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Poster Presentation
SCR Systems

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The PUREM SCR System with AdBlue™

PUREM is *systems integrator and Tier 1 supplier* of these systems to DCX Mercedes Benz. PUREM delivers product in volume production since 2005 for the Euro IV/V BlueTec trucks (Actros, Atego tec) in 38 different SCR housing configurations.

**Functional principle:**
Aqueous solution urea AdBlue™ is being transported from the *urea tank* via the *supply unit* through *heated lines* to the *Modular Dosing Unit MDU*. Here it is mixed with air, then *injected* into the hot exhaust (>200 deg C), thus creating Ammonia. The reduction of harmful NO\textsubscript{x} to harmless NO\textsubscript{2} and H\textsubscript{2}O is taking place on the surface of the *SCR catalyst*. The entire system is controlled with a frame module, which communicates via CAN bus with the engine ECU.

Efficiency can exceed 70% NO\textsubscript{x} reduction, dependent on the mapping point of the engine. The SCR system allows for optimum fuel consumption calibration of the engine.

PUREM is further developing systems for EPA 2010 and Euro 6 standards (further reduction in NO\textsubscript{x} to 0.1 g/bhp-hr). These systems are called *Particle NOX Cleaner PNC™*.

The PUREM *airless urea dosing system ADS™* is featuring a small sized urea dosing pump, allowing for precise injection of the NO\textsubscript{x} reduction agent controlled by a specific after treatment control unit *ACU*. 