ELECTRIC CHILLER

AquaChill 400 Instructions / Warranty

Features:

1. Thermo-electric Chiller
2. For Fresh- and Marine water aquariums
3. Micro-processor conducted
4. Silent - Easy to install
5. Temperature reach 15°C - 30°C
6. Reduces water temperature 4°C - 5°C in a 400L. aquarium

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Safety precautions

Read the instructions carefully before use.

1. Do not disassemble nor modify the AquaChill 400 in order to avoid electrical shock or fire hazard. If opened warranty expires.
2. Do not use other electric wires or plugs than the ones supplied with the AquaChill 400.
3. To prevent electric shock, do NOT touch the power source with wet or sweaty hands, or when the power source itself is wet.
4. A pump with a water debit of 1000 to 2000 liters per hour is recommended.

Parts List

AquaChill 400

1. Water inlet
2. Water outlet
3. Function indicator LED (green)
4. Temperature indicator
5. Temperature adjuster (higher)
6. Temperature adjuster (lower)
7. Ventilation inlet
8. Ventilation outlet
9. 48V electric connecting wire set

Power source

10. Radiator fan
11. Power source switch
12. Socket
13. Power source 115V/230V selector switch
14. Radiator grid
15. 48V socket

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Cautions

Please read carefully before installing the AquaChill 400

The AquaChill 400 must be placed in an area with good ventilation. Avoid exposing it to direct sunlight ***(fig. 16).*** DO NOT to put it in a small, confined place, in order to prevent a decrease in efficiency.

The AquaChill 400 is operated by a power source. ***Careful !!! Always put the position on 230V when the power supply of your home is 220/230V (fig. 28). In case of a wrong setting (for example; using 115V position on 220/230V , the power source will be severely damaged (short circuit)***. No warranty applies in this case.

The Aquachill 400 produces heat while cooling, so make sure the air inlet and outlet of the Aquachill 400 is not blocked. Assure a good air flow, as it increases the efficiency of the Aquachill 400. ***(fig. 17)***

Put the AquaChill 400 on a flat and stable surface. ***(fig. 18)***

The recommended content of the tank is approx. 400 liters. Indoor use only. ***(fig. 19)***

Avoid the power source and the AquaChill 400 body getting wet ***(fig. 20).***

Make sure the connections of the power cord and d.c. 48V are set correctly. This avoids electrical damage ***(fig. 21).***

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Installation

- Turn the screw(s) of the water inlet and outlet to the lowest position. ***(see direction fig. 22)***

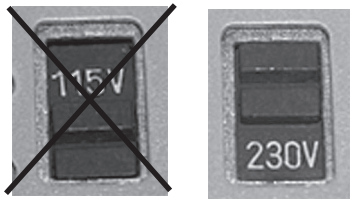
- Put the tubes over the water inlet and outlet ***(fig. 23)***

- Push the tube until it reaches the lowest part of the outlet / inlet connection. ***(fig. 24)***

- Tighten the screw(s) by hand ***(see direction on fig. 25)***

Caution!

the voltage of the wall socket MUST be the same as the one of the power source



- Plug the connecting wire of the AquaChill 400 into the Power source (6-Pin connection) ***(fig. 26a & 26b)***

- Put the plug in the socket of power source before determining the voltage. Do not connect the power cord. ***(fig. 27)***

- After completion of the basic installation, let the water circulate 5 ~ 10 minutes. Make sure there are no air bubbles left in the water pipe. ***The AquaChill 400 is now ready for use.*** You can now connect the power.***(fig. 29a)*** Make sure the power cable is in a loop.***(fig. 29b)***

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- Press the 'On' button ***(fig. 30)***, a green light appears on the AquaChill 400. While the AquaChill 400 is running, the cooling fan could make a little noise.

Setup

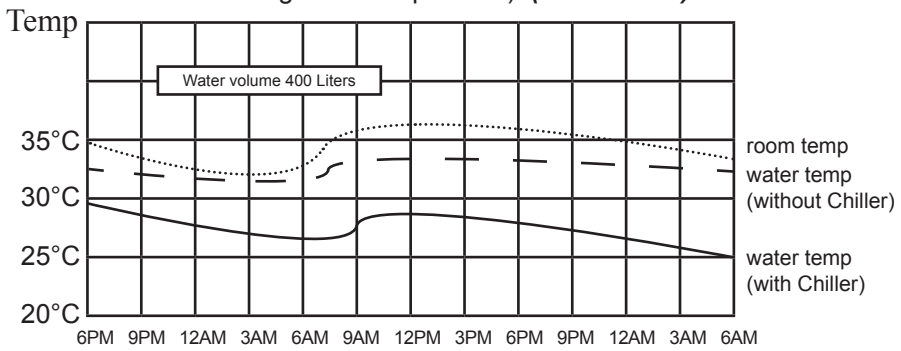
- On top of the AquaChill 400 you'll find a display ***(fig. 31)*** This display has 2 buttons, one with the arrow pointing upwards (red field), and one with the arrow pointing downwards (blue field)

- The arrow in the red field is for choosing a higher temperature setting (for example, if your display reads 25°C , and you wish to set the temperature to 27°C, then use this arrow.)

- The arrow in the blue field is for choosing a lower temperature setting (for example, if your display reads 25°C , and you wish to set the temperature to 23°C, then use this arrow.)

- If the requested temperature is 25°C, yet the temperature of the aquarium is higher (for example 27°C), then the orange LED light goes on and the cooling starts. In the opposite case, if the requested temperature is higher than the water temperature, then the LED light goes off and the cooling stops.

Cooling effect : for a 400 liter aquarium, at room temperature of 32°C ~ 38°C, it will take 12 hours to lower the water temperature with 5°C. (The chart is for reference only, actual cooling will depend on the surroundings of the aquarium). ***(see below)***



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Maintenance

The AquaChill 400 has a very low maintenance, yet a few rules have to be applied :

- Do not clean the AquaChill 400 body with water, but wipe it with a dry cloth instead. ***(fig. 32)*** Do not disassemble the AquaChill 400, the warranty then expires.

- In case of insufficient air apport on the inlet or outlet of the ventilator due to dust , clean it with a brush or vacuum cleaner ***(fig. 33),*** thus prolonging the lifetime and efficiency of the AquaChill 400.

- Check the tubing of the water in- and outlet regurarly (once every 6 months). If they are dirty, replace them.

- When moving the AquaChill 400 or his power source, ALWAYS unplug the power cable first ***(fig. 34).***

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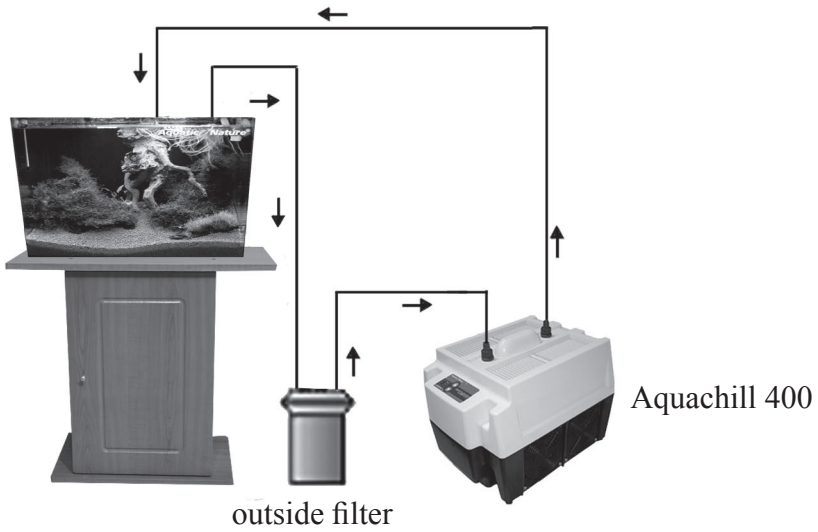
Actual Application Examples

1. User application with outside filter



To avoid a decrease in efficiency, minimize the length of the watertube between the AquaChill 400 and the tank (apply a correct position). In other words, keep the distance from the outlet of the filter to the inlet of the AquaChill 400 as short as possible.

Caution :

1. Make sure the AquaChill 400 **never** operates without water. This could lead to irreparable damage.
2. Place the AquaChill 400 preferably at the same height, or higher than the pump (filter).

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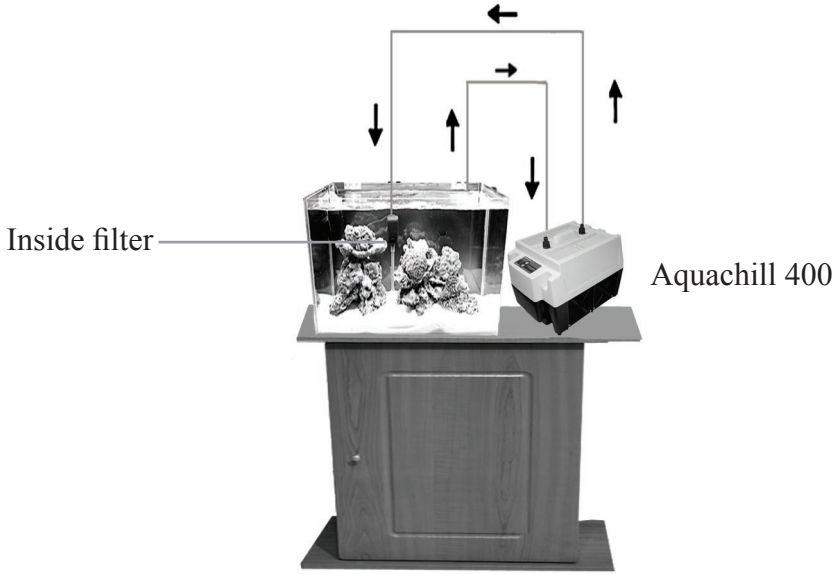
Actual Application Examples

2. User application with inside filter



To avoid a decrease in efficiency, minimize the length of the watertube between the AquaChill 400 and the tank (apply a correct position). In other words, keep the distance from the outlet of the filter to the inlet of the AquaChill 400 as short as possible.

Caution :

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Technical Specifications

Name	Aqua Chill
Model	400
Cooling method	Thermo-electric
Voltage	220/230V - 50Hz
Power	Stand-by : 5W Cooling : 720 W
Temperature Range	15°C ~ 30°C
Dimensions (mm)	Chiller : 286 x 287 x 367 Power source : 91 x 116 x 146
Weight (Kg)	18
Dimensions of Connecting pipe	Inside dia 12 mm Outside dia 16 mm

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Trouble Shooting

Item	Problem	Possible reason	Solution
1.	AquaChill 400 not working. No powerlight	1. No power	1. Make sure the AquaChill 400 is plugged in. 2. On/Off switch should be in "ON" position 3. Adaptor not connected.
2.	Water temperature cannot drop *	1. Air inlet is blocked	Clean the air inlet
		2. Bad ventilation.	Make sure you have a good ventilation
		3. Water tube is too long,	Shorten the length of the water tube.
		4. Aquarium light system too close to water level (too much heat)	Adjust the position between lighting and water surface
		5. Volume of the aquarium higher than 400 liters	Lower volume of aquarium
		6. Tubes are blocked	Clean tubes or replace them
		7. Distance between pump and AquaChill 400 is too big	Reduce distance between pump and AquaChill 400

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Trouble Shooting

Item	Problem	Possible reason	Solution
		8. Insufficient water supply	Clean the filters
		9. Presence of air bubbles	Remove air bubbles
3.	Small amount of circulating water	Water tube or pump filter blocked	Clean the pump
4.	Temp indicator shows -- or OO and AquaChill stops	1. water temp is under 13°C or over 37°C	When the water temp is between 13°C and 37°C, the AquaChill will start again
		2. Sensor break down	Repair sensor

* Caution : due to certain circumstances, the water supply could come to a halt (for example due to a blocked pump). In this situation the water that is still in the Chiller cools off, until it's frozen. If this happens, wait 30 minutes until you restart the Chiller. NEVER let the AquaChill run out of water.

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Side View

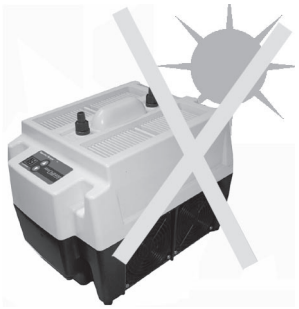

Fig. 16

Fig. 17

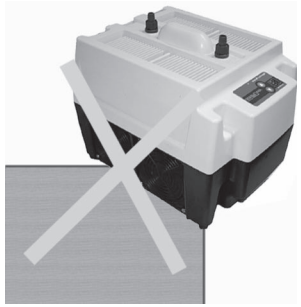

Fig. 18

Fig. 19

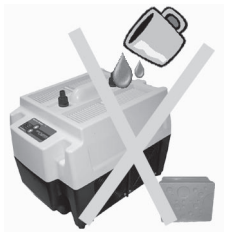

Fig. 20

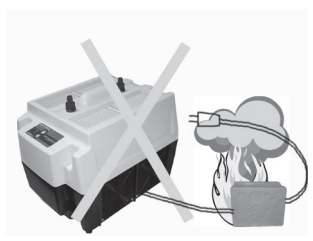

Fig. 21

Fig. 22

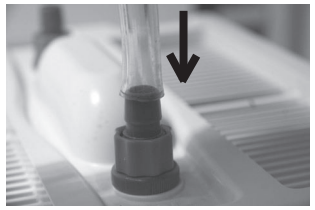

Fig. 23

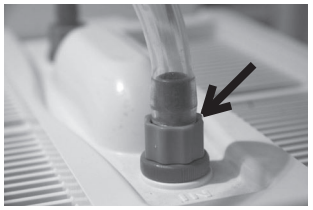

Fig. 24

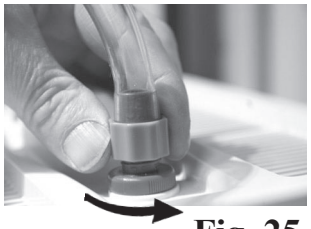

Fig. 25

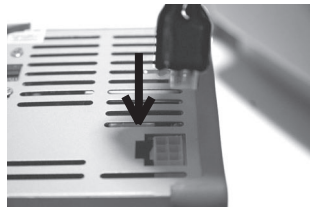

Fig. 26a

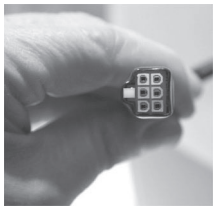

Fig.26b

Fig. 27

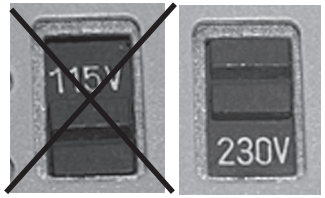

Fig. 28

Fig. 29a

Fig. 29b

Fig. 30

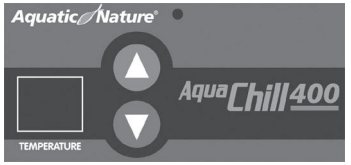

Fig. 31

Fig. 32

Fig. 33

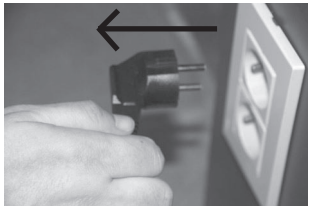

Fig. 34

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