



Smart AWC Duo G2





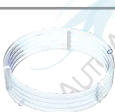
Manual



Model

SAWC-406P

List of Parts (Can Be Purchased Separately)

Item	Picture	Description
Smart AWC Duo G2 Controller		<ol style="list-style-type: none"> 1. Controller with touch panel & two Square Dual Sensors 2. Max. Mounting Thickness : 1/2 inch (12.7 mm)
Universal Power Adapter		<p>Input : 100-240 VAC 50-60 Hz Output : DC 12 V / 1 A</p>
DC Pump x3		<p>Max. Head : 8.2 feet (250 cm) Max. Flow : 74 gph (280 lph)</p>
Universal Tube Holder x3		<p>For rimmed and rimless aquariums up to 1/2 inch (12.7 mm)</p>
Siphon Break x3		<p>A connector to break the siphon</p>
Tubing 19.6 feet (600 cm)		<p>Used with DC Pumps</p>



Caution : Risk of Injury from Strong Magnets

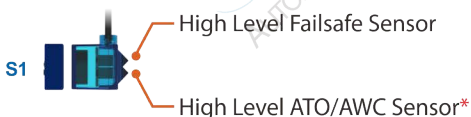
Controller & Square Dual Sensors

■ Smart AWC Duo G2 Controller



- (S1): High Level Dual Sensor
- (S2): Low Level Dual Sensor
- (⏻): Power DC Jack
- (P1): ATO Refill Pump/ Freshwater AWC Refill Pump Jack
- (P2): AWC Drain Pump Jack
- (P3): Saltwater AWC Refill Pump Jack

■ High Level Square Dual Sensor



■ Low Level Square Dual Sensor

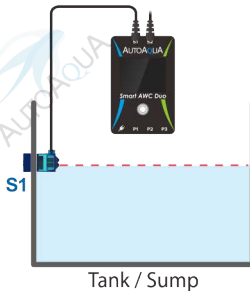


*The High Level ATO/AWC Sensor (S1) must be at least 1/4 inch (6 mm) higher than the Low Level AWC Sensor (S2), or Smart AWC Duo G2 will not work properly.

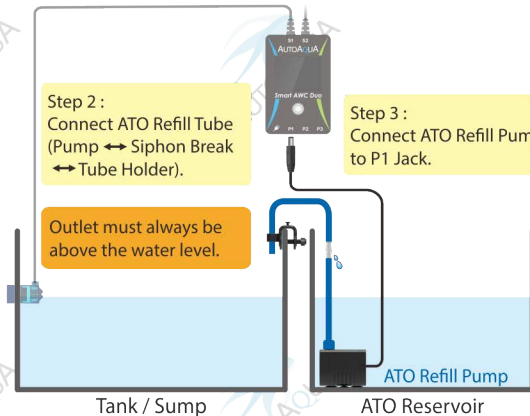
Installation

1. ATO (Auto Top Off)

Step 1 :
Mount the blue sensor
(S1) and adjust the lower
sensor to the normal
water level.*



*Please set the sensor away from the direct infrared light or sun light to avoid malfunction.



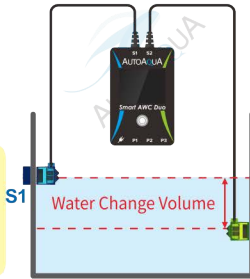
Siphon break must be higher than the water level in the reservoir.

Air In : Siphon break allows air in to break the siphon when the pump turns off.

Water Out : Water drops out of the hole are normal when the pump is on.

2. AWC (Auto Water Change)

Step 1 :
Mount the blue sensor (S1) and adjust the lower sensor to the normal water level.*



Step 2 :
Mount the green sensor (S2) and adjust the top sensor to the desired water level after draining.*

Tank/Sump

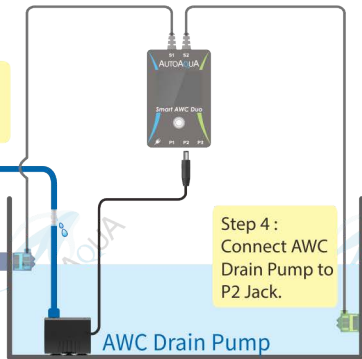
*Please set the sensor away from the direct infrared light or sun light to avoid malfunction.

i. Saltwater Aquarium

Step 3 :
Connect AWC Drain Tube (Pump
↔ Siphon Break ↔ Tube Holder).

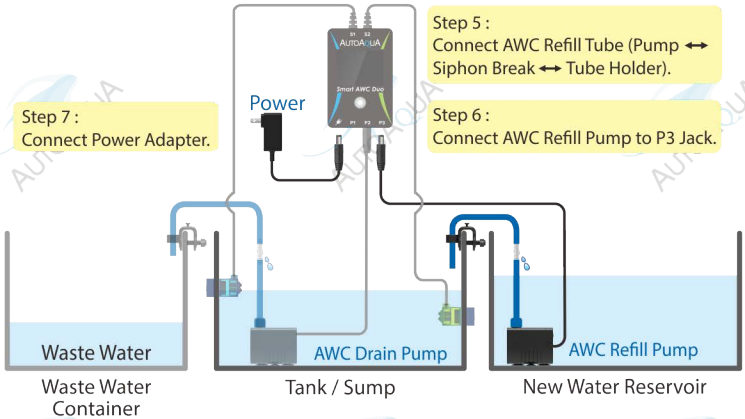
Outlet must always be above the water level.

Waste Water Container



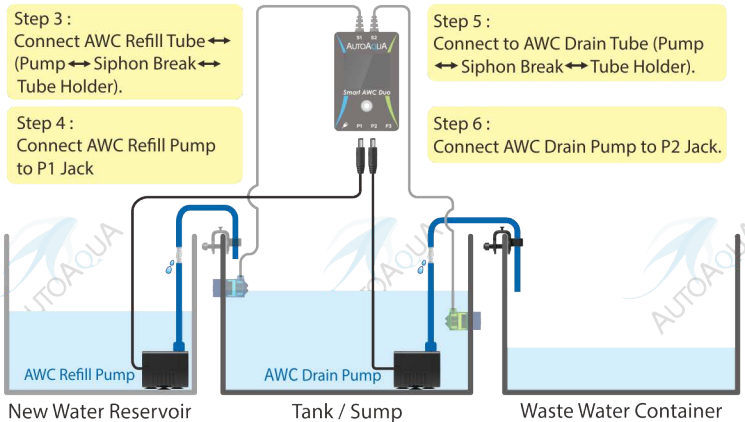
Step 4 :
Connect AWC
Drain Pump to
P2 Jack.

Tank/Sump



ii. Freshwater Aquarium

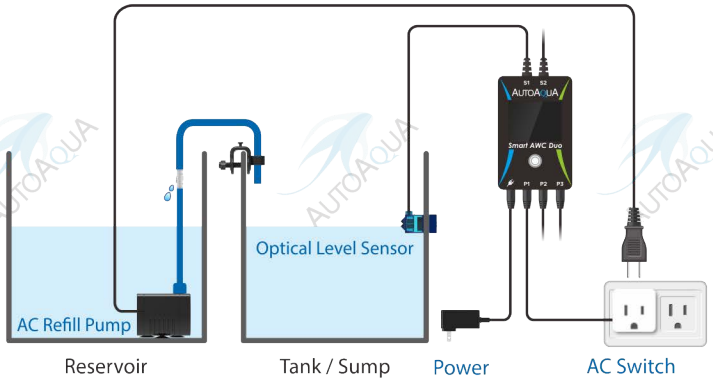
For Freshwater aquariums, P3 is not required.



Optional Accessory for Higher Performance

1. Smart AC Switch

If you desire using your own AC Pump, you can purchase the AUTOAQUA Smart AC Switch to replace the DC Pump to an AC Pump for a higher output.



Smart AC Switch (SAC-10) :

1. AC Capacity : 100-240 VAC, 50-60 Hz
2. Max. Load : 10 A / 2400 W @ 240 VAC
3. DC Connector : DC 5.5 x 2.5 mm Male
4. Cable Length : 10 ft (300 cm)

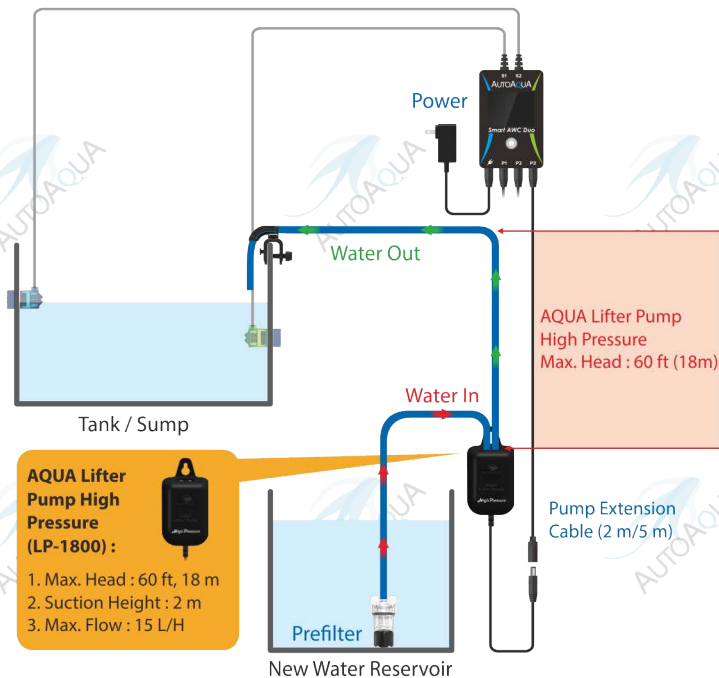
2. Replaced to AQUA Lifter Pump High Pressure

If you require a high head pump, you can purchase AUTOAQUA AQUA Lifter Pump High Pressure with Max. Head : 60 ft, 18 m.



Recommended Additional Purchasing Accessories :

- Pump Extension Cable (2 m / 5 m) : For longer cable length.
- Prefilter & Prefilter Base : To protect diaphragm pump from being clogged and damaged by particles in reservoir.



Calculating the Water Change Volume

The volume can be calculated by multiplying the width and length of your tank and the distance between the pyramids of the two sensors.*

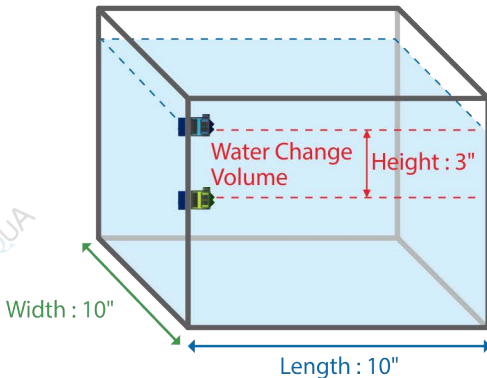
For example, a tank is 10 inches in length and 10 inches in width. If the distance between the two sensors is 3 inches, the water change volume is approximately 1.3 gallons.

Volume Formula : $L \times W \times H / 231 = \text{Volume in Gallons}$

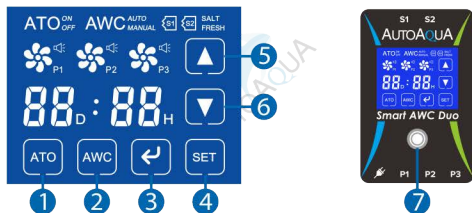
10" (L) X 10" (W) X 3" (H) = 300 cubic inches (around 1.3 gallons)

Note : Suggested daily water change maximum 1.5 gallons (5.7 liters).

*The water volume may be influenced by factors such as the speed of return pump.



Icons & Buttons for Setting

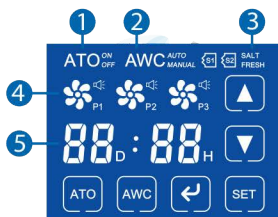


No.	Icon/Button	Function
1		Turn ATO ON / OFF
2		Select AWC MANUAL / AUTO / OFF
3		1. Start / Pause / Resume AWC 2. Dismiss alarm
4		1. Setting Saltwater / Freshwater Mode 2. Setting Time Period in AWC AUTO mode
5		1. Increase day / hour 2. Choose Saltwater / Freshwater mode
6		1. Decrease day / hour 2. Choose Saltwater / Freshwater mode
7		1. Wake up the display 2. Dismiss alarm 3. Resume AWC process 4. Return to AWC setting page* 5. Reset (hold at least for 8 seconds until the display goes black)

*During water change process, pressing can stop the process and return to the previous AWC MANUAL/AUTO setting page.



















Also, ATO turns off automatically and flashes 5 times with audible alarm if the ATO is on in the beginning of the AWC process.





Display Indication





No.	Item	Display
1	ATO	<p>ATO^{ON} : ATO is on.</p> <p>ATO^{OFF} : ATO is off.</p>
2	AWC	<p>AWC : AWC is off.</p> <p>AWC^{MANUAL} : AWC is in MANUAL mode.</p> <p>AWC^{AUTO} : AWC is in AUTO mode.</p>
3	Aquarium Setting Mode	<p>SALT : Saltwater mode</p> <p>FRESH : Freshwater mode</p>
4	Pump	<p> shows : Pump is connected and off.</p> <p> flashes : Pump pauses after power outage.</p> <p> rotates : Pump is on.</p> <p> flashes : Pump pauses.</p> <p> flashes : QST alarm</p>
5	Countdown Timer (AWC AUTO Mode)	<p>DD_D:DD_D Colon flashes every second : Timer is running.</p> <p>DD_D:DD_D Colon & numbers flash every 3 seconds : Timer pauses.</p> <p>DD_D:DD_D D flashes : DAY is being set.</p> <p>DD_D:DD_D H flashes : HOUR is being set.</p>

Alarm and Reminder

Status	Description	Action
 flashes with audible alert	1. ATO pump is not connected. 2. ATO pump malfunctions.	1. Connect the pump cable. 2. Replace the pump.
 flashes with audible alert	Quick Security Technology (QST) alarm Please refer to page 13 for further details.	1. Touch  or  to dismiss the alarm. 2. Verify the root cause. <ul style="list-style-type: none"> • Empty Reservoir • Pump Failure
 &  flashes with audible alert	Pump pauses over 10 minutes.	Touch  or  to dismiss the alarm.*
 &  flashes with audible alert	Timer pauses over 10 minutes.	Touch  or  to dismiss the alarm.*
 shows	The High Level Failsafe Sensor detects water.**	Touch  or  to dismiss the alarm.
 shows	The Low Level Failsafe Sensor detects no water.**	Touch  or  to dismiss the alarm.

* Touching  or  will dismiss the alarm only. Please touch  or  again to resume the process.







** For very small aquariums and AIO aquariums, it's normal that the failsafe sensor may be triggered after each filling/draining.

*** If there are two alarms triggered at the same time, touching  or  once will dismiss one alarm only.

Auto Water Change Setting

1. AWC MANUAL Mode (One-Time AWC)

In this mode, users have to manually start the AWC process.

- 1). Touch  until the screen shows MANUAL.
- 2). Touch  and the SALT or FRESH will flash. Touch  or  to set it.
- 3). Touch  again to save the setting.
- 4). Touch  to start the water change.













MANUAL Set Up Screen:



Ready

2. AWC AUTO Mode (Periodic AWC)

In this mode, Smart AWC Duo G2 will do water changes periodically according to your duration setting.

- 1). Touch  until the screen shows AUTO.
- 2). Touch  and the "D" will flash. Touch  or  to set the date.
- 3). Touch  again and the "H" will flash. Touch  or  to set the hour.
- 4). Touch  again and the SALT or FRESH will flash. Touch  or  to set it.
- 5). Touch  again to save the setting.
- 6). Touch  to start the countdown.

AUTO Set Up Screen :

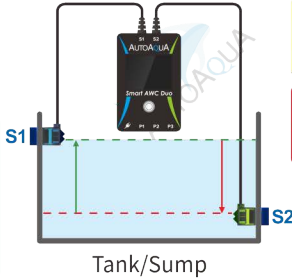
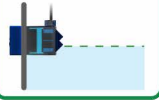


Ready

Auto Water Change Process

Step 3 :
New water is added until the water level reaches S1.

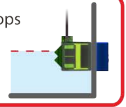
Refill pump stops as the water level at the bottom sensor of S1.



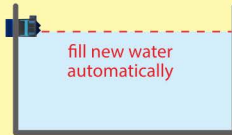
Step 1 :
ATO is turned off automatically during AWC process.

Step 2 :
Old water is pumped out until the water level reaches S2.

Drain pump stops as the water level at the top sensor of S2.



Step 4 :
AWC Balance Mode
AWC flashes for 3 minutes to balance the water level.



Step 5 :
When water change is done,

- MANUAL mode : AWC flashes 5 times with 5 beeps.
- AUTO mode : AWC flashes 5 times .

Quick Security Technology (QST)

Smart AWC Duo G2 uses QST for real-time protection against any failure situation.*

QST can detect the malfunction of the sensor, the controller, and the empty reservoir to avoid the pump running dry. The controller will give an audible and visual alert when any one of the following situations occurs.

For ATO : Any filling time is 6 times longer than the first filling time. For example, if the first filling time is 10 sec, the controller will give an alert when any filling time is over 60 sec.


For AWC : Any draining time or filling time is 3 times longer than the first one.**

For example, if the first draining or filling time is 20 sec, the controller will give an alert when any draining or filling time is over 60 sec.

*No security time control for the first filling and draining.

**AWC filling time includes the filling occurring during 3-minute balance period.

How to reset / clear QST memory?

Pressing  for at least 8 seconds until all LED indicators flash will clear QST memory and reset the QST memory to the factory setting.

Power Outage Security Measures

1. When the power outage occurs during the water change process, the process will be delayed for 1 minute after restoration of power and then resumes. The pump icon will flash during the delay.
2. When the power outage occurs during the countdown, the timer will pause during power outage. It will retain the record and resume after power outage automatically.

Specifications

1. Power Input : 100-240 VAC 50-60 Hz
2. DC Pump :
 - Max. Head : 8.2 feet (250 cm)
 - Max. Flow : 74 gph (280 lph)
3. Max. Mounting Thickness : 1/2 inch (12.7 mm)
4. Water Change Interval :
 - Minimum : 1 hour
 - Maximum : 99 days 23 hours

Notice

1. Please read the manual in detailed before installation. Keep the controller and power adapter dry and avoid any contact with water to prevent malfunctions.
2. If using another ATO instead of the built-in ATO, please turn off your ATO before AWC starts.
3. Avoid setting up the sensors in an area with direct infrared or sun light.
4. Only use AUTOAQUA 12V 1.0A Power Adapter. Using the wrong adapter will damage device and will not be covered by warranty.

Limited Warranty

Notice: Read the entire Limited Warranty prior to purchasing, installing or using this product. By purchasing, installing or using this product, you are acknowledging that this Limited Warranty is part of the sale terms.

AUTOAQUA products are warranted to be free from defects in defects and workmanship for one year from the date of original purchase from an authorized reseller to the original purchaser. This Limited Warranty is not transferable.

AUTOAQUA is not responsible for, and the Limited Warranty does not cover the following: product failures or damage due to normal wear and tear, damages caused by heat/moisture/neglect/improper installation/misuse/abuse/modifications/corrosive chemicals.

Limitation of Liability – this Limited Warranty covers only the repair or replacement of the product when damage or failure is a direct result of a defect of the materials or workmanship. In no event will AUTOAQUA be liable to you or any other party for any direct, indirect, incidental, consequential or other damages arising out of the use of the product. AUTOAQUA does not cover personal injury, personal loss, or other damages associated with the use of the products. In no case will AUTOAQUA's liability exceed the amount you paid for the product. If you disagree with these terms and conditions, do not use the covered products.

All warranty repairs or replacements are performed by the authorized distributor in the region where the Product was first shipped by AUTOAQUA. To request warranty service, please email us through our website, www.autoaqua.com.tw or service@autoaqua.com.tw. You will receive instructions on how to return the Product for repair or replacement. A copy of the original purchase receipt will be required and buyer shall be responsible for shipment and insurance costs to send the Product to AUTOAQUA for warranty service. International and/or expedited shipping are not covered under your AUTOAQUA warranty.

Purchase Date

(Y/M/D)

Warranty Period

One year from the purchase date

Place of Purchase

(Store name, phone, email, address)

Service

AUTOAQUA Technologies Co., Ltd.
7F-7.,NO.229,Fuxing 2nd Rd.,Zhubei
City, Hsinchu County,Taiwan
E-mail : service@autoaqua.com.tw
www.autoaqua.com.tw

* Please go to AUTOAQUA website to get the distributor information.

