



CALLIDUS TECHNOLOGIES

CALLIDUS CUBL-CF™

Callidus Ultra Blue Low NOx Compact Flame Process Burner

Ideal for retrofits into existing tight refinery furnaces, the CUBL-CF Compact Flame Ultra Low-NOx Burner provides an economical solution that combines low emissions, shortened flame lengths, ease of installation and low maintenance.

Achieved through innovative design and rigorous testing, the CUBL-CF is a true “plug-and-play” burner, matching the existing footprint of older pre-lox NOx burners while providing a similar flame geometry.

The CUBL-CF employs a new innovative single gas lance design that includes a fuel gas orifice protected from the radiant box.

The result is reduced NOx emissions, increased fired duty of the furnace, and improved throughput in the refinery.

Reduced Flame Height

- Shorter flame geometry makes the CUBL-CF ideal for cabin style heaters and retrofits into tight furnaces

Less Furnace Draft Required

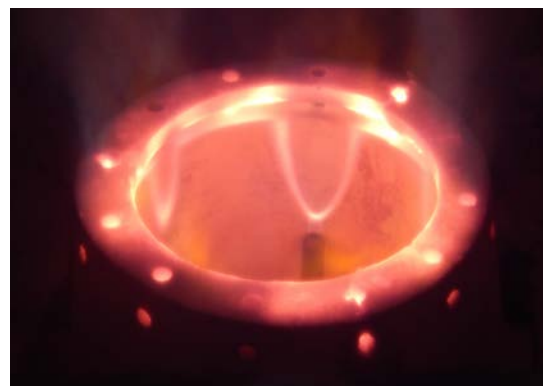
- CUBL-CF requires 60% less air-side draft than other burners, which is optimal for smaller, natural-draft heaters with less available draft

Easier to Maintain

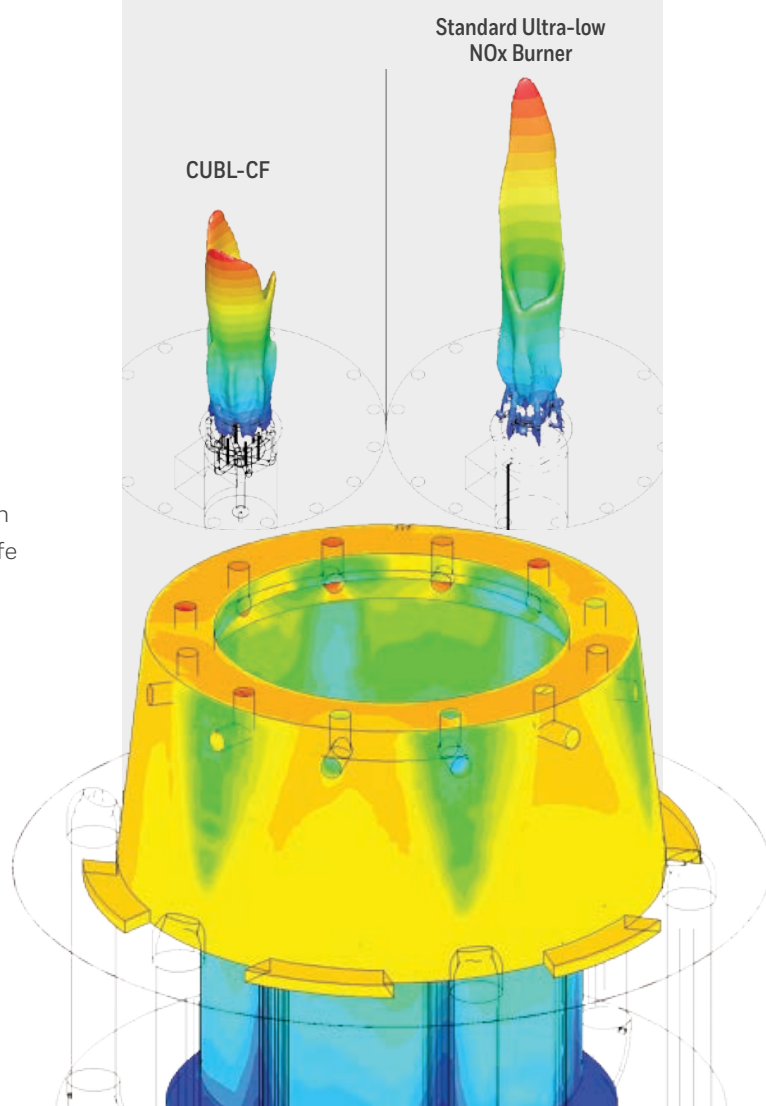
- The CUBL-CF design features a single large fuel gas orifice, which is located away from the heat of the furnace, resulting in longer life and less maintenance

Proven Low-NOx Emissions Technology

- Design is based on the industry leading CUBL Ultra-Low NOx Burner technology, used in Refining and Petrochemical applications globally



FLAME COMPARISON



CALLIDUS CUBL BURNERS

Advanced Burner Technology Preferred throughout the industry for Ultra-Low NOx needs.

Designed for ease of use and Ultra-Low NOx emissions, CUBL burners provide the flexibility to run from light off to max rate over an extreme range of fuels without operator intervention, combined with tight burner spacing and flame dimensions, this ultra low NOx user-friendly burner has set the standard for new heater and retrofit needs.

CUBL

With specific requests and developmental mandates from the industry's leading companies, the CUBL was designed to require no special operating needs, ability to fit into virtually any application, shorter flame lengths and is extremely stable. The result is a burner with improved NOx reduction and reduced maintenance.

CUBL-X NEXT-GEN BURNER

The CUBL-X burner uses a series of primary combustion air inductors designed to maximize the amount of air that is introduced into the primary combustion zone of the burner. This added technology provides outstanding performance for furnaces with low-draft operations, short radiant box heights, and tight burner-to-burner spacing or internal currents that prove to be a challenge for other burner technologies. This advanced technology gives the CUBL-X its ability to produce 40% more heat capacity compared to other burners that require larger heater floor cut-outs.

CUBL-DF DOWN FIRED BURNER

The CUBL-DF takes the proven CUBL technology one step further, incorporating the use of separate manifolds to fire PSA or off-gases. The results are incredibly low NOx levels. Additionally, the improved exit velocity from the CUBL-DF tile minimizes the flame leaning that can sometimes occur in a down fired reformer. We have supplied thousands of down-fired CUBL-DF burners for reformers in hydrogen, ammonia and methanol service.

CUBL-F FLAT FLAME BURNER

Designed for cracking and coking furnace applications, the CUBL-F flat flame process burner is suitable for firing up a wall, across the floor or free standing in the furnace. The CUBL-F provides superior mechanical safety and integrity, flame quality and does not require special operating needs while delivering optimized heat flux profiles and ultra-low NOx emissions.

CUBL-HC HIGH-CAPACITY BURNER

The CUBL-HC burner takes advantage of the CUBL technology and applies it in high capacity, forced draft situations. In these applications, large heat releases are required and there is additional need for shorter flames than traditional ultra-low NOx burners. Utilizing the high airside pressure drop available on most high heat release, forced draft projects, the CUBL-HC yields ultra-low NOx emissions and compact flames.

CUBL-CF COMPACT FLAME BURNER

Ideal for retrofits into existing tight refinery furnaces, the CUBL-CF Compact Flame Ultra Low-NOx Burner provides an economical solution that combines low emissions, shortened flame lengths, ease of installation and is low maintenance. The result is reduced NOx emissions, increased fired duty of the furnace, and improved throughput in the refinery.

For more information

For more information, please visit www.callidus.com to find a local sales representative

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