The North American Commitment

We continuously provide our customers with innovative solutions for all their combustion needs. Our creative energy and engineering expertise come together to provide the latest in combustion technology—supplying breakthrough new products and solutions that improve your facility’s performance—and your bottom line.

We provide our customers with full-service support. End-to-end, we ensure every customer is completely satisfied. From initial consultations through field installation and service, North American provides complete customer support throughout the entire process.

CUTTING EMISSIONS THROUGH CUTTING EDGE TECHNOLOGY
**Breakthrough technology for the ultimate in performance.**

**Ultra Low NO\textsubscript{x} without FGR**

The Magna-Flame LE uses a lean premix primary flame and dilute secondary combustion to achieve less than 18 ppm (corrected to 3% O\textsubscript{2}) NO\textsubscript{x} without FGR in many applications.

**Get Even Lower NO\textsubscript{x} with FGR**

When FGR is utilized with the Magna-Flame LE, the NO\textsubscript{x} emissions can be taken to even lower levels; below 8 ppm (corrected to 3% O\textsubscript{2}), 0.01 lb NO\textsubscript{x} per MMBtu.

(see Fig 1)

**Low NO\textsubscript{x} without sacrificing low CO and VOC’s**

In many low NO\textsubscript{x} burners, CO and VOC emissions increase as NO\textsubscript{x} emissions decrease. The Magna-Flame LE utilizes a lean premix reaction chamber that changes this relationship and minimizes NO\textsubscript{x}, CO, and VOCs simultaneously.

**Preheat efficiencies**

The LE’s lean premix technology also provides low NO\textsubscript{x} with preheated air. As the preheat temperature increases, the primary air / fuel ratio adjusts to maintain consistent NO\textsubscript{x} emissions.

**How it works**

The unique patented design of the Magna-Flame LE uses a method of lean premix combustion with a controlled reaction zone and dilute secondary combustion in the furnace to achieve ultra low burner NO\textsubscript{x}, CO, and VOC emissions.

**Get Even Lower NO\textsubscript{x} with FGR**

Secondary gas is injected into the furnace where it mixes with furnace gases and the products of combustion from the primary reaction zone. The secondary fuel flow provides near stoichiometric overall ratio for the burner. The entrained oxygen deficient furnace gases are vital to creating a minimal amount of NO\textsubscript{x} with the secondary jets.

**FIG 3 LE - CROSS SECTION**

**LE Features**

- < 20 ppm NO\textsubscript{x} without FGR
- < 8 ppm, 0.01 lb NO\textsubscript{x} per MMBtu with FGR
- Low CO and VOC emissions
- High intensity, compact flame
- Sizes from 10 to 250 million Btu/hr
- Turndown up to 10:1
- Available from windbox inserts through packaged systems
- Patented technology
- Robust design
- Rugged and reliable
- No moving parts