



**INNOVATIVE SOLUTIONS
FOR THE ENVIRONMENT:**



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-DeNOx systems
- Silencers
- Spark arrestors
- Mobile fire suppression systems

Fischer Abgastechnik GmbH & Co. KG
Spatzenweg 10
48282 Emsdetten

T +49 (0) 25 72 / 967 49-00
F +49 (0) 25 72 / 967 49-50
info@fischer-at.de
www.fischer-at.de



MACHINERY ENVIRONMENT PEOPLE

**PARTICULATE
FILTERS**



WE ARE ALREADY DEVELOPING THE SHAPE OF THINGS TO COME

In light of current and future emission limits, the exhaust aftertreatment system needs to be individually configured to ensure ideal system integration into new or existing applications.

Our strength lies in the development of unique systems, as well as the design and continuous improvement of SCR-DeNOx systems, thermal management systems, particulate filters, oxidation catalysts, programming and control units.

Benefit from our expertise for the following services:

- 3D design
- CFD analysis
- FEM calculation
- Vibration analysis
- Control unit development
- In-house programming
- In-house development in the area of thermal management

PARTICULATE FILTERS

Specially designed and manufactured to suit your requirements, our particulate filter systems are extremely effective at reducing soot emissions from your engines.

When combined with an oxidation catalyst, the following reductions in harmful substances can be achieved:

Carbon monoxide (CO):	< 98 %
Hydrocarbons (HC):	< 95 %
Soot particles:	90 to 99 %

PARTICULATE FILTERS

PASSIVE SYSTEMS

With passive regeneration methods, no additional thermal energy is introduced.

Passive, low-cost methods are often the ideal solution if the engine load is regularly high and there are no protracted low-load phases.

Additive-regeneration:

An additive is introduced to the fuel, either automatically by the particulate filter control or manually.

The additive lowers the soot ignition temperature from approx. 600° C to approx. 390° C and significantly accelerates soot combustion.

Continuous regeneration:

A special catalytic pre-filter is installed upstream of the particulate filter or the particulate filter has a catalytic coating. The pre-filter or the particulate filter coating encourage oxidation, thereby converting nitrogen oxide (NO) in the exhaust gas into nitrogen dioxide (NO₂). The nitrogen dioxide (NO₂) is used to regenerate the PF.

ACTIVE SYSTEMS

With active regeneration methods, additional thermal energy is introduced.

Active regeneration is the only choice if the engine load is constantly low or remains low over a protracted period.

Catalytic burners:

A catalytic pre-filter with a special coating is installed upstream of the particulate filter. A regulated flow of diesel fuel is fed onto this filter and, as a result, the deposits on the PF are burnt off in a controlled manner.



Electrical heating elements:

Electrical heating elements are installed in the exhaust system upstream of the PF or in a ring around the filter element (SMF® only) to actively support regeneration of the PF.

Thermal burners:

A burner unit is installed in the inlet chamber of the PF or in the upstream exhaust gas line.

Thanks to this technology, the exhaust gas temperature can be raised to the necessary level of > 400° C/600° C with a rated thermal input of up to 120 kW.

This technology enables complete regeneration of particulate filters, even without a diesel oxidation catalyst or additives. It also allows SCR-DeNOx systems to be operated in the low-load range.

The Fischer engineers developed the **HELIOS FFB full-flow burner** to cover a wide range of applications in this area.

With the **HELIOS FFB**, active thermal management is possible at practically any engine operating point and with virtually any fuel quality.

