



ClearSign Core™ Process Burner

Historically, complying with continually changing regulations has often required the installation of a costly Selective Catalytic Reduction (SCR) system to achieve ultra-low NO_x levels. ClearSign Technologies offers a better solution. Our ClearSign Core Process Burners allow operators to typically achieve 5ppm NO_x levels with a simple and cost-effective direct burner replacement project. Independent cost analysis indicates the ClearSign Core solution cost is 10% or less than that of a retrofit SCR addition, without significant operating expenses.

Developed over years of laboratory testing and field installation, and with the new addition of an industry standard continuous pilot, the ClearSign Core Process Burners operate like a traditional burner. They also have an extremely compact flame, essentially eliminating flame impingement or coalescing issues associated with conventional burners.

Benefits:

- NO_x Capability = 5ppm
- Compact Flames
- Increased Radiant Duty
- Direct Burner Replacement
- Reduced Tip Plugging
- Standard Continuous Pilot

Attributes	ClearSign Core	SCR
NO _x Capability	<5ppm	<5ppm
Capital Cost	Low	High
Operating Costs	Low	High
Installation Period	<1 week	> 6 weeks
Plot Space Requirement	None	Significant
Catalyst & Chemicals	None	Significant

CLEARSIGN CORE™



Burner Performance

NOx Capability	sub 5ppm
Typical Turndown	>4:1
Fuel	Natural Gas, RFG up to 80% H2
Heat Release	Up to 20 MM BTU/hr (Natural Draft Operation)

In many ways, the ClearSign Core Process Burner represents the best of both worlds – SCR level emissions with the simplicity of a direct burner replacement. ClearSign Core Process Burners are provided with the support and manufacturing of our exclusive global burner OEM partner and are available today with the following supply options:

- CFD modeling
- Full scale single and multiple burner performance testing
- Technical installation support and operator training

To learn more about our products or to request a proposal, please contact ClearSign Technologies at 206-673-4848 or sales@clearsign.com.