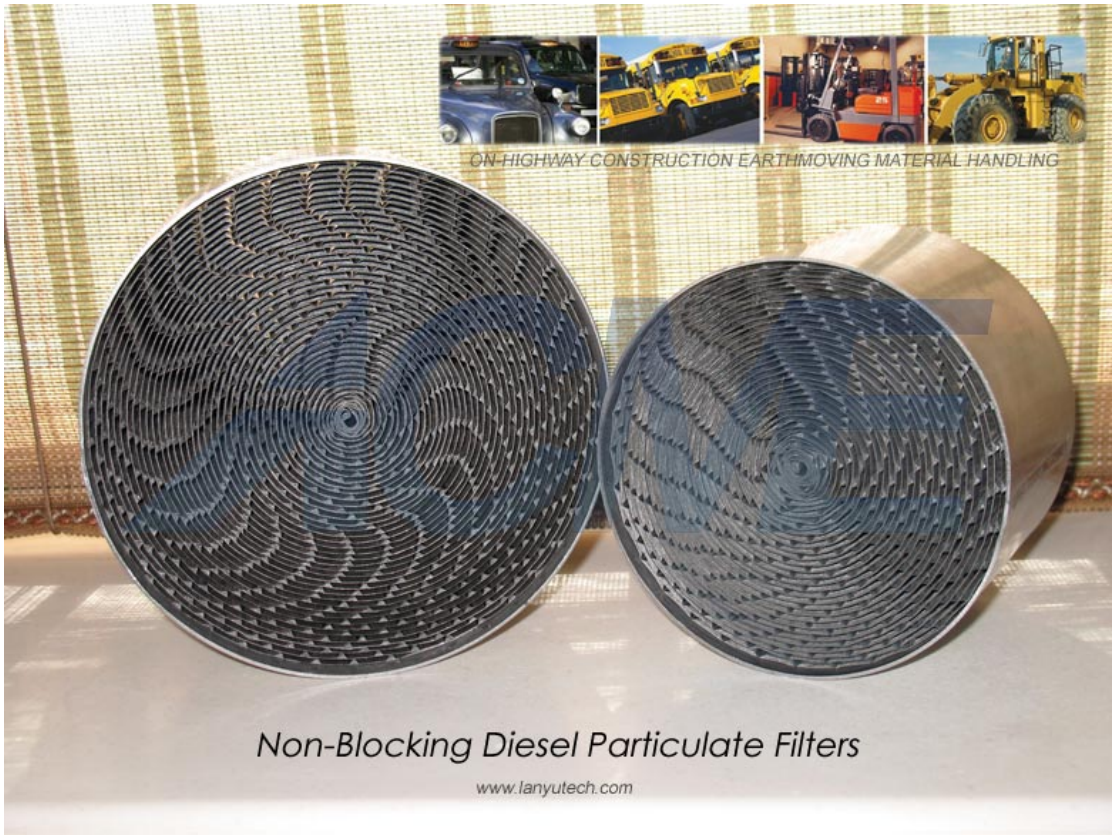
ACME Partial Flow Diesel Particulate Filters (p-DPF)

for Particulate Matter (PM) Reduction

The ACME® p-DPF is a non-blocking diesel particulate filter that provides effective removal of diesel particulate matter and lower backpressure than conventional wall-flow particulate filters. The ACME® p-DPF can be used in most above-ground diesel engine applications. It is ideal for retrofit on most diesel engines where wall-flow particulate filters are unsuitable, including light duty cycle, older and two-stroke engines. ACME® non-blocking, diesel particulate filters are used to improve air quality around diesel engines. The ACME® p-DPF requires diesel fuel with sulfur content less than 500 ppm for proper operation and works best with sulfur content less than 15 ppm (ULSD fuel).



Advantages of ACME® p-DPF

Reduces up to 80 per cent Diesel Particulate Matter (DPM).

Looks, installs and operates like a conventional diesel oxidation catalyst.

Does not clog or accumulate soot particles.

Requires no maintenance.

Achieves a backpressure meeting many off-highway engine manufacturer's exhaust system limits.

Attains a high conversion efficiency for carbon monoxide, hydrocarbons, odor and particulate matter.

Effectively removes diesel nano-particles (highest human health risks).

Improves sound attenuation (equivalent or superior to the original muffler).

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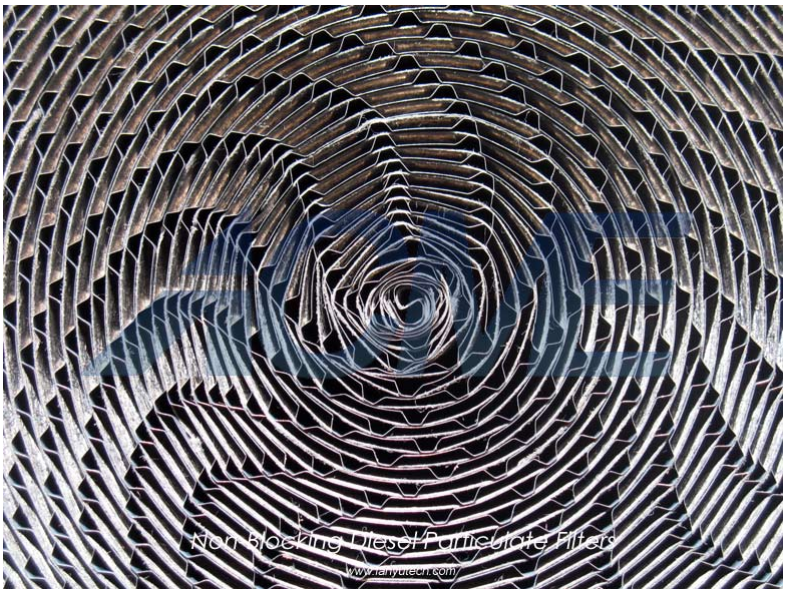


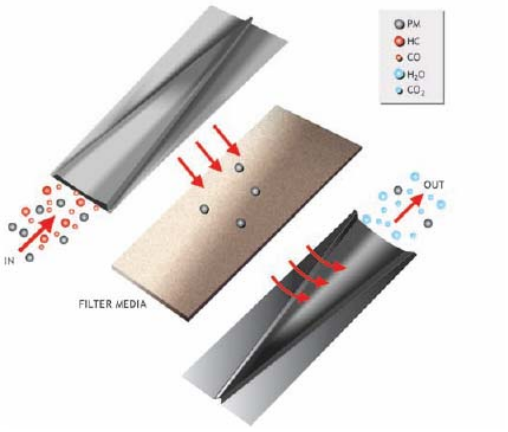
Close-up view of substrate showing the alternating tapered trapezoidal ducts and filtration media

How it works

The ACME® p-DPF is a network of flow-through channels consisting of corrugated metal foils and metal fiber fleece. The channels use a continuous but variable cross section to transfer exhaust gas through the stainless steel filter medium. Nano particles are collected within the filter on the surface of the fibres, which are effectively oxidized by means of a catalytic coating.

The coating provides high overall particulate reduction across a wide range of exhaust flows and temperatures, with backpressure characteristics similar to a conventional diesel oxidation catalyst. The design also effectively destroys carbon monoxide (CO), diesel hydrocarbons (HC) and diesel odor.

This product although being very robust and easily maintained, does not have the trapping efficiency of the full flow filter, but will not block and damage due to extreme exothermic reactions typically caused by low temperature applications.



A cell of the main metal filter

Typical Emission Reductions from the p-DPF System

The ACME® p-DPF system is designed to give the following typical reductions in legislated emissions from a Diesel powered engine.

- Particulate PM 80% +
- Carbon Monoxide CO 90% +
- Hydrocarbons HC 90% +