

ZoloSCAN2 for Ethylene Cracking Furnaces



Burn Cleaner. Fire Consistently. Run Longer.

Precision Combustion for the Most Demanding Fireboxes

In ethylene production, your cracking furnace is the heartbeat of the process.

With feedstocks ranging from ethane and LPG to naphtha, and temperatures above 800°C, managing coke buildup, inefficient combustion, and uneven tube temperatures can quickly erode performance.

ZoloSCAN2 solves the visibility problem. Installed directly into the radiant and convection sections, it delivers real-time, in-situ laser measurements of O₂, CO, H₂O, and temperature.

With data streaming across up to 14 independent zones, you gain the insight to fine-tune air-fuel ratio, flatten temperature profiles, and reduce stress on tubes and operators alike.

No sample lines. No lag. Just live, actionable data.

Performance That Speaks for Itself

At high-capacity ethylene crackers, ZoloSCAN2 has delivered:

- 25% to 100% longer furnace runs between decokes
- 10–20% NO_x reduction through tighter O₂ control
- ROI in under 12 months
- +7% feed rate increases on LPG without raising TMT
- 1–5 more uptime days per year

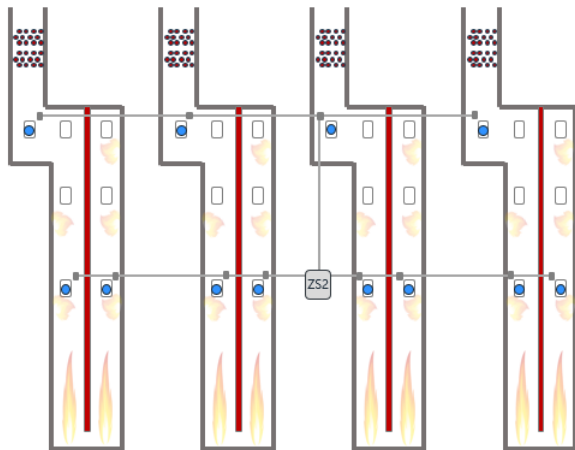
ZoloSCAN2 vs. Conventional Technologies

Capability	ZoloSCAN2	Traditional Analyzers	Thermal Cameras
Measurement Zone	In-furnace, multi-zone	Convection Section	In-Furnace tubes
Gases Measured	O ₂ , CO, H ₂ O, Temperature	O ₂ or Combustibles	Skin Temperatures
Process Insight	Combustion Uniformity	Exit Gas Conditions	Hot Spots
Maintenance Needs	Minimal	Moderate	Moderate

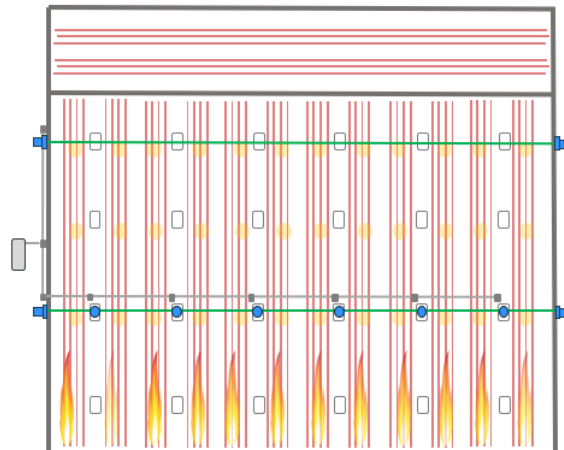
ZoloSCAN2 delivers what others estimate: zone-by-zone combustion clarity across the entire firebox.



Monitor Multiple Heaters



High Resolution Zone Monitoring



Case in Focus: From Constraint to Confidence

A major refinery struggled with frequent decoking, rising emissions, and limited headroom for increasing feed on their cracking units.

After deploying **ZoloSCAN2**:

- Furnace imbalance was identified and corrected in real time
- NOx dropped without sacrificing capacity
- Feed rate increased under tighter thermal control
- ROI was realized in less than 12 months

What changed was the ability to act on these combustion processes real time.

Why It Matters

ZoloSCAN2 is engineered specifically for the extreme environment of ethylene cracking:

- TDLAS laser sensors that operate through heat, vibration, and long path lengths.
- Measurements in the radiant and convection sections and multiple cracking units.
- Self-aligning optical heads for reliable long-term use
- Ease of installation via sight port retrofit kits.
- Seamless DCS/PLC integration via OPC UA, DA, or Modbus.

From light-off to full load, **ZoloSCAN2** gives you unmatched combustion visibility and control.

Let's Talk Combustion Intelligence.

Gain control, boost efficiency, and avoid surprises. Let's talk about how ZoloSCAN2 gives you unmatched combustion visibility and control.

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