

CTI-CRYOGENICS® REFRIGERATION SYSTEM

MODEL 350, 1020, 1050 (CRYODYNE®)



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CTI offers a family of single and two stage, closed-cycle refrigeration systems based on the Gifford-McMahon thermodynamic Cycle. They provide usable refrigeration from <10 K to >80 K for a variety of commercial and research applications. CTI has the most thoroughly proven closed-cycle helium refrigeration systems on the market today.

CTI Refrigeration systems consist of a refrigeration assembly, compressor assembly and customized installation kit, which includes flexible interconnecting Helium lines and refrigerator cable ranging from the standard 10 foot separation length up to 300 foot length.

Applications and Markets

R&D

Superconductor Cooling

Cryopumps

Optical Systems

Materials Research

Spectroscopy

Radio Astronomy

NMR Systems

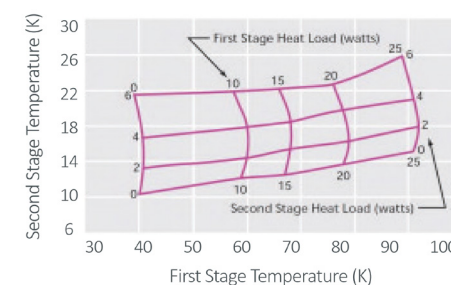
FEATURES & BENEFITS

- The most thoroughly proven closed-cycle helium refrigeration systems on the market
- Ultra pure helium gas as the refrigerant which is environmentally safe and nonflammable
- Long life

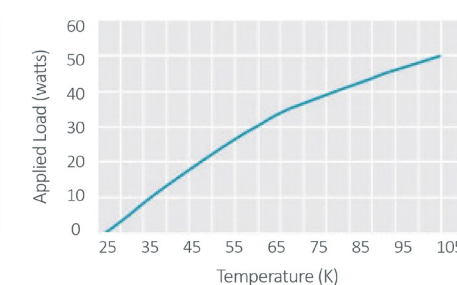
Model 350 Cryodyne® Refrigeration System

The Model 350 is used in many laboratory and commercial applications such as cooling low noise amplifiers for radar and radio astronomy. The M-350 is used in basic materials research, matrix isolation spectroscopy and cooling of superconductors. The single stage M-350 will provide 40 WATTS of refrigeration at 77 K. The two stage M-350 will provide a refrigeration of 4 WATTS at 20 K and 20 WATTS at 77 K simultaneously.

Model 350 Two Stage Cryodyne®
Refrigerator Typical Performance (60 Hz)



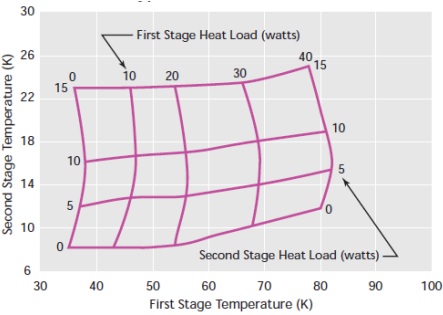
Model 350 Single Stage Cryodyne®
Refrigerator Typical Performance (60 Hz)



Model 1020 Cryodyne Refrigeration System

The Model 1020 is available in a two stage configuration only. Single stage performance is available from the M-1050. The M-1020 was designed for high capacity applications such as MRI magnet shield cooling and large cryopumps. The M-1020 will provide 12 WATTS of refrigeration at 20 K and 35 WATTS at 77 K simultaneously.

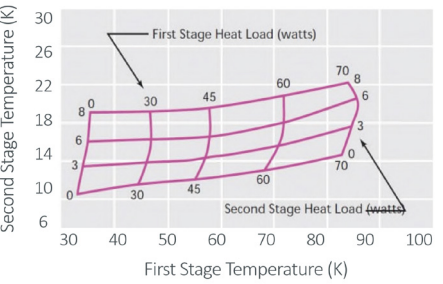
Model 1020 Two Stage Cryodyne® Refrigerator Typical Performance (60 Hz)



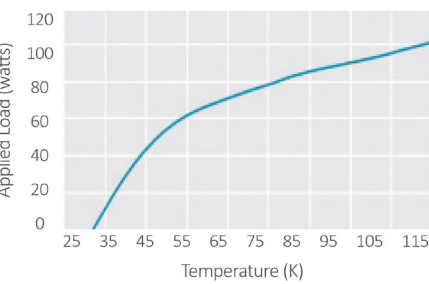
Model 1050 Cryodyne® Refrigeration System

The Model 1050 is available in both single and two stage configurations to meet a variety of high capacity cooling applications. The M-1050 is ideal for a number of high temperature semiconductor applications that require cooling from 20 K to 80 K. The M-1050 single stage system will provide 80 WATTS of refrigeration at 77 K. The M-1050 two stage system will provide 7 WATTS of refrigeration at 20 K and 65 WATTS at 77 K simultaneously.

Model 1050 Two Stage Cryodyne® Refrigerator Typical Performance (60 Hz)



Model 1050 Single Stage Cryodyne® Refrigerator Typical Performance (60 Hz)



CTI APPLICATIONS EXPERTISE

The CTI applications team listens carefully to customer perspectives and partners with them to address their issues. Leveraging our leadership in modern cryopump technology, we deliver the right solution, whether off the shelf or custom engineered. We are committed to helping you meet your process and manufacturing objectives.



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