



TFC Series
Liquid Chiller/Heater
Product Manual
Volume 1.3



tecca

The logo for Teca, featuring the word "teca" in a bold, lowercase, sans-serif font. A vertical line is positioned to the left of the text, and a decorative four-pointed starburst graphic is located at the bottom left corner of the logo area.

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TFC-2700

Liquid Chiller/Heater



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What's in the Box ???

TFC-2700 Through Flow Liquid Chiller/Heater

Power Cord - North American 120 VAC

Software and Manuals

(2) 12 foot lengths of 3/8" ID tubing
(2) 90 degree elbow Quick Connects
(2) hose clamps.

Features

The TFC-2700 is an air cooled, through flow liquid heater and chiller. It uses solid state thermoelectric technology to cool a constant or an intermittent flow of water. The temperature sensor is in the liquid heat exchangers and meant to be kept cold to provide a faster response to intermittent flows while avoiding freeze ups and over heats under no flow conditions. The hot side fans run continuously. It includes an adjustable and programmable temperature controller with USB communications and standard software.

- Constant or intermittent water flow heating and cooling
- Loose On/Off temperature control or tight PID control
- Wide input voltage range
- Extruded, high fin density, aluminum heat sink
- Hard Coat Anodized, Teflon impregnated fluid heat exchanger
- Automatic recovery to set point after regain of power
- Programmable over-temperature limits
- Hardwired safety overheat limits will shut down everything. System automatically recovers after cool down.
- System shut down upon sensor break, over and under range
- Use in single pass or re-circulating systems

Options

- Reduced Noise, Single Set Point fan speed control
- Standard Bus Communication
- RS-485 Modbus Communications

Warnings

- Read and understand the manuals included with the product
- Not for potable fluids
- Installation should be performed by a qualified technician.
- Install system in a secure, flat and level location.
- Do not install near a heat source, in the direct sun or exposed to rain , spills or splashes.
- Do not block the air inlet or outlet
- Always lock the feet when in final location..
- Make sure the system is dry before applying power.
- This product should be serviced by a qualified technician.
- Caution: Risk of electrical shock. Always disconnect the power when performing any servicing.
- For chilling water only.
- NEVER introduce flammable or explosive materials.
- Always empty all fluids from the unit prior to shipping.
- Remove power prior to any service or cleaning
- Use a vacuum cleaner or towel to remove dust and dirt accumulation at the inlet finger guards (Ambient Air intake) regularly.

Basic Installation and Operation

Step 1: Locate the unit on a flat level surface and lock the feet. Make sure you have some room around it for good airflow in the front and out the back.

Step 2: Attach both fittings to an inlet hose and outlet hose. Attach these to the appropriate fittings on the unit.

Step 3: Insert the TFC-2700 into the flow by attaching the inlet hose towards the water source and the outlet towards the device being cooled.

Step 4: Plug the power cord in the back of the unit and the other end in the wall outlet. Turn the unit on. A light will appear at the switch, the temperature controller will boot up and the fans will start to spin.

Step 5: Inspect all connections for leaks. Turn the unit off, disconnect the power and take appropriate action if any are found.

Step 6: To change the set point press the up or the down arrow button. The controller is factory set for on/off control at 20 degrees C with a +/- 2C deadband and 4 C operational hysteresis. It will begin to cool at 26C and stop cooling at 22C. It will neither cool nor heat from 22C to 18C. It will heat from 14 C to 18C.

Changing the set point will change the control range accordingly. Note that the temperature indicated is that of the exchanger and runs a typical 1C lower in cooling and 1C higher in heating modes. Alternate programming is available. See detailed temperature controller information included with this documentation.

Step 7: Monitor the outlet temperature and the temperature at the point of concern for any differences between instruments from heat picked up or lost in the hoses. Make manual adjustments

Specifications

Input Voltage: 100-240 VAC, 50/60 HZ

Input current: 10 Amps @ 120 VAC, 60 HZ nominal running

Ambient temperature: 0 to 50 C

Fluid Temperature: 0+ to 50C

Humidity: 0-85% Non-Condensing

Cooling at 0dt: 830 watts

Max input pressure: 60 PSI

Heat Dissipation Method: Forced air over extruded aluminum heat sinks into ambient air

Media Cooled/Heated: Flowing water through aluminum, hard coat anodized, Teflon impregnated liquid jackets.

Size: 18" Tall x 13.75" Wide x 17.5" Deep

Weight: 112 lbs

Panel mount fittings: Colder Products # HFCD168-12

Included hose fittings: Colder Products # HFCD236-12, 3/8 Barb

Included hose: Federal Hose 5526-050



