

Safety

1. Read the supplied booklet 'Safety Matters' before using the system.
2. If in doubt about the system operation, refer to the system manual.
3. Use appropriate personal protective equipment to avoid hot / cold burns.
4. Venting the OVC – Only vent the OVC when the system is at room temperature. Only vent with dry nitrogen.
5. This guide assumes an ITC503 is being used. If using an alternative controller, see the manual for control information.

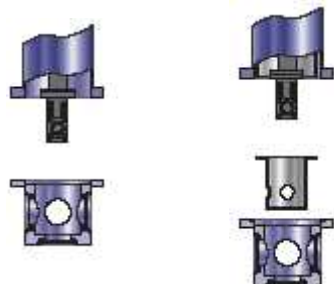
1 Getting Started

- a) Check that all system interconnections are made correctly.
- b) Check that the compressor gauges readings show the expected values.
- c) Switch on the temperature controller and check that it displays room temperature.

2 Open the Cryostat and mount the sample

- a) Remove the optical tail (all systems) and radiation shield (not applicable to AC-V01).
- b) Mount sample on to the sample mount.
- c) Wire the sample to the sample block pins, if applicable.
- d) Re-assemble the shields ensuring that the O-ring is correctly positioned.
- e) Connect high vacuum pump to cryostat vacuum valve.
- f) Evacuate OVC to below 2×10^{-4} mbar.

NB If you operate above room temperature you must pump the cryostat OVC continuously.



AC-V01

AC-V04



AC-V12 & 14

3 Cooling the System to Base Temperature

- a) Start the compressor water supply (if applicable)
- b) Switch on the compressor
- c) Monitor the sample temperature using the ITC503 during cooldown to base temperature.
- d) Complete entry to System Log.

4 Controlling at the required temperature

It is not essential to cool the system to base temperature first.

- a) Set desired temperature by holding **SET** and pressing **RAISE** and **LOWER** to desired temperature.
- b) Check PID values are correct.
- c) Press **AUTO** once on the heater control.

5 Warming Up

Switch off the compressor. Either:

- a) Leave it to warm naturally or
- b) Set temperature to 300 K or
- c) Allow a small quantity of dry nitrogen gas into the OVC.

OptistatAC-V Quick Start Guide

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INSTRUMENTS**

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