

# Diesel Generator Emission Control Has Never Been Easier!

Diesel generators are a reliable and efficient power source; however, their emissions must be effectively controlled to meet increasingly stringent environmental and regulatory requirements. Particulate matter (PM) and nitrogen oxides (NO<sub>x</sub>) are major contributors to air pollution and pose significant environmental and health concerns.

The BlueMAX™ NOVA 300e is an advanced emissions control system integrating an active Diesel Particulate Filter (DPF), Diesel Oxidation Catalyst (DOC), and Selective Catalytic Reduction (SCR) system. It is designed to reduce both PM and NO<sub>x</sub> from medium- and heavy-duty diesel engines in stationary applications.

The DPF utilizes a wall-flow substrate with a proprietary catalyst applied to the internal surfaces, lowering the soot oxidation temperature and enabling passive regeneration during normal engine operation. When exhaust temperatures are insufficient, active regeneration is automatically initiated through controlled hydrocarbon (fuel) injection over the DOC catalyst. An Electronic Control Unit (ECU) continuously monitors temperature, pressure, and exhaust mass flow rate to predict and manage regeneration events.

Downstream, the SCR system reduces NO<sub>x</sub> through a chemical reaction with Diesel Exhaust Fluid (DEF). The SCR sub-system includes the SCR catalyst, DEF dosing unit, and DEF tank. A NO<sub>x</sub> sensor positioned upstream continuously measures NO<sub>x</sub> concentration, while inputs from engine mass air flow and temperature sensors are processed by the ECU to precisely control DEF injection. This closed-loop control strategy enables accurate dosing without engine recalibration, making the system suitable for both original equipment manufacturer (OEM) and retrofit applications. An integrated electric heater maintains optimal exhaust temperatures to ensure consistent NO<sub>x</sub> reduction under all operating conditions.

The BlueMAX™ NOVA 300e ECU continuously monitors all system sensors and components, providing real-time diagnostics and alerting the operator to system status and potential issues.

With optimized catalyst design, advanced washcoat formulation, and precise system control, the BlueMAX™ NOVA 300e delivers high-efficiency emissions reduction. The system is capable of achieving up to 99% reduction in nitrogen oxides (NO<sub>x</sub>), up to 98% reduction in particulate matter (PM), up to 97% reduction in carbon monoxide (CO), and up to 95% reduction in hydrocarbons (HC), resulting in corresponding reductions in volatile organic compounds (VOCs) and hazardous air pollutants (HAPs).\*

Verified by the California Air Resources Board (CARB), the system is designed to deliver reliable emissions control performance under real-world operating conditions, supporting cleaner and more sustainable diesel operation.

BlueMAX™

# NOVA 300e

## SCR, DOC + Active DPF system



scan and learn



Sold and supported globally, Nett Technologies Inc., develops and manufactures proprietary catalytic solutions that use the latest in diesel oxidation catalyst (DOC), diesel particulate filter (DPF), selective catalytic reduction (SCR), engine electronics, stationary engine silencer, exhaust system 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 California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) verified. As the emission control authority, we are here to help you navigate through the hassles and complexities of emission control compliance.

**NETT**  
TECHNOLOGIES INC.  
...the emission control authority.

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## BlueMAX™ NOVA 300e PRODUCT OVERVIEW

### How does the BlueMAX™ NOVA 300e Filter work?

Nett Technologies' BlueMAX™ NOVA 300e is an advanced emissions control system integrating an active Diesel Particulate Filter (DPF), Diesel Oxidation Catalyst (DOC), and Selective Catalytic Reduction (SCR) to reduce particulate matter (PM) and nitrogen oxides (NO<sub>x</sub>) from medium- and heavy-duty diesel engines in stationary applications.

The system is verified by the California Air Resources Board (CARB) for Tier 1, Tier 2, and Tier 3 engines rated at or above 75 hp (56 kW), as well as Tier 4i engines above 750 hp (560 kW), and Tier 4 Alt 20% NO<sub>x</sub> and PM configurations. Applicable engines must meet particulate matter limits of 0.2 grams per brake horsepower-hour (g/bhp-hr) or less, based on certification or in-use emissions testing using steady-state cycles consistent with ARB off-road regulations, including ISO 8178 D2.

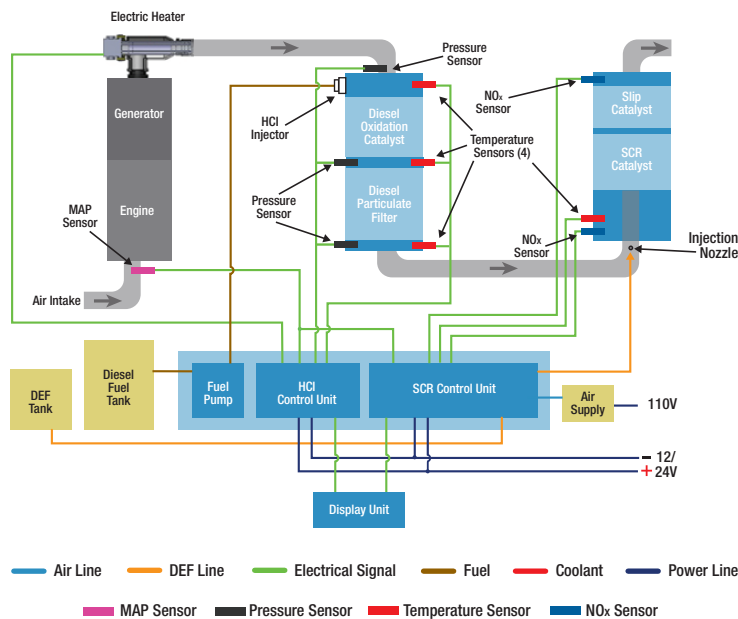
The wall-flow DPF captures particulate matter (PM) within a ceramic monolith consisting of parallel channels separated by porous walls. A proprietary catalyst coated on the internal surfaces lowers the soot oxidation temperature, enabling passive regeneration during normal operation at lower exhaust temperatures.

When exhaust temperatures are insufficient, active regeneration is automatically initiated. During this process, diesel fuel is injected upstream over the DOC catalyst in a controlled manner to increase exhaust temperature and safely oxidize accumulated soot.

Downstream, the SCR system reduces NO<sub>x</sub> through a chemical reaction with urea, commonly referred to as Diesel Exhaust Fluid (DEF). A NO<sub>x</sub> sensor continuously measures NO<sub>x</sub> concentration, while inputs from engine mass air flow and temperature sensors are processed by the Electronic Control Unit (ECU) to precisely control DEF dosing.

An integrated electric heater maintains optimal exhaust temperature, ensuring consistent NO<sub>x</sub> reduction performance under all operating conditions.

### BlueMAX™ NOVA 300e System Schematic Drawing

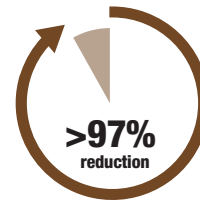


## PRODUCT FEATURES

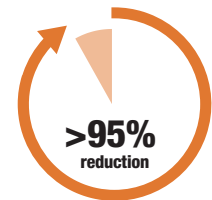
- Integrated DOC, active DPF (hydrocarbon injection), and SCR system
- Designed for stationary diesel engines in medium and heavy-duty applications
- Suitable for OEM and retrofit installations
- CARB verified (Level 3+, Mark 5)
- No engine recalibration required
- Advanced ECU with real-time monitoring and diagnostics
- Automatic active regeneration system
- Integrated electric heater for optimized temperature control
- Data logging capabilities with customizable alarms
- Maintenance intervals up to 6000 hours
- Durable, insulated design with quiet operation
- Colour display for system status and performance monitoring

## EMISSIONS REDUCTION PERFORMANCE

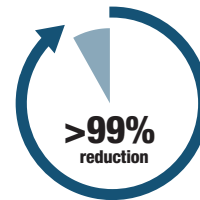
### Typical BlueMAX™ NOVA 300e Emissions Reduction Performance



Carbon Monoxide (CO)



Hydrocarbons (HC)



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



Particulate Matter (PM)

\*\*Actual emission reduction may vary with engine, load, and operating conditions. Properly engineered catalyst systems are capable of achieving higher conversion efficiencies than CARB verification values when optimized for a specific application.



...the emission control authority.

Contact Nett Technologies Inc. today at:

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