EGAS DeNOX

Engine Gas Analysis Systems

PROCESS & EMISSIONS MONITORING SYSTEMS

Heated Turnkey Gas Analysis System: easy to use and ideally suited for fast, continuous and simultaneous measurements of NH_3 and NOX in DeNOx applications. This system is ideal for engines where SCR (Selective Catalytic Reduction) or SNCR (Selective Non-Catalytic Reduction) have been implemented.

SPECIFIC FEATURES:

Sampling:

- Sampling system with self-regulated heated line (191°C) and 2 microns heated filter integrated
- Additional heated filter in standby, for instant replacement through ''Quick Lock'' connection system (optional)
- Calibration and zero gases can be injected to the heated probe for system integrity check, leak test, system calibration
- Automatic and programmable back-flushing (using air or N_2) for filter cleaning

Analysis cabinet:

- Fast and easy to move between test cells (cabinet mounted on castor wheels)
- Secondary safety filter (1.5 microns) embedded in the cabinet
- Ultra low maintenance, no moving parts
- Modular design for addition of other analyzers (THC, CO, CO_2, O_2)
- No interference or quenching effect with CO, CO_2, H_2O and other gases
- Analyzers with fast response time (<2 sec)
- Communication by AK protocol (RS232 / RJ45)
- Specially designed software (Windows PC)
- Dual measurement possible (pre and post catalyst)

MAIN APPLICATIONS:

- Pre and / or post catalyst measurement of NOX and NH_3 for all types of engines using DeNOx
- Emissions monitoring for Incineration, Cogeneration, and other processes using catalytic DeNOx systems

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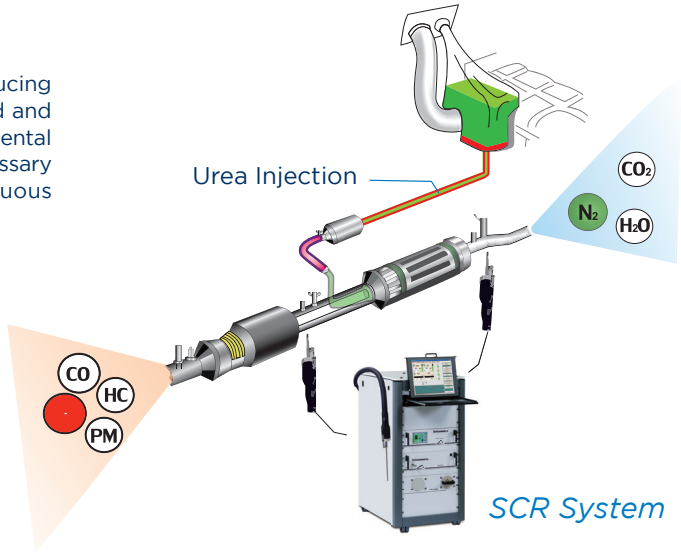
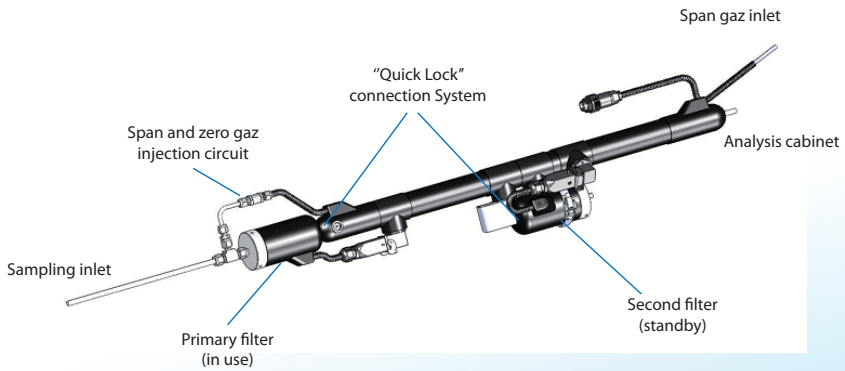
PRINCIPLE OF OPERATION:

In DeNOx systems using urea injection with ammonia (NH_3) as a reducing agent, the flow rate and control of NH_3 must be continuously adjusted and controlled to prevent excess NH_3 emissions (slip), thus reducing environmental impact and cost of reagents. Therefore, to optimize this process, it is necessary to use an emissions analysis system for simultaneous and continuous monitoring of NOx and NH_3.



An innovative «Quick Lock ™» connection system allows for filter changes “on the fly” with no need to cool the sample system.

The primary particulate filtering system consists of two filters in parallel; the first is an in-line filter integrated into the sample probe assembly on the engine, the second is an in-line “standby” filter which is also maintained at temperature. The ‘’Quick Lock” feature means the operator can remove the primary filter (for cleaning) while sampling and the second filter (ready to using) will continue to remove particulates until the new filter is embedded into place.



ANALYZER	TOPAZE 32M	BERYL 92M
Measured gas	NO or NOx (option NO_2)	NH_3
Principle	Heated CLD (at 140°C)	Heated FTUV (at 191°C)
Linearity	< 1% from 10 à 90% of F.S.	< 1% of F.S.
Lower Detectable Limit	0,1 ppm (range 10 ppm)	< 0.4 ppm
Response Time (T90 sec)	< 2 s	< 2 s
Zero drift	< 1% / 7 days	< 2 % of F.S./ 24 h
Span drift	< 1% / 7 days	< 2 % of F.S./ 24 h
Calibration gas	NO or NO_2	NH_3
Ranges	10-100-1000-10000 ppm	50-100-500 ppm (option: 25 ppm)

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