

## UltraCarb 100 Lite Automatic Oxygen Probe Compensation System

### What is UltraCarb 100 Lite?

A fixed gas analyzer for the optimisation/oxygen probe 'calibration' of carburising, carbonitriding and neutral hardening atmospheres.

The three gas (CO, CO<sub>2</sub>, CH<sub>4</sub>) infrared analyser calculates the %R carbon potential and the 'Process Factor'/'CO Factor'. This factor is used to automatically update the carbon controller via a serial communications link.

The 'UltraCarb 100 Lite' is complete with a three stage filter sample line and operates with an existing oxygen probe based carbon control system to 'calibrate' the probe % carbon – the probe can be 'sooted' or 'failing' – the UltraCarb 100 Lite will compensate.

### Features

Three independent IR gas sensors for CO, CO<sub>2</sub> and CH<sub>4</sub>. The high accuracy sensors have low drift with fast response time.



LCD operator touch screen graphic interface which displays %CO, %CO<sub>2</sub>, %CH<sub>4</sub>, %R carbon and calculated 'Process Factor'/'CO Factor'.



Integral sample pump, coalescing filter and sample flowmeter



### What are the benefits?

- Accurate, affordable infrared atmosphere measurement
- Accurate calculation of atmosphere carbon potential
- Automatic oxygen probe compensation
- Verification of oxygen probe accuracy and performance
- Easy identification of furnace atmosphere problems and furnace condition
- Evaluation of endogas generator performance and catalyst condition
- Optimise nitrogen-methanol and 'in furnace' generated atmosphere

### How do I save money?

- Increase product quality and reduce 'rework'
- Work to lower part of case depth specification with confidence - shorter cycle times
- Increased production
- Payback time under one year

For more information

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## UltraCarb 100 Lite – How does it work?

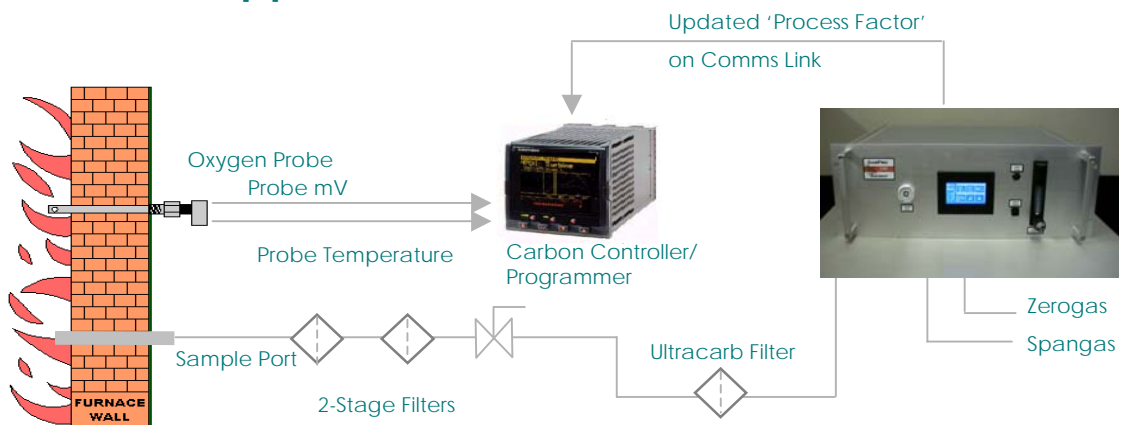
The UltraCarb 100 Lite uses values from three individual Infra-Red analysers (one for each gas) to **accurately** calculate the furnace atmosphere carbon potential.

UltraCarb 100 Lite then calculates the 'Process Factor'/' CO Factor' based on the %IR Carbon and sets this value, and sends it via a serial communications link, to the existing atmosphere controller.

**The result** - the atmosphere controller now reads the same as the calculated %IR carbon.

The oxygen probe may be sooted or even failing - **the UltraCarb 100 Lite will compensate!**

## Single Furnace Application:



## Specification

	CO <sub>2</sub>	CO	CH <sub>4</sub>
<b>Ranges:</b>	(0-2%)	(0-30%)	(0-10%)
<b>Resolution:</b>	(10ppm)	(0.02%)	(0-02%)
<b>Accuracy:</b>	2% of gas Range		
<b>Stability:</b>	< +/- 2% over 12 months		
<b>Repeatability:</b>	Zero +/- 0.3%, Span +/- 1.5%		
<b>Electrical:</b>	110/240 volts ac 50-60 Hz 150 watts		

UltraCarb 100 Lite is supplied in a 19" rack (4U) for fixed panel mounting and is complete with a powerful sample pump and sample flowmeter (0 – 1 L/min).

A three stage filter system is supplied for installation in the furnace sample line.

Calibration gas is required. Nitrogen for zero and certified calibration gas for span.

Manufactured **in the UK by Almor**