

# How to use the CD8 as a shared freeze dryer

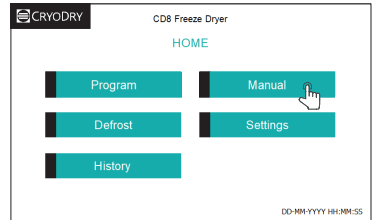
The CryoDry CD8 is designed to be used in a fully automatic mode however there may be times that users wish to use the system in manual mode, such as when multiple users want to use the system at different times. Please note, if you are working in Manual Mode your samples have to be pre-frozen before placing them in the unit.



WATCH THE VIDEO

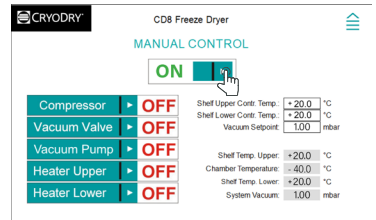
1

From the home screen select Manual.



2

In the Manual Control screen you can see there are options to control the **Compressor**, **Vacuum Valve**, **Vacuum Pump** and the **Shelf Upper** and **Shelf Lower** Heaters.



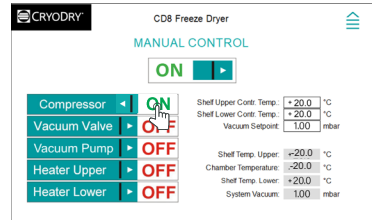
Set the shelf temperature to the required temperature in the **Temp Setpoint**.

Set the **Vacuum Setpoint**.

Select **Manual Control** to **ON**. Will turn green. Now the individual controls can be operated.

3

Turn **ON** the **Compressor** run the compressor until both shelves are less than **-40C**. The system is now ready to take samples.



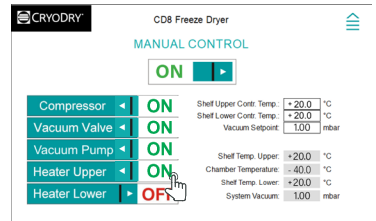
4

Samples can be placed in the unit, please ensure that they are **fully frozen**.



5

Toggle **Vacuum Valve** and **Vacuum Pump** to **ON**. This starts the vacuum pump and opens the valve between the pump and the chamber.



It is good practice not to be too aggressive with the shelf temperature setting especially at the start of the run. Shelf temperatures that are too high can cause the product to melt.

Shelf heaters are operated by selecting **Shelf Temperature** to **ON**.

## How to add further samples

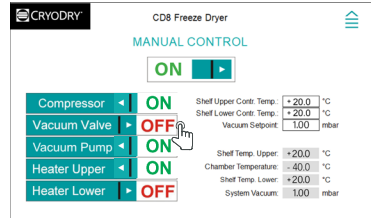
There are some important points when adding samples to an unit already running in Manual Mode.

- ✓ Product **MUST** be pre-frozen
- ✓ Ensure the shelves are at ambient temperature.
- ✓ Ensure that the following steps are carried out correctly
- ✓ Do not be too aggressive with shelf temperature settings.
- ✓ Ensure the shelves are at ambient temperature. Otherwise the product will re-hydrate from condensation

1

Go to the Manual control screen (system may be in screen saver mode, touching the screen will bring up Manual Control.

Toggle the **Vacuum Valve** to **OFF**.



2

**Open the drain valve** on the side of the unit to release the vacuum. Please note it is good practice not to suddenly open the valve wide open. Open it slowly and allow the pressure to equilibrate. As the pressure rises you can then slowly open the valve further, until it is fully open.



3

Once the pressure has reached ambient pressure you can **open the door and place your samples** inside the unit.



4

Before closing the door, **check the seals** and **wipe away any water, ice** that may have built up.



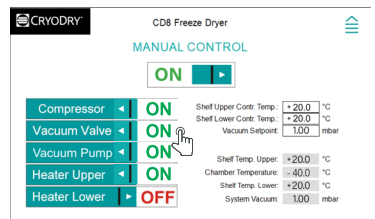
5

Close the door and then fully close the drain valve.



6

Toggle the **Vacuum Valve** from OFF to **ON**.



**Repeat this procedure to add or remove further samples**