

UltraCarb 100 Lite

AUTOMATIC OXYGEN PROBE COMPENSATION SYSTEM

What is Ultracarb 1000?

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

The three gas (CO, CO₂, CH₄) infrared analyser calculates the %IR 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' complete with a three stage filter sample line, 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, CO₂ and CH₄. The high accuracy sensors have low drift with fast response time.



LCD operator touch screen graphic interface which displays %CO, %CO₂, %CH₄, %IR 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

Marathon Process Controls

UltraCarb 100 Lite – How does it work?

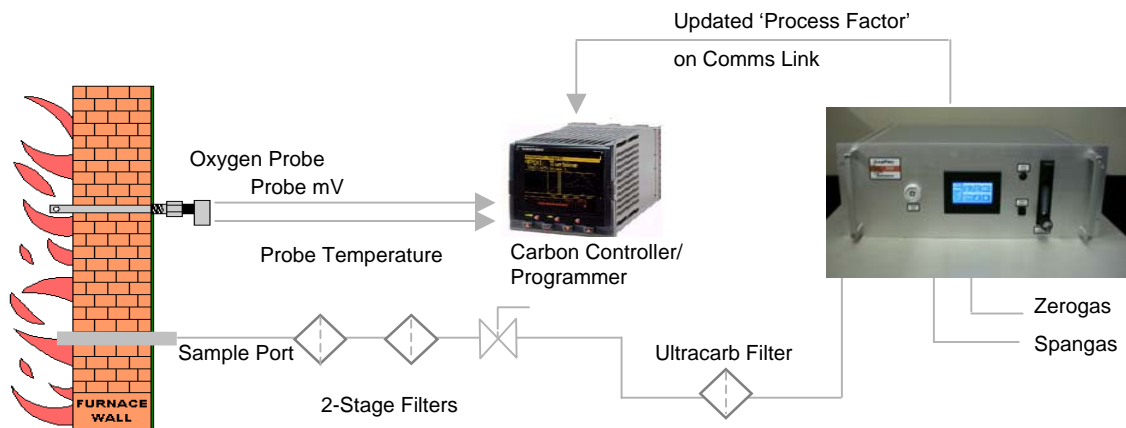
The UltraCarb 100 Lite uses values from three individual Infra-Red analysers (one for each gas) to **accurately** calculate the furnace atmosphere carbon potential.

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 ₂	CO	CH ₄
Ranges:	(0-2%)	(0-30%)	(0-10%)
Resolution:	(10ppm)	(0.02%)	(0-02%)
Accuracy:	2% of gas Range		
Stability:	< +/- 2% over 12 months		
Repeatability:	Zero +/- 0.3%, Span +/- 1.5%		
Electrical:	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.

Designed and manufactured by *Heat Treat Solutions*

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