ZoloSCAN is an innovative, laser-based combustion diagnostic system which simultaneously measures temperature, O₂, CO and H₂O in real-time, directly in an ethylene cracking furnace. Multiple laser paths are set in critical areas of the furnace. There are no probes to insert, no sensitive electronics near the furnace and no calibration required. Only small port openings and a clear line of sight across the furnace are required for each laser path. ZoloSCAN measurements allow for targeted burner row and zone control not possible with traditional single-point thermocouples and ZrO₂ sensors.

**Key Features**

- Multiple constituents
  - Simultaneously measures temperature, O₂, CO, and H₂O
- Multiple paths, multiple furnaces
  - Allows up to 24 measurement paths per ZoloSCAN system
- SensAlign Heads
  - Automatic alignment maintains reliable and accurate measurements
- Minimal maintenance

**Benefits**

- Extend run length
  - Eliminate local hot spots
  - Increase decoking intervals
- Lower emissions
  - Reduce NOₓ, CO and CO₂
- Fuel savings
  - Lower excess O₂
  - Optimize air/fuel ratio
- Safety/sentry
  - Real-time visibility into startup and shutdown
  - Alarms for high CO
- Increase productivity/output
  - Optimize heat flux profiles
  - Maximize furnace availability
  - Increase process yields

Multiple paths arranged around the furnace provide profiles for temperature, O₂, CO and H₂O that can be used to balance and optimize combustion.
Actionable Information
The ZoloSCAN interface provides real-time furnace balance information. For a typical system, a complete profile of the furnace is updated every few minutes. This data helps operators make informed decisions about air/fuel ratios or burner adjustments to improve the temperature and oxygen balance in the furnace. The real-time measurements can also be integrated directly into the control system in order to achieve the greater benefits with automated control.

Proven Value
Multiplexed TDLAS laser systems are the industry benchmark for reduced maintenance, reliability, and control of combustion optimization. Zolo systems have been successfully installed in over 100 industrial applications around the world and continue to provide long-term value.

Find out what ZoloSCAN can do for you.
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ZOLOSCAN BALANCEAPP INTERFACE
ZoloSCAN BalanceApp interface allows for clear visualization of combustion imbalances within the furnace. Burner row constituents are quantified and provided to operators and the DCS/PLC to reduce the uncertainty of traditional combustion tuning via local in-furnace data.