



The Aquarium Solution

**DC SERIES
CHILLER**

INSTRUCTION MANUAL



CE

MODEL: DC-750

Before operating this appliance, please read this instruction manual completely and keep it handy for future reference.

CONTENTS

| | |
|---|-----|
| ■ PREFACE | 2 |
| ■ SUGGESTIONS FOR SAFE OPERATION | 2 |
| ■ FEATURES..... | 3 |
| ■ CHILLER PRODUCTS INTRODUCTION..... | 3 |
| ■ TECHNOLOGY DATA..... | 3 |
| ■ PERFORMANCE CURVE..... | 4 |
| ■ INSTALLATION..... | 4-6 |
| 1. Please check the contents of the package..... | 4 |
| 2. Installation place selection | 5 |
| 3. Suggestions for installation..... | 6 |
| 4. Installation methods..... | 6 |
| 5. Before starting operation of the unit please check the following points..... | 6 |
| ■ OPERATION..... | 7-8 |
| ■ CLEANING AND MAINTENANCE..... | 8-9 |
| ■ STEPS OF FILTER CLEANING | 9 |
| ■ A GUIDE TO SIMPLE PROBLEMS SOLVING..... | 10 |
| ■ PARTS LIST | 11 |
| ■ CIRCUIT DIAGRAM..... | 12 |
| ■ GUARANTEE CLAUSES..... | 12 |

D-D DC SERIES CHILLER

PREFACE





Thank you for purchasing a D-D DC series chiller. The chiller represents a significant step forward in aquarium cooler engineering, offering state of the art technology at highly competitive prices. Temperatures in aquariums ranging from 100-2000 lts (C.25-500g) can now be quickly and economically maintained by selecting the correct model from the chillers in the D-D DC range and, with a heat exchanger that is manufactured from high grade pure titanium, the chillers are suitable for applications in fresh or salt water aquariums. The reasonable system design and high quality perfect efficiency compressor reduces the forces on the rotor resulting in significantly lower noise levels, quieter than a normal refrigerator from home and abroad, whilst the digital temperature controller ensures that the selected temperature is maintained. D-D DC series chillers have strong chassis with a housing of ABS plastic which is anti-rust, anti-corrosion, ensuring the chiller does not look out of place in any surroundings and compared with other cooling units, our chillers use the environmental friendly refrigerant R134a. For the complete use and understanding of this chiller, it is recommended that this instruction manual is thoroughly read and understood. Failure to do so may result in loss of fish or damage to this unit.

SUGGESTIONS FOR SAFE OPERATION

Several symbols are used in this manual and on the product itself which are aimed at proper and safe operation in order to prevent you from injury or others or damage to the chiller. The meanings of these symbols are explained below. Please be sure you understand their meanings before you read this manual.

EXPRESSIONS (TERMS AND SYMBOLS)

Degrees of danger will be indicated by the terms or shown by pictures. The symbols on the left is a general emphasis but specific details of the action which must be taken will be show by a picture or explanatory near to the symbol.

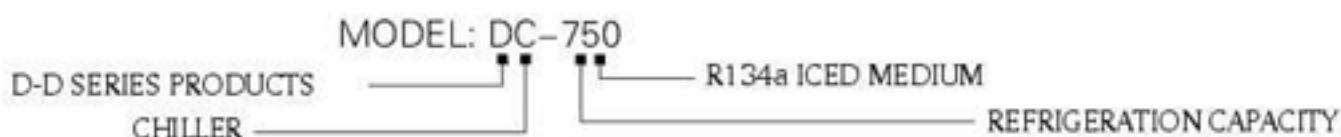
-  This symbol advises you of an item which should be noted (including danger and warning). The symbol on the left is the general note but specific details to be noted will be shown by a picture, a word or an explanatory text inside or near to the triangle.
-  This term indicates the possibility that continuing to work while ignoring this attention, or working incorrectly without full understanding, may cause personal injury or physical damage.
-  This symbol advises you of an action which must be taken (is mandatory) in order to avoid danger.
-  This symbol advises you of an action which must not be taken (is prohibited) in order to avoid danger. The symbol on the left is a general prohibition but specific details of the action which must not be taken will be shown by a picture or explanatory text near to the symbol.

D-D DC SERIES CHILLER

FEATURES

1. Microcomputer control system for the convenience of user.
2. Large refrigeration capacity, aquarium water can be refrigerated to any degree above 4°C in a short period of time.
3. Adopt Freon-free R134a iced medium, safe and environmental friendly.
4. Anti corrosion pure titanium evaporator for fresh & sea water dual use.
5. Overcurrent protection device system.
6. Temperature memory system that makes the unit refrigerate continuously according to the previous temperature when the power is supplied again to protect the fish in the aquarium.

CHILLER INTRODUCTION



TECHNOLOGY DATA

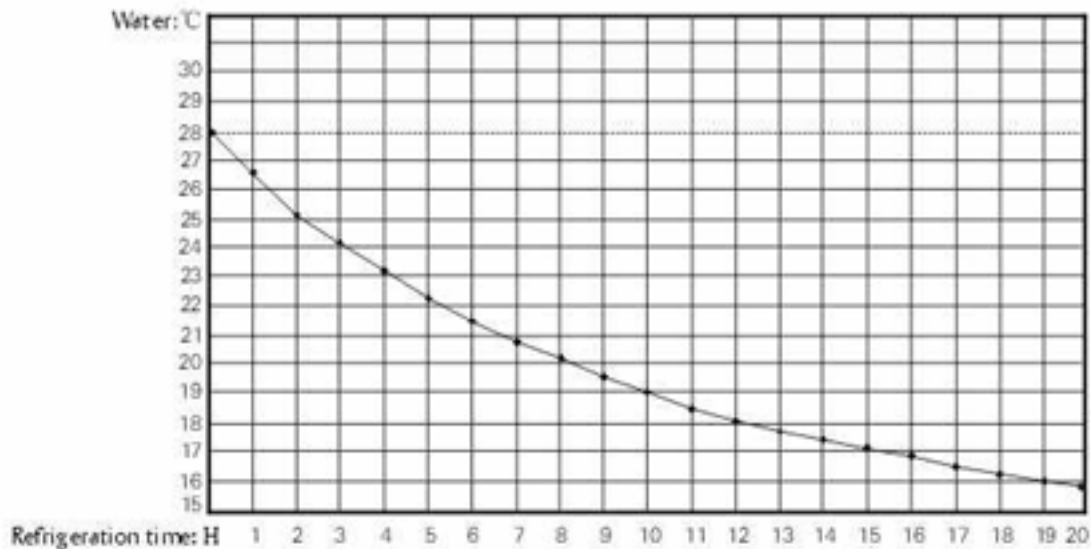
| | |
|---|---------------------|
| Model | DC-750 |
| Rated Voltage | 220-240V (110-120V) |
| Rated Frequency | 50Hz (60Hz) |
| Working Current | 1.8A (3.0A) |
| Power | 1.4HP |
| Water Temperature Before Refrigeration | 28°C |
| Refrigeration Time | 20h |
| Cooling Wattage | 750W |
| Water Temperature After Refrigeration (Water Refrigerated 300L) | 18°C |
| Water Temperature After Refrigeration (Water Refrigerated 600L) | 23°C |
| Refrigerant | R134a |
| Refrigerant Weight | 220g |
| Rate of Flow | 1000-2500L/h |
| Weight | 18.6Kg |
| Size | 448x330x440mm |

1. The rate of flow is decided according to the max jet of the pump (immersible pump or other external power filter) and the circulation equipment.
2. The refrigeration performance test is indicated when the ambient temperature is 30°C, the water temperature before refrigeration is 28°C, the set temperature is 18°C and the water refrigerated is 300L. When water refrigerated is reduced, the water temperature will drop down on.
3. The refrigeration efficiency is determined according to the installation location, heating source, lighting, pump filter and other connecting parts. Special pump and other accessories sold with Hailea series chillers should be used. Do not use other alternatives to avoid affecting the performance of the unit.
4. When there is not enough exchanged air in a room, the refrigeration efficiency is reduced if the surrounding temperature increases due to the heat from the unit.

D-D DC SERIES CHILLER

PERFORMANCE CURVE

MODEL: DC-750 AMBIENT TEMPERATURE: 30°C REFRIGERATED: 300L



The refrigeration performance test is indicated when the ambient temperature is 30°C, the water temperature before refrigeration is 28°C, and the water refrigerated is 300 L. When water refrigerated is reduced, the water temperature will drop down to any degree above 4°C in a short period of time.

INSTALLATION

When the chiller carton is unpacked, check to see if the chiller is the right model and that no damage to the chiller occurred during the transportation. You also check to be certain that the number of the spare parts and accessories are the same quantity as those specified in the instruction manual. If you find out any discrepancy or difficulties, please enquire to our dealer in your area.

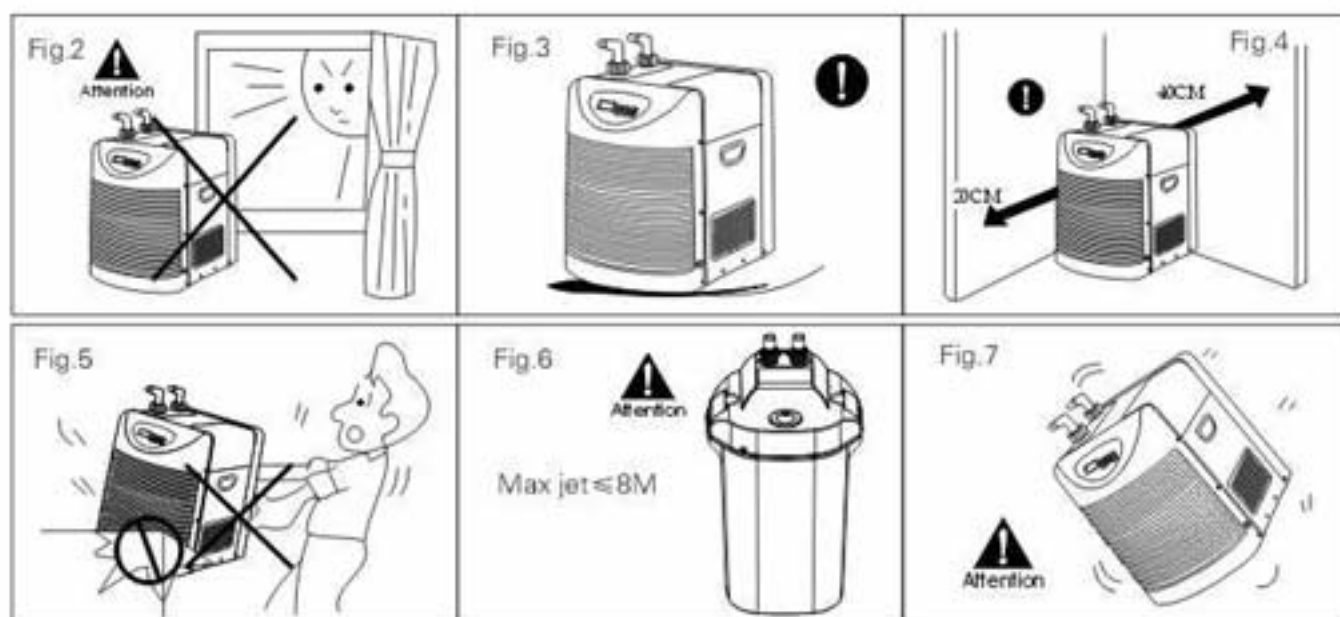
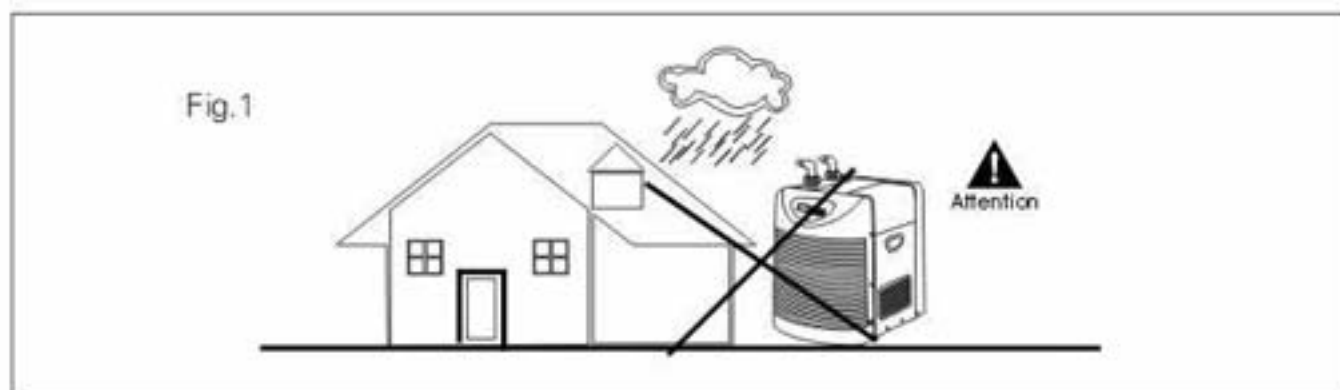
1. PLEASE CHECK THE CONTENTS OF THE PACKAGE:

- ✳ D-D DC Series chiller1 set.
- ✳ Instruction manual1piece.
- OPTIONAL:
- ✳ Water inlet & outlet connector2 pieces .
- ✳ Nut2 pieces .
- ✳ Seal ring4 pieces.
- ✳ Fuse1 piece.

D-D DC SERIES CHILLER

2. INSTALLATION PLACE SELECTION :

- (1) Don't install the chiller outdoors. (Fig.1)
- (2) Select a site as cool as possible, please keep the unit away from inflammable, high temperature, direct sunshine, moisture or dust. (Fig.2)
- (3) Place the unit on a horizontal stable surface. (Fig.3)
- (4) Install at least 20~40 cm away from the walls or other things for venting. (Fig.4)
- (5) Don't cover up the chiller, while it is working avoid shaking or colliding with other things directly. (Fig.5)
- (6) The circulation water flow for the chiller is indicated in the technology data form. This chiller doesn't have a water pump. So, it needs a pump with an external filter. Pump head is no more than 8m maximum. If other equipment out of specification is used, it may cause water leakage or other damage. (Fig.6)
- (7) Neither put the chiller side down nor up side down, it will damage the chiller. Wait at least 20 minutes before operation, if it is up side down for only a few period of time. (Fig.7)



D-D DC SERIES CHILLER

3. SUGGESTIONS FOR INSTALLATION :

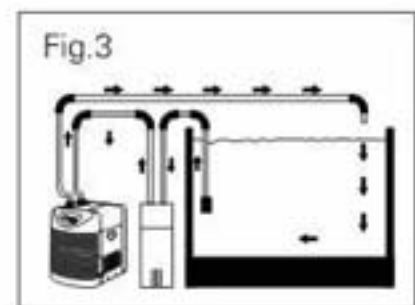
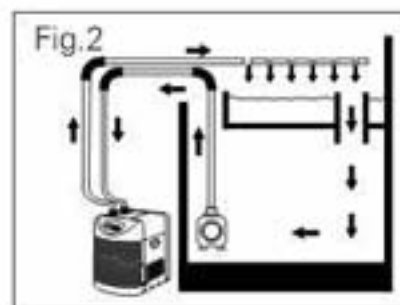
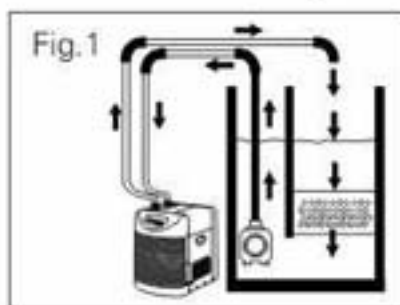
1. Electrical work must be done by a qualified electrician.
2. Provide a separate power outlet to be used only for the unit.
3. Ensure that the power source to be utilized conforms to the power requirements specified on the product nameplate.
4. The power supply should be fitted with earth leakage breaker.
5. Disconnect the power during installation.

4. INSTALLATION METHODS

Note: The chiller must be operated with a circulating & filtering system.

The chiller also can be installed in a hidden position such as inside an closed style aquarium cabinet. But if your cabinet has no ventilation grilles, they must be made, calculating a minimum surface area of at least four hundred and fifty square cm for the passing air. When the grilles are being made, make sure the air intake grilles must be in exact alignment with the aspiration grille of the chiller and the air outlet grille on the cabinet should be made as high as possible for easy air outlet. The chiller should be installed with its back as near as possible to the grille of the cabinet to allow fresh air circulation. The chiller also can be installed under an open style aquarium cabinet. As you know, it should be installed at a minimum distance of at least 20-40 cm from each side of the cabinet, so as to allow a fresh flow air in the intake area. For fresh air circulation, it is suggested to put your chiller out of the aquarium cabinet.

If the chiller is placed under a water fish tank fitted with filter, a water intake tube must be provided with the water pump arriving directly to the input connector in chiller to ensure the intake water is pure. For sea water , it must be filtered before arriving the chiller, or the evaporator will be dirty and this will affect the refrigeration.



5. BEFORE STARTING THE OPERATION OF THE CHILLER , PLEASE CHECK THE FOLLOWING POINTS:

- (1) Check if the water level inside the aquarium is appropriate.
- (2) Make sure that no water leaks from the hose and pipe connections.
- (3) Insert the power plug with it's full contact into the power outlet so that the plug itself does not wobble.
- (4) Make sure there is nothing wrong with the circulating & filter system, especially the circulating tube must not be clogged.

D-D DC SERIES CHILLER

OPERATION

Note: Before starting the chiller, you must run the pump & make sure that there is nothing wrong with the water circulating system. There are three buttons for exchanging or setting temperature on the control & command panel.

■ AQUARIUM TEMPERATURE DISPLAYS & SETTING TEMPERATURE DISPLAYS

After pressing the (SET) button, the indicator "1" will appear to indicate the previously setting temperature value on the display , press the SET button once again , the indicator light "1" will turn off and the aquarium water temperature will appear on the display. The light twinkles to indicate the setting temperature.

■ ADJUST THE SETTING TEMPERATURE

Press the (SET) button for more than three seconds to indicate that the programming function is enabled and the previously setting temperature value will appear on the display, press the "△" button for increasing temperature or "▽" button for decreasing temperature to choose your required temperature. The setting temperature is from 4°C to 28°C, Then press the (SET) button again or just wait for eight seconds. The aquarium water temperature will appear on the display while the chiller is working.

■ THE CHILLER PROTECTION DEVICE TO BE RESPONDING

Protection device is provided with the chiller. The refrigeration compressor need three minutes after resetting and for the first time, it needs about one minute.

■ REFRIGERATION COMPRESSOR ON & OFF AUTOMATICALLY

When the refrigeration compressor stops working for over three minutes & the water temperature is 1°C above the setting temperature, the compressor will start to work again automatically.

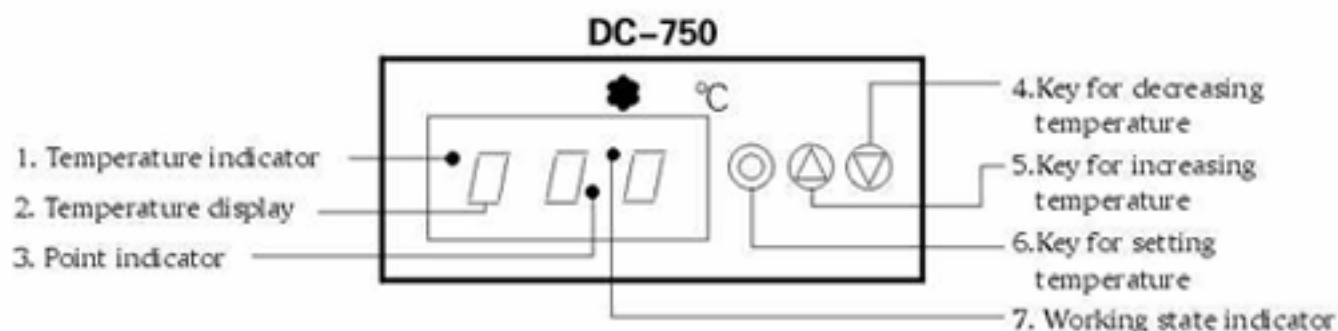
The compressor will stop working automatically when the aquarium water temperature reaches or falls below the setting temperature.

The indicator light "7" shows that the chiller is working. The light turns off when the aquarium water temperature reaches the set temperature & the chiller stops working, the light twinkles to show that the protection device to be responding for three minutes.

■ AUTOMATIC BREAKDOWN DISPLAY SYSTEM

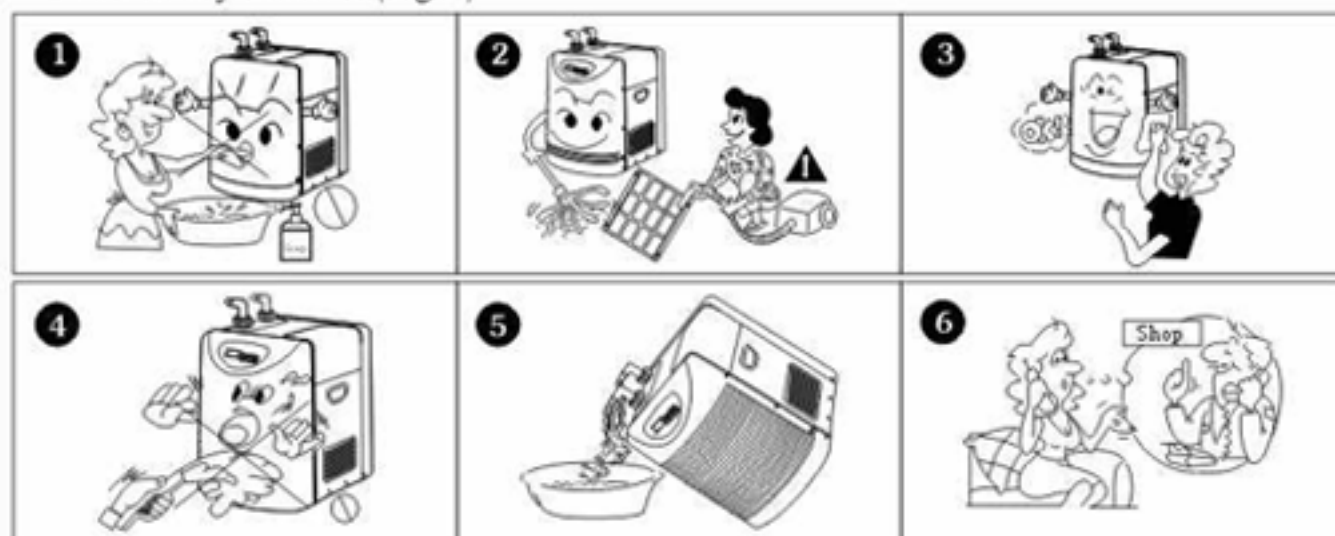
Some breakdowns will automatically show on the display. When the water temperature inductor is broken the letter P1 will appear on the display and the protection device will respond to stop the chiller.

D-D DC SERIES CHILLER



CLEANING AND MAINTENANCE

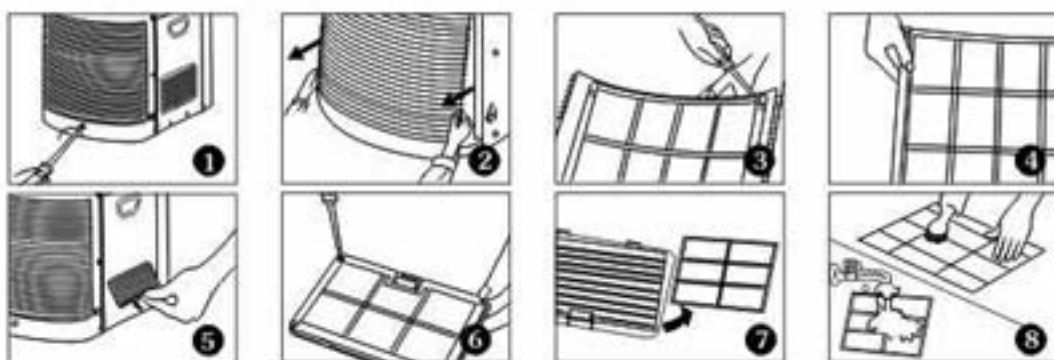
1. Cleaning of the circulating system and the filtration system is recommended each month for maximum refrigeration operation and efficiency, unplug the cord from the outlet before cleaning. Rinse collected debris from the filter media, inlet & outlet pipe, flow diverter, impeller and chamber cover in clear lukewarm tap water. Soap or detergents are not recommended for filter maintenance because they are bad for the fish's health. (Fig.1)
2. Remove the dust at the air inlet and outlet with a brush or vacuum cleaner. To avoid electric shock, during operation, do not insert wire into the exhaust outlet or the air inlet. (Fig.2)
3. The plug, electric supply switch and temperature adjuster must be cleaned with dry soft cloth. (Fig.3)
4. Neither immerse the unit into water nor flush it with water directly to avoid damaging the electric insulation of the chiller. (Fig.4)
5. Disconnect the power supply plug if the unit will not be used for a long time, remove the inlet & outlet pipes, lift the front of the chiller a bit to remove water out of the chiller, clean all the parts with a soft cloth and cover it with a vinyl bag, put it into the color box, then store it in a safe and dry place. (Fig.5)
6. If you still have any other questions, please contact with our dealer or an Authorized Service Center near your home. (Fig.6)



D-D DC SERIES CHILLER

STEPS OF FILTER CLEANING


1. Loosen screw of front draft hood , turn counterclockwise (Fig.1).
2. Draw front draft hood out lightly by hands (Fig.2).
3. Loosen screws of filter and remove the filter (Fig.3.4).
4. Lift and remove side draft hood (Fig.5).
5. Loosen screw of side draft hood & remove the filter (Fig.6.7).
6. Remove the dust with brush or vacuum cleaner, or rinse it well with water completely and dry it before reinstalling (Fig.8).
7. Install all the parts back by counter steps.



D-D DC SERIES CHILLER

A GUIDE TO SIMPLE PROBLEMS SOLVING

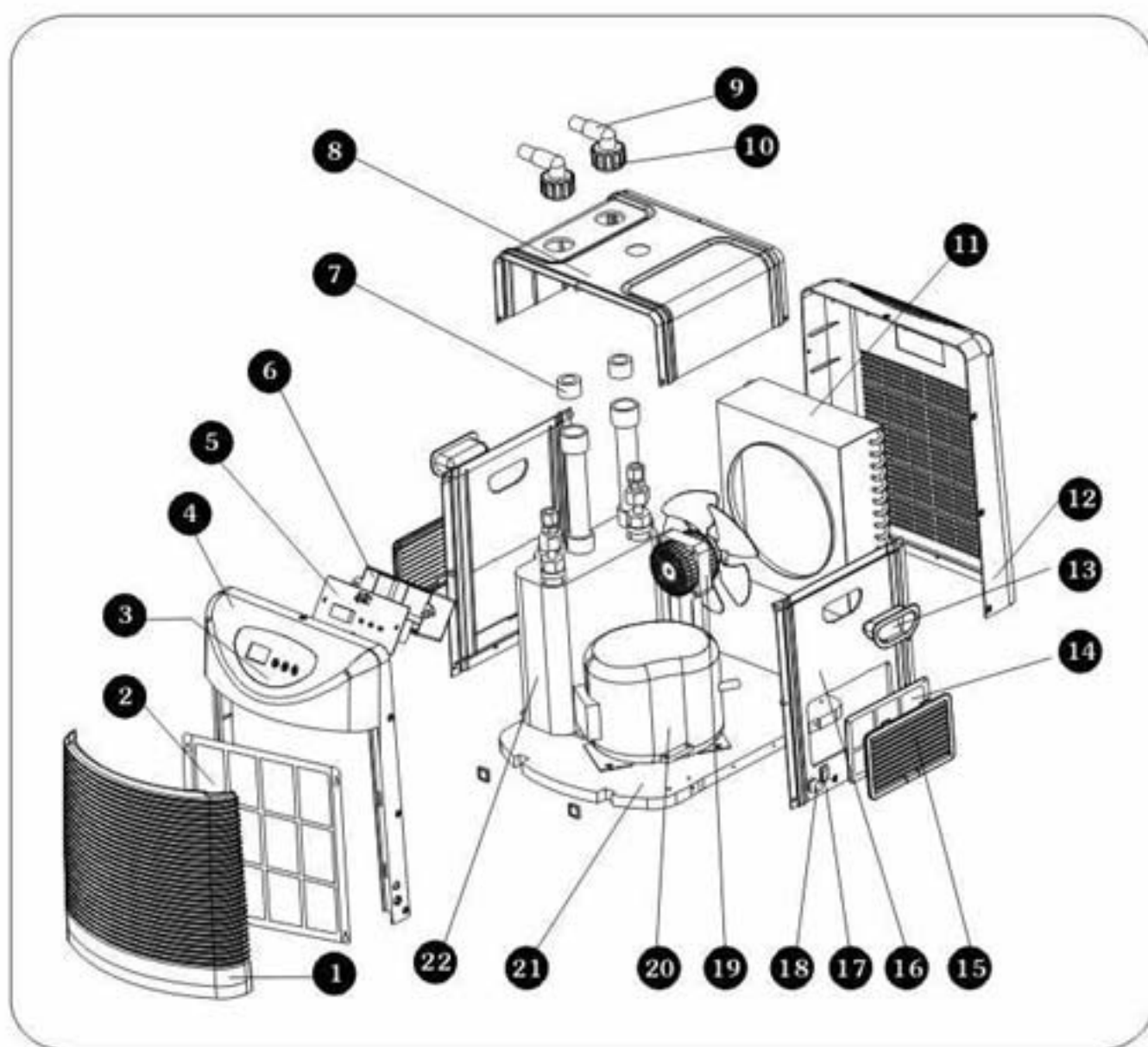
Before calling service personnel, please check the following chart for possible cause to the trouble you are experiencing.

| SYMPTOM | CAUSE | COUNTERMEASURE |
|---|---|--|
| The chiller doesn't run & the display appears nothing | Power is not turned on | Turn on the power |
| | Plugged in insufficiently | Be sure the power cord is to be fully plugged in |
| | The fuse has broken | Change a new one |
| The chiller repeats on and off | Apply to wrong voltage and frequency | Apply to correct power source, according to the nameplate. |
| | The chiller protection device to be responding | Wait for 3 minutes & the chiller will turn on again automatically |
| Refrigeration capacity reduces or even no refrigeration | The setting temperature is higher than the aquarium water temperature | Reset refrigeration temperature |
| | The air inlet and outlet are dogged with dirt | Rinse the dust at the air inlet & outlet with a brush or a vacuum cleaner |
| | Iced medium is not enough |  Look at page 3-4, fill the chiller with the same type of iced medium by a qualified electrician |
| | Too much refrigeration water | Reduce water |
| | | |
| Runs with shock & loud noise | The base is not flat | Mount it on a flat base |

D-D DC SERIES CHILLER

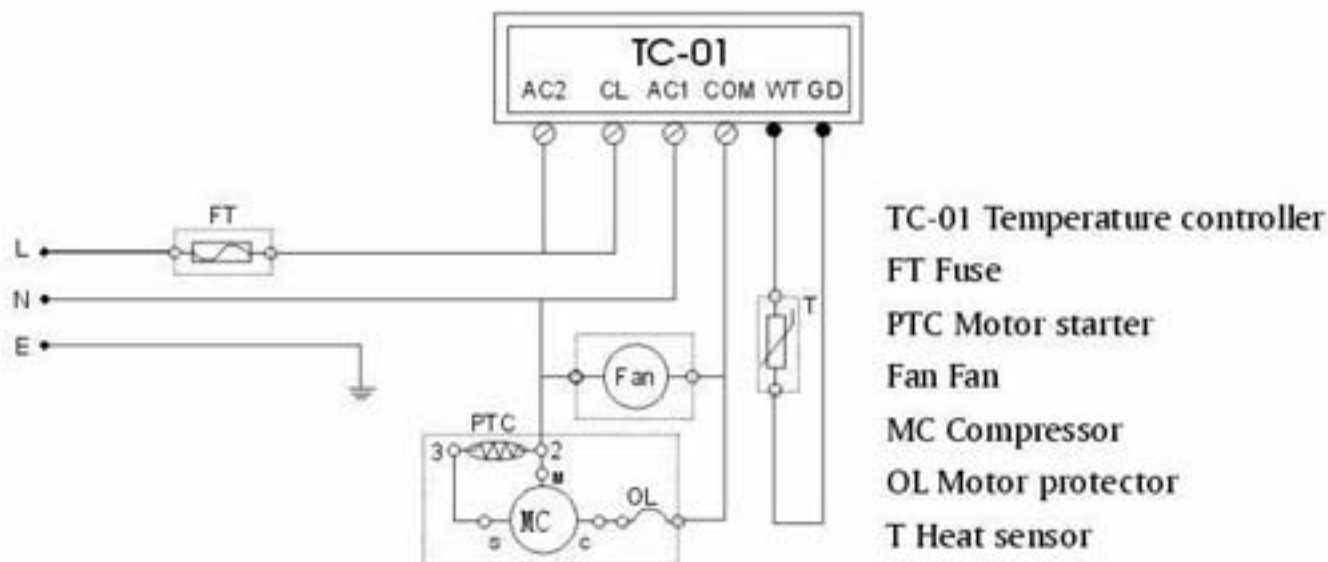
PARTS LIST

- (1) Front draft hood (2) Filter (Front draft hood) (3) Control & command panel (4) Front cover
(5) Circuit board (6) Back cover of circuit board (7) Seal sleeve (8) Middle top cover
(9) Pipe connector (10) Nut (11) Condenser (12) Back cover (13) Handle
(14) Filter (Side draft hood) (15) Side draft hood (16) Middle nether cover (17) Fuse
(18) Power supply switch (HC-250A/HC-300A only) (19) Fan motor (20) Compressor
(21) Base (22) Tank (with evaporator)



D-D DC SERIES CHILLER

CIRCUIT DIAGRAM



GUARANTEE CLAUSES

D-D The Aquarium Solution LTD. hereby agrees to take the responsibility of servicing the D-D DC series chiller identified on this guarantee form.

■ SERVICE UNDER GUARANTEE

1. This product is guaranteed by us against defects due to faulty workmanship or materials.
2. If the product has been damaged under normal use, it will be entitled to be free repairing service. Service under guarantee is provided only upon presentation of reasonable evidence (eg. Completed guarantee card or purchase receipt) that date of the dam is within the guarantee period.

■ GUARANTEE PERIOD : (A period of ONE YEAR after the date of purchase.)

For extended warranty information visit www.theaquariumsolution.com

■ SERVICE NOT UNDER GUARANTEE

1. The guarantee is not valid if the defect is due to accidental damage, misuse or neglect and in case of alterations or repair carried out by unauthorized persons.
2. If your unit can't work after guarantee or during guarantee because of your using or maintaining uncurrently , we'll charge the material cost.
3. If your guarantee form is missing, the guarantee is not valid, either.

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