

**TECHNICAL NOTE**

**Fixed 5% CO2 Control for HA Workstations**

**Introduction**

One of the options available to specify when ordering a Whitley HA Workstation is CO2 feedback. This means that the CO2 level within the workstation is monitored by a CO2 sensor and controlled by the PLC software to an accuracy within +/- 0.4% within the range 0 - 15%. However, this level of accuracy is not always required by some customers so an alternative option is available where a fixed level of approximately 5% CO2 is maintained in the workstation.

**Summary**

When a workstation is ordered without CO2 feedback the CO2 is metered into the workstation as a percentage of the Nitrogen flow. This means that the level of CO2 within the workstation will vary depending on the level of oxygen present. When reducing the oxygen level (i.e. nitrogen flowing) the CO2 will tend to remain close to the 5% level, however, when increasing the oxygen level (i.e. nitrogen not flowing) the level of CO2 within the workstation will be reduced slightly but over time will gradually move closer to 5%

Typical accuracy values for CO2 will be between 3% and 6% (when the oxygen level is less than 10%). This tolerance could increase when the oxygen level is greater than 10%.