



New requirements - Our solution

# mtu EXHAUST GAS AFTERTREATMENT SYSTEM FOR REDUCED EMISSIONS

From a single source: with the **mtu** EGAT system we present the exhaust aftertreatment solution for your gas system.

### Exhaust gas aftertreatment and measurement according to 44. BImSchV

The 44th BImSchV (German ordinance on the Implementation of the Federal Immission Protection Law) has been in force since 2019. According to this regulation, medium-sized combustion plants must be equipped with a suitable exhaust gas aftertreatment system as of 2023. The **mtu** EGAT system is our answer to the demands for stricter emission limits and more stringent requirements such as shortened measurement intervals or the obligation to provide evidence, documentation and reports.

### Perfect interaction for higher efficiency

To ensure that your gas systems are as cost-efficient, trouble-free and low emissions as possible, we offer an in-house developed exhaust gas aftertreatment system (EGAT), which is optimally adapted to the engines. As a reliable partner, we analyze the respective requirements, installation conditions, necessary installation space, and accessibility for operation and maintenance. We supervise the implementation up to commissioning - and are also happy to ensure a smooth life cycle for the entire system.

### Benefits:



Perfectly tailored exhaust gas aftertreatment system from a single source



Airless system eliminates the need for costly compressors



Durable construction minimizes operating costs



Comprehensive solutions satisfying all regulations and documentation requirements (Federal Emission Control Ordinance (44. BImSchV)) by integrating in existing MMC systems



Comprehensive service support by **mtu** certified technicians; integration into existing Value Care Agreement possible.



Remote maintenance through digital tools accelerates troubleshooting to get you back up and running if needed



Guaranteed spares and service availability (**mtu** proprietary equipment / developed in-house)



Low exhaust back pressure design enables continued unrestricted engine operation at maximum power



High SCR conversion rates (up to 90%) optimize engine operation and boost efficiency



Our versatile EGAT system can be integrated in all manner of existing installations



Expert planning, engineering, installation and implementation.

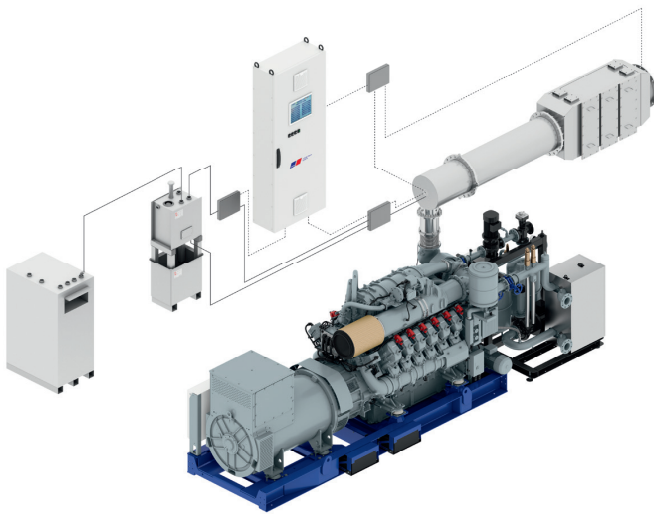


A Rolls-Royce solution

### mtu EGAT system: The components

The **mtu** EGAT system enables compliance with the emission levels below for typically tuned **mtu** engines up to 21,000 hours of operation. An SCR catalyst and a downstream oxidation catalyst are

Nitrogen oxides	NOx	100	mg/Nm <sup>3</sup> @ 5 % O <sub>2</sub> , dry
Carbon monoxide	CO	250	mg/Nm <sup>3</sup> @ 5 % O <sub>2</sub> , dry
Formaldehyd	HCHO	20	mg/Nm <sup>3</sup> @ 5 % O <sub>2</sub> , dry
Ammoniak	NH <sub>3</sub>	10	mg/Nm <sup>3</sup> @ 5 % O <sub>2</sub> , dry



#### These components are included:

- Catalyst housing
- RM mixer
- Reducing agent system and sensors
- Day tank

### mtu EGAT system: Our all-round service

We always want to ensure the highest possible availability. To this end, scheduled preventive maintenance of the EGAT system is aligned with system and genset maintenance tasks. This allows for synergetic effects to be realized and thus for the number and cost of service calls to be kept to a minimum. The existing remote maintenance access from Rolls-Royce enables rapid fault analysis and restart of the EGAT if required.

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used in the system. The lifetime of both catalyst elements is up to 21,000 operating hours at 90% conversion rate.

The power ranges valid for these values can be found in the engine description, as well as further data in the technical data sheet of the genset and the corresponding EGAT data sheet.

### SCR - Selective Catalytic Reduction

The chemical reaction that converts harmful nitrogen oxides (NO<sub>x</sub>) within exhaust gas into water (H<sub>2</sub>O) and nitrogen (N<sub>2</sub>).

### Oxidation catalyst

The oxidation catalyst downstream of the SCR catalyst is responsible for the oxidation of carbon monoxide (CO) and formaldehyde (HCHO).

### EGAT control system

Control and regulation functions of the EGAT system, such as pump control, reducing agent metering and monitoring, are performed by the MMC system control. This also takes over the NO<sub>x</sub> logging with daily averaging required by the 44th BImSchV. The EGAT system does not require a separate control system but can be integrated into the existing MMC control system and benefit from its advantages such as remote control, data logging, error detection, alarm logging, visualization and digital interfaces.

