

# ActiveAQUA

Ideal for HYDROPONIC System Reservoirs

1/2 HP ♦ 53-317 GALLONS (200-1200 LITERS)

1/4 HP ♦ 26-210 GALLONS (100-800 LITERS)

# CHILLER

INSTRUCTION MANUAL

## HGCH1/2 - 1/4

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



PATENT NUMBER:200630051337.1/01235915.7

## CONTENTS

■ INTRODUCTION	2
■ SUGGESTIONS FOR SAFE OPERATION	2
■ FEATURES	3
■ PRODUCTS INTRODUCTION	3
■ TECHNICAL DATA	3
■ PERFORMANCE CURVE	4
■ INSTALLATION	4-7
1 Please check the contents of the package	4
2 Installation place selection	5
3 Suggestion for installation	6
4 Installation methods	6
5 Before starting operation of the unit please check the following points	7
■ 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	11
■ GUARANTEE CLAUSES	12

# ACTIVEAQUA HC SERIES CHILLER

## INTRODUCTION

Thank you for purchasing an ActiveAqua Series Chiller, the chiller represents a significant step forward in horticultural cooler engineering, offering state of the art technology at highly competitive prices. Temperatures ranging from 100 to 6000 liters (approx. 25 to 1500 gallons) can now be quickly and economically maintained by selecting the correct model ActiveAqua Series Chiller. The super silent design results in significantly lower noise levels, quieter than any other similar domestic or imported chiller, while the digital temperature controller ensures that the selected temperature is maintained. ActiveAqua Series Chillers have a strong chassis with an ABS plastic housing which is anti-rust and anti-corrosive, ensuring that the chiller does not look out of place in any setting. Our chillers use the environmentally friendly refrigerant R134a. For a complete understanding of this chiller, we recommend reading this instruction manual thoroughly.

## SUGGESTIONS FOR SAFE OPERATION

Several symbols are used in this manual and on the product itself which are aimed at promoting proper and safe operation in order to prevent injuries or damage to the chiller. Please familiarize yourself with the symbols below before reading the manual or trying to operate the chiller.

### EXPRESSIONS (TERMS AND SYMBOLS)

Hazard seriousness levels will be indicated in writing or shown by pictures. The symbol on the left provides general emphasis of the hazard, but specific details of the action which must be taken will be shown by a picture or explanation near the symbol.



Attention

This term indicates the possibility that continuing working while ignoring this attention, or working incorrectly without full understanding, may cause personal injury or equipment damage.



This symbol advises you of an item which should be noted (including danger and warning).



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.

# ACTIVEAQUA HC SERIES CHILLER

## FEATURES

1. Convenient microcomputer control system.
2. Large refrigeration capacity: water can be refrigerated to any level above 4°C in a short period of time.
3. Uses Freon-free R134a refrigerant, which is safe and environmentally friendly.
4. The super quality condenser is manufactured by American OAK production line.
5. Anti corrosive pure titanium evaporator for fresh & salt water.
6. The compressor protection device system is built to shut off the circuit automatically to prevent the motor from burning out when the motor is overheated due to overload.
7. Temperature memory system that makes the chiller refrigerate continuously according to the previous temperature when the power supplied again to protect plants in the reservoir.

## PRODUCT INTRODUCTION

MODEL: HGCH1/2 - 1/4

ACTIVEAQUA HC SERIES CHILLER  
CHILLER

Pump power  
capacity

## TECHNOLOGY DATA

Model	HGCH1/4	Power Voltage	220-240V (110-120V)	<ol style="list-style-type: none"> <li>1. The rate of flow is decided according to the max jet of the pump (immer-sible pump or other external power filter) and the circulation equipment.</li> <li>2. The refrigeration performance test is indicated when the ambient temperature is 30°C, the water temperature before refrigeration is 28°C, the setting temperature is 16°C and the aquarium capacity is 300/600L. When water quantity is reduced, the water temperature will also drop.</li> <li>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 which sold with ActiveAqua Series chillers should be used. Do not use other alternatives to avoid affecting the performance of the unit.</li> <li>4. When there is not enough exchange air in a room, the refrigeration efficiency is reduced if the surrounding temperature increases due to the heat from the unit.</li> </ol>
Electric Current	1.8A (3A)	Frequency	50Hz (60Hz)	
		Refrigerant	R134a	
Power	1/4HP	Water Temp Before Refrigeration	28°C (82°F)	
Rate of Flow	1000-2500L/H	Water Temp After Refrigeration		
Refrigerant Weight	210-240g	Aquarium Capacity 300L	Aquarium Capacity 600L	
		16°C (60°F)	22°C (72°F)	
Weight	20Kg (44 Lbs.)			
Size	475x360x490mm (18.7"x14.2"x19.3")			

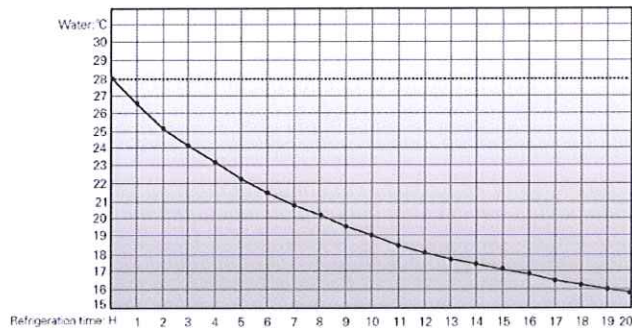
Model	HGCH1/2	Power Voltage	220-240V (110-120V)	<ol style="list-style-type: none"> <li>1. The rate of flow is decided according to the max jet of the pump (immer-sible pump or other external power filter) and the circulation equipment.</li> <li>2. The refrigeration performance test is indicated when the ambient temperature is 30°C, the water temperature before refrigeration is 28°C, the setting temperature is 18°C and the aquarium capacity is 300/600L. When water quantity is reduced, the water temperature will also drop.</li> <li>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 which sold with ActiveAqua Series Chillers should be used. Do not use other alternatives to avoid affecting the performance of the unit.</li> <li>4. When there is not enough exchange air in a room, the refrigeration efficiency is reduced if the surrounding temperature increases due to the heat from the unit.</li> </ol>
Electric Current	2.4A (4.4A)	Frequency	50Hz (60Hz)	
		Refrigerant	R134a	
Power	1/2HP	Water Temp Before Refrigeration	28°C (82°F)	
Rate of Flow	1200-3000L/H	Water Temp After Refrigeration		
Refrigerant Weight	250-280g	Aquarium Capacity 500L	Aquarium Capacity 1000L	
		18°C (64°F)	23°C (73°F)	
Weight	22Kg (48.5 Lbs.)			
Size	475x360x490mm (18.7"x14.2"x19.3")			



## ACTIVEAQUA HC SERIES CHILLER

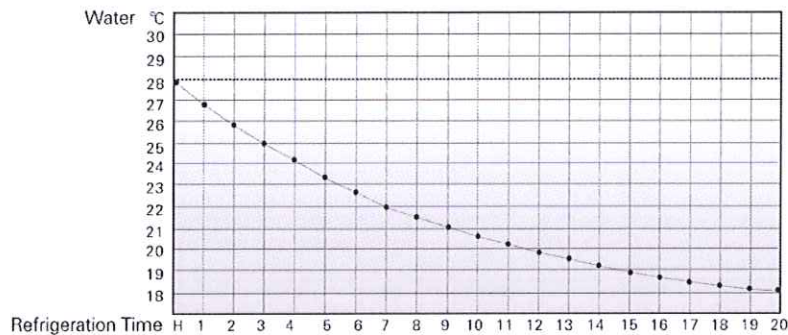
### PERFORMANCE CURVE

MODEL :HGCH1/2-1/4 AMBIENT TEMPERATURE : 30°C RESERVOIR CAPACITY: 300L



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

MODEL : HGCH1/2-1/4 AMBIENT TEMPERATURE :30°C RESERVOIR CAPACITY: 500L



The refrigeration performance test is indicated when the ambient temperature is 30°C, the water temperature before refrigeration is 28°C, and the reservoir capacity is 500L. When reservoir capacity reduces, the water temperature will drop down to any degree above 4°C in a short period of time.

# ACTIVEAQUA HC SERIES CHILLER

## INSTALLATION

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

### 1 PLEASE CHECK THE CONTENTS OF THE PACKAGE:

- ✳ HAILEA HC Series chiller .....1 set.
- ✳ Instruction manual .....1 piece.
- OPTIONAL :**
- ✳ Water inlet & outlet connector .....4 pieces.
- ✳ Nut .....4 pieces.
- ✳ Seal ring .....4 pieces.
- ✳ Fuse .....1 piece.

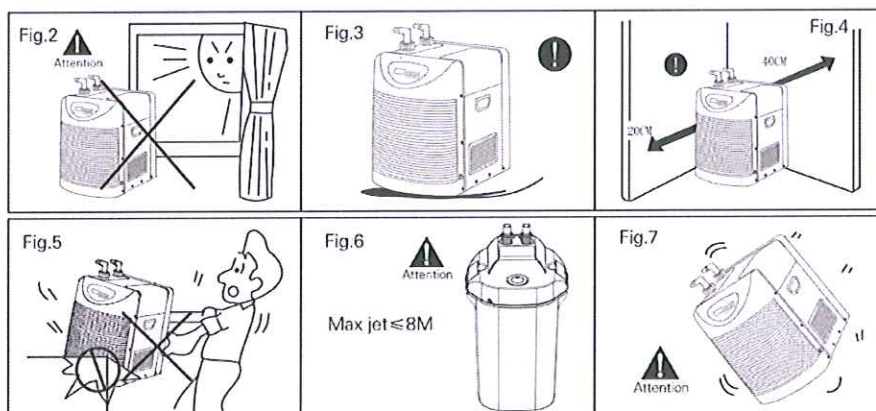
### 2 WHERE TO INSTALL:

- (1) Don't install the chiller outdoors. (Fig.1)
- (2) Place the chiller in a ventilated place away from inflammables, 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 (8-16 inches) away from the walls to allow the units to vent. (Fig.4)
- (5) Don't cover the chiller while it's working, and avoid shaking or banging the unit against other things.
- (6) The circulation water flow of the chiller is indicated in the technology parameter table. This chiller doesn't have a water pump. So, it needs a pump with an external filter available. The lift is no more than 8m maximum. If other equipment out of specification is used, it may cause water leak or other damage. (Fig.6)
- (7) Don't put the chiller on its side or upside down as this will cause damage to the chiller. If it is placed in its side, right the unit and wait for 20 minutes before switching it on. (Fig.7)

Fig.1



## ACTIVEAQUA HC SERIES CHILLER



### 3. SUGGESTIONS FOR INSTALLATION :

1. All electrical work should 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.

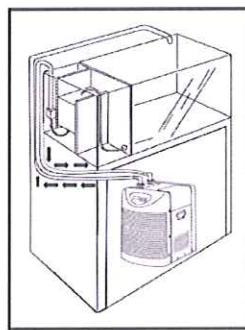
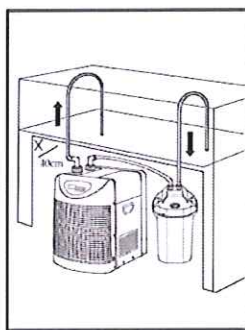
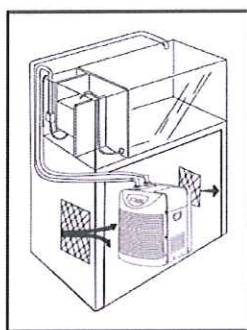
### 4. INSTALLATION METHODS

Note: The chiller must be operated with a circulation & filtration system. The chiller also can be installed in a hidden position such as inside a closed style cabinet, providing that cabinet has ventilation grilles. If you need to make grilles, make sure the air intake grilles are aligned with the aspiration grille of the chiller. 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 for fresh air circulation. The chiller also can be installed under an open style cabinet. As you know, it should be installed at a minimum distance of at least 20-50 cm (8-20 inches) from each side of the cabinet, so as to allow fresh flow air in the intake area. For fresh air circulation, it is suggested to put your chiller out of the reservoir cabinet.

If the chiller is placed under a water reservoir fitted with a filter, a water intake tube must be provided with the water pump which arrives directly to the input connector on the chiller to ensure the intake water is pure.

## ACTIVEAQUA HC SERIES CHILLER

Please note that the filter (with the pump) must be located below the reservoir water level. If you wish to place the unit at the side of the reservoir, you must fill the filtration system with water before turning it on.



### 5. BEFORE OPERATING THE CHILLER, PLEASE REVIEW THE FOLLOWING POINTS:

- (1) Check if the water level inside the reservoir is appropriate.
- (2) Make sure that no water leaks from the hose connections.
- (3) Insert the power plug completely into the power outlet so that the plug itself does not wobble.
- (4) Make sure there is nothing wrong with the water circulation & filtration system, especially making sure that the circulation tube is not clogged.

### 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 switching or setting temperature on the control & command panel.

#### ■ RESERVOIR TEMPERATURE DISPLAY & SETTING TEMPERATURE DISPLAY

After pressing the (SET) button for a short period of time, the indicator "2" will appear to indicate the previously setting temperature value on the display, press the SET button once again, the indicator light "2" will turn off and the reservoir water temperature will appear on the display. The light twinkles to indicate the setting temperature.



## ACTIVEAQUA HC SERIES CHILLER

### ■ 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 "Δ" button for increasing temperature or "▽" button for decreasing temperature to choose your required temperature. The setting temperature is from 4 °C to 28 °C. After setting, press the (SET) button again or just wait for eight seconds. The reservoir water temperature will appear on the display while the chiller is working.

### ■ TEMPERATURE ERROR ADJUSTMENT (□□)

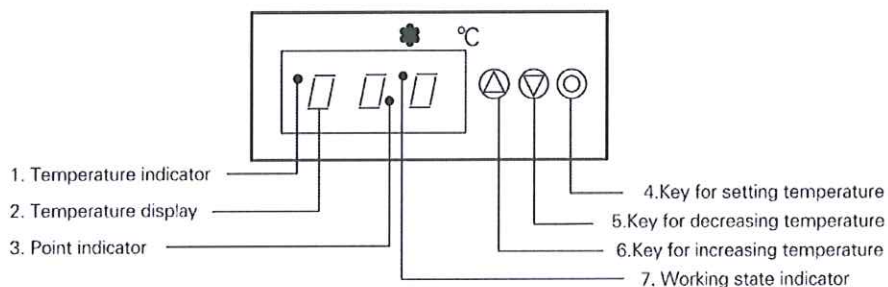
The common setting is "□□", when the reservoir water temperature is different from the temperature value which appears on the display of the chiller, you can adjust the error as following: Press "Δ" and "▽" buttons at the same time for 6 seconds till the display twinkles, then press "Δ" or "▽" button separately for temperature error adjustment ranging from -1.5 to +1.5. (Do not use this function frequently if it is not necessary.)

### ■ THE CHILLER PROTECTION DEVICE

A protection device is provided with the chiller. The refrigeration compressor needs three minutes to start after resetting, and at the initial start, requires about one minute.

### ■ FAILURE INDICATION

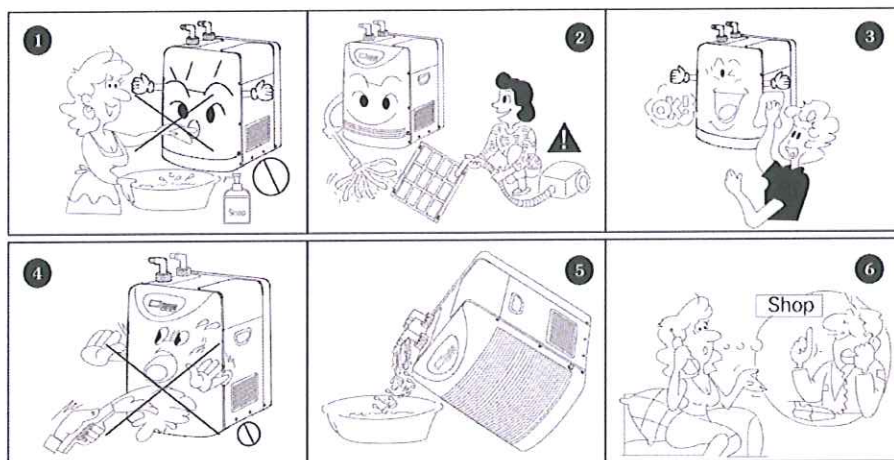
Certain failures automatically show on the display panel. When the water temperature sensor has failed, "P1" will show on the display, and the protection device will stop the chiller.



## ACTIVEAQUA HC SERIES CHILLER

### CLEANING AND MAINTENANCE

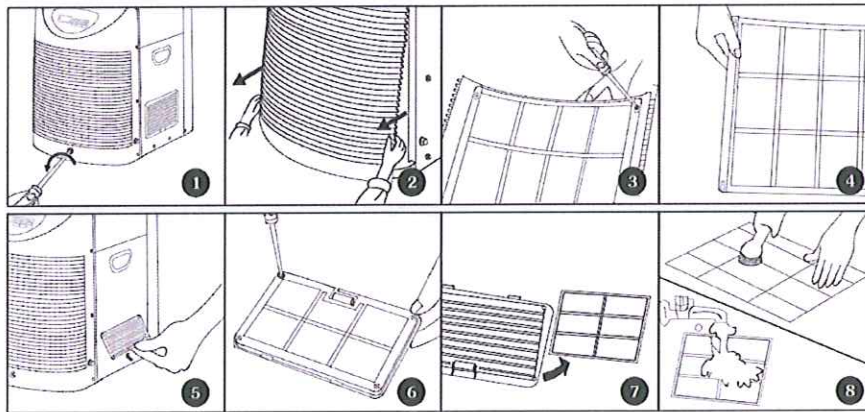
1. Cleaning the circulating system and the filtration system is recommended once every one or two months for optimum refrigeration performance and efficiency. Unplug the cord from the outlet before cleaning. Rinse collected debris from the filter media, inlet & outlet pipe, flow diverter, impeller and chamber cover with clear lukewarm tap water. Soap or detergents are not recommended for filter maintenance because they are bad for the plant's health. (Fig.1)
2. Remove the dust at the air inlet and outlet with a brush or a vacuum cleaner. To avoid electric shock during operation, do not insert wire into the exhaust outlet or the air inlet. (Fig.2)
3. The electric supply switch and temperature adjuster must be cleaned with dry soft cloth. (Fig.3)
4. Don't immerse the unit in water or flush it with water directly> Doing so may damage the electric insulation of the chiller. (Fig.4)



## ACTIVEAQUA HC SERIES CHILLER

### STEPS OF FILTER CLEANING

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



## ACTIVEAQUA HC SERIES CHILLER

### A GUIDE TO SOLVE SIMPLE PROBLEMS

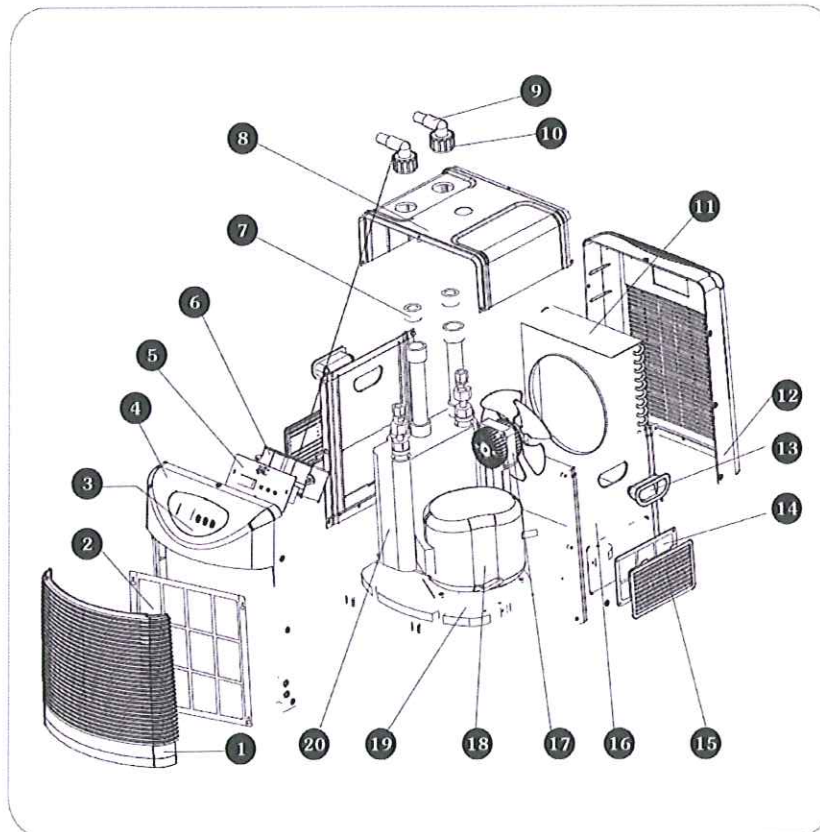
Before calling service personnel, please check the following chart for possible cause to the trouble you are experiencing.

SYMPTOM	CAUSE	COUNTERMEASURE
The chiller doesn't run & the display appears empty	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	Install a new one
The chiller repeats on and off	Due 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 reduced or no refrigeration	The setting temperature is higher than the reservoir water temperature	Reset refrigeration temperature
	The air inlet and outlet are clogged with dirt	Remove dust at the air inlet of the filter with a brush or vacuum cleaner
	Refrigerant is low	Look at page 3, have an electrician fill the chiller with the same type of refrigerant
	Too much water in reservoir	Reduce the water
Vibration & loud noise	The base is not flat	Mount it on a flat base



# ACTIVEAQUA HC SERIES CHILLER

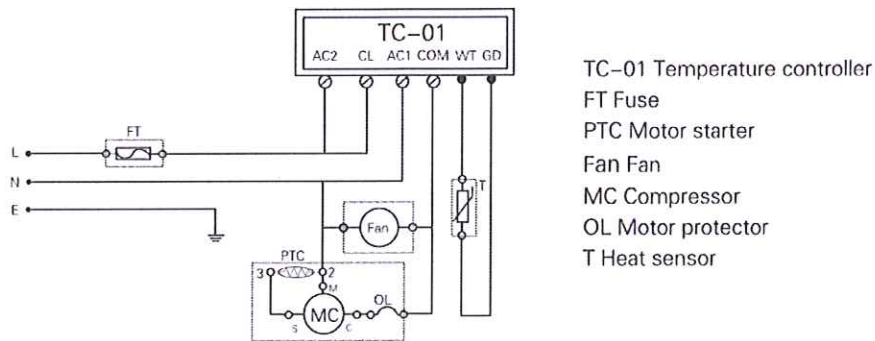
## PARTS LIST



- 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 Fan motor ⑱ Compressor ⑲ Base
- ⑳ Tank (with evaporator)

## ACTIVEAQUA HC SERIES CHILLER

### CIRCUIT DIAGRAM



### GUARANTEE CLAUSES

Hydrofarm hereby agrees to take the responsibility of servicing the ActiveAqua HC 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 claim is within the guarantee period.

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

#### ■ 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.

## ACTIVEAQUA HC SERIES CHILLER



ONE YEAR WARRANTY

WARRANTY FORM

DATE :

PURCHASER'S NAME		TELEPHONE NUMBER	
POST CODE		PRODUCT	
ADDRESS			
MODEL		PRODUCT NUMBER	
TO BE SIGNED AND SEALED BY THE RETAILER			
WITH EFFECTIVE FROM (DATE OF PURCHASE)			
REPAIRING SUMMARY RECORD			