

PARTIAL FLOW SINTERED METAL FILTER (pDPF)

HJS
Emission Technology

SOUTH AFRICA

Smart Emission Control for Modern Low Back Pressure Engines

HJS Emission Technology South Africa offers advanced Partial Flow Diesel Particulate Filters (pDPF) based on proven SMF® sintered metal technology.

Our PDPF systems are the ideal alternative solution for tier 2 to newer, technologically advanced Tier 3, Stage 3A and smaller Tier 4 engines that require lower exhaust back pressure while still achieving significant emission reduction.

Designed for mining and industrial applications, the HJS PDPF delivers reliable emission control without compromising engine performance.



HOW A PARTIAL FLOW DIESEL PARTICULATE FILTER (pDPF) WORKS:

A pDPF reduces Diesel Particulate Matter (DPM) by filtering a defined portion of the exhaust gas while allowing the remaining gas to bypass the filter.

The design allows:

- Controlled filtration efficiency
- Significantly lower back pressure
- Reliable performance in variable duty cycles
- Simplified regeneration characteristics
- Long service intervals

The HJS pDPF can achieve up to 80% efficiency in reducing diesel particulate emissions, depending on application requirements.

ADVANCED GAS CONVERSION BENEFITS

Beyond particulate reduction, the HJS pDPF system:

- Converts NO to NO₂ gases aiding in passive regeneration
- Reduces Carbon Monoxide (CO) emissions
- Supports improved overall exhaust gas treatment

This makes it a comprehensive emission solution, not just a soot filter.

WHY pDPF IS CRITICAL FOR MODERN ENGINES

Newer generation Tier 3, Stage 3A and smaller Tier 4 engines are more sensitive to exhaust back pressure.

The HJS pDPF provides excellent emission reduction while maintaining low back pressure, protecting engine performance and reliability.



KEY BENEFITS FOR MINING & INDUSTRIAL APPLICATIONS

Low Back Pressure

Protects sensitive engines and ensures stable performance.

Long Service Intervals

Reduced ash accumulation due to sintered metal design.

Robust Mining-Grade System

Engineered for harsh African operating environments.

Easy Cleaning

Can be cleaned using water — simple and practical.

Full ECU Integration (If Required)

Seamless integration into engine management systems.

Modular Housing Design

Partial flow and full flow filters are interchangeable within modular housings.

Space-Saving Configurations

Custom configurations can be manufactured to fit available installation space.

More compact than traditional DPF systems.

FLEXIBLE CONFIGURATION OPTIONS

We know that every application is different, and that is why the HJS pDPF system can be:

- Designed to meet specific filtration thresholds
- Configured for available space constraints
- Adapted for compact installation
- Supplied with optional catalytic coating
- Integrated into modular exhaust housings

WHY HJS EMISSION TECHNOLOGY SOUTH AFRICA?

Our approach is simple:

- We listen to your engine requirements.
- We understand your space constraints.
- We analyse your back pressure limits.
- We design the correct solution.

You don't get what sounds good. You get what works.

BUILT ON PROVEN SMF® TECHNOLOGY

The HJS pDPF is based on globally proven SMF® (Sintered Metal Filter) technology, delivering:

- High structural durability
- Excellent thermal resistance
- Reliable long-term performance
- Stable filtration under challenging duty cycles



Looking for a low back-pressure emission solution for your Tier 3 or Tier 4 engine?

We have the right solution for every application. Let us help you save lives with clean air.

Contact

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