

C230 CARBON DETERMINATION

The LECO C230 Carbon Determinator is a microprocessor based, software driven instrument for measurement of carbon and sulphur content in metals, ores, ceramics and other inorganic materials. The C230 uses an induction furnace and measures carbon by infrared absorption.

The infrared (IR) source consists of nichrome wire that is resistance-heated to 850°C. The IR source radiates visible energy as well as all wavelengths in the infrared spectrum. The description may use carbon dioxide; the same principle applies to sulfur detection.

Carbon dioxide absorbs IR energy at a precise wavelength within the IR spectrum. Energy from IR source is absorbed as the gas passes through the cell, preventing it from reaching the IR detector.

One IR cell is used both as a reference and for measurement. The total carbon, as carbon dioxide, is detected on a continuous and simultaneous basis.

The starting reference level, or baseline, for the detector is established by running oxygen through the cell to drive off residual atmospheric gases.



LECO C230 CARBON ANALYZER

Specifications

Range (at 1 gram)		Result Readability	
C230C	Carbon : 4 ppm to 3.5%	With PC : 15 digits of precision	
		Without PC : 0.1 ppm	
C230CLC	Carbon : 2 ppm to 0.5%	Calibration	
		With PC : Multi-Point Linear	
C230CHC	Carbon : 60 ppm to 6.0%	Without PC : Single-Point Linear	
<i>Note: Reducing sample weight may extend range.</i>		Analysis Time : 45 seconds (Nominal)	
Precision		Sample size : 1 gram (Nominal)	
C230C	Carbon : 2 ppm or 0.5% RSD*	Detection method : Sulphur State, Infrared Absorption, Sulphur as Sulphur Dioxide	
C230CLC	Carbon : 1 ppm or 0.5% RSD*	Chemical Reagents : Anhydrous Magnesium Perchlorate, Sodium Hydroxide on an inert base, Lecosorb, Platinized Silica, Cellulose	
C230CHC	Carbon : 30 ppm or 0.5% RSD*		

Specifications

Gas Required		Dimensions	
Carrier Gas :	Oxygen 99.5% pure, 40 psi	Determinator	
Pneumatic Gas :	Compressed Air, Nitrogen, or Argon, 40 psi (2.76 bars), Source must be oil & water free	Height : 30.50 inches (77.5 cm)	
		Width : 27.50 inches (70.0 cm)	
		Depth : 23.50 inches (59.7 cm)	
		Weight : 300 pounds	
Gas Flow (based on nominal analysis time)		Computer (PC based system)	
Measure :	3 litres per analysis	Height : 17.00 inches (43.2 cm)	
Pneumatic :	1 litre per analysis	Width : 8.00 inches (20.3 cm)	
Regulators		Depth : 17.00 inches (43.2 cm)	
Oxygen :	501-291 O ₂ Pressure Regulator	Weight : 29 pounds	
Compressed Air :	766-036 Compressed Air Regula	Monitor (PC based system)	
Inert Gas :	764-216 Inert Gas Regulator	Height : 15.00 inches (38.1 cm)	
Furnace :	Induction, 18 MHz, 2.2 kW	Width : 14.00 inches (35.6 cm)	
Data Transmit :	Included	Depth : 16.00 inches (40.6 cm)	
Data Storage		Weight : 35 pounds	
With PC :	Limited only by hard drive space	Electrical Power Requirements	
Without PC :	10 Samples Weight, 50 Answers, 5 Methods	Determinator : 230 V \checkmark , \pm 10%, 50/60 Hz, Single phase, 15 amps max	
Key Pad		Operating Current : 12 Amps	
With PC :	External	Stand-by Current : 4 Amps	
Without PC :	Internal Membrane / External Optional	Computer (PC based): 115/230 V, \pm 10%, 50/60 Hz, 5/3 amps max	
Display		Monitor (PC based): 90 264 V, 50/60 Hz, 1.6 amps max	
With PC :	15.00 inch SVGA Monitor	Balance : 120V, \pm 10%, 50/60 Hz, 0.5 amps max	
Without PC :	Liquid Crystal (16x26 character)		