit, ensure that the shut-off valves are properly opened when the device is in operation.

Probe positioning

Make sure that the injection pressure is below 1.5 bar



For optimum probe reading, position it perpendicular to the tubing.





The probe's angle of inclination must never exceed 45° from vertical.



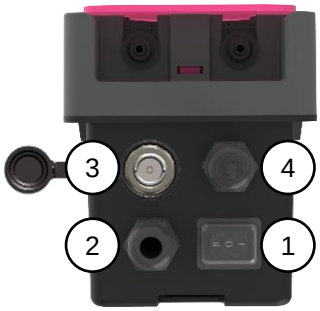




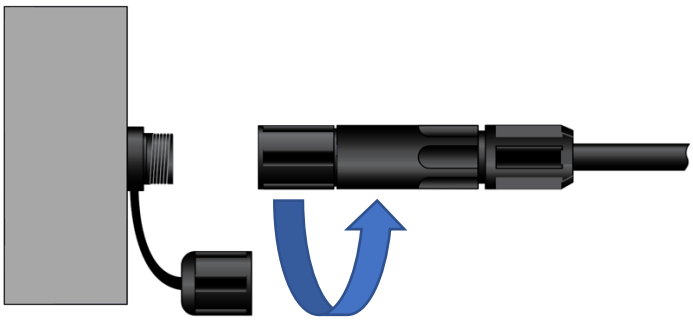
5. Electrical connections

Wiring diagram:

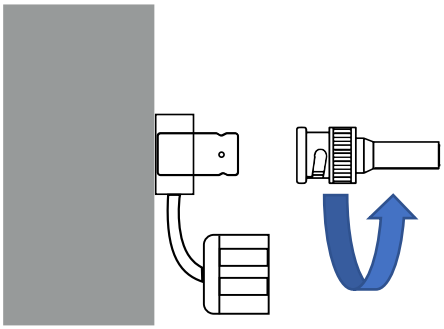
1. Switch with three positions: ON-OFF-MOM
2. Power Supply cord cable
3. pH or ORP probe input, with BNC connector
4. Free



Connect the power supply pre-wired cable to the mains (100 ÷ 240 Vac).



Binder connector input



BNC connector input

6. Commissioning / Electrical connections

6.1 General connections

Note: With the exception of the relay output, all input/output connections are safety extra-low voltage (SELV). These voltages are usually supplied by the device and do not exceed 15V DC.

CAUTION
Electrical connection of the box BWT EasyDose must be connected to the pool's filtration system.
The CAD input "remote control" can be used to fulfil this condition.
(Potential free input, do not connect 220 V or other power supply to this input)

7. Setup and Operation

7.1 EasyDose RG-DIGITAL Pump





Wiring diagram:

1. Switch with three positions: ON-OFF-MOM
2. Power Supply cord cable
3. Circulation pump 220-240 VAC input



EasyDose RG-Digit: constant dosing pump with flowrate regulation by keyboard
Min flowrate is 10% of the maximum value 100%.

Switch position:

a. **MOM**: Priming position. The pump runs for 3 minutes at max speed; pressing again the MOM switch stops the pump.
b. **ON**: Normal position. The unit doses.
Pump starts dosing at the set speed when an external trigger is detected and stops dosing when the external trigger is undetected.
For setting the pump speed, press SET to adjust the speed from 10 to max. 100%.
c. **OFF**: Stand by position. The pump is stopped.

7.2 EasyDose pH

Proportional dosing with pH control meter built in, the pump has galvanised electrical insulation and measure insulation.





Switch position:

a. **MOM** (symbol switch “II”): Priming position. The pump is running.
b. **ON** (symbol switch “O”): Normal position. The unit measures the pH and doses.
c. **OFF** (symbol switch “I”): Stand by position. The pump is stopped.

Setup



a. Set the switch to **OFF** position (symbol switch “I”).
b. Keep pressed CAL for 3 seconds to enter the SETUP menu.
c. pH setup menu:
    1. Adjust the dosage method for pH: **Acid** or **Alka**
    2. Temperature: **25°C (10-50°C)**
    3. Over feed alarm (OFA): Off (0’) to 60’
    4. Power On delay (POD): Off (0’) t0 60’
    5. Save (yes/no)

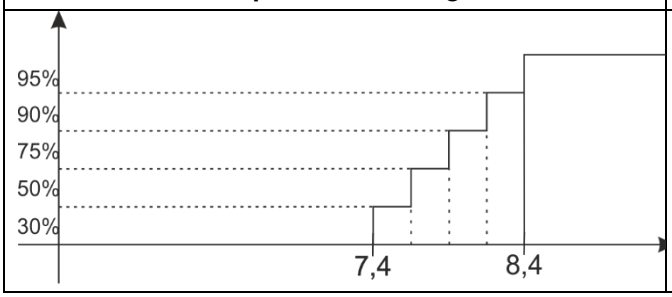
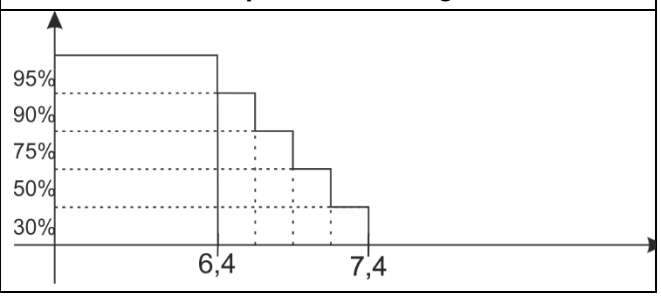
Set Point adjustment

a. Set the switch to **ON** position (symbol switch “O”)
b. Keep pressed SET until the Setpoint value starts flashing, then press again SET to increase the value.
c. After 3 seconds from releasing the SET key, the unit saves the value and displays **mem**.
   It is possible to set a value between 6.4 and 8.0 pH, with an increase of 0.1 pH.
d. When the real measure is lower than 6.2 pH or higher than 8.2 pH, the measure displayed flashes.

Item	Values
Range of Measure	3,8 – 8,2 pH
Range of Alarm	Alarm min: 0 - 6,2 pH Alarm Max: 8,2 -14 pH
Range of setpoint	6,4 – 8,0 pH

Proportional dosing:

Setpoint = 7.4 pH
Dosing mode = Acid/Alka
Prop. Band= 1.0 pH (* Fixed value)
Total period time= 10 minutes

Acid dosing mode with 7,4 pH SetPoint Proportional dosing	Acid dosing mode with 7,4 pH SetPoint Proportional dosing
	

(*the device controller calculates in automatic mode the time dosing between 7.4 and 8,4 pH measure)

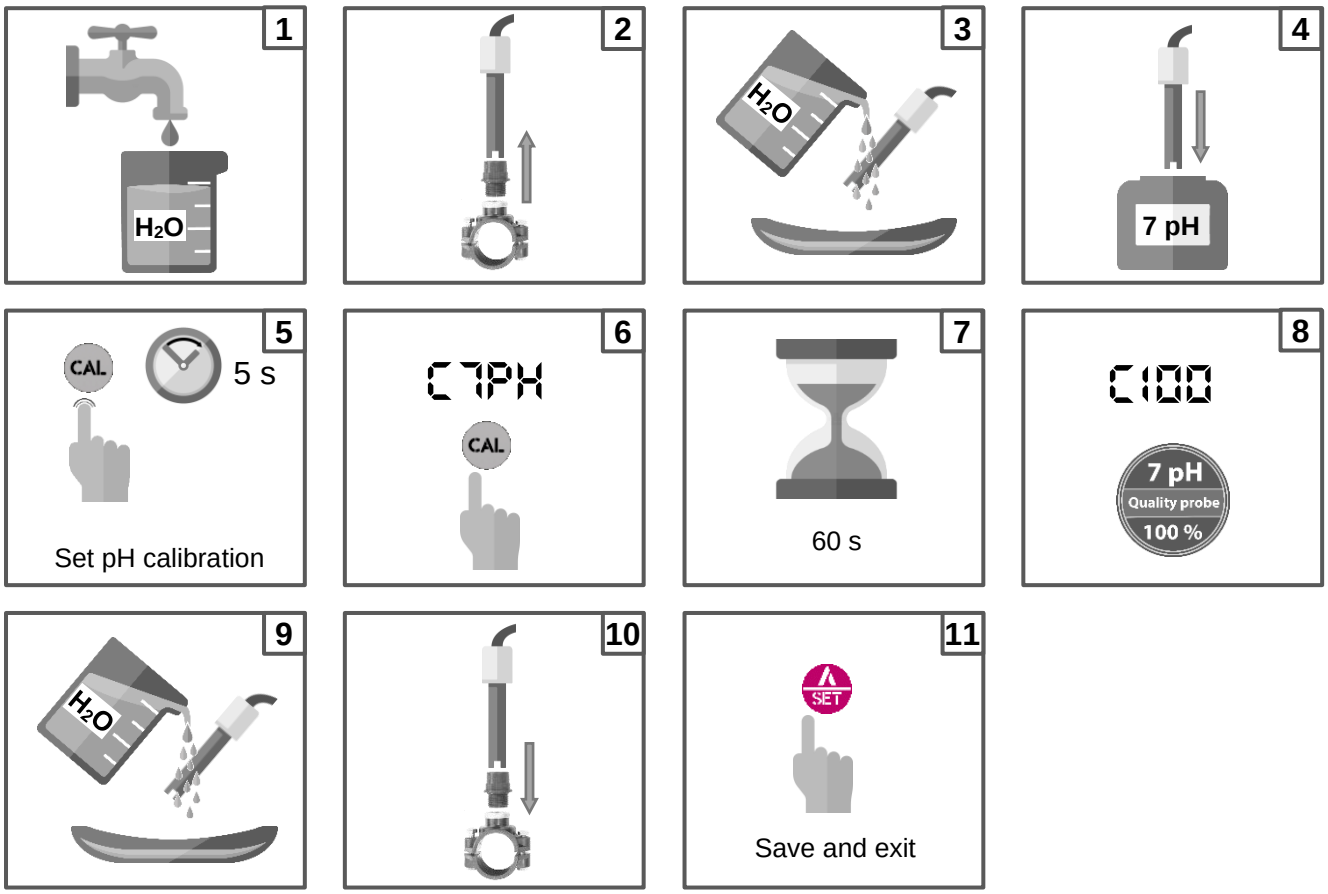
- During POD countdown circular running segment is showed in position 1 (green one) – POD timer showed (switching to OFF zeroes the POD timer)
- During OFA pre-alarm measure value is alternated by OFA message each 500ms
- After OFA alarm e disabled dosage OFA message replace measure value until any key is pressed

Booster Function:

Press Switch in mom position for priming pump and press set/up to activate the booster dosing functions, to skip press any button.

7.3 pH Calibration

Set the switch to **ON** position then follow the steps below:



Note: If you have selected the EasyCal function, the calibration will be made only in 1 point using the 7 pH buffer solution.
During calibration procedure, the **hold (setup)** LED will turn red.

7.4 EasyDose ORP

Proportional dosing with pH control meter built in, the pump has galvanised electrical insulation and measure insulation





Switch position:

a. **MOM** (symbol switch "II"): Priming position. The pump is running.
b. **ON** (symbol switch "O"): Normal position. The unit measures the ORP and doses.
c. **OFF** (symbol switch "I"): Stand by position. The pump is stopped.

Setup

a. Set the switch to **OFF** position (symbol switch "I").
b. Keep pressed CAL for 3 seconds to enter the SETUP menu.
c. ORP setup menu:
    1. Adjust the dosage method for ORP: **Low** ("Lo")
    2. Over feed alarm (OFA): Off (0') to 60'
    3. Power On delay (POD): Off (0') t0 60'
    4. Save (yes/no)



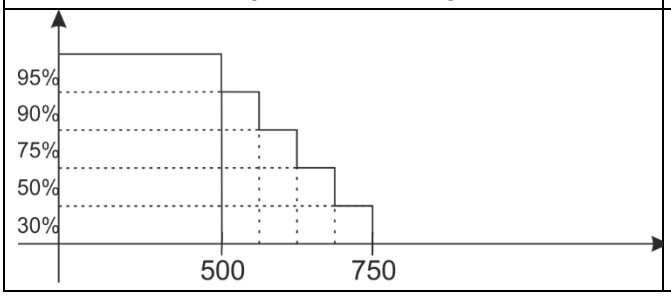
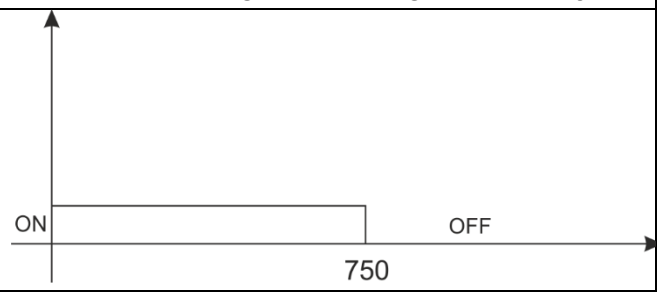
Set Point adjustment

a. Set the switch to **ON** position (symbol switch "O").
b. Keep pressed SET until the Setpoint value starts flashing, then press again SET to increase the value.
c. After 3 seconds from releasing the SET key, the unit saves the value and displays **mem**.
   It is possible to set a value between 450 and +850 mV, with an increase of 10 mV.
d. When the real measure is lower than 400 mV or higher than 900 mV, the measure displayed flashes.

Item	Values
Range of Measure	400 – 999 mV
Range of Alarm	Alarm min: 0 - 450 mV Alarm Max: 900 - 999 mV
Range of setpoint	450 – 850 mV

Proportional Dosing:

Setpoint = 750 mV
Dosing mode = Low
Prop. Band= 250mV (*Fixed value)
Total period time= 10 minutes

Low dosing mode with 750 mV set point Proportional dosing	Low dosing mode with 750 mV Set Point ON/OFF dosing for Chlorin generator only
	

(*the device controller calculates in automatic mode the time dosing between 750 and 500 mV measure)

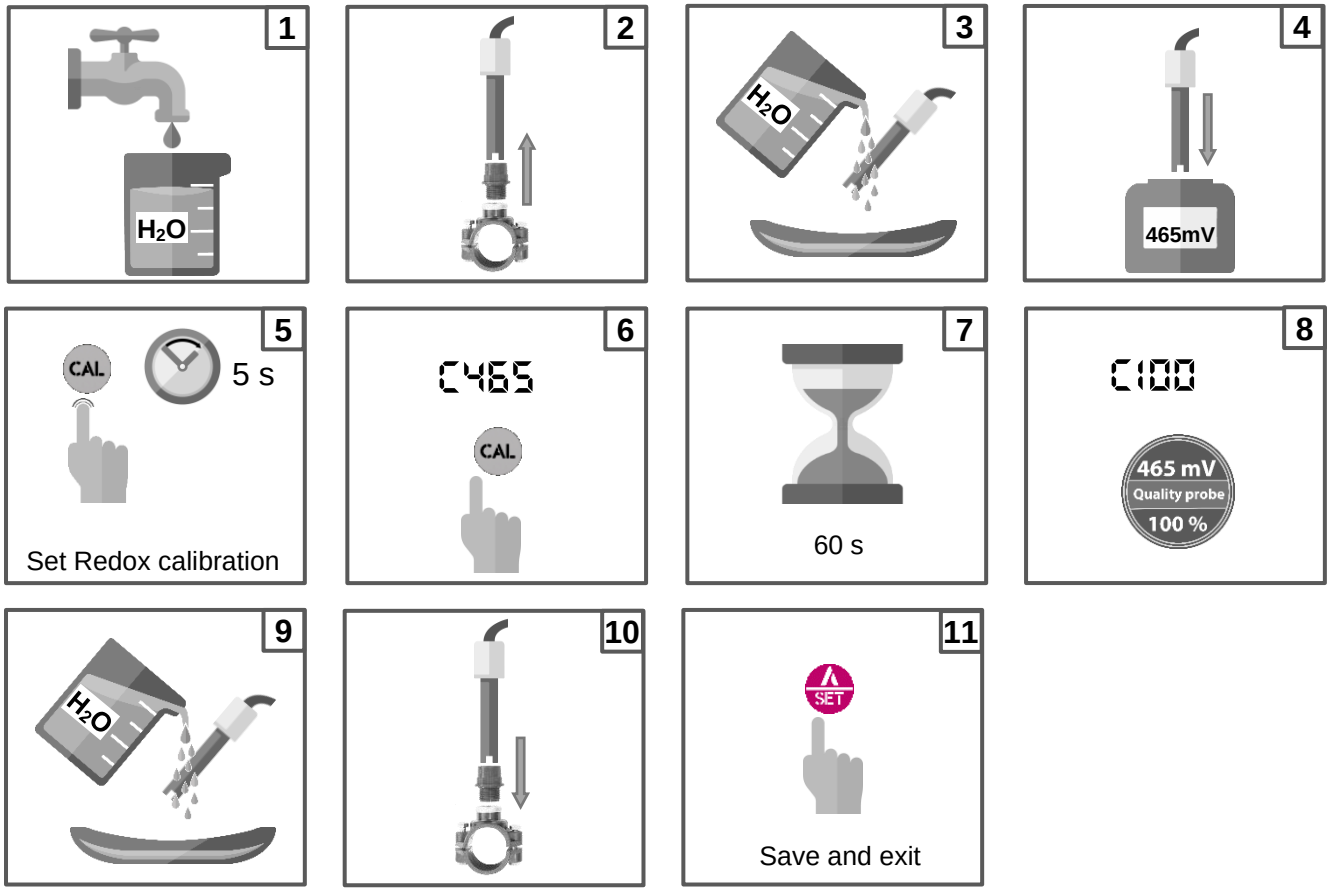
- During Power on delay (**POD)** countdown circular running segment is showed in position 1 (green one) – POD timer showed (switching to OFF zeroes the POD timer)
- During OFA pre-alarm measure value is alternated by OFA message each 500ms
- After OFA alarm e disabled dosage OFA message replace measure value until any key is pressed

Booster Function:

Press Switch in mom position for priming pump and press set/up to activate the booster dosing functions, to skip press any button

7.5 ORP Calibration

Set the switch to **ON** position then follow the steps below:



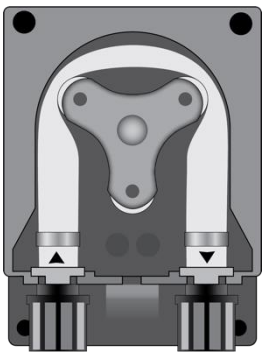
Note: During calibration procedure, the **hold (setup)** LED will turn red.

8. Alarms

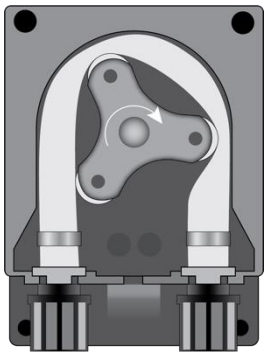
Alarm	EasyDose pH	EasyDose ORP	Actions to do
Out of Range measure	flashing three red number segment	flashing three red number segment	• Replace or check the measure probe • Restore pH / ORP

9. Handling

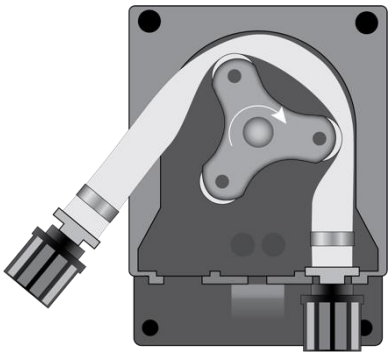
Hose replacement:



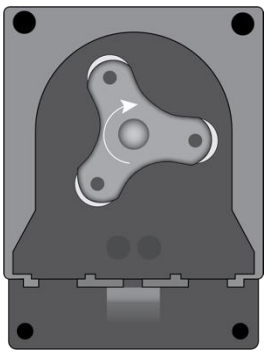
Open the pump's lid and release the hose by pulling the left connector upward.



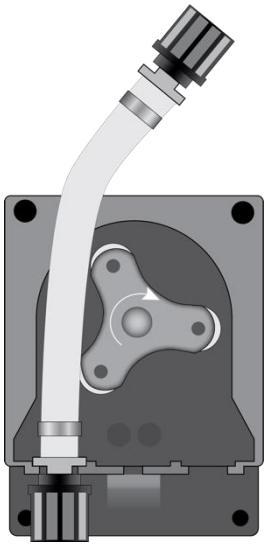
Position the roller like the figure, turning it in the direction of the circular arrow.



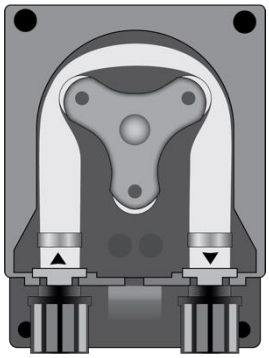
Completely release the left connector, holding it taut towards the outside, and turn the roller in the direction of the circular arrow so that the hose is freed up to the right connector.



Position the roller like the figure, turning it in the direction of the circular arrow.

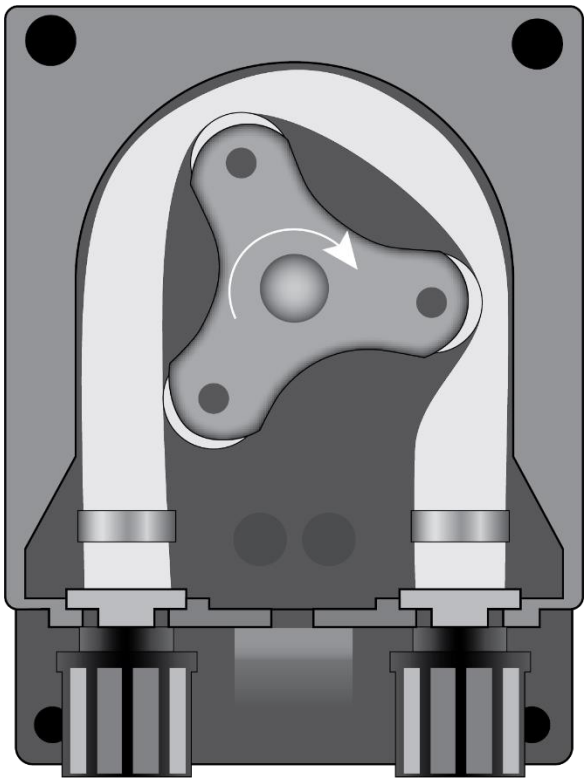


Insert the left connector into the relative housing and pass the hose under the roller's guide. Turn the roller in the direction of the circular arrow, simultaneously accompanying the hose into the pump's head, until the right connector is reached.



Close the pump's lid and press its surface hard so that it is properly locked into place.

10. Storing the pump after use



When the regulation device must be stored, clean water should be pumped through the hose in order to rinse it.
Then position the roller like the figure, turning in the direction indicated by the circular arrow.
These two precautions will facilitate the subsequent reactivation of the unit.

11. Default parameters

- Set Point value = **7.4 pH; 750 mV;**
- Dosing method = **Acid (pH); Low (ORP - Redox)**
- OFA Time = **OFF**
- Dosing type = **PROP; ON/OFF Schuko ORP model only**