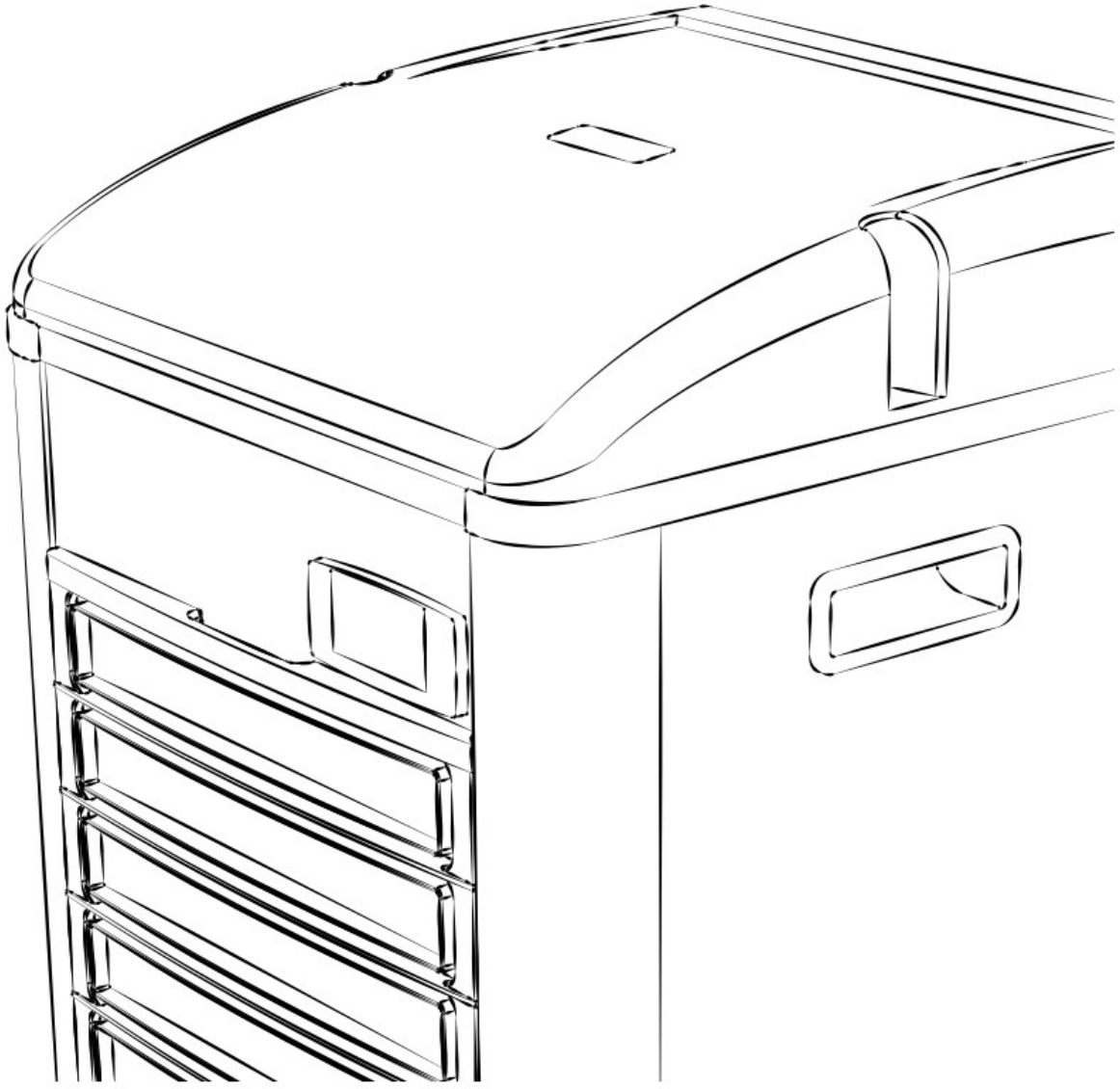
INSTALLATION, USE AND MAINTENANCE MANUAL

CPA# CHILLER LINE
Model: CP5



Language: English - art. cod. 6.1.204.00 - 10/2024

Introduction

This installation, use, and maintenance manual has been prepared for those responsible for installing the appliance and for those tasked with using or operating the appliance. We recommend that you carefully read this manual, follow safety precautions, and ensure proper installation.

The user manual contains important instructions and information on how the appliance can be used safely, professionally, and economically.

This manual is intended to be consulted by all individuals involved in the lifecycle of the appliance and should therefore be kept and made accessible to the user at all times.

The chiller may only be installed and used after reading this manual in its entirety and following the instructions provided therein.

IMAGES

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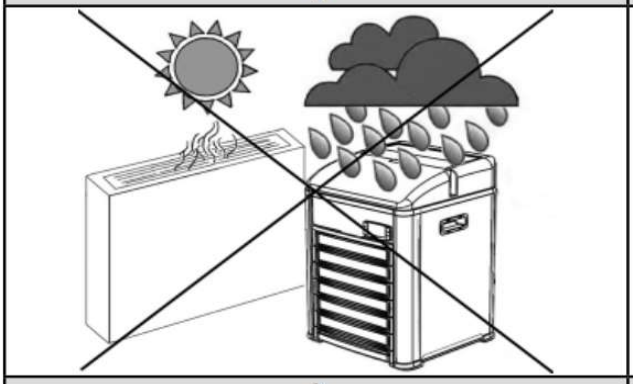

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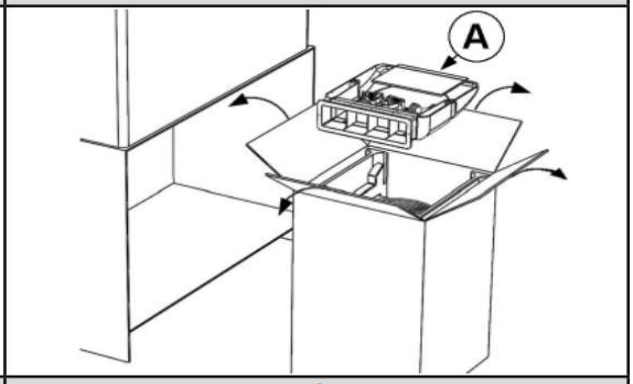

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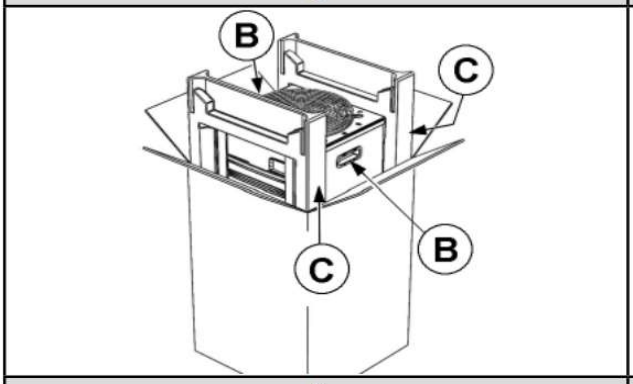

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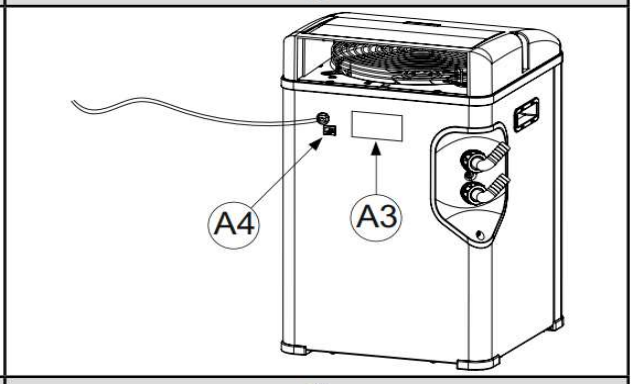

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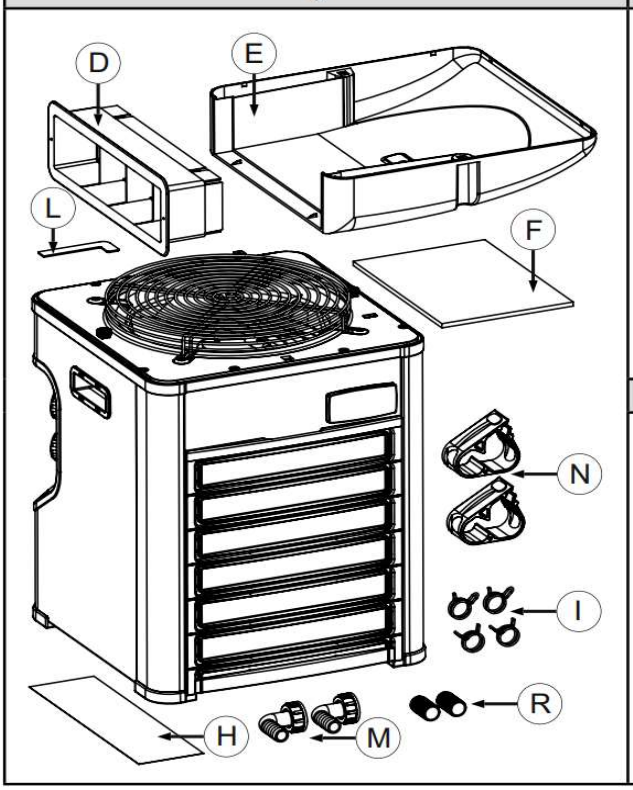

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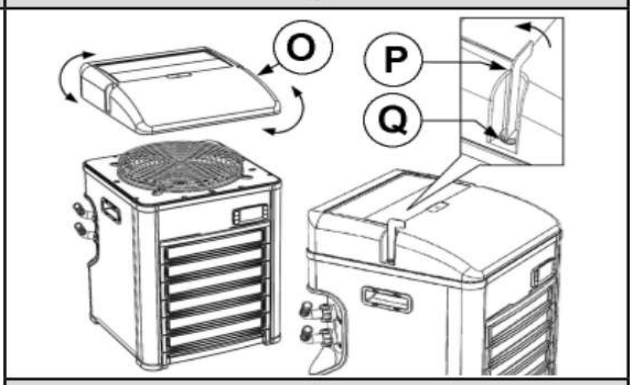

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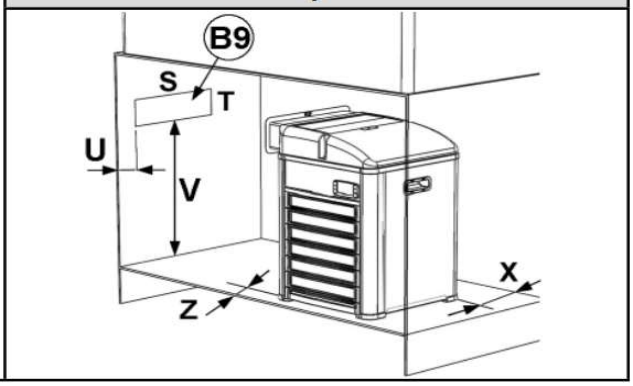

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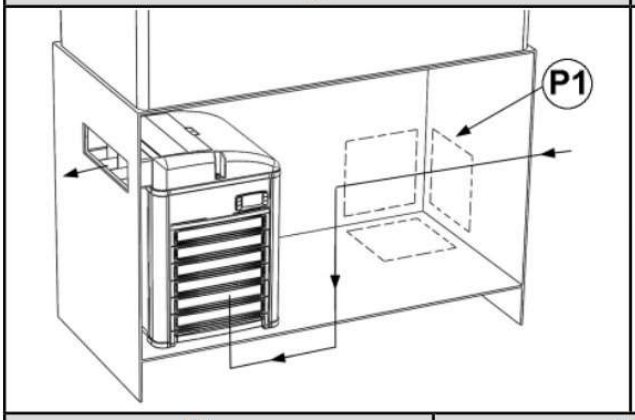

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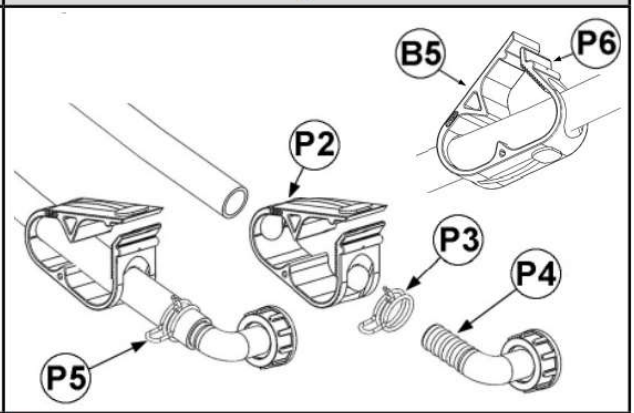

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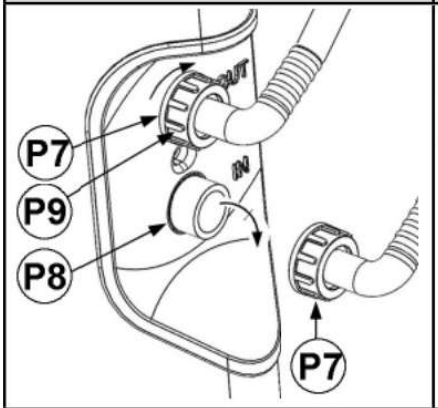

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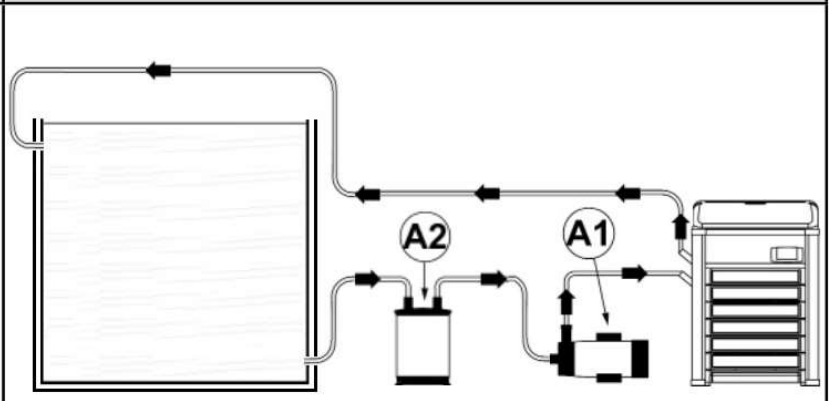

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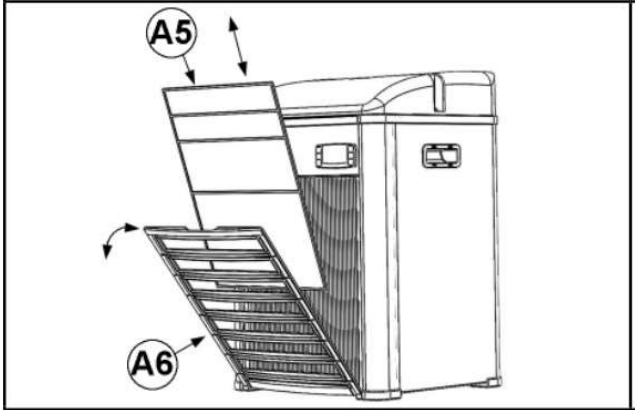

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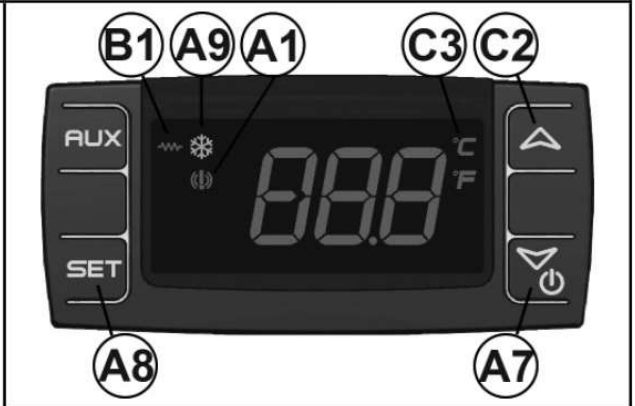

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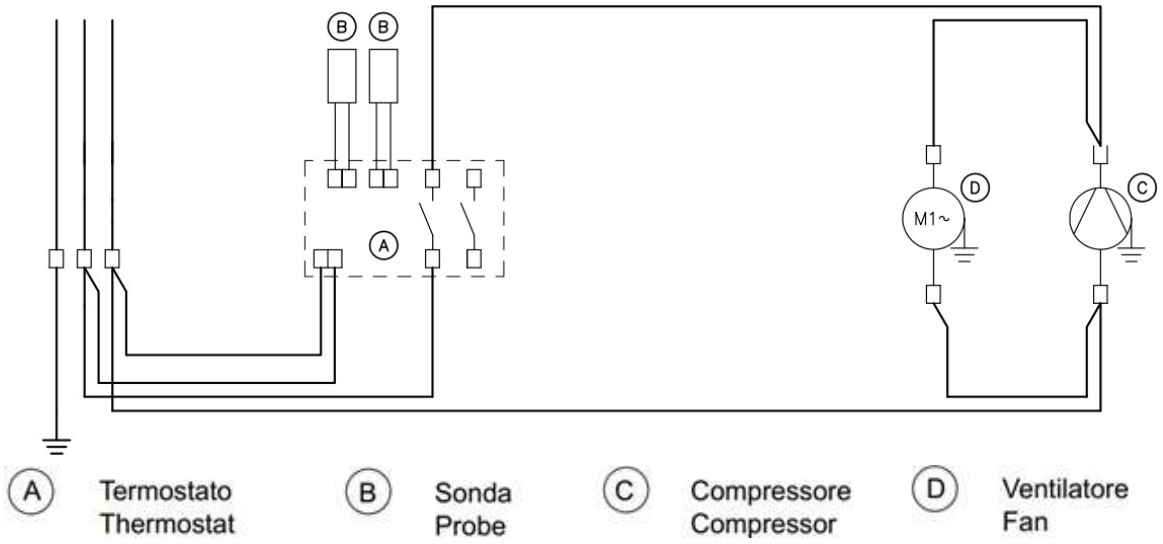
WIRING DIAGRAM



CONFORMITY CE STATEMENT

I, the undersigned, MASSIMO TURCI, Legal Representative of the Company TECO S.r.l.
with Registered Office at Via Gregorio Ricci Curbastro, 8 - 48124
Fornace Zarattini, Ravenna, Italy VAT No. 01075610392
declares under his own responsibility that appliance
type: **REFRIGERATOR**
model: **CP5**
serial number: **from F24A0000 to F24L9999**
year of manufacture: **2024**
to which this statement refers, complies with following Regulations:
2014/35/EU LOW VOLTAGE SAFETY DIRECTIVE
2014/30/EU ELECTROMAGNETIC COMPATIBILITY DIRECTIVE
and following technical standards and specifications have been observed:
LVD Regulations used:
EN 60335-1 / EN 60335-2-24 / EN 60335-2-60 and RELATED AMENDMENTS
EMC Regulations used:
EN 55014-1 / EN 61000-3-2 and RELATED AMENDMENTS

The undersigned also declares that he keeps the relevant technical documentation of the appliance covered by the following declaration at the premises of TECO S.r.l.

The Legal Representative
Massimo Turci

CE

Ravenna 05/03/2024

ENGLISH

SUMMARY

1. INSTRUCTION MANUAL

1.1.1 IMPORTANT WARNINGS

NOTE: Please keep these instructions for future reference.

- Do not insert fingers or foreign objects into the air grilles. This may cause injuries due to blade rotation.
- Do not scratch or pull the power cord.
- If you notice an anomaly (burning smell, etc.), disconnect the power and contact the dealer. If the unit continues to operate abnormally, there is a risk of fire, breakage, etc.
- If the power cord is damaged, it must be replaced by the manufacturer, dealer, or qualified technical personnel to avoid hazards.
- Repairs should not be carried out by the user but only by technical personnel. Incorrectly performed repairs can lead to fire or electrical shock.
- Disconnect the power before performing any maintenance on the aquarium.
- Ensure that the electrical supply characteristics match those indicated on the "technical data" plate affixed to the appliance.

WARNING: This product is not suitable for children under eight years of age. It is essential to ensure that children do not play with the device. This device is not intended for use by persons (including children) with limited physical, sensorial or mental abilities, or lacking in experience and know-how, unless supervision or instructions for using the device are provided by the person responsible for their safety. Cleaning and maintenance shall not be made by children without supervision.

WARNING: Modifications or repairs made by the user without written authorization from TECO S.r.l. will void the warranty and release TECO S.r.l. from any liability for damages caused by a defective product. The same considerations apply when using non-original or different replacement parts not explicitly indicated by TECO S.r.l.

WARNING: Provide adequate ventilation for the chiller, and do not obstruct the free flow of air around the chiller.

WARNING: Do not damage the refrigerant circuit.

WARNING: The appliance contains flammable R290 gas. Any service work must be performed exclusively by experienced personnel trained in R290 gas handling procedures.

WARNING: To prevent hazards due to the appliance's instability, it must be properly secured according to the instructions.

WARNING: Before disconnecting the appliance from the pipes, it is necessary to clamp the tubes with the appropriate clamps (Ref. B5 Fig. 9) to prevent water from leaking out of the aquarium. Once the appliance is reconnected, reopen the appropriate clamps (Ref. P6 Fig. 9). The operator must be able to verify, from all accessible positions, that the device is electrically disconnected from the power supply.

1.2 PERSONNEL QUALIFICATIONS

All personnel involved in the operation, installation, inspection, and maintenance of the appliance must be qualified to perform their assigned tasks. If the personnel do not already possess the necessary knowledge and skills, appropriate training and education must be provided. Always organize repair activities with consideration for the activity, health, and safety of the personnel, and ensure compliance with all safety requirements for the appliance, adhering to the regulations and laws in force concerning safety and health.

REQUIRED QUALIFICATIONS:

- CERTIFIED REFRIGERATION TECHNICIAN FOR USE WITH FLAMMABLE REFRIGERANTS: Qualified technician capable of working on refrigeration systems containing flammable refrigerants.

1.3 WARRANTY

The appliances manufactured by TECO S.r.l. are covered by a WARRANTY provided by the authorized dealer from whom the purchase was made, as required by the legal provisions of the country in which they are marketed. If, during the validity period, there are faulty operations or malfunctions of appliance parts that fall within the warranty terms, the authorized dealer, after appropriate checks on the appliance, will proceed with the repair or replacement of the defective parts. To claim warranty coverage, it is necessary to provide the documentation required by the legal provisions of the country in which the appliance is marketed, and comply with the conditions specified by your dealer or TECO's authorized service center.

1.4 MANUAL ORGANIZATION/CONSULTATION METHODS

1.4.1 MANUAL STRUCTURE

The manual is divided into chapters, which gather all the necessary information by topic to use the product without any risk.

1.4.2 DESCRIPTION OF PICTOGRAMS

The purpose of safety signage is to quickly and easily draw attention to areas where it has not been possible to eliminate residual risks inherent in operation. Below are the safety symbols applied and their meanings:

WARNING: This symbol indicates safety regulations for the operator and/or any exposed individuals.

CAUTION: This symbol signifies the possibility of causing damage to the product and/or its components.

NOTE: This symbol conveys useful information.


This symbol is a warning and indicates a fire hazard or flammable material.


This symbol is a warning and indicates an electrical hazard.


This symbol indicates an earth terminal for protection against electrical shocks.


This symbol indicates to read the manual carefully.

1.5 PRODUCT DESCRIPTION

The appliance is suitable for cooling the water contained in tanks for domestic and/or commercial sports recovery. The appliance must not be used for purposes other than those specified above. Using it for purposes other than its intended use may lead to hazardous conditions.

1.5.1 TECHNICAL DATA AND SPECIFICATIONS

Specifications	Model
	CP 5
Power supply[1]	230V - 50Hz
Power Consumption	480 W
Water Inlet/Outlet	16 mm - 3/4 in
Water flow[2]	900 l/h ÷ 1200 l/h - 238 USgal/h ÷ 317 USgal/h
Maximum Pressure	100 kPa - 1 bar - 14,4 PSI
Weight	25 kg - 54,9 lb
Dimensions	310 x 310 x 500 (h) mm - 12,2 x 12,2 x 19,69 (h) in
Refrigerant[1]	R290

All data is indicative and subject to change without notice by TECO.
Refer to the technical data label Ref. A3 Fig.4. Contact TECO for other power supplies.
[2]The indicated flow is the actual flow, not the maximum flow of the pump. Please contact the distributor for pump selection.

Tab. 3-1

1.6 GENERAL CONDITIONS OF USE

1.6.1 ALLOWED USES

To correctly use the appliance, it is advisable to follow the following guidelines:

- The appliance described in this manual has been specifically designed for cooling water.
- The appliance is suitable for operation in environments with an ideal operating temperature between +16°C and +32°C (60°F – 90°F).
- The appliance must be installed on a flat surface.
- Any operation involving manual actions on the appliance must only be done when the appliance is stationary.
- ⚠ **WARNING**: Use a pump that, once installed in the system, generates a flow rate greater than 900 l/h.

A different use than intended, and a process with parameters that do not comply with the limit characteristics, can damage the equipment and represent a risk to the safety of operators. Therefore, failure to comply with the technical parameters in question may constitute an abnormal condition, also in terms of personnel safety.
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1.6.2 PROHIBITED USES

Using the appliance in contrast to the recommended usage guidelines constitutes non-compliant usage. Here are the guidelines:

- It is prohibited to use the appliance in areas with high heat and direct radiation exposure.
- It is prohibited to use the appliance in areas with potentially explosive atmospheres.
- It is prohibited to use the appliance in excessively dusty areas and/or in the presence of a high concentration of solid particulates in the air.
- It is prohibited to introduce water into the refrigeration unit at a temperature exceeding 30°C (86°F) or lower than 5°C (41°F).

1.7 INSTALLATION AND OPERATION

1.7.1 PACKAGE CONTENTS

Upon opening the cardboard box, please check for the presence of all accessories (Fig. 5):
D Extension conveyor 1
E Conveyor 1
F Installation, usage, and maintenance manual 1
H Adhesive drilling template for the hot air outlet 1
I Cable ties for securing tubes 4
L Air conveyor fixing key 1
M Tube connection fittings complete with gaskets 2
N Tube clamps 2
Verify through the technical data label (Ref. A3 Fig. 4) that the appliance contained in the packaging matches the purchased model.

1.7.2 UNPACKING THE APPLIANCE

⚠ **WARNING: Do not overturn the packaging or the appliance. Keep the packaging intact for future handling.**
1) Open the packaging and remove the accessories (Ref. A Fig. 2).
2) Remove the contents without turning them over; gripping them by the side handles (Ref. B Fig. 3).
3) Remove the polystyrene (Rif.C Fig.3).
4) Remove the plastic bag.

1.7.3 APPLIANCE INSTALLATION AND OPERATION

⚠ **WARNING: Installation must not be carried out by the user but only by qualified technicians.**
1) Do not install or attempt to repair the appliance if it has been damaged during transport.
2) Do not connect the power cord to the electrical supply unless specifically required.
.3) To ensure the proper operation of the appliance under safe conditions, it is strictly forbidden to expose it to weather conditions and direct heat sources (Fig. 1). The temperature in the installation environment should be between 16°C and 32°C (60°F – 90°F).
4) Position the refrigerator so that the refrigerator itself and the parts containing live parts are not accessible in any way to a person inside the tank.
5) Position the chiller in a way that it cannot fall into the tank under any circumstances
6) Choose the direction for the hot air outlet by rotating the conveyor (Ref. O Fig. 6) and secure it by turning the two screws a quarter turn counterclockwise (Ref. Q Fig. 6) using the provided wrench (Ref. P Fig. 6).
7) If the installation is not inside a technical compartment, proceed to step 10.
8) If the installation is inside a technical compartment, make an opening on the chosen wall for the evacuation of hot air, respecting the recommended minimum distances (Fig. 7). The supplied label (Ref. B9 Fig. 7) can be helpful. The minimum internal dimensions of the cabinet are 390x390x525(h) mm; 15.35x15.35x20.67(h) in.
9) Provide an opening of 400 cm² – 62 in² to allow air to enter the compartment (Ref. P1 Fig. 8).

Hot Air Exhaust Opening Position		
S	260 mm – 10,24 in	
T	74 mm – 2,91 in	
U	> 60 mm – 2,36 in	
V	CP 5	427 mm – 16,8 in

Minimum distances from the walls	
Z (filter side)	30 mm – 1,18 in
X (Cable output side)	50 mm – 1,97 in

Tab. 1-1

10) Prepare the tubes as follows:
10.1) If necessary, first slide on the tube clamp (Ref. P2 Fig. 9) and then the tube locking clamp (Ref. P3 Fig. 9).
10.2) Insert the fitting (Ref. P4 Fig. 9) into the tube and bring the tube locking clamp over the fitting (Ref. P5 Fig. 9).
10.3) Rotate the fitting (Ref. P7 Fig. 10) clockwise, orienting it according to your needs, and tighten it securely.

10.4) When connecting the tubes, ensure that the tube coming from the pump (not provided) (Ref. A1 Fig. 13) and/or from the filter unit (not provided with the appliance) is connected to the position marked as IN (Ref. P8 Fig. 10), and that the water outlet tube from the refrigerator is connected to the position marked as OUT (Ref. P9 Fig. 10).
11) Position the appliance in the chosen location, ensuring visibility of the instrument.

CAUTION: The appliance must be installed at a height lower than the water level.

CAUTION: Do not position the appliance above the tank.

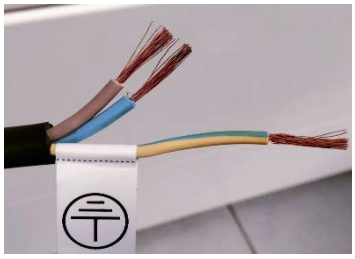
WARNING: When positioning the appliance, ensure that the power cord is not trapped or damaged.
12) Start the pump if necessary. If needed, reopen the tube clamps (Ref. P6 Fig. 10). Ensure that the water circulates smoothly within the circuit and that there are no leaks. In case of hydraulic circuit anomalies or leaks, review the connections. Verify that the water flow matches the requirements specified in Table Tab.3-1. If the flow is too high, restrict the pipes until the required flow is achieved. If the flow is too low, consider using a more powerful pump.

13) CAUTION: To avoid damage, the appliance cannot operate without water circulation (pump off) and with an actual water flow different from what is indicated in Table Tab. 3-1.

CAUTION: Ensure that the water supplied to the appliance is filtered.
14) With the pump in operation, make the electrical connection of the chiller to the electrical network as described in point 14. The display will show the word OFF.

WARNING: Connect only the TECOnnect Wi-Fi module (not supplied) to RJ45 connector (ref.A4 Fig.4). Do not connect any other device to this connector.

1.7.4 ELECTRICAL CONNECTION



The appliance, before being placed on the market, has undergone electrical and functional testing.
The appliance is supplied with the power cord. The installer must connect the appliance in compliance with current safety regulations.
Check the integrity of the power cord.
Connect the brown wire to the phase of the system, the blue wire to the neutral of the system, and the yellow-green wire to the ground.
Ensure that the circuit supplying power to the appliance is protected by a residual current circuit breaker with a nominal tripping current not exceeding 30 mA.

WARNING: Ensure that the power cord is never subjected to tension and is not placed in contact with heat sources.

WARNING: Check the integrity of the power cord.

WARNING: Ensure that the electrical supply characteristics match those indicated on the technical data label applied on the back of the appliance (Ref. A3 Fig. 4).

WARNING: Ensure that the power cord is never subjected to tension and is not placed in contact with heat sources.

WARNING: The chiller must be permanently connected to the fixed electrical network, and the connection must be equipotential.

WARNING: The chiller must be powered through a residual current circuit breaker with a nominal tripping current not exceeding 30 mA.

1.7.5 TURNING ON, OPERATION, AND TURNING OFF OF THE APPLIANCE

1) By pressing the power button (Ref. A7 Fig. 15) for at least 3 seconds, your appliance will start functioning, and the water temperature will be displayed on the screen. To view the target temperature, press the SET button (Ref. A8 Fig. 15). To return to the current water temperature, press the SET button again (Ref. A8 Fig. 15) or wait for 5 seconds.

2) CAUTION: To prevent compressor damage, a 2-minute delay has been programmed for the initial startup.

3) To stop the appliance, press the power button (Ref. A7 Fig. 15) for at least 3 seconds, and the display will show "OFF.".

1.7.6 DISPLAY INDICATIONS

On: Appliance in cooling mode (Ref. A9 Fig. 15).

On: Appliance in heating mode (NOT ACTIVE) (Ref. B1 Fig. 15).

Flashing: Appliance ready for cooling (Ref. A9 Fig. 15).

On: Alarm condition (Ref. A1 Fig. 15).

1.7.7 THERMOSTAT ADJUSTMENT

Refer to Figure 15 for button identification

1) The water temperature can be set between 5°C and 15°C (41°F - 59°F). To change it:

a. Press and hold the SET button (Ref. A8) for 3 seconds. The currently set value will be displayed, and the unit of measurement icon (C or F Ref. C3) will start flashing.

b. Adjust the value using the buttons and (Rif. C2 e A7).

c. Press the SET button (Ref. A8) to confirm the set value.

2) To adjust other parameters such as operating hysteresis (Hy) or sensor calibration (Ot). Access the programming menu by pressing and holding the SET+ (Ref. A8 e A7). The icon of the selected unit of measurement begins to flash (C or F Ref. C3) and Hy appears. Scroll through the parameters using the buttons and (Ref. C2 and A7) until you see the desired parameter.

f. Press the SET button (Ref. A8), and the currently set value will be displayed.

g. Adjust the value using the buttons and (Ref. C2 e A7).

h. Press the SET button (Ref. A8) to confirm the set value and proceed to the next parameter.

i. Press SET + (Ref. A8 and C2) to exit the programming mode.

NOTE: If no button is pressed for 30 seconds, all the set values will be saved, and the appliance will be ready to operate.

Parameter	Pre-set Value	Description	Adjustment Range
Hy	1°C	This parameter regulates the hysteresis, which is the differential for the operation of the appliance	0,5 ÷ 10°C 1 ÷ 45°F
ot	0°C	This parameter adjusts the probe calibration.	Don't modify
o1	off	Activation-deactivation of the heating function. No heating function available.	Don't modify
rL	xx.x	Thermostat firmware version. Read-only parameter.	-

Tab. 1-2

1.8 TRANSPORT AND STORAGE

The appliance should be handled gently and positioned in an upright position using the provided handles. It should be placed on a flat surface.

1.9 DEMOLITION AND DISPOSAL

The label with the crossed-out waste bin symbol on the product indicates that the product should not be disposed of through the normal household waste disposal procedure. To prevent potential harm to the environment and human health, please separate this product from other household waste so that it can be recycled in accordance with environmentally responsible procedures. For more information on available collection centers, please contact your local government office or

the product retailer. These instructions apply only to customers within the European Union, in accordance with the European Parliament directive on Waste Electrical and Electronic Equipment (WEEE) and the regulations governing its transposition and implementation into various national legal systems. For other countries, please contact your local government to explore the possibility of recycling your product.

1.10 MAINTENANCE

Scheduled routine maintenance includes inspections, checks, and interventions that systematically monitor the condition of various parts to prevent interruptions and breakdowns. These operations must be carried out by Qualified Personnel. Maintenance tasks should be performed in accordance with the times indicated in the following table:

Component	Frequency	Operation
Appliance	Every month	Check the tightening of the components.
	Every year	Check the integrity of electrical components and electrical cables
	Every year	Efficiency and safety checks
	Every year	Inspection of informative labels
Fan	Every month	Check the operation.
Capacitor	Every month	Visual inspection to check if it is clean or not.
Compressor	Every month	Check the mechanical operation.
Filter	Every month	Check and clean

Tab. 1-3

1.10.1 CLEANING

Cleaning the filter should be done at least once a month and as needed based on the level of dustiness in the installation environment. Open the plastic grille (Ref. A6, Fig. 14) from the top and remove the filter (Ref. A5, Fig. 14). Clean the filter by washing it with lukewarm water.

CAUTION: Do not use hard brushes or abrasive materials to avoid damaging the filter.
Reposition the filter (Ref. A5, Fig. 14) and close the plastic grille (Ref. A6, Fig. 14).

1.11 DIAGNOSTICS, ISSUES, CAUSES, AND REMEDIES

Below, we present a table that is useful for the operator to recognize the defects observed in the operation.

Repairs on the appliance will be carried out by a specialized and trained maintenance technician.

2. SPARE PARTS

To ensure satisfactory and consistent operation, it is necessary to use exclusively original parts and accessories. The use of non-original spare parts is not recommended. In the event that this occurs, Teco S.r.l. disclaims any responsibility for any damage to persons or property resulting from non-compliance with the above instructions.

3. TABLE OF ISSUES, CAUSES, REMEDIES

Issues	Causes	Remedies
The display doesn't turn on	Loss of electrical power.	Check that the plug is fully inserted into the power outlet (Ref. A5, Fig. 4).
Poor water cooling.	Insufficient water flow.	Check the proper operation of the pump (not supplied) (Ref. A1, Fig. 12-13).
	Insufficient thermal insulation.	Provide insulation for the tank walls and pipes to reduce thermal losses.
	Air exiting from the ventilation grille at room temperature.	Lack of refrigerant in the compressor, please contact the local TECO S.r.l. dealer.
On the display, the message "HA2" appears (overheating).	Dirty air filter.	Clean the filter as indicated in the Cleaning chapter.
	Room temperature too high.	Restore optimal environmental conditions. The maximum allowable room temperature is 32°C (90°F)
	Blocked ventilation ducts.	Clear the vents or place the conditioner in a suitable environment.
	Ventilation system malfunction.	Contact the local TECO S.r.l. dealer.
On the display, the message "P1" appears	Water temperature probe malfunction.	Contact the local TECO S.r.l. dealer.
On the display, the message "P2" appears	Overheating probe malfunction.	Contact the local TECO S.r.l. dealer.
On the display, the message "HA" appears.	High water temperature.	Check the proper operation of the pump (not provided) (Ref. A1 Fig. 12-13).
		Ensure that there are no pipe obstructions.
		Verify that the cooling function is active.
On the display, the message "LA" appears.	Low water temperature.	Check the proper operation of the pump (not provided) (Ref. A1 Fig. 12-13).
		Ensure that there are no pipe obstructions.
The temperature displayed on the device's screen does not match the actual temperature of the aquarium	The water does not circulate correctly within the hydraulic circuit.	Ensure that there are no pipe obstructions.
		Check the efficiency of the pump (not provided).
	Long and uninsulated pipes.	Shorten the pipes as much as possible and thermally insulate them.

Tab. 2-1