AquaEuroUSA™
Trusted for Quality and Performance

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sales@aquaeurousa.com

AquaEuroUSA™
Trusted for Quality and Performance

Finest Quality - Best Performance - Superior Design

State of the Art Cooling Chiller

Great for freshwater, saltwater and reef tanks

INSTRUCTION MANUAL

MODEL: **MC-1/4HP & 1/2HP**

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

CE

CONTENTS

LIMITED WARRANTY

AquaEuroUSA™ guarantees this product, to the original purchaser, against defects in components, materials and workmanship (that occur under normal use) for a period of ONE (1) YEAR from the date of retail purchase. The warranty is not transferable and is confined to the original retail purchaser only. The warranty does not extend to damages caused by power surges, saltwater corrosion, improper installation or any form of abuse. The warranty does not apply if (1) damages result from misuse, accident, lack of reasonable care or abuse, (2) the product is not purchased from AquaEuroUSA™ or an authorized dealer, (3) damage due to modification or alteration that is made to the product (4) wrong circuitry or unspecified electrical input to the chiller, (6) the site (location where the product is kept) conditions do not conform to the recommended operating conditions for the chiller, (6) the original brand name is removed, obliterated or altered from the product.

Contact the company at www.aquaeurousa.com

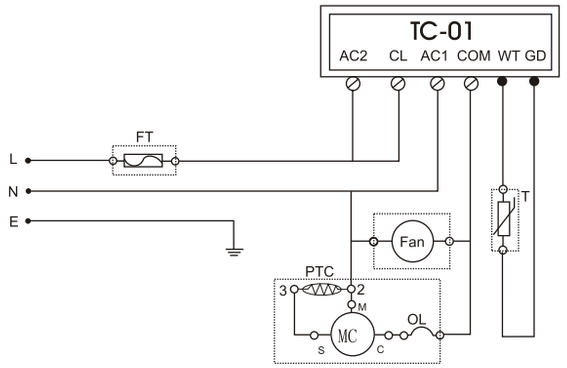
Purchaser pays any postage, shipping and insurance fees to return chiller. If the repairs needed are covered by the warranty, the company will pay the return shipping charges to destinations in the U.S.A.

Again, in the event of product failure within the warranty period, please contact the store where the product was purchased for further instructions for repair or replacement. Repair or replacement will be carried out through AquaEuroUSA™ or its authorized dealers. A return authorization number (RMA) and a copy of original purchase receipt are required for return of the defective product. After any repairs/replacement of the unit, this warranty will thereafter continue and remain in force only for the unexpired period of warranty. Moreover, the time taken for repair/replacement and in transit whether under the warranty or otherwise shall not be excluded from the warranty period.

Limitation of Implied Warranties and Exclusion of Certain Damages.

Limit of Liability: For any single claim, the limit of liability under this contract is the least of the cost of (1) authorized repairs, (2) replacement with a product or equal or greater value, (3) reimbursement for authorized repairs or replacement, or (4) the price that you paid for the product. (No cash refunds will be made). The total liability under this contract is the purchase price you paid for the product; in the event we replace the product or reimburse you for replacement of the product with another product of equal or greater value, we shall have satisfied all obligations owed under this contract.

CIRCUIT DIAGRAM



TC-01-Temperature controller
FT-Fuse
PTC-Motor starter
Fan-Fan
MC-Compressor
OL-Motor protector
T-Heat sensor

AquaEuroUSA™ MC SERIES CHILLER

PREFACE

Thank you for purchasing a AquaEuroUSA™ MC chiller series, the chiller represents a significant step forward in aquarium cooler engineering, offering state of the art technology at highly competitive prices. Temperatures in aquariums that range between 12 to 1200 gallons can now be quickly and economically maintained by selecting the correct chiller model from the AquaEuroUSA™ MC series and, with a heat exchanger that is manufactured from high grade pure titanium, the chillers are suitable for applications in fresh or salt water aquarium. Quieter than a similar domestic or foreign chiller, whilst the digital temperature controller ensures that the selected temperature is maintained. AquaEuroUSA™ MC chiller series have a strong frame with a housing of ABS plastic which is anti–corrosive,ensuring the chiller does not look out of place in any surrounding unlike other cooling units, our chillers use the environment friendly refrigerant R134a(1HP chiller uses refrigerant R22).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 livestock 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 injury to you or damage to the chiller. The meanings of these symbols are explained below. Please be sure you understand their meanings before you continue reading 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.

Attention

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 be taken will be shown by a picture or explanatory text near to the symbol.

A GUIDE TO SIMPLE PROBLEMS SOLVING

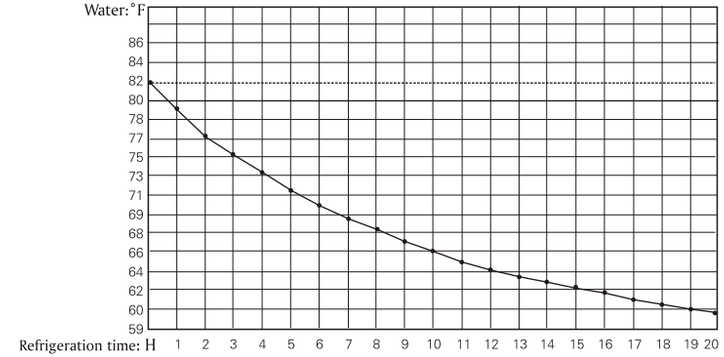
Before calling service personnel, please check the following chart for possible cause to the trouble you are experiencing.

SYMPTOM	CAUSE	COUNTERMEASURE
No power source. The unit doesn't run & nothing appears on temperature display	Power is not turned on	Turn on the power
	Not plugged in properly	Be sure the power cord is fully plugged in
	The fuse is defective	Change a new one
The unit turns on and off	Apply to wrong voltage and frequency	Apply to correct power source according to the nameplate
	The unit protection device is responding	A. Check if the water circulation is normal B. If the fan and the chiller dissipate heat normally, wait for 3 minutes & the unit will turn on again automatically
Water refrigerated reduces or even no refrigeration	The compressor runs normally, the fan stops running, the unit can't dissipate heat	Replace with a new fan of the same specs
	The set temperature is higher than the aquarium water temperature	Reset desired water temperature
	The air filter inlet and outlet are clogged with dirt	Remove the dust from the air filter inlet/outlet with a brush or a vacuum cleaner
	Not enough refrigerant	☞ Look at pages 3/4, fill the unit with the same type of refrigerant by a qualified technician
	Too much water in aquarium	Reduce the water
Running with shock & loud noise	The base is not flat	Mount it on a flat base

AquaEuroUSA™ MC SERIES CHILLER

PERFORMANCE CURVE

MODEL: MC–1/4HP AMBIENT TEMPERATURE: 86°F REFRIGERATED: 79 Gal.



The refrigeration performance test is indicated when the ambient temperature is 86°F , the water temperature before refrigeration is 82°F , and the water refrigerated is 79 Gal. When water refrigerated is reduced, the water temperature will drop down to any degree above 39°F in a short period of time.

TECHNICAL DATA

Model	1/2HP
Rated Voltage	110-120V
Rated Frequency	60Hz
Working Current	4.4A
Power	1/2HP
Water Temperature Before Refrigeration	82°F
Refrigeration Time	20h
Water Temperature After Refrigeration (Water Refrigerated 132 Gal.)	64°F
Water Temperature After Refrigeration (Water Refrigerated 264 Gal.)	73°F
Refrigerant	R134a
Refrigerant Weight	260g
Rate of Flow	315-790 GPH
Weight	49 lb.
Size	18.7"L x 14.2"W x 19.3"H

1. The rate of flow is decided according to the flow rate of the pump (submersible pump or other external power filter) and the circulation equipment.
2. The refrigeration performance test is indicated when the ambient temperature is 86°F , the water temperature before refrigeration is 82°F , the set temperature is 64°F and the water refrigerated is 132 Gal. when water refrigerated is reduced, the water temperature will drop down on and 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 AquaEuroUSA™ 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.

FEATURES

1. Microcomputer control system for the convenience of user.
2. Large refrigeration capacity.
3. Adopt Freon-free R134a iced medium, safe and environmental friendly.
4. Anti corrosion pure titanium evaporator can be used for fresh or salt water applications.
5. Auto overcurrent power off protection system.
6. Temperature memory system stores temperature setting in case of power failure.

CHILLER INTRODUCTION

MODEL: MC–1/4HP – 1/2HP

AquaEuroUSA™ PRODUCTS

CHILLER

TECHNICAL DATA

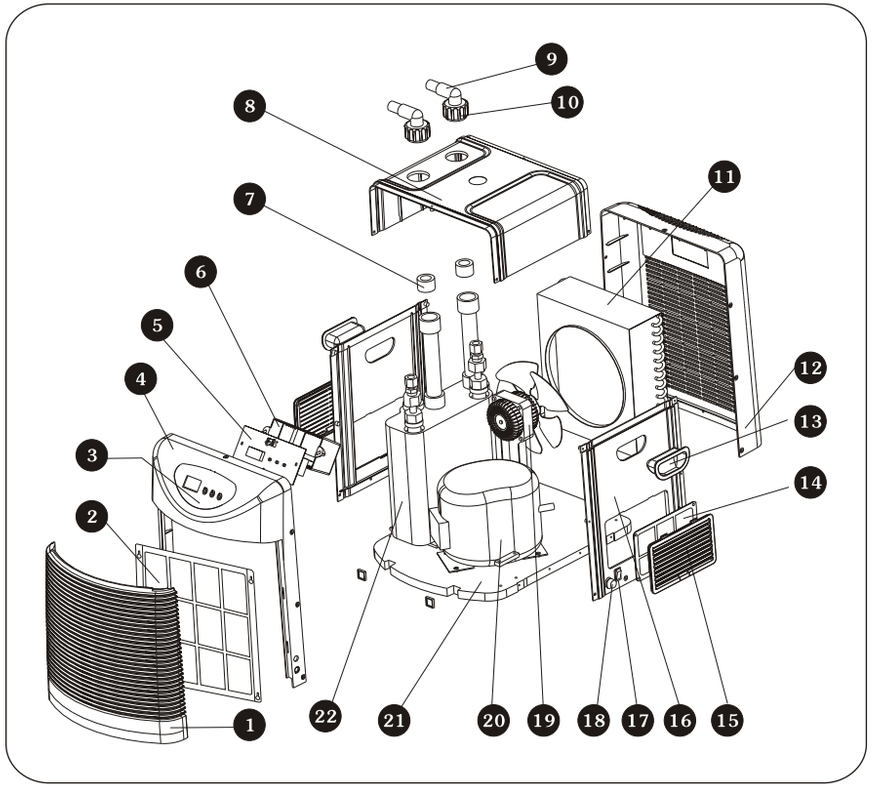
Model	1/4HP
Rated Voltage	110-120V
Rated Frequency	60Hz
Working Current	3.0A
Power	1/4HP
Water Temperature Before Refrigeration	82°F
Refrigeration Time	20h
Water Temperature After Refrigeration (Water Refrigerated 79 Gal.)	61°F
Water Temperature After Refrigeration (Water Refrigerated 158 Gal.)	72°F
Refrigerant	R134a
Refrigerant Weight	220g
Rate of Flow	260 - 600GPH
Weight	41 lb.
Size	17.6"L x 12.9"W x 17.3"H

1. The rate of flow is decided according to the flow rate of the pump (submersible pump or other external power filter) and the circulation equipment.
2. The refrigeration performance test is indicated when the ambient temperature is 86°F , the water temperature before refrigeration is 82°F , the set temperature is 64°F and the water refrigerated is 79 Gal. when water refrigerated is reduced, the water temperature will drop down on and 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 AquaEuroUSA™ 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.

AquaEuroUSA™ MC SERIES CHILLER

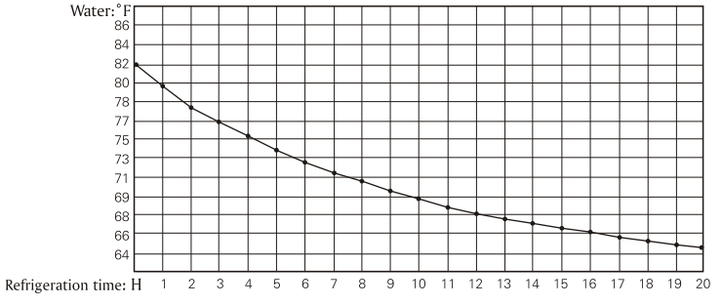
PARTS LIST

(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) Power supply switch
(HC-250A/HC-300A only) (18)Fuse (19) Fan motor (20) Compressor (21) Base
(22) Tank (with evaporator)



PERFORMANCE CURVE

MODEL: MC–1/2HP AMBIENT TEMPERATURE: 86°F REFRIGERATED: 132 Gal.



The refrigeration performance test is indicated when the ambient temperature is 86°F , the water temperature before refrigeration is 82°F , and the refrigerated water capacity is 132 Gal.
When refrigeration capacity is reduced, the water temperature will drop down to any degree above 39°F in a short period of time.

INSTALLATION

This chiller is designed and built with safety as a prime concern. Each chiller is checked at the factory for safety and proper operation prior to shipment. Read and follow the safety rules before installation, operation and performing routine maintenance. inspect chiller when it is received for damage that might have occurred during transportation. If you encounter any discrepancies or difficulties, contact the company you purchase the unit from.

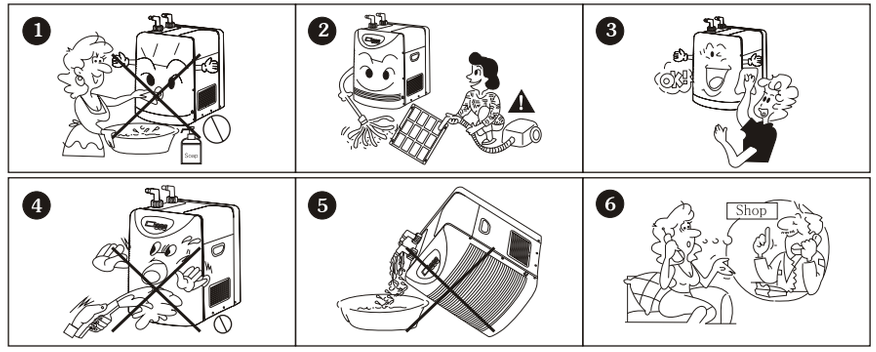
1. PLEASE CHECK THE CONTENTS OF THE PACKAGE:

- ※ AquEuroUSA chiller .....1 set.
- ※ Instruction manual .....1 piece.

OPTIONAL :

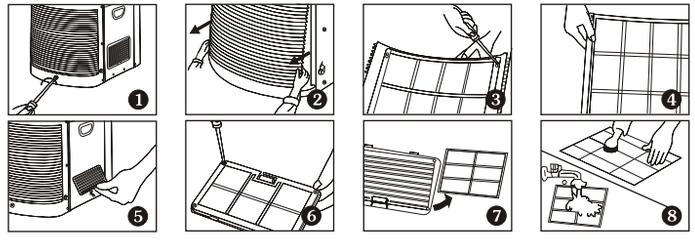
- ※ Water inlet & outlet fittings .....2 pieces (MC-1/2HP 4 pieces).
- ※ Nut .....2 pieces (MC-1/2HP 4 pieces).
- ※ Seal ring.....4 pieces.
- ※ Fuse.....1 piece.

4. Do not submerse the unit into water nor flush it with water directly to avoid damaging the electric insulation of the chiller. (Fig.4)
5. If storing the unit for a long period of time, disconnect from power supply. Remove the inlet & outlet hoses, use a pump to remove the water from the unit. Do not tilt 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 the power cord is damaged, it must be replaced by the manufacturer or its service agent to avoid a hazard and void the warranty.
7. Do not try to repair a chiller that was damaged in shipment or usage. Contact the manufacturer or your retailer in the event of malfunction.(Fig.6)



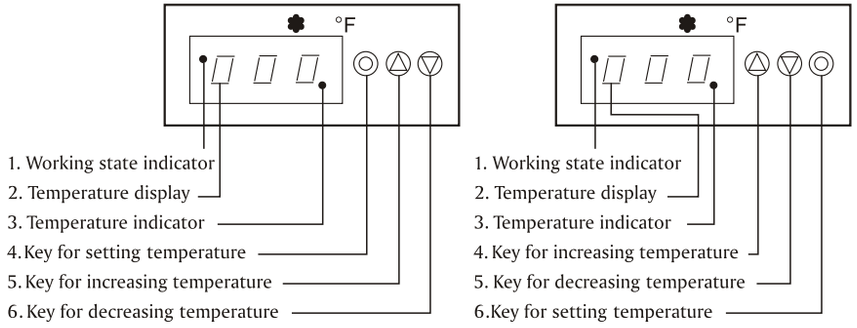
CLEANING FILTER

1. Loosen front cover screw, turn counterclockwise (Fig.1).
2. Pull front hood cover out gently (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 and completely dry it before reinstalling (Fig.8).
7. Install all the parts back by counter steps.



■ DISPLAY SYSTEM

Description of display system is also provided with the chiller. When the water temperature sensor has an open circuit or has a broken circuit, the letters "p1" or "p2" will appear on the display and the protection device will turn on to stop the chiller.



CLEANING AND MAINTENANCE

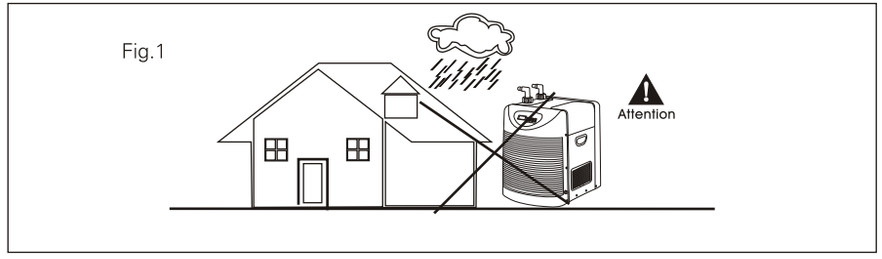
Warning: Do not touch chiller, cord or electrical plug with wet hands. Do not allow electrical components to get wet. If electrical components get wet, unplug chiller immediately.

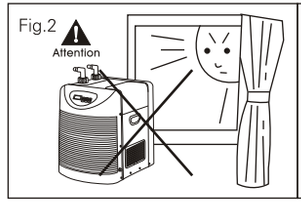
1. Cleaning of the circulating system and the filtration system is recommended once a month for optimum refrigeration performance, operation and efficiency. Unplug the cord from the outlet before cleaning.
Rinse collected debris from the filter media, inlet & outlet fittings, water hose/piping, pump impeller and chamber cover in clean warm tap water. Do not use soap or detergents to clean any part of chiller or components. (Fig.1)
2.Remove the dust from the air filter inlet and outlet with a brush or vacuum cleaner. To avoid electric shock, do not insert wire into the exhaust outlet or the air inlet while unit is in operation. (Fig.2)
3.The power plug, power switch and temperature display must be cleaned with dry soft cloth. (Fig.3)

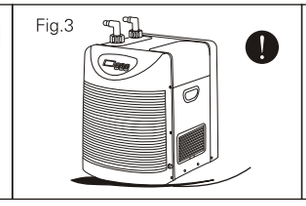
INSTALLATION

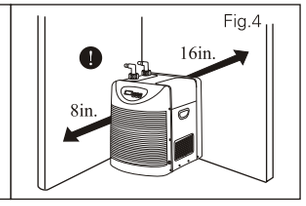
2. INSTALLATION SAFETY PRECAUTIONS:

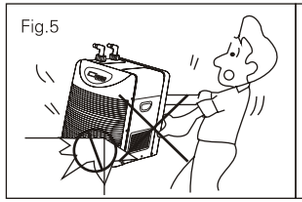
(1) Don't install the chiller outdoors. (Fig.1)
(2) Place the chiller in a well ventilated area away from flammables, high temperature, direct sunshine, moisture or dust. Maximum operating room temperature for this chiller is 95°F (Fig.2)
(3) Place the unit on a stable, flat, even horizontal surface. (Fig.3)
(4) Do not store chiller in a closed location that does not receive air flow such as a closet or cabinet. Clearance of at least 8" in the front and 16" in the back of the chiller are needed for proper air flow. (Fig.4)
(5) Don't cover the chiller while in operation. Do not place items on top of unit.
(6) The required water flow of the chiller is indicated in the technical data table. This chiller does not include a water pump. AquaEuroUSA™ water pump is sold separately. Do not use a pump with more than 19 feet of head pressure rating. Inadequate equipment can cause water leakage or other damage. (Fig.6)
(7) Do not put the unit upside down, it will cause damage to the unit. If unit is moved for any reason you must wait for 20 minutes before turning unit on. (Fig.7)
(8) Do not operate chiller if you smell smoke or there is burning.
(9) Do not use extension cords. Keep all connections dry and off the ground.
(10) Do not allow water or salt to come in contact with thermostat or power cord.

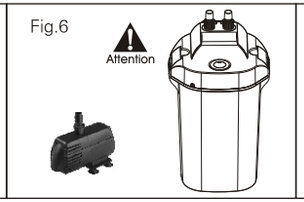


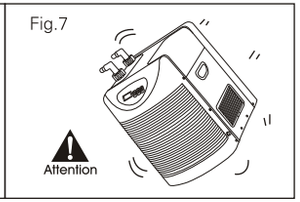










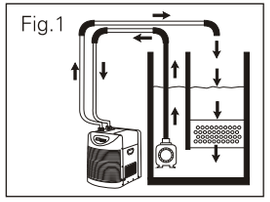


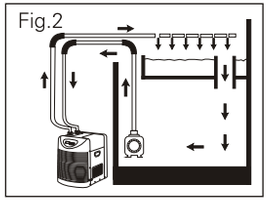
3. SAFETY:

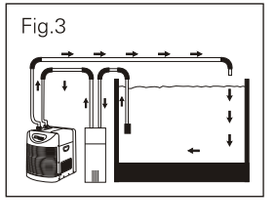
1. Do not attempt to repair unit yourself. Electrical work must be performed by a qualified technician.
2. Provide a dedicated power outlet to be used only for the unit.
3. Ensure that the power source to be utilized conforms to the power requirements specified on the product nameplate.
4. Plug the chiller into a dedicated GFCI (ground fault circuit interrupter) protected grounded electrical outlet. Do not leave any gap between connections.
5. Unplug unit before putting on or taking off parts, before cleaning and when not in use.

4. INSTALLATION METHODS

Note: The chiller must be operated with a water pump or filtration system.
The chiller can also be installed in a hidden position such as inside an aquarium cabinet.
If cabinet is completely sealed, air ventilation slots must be made. When making the slots, make sure the air intake slots are in exact alignment with the air vents of the chiller and the air outlet slots on the cabinet should be made as high as possible for easy air removal. The chiller should be position with its back as near as possible to the cabinet slots to allow fresh air circulation.
The chiller can also be installed under an open style cabinet. It must be installed at a minimum distance of 8-20 inches from each side of the cabinet, to allow fresh air flow in the chiller intake area. For best air circulation, avoid placing your chiller in an aquarium cabinet.
If the chiller is placed under an aquarium fitted with a filter, a water intake tube must be provided with the water pump which arrives directly to the input connector in chiller to ensure the intake water is pure. All water must be filtered before entering the chiller, or the evaporator will get dirty and this will affect the refrigeration. Please note that the filter (with the pump) must be located below the aquarium water level. If you wish to use an external filter, you must fill the filtration system with water before turning unit on.







AquaEuroUSA™ MC SERIES CHILLER

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 the inlet and outlet plumbing fittings are connected properly to avoid water leakage.
(3) Connect chiller power plug to a ground fault circuit interrupter (GFCI). Leave a drip loop in the power cord to prevent water from running the lenght of the cord and reaching the power outlet
(4) Do not operate chiller without water flow to the unit.

PROGRAMMING

Note: Before turning chiller on and once all connections are made, circulate water through chiller for 30 minutes before turning the unit on. Check all connections for water leakage and/or obstruction. Verify pump is operational and unblocked. There are three buttons for switching or setting the temperature on the control/command panel.

■ AQUARIUM TEMPERATURE DISPLAYS & SETTING TEMPERATURE DISPLAYS

After pressing the (SET) button, the indicator "1" will appear and indicate the previously set temperature 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.
Note: The round light flickers to point out the set temperature.

■ ADJUSTING THE SET TEMPERATURE

Press the (SET) button for five seconds, the previously set temperature will be displayed.
Press the "△" button to increase the temperature or "▽" button to decrease the temperature.
The temperature can be set between 39°F and 82°F. After new temperature has been programmed press the (SET) button again or just wait for eight seconds for the current aquarium water temperature to appear on the display.

■ CHILLER RESETTING PROTECTION

Protection device is provided within the chiller. The device gives the refrigeration compressor a cooling period of three minutes after resetting for the first time, it gives about one minute after that.

■ REFRIGERATION COMPRESSOR ON & OFF AUTOMATICALLY

When the refrigeration compressor stops working for over three minutes & the water temperature is 2°F above the set temperature, the compressor will automatically start to work.
The compressor will stop working automatically when the aquarium water temperature reaches or falls below the set 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 will then start flickering for three minutes to indicate that the chiller protection device is on.