1000 SERIES CRYOSTREAM
USING AN EXTERNAL DRY AIR/GAS SUPPLY

INTRODUCTION

This tech note describes how to disable the in the internal dry air supply and connect an external source to the Cryostream 1000 GSM, which the system can then regulate and set the flow.

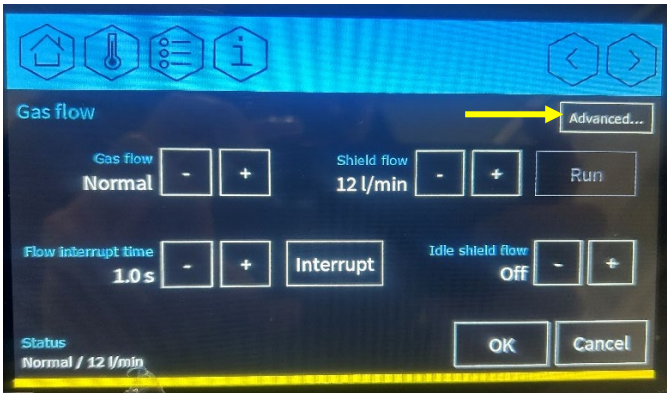
External dry air/gas requirements:

- A dew point of less than -60˚C
- Delivery pressure of 1 bar /14.5psi (Max. 4 bar /58 psi if connecting to the GSM, an internal regulator will reduce the supply to 1 bar)
- A minimum of 12 L/min gas flow

WARNING

The internal dry air supply needs to be turned off before connecting any external gas source. Failure to turn off the internal compressor while supplying an external source can result in critical damage to the CS1000.

1. Switch on the Cryostream GSM and navigate to the 'Gas Flow' page by pressing the settings button and scrolling through the pages. Once on the 'Gas Flow', press the 'Advanced' option and select the 'External dry air' option and press ok.



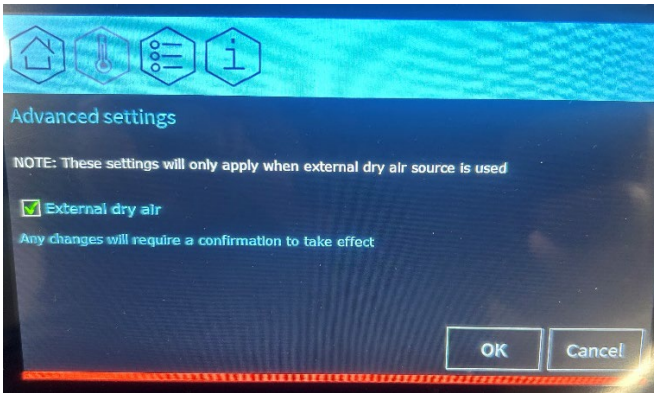


Figure 1 - Gas Flow settings page and advanced settings page

2. Selecting this option stops the internal dry air compressor from running at any time. Go back to the home page and double check that 'External Shield' is now displayed on the home page

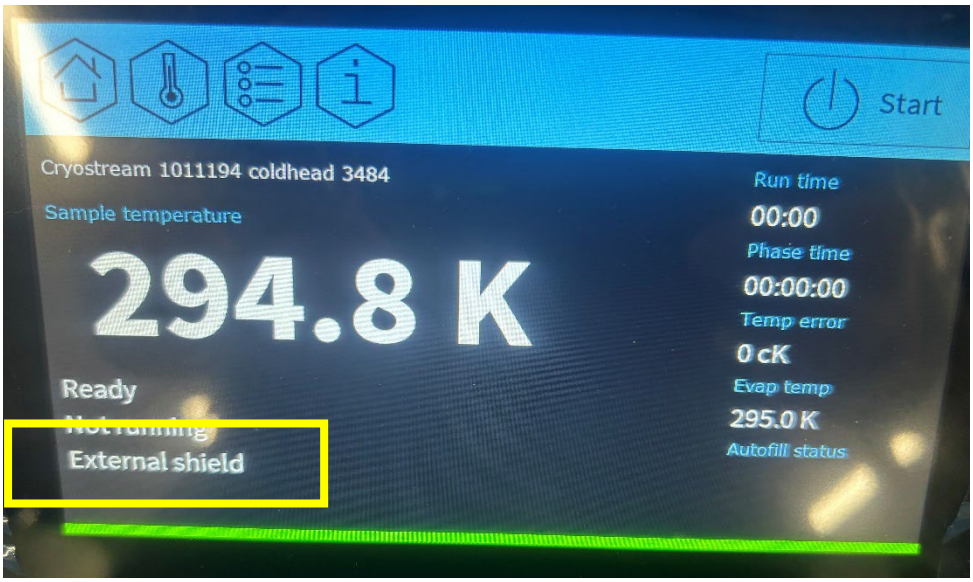


Figure 2 - 'External shield' notification

NOTE

It is recommended to check that this is displayed after any time the Cryostream is powered off and on again.

3. Connect your external dry air/gas source to the back of the Cryostream 1000 GSM using 6mm tubing.

Location of the 'AUX DRY AIR' port on the GSM to connect your own dry air source

Figure 3 - AUX dry air port

4. Ensure that your dry/gas supply is on and flowing to the GSM and use the 'Shield flow' option to set the desired flow rate. When cooling double check the shield flow reading rate matches what it is set to, this can be viewed in the bottom left of the screen under 'Status', or in the 'Gas flow' information screen.

5. By default the shield flow is only on when the Cryostream is cooling. If you wish to change this go back to the 'Gas Flow' settings page and select the 'Idle shield flow' option.

Figure 4 - Idle shield flow

Shield flow in the Cryostream is set to avoid ice buildup on the nozzle. To set the shield flow, go to settings and navigate to gas flow. Then select one of the following options using the up and down navigation keys:

- Off : Sets the shield flow to permanently off independently of the status of the Cryostream 1000
- On: Sets the shield flow permanently on independently of the status of the Cryostream 1000
- Auto : Shield flow and compressor are on when the Cryostream 1000 is running, and off when the Cryostream 1000 is in shutdown.