

Model HE-3-TLSL

Wet Helium-3 Cryostat

➤ Overview

The Model HE-3-TLSL cryostat is a top-loading system with sample in (He-3) liquid for fast sample exchange. The design allows the sample to be removed from and introduced directly into the He-3 pot while the cryostat is cold. The system also includes a sample probe and a load-lock with gate valve, plus an external gas handling system for safe insertion and removal of the sample in and out of the He-3 chamber.

This He-3 insert includes the following components:

- Charcoal sorption pump with heater and thermometer
- 1 K pot with thermometer
- He-3 pot (sample chamber)
- Load-lock
- Sample probe with thermal anchor stage, thermometer, and heater
- IVC can
- External gas handling system with stored He-3 gas
- External sorption cryo-pump
- Operation test



Model HE-3-TLSL Helium-3 Cryostat with Gas Handling System

➤ Features / Benefits

Fast sample loading	<ul style="list-style-type: none">• The sample can be loaded or removed when the cryostat is cold
High cooling power with sample in (He-3) liquid	<ul style="list-style-type: none">• 400 mK with 400 microwatt cooling power
Wiring (option)	<ul style="list-style-type: none">• Customized wiring, coaxial cables, and fiber optics
Magnetic field (option)	<ul style="list-style-type: none">• Solenoid or vector magnet
Rotating sample holder (option)	<ul style="list-style-type: none">• Rotating range: 0 ~ 90 degrees

Design Specifications

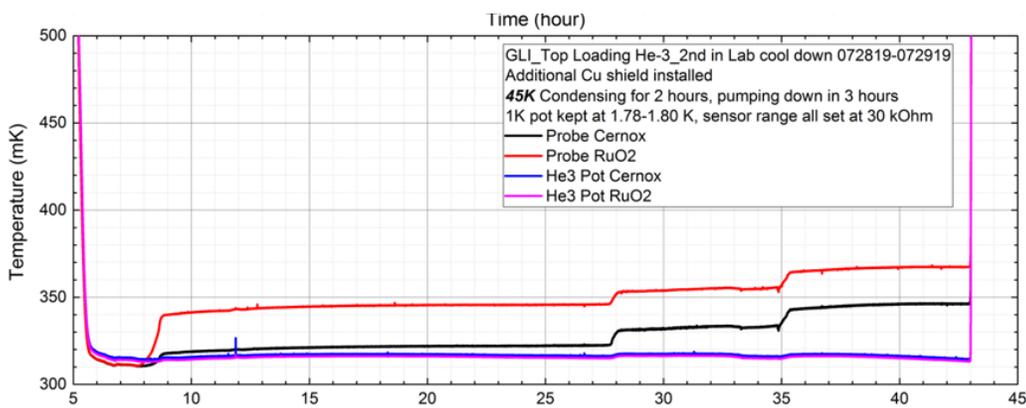
Base Temperature	320 mK
Hold Time at Base Temperature with 20 STP liter He-3 gas	25 hours
Operating Temperature Range	0.3 K - 80 K (300 K optional)
Sample Space	0.5" - 1.46"



Model HE-3-TLSL Helium-3 Cryostat with Gas Handling System



Top View of Model HE-3-TLSL Helium-3 Cryostat



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