

HPD

Model 107

Mid-Sized, Cryogen-Free, He3-Backed, ADR Cryostat

000111100010

➤ Overview

The HPD Model 107 adiabatic demagnetization refrigerator (ADR) is specially designed for experiments needing high cooling power. By employing a Helium-3 cooler that offers a low 300 mK intercept, more of the ADR cooling power can go towards your experiment. This mid-sized research cryostat features an experimental volume of 34 cm in diameter and 20 cm tall. If your cooling needs exceed standard ADR capabilities, but require operational simplicity, the Model 107 may be just the ticket.



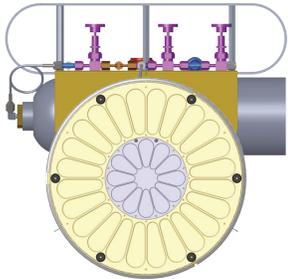
Features

- Helium-3 backed, single stage ADR (Adiabatic Demagnetization Refrigerator)
- ADR cryostat with high-powered 300 mK intercept)
 - Kevlar suspension
 - 30 mK stages
- Optimized for versatility and flexibility
 - 2X NW50 user ports on top flange
 - 2X NW40 user ports on top flange
 - 1X NW25 user ports on top flange
 - 1X Ø150 mm user port on vacuum jacket bottom flange
- Nickel plated aluminum thermal shields (50 K, 4 K)
- Quick release vacuum jacket flanges
- Electronically controlled motorized heat switches
- Vibration minimizing design
- Remote rotary valve motor
- Custom service stand (option)
 - Allows for transport & servicing
 - 76 cm of height adjustment



Design Specifications

- Long hold times: 180 hours with 40 L charge; ~120 hours with a 35 L charge
- Large capacity FAA salt pill (~70 cc)
 - >85 mJ at 50 mK; >250 mJ at 100 mK
- Pulse-tube stage temperatures of 50 K and 2.7 K
- 0.9 W cooling power at 4.2 K
- ADR base temperature of < 30 mK
- 250 hour no load regulation at 100 mK
- 6 J of cooling capacity at 300 mK



Bottom view of Model 107 ADR cryostat showing pulse-tube cooler and feedthrough flanges

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