



# PGA 3510

Precision measurement of protective heat treating atmospheres

800 x 480  
Color Touch Screen

## Portable 3-Gas NDIR Analyzer + Oxygen (%O<sub>2</sub>)

CO: Carbon Monoxide

Range: 0 - 100%

CO<sub>2</sub>: Carbon Dioxide

Range: 0 - 2.0%

Optional Range: 0 - 20.0%

CH<sub>4</sub>: Natural Gas/Methane

Range: 0 - 100%

%O<sub>2</sub>: Oxygen

Range: 0.1 - 25.0%

Optional H<sub>2</sub>: Hydrogen

Range: 0 - 100%

Calculated % Carbon

Range: 0.01 - 2.00%

Suggested COF / PF factors

On-board Datalogger

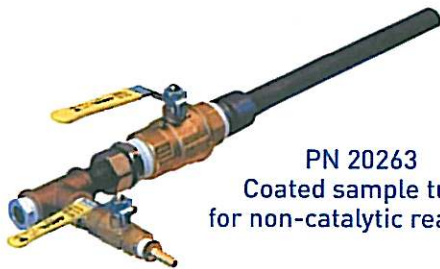
Carbon Calculation			
Furnace Temperature	1500 °F	Probe Temperature	1500 °F
Measured CO	25.21 %	Probe Efficiency	100.00 %
Measured CO <sub>2</sub>	0.274 %	Probe CO Factor	100.00 %
Measured CH <sub>4</sub>	0.05 %	Supplement CO Factor	0
H <sub>2</sub> (ppm analyzer)	0.47 %	Supplement CO Factor	0
Control Mode	Manual		
Data Source	Manual		
Output Concentration	2.25 %		

- 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

Included Software for Data Management

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

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



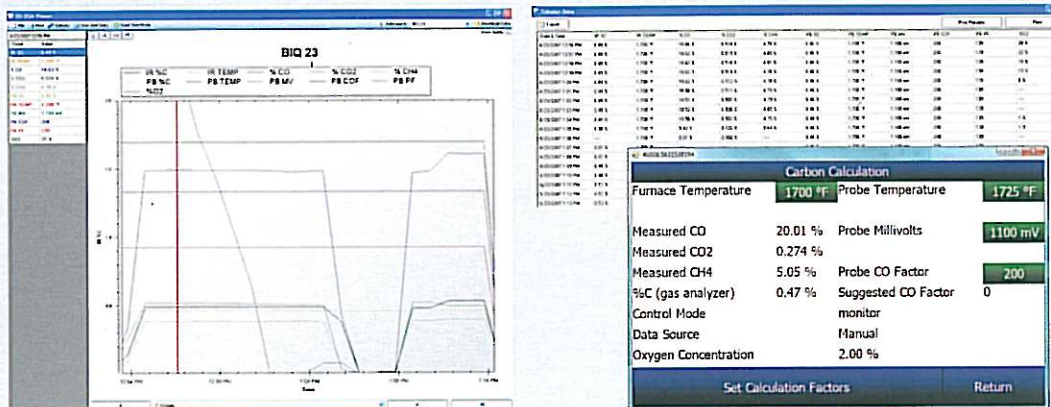
PN 20263  
Coated sample tube  
for non-catalytic reaction

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Super Systems  
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# PGA Utility Software



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

## Why a Portable 3-Gas IR Analyzer?

### Endothermic Generator Diagnostics

- The effectiveness of the catalyst is measured by the CH<sub>4</sub> 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<sub>2</sub>) can show possible problems (i.e. sooting, water leaks, air leaks, and radiant tube leaks)
- Too much free methane (CH<sub>4</sub>) 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<sub>2</sub>) can show possible problems (i.e. sooting, water leaks, air leaks, and radiant tube leaks)



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