TTS
TARK THERMAL SOLUTIONS

# PowerCool Series DA-014-12-02
# MFG Part Number: DA-014-12-02-00-00

## PowerCool Series Thermoelectric Cooler Assembly

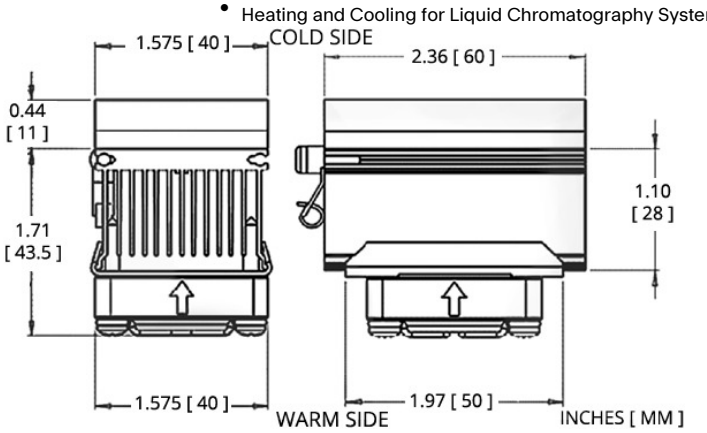
The DA-014-12-02 is a Direct-to-Air Thermoelectric Cooler Assembly that uses impingement flow to transfer heat. It offers dependable, compact performance by cooling objects via conduction. Heat is absorbed through a cold plate and dissipated thru a high density heat exchanger equipped with an air ducted shroud and brand name fan. It has a maximum Qc of 12 Watts when ΔT = 0 and a maximum ΔT of 50 °C at Qc = 0.

## Features

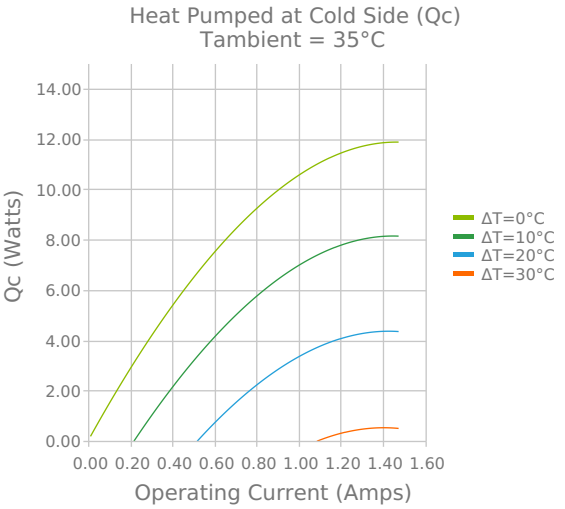
- Compact design
- Precise temperature control
- Reliable solid-state operation
- Low noise
- RoHS-compliant

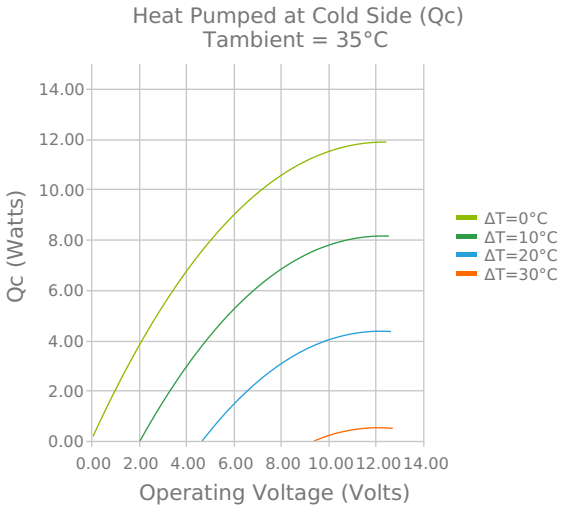
## Applications

- Medical Diagnostic and Analytical Instrumentation
- Thermoelectric Coolers and Assemblies for Medical Applications
- Liquid Cooling Options for PET and SPECT Scanners
- Cooling for Centrifuges
- High-Performance Liquid Chromatography (HPLC)
- Heating and Cooling for Liquid Chromatography Systems




## Electrical and Thermal Performance



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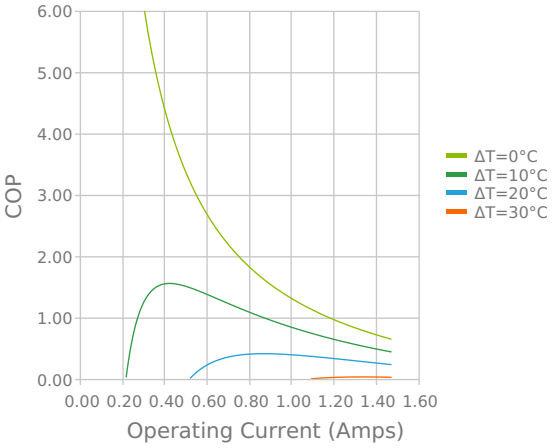
Coefficient of Performance (COP = Qc/Pin)
Tambient = 35°C

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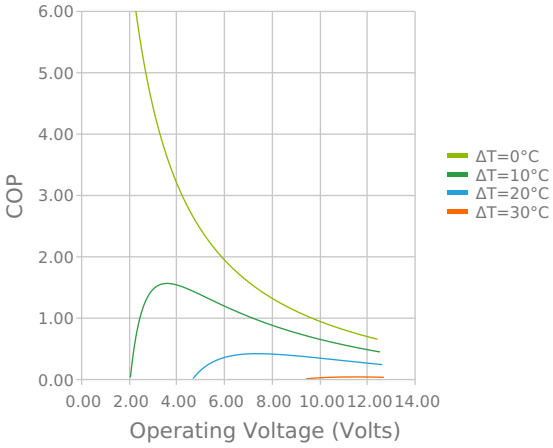
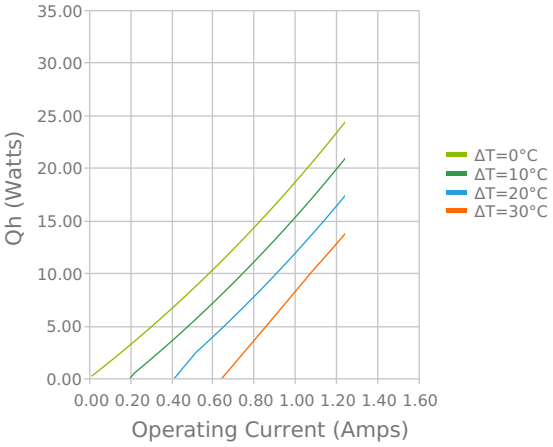



Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Tambient = 35°C

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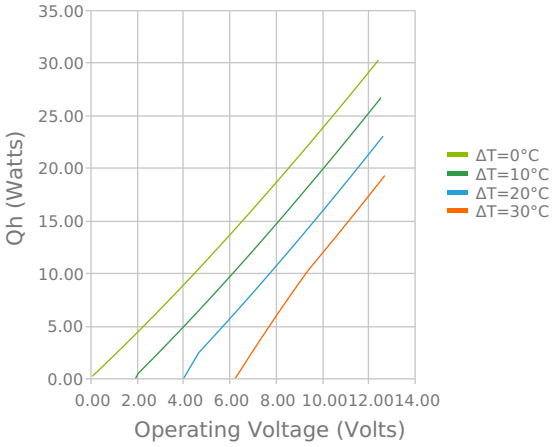
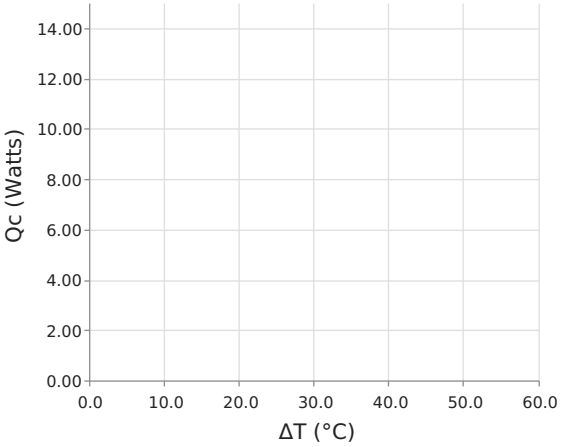



Heat Pumped at Cold Side (Qc)
Voperating = 12 Volts | Ioperating = 1.43 Amps

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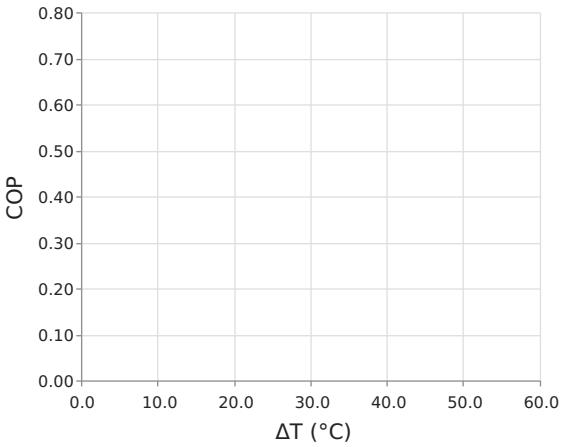
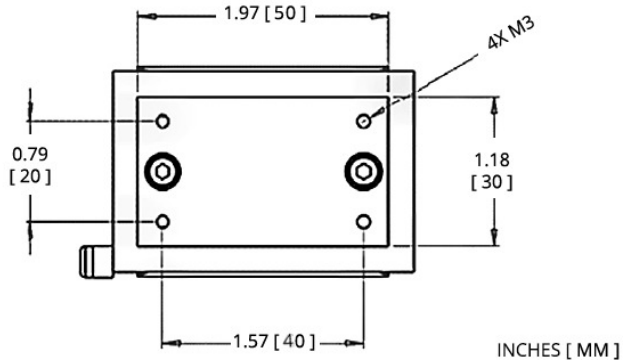


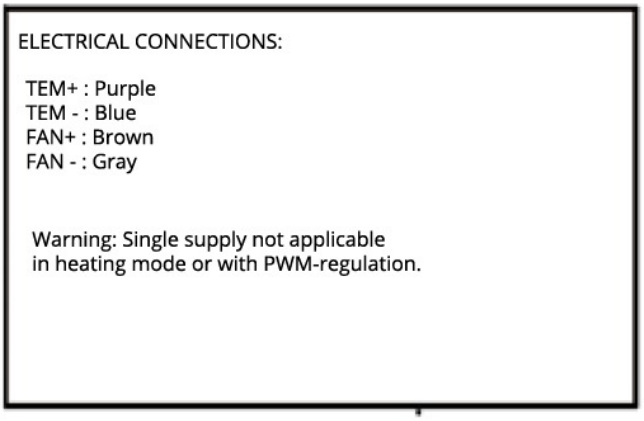
# Specifications

| | |
|---|---|
| **Heat Transfer Mechanism, Cold Side** | Direct - Conduction |
| **Heat Transfer Mechanism, Hot Side** | Air - Forced Convection |
| **Operating Temperature Range** | -10°C to 44°C |
| **Supply Voltage** | 12.0 VDC nominal / 15.0 VDC maximum |
| **Current Draw** | 1.8 A running / 2.3 A startup |
| **Power Supply** | 22.0 Watts |
| **Performance Tolerance** | 10% |
| **Hi-Pot Testing** | No Testing |
| **Fan MTBF** | 50000 hours |
| **Weight** | 0.20 kg |
| **Panel Mounting** | Flush Mount |

## Mounting Hole Location




## Wiring Schematic




## Notes

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|---|
| [1]For indoor use only |
| [2]Units are generally maintenance free, however occasionally it is recommended to clean the heat sinks and fans of debris. This is best done with compressed air. |



Revision: 01 Date: 01-29-2025

Print Date: 05-12-2025