



Service Note 1092-207

Helium-3 Gas Securing

Quantum Design has found in the Helium-3 option that a measurable amount of the ^3He gas permeates through the diaphragm pump even when the diaphragm pump is off when the option is idle. In order to save as much of the ^3He gas as possible before storing the option for considerable period, you must secure the ^3He gas into the tank.

Securing the Helium-3 Gas in the Tank

Before starting this procedure, verify that the system is in the normal operating configuration with the "TANK" valve open and the "FILL" valve closed.

To save the ^3He -gas into the tank, run the "Clean and Secure ^3He Gas" wizard. The software guides you through the following steps:

1. Cool the Helium-3 insert to about 10 K to allow the cold surfaces inside the insert to freeze out the non-helium contamination.
2. Pump the remaining ^3He gas into the reservoir tank and close the manual valve.
3. Warm up the system and place the Helium-3 insert into the Helium-3 cart.

In case if you don't want to clean the gas, you may run "Quick Secure He3 Gas" wizard. This simply performs the second step noted above without the need to thermally cycle the system.