

# Your LSI engine emission control just got easier!

The BlueCAT™ system utilizes 3-Way Catalyst (TWC) technology to simultaneously control nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), and hydrocarbons (HC) from engine exhaust under stoichiometric operating conditions.

Exhaust gases pass through the catalyst, where a combination of precious metal formulations promotes three simultaneous reactions: reduction of NO<sub>x</sub> into nitrogen (N<sub>2</sub>), and oxidation of CO and HC into carbon dioxide (CO<sub>2</sub>) and water vapor (H<sub>2</sub>O).

For optimal performance, the system operates under a controlled air-to-fuel ratio, allowing the catalyst to efficiently perform both oxidation and reduction reactions at the same time. An integrated control strategy continuously monitors engine and exhaust conditions to maintain this balance and ensure consistent performance.

With optimized catalyst design and precise control of operating conditions, the BlueCAT™ system achieves up to 99% reduction in NO<sub>x</sub>, up to 98% reduction in CO, and up to 96% reduction in HC, resulting in corresponding reductions in volatile organic compounds (VOCs) and hazardous air pollutants (HAPs).\*

This technology provides a reliable and efficient solution for high-performance emissions control, supporting cleaner and more sustainable engine operation.

## BlueCAT™ 200 3-Way Catalyst



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Sold and supported globally, Nett Technologies Inc., develops and manufactures proprietary emission control solutions that use the latest in 3-way catalytic converters, diesel oxidation catalyst (DOC), diesel particulate filter (DPF), selective catalytic reduction (SCR), engine electronics, stationary engine silencers, and exhaust gas dilution technologies. Our reliable and real-world emission solutions will extend the usable life of existing equipment while allowing you to avoid costly future replacements. We manufacture emission control solutions that are ARB and EPA verified. As the emission control authority, we are here to help you navigate through the hassles and complexities of emission control compliance.

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## BlueCAT™ 200 PRODUCT OVERVIEW

### How does the BlueCAT™ 200 work?

The BlueCAT™ 200 system is designed for retrofit on propane-fueled Large Spark Ignition (LSI) engines, delivering high-efficiency emissions control in applications such as forklifts, aerial lifts, and ground support equipment under CARB LSI-2 Level 3A requirements.

The system combines a 3-way catalytic converter integrated into a muffler with a digital air-fuel (A/F) ratio controller, providing a compact, direct-fit solution that simplifies installation while maintaining or improving noise attenuation performance.

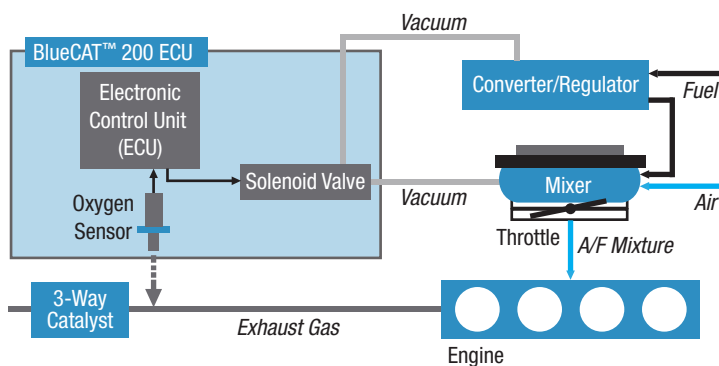
During operation, exhaust gases pass through the catalyst, where carbon monoxide (CO) and hydrocarbons (HC) are oxidized, and nitrogen oxides (NO<sub>x</sub>) are reduced into nitrogen (N<sub>2</sub>), carbon dioxide (CO<sub>2</sub>), and water vapor (H<sub>2</sub>O). To achieve these simultaneous reactions efficiently, the system maintains the engine at a precise stoichiometric air-to-fuel ratio.

This is accomplished through a closed-loop control system that includes a zirconium oxygen (O<sub>2</sub>) sensor, a fuel control solenoid, and an Electronic Control Unit (ECU). The O<sub>2</sub> sensor continuously monitors exhaust composition and sends feedback to the ECU, which adjusts the fuel system in real time to maintain optimal A/F ratio and maximize catalyst performance.

The ECU is housed in a rugged enclosure suitable for installation in the engine compartment or dashboard and includes integrated self-diagnostic features. Built-in indicators provide continuous monitoring of system operation, including power status, sensor activity, warm-up conditions, and A/F ratio modulation, while a dashboard warning signal alerts the operator to any malfunction, helping prevent excessive emissions.

With its closed-loop control strategy, integrated design, and proven catalyst technology, the BlueCAT™ 200 system provides a reliable, efficient, and easy-to-install solution for achieving high-performance emissions control in LSI engine applications

BlueCAT™ 200 System Schematics Drawing

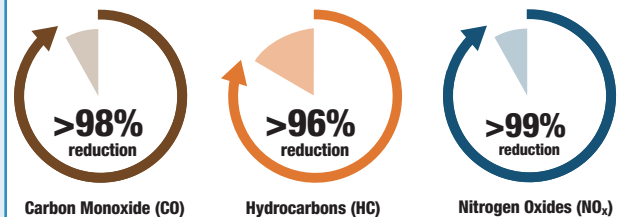


## PRODUCT FEATURES

- California Air Resource Board (CARB) verified system
- Ideal for LPG, CNG and gasoline engines.
- Includes an Air/Fuel Ratio controller that maximizes the emissions reduction
- Includes the On-Board diagnostic system that provides constant system monitoring
- Direct-Fit muffler replacement simplifies the installation and saves time
- Matches or surpasses the original muffler in sound attenuation and backpressure characteristics with the addition of superior emissions performance
- Made of heavy aluminized steel to increase the typical life expectancy of its original replacement

## EMISSIONS REDUCTION PERFORMANCE

### Typical BlueCAT™ 200 Emissions Reduction Performance



Carbon Monoxide (CO)

Hydrocarbons (HC)

Nitrogen Oxides (NO<sub>x</sub>)

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