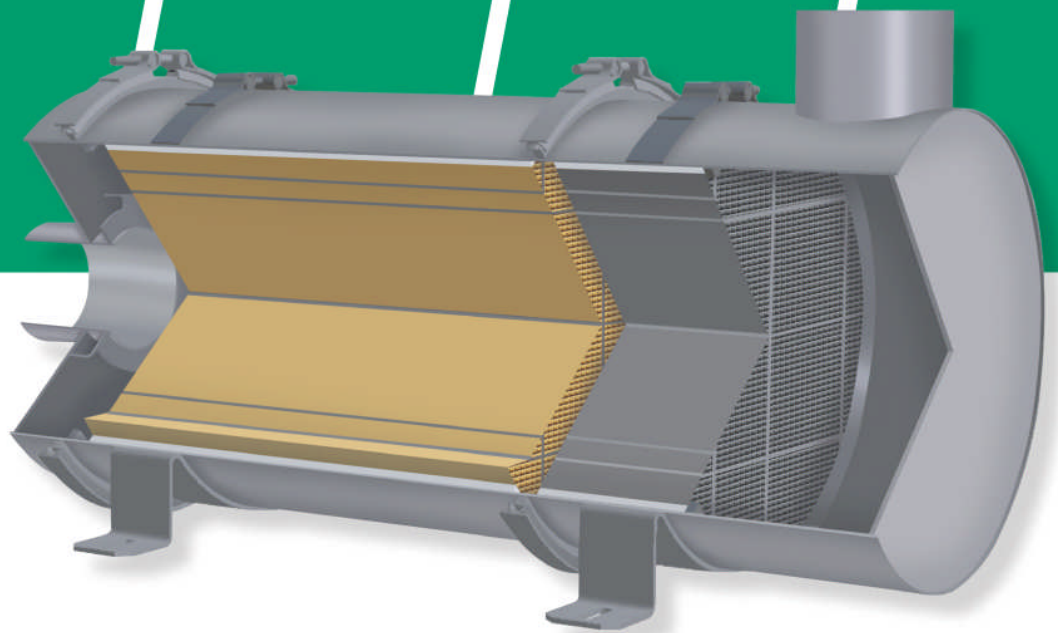


advanced



mobiclean[®] R advanced

Particulate Filter System for School Buses

hugfiltersystems.



Leading Environmental Technology for a Green and Clean School Bus Fleet

Helping kids breathe easy

Diesel exhaust is a major source of combustion particles that contribute to poor air quality nationwide. Since almost all school buses are operated with diesel engines, diesel engine exhaust can thus also be a source of concern, specifically with regard to exposure to children. Diesel particulate matter emissions (PM) are a complex and unhealthy mixture of inorganic and organic carbon particles with adhered toxic substances and metals.

It is well known that children are particularly susceptible to air pollution and therefore are at even higher risk for particulate matter exposure than adults. Health researchers believe that children are more susceptible than adults to the adverse health effects of air pollution for a variety of reasons. For example, children are more active than adults and therefore breathe more rapidly. Children have more lung surface area compared to their body weight and therefore inhale more air pound-for-pound than adults.

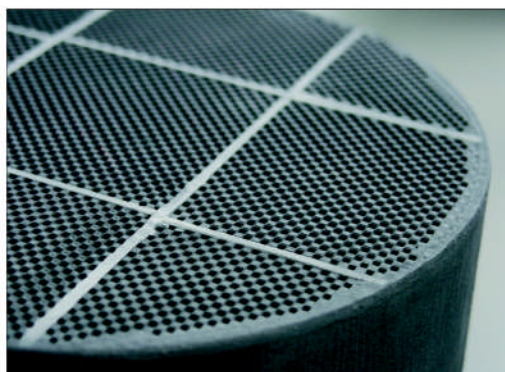
DPF or DOC - Making the Right Choice

Diesel Oxidation Catalysts (DOC) are widespread and inexpensive, but do nothing to reduce neither the most



dangerous ultrafine soot particles nor black carbon. The Clean Air Task Force (www.catf.us) considers DOC's as one of the least effective retrofit options, reducing particulate matter by only approximately 20% under full load. DOCs do not remove black carbon, the climate-forcing component of diesel particulate matter, and are ineffective under idle conditions at bus stops when the emissions typically enter the bus.

A retrofit with a diesel particulate filter (DPF) offers a comprehensive elimination of diesel particulate matter emissions and black carbon soot by almost 100% and is the most effective solution for addressing school bus cabin air quality as well as improving conditions outside of schools.



The Right Diesel Particulate Filter Systems for Your School Bus



Full Flow Diesel Particulate Systems against Smoke

Only Full Flow Diesel Particulate Systems are an effective tool against smoke. Our mobiclean R advanced systems retain particles of the exceptionally dangerous zone of 20 - 300 nanometres.

Proven. Effective. Reliable

mobiclean R advanced Filter Systems are based on a ceramic honeycomb structure made of silicon carbide (SiC). The exhaust gasses flow through the porous walls between the channels that are blocked at alternate ends. During this process more than 99% of particles of all sizes will be deposited in the walls.

Outstanding emission reduction results:

- **99% Particulate Matter (PM) reduction**
- **90% Carbon Monoxide (CO) reduction**
- **70% Hydrocarbon (HC) reduction**

As a result of this a diesel engine will produce more favorable emissions than a comparable gas engine.

Choosing a mobiclean R advanced Filter System, your fleet can be assured of having the best available technology.

The Appropriate Regeneration Technology for Each School Bus

In order to burn off the collected soot, all our filters are equipped with catalytic coating. To initiate a regeneration, temperatures over 200°C are needed in 15% of the duty cycle, which is the lowest temperature requirement in the industry.

Diesel Particulate Filter (DPF) should work without you worrying about it. Without vehicle downtime, without operator interaction, without having to plug in to an electric power source and without unplanned cleaning due to plugged DPFs. – That is what you can expect from us!

Particulate Filter Systems Made in Switzerland with Outstanding Emission Results

Why mobiclean R advanced is the Better Solution:

- **Regeneration temperature over 200°C is needed in only 15% of the duty cycle (lowest in industry)**
- **Maintenance interval 120'000 miles**
- **Compatible with EGR engines**
- **Future SCR upgrade for up to 90% NOx reduction available**
- **Backpressure < 40 in H₂O (100 mbar)**
- **No need to push a button to regenerate**
- **No need to plug in to regenerate**

Economical and Dependable

mobiclean R Filter Systems also perform reliably under extreme conditions. Maintenance is minimal and overhead cost low.

Swiss Quality

All components of our mobiclean R Filter Systems are developed and manufactured to the highest quality standards at our factory in Switzerland. While we only use extremely high-temperature-resistant stainless steel for the housings, the honeycombs are made of finest silicon carbide.



We are one of the very few manufacturers worldwide to offer all components made in-house. You as a customer can always rest assured to use customized, finely tuned components with best Swiss quality.

Hug Filtersystems

Hug Filtersystems based in Liberty Hill, TX is the leading manufacturer of exhaust aftertreatment systems for diesel engines. Hug Filtersystems is part of the Swiss Hug-Group, whose Exhaust Aftertreatment Systems are successfully used in thousands of applications worldwide.

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