



Designed for Ease
of Use and Ultra-Low
NO_x Emissions

Advanced Burner Technology

Honeywell UOP Callidus CUBL Burner

Preferred throughout the industry for Ultra-Low NO_x needs.

With 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 NO_x 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 created with these distinct advantages:

No special operating needs

- The CUBL does not require start-up lances or special procedures
- Operations are no different than a conventional burner

Able to fit in virtually any application

- Natural draft or forced draft
- Flat flame or round flame
- 2 MM Btu/hr to 45 MM Btu/hr with higher levels possible
- Round flame tile has the smallest diameter of any comparable duty, ultra-low NO_x burner available, allowing for retrofits without floor modifications
- Fires — vertical (up or down) or horizontally
- Operates with a wide range of fuels
- Perfect for retrofit of older heaters originally designed for conventional raw gas and premix burners

Extremely Stable

- The CUBL is stable and can achieve 10 to 1 turndowns

Shorter Flame Lengths

- Typical flame length of 1.5 ft/MMBtu/hr (1.56 m/MW)

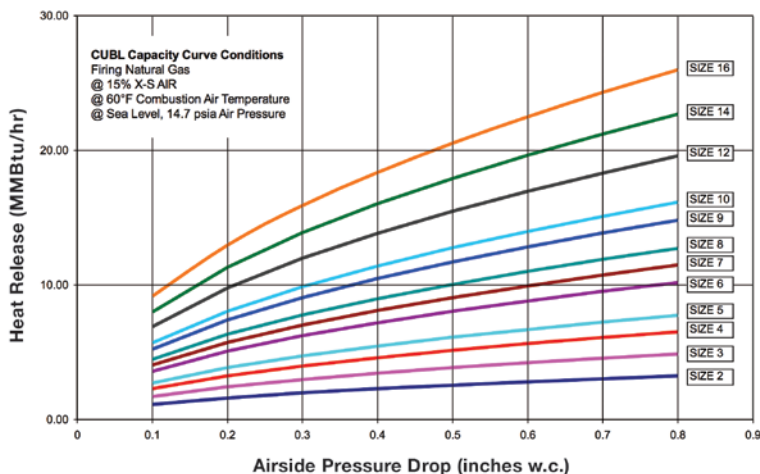
Better NO_x Reduction

- 10-20 ppmv are typical without any additional technologies (steam, external flue gas, recirculation, etc.)
- The CUBL is a highly staged, internal flue gas recirculation burner

Reduced Maintenance

- No metallic flame holders to burn up
- Primary tips are well away from the combustion and cooled by air stream
- Staged tips are shielded by refractory

CUBL Capacities Heat Release vs. Airside Pressure Drop



Ultra-low NO_x CUBL Burner

CUBLF (Flat)

Designed for cracking and coking furnace applications, the CUBLF is suitable for firing up a wall, across the floor or free standing in the furnace.

Mechanical safety and integrity

- Burner tiles use no metallic parts creating better thermal expansion while providing longer burner life

Control flame quality

- Reduced tile size results in thinner flames eliminating rollover
- All tip drillings are carefully engineered and tested to optimize heat flux profile

No special operating needs

- CUBLF does not require start-up lances or special procedures
- Ultra-low NO_x

CUBL-DF (Down Fired)

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 NO_x 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.

Key Features:

- Fuel source flexibility
- Low maintenance
- Outstanding combustion performance
- Ultra-low NO_x

CUBLX

Based on the proven CUBL technology, the CUBLX 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 CUBLX its ability to produce 40% more heat capacity compared to other burners that require larger heater floor cut-outs.

Key Features:

- More duty from a smaller burner Shorter, stiffer flames 1.25 ft/ MMBtu/hr (1.3 m/MW)
- Smaller burner circles or more burner to burner spacing
- Ultra-low NO_x

CUBL-HC (High-Capacity)

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 NO_x burners. Utilizing the high airside pressure drop available on most high heat release, forced draft projects, the CUBL-HC yields ultra-low NO_x emissions and compact flames

Key Features:

- Flame Lengths as short as 0.5 ft/MMBtu (0.52 m/MW)
- Compact design retrofits into the most challenging furnaces
- Suitable for high airside pressure drop applications
- Stable through a 10:1 turndown
Modular design is adjustable for retrofit projects using existing cut-outs and air delivery systems



Ultra-low NO_x CUBLX Burner



Honeywell UOP Callidus headquarters - Tulsa, Oklahoma. USA

Global Coverage

Honeywell UOP Callidus reaches the global market through our headquarters located in Tulsa, Oklahoma, USA, with regional direct sales offices and independent sales representation around the world. Meeting our customers' expectations and setting the standards for the combustion industry have always been our goals. Each burner, flare, thermal oxidizer and catalyst system we design and manufacture is built with those goals in mind.



Honeywell UOP Callidus' R&D and Test Center in China

Test Facility

Honeywell UOP Callidus' test facilities in the U.S. and China are used for combustion technology research and development, as well as for customer demonstrations. Our array of test systems allow us to closely match actual field operating conditions, providing results that will more accurately predict actual measured performance.



Honeywell UOP Callidus 82,000 sq. ft. manufacturing and fabrication facility in USA

In Addition to CUBL, Honeywell UOP Callidus Offers:

- Ultra-low NO_x burners
- Flares, flare systems and flare gas recovery systems
- Thermal oxidizer systems
- Field services and parts
- CFD Modeling
- Training and schools

ISO 9001:2008 Certification



USA Certification



China Certification

High-Performance Combustion Solutions
Service – Parts – Installation

Contact us—we're here to help.

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For more information

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