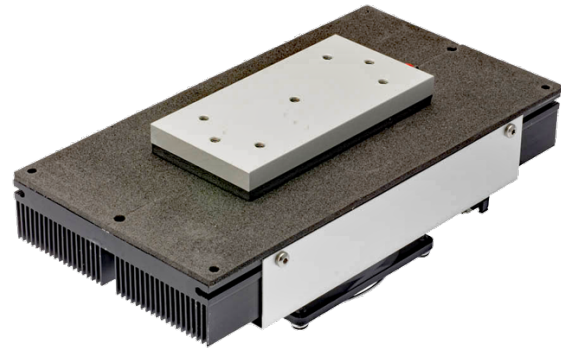


## PowerCool Series Thermoelectric Cooler Assembly

The DA-075-24-02 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  $Q_c$  of 71 Watts when  $\Delta T = 0$  and a maximum  $\Delta T$  of 42 °C at  $Q_c = 0$ .

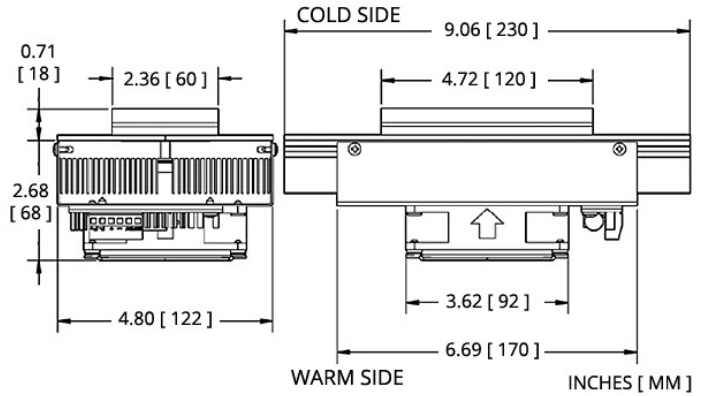


## Features

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

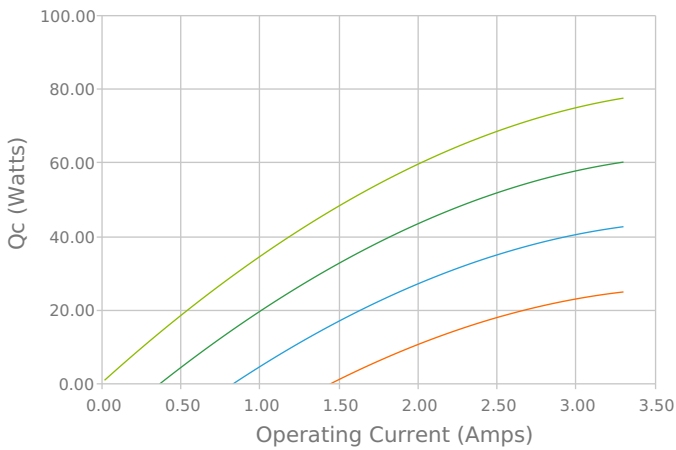
## Applications

- 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

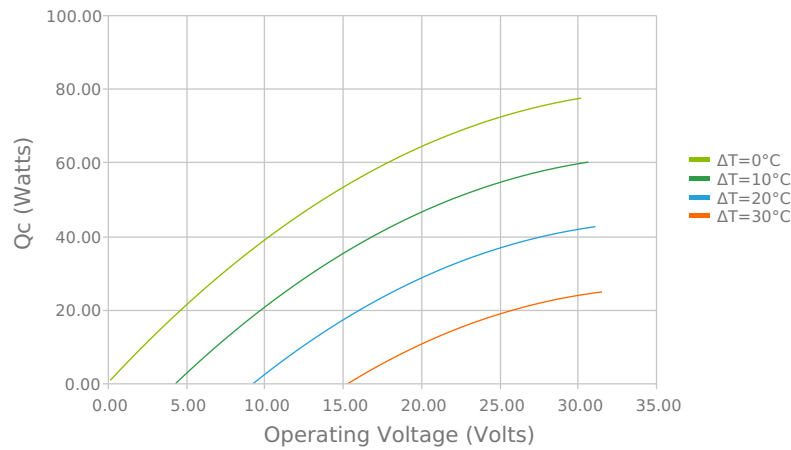


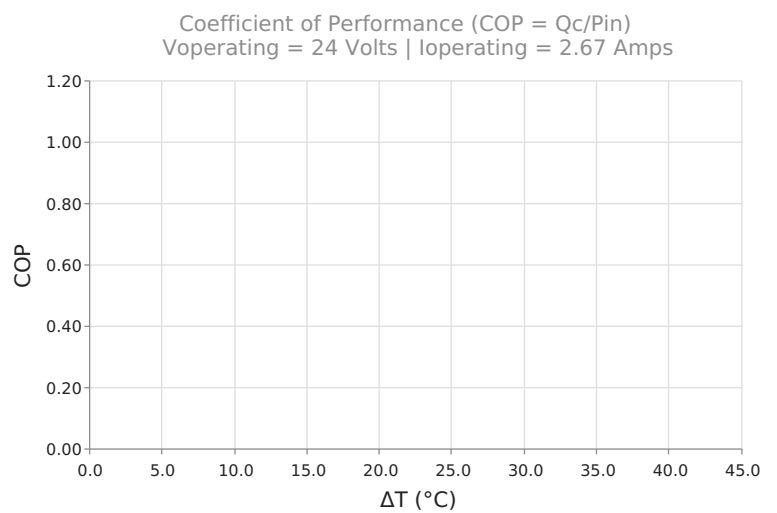
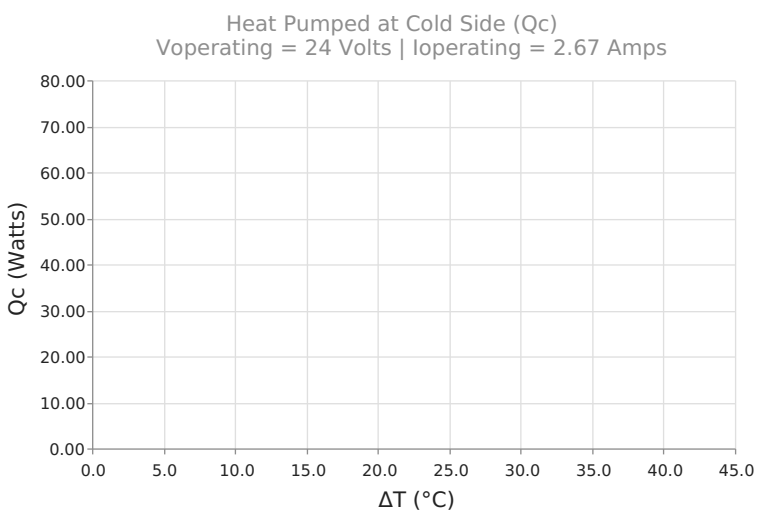
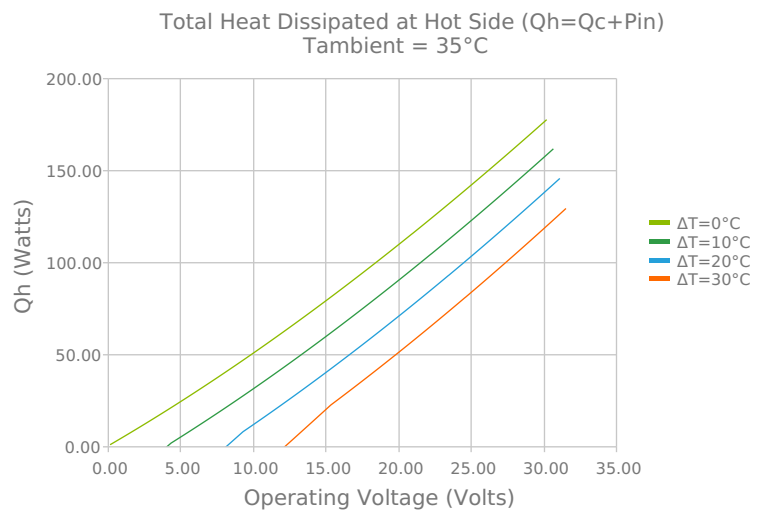
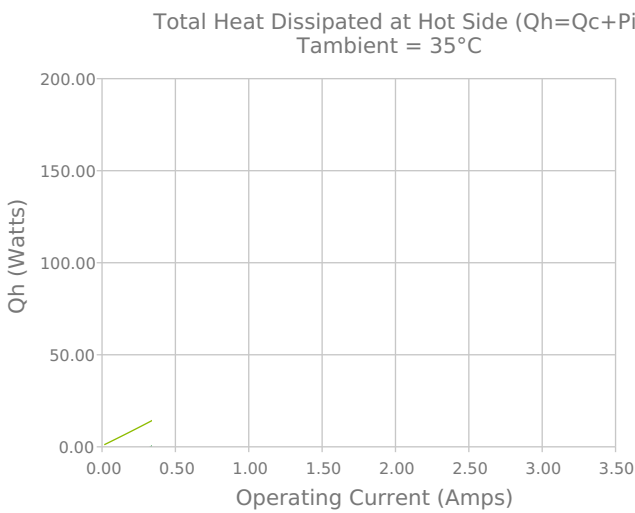
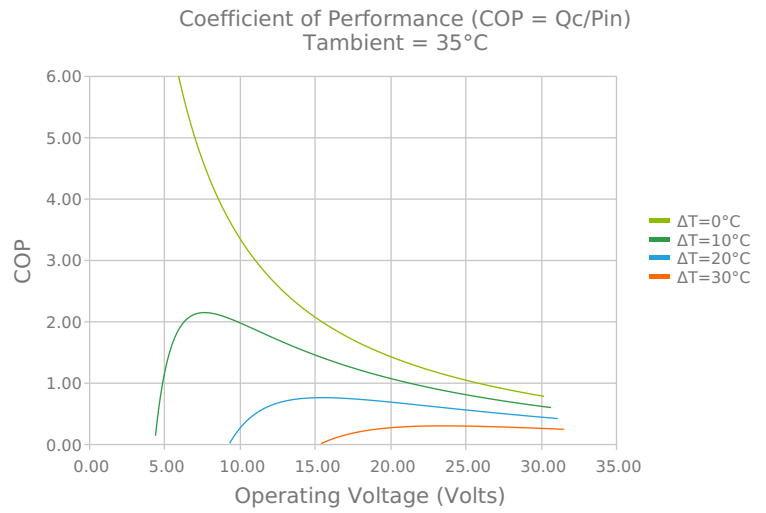
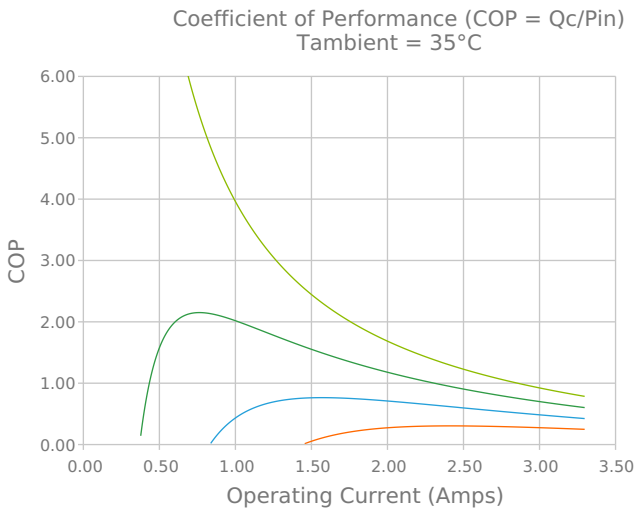
## Electrical and Thermal Performance

Heat Pumped at Cold Side ( $Q_c$ )  
 $T_{\text{ambient}} = 35^\circ\text{C}$



Heat Pumped at Cold Side ( $Q_c$ )  
 $T_{\text{ambient}} = 35^\circ\text{C}$

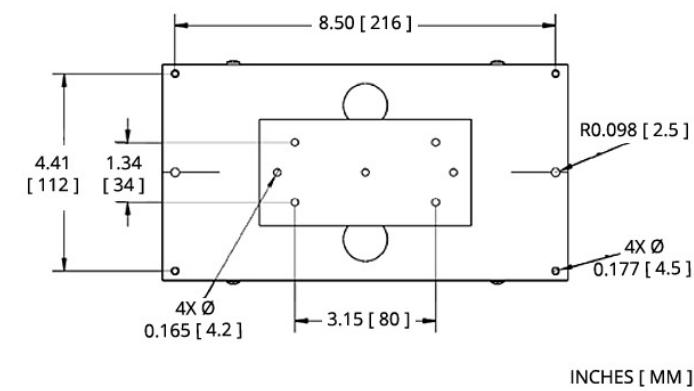




Specifications

Heat Transfer Mechanism, Cold Side	Direct - Conduction
Heat Transfer Mechanism, Hot Side	Air - Forced Convection
Operating Temperature Range	-10°C to 47°C
Supply Voltage	24.0 VDC nominal / 30.0 VDC maximum
Current Draw	3.7 A running / 4.6 A startup
Power Supply	89.0 Watts
Performance Tolerance	10%
Hi-Pot Testing	750 VDC
Fan MTBF	50000 hours
Over-Temp Thermostat (Hot and Cold Side Heat Sink)	75°C ± 5°C (hot side heat sink)
Weight	1.70 kg
Panel Mounting	Flush Mount

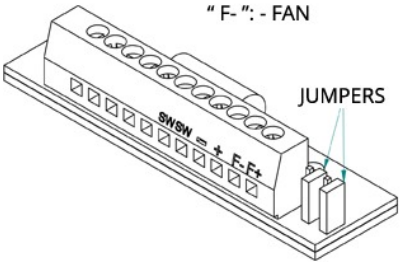
# Mounting Hole Location



# Wiring Schematic

## ELECTRICAL CONNECTIONS:

" + " : + TEM  
" - " : - TEM  
" F+ " : + FAN  
" F- " : - FAN



To use a separate supply for TEMs and FANs: Mount jumpers to not short-cut the pin pairs.

To use a single supply for TEMs and FANs: Mount jumpers to short-cut the pin pairs.

Connect the unit to " + " & " - ".

Warning: Single supply not applicable in heating mode or with PWM-regulation.

## Notes

<sup>1</sup> For indoor use only
<sup>2</sup> 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.

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