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TECO TK500

TECO TK500 Aquarium Water Chiller User Manual

Model: TK500 | Brand: TECO

INTRODUCTION

The TECO TK500 1/6 HP Aquarium Water Chiller is designed to provide precise and stable temperature control for various aquatic environments, including marine reef tanks, saltwater fish tanks, freshwater aquariums, and axolotl habitats up to 120 gallons. This manual provides essential information for the proper installation, operation, and maintenance of your TECO TK500 chiller to ensure optimal performance and longevity.



Image: Front view of the TECO TK500 Aquarium Water Chiller, showcasing its compact design and digital display.

SAFETY INFORMATION

Please read all safety warnings and instructions carefully before operating the TECO TK500 chiller. Failure to follow these instructions may result in product damage, personal injury, or electric shock.

- **Electrical Safety:** Always disconnect the chiller from the power supply before performing any maintenance or cleaning. Ensure the power outlet is properly grounded and matches the voltage requirements of the unit. Do not operate the chiller with a damaged power cord or plug.
- **Water Safety:** Ensure all hose connections are secure to prevent leaks. Do not submerge the chiller unit in water. This appliance is not suitable for children under the age of 8 years old.
- **Ventilation:** The chiller requires adequate ventilation for proper operation and heat dissipation. Do not block the air intake or exhaust vents. Maintain sufficient clearance around the unit.
- **Refrigerant:** This unit uses R290 refrigerant. Do not attempt to service the refrigerant system yourself. Refer to qualified personnel for any refrigerant-related issues.

WHAT'S INCLUDED

Verify that all components listed below are present in your package:

- (1) TECO TK500 1/6 HP Water Chiller Unit
- (1) Power Cord (120VAC 50/60Hz)
- (1) Molded Top with Side Exhaust
- (1) Conveyor Vent Extension
- (2) 5/8" Hose Barb Fittings
- (2) Hose Clamps
- (2) Hose/Cable Wraps
- (2) Inline Flow Control Clamps
- Instructions Manual (this document)



WHAT'S INCLUDED

Water Chiller TK-500 1/6hp - Qty. 1

Power Cord - 120VAC 50/60HZ - Qty. 1

Molded Top w/Side Exhaust - Qty. 1

Conveyor Vent Extension - Qty. 1

Hose Barb Fittings - 5/8" ID - Qty. 2

Hose Clamps - Qty. 2

Hose/Cable Wraps - Qty. 2

Flow Control Clamps - Qty. 2

Image: All components included with the TECO TK500 chiller, including the main unit, power cord, vent extension, fittings, and clamps.

SETUP AND INSTALLATION

Follow these steps for proper installation of your TECO TK500 water chiller:

- 1. Placement:** Position the chiller in a well-ventilated area, ideally under a cabinet stand or externally, ensuring at least 6 inches of clearance around all sides for optimal airflow. The rotatable exhaust vent allows for flexible placement.
- 2. Hose Connections:** Attach the 5/8" barbed hose fittings to the inlet ("IN") and outlet ("OUT") ports on the back of the chiller. Secure them with the provided hose clamps.
- 3. Water Flow:** Connect the inlet hose from your aquarium's water pump (or sump return) to the chiller's "IN" port. Connect the outlet hose from the chiller's "OUT" port back to your aquarium or sump. Ensure your water pump provides a flow rate between 132-211 GPH (gallons per hour).
- 4. Power Connection:** Once all water connections are secure and checked for leaks, plug the chiller's power cord into a grounded electrical outlet.



TECO air

Top Exhaust Airflow Design

360°

**Rotate Exhaust Vent
Direct Air Anywhere**

Exhausts hot air to the
Back, Sides or Front



**Includes 360° Rotating
Top & Exhaust Vent**



Smart Airflow Management for Any Setup

- Fits Tight Cabinets
- Improves Cooling Efficiency
- Prevents Heat Buildup Inside

Italian Engineering. Smarter Cooling.

Image: Diagram illustrating the TECO TK500 chiller's airflow, showing cool air intake and hot air exhaust, highlighting the rotatable exhaust vent.



Image: Close-up view of the inlet and outlet hose connections on the back of the TECO TK500 chiller, labeled "IN" and "OUT".

OPERATING INSTRUCTIONS

The TECO TK500 features a user-friendly digital thermostat for precise temperature control.

Digital Control Panel:



Image: Close-up of the TECO TK500's digital control panel, showing the temperature display and control buttons (AUX, SET, Up, Down, Power).

- **Power On/Off:** Press the power button (usually combined with the down arrow) to turn the unit on or off.
- **Setting Temperature:** Press the "SET" button. The display will flash. Use the Up and Down arrow buttons to adjust the desired temperature. Press "SET" again to confirm. The chiller will maintain the water temperature within 1°F of your set point.
- **Temperature Units:** The digital thermostat allows you to switch between Fahrenheit (°F) and Celsius (°C). Refer to the full manual for specific button combinations to change units.
- **Alerts:** The unit can be configured to provide audible alerts for temperature deviations.
- **WiFi Module (Optional):** The TECO TK500 is compatible with the optional TECOnnect WiFi module, allowing for mobile app control and alerts. Consult the TECOnnect module's instructions for setup.

MAINTENANCE

Regular maintenance ensures the efficiency and longevity of your TECO TK500 chiller.

- **Air Filter Cleaning:** The chiller features a magnetic front air filter. Regularly remove and clean the air filter to prevent dust and debris buildup, which can impede airflow and reduce cooling efficiency. Clean with warm water and mild soap, rinse thoroughly, and ensure it is completely dry before reinserting.
- **Coil Cleaning:** Periodically inspect the condenser coils for dust accumulation. Use a soft brush or vacuum cleaner with a brush attachment to gently remove any buildup.
- **Hose and Connection Inspection:** Regularly check all hoses and connections for signs of wear, kinks, or leaks. Replace any damaged components immediately.
- **Water Flow:** Ensure consistent water flow through the chiller. Reduced flow can impact performance. Clean your aquarium pump and plumbing as needed.



Image: Close-up view of the TECO TK500's front air filter grille, indicating the area to be cleaned for maintenance.

TROUBLESHOOTING

If you encounter issues with your TECO TK500 chiller, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Chiller not turning on	No power, tripped circuit breaker, faulty power cord.	Check power connection, reset circuit breaker, inspect power cord for damage.
Water not cooling sufficiently	Blocked air filter, insufficient water flow, ambient temperature too high, chiller undersized for tank.	Clean air filter, check water pump and hoses for obstructions, ensure adequate ventilation, verify chiller capacity for your tank size.
Excessive noise	Vibrations, fan obstruction, unit not level.	Ensure unit is on a stable, level surface. Check for any objects touching the fan or casing.
Water leaking	Loose hose connections, damaged hoses.	Tighten hose clamps, inspect hoses for cracks or punctures and replace if necessary.

If the problem persists after attempting these solutions, please contact TECO customer support.

SPECIFICATIONS

Detailed technical specifications for the TECO TK500 Aquarium Water Chiller:

Feature	Detail
Model	TK500
Horsepower	1/6 HP
Aquarium Size (Max)	Up to 120 Gallons (454 Liters)
Dimensions (LxWxH)	12.2 x 12.2 x 16.38 inches (31 x 31 x 41.6 cm)
Item Weight	41 Pounds (18.6 kg)
Voltage	120V/60Hz
Max Power	225 Watts
Refrigerant	R290 (Freon-Free)
Min Flow Rate	106 GPH / 400 LPH
Max Flow Rate	211 GPH / 800 LPH
Inlet/Outlet Thread	3/4" SAE Thread (19mm)
Inlet/Outlet Barbs	5/8" ID Hose Barbs (16mm)
Min Set Point	41°F / 5°C
Max Set Point	86°F / 30°C

Feature	Detail
Optimal Temp Range	65°F - 85°F
Max Differential	0.5°F / 0.5°C
Heat Exchanger	Titanium (Corrosion-resistant, Saltwater Safe)
Origin	Made in Italy



SPECIFICATIONS



TK500 WATER CHILLER

MODEL: TK-500
HORSEPOWER: 1/6
AQUARIUM SIZE: Up to 120 Gal (454L)
DIMENSIONS (LxWxH): 12.2" x 12.2" x 16.38"
WEIGHT: 36.4 lbs (16.5 kg)
VOLTAGE: 120V/60Hz
MAX POWER: 225 Watts
BUILT-IN HEATER: NO

MAX PRESSURE: 8.7 psi
MIN FLOW RATE: 106 GPH / 400 LPH
MAX FLOW RATE: 211 GPH / 800 LPH
INLET/OUTLET: 3/4" SAE Thread (19mm)
INLET/OUTLET: 5/8" ID Hose Barbs (16mm)
MIN SET POINT: 41°F / 5°C
MAX SET POINT: 86°F / 30°C
OPTIMAL TEMP RANGE: 65°F - 85°F
MAX DIFFERENTIAL: 0.5°F / 0.5°C

Image: Diagram showing the dimensions (length, width, height) and key specifications of the TECO TK500 water chiller.

WARRANTY AND SUPPORT

The TECO TK500 Aquarium Water Chiller comes with a **2-Year Manufacturer's Warranty**. This warranty covers defects in materials and workmanship under normal use.

For warranty claims, technical support, or any questions regarding your TECO product, please contact TECO customer service through their official website or the retailer from whom you purchased the unit. Please have your model number (TK500) and proof

of purchase ready when contacting support.

Manufacturer: Teco

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