atmosphere

PGA 3510

Precision measurement of protective heat treating atmospheres

Color Touch Screen

Portable Multi-Gas Analyzer

CO: Carbon Monoxide
Range: 0 - 100%
CO_2: Carbon Dioxide
Range: 0 - 2.0%
Optional Range: 0 - 20.0%
CH_4: Natural Gas/Methane
Range: 0 - 100%
$\%O_2$: Oxygen
Range: 0.1 - 25.0%
Optional H_2: Hydrogen
Range: 0 - 100%
Calculated % Carbon
Range: 0.01 - 2.00%
Suggested COF / PF factors
On-board Datalogger

Calculations
K_N
K_C
%C

- Accurate measurement of carbon based on gas composition
- **CQI-9** carbon potential verification device
- Easy to operate
- Built in sample pump
- Battery operated
- Easy to use onboard calibration
- Software utilities for printing charts
- Available with ammonia compatible design

Enhanced with Nitriding/FNC Calculations

- Carbon Activity (K_C)*
- Nitriding Potential (K_N)*

*Requires Optional H_2 Cell

Included Software for Data Management

- Language editor
- Datamanager for downloading
- Print charts and tabular data
- Setup furnace identifiers
- Add notes when capturing data
- Real time graphical display on PC
- Export utilities
- Backup data manager

Other Features

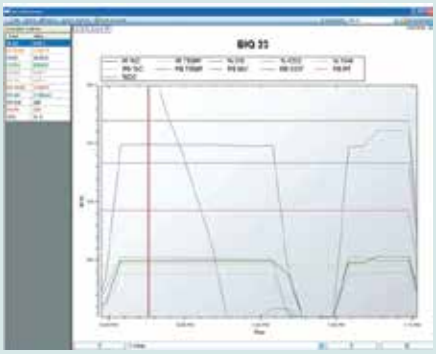
- Field calibration for zero and span
- Ethernet and USB connection to PC
- Universal power (110 - 230 VAC)
- Rechargeable battery

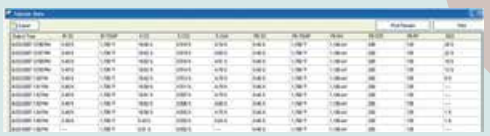
PN 20263
Coated sample tube
for non-catalytic reaction

INNOVATIVE SOLUTIONS WORLDWIDE

SuperSystems incorporated

PGA Utility Software





For configuration, equipment, language and data management with an easy interface

Why a Portable Multi-Gas IR Analyzer?

Endothermic Generator Diagnostics

- The effectiveness of the catalyst is measured by the CH_4 content. Less than 0.5% is an indication of properly functioning catalyst. Higher concentrations indicate the necessity for either conditioning or replacement
- Measuring the level of CO in the carrier gas allows correction of the %Carbon reading at the furnace

Heat Treat Furnaces - Conventional Endo Gas

- Furnace atmosphere carbon potential (%C) can be verified
- Measuring Carbon Monoxide (CO) allows adjustment of the COF/PF parameters to fine tune the %Carbon calculation in the furnace.
- Measuring Carbon Monoxide (CO) and Carbon Dioxide (CO_2) can show possible problems (i.e. sooting, water leaks, air leaks, and radiant tube leaks)
- Too much free methane (CH_4) could be an early indication of a furnace problem

Heat Treat Furnaces - Nitrogen/Methanol Endo Gas

- The Carbon Monoxide (CO) level in the furnace atmosphere indicates the effectiveness of the cracking of the methanol
- Furnace atmosphere carbon potential (%C) can be verified
- Measuring Carbon Monoxide (CO) allows adjustment of the COF/PF parameters to fine tune the %Carbon calculation in the furnace
- Measuring Carbon Monoxide (CO) and Carbon Dioxide (CO_2) can show possible problems (i.e. sooting, water leaks, air leaks, and radiant tube leaks)

Nitriding/FNC Applications

- Nitriding Potential (K_N) calculated using H_2 sensor
- Used to address single and multi-stage nitriding applications where precision measurement is required for controlling gas flows to get specific case and white layer requirements addressing AMS 2759/12 requirements
- Carbon activity (K_C) calculated for FNC applications using gas composition from CO or endothermic gas flows and H_2 present

SuperSystems incorporated

7205 Edington Drive
Cincinnati, OH 45249
513.772.0060 **phone**
513.772.9466 **fax**