

**Hidden Isochema XCS Series**

Climate Control Systems



[www.hiddenisochema.com](http://www.hiddenisochema.com)

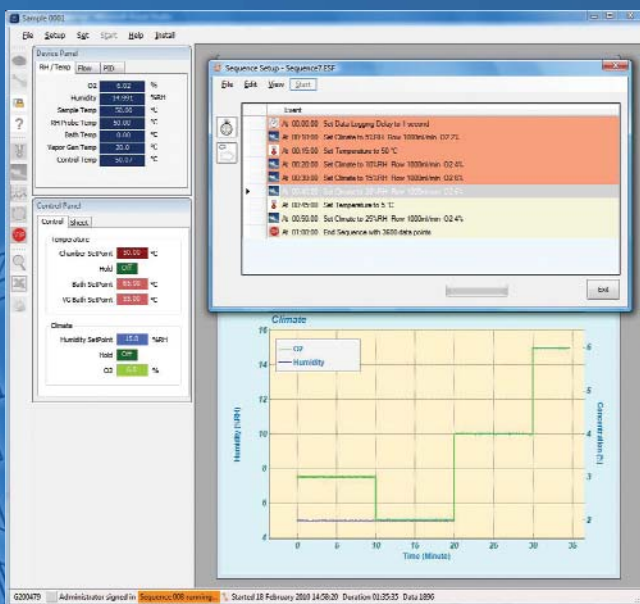
# XCS Overview

The Hiden Isochema XCS system provides users with a unique controlled climate for a range of academic and scientific applications.

The compact system allows automated management of:

- Atmospheric composition
- Relative humidity
- Gas flow rate
- Temperature
- Pressure

The XCS also offers the possibility to make controlled in-situ environmental changes to samples undergoing measurements using any hyphenated apparatus.



Intelligent control software performs real-time analysis of environmental conditions, maintaining the composition defined by the user, or following pre-programmed sequences for fully automated control.

A number of custom attachments are available for the XCS, which permit sample manipulation while maintaining atmospheric control and uninterrupted measurement.

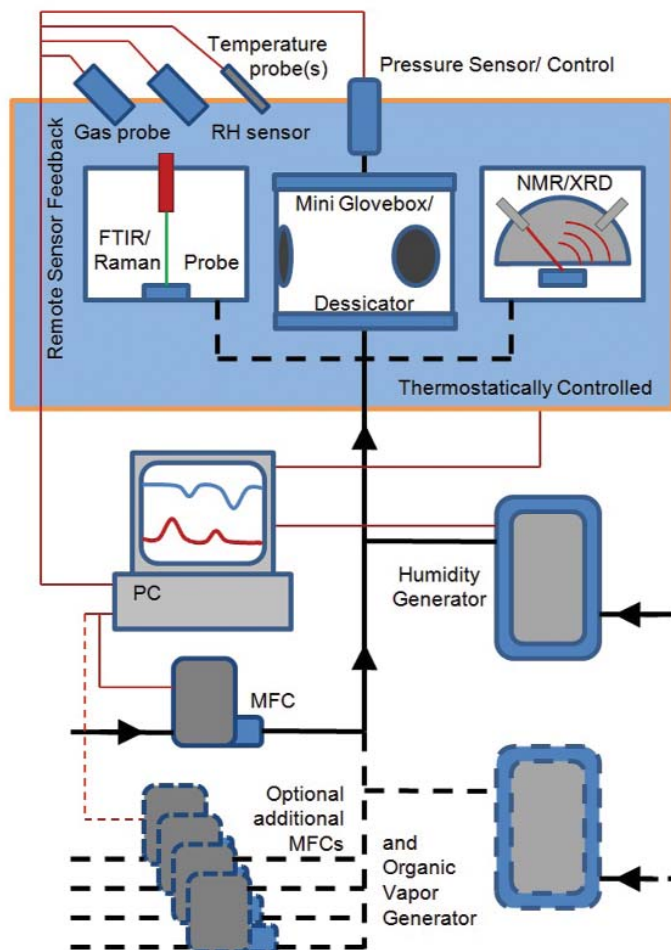
The XCS system can be coupled with existing systems or used independently to provide ultimate control of environmental conditions. Hiden Isochema are also able to tailor the XCS to many individual applications.

An optional integrated mass-spectrometer extends the range of experimental capabilities of the XCS, allowing the continuous measurement of atmospheric changes and evolved gas analysis.

## Versatility

The XCS is designed to be customised to suit your needs. Swagelok™ fittings allow the XCS to complement existing equipment and techniques, such as:

- X-ray and other diffractometers
- NMR spectroscopy systems
- IR/Raman probes
- Electron microscopes
- Biological analysis systems
- Optical and other spectrometers
- Packaging analysis apparatus
- Dilatometry
- Resistivity measurements



The XCS includes remote sensors in the sample environment, permitting direct feedback of changing conditions and high-accuracy response, allowing control of options including:

- Temperature stability from  $\pm 0.1$  °C
- Humidity between 0 % & 100 %RH
- Gas flow rate, 3 ml/min to 2 l/min
- Pressure  $\pm 0.05$  % of range

The standard base unit may be fitted with various optional attachments such as loading ports, additional probes, manipulation tools, gloves and any custom requirements to ensure accessibility, control and functionality as required.

## Precision Control





# Technical Specifications

<b>Gas</b>	Flow Rate Flow Controller Type Measurement Accuracy Number of Streams	From 3 ml/min to 2 l/min Thermal $\pm 1$ % full scale 2 to 8
<b>Vapor</b>	Control Range Feedback Regulation Accuracy Measurement Method	0* - 100 % (* determined by gas supply) $\pm 0.1$ % RH for water Capacitance transmitter (water) Optional dynamic sampling mass spectrometer (other vapors)
<b>Temperature</b>	Regulation Accuracy Resolution Range Sensors  Number of Sensors	$\pm 0.1$ to $\pm 1$ °C from $\pm 0.01$ °C 5 to 50 °C Platinum resistance thermometer (PRT) or K-type thermocouple to suit. 2 to 8
<b>Pressure</b>	Control Sensors Typical Accuracy	Downstream flow regulation Strain gauge or capacitance manometer to suit $\pm 0.05$ % full scale

It is Hiden Isochema's policy to continually improve product performance and therefore specifications are subject to change.

# Hiden Isochema

## Advancing Sorption Analysis

Hiden Isochema Ltd.,  
231 Europa Boulevard, Warrington, WA5 7TN, UK  
Tel: +44 (0) 1925 244 678  
Fax: +44 (0) 1925 244 664  
Email: [info@hidenisochema.com](mailto:info@hidenisochema.com)  
Web: [www.hidenisochema.com](http://www.hidenisochema.com)

