

## 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.
4. This guide assumes a Mercury iTC is being used. If using an alternative controller, refer to the manual for control information.
5. Only vent the OVC when the system is at room temperature and only use dry gas (e.g. nitrogen).

## Preparing the system

- a) Check you have available all the necessary components you may need for your experiment.
- b) Connect a high-vacuum pump to the cryostat vacuum valve (2).
- c) Evacuate the OVC to below  $10^{-4}$  mbar.
- d) Check that the transfer siphon has been evacuated.
- e) Connect all the components of your system.



## Cooling the system

- a) Fully close the needle valve on the transfer siphon, then open four turns.
- b) Open the valve on the VCU (by turning anti-clockwise).
- c) Slowly lower the dewar leg of the siphon into the Helium dewar.
- d) Push the other end into the entry arm of the cryostat (1). Engage the nut on the siphon with the thread on the cryostat and tighten.
- e) Switch on the GF4 pump. The cryostat should now cool steadily.

## Controlling at set temperature

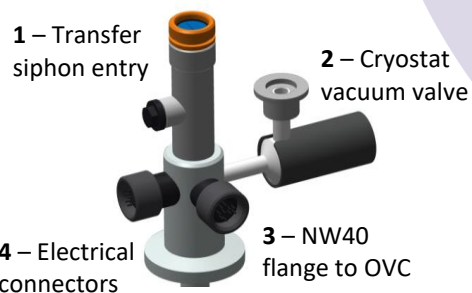
- a) Set the desired temperature by tapping **Control** and changing the set point to the desired temperature.
- b) Select **Auto** in the heater control configuration.
- c) For optimum performance, use the flow and PID values in the test results.

## Changing samples

- a) Warm the cryostat to room temperature.
- b) Remove the NW40 clamp (3) and remove the cold unit.
- c) After changing samples, re-assemble the system and evacuate the OVC.
- d) Repeat the cooldown process as detailed above.

## Warming up

- a) Switch off the pump and wait for the pressure in the helium circuit to rise to approximately the storage dewar pressure.
- b) Remove the transfer siphon from the cryostat.
- c) Immediately fit the Bunsen relief valve to the cryostat.
- d) Setting the **Control** temperature to 300K and venting the OVC with a small volume of nitrogen gas will accelerate the warm up.



For technical support, spares and accessories, contact your local regional support team. See the product manual for full details.