

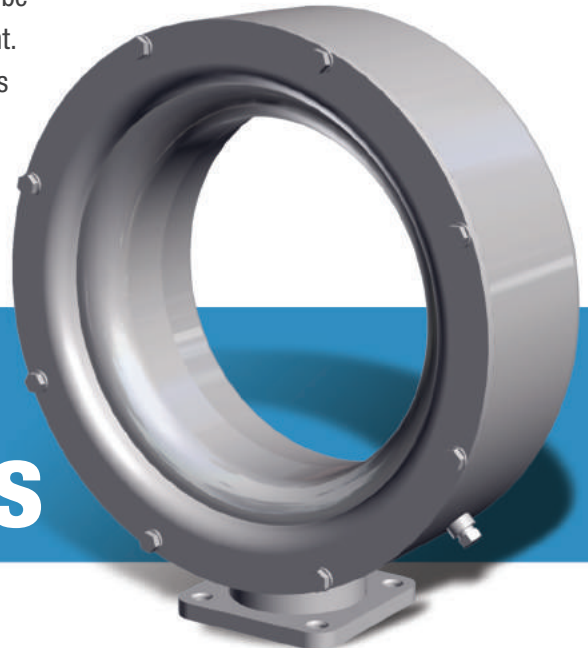
# Diluting and cooling your exhaust gas just got easier!

The FD-Series diluters from Nett Technologies are designed to greatly dilute and cool hazardous engine exhaust gases that are emitted from diesel engines installed on vehicles and stationary equipment with range of 135 to 2400hp. By mixing ambient air with engine exhaust gas in an approximate 5:1 to 10:1 ratio, the FD-Series diluters are able to deliver a safer and less hazardous environment. In addition to diluting your exhaust gas, the conditioned exhaust experiences a substantial reduction in temperature, which ultimately leads to a safer work environment. The FD-Series diluters are ideal for mining and tunneling applications where employees are at a higher risk of being exposed to high temperature and harmful exhaust gas concentrations.

Marketed mainly for equipment operators within mining, material handling and construction industries, the FD-Series diluters reduce concentrations of hazardous exhaust gases by projecting them further and spreading them over a wider area while at the same time reducing the temperature. If exhaust emissions reduction is also required, the FD-series diluters can be integrated with an emission control system.

These ruggedly built diluters have no mechanical or moving parts and can also be custom engineered to accommodate your diverse and every dilution requirement. With their quiet operation and low total life cost, the Nett Technologies' FD-Series diluters are an ideal solution for diluting your exhaust gases.

## FD-SERIES exhaust gas and temperature diluters



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.

[www.nettinc.com](http://www.nettinc.com)

## FD-SERIES PRODUCT OVERVIEW

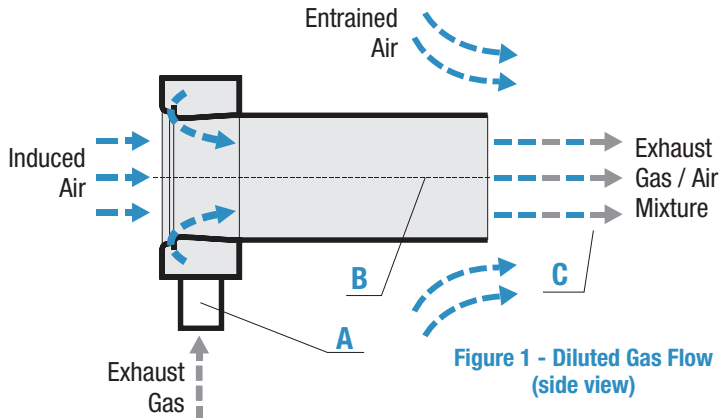


Figure 1 - Diluted Gas Flow (side view)

Engine exhaust gases enter the circular manifold of the exhaust gas diluter, as shown in Figure 1 above. The exhaust gases flow alongside the curved inside surface of the device, inducing quantities of ambient air into the diluter.

Figure 2 represents the exhaust emissions and temperatures which are sampled at three points, A, B, and C of the diluter system.

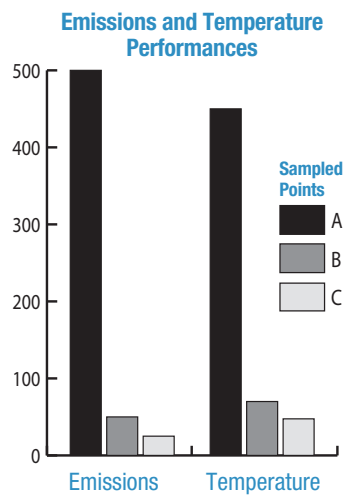


Figure 2

As shown in Figure 1, these points represent the undiluted exhaust (A), the exhaust inside the diluter tube (B), and the exhaust at 1 m distance after the diluter (C).

The emissions are expressed in ppm. The same concentration reductions apply to all emissions, including diesel particulate matter (PM), carbon monoxide (CO), hydrocarbons (HC), and nitrogen oxides (NO<sub>x</sub>). The exhaust temperature is in degrees Celsius. The exhaust gas diluter can typically lower the exhaust temperature from 450°C to 70-80°C, measured at the gas discharge point, and to about 50°C measured at 1 m after the diluter.

Both the emission dilutions and the exhaust cooling effect depend on the diluter gap settings. For different applications, these settings can be adjusted to always achieve the highest dilution performance. The corresponding exhaust gas pressure drop across the diluter is typically 5-7 kPa (20-28 in. H<sub>2</sub>O). The gaps can be adjusted to change the dilutions and pressure losses by applying variable thickness shims underneath the diluter header.

## FD-SERIES PRODUCT FEATURES

- The FD-Series diluters will greatly dilute and cool hazardous engine exhaust gases ensuring the operators are working in a safer and healthier environment.
- Reduced risk of igniting nearby flammable or combustible materials due to lower exhaust temperatures.
- For operators of vehicles within tunnels, containers and warehouses, the FD-Series diluters can be designed such that the exhaust flow is projected away from the vehicle or stationary equipment.
- Quiet operation. There are no mechanical or moving parts.
- Ruggedly built to withstand rough operating conditions for extended periods.
- Have a low initial cost with minimal maintenance requirements resulting in a very low total life cycle cost.



...the emission control authority.

Contact Nett Technologies Inc. today at:

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or visit us online at [www.nettinc.com](http://www.nettinc.com)

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