



Fischer Abgastechnik has been a specialist in exhaust gas purification for over 20 years.

Our mission and motivation can be summed up as: **Clean air, out of responsibility for people, the environment and machinery!**

For us, responsibility means harnessing the potential of innovative ideas to meet the requirements of emission directives and help preserve resources.

Our engineers specialise in custom-built, special solutions so that the principles of sustainability can be applied efficiently to new or existing systems for a variety of sectors.

We would be pleased to set up a face-to-face meeting to show you the specially developed technological solutions we can offer for your specific applications.

- Exhaust gas technology
- Particulate filters
- Thermal management
- SCR-DeNO_x systems
- Silencers
- Spark arrestors
- Mobile fire suppression systems
- ORC – Energy-efficient solutions based on waste heat

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OXIDATION CATALYSTS

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Even with state-of-the-art technologies, the exhaust gases from biogas CHP plants may still contain environmentally harmful and toxic emissions such as formaldehyde, which are governed by the rules and limit values defined by the legislative authorities in coordination with the responsible government agency.

The German air pollution control regulation TA Luft introduced new and stricter emission gas regulations in 2018 that must not be exceeded at any time.

Fischer biogas oxidation catalysts represent a safe and reliable solution for ensuring compliance with these formaldehyde reduction rules.

「 BIOGAS OXIDATION CATALYSTS 」

Biogas oxidation catalysts, BOC for short, are used in gas-powered and dual-fuel engines that run on biogas, sewage gas or landfill gas.

Oxidation:

Up to 90% of formaldehyde (CH_2O) is converted into carbon dioxide (CO_2) and water (H_2O)

- Over 90% of the carbon monoxide (CO) is converted into carbon dioxide (CO_2).
- Up to 90% of hydrocarbons (HC) are converted into carbon dioxide (CO_2) and water (H_2O).

Note:

If the fuel gas contains hydrogen sulphide (H_2S) (i.e. there is no desulphurisation system), it is burnt to form sulphur dioxide (SO_2) and sulphur trioxide (SO_3). As catalyst poisons, these substances have a deactivating effect on the coating and undergo further oxidation in the catalyst.

- Sulphur dioxide (SO_2) into sulphur trioxide (SO_3)
- Sulphur dioxide (SO_2) to sulphur tetroxide (SO_4)

Innovative ideas and a wide range of housing designs, including clamp or flange systems and even QR housings (Quick Remove), ensure perfect alignment with the needs of your stationary plant.

If the exhaust gas is cooled to below the dew point after passing the catalytic converter, the sulphur dioxide (SO_2) in the condensate will form sulphurous acid (H_2SO_3) and the sulphur trioxide (SO_3) will form sulphuric acid (H_2SO_4). These substances have highly corrosive effects even on stainless steels and can damage the components installed downstream of the catalytic converter, e.g. the exhaust gas heat exchanger.

For this reason, Fischer BOC feature a special platinum coating that is highly resistant to sulphur compounds and keeps the oxidation of sulphur oxides low.

