HC1b - Humidity Controller for MX data collection experiments*


HC1b

Directly compatible with most of exiting synchrotron beamlines, the HC1b produces an air stream of controlled Relative Humidity (RH) at ambient temperature. It allows for data collection at room temperature and for optimization of crystal diffraction.

Highlights:

♦ **Minimum impact on beamline setup: Air dispensing nozzle similar in size to standards cryo-cooling heads used at beamlines.**

♦ **Installation in a few minutes**

♦ **Communication with beamline control software to run automatically dehydration protocols**

♦ **Java core application with user's editable Python scripts for dehydration protocols**

♦ **Drop display and automated drop size tracking for determination of initial RH conditions**

♦ **Plotting and recording over time of RH, Sample temperature**

♦ **Fast RH settling time**

Air dispensing head

GUI
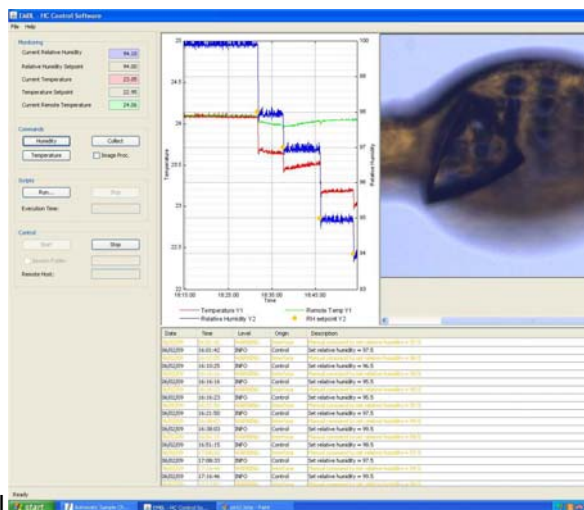
Main specifications*

Dimenstions
- 450 (width) x 600 (depth) x 1000 (height)

Supply
- Main: 220V50Hz power supply
- Ai:r 6 bars compressed air (Oil free, Filtered<10μm)

RS232 connection
Control:
- Relative humidity (RH)
- Condenser temperature Monitoring and output air flow close to sample position

Ethernet connection
- Machine status
- Temperature of the saturated air generator

Water tank
- 5L tank for distilled water

Control panel
- System status (LEDs)
- RH controlled Air stream flow
- Protection air stream flow

Nozzle
- 26mm OD nozzle to be mounted on a cryo support
- 1.5m tube to the HC1b unit

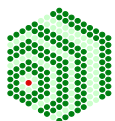**Output RH controlled air stream** *(preliminary)*
- Flow 3-6 l/min
- Relative humidity range 50-99.9% RH
- Precision about +/- 1% RH
- Stability about +/- 0.2% RH RMS