On-road Vehicle NO_x Emission Control

Airyx Plume Chasing - Fast and precise identification of high emitting vehicles.

1. On-road high emitter screening and identification.

2. Stop high emitting vehicles.

3. Inspection of suspicious vehicles.

4. Identification of manipulations or malfunctions.

FAST & ACCURATE MEASUREMENT
Sensitive NO_x / CO_2 analyser for diluted plume measurements.

CALIBRATION FREE
DOAS (Differential Optical Absorption Spectroscopy) technology, no calibration gases. No drift.

PLUG & PLAY SETUP
Easy installation on any vehicle. Easy operation with wireless tablet GUI.

RUGGED & FLEXIBLE
Robust, low power setup. Flexible application. Long life-time.

Airyx
DIFFERENT THINKING. BETTER MEASURING.

WHY PLUME CHASING?

The Plume Chasing (PC) method provides determination of NO_x emission factors from single vehicles under real driving conditions by sampling exhaust plume gases. In contrast to stationary measurements, PC does not capture snapshot like remote sensing measurements but instead representative averages over seconds to minutes respecting variable engine loads of the target vehicle. This allows 100% reliable identification of high emitting vehicles.

Airyx Plume Chasing System - Technical Specifications	
Operation and data monitoring	WiFi; Tablet mounted in car cockpit
Emission class identification	LDV Euro 4,5,6 / HDV EURO IV,V,VI
Emission calculation	In real-time, from NOx/CO2 ratio
Measurement duration per target vehicle	15 seconds (preliminary screening) 1 minute (valid measurement)
Detection of NO_2	Direct spectroscopic measurement
Detection of NO (NO_x)	By conversion to NO_2
Detection of CO_2	Internal NDIR CO2 sensor
Plume sampling line	Mounted at front car bumper, flexible injury protection
Analyser Response Time (10% to 90%)	< 2 seconds
Analyser Zero Drift	Less than 0.1 ppb/month*1
Calibration	NO2 calibration gas not required
Consumable gases	No gases needed for operation
Cross sensitivity	No cross sensitivity
Data communication	LAN/WiFi/RS232/M2M/OPCUA; Bayern-Hessen Protocol
Start-up time	Less than 1 min (typ.)
Analyser Weight	< 12 kg
Analyser Size (WDH)	48.26 x 41.0 x 13.3 cm3, 19” Rack, 3HU
Temp. operation range	-10 to +40°C

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Airyx GmbH
Hans-Bunte-Str. 4
69123 Heidelberg
Germany

Product page

Contact us