

# Manual

## Deepwater Aquatics BLDC

Please review this manual before installing your new pump

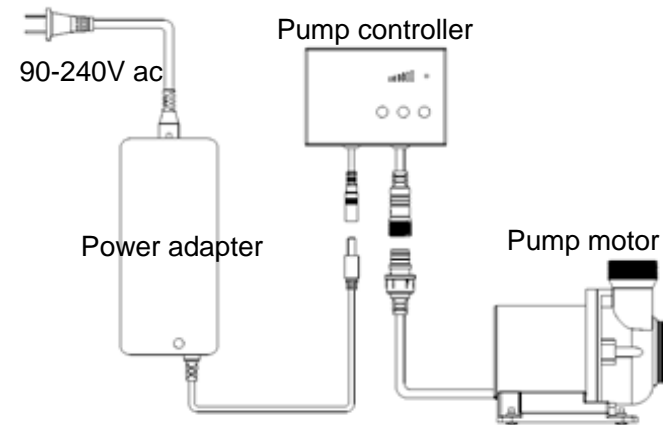
### Pump model and specification:

|                          | Model  | Flow (L/h) | Head (m) | Watt (W) | Voltage (V dc) | Current (A) |
|--------------------------|--------|------------|----------|----------|----------------|-------------|
| <input type="checkbox"/> | BLDC5  | 5500       | 4.5      | 33.4     | 24             | 1.4         |
| <input type="checkbox"/> | BLDC7  | 7000       | 5        | 43.2     | 24             | 1.8         |
| <input type="checkbox"/> | BLDC8  | 8000       | 5.6      | 67.2     | 24             | 2.8         |
| <input type="checkbox"/> | BLDC10 | 10000      | 5        | 79.2     | 24             | 3.3         |
| <input type="checkbox"/> | BLDC12 | 12000      | 6.5      | 132      | 24             | 5.5         |
| <input type="checkbox"/> | BLDC15 | 15000      | 7        | 144      | 24             | 6           |

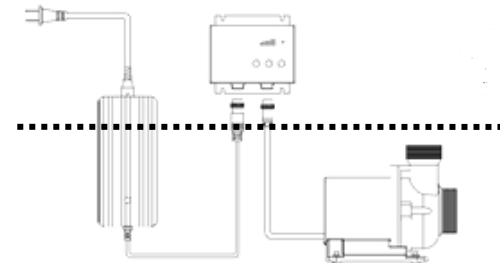
### Check your package:

- 1× BLDC power adapter
- 1× BLDC pump controller
- 1× BLDC pump motor
- 1× manual

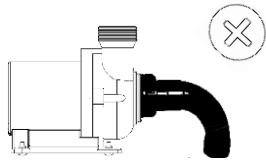
### Connection:



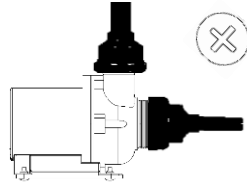
### Install:



Controller should be installed on a place higher than pump to prevent water damage.



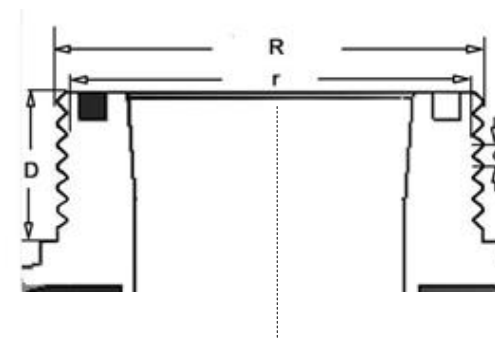
Pump must always stay submersed; otherwise the pump will stop to prevent damage. Do not use 90 degree elbows on the intake.



**IMPORTANT:** The diameter of the pipe connected to the pump inlet and outlet should not be reduced. Reduce pipe at the very last moment in your plumbing setup.

**Inlet and outlet thread: Works with All US Pipe/Threading**

| Model             | Size   | R (mm) | r (mm) | d (mm) | D (mm) |
|-------------------|--------|--------|--------|--------|--------|
| Inlet (10/12/15)  | 2"     | 59.614 | 56.656 | 2.309  | 22.000 |
| Outlet (10/12/15) | 1 1/2" | 47.803 | 44.845 | 2.309  | 18.000 |
| Inlet (5/7/8)     | 1 1/2" | 47.803 | 44.845 | 2.309  | 17.800 |
| Outlet (5/7/8)    | 1 1/4" | 41.910 | 38.952 | 2.309  | 18.000 |



**Pump function:**

- Memory: In the event of power failure, pump will resume at last speed setting

---

- No-Water: If pump is running without water, controller will stop pump within 10s'.

---

- Speed: 6 Speed Settings for different flow rates.

---

- Indicator: 6 LED lights to indicate pump running speed and the reason of faults, and 1 LED light to indicate paused when feeding.

---

- Turn on/off: Ability to turn the pump to an off state using speed buttons.

---

- Install: Internal or External Usage

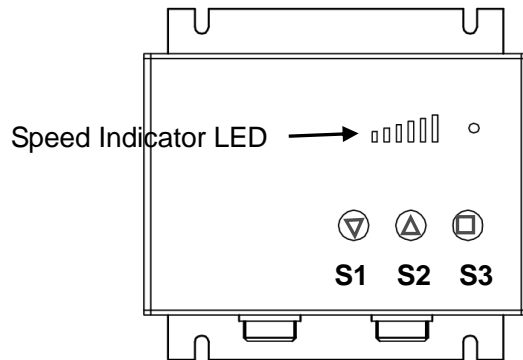
---

- Protection: Over-heat, Over-voltage, Over-current, block.

---

- Others: 20s' soft start.

## Operation



1. Controller has 6 adjustable speeds.
2. 7 LED indicator lights on controller. The 6 lights indicate running speed, and one to indicate pump is in feed mode or paused.
3. Controller has 3 buttons, S1: speed down/stop; S2: speed up/start; S3: pause.
4. After you connect the pump to power the power light will come on, but pump will not run.
5. Turn On: Press S2, pump will start to run at first speed within 20 seconds. Only the first LED on the left will be lit up.
6. Speed Up: Press S2 to speed up pump, each time an LED Lights up it will increase speed.
7. Speed Down: Press S1 to speed down pump.

-5-

8. Continuing to press S1, pump will jump to the highest speed within 3s.

9. Continuing to press S2, pump will jump to lowest speed, first LED on the left will still be lit up.

10. Turn Off: Pump will stop and first LED on the left will extinguish if you press S2 when pump is running at lowest speed.

11. Pause: Press S3, pump will stop for 30 minutes on whatever speed the pump is currently set on.

and the speed indicator LED will extinguish, pause

indicator LED will be lit. Pump will be recovery automatically after 30 minutes, or press S3 when pump is on pause.

12. Soft Start: 20s is needed to speed up to highest speed when started

13. No-water Protection: Controller is able to inspect that if pump running with water or without water. If pump is running without water, controller will stops pump within 10s, and first LED will be flickering to indicate this fault.

14. Restart: Press S2 to restart if problem is resolved.

15. Memory: If input power cutoff accidentally, pump is able to recover previous running status automatically when power comes back.

16. Protection: Over current, Over voltage, Low voltage, No-water, Blocked.

-6-

17. Fault Indicators:

First LED flicking: No-water fault

Second LED flicking: Low voltage fault

Third LED flicking: Over voltage fault

Fifth LED flicking: Blocked fault.

Sixth LED flicking: Over current fault

**Maintain**

1. There are 6 LEDs on controller, and function by showing the fault happening inside the pump (see the item 17 of operation). If problem is resolved, press S2 to restart pump, or if pump does not run please try to switch off power adapter and switch on again to restart.

1-1. If first LED flicking, try to adjust the location of pump, check output pipe connected on inlet of pump, look if there is enough water flowing into pump.

1-2. If second or third LED flicking, please check out power adapter.

1-3. If fifth or sixth LED flicking, please contact technical service.

2. The pump is used in clean water. A filter is needed to fit on pump inlet if water is not clean.

3. For any questions please contact our technical service



**Warning**

Do not connect pump controller to others power except original power adapter, this will void your warranty.

Do not use pump in flammable liquid. Use this pump in clean fresh water or sea water only.

Do not use pump in water over 40 Degrees Celcius

Do not run pump at in water deeper than 1.5M

Do not drop electrical components in water. Keep in dry safe place.

Do not put fingers or others objects in front pump inlet.

Do not pull or drag the cables on pump, controller and power adapter.

For Technical Support

Deepwater Aquatics

888-789-5553

support@deepwateraquatics.com

