PowerCool Series DA-024-12-02
MFG Part Number: DA-024-12-02-00-00

PowerCool Series Thermoelectric Cooler Assembly

The DA-024-12-02 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 24 Watts when ΔT = 0 and a maximum ΔT of 44 °C at Qc = 0.

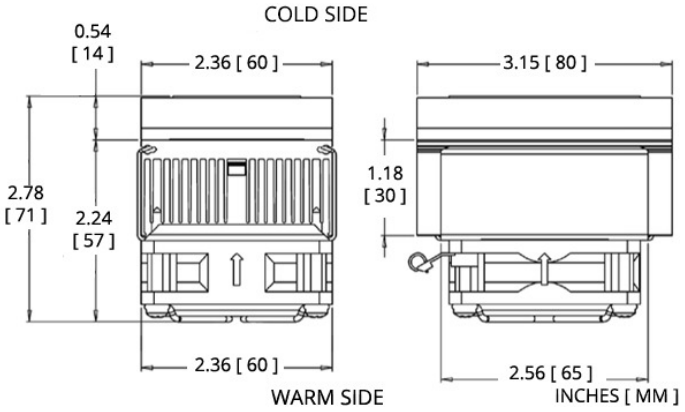
Features

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

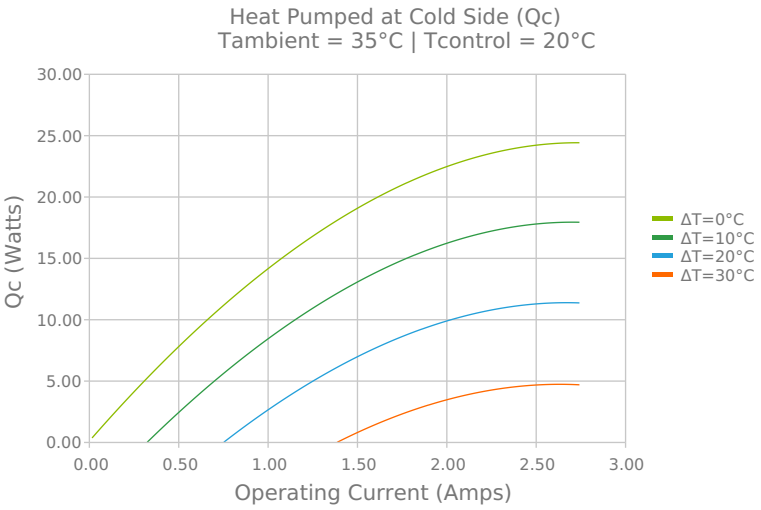
Applications

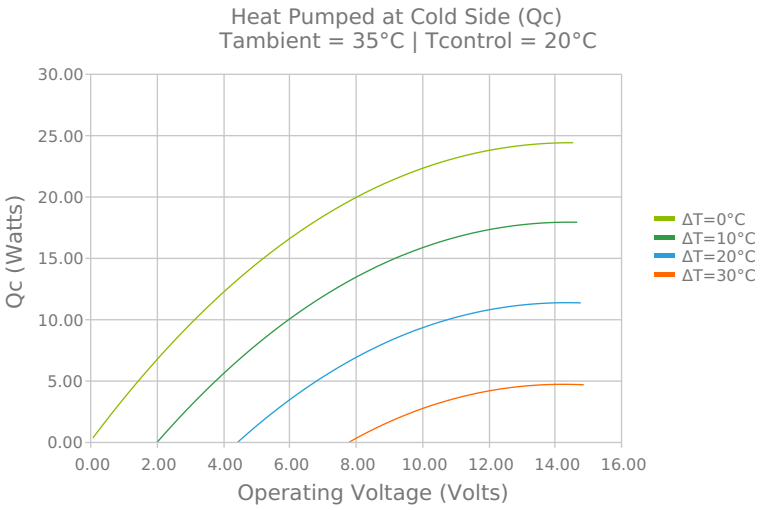
- Medical Diagnostic and Analytical Instrumentation
- Thermoelectric Coolers and Assemblies for Medical Applications
- Liquid Cooling Options for PET and SPECT Scanners
- Cooling for Centrifuges
- High-Performance Liquid Chromatography (HPLC)
- Heating and Cooling for Liquid Chromatography Systems



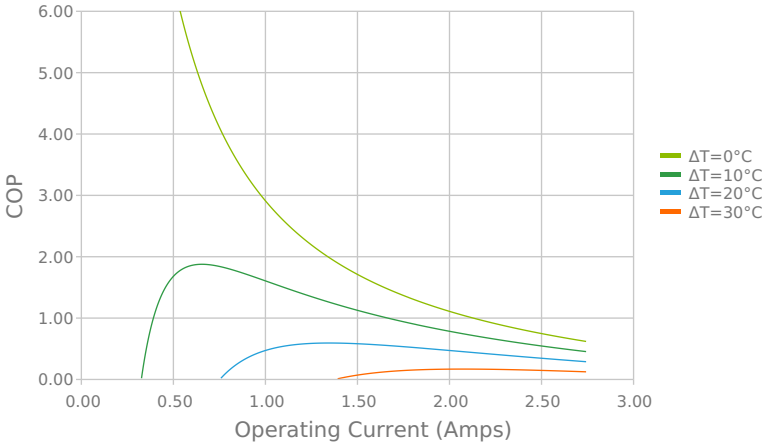


ELECTRICAL AND THERMAL PERFORMANCE

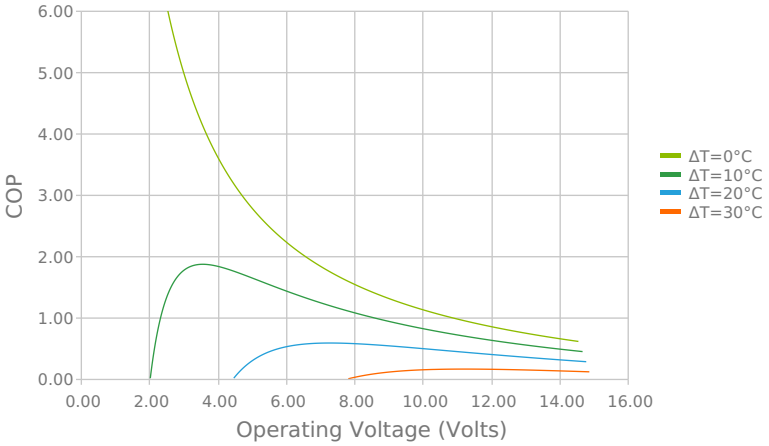




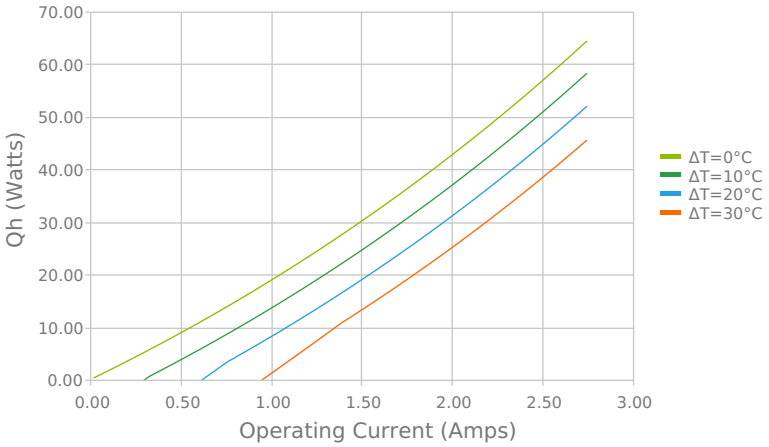
Coefficient of Performance (COP = Qc/Pin)
Tambient = 35°C | Tcontrol = 20°C



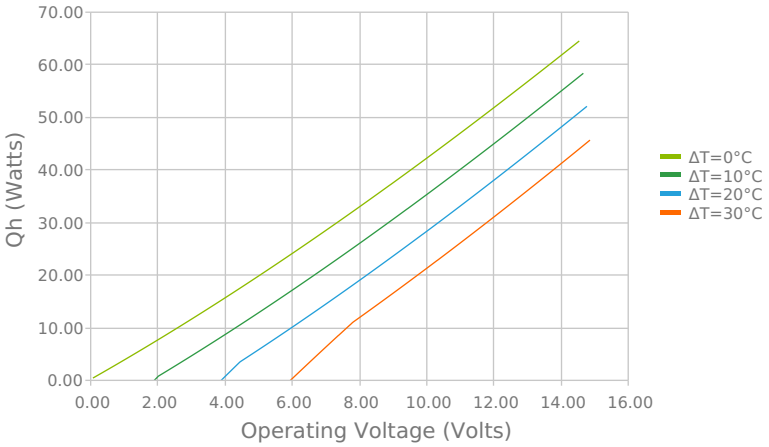
Coefficient of Performance (COP = Qc/Pin)
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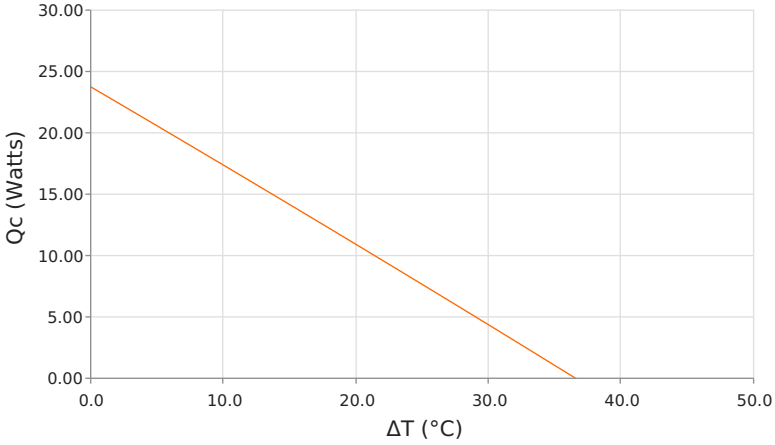
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Tambient = 35°C | Tcontrol = 20°C



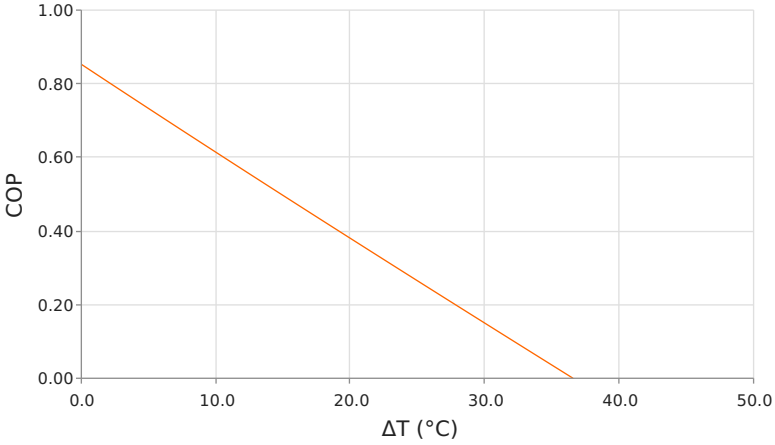
Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Tambient = 35°C | Tcontrol = 20°C



Heat Pumped at Cold Side (Qc)
Voperating = 12.02 Volts | Ioperating = 2.33 Amps



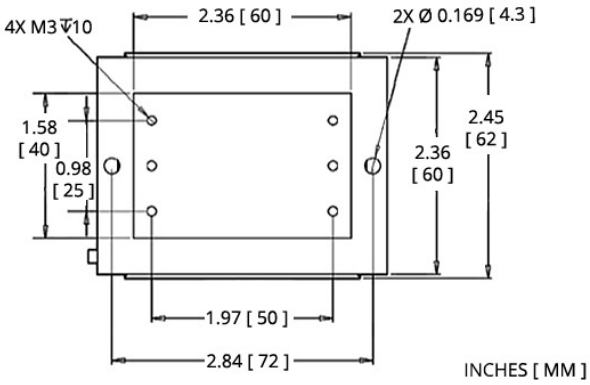
Coefficient of Performance (COP = Qc/Pin)
Voperating = 12.02 Volts | Ioperating = 2.33 Amps



SPECIFICATIONS

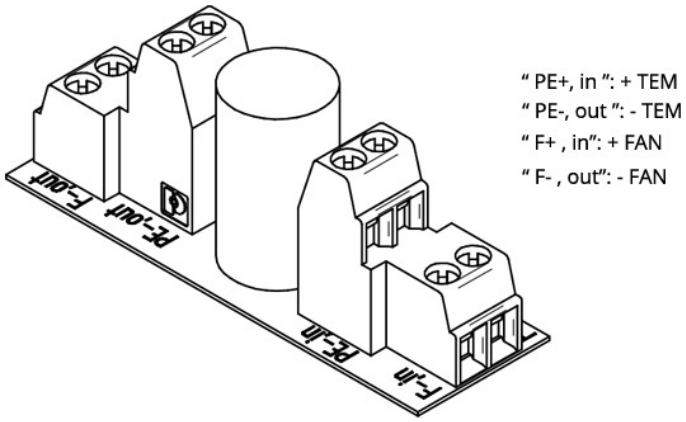
Heat Transfer Mechanism, Cold Side	Direct - Conduction
Heat Transfer Mechanism, Hot Side	Air - Forced Convection
Operating Temperature Range	-10°C to 48°C
Supply Voltage	12.0 VDC nominal / 15.0 VDC maximum
Current Draw	2.4 A running / 2.8 A startup
Power Supply	29.0 Watts
Performance Tolerance	10%
Hi-Pot Testing	No Testing
Fan MTBF	50,000 hours
Weight	0.30 kg
Panel Mounting	Flush Mount

MOUNTING HOLE LOCATION



WIRING SCHEMATIC

ELECTRICAL CONNECTIONS:



NOTES

[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.

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