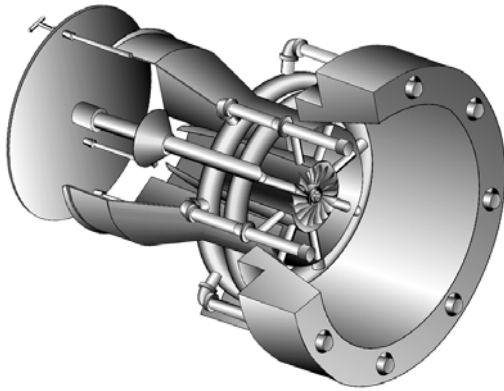


THE DELTA-NOx ULN BURNER

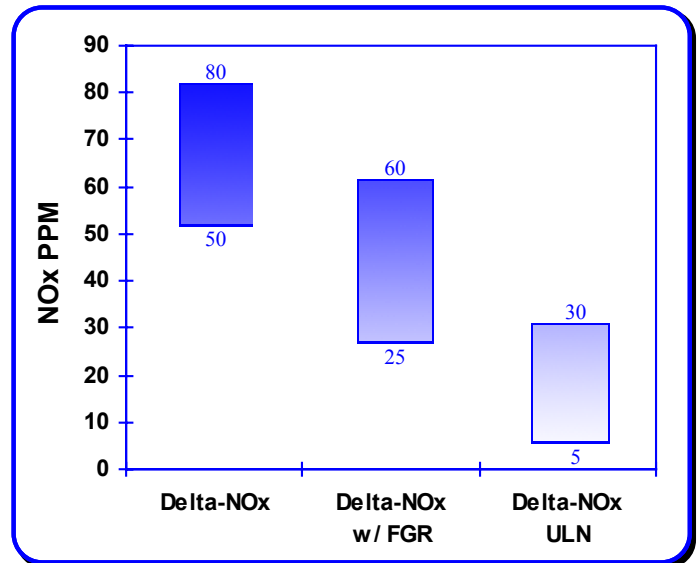


THE NEW ULTRA LOW NOx SOLUTION

Innovative Ultra Low NOx Technology

Coen's well-known Delta-NOx burner, the industry's Low NOx burner of choice, exceeded 150 installations worldwide in just over four years. The Delta-NOx, designed for 50-80 ppm without FGR, can easily meet 25-30 ppm NOx with minimum FGR. And now, with new Ultra Low NOx (ULN) technology, the Delta-NOx can achieve 5-9 ppm. The Delta-NOx can now be tailored to meet any customer's NOx requirements.

Unlike other ultra low NOx techniques, the new Delta-NOx ULN's simple, yet innovative technology provides a low cost solution to meet any NOx requirement. By varying the air fuel ratio at strategic locations in the burner, the Delta-NOx ULN provides exceptional stability, even with large amounts of FGR. Maximum thermal and prompt NOx reductions are possible for the first time with a diffusion flame burner. Standard burner management and controls further simplify the design to help lower costs.



Benefits of Delta-NOx ULN

- Ultra Low NOx performance
- Extremely stable combustion
- Refinery gas compatible
- Ideal for single or multi-burner applications
- Safe operation with simple controls
- High burner turndown
- Low NOx capability with oil firing
- Improved air distribution promotes low CO
- Simple rugged design with no moving parts
- Existing Delta-NOx units easily modified to ULN

Initial Testing

The Delta-NOx ULN performed exceptionally well in preliminary testing conducted at the Coen Research and Development Facility. It achieved as low as 3 ppm NOx with the use of 30% FGR. In testing, the Delta-NOx ULN produced virtually no CO emissions at all burner loads.

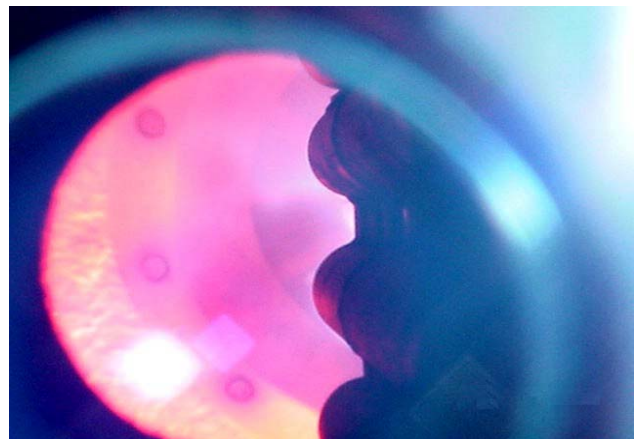
Delta-NOx ULN Meets Project Goals

Coen successfully applied the ULN technology to an existing Delta-NOx installation at a Calpine facility in Pryor, Oklahoma. Calpine retrofitted their existing Delta-NOx 42 burner with the ULN technology on a refractory lined 170,000 lb/hr A-Type packaged boiler firing natural gas with flue gas recirculation. The boiler started up in a short time with NOx emissions below 7.5 ppm.

“The burner certainly is exciting to work with, especially when we noted the burner’s excellent flame stability when rapidly changing loads. This is something I haven’t seen before in other low NOx burners” commented William Stan Kee, Technical Advisor, Calpine Power Plant Technology



Delta-NOx ULN Installation at Calpine



Furnace Rearwall View of ULN Flame

Customer Needs	Operations	Air Quality
<ul style="list-style-type: none">✓ Easy to Install✓ Quick Start Ups✓ Lower Cost✓ Fast Delivery✓ Trouble Free Design	<ul style="list-style-type: none">✓ Simple Controls✓ Excellent Turndown✓ Fast Ramp Up Rates✓ 10:1 Turndown✓ No Moving Parts	<ul style="list-style-type: none">✓ Meets BACT✓ Ultra Low NOx✓ Low CO✓ Low Emissions Over Turndown Range

With Ultra Low NOx performance, lower energy consumption, higher turndown, and a simpler design than conventional burners, Coen’s new Delta-NOx ULN burner is ready to challenge all competitors in setting the new standard for low emissions.

For more information, talk to your Coen Representative about designing a dependable, integrated system to your company’s specifications using the new Delta-NOx ULN or any of Coen’s other outstanding products.



COEN COMPANY, INC.
1510 Tanforan Avenue, Woodland, CA 95776
(530) 668-2100 FAX: (530) 668-2171
www.coen.com