

## SCR for Diesel and Natural Gas Reciprocating Engines “Setting the Green Standard in Reduction Technology...”

Selective Catalytic Reduction (SCR) and ADCAT™ oxidation catalytic emission control systems from EmeraChem Power™ combine the latest in advanced catalytic science & technology from a catalyst technology leader.

### Proven Performance

Our reputation for successful system integration and project coordination has been demonstrated in over 200 systems for both internal combustion engines and combustion turbines over the past 10 years.

### Catalyst Technology “Full-Wrap” Performance Guarantee

Our systems are engineered and manufactured to the exact specifications to meet and exceed your NO<sub>x</sub>, CO and VOC emissions standards while meeting your project and budget requirements. These are provided as extensively as from the engine exhaust manifold to the stack outlet, with a “full-wrap” guarantee. This allows for single point accountability direct from the manufacturer and guaranteed by unrivaled, responsive customer support with catalytic science “know-how”.

### Reliability and Dependability

Our SCR systems utilize proven design configurations for each reagent process (ammonia or urea) and are comprised of durable, reliable components that are user-friendly and require minimal maintenance.

### “Built to Fit” Your Application or Fleet

Whether your system is for power generation or motive-force applications, each EmeraChem Power™ system is engineered and built to meet specific NO<sub>x</sub> reduction and additional performance criteria, including engines requiring Ultra-Low NO<sub>x</sub> emissions (greater than 95% NO<sub>x</sub> reduction efficiency), all with economy in mind.

EmeraChem Power™ is an authorized licensee of EmeraChem’s catalytic technologies which include highly efficient NO<sub>x</sub>, SO<sub>x</sub>, PM, VOC and HC control technologies and systems (EMx™, ESx®, NSCR (3-way), ADCAT™ CO, ADCAT™ VOC).



## Catalyst and Equipment Description

The engine exhaust gas flows into the SCR mixing chamber where a solution of urea is finely injected using air atomization. EmeraChem Power's proven multi-element mixing technology is critical to high SCR performance.

The urea dosing system is housed in a NEMA 4 enclosure, which contains a precision variable speed pump and associated instrumentation, valves, and piping - all pre-wired and pre-tested.

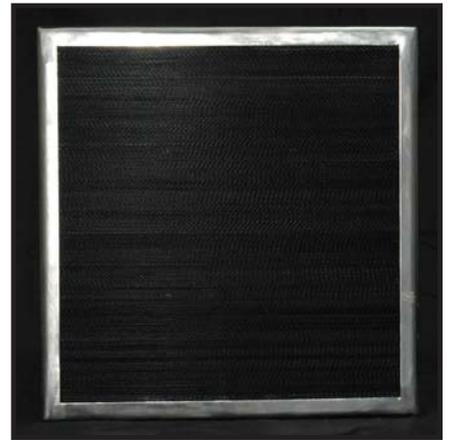
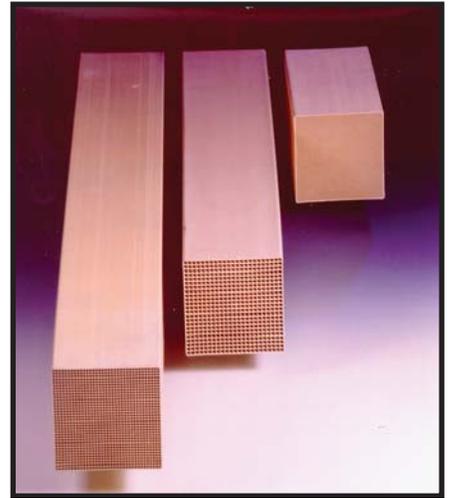
The mixing chamber delivers to the SCR catalyst reactor a uniform mixture of engine exhaust gas and urea, and is designed to provide flow straightening and distribution for optimal catalytic performance.

At the SCR catalyst, the urea and nitrogen oxides (NOx) are converted to harmless nitrogen and water vapor. For applications requiring VOC and CO reduction, high performance oxidation catalyst is included in the system.

The SCR catalyst is a homogenous extruded honeycomb with active catalyst materials (titanium, vanadium and tungsten) - proven in hundreds of applications. The oxidation catalyst utilizes platinum for highest activity on either a ceramic or metal honeycomb. The oxidation catalyst modules use a "clear path/discrete" geometry for high surface area and low back pressure.

The catalytic emission control system is fully automated with available remote control and reporting capabilities.

Whatever the application, we are ready to provide customized solutions for your emission reduction needs, now and in the future.



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## SCR System

