PowerCool Series AA-034-12-22
MFG Part Number: AA-034-12-22-00-00

PowerCool Series Thermoelectric Cooler Assembly

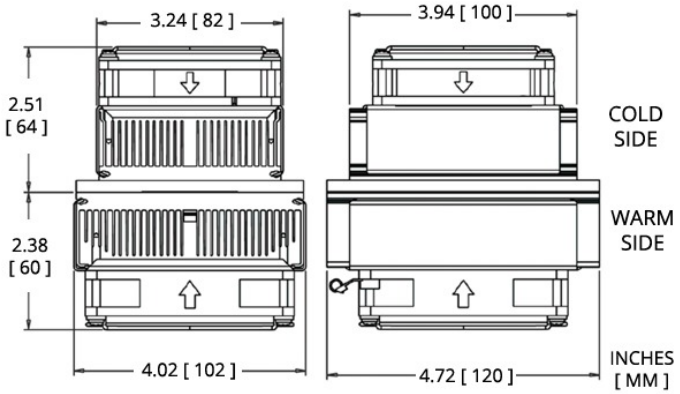
The AA-034-12-22 is an Air-to-Air Thermoelectric Cooler Assembly that uses impingement flow to transfer heat. It offers dependable, compact performance by cooling objects via convection. Heat is absorbed and dissipated through high density heat exchangers equipped with air ducted shrouds and brand name fans. The heat pumping action is created by thermoelectric modules, which are custom designed to achieve a high coefficient of performance (COP). It has a maximum Qc of 33 Watts when ΔT = 0 and a maximum ΔT of 35 °C at Qc = 0.

Features

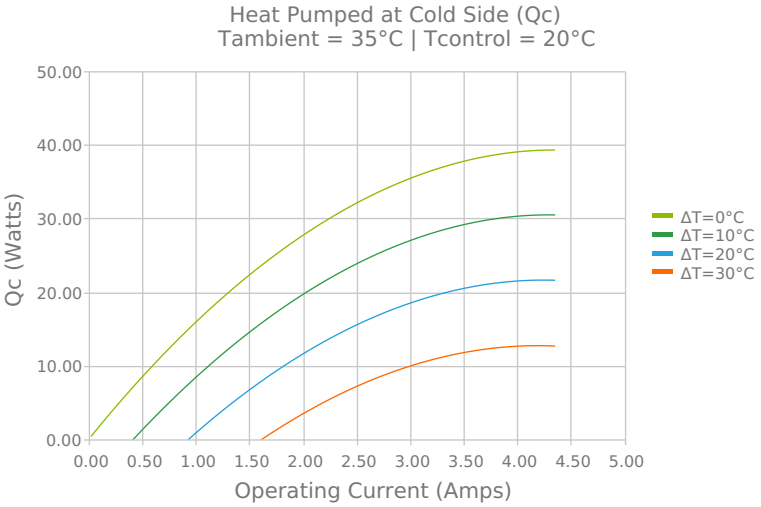
- Compact design
- Precise temperature control
- Reliable solid-state operation
- Low noise
- RoHS-compliant

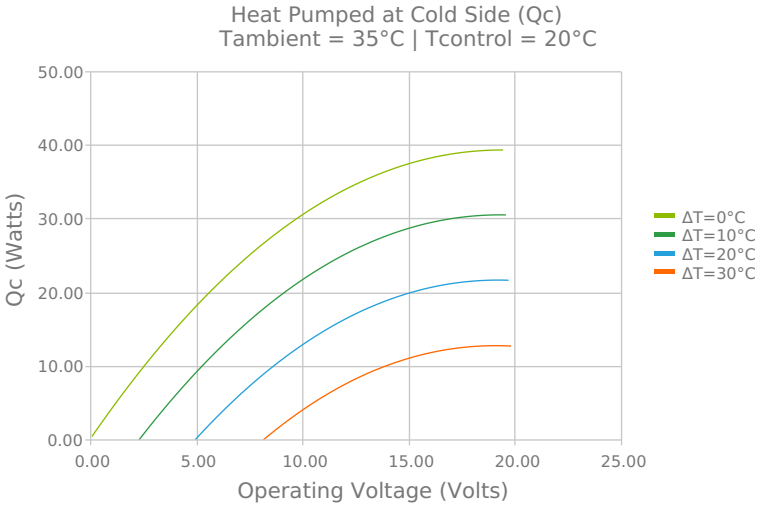
Applications

- 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

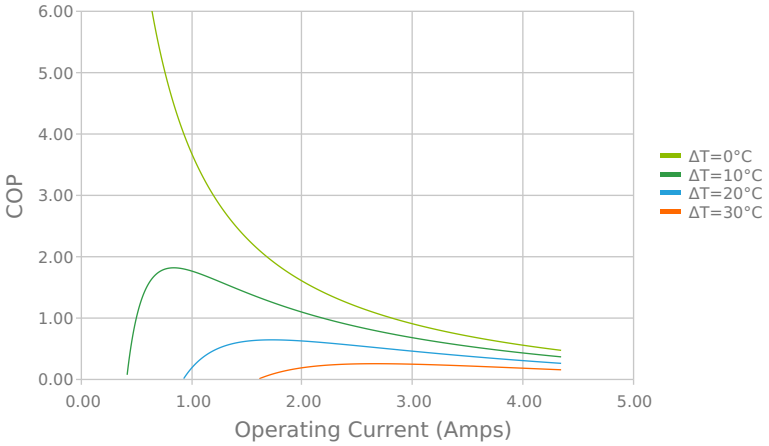


ELECTRICAL AND THERMAL PERFORMANCE





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



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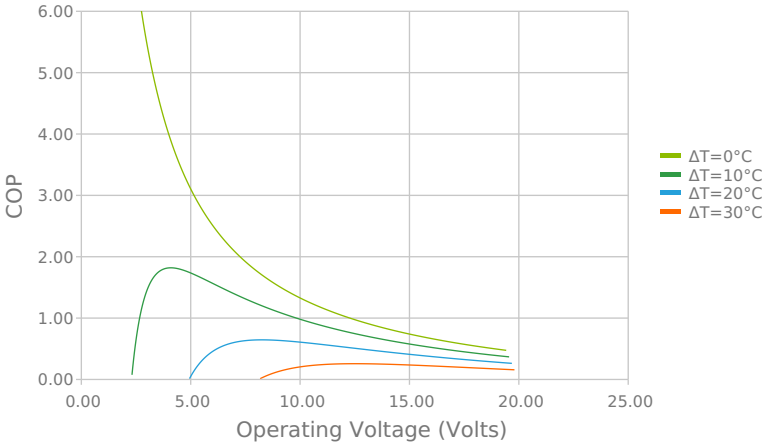
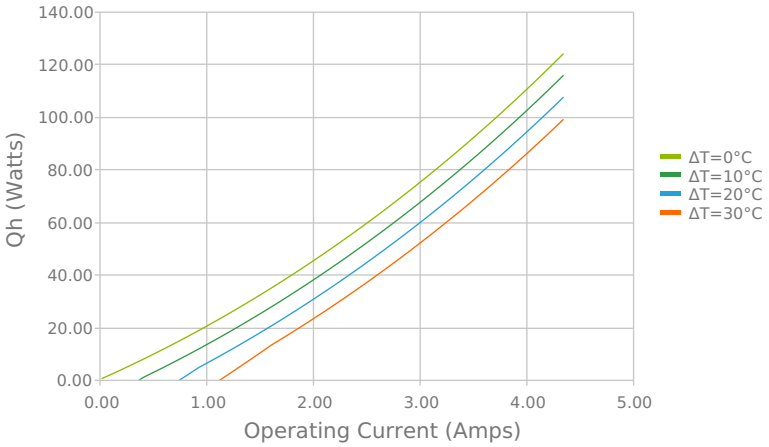


Total Heat Dissipated at Hot Side (Qh=Qc+Pin)
Tambient = 35°C | Tcontrol = 20°C



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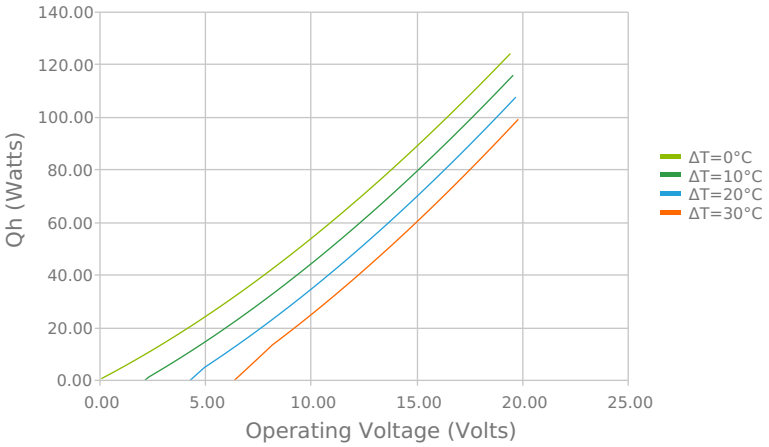
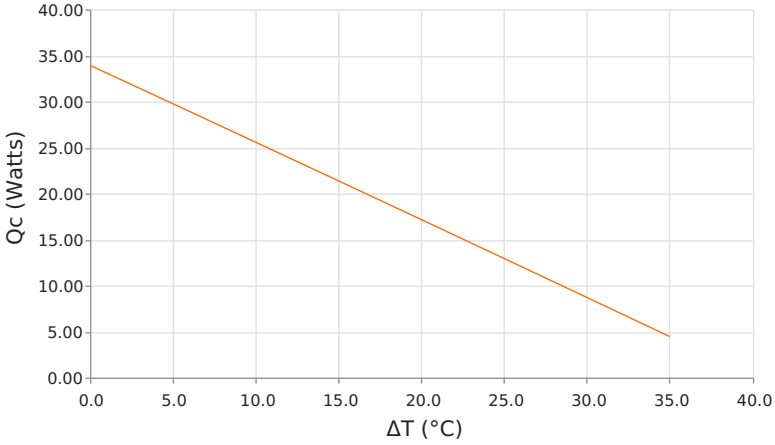


Heat Pumped at Cold Side (Qc)
Voperating = 12.02 Volts | Ioperating = 2.76 Amps



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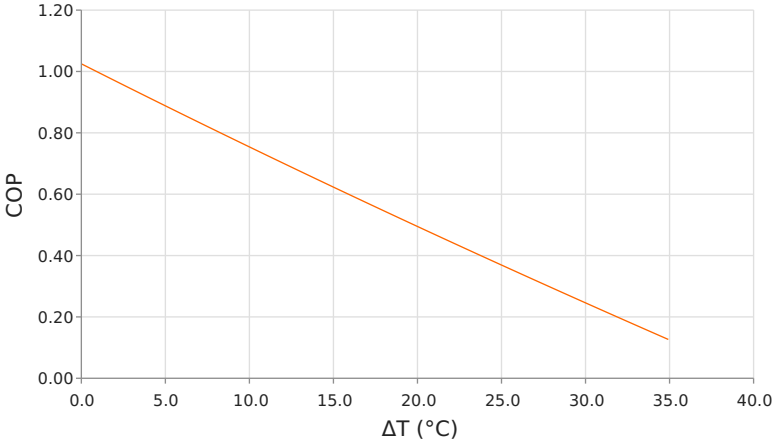
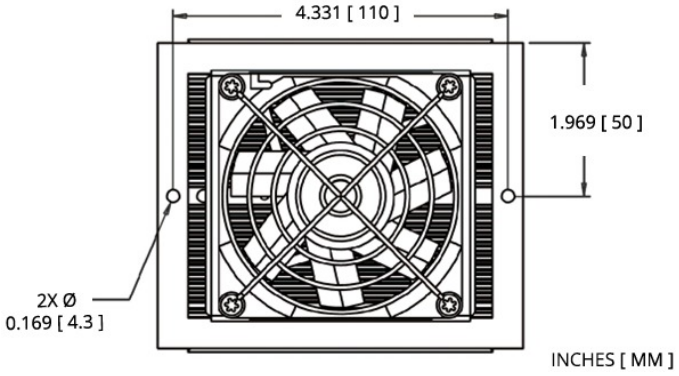


SPECIFICATIONS

Operating Temperature Range	-10°C to 49°C
Supply Voltage	12.0 VDC nominal / 15.0 VDC maximum
Current Draw	3.5 A running / 4.0 A startup
Power Supply	42.0 Watts
Performance Tolerance	10%
Fan MTBF	40,000 hours
Weight	0.90 kg

MOUNTING HOLE LOCATION



WIRING SCHEMATIC

ELECTRICAL CONNECTIONS:

ITEM	Wire Color	Crimp Ferrule Color
TEM+	Red	White
TEM -	Black	White
FAN+ (Hot Side)	Red	Blue
FAN - (Hot Side)	Black	Blue
FAN+ (Cold Side)	Red	Purple
FAN - (Cold Side)	Black	Purple

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.

Date: 12/14/2021