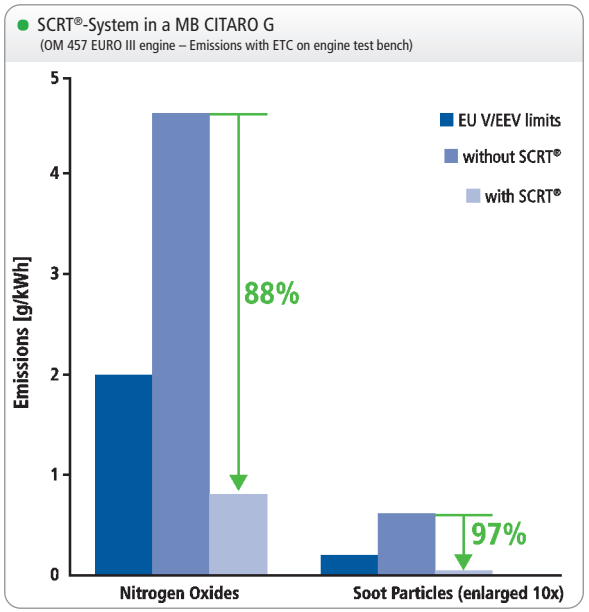
Better emission class – from Euro III to Euro V and EEV with SCRT®

The SCRT® system reduces not only soot and fine particulate matter in diesel exhaust emissions right down to the detectability threshold, but also nitrogen oxide emissions by up to 90 per cent, as well as emissions of the remaining gaseous pollutants. As a result, Euro III buses, for example, that have undergone an SCRT® retrofit comply with the Euro V and even the EEV standard.



This new generation of exhaust-gas aftertreatment systems enables bus manufacturers and fleet operators to comply with the globally applicable exhaust emissions legislation of the future right now.

Public transport operators favour action on health and environmental protection!

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HJS Emission Technology

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Clean Solutions
for Public Transport Buses

SCRT®

Selective Catalytic Reduction Technology

Soot and Nitrogen Oxides free!

www.hjs.com

HJS Emission Technology

Challenge

Right to clean air

The citizens of Europe have the right to clean air. This is why European and national regulations – for example, the EU clean air directive 2008/50/EC – set a number of limits and alarm thresholds for the concentrations of certain pollutants, such as particulate matter (PM_{10}) and nitrogen oxides (NOx).

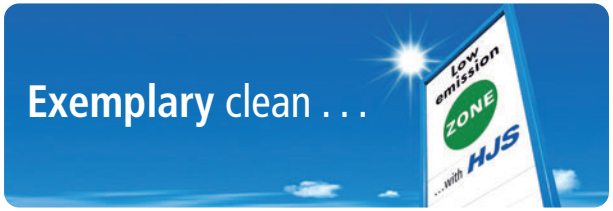
	Mean	Limit PM_{10} (Particulate Matter)	Limit NO_2 (Nitrogen Dioxide)
Stage 1 since 01.01.2005	**24 h**	**50 µg/m³** not more than **35** violations/year	
	1 year	**40 µg/m³**	
Stage 2 since 01.01.2010	**24 h** (PM_{10}) **1 h** (NO_2)	**50 µg/m³** not more than **35** violations/year	**200 µg/m³** not more than **18** violations/year
	1 year	**40 µg/m³**	**40 µg/m³**

Tab.: EU Directive 2008/50/EC

If the limits for particulate matter and nitrogen oxides are overshot, the authorities in the zones in question are required by law to impose measures that will effectively reduce the pollutant concentrations in the air in order to protect health.

Many city and local authorities are not in a position to meet the ambitious requirements of the EU directive and will therefore have to apply for an extension of the deadline until 2015. The condition for an extension is the drafting and implementation of effective measures against air pollution. If such measures are not taken, infringement proceedings may be pursued by the EU.

Challenge for local authorities: legislation stipulates clean air!



Solution

Measures

The chief objective is to quickly implement effective measures to reduce PM and NOx emissions. Particularly in big cities and conurbations, road traffic is one of the main sources of air pollution. Both technical and non-technical measures are called for in the road-traffic scenario to reduce emissions of diesel soot (a primary contributor to airborne particulate matter) and nitrogen oxides.

One verifiably effective measure in this respect has proved to be the introduction of low emission zones (LEZs), which only low-emission vehicles are permitted to enter. By retrofitting exhaust-gas aftertreatment systems, even old vehicles can be run cleanly.

Cities and local authorities as role models

Cities and local authorities that act right now to equip and retrofit their public transport buses with effective exhaust-gas aftertreatment systems have understood their responsibility for protecting the health of their citizens. In doing so, they are also promoting people's trust in public transport as a clean, "green" and progressive means of getting around.

Retrofitting existing fleets of buses means

- ✔ An immediate reduction of pollutant emissions at source
- ✔ Authorities act as sole models in health and environmental protection
- ✔ A cost-effective alternative to buying a new vehicle

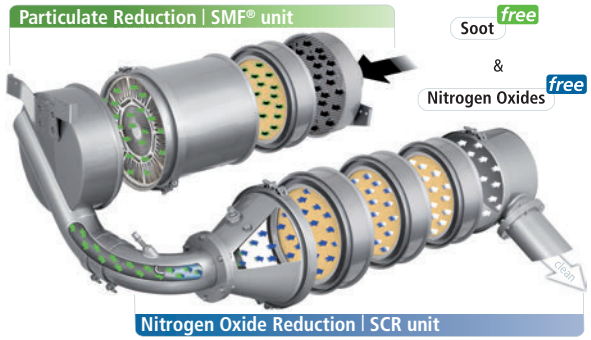
SCRT® – HJS's solution for clean buses!

Implementation

SCRT® for public transport buses

Soot particles have been able to be filtered from diesel exhaust gases, down to the limit of detection, with the aid of an HJS sintered metal filter (SMF®) for some time now. But it's not just particulate matter that pollutes the environment and damages people's health: gaseous substances such as nitrogen oxides are also harmful. In order to reduce the levels of these gases, HJS has contributed to the development of the SCRT® (Selective Catalytic Reduction Technology) system.

SCRT® combines a diesel particulate filter with an SCR unit for controlling nitrogen oxides. New buses that are already fitted with particulate filters can be retrofitted with an SCR unit to create an SCRT® system. Likewise, older vehicles without an exhaust treatment system can be retrofitted with an SCRT® system. SCRT® is currently the most effective and state-of-the-art exhaust-gas aftertreatment technology available.



SCRT®-benefits at a glance

- ✔ Retrofitting of EURO II and EURO III city buses
- ✔ SCRT® satisfies emission classifications EURO V and EEV
- ✔ Modular design with SMF® and SCR unit
- ✔ Absolutely low-maintenance and economical