

MRC Series Thermoelectric Cooler Assembly

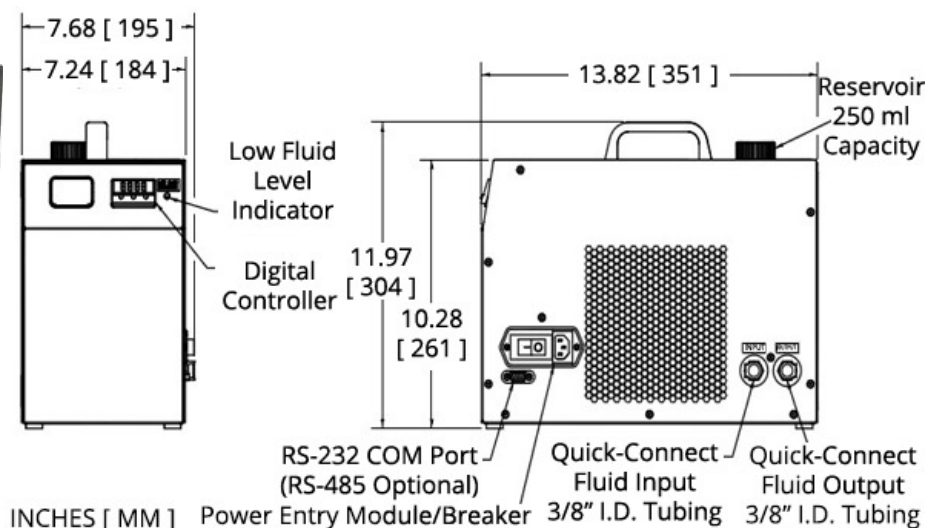
The MRC150-DH2-DV is a bench top re-circulating chiller that offers dependable, compact performance by controlling the temperature of a coolant in a liquid circuit. The coolant is re-circulated using a pump with high MTBF. Heat from coolant is absorbed by a heat exchanger and dissipated thru high density heat sinks equipped with brand name fans. The thermoelectric modules are custom designed to achieve long life operation. The unit is regulated with an easy to use digital temperature controller with push button interface. The controller can control temperature of liquid circuit at outlet from -12°C to 40°C. The unit is housed inside an a sheet metal casing, operates on universal input 115/230 VAC and is UL/IEC rated. Custom configurations are available, however, MOQ applies.

Features

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

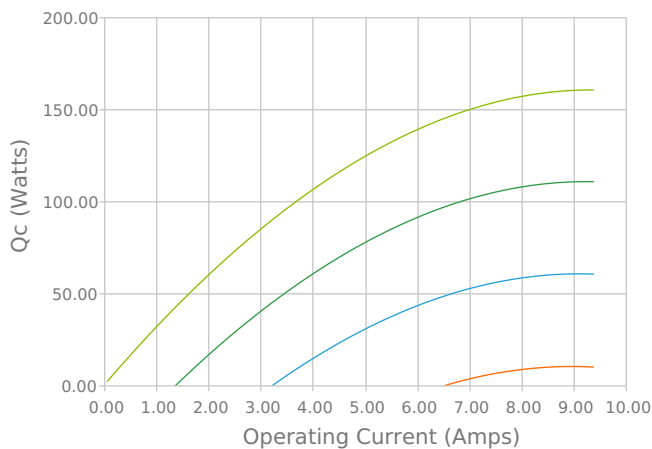
Applications

- Liquid Cooling Options for PET and SPECT Scanners
- Cooling Particle Accelerators: Linear Accelerators and Cyclotrons
- Spindle Screw Pump Technology for Medical Cooling
- Semiconductor Fabrication Equipment Cooling
- X-ray Cooling in Industrial Scanners

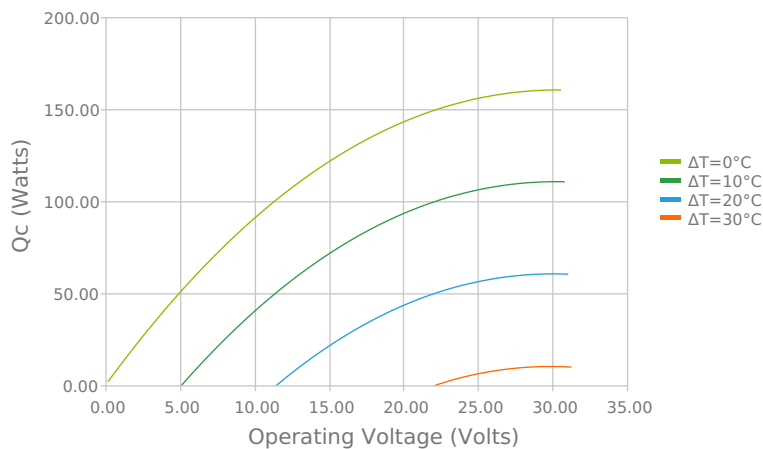


ELECTRICAL AND THERMAL PERFORMANCE

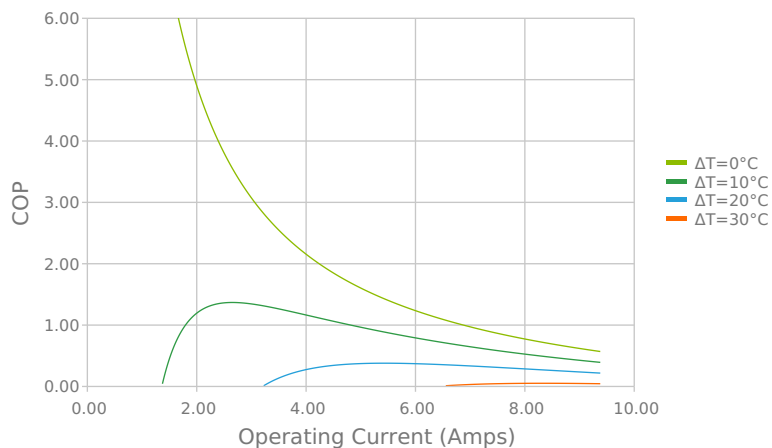
Heat Pumped at Cold Side (Q_c)
Tambient = 35°C | Tcontrol = 20°C



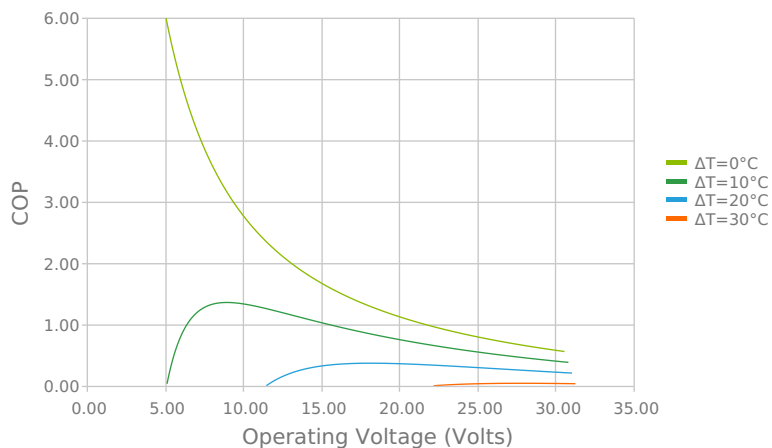
Heat Pumped at Cold Side (Q_c)
Tambient = 35°C | Tcontrol = 20°C



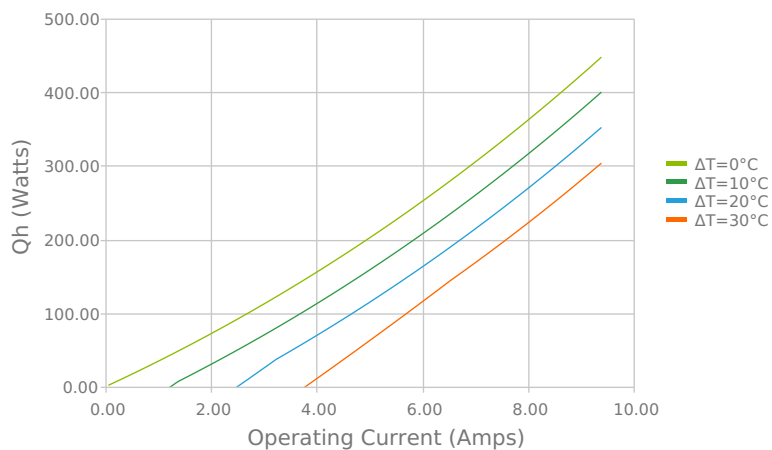
Coefficient of Performance (COP = Q_c/P_{in})
 $T_{ambient} = 35^{\circ}\text{C}$ | $T_{control} = 20^{\circ}\text{C}$



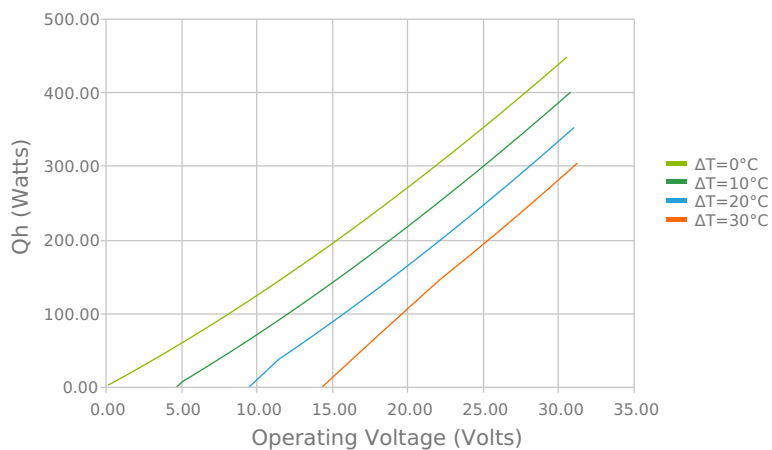
Coefficient of Performance (COP = Q_c/P_{in})
 $T_{ambient} = 35^{\circ}\text{C}$ | $T_{control} = 20^{\circ}\text{C}$



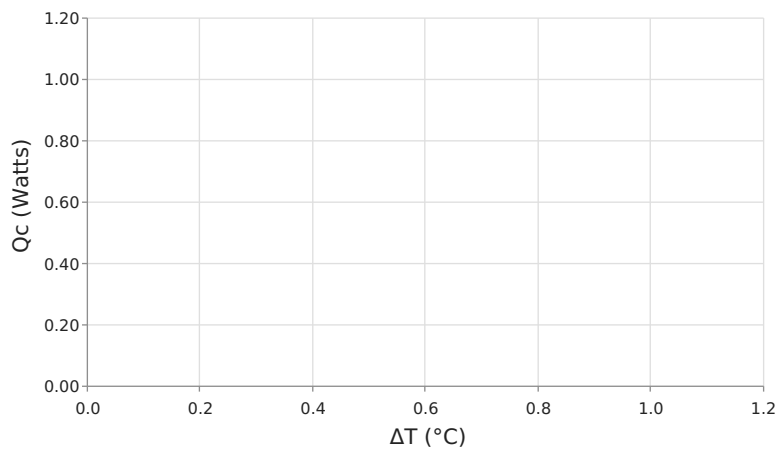
Total Heat Dissipated at Hot Side ($Q_h = Q_c + P_{in}$)
 $T_{ambient} = 35^{\circ}\text{C}$ | $T_{control} = 20^{\circ}\text{C}$



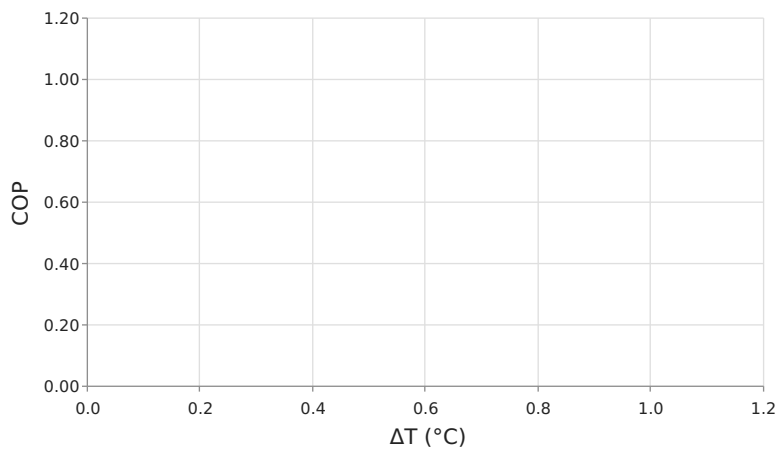
Total Heat Dissipated at Hot Side ($Q_h = Q_c + P_{in}$)
 $T_{ambient} = 35^{\circ}\text{C}$ | $T_{control} = 20^{\circ}\text{C}$



Heat Pumped at Cold Side (Q_c)
 $V_{operating} = 24$ Volts | $I_{operating} = 7.5$ Amps



Coefficient of Performance (COP = Q_c/P_{in})
 $V_{operating} = 24$ Volts | $I_{operating} = 7.5$ Amps



SPECIFICATIONS

Operating Environment Temperature Range

4 °C to 45°C

Control Temperature Range (70/30 Water/Glycol)

-12 °C to 40°C

Supply Voltage

115 VAC to 230 VAC

Current 115 VAC (230 VAC)

4.7 Amps (2.4 Amps)

Power Supply

294.0 Watts

Performance Tolerance

10%

Fluid Capacity

250 mL

Maximum Flow Rate

2.9 L/min

Weight

10.90 kg

NOTES

¹Use distilled water as coolant for control temperatures above 5°C

²To prevent freezing, use coolant with 70/30 distilled water/ethylene glycol

³Unit comes with a 115 VAC North American cord and a 230 VAC European cord

⁴UL Rating: UL61010 – 1/IEC61010-1

Any information furnished by Laird and its agents, whether in specifications, data sheets, product catalogues or otherwise, is believed to be (but is not warranted as being) accurate and reliable, is provided for information only and does not form part of any contract with Laird. All specifications are subject to change without notice. Laird assumes no responsibility and disclaims all liability for losses or damages resulting from use of or reliance on this information. All Laird products are sold subject to the Laird Terms and Conditions of sale (including Laird's limited warranty) in effect from time to time, a copy of which will be furnished upon request.

© Copyright 2020 Laird Thermal Systems GmbH. All Rights Reserved. Laird, Laird Technologies, Laird Thermal Systems, the Laird Logo, and other word marks and logos are trademarks or registered trademarks of Laird Limited or an affiliate company thereof. Other product or service names may be the property of third parties. Nothing herein provides a license under any Laird or any third party intellectual property rights.

Date: 06/01/2020