



## AC PRO AUTOMATIC COMPACT – D90 to D200

90 to 200 liters/hour – 230V (or 400V)



### START-UP GUIDE

**Dessalator®**

ZI des 3 Moulins  
282 rue des Cistes  
06600 Antibes, France  
[www.dessalator.com](http://www.dessalator.com)  
[contact@dessalator.com](mailto:contact@dessalator.com)

# Start-Up

## Precautions before start-up



### **WARNING!**

**Before starting-up, check that the valves are open**

### Mandatory:

- When using the device for the first time, after changing the filter, after the boat has been grounded or stopped for a long time, you should flush the system using fresh water by operating the three-way valve on the prefilter.

Purge the system for 1 minute: watermaker must be stopped and the pressure regulator open (counterclockwise).

- Once the system is filled, put the valve back in seawater position.

**➡Note:** If you are not going to use the watermaker at all for a month or more, we recommend to either sterilize the membranes for storage (for a maximum duration of 6 months) or to rinse it out at least once a month.

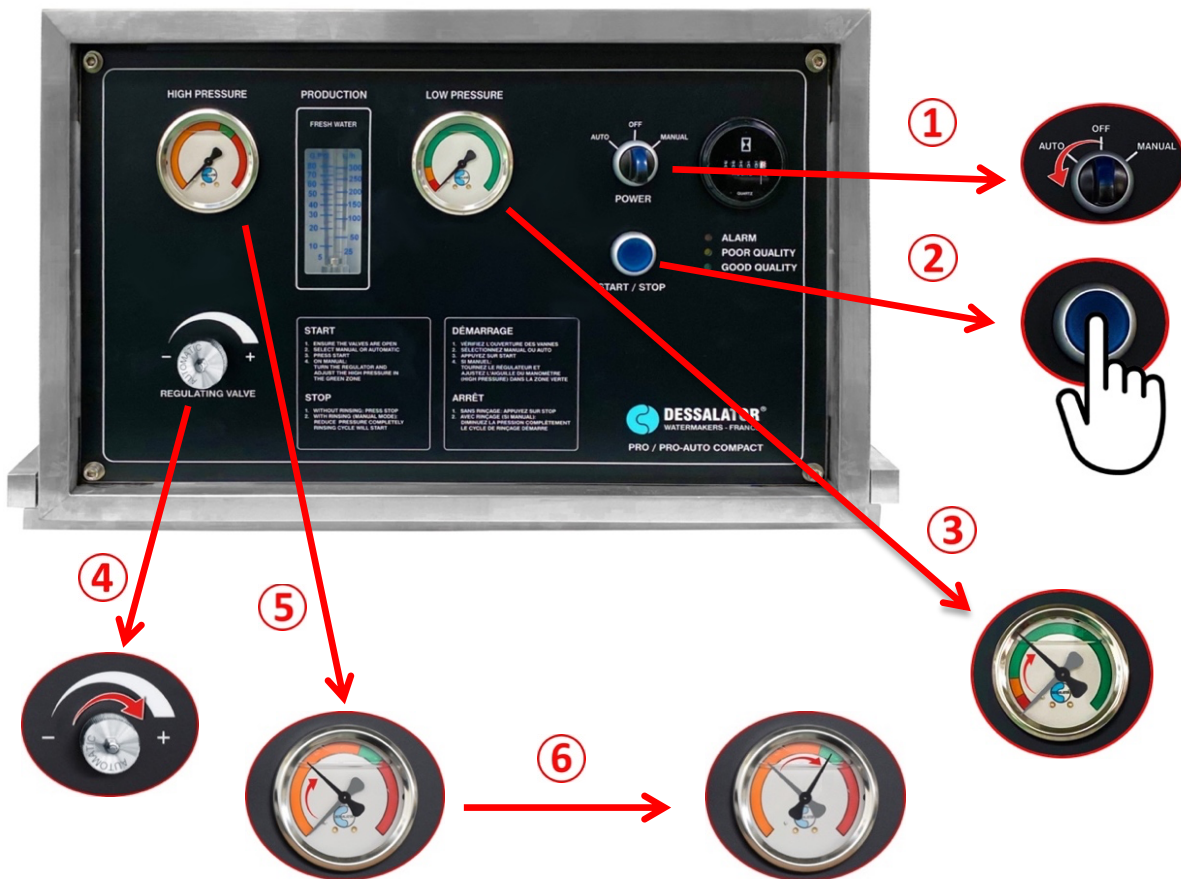
Before starting the system back up, we recommend rinsing it out for two minutes.

## Starting-up the watermaker

### Automatic mode:

The AUTOMATIC product range is equipped with a motorized knob regulator to adjust the pressure.


- Simply set the switch ① **AUTO**.
- The pre-pump starts, the needle on the low pressure manometer ③ rises in the green zone.
- The engine has started, the pressure regulator knob ④ will automatically run to increase the pressure to the orange zone ⑤ of the pressure gauge, then gradually adjust it until it reaches the green zone ⑥ on the pressure gauge. This procedure takes about 2 minutes.



➔ **Note** : The fresh water yield depends on the temperature and salinity of the sea water and the cleanliness of the 5 & 25 micron filters (in the pre-filter).

## Starting the watermaker with the Micro-Commande :



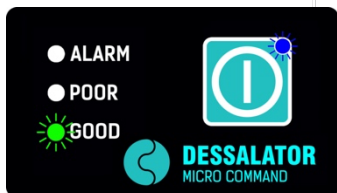
- To start the watermaker from STANDBY, press and hold the button  for about 2 seconds.



- The BLUE LED of the button will start to blink and the buzzer will acknowledge the operation with 2 'beeps'. Upon release of the button, the watermaker will start.



- The RED, YELLOW and GREEN LEDs will show the same indication as on the control panel of the watermaker. The blinking speed of the YELLOW LED provides feedback of the water pressure in the system : faster blinking means higher pressure.

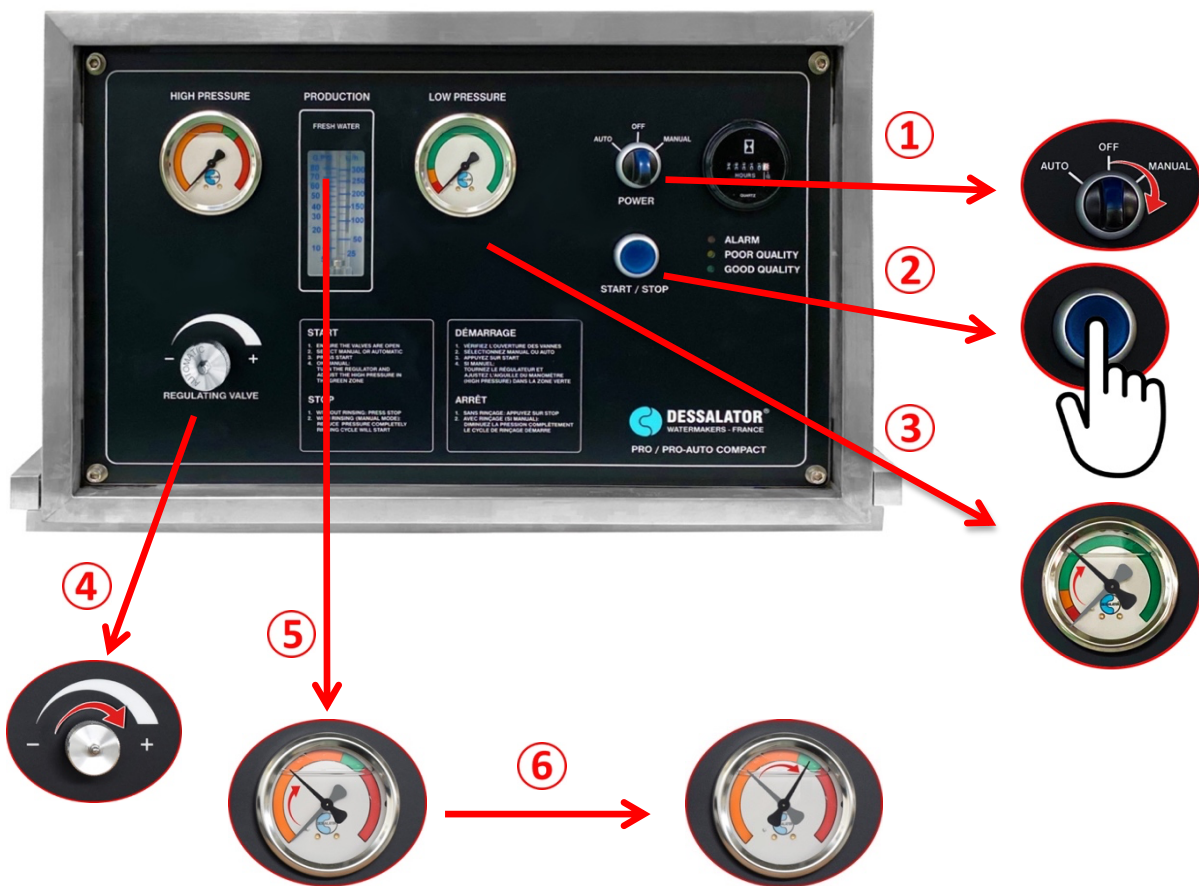


- Once the production water is of good quality, the GREEN LED will light up.

## Manual mode:

Follow the procedure below :

- Set the switch ① to **MANUAL** and press the **START** button
- The pre-pump starts, the needle on the low pressure manometer ③ rises in the green zone.
- Once the engine has started, gradually turn the pressure regulator knob ④ to the right to increase the pressure towards the middle of the orange zone ⑤ then continue gradually increasing the pressure until it reaches the green zone ⑥ on the pressure gauge. **This procedure takes about 1 minute.**



➔ **Note** : Too high a pressure setting stops the watermaker and turns on the red light. In this case, decrease the pressure with the pressure regulation knob ④ and repeat the startup procedure.

The fresh water yield depends on the temperature and salinity of the sea water and the cleanliness of the 5 & 25 micron filters (in the pre-filter).

## Stopping the watermaker: without rinsing of the membranes

It is not necessary to rinse your membranes if you use your watermaker regularly.

### Mode Automatique :

Follow the procedure below :



### With the Micro-Command :

To STOP your watermaker normally :



2 sec.

- Press and hold the button  for about 2 seconds.



- Upon release of the button, the watermaker will STOP and go to STANDBY.

## Mode Manual :

Follow the procedure below :

- Set the switch ① to « OFF».
- You can now lower the pressure regulator knob ② to the left (counterclockwise) until the needle of the high pressure gauge ③ is at the minimum.
- Once the knob has come to a stop, reopen the pressure regulator knob ② by only ¼ of a turn (to the right).



**Beyond 10 days without use, it is best to rinse the membranes before the watermaker is started-up again (see manual rinse procedure in Appendix A3).**

If watermaker is not used, the rinsing is to be renewed every month.

If the watermaker is not used completely, the membranes must be sterilized for storage (for a maximum of 6 months).

## Stopping the watermaker : with automatic rinsing of the membranes

A rinsing must be carried out if the watermaker is not going to be used for more than 10 days.

### Automatic mode:

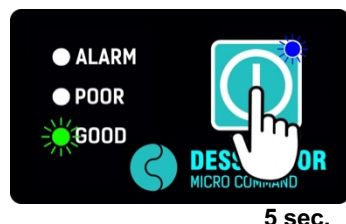
After using the watermaker, **do not turn it off**.

- While the watermaker is still **①**inning, Start turning the knob of the pressure regulator **①** (counterclockwise) to engage the rinsing mechanism, the pressure of the manometer will drop. **②**
- The watermaker will then start the rinsing procedure. The green and yellow LEDs **②** on the **②**control panel will light up, indicating that the rinsing procedure has started. It lasts 30 seconds **③**. When the procedure is complete, the green and yellow LEDs **②** will lights off and **③** the only remaining indicator will be the flashing blue LED on the switch **③**. If you don't have a mini-control you can turn the switch OFF **③**.



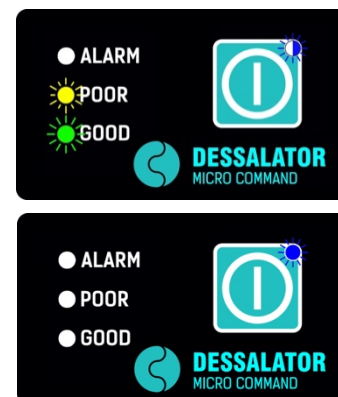
### With the Micro-Command :

To STOP your watermaker and terminate the process with an automatic rinse cycle :



Press and hold the button **①** for about 5 seconds until the YELLOW and GREEN LEDs are both lit and a long 'beep' is heard from the buzzer.

Upon release of the button, the watermaker will STOP and initiate an automatic rinse cycle before going to STANDBY.



## Manual mode:

Follow the procedure below :

After using the watermaker, **do not turn it off.**

- While the watermaker is still running, Start turning the knob of the pressure regulator ① (counterclockwise) to engage the rinsing mechanism, the pressure of the manometer will drop.
- Once you have reached the end stop, reopen the pressure regulator knob ① by only ¼ turn (to the right).
- The watermaker will stop producing water and will start the rinsing procedure. The green and yellow LEDs on the control panel ② will light up, indicating that the rinsing procedure has started. This should last 30 seconds and stop automatically. The green and yellow LEDs ② will turn off and the only remaining indicator will be the flashing blue LED on the ON/OFF switch ③, you can turn off the system by position the switch ③ to « OFF ».

Automatic rinsing is the best way to rinse your system because it not only replaces seawater with fresh water, but it also washes your pre-filter and allows discharge to the sea through the suction through-hull all dirt and debris accumulated in the filters.

If the watermaker is not used, the rinsing is to be renewed every month.

**If the watermaker is not used completely, the membranes must be sterilized for storage (for a maximum of 6 months).**



# Maintenance



## WARNING!

In case of risk of frost, we recommend emptying the flowmeter located on the control panel, disconnect the output pipe (blue) and blow or inject air into this pipe while alternating pressing on the small button of the solenoid valve located at the back of the control panel. You should also protect your membranes against the cold using blankets or insulation.

## Membranes maintenance

Over time, it is normal for the flow to drop by 10 to 15%.

If yield/output is no longer satisfactory, you should consider replacing the membranes.

The output volume of your watermaker is established within the first 24 to 48 hours of operation. The fresh water output depends on the salinity and temperature of the seawater, as well as on the working pressure of the membranes.

Rinsing the membranes can improve the yield/output.

## Rinsing frequency of the membranes

It is therefore not necessary to rinse the membranes after each use. Rinsing them too often can lead to premature deterioration of the membranes.

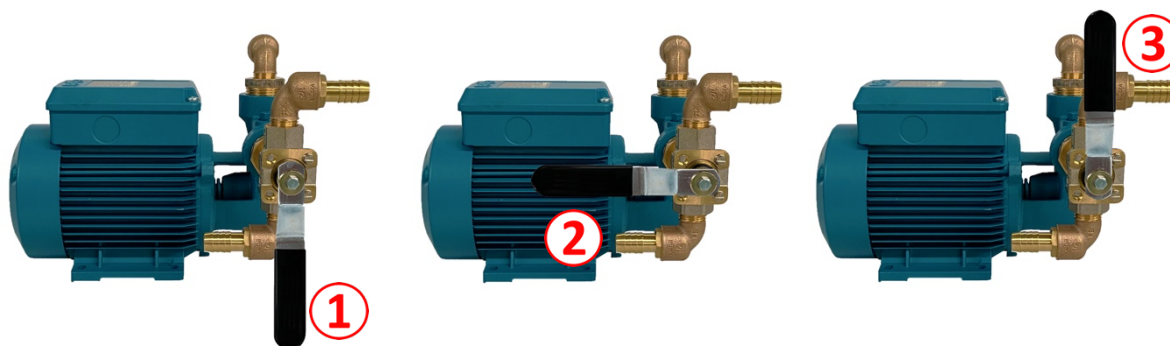
There are two methods to flush the system: one manual and the other automatic.

Both methods use the water in the boat's tanks.

It is necessary to rinse the watermaker if it is not going to be used for several days.

➡**Reminder:** All flushing procedures should be done with the **motor/pump block off**.  
The biggest enemy of membranes is **pressurized fresh water**.

## Manual Rinsing Procedure :



- 1** The valve is in the seawater position for use in desalinization mode.
- 2** The valve is in the closed position, to change the filter cartridge (see **Appendix 4**) or isolate the water circuit.
- 3** The valve is in the fresh water position for manually rinsing the circuit with fresh water or for performing sterilization (see below).

**Your DESSALATOR® is equipped with automated rinsing, here is the procedure to follow if you choose manual rinsing**

### Normal position normale :

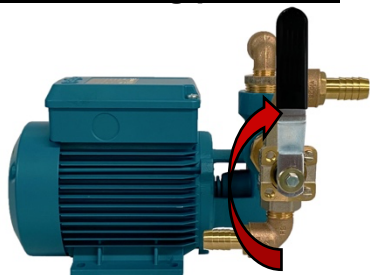


#### **Normal seawater use position:**

The valve handle is in seawater position.

For manual rinsing, tilt the handle of the 3-way valve upwards to the fresh water position (see below), let the circuit rinse for approximately one minute then reposition the valve downwards to the sea water position (see below).




























### Manual rinsing position :



#### **Manual rinsing and sterilization:**

Place the valve handle on the fresh water position

# Guide of the Indicator Lights of the Micro-Command

INDICATOR LIGHTS	DESCRIPTIONS AND ACTIONS
  	<b>Test upon starting-up the test</b> When these indicator lights remain on, please open the regulator (-) to lower the pressure.
  	<b>The pumps are started, waiting for working pressure</b> Slowly turn the pressure regulator clockwise (+) until the needle of the pressure gauge is in the green area.
  	<b>Working pressure reached, waiting for good water quality</b> Please wait, once the water quality is good the machine will automatically start to produce water.
  	<b>Water production</b> The water quality is good, drinking water is being produced
  	<b>Automatic rinsing</b> Please wait, the rinsing takes 30 seconds
  	<b>Low pressure</b> The pressure is too low
        	<b>Alarm 1-1: down time - low pressure</b> Did this alarm ring after the pump started first? If so check the seawater inlet valve and the pre-filter. Restart and try again.  <b>Alarm 1-2: No power to the pressure sensor</b> If this alarm sets off after the machine start, it could be a failure of the pressure sensor or the system voltage could be too low.  <b>Alarm 2-1: Pressure too high</b> Switch off the watermaker, fully open the regulator (-) and restart the machine.

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## Legend:

Indicator lights are on



Indicator lights are flashing



Indicator lights are off



ZI des 3 Moulins, 282 rue des Cistes  
Bâtiment Euro 92  
06600 Antibes, France  
[www.dessalator.com](http://www.dessalator.com)  
[contact@dessalator.com](mailto:contact@dessalator.com)  
+33 4 93 95 04 55