



Simply intelligent: the new SintROC diesel particulate filter
Continuous regeneration with maximum efficiency





MANN+HUMMEL SintROC **– with continuous regeneration**

Modern electronics cuts costs, increases operational reliability, and reduces maintenance requirements.

The new SintROC diesel particulate filter from MANN+HUMMEL is the ultimate solution for non-road applications with engine outputs from 50 to 600 kW. Controlled by intelligent software and using modern electronics, the system regenerates continuously without interrupting operation. The regeneration process requires an exhaust gas temperature higher than 380 °C for only 10% of the machine operating time.

In contrast to other DPF systems with an oxidation catalyst, the SintROC also reduces NO₂ emissions, which is a considerable advantage for use with mining vehicles. The fully-automatic system from MANN+HUMMEL takes efficiency, economy and operational reliability once more to a new level.

Three filters set the benchmark

MANN+HUMMEL always offers the ideal DPF solution

SintAC

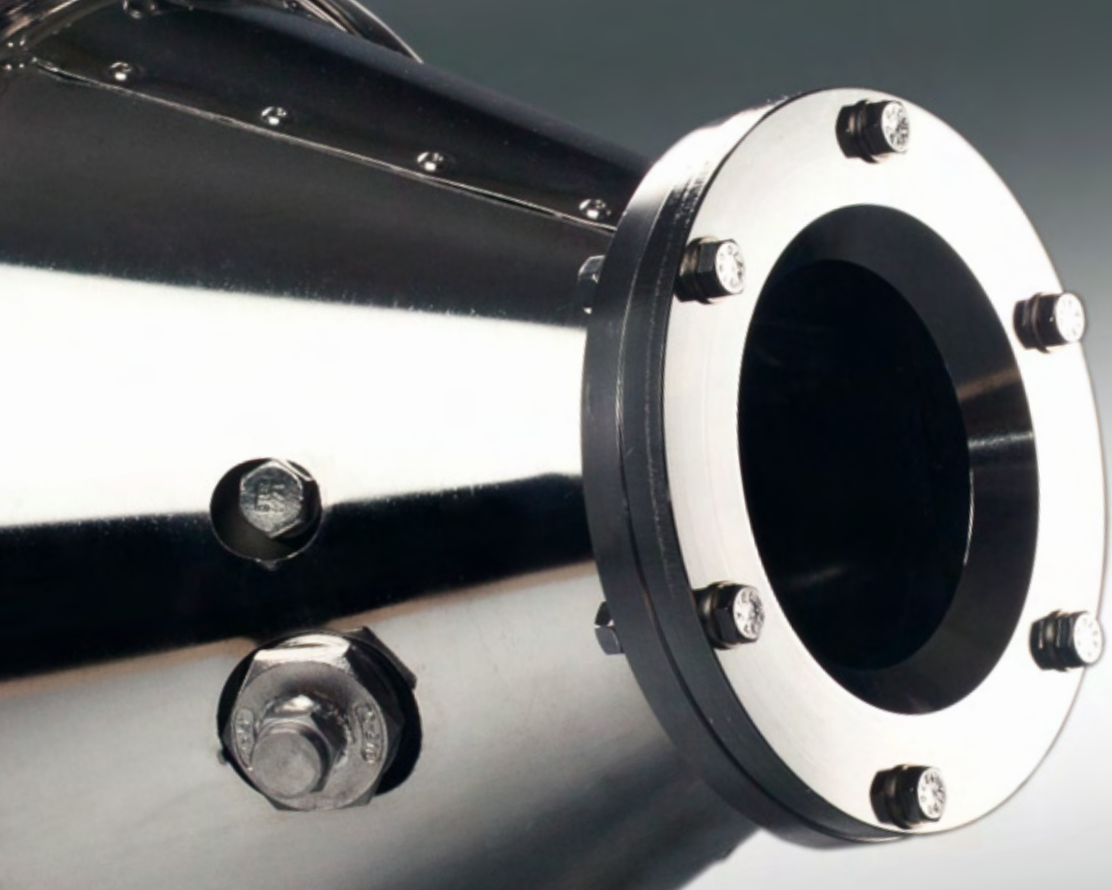
Active system for diesel applications with low to medium output and low to high dynamic change in power consumption such as forklifts, mini-excavators, wheel loaders, compressors, tractors or agricultural machines up to 130 kW.

SintDOC

Passive system for medium to high outputs with high and as constant as possible power consumption such as dump trucks, mobile excavators and crawler excavators with engines up to 600 kW.

SintROC

Passive system with additive support for engine outputs from 50 to 600 kW with a dynamic change in power consumption such as with mining vehicles, construction machines and agricultural machines.



Clever control

The electronics defines the dosing strategy for the additive. The dosing amount depends on the emission behaviour of the vehicle and therefore keeps running costs to a minimum. The control system also functions as a datalogger, and acquires temperature and pressure data.



Clear display

The modern display informs the machine user with well readable text and international symbols at all times about the status of the diesel particulate filter for higher reliability and easy scheduling in service.



Easy installation

The modular configuration of the system enables excellent flexibility for installation in small and also large machines. The electronics does not require a special power supply and can therefore find universal use.



Quick service

Service master is a software for the installation and maintenance of diesel particulate filters. The software has an intuitive user interface and is easy to use.



SintROC: The values add up – inside and outside

1 Robust and low-maintenance: the filter element

- Extremely durable metal filter medium – a long life also with heavy duty applications
- Low backpressure through advanced design – minimal fuel loss
- Maximum efficiency – over 99% of diesel particulates are separated
- Permanent filter monitoring – soot and ash load under control at all times
- Quick and easy cleaning – no expensive cleaning devices required



2 Convincing: the housing

- Completely made from stainless steel
- Robust with an extremely long life
- Quick fitting and easy to service
- Flexible use through very compact design

In a class of its own: SintROC with clear advantages

- Ideal nonroad solution for engine outputs from 50 to 600 kW
- Fully-automatic, passive regeneration with additive support*
- Higher engine performance, lower fuel consumption through favourable backpressure characteristics in comparison to ceramic filters
- No downtime caused by regeneration during operation
- NO₂ reduction by up to 70%, which is particularly important for mining applications
- Independent of the type of diesel fuel, without restriction with regard to the sulphur content of the fuel
- Very long service interval thanks to an extremely high ash holding capacity
- Maximum durability, no need for replacement during the lifetime of the machine

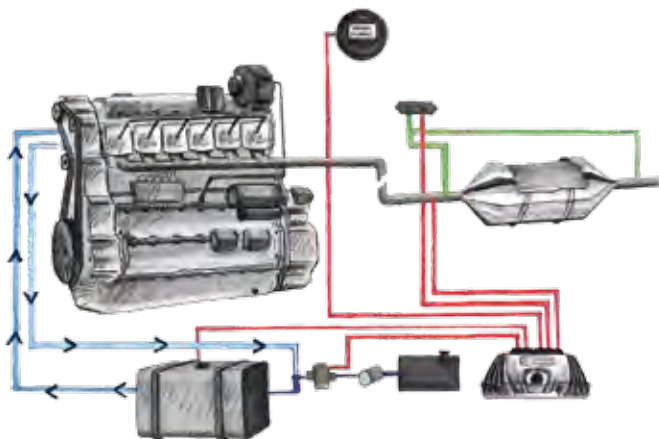
*provided for 10% of the operating time the temperature is higher than 380 °C



The difference is the electronics!

**Simply brilliant!
The most modern
electronics on the
DPF market**

- Independent additive dosing
- Extremely robust cable harness and connector – best possible protection
- Cable harness easy to adapt to different vehicle lengths
- Use with different vehicle voltages
- Fully modular design for maximum flexibility
- Uncomplicated software updates possible on the vehicle on site without the need to replace hardware
- Permanent system monitoring of general functionality and compatibility of the fitted components to the respective application
- Display of all required servicing actions (additive fill-up and filter cleaning)
- Execution of servicing (additive fill-up and filter cleaning) possible at all times without laptop



This is how the SintROC-DPF system works

SintROC enables fully-automatic regeneration provided the exhaust gas exceeds a temperature of 380 °C for 10% of the operating time. The additive dosed into the fuel reduces the ignition temperature of the soot and accelerates the regeneration process. In addition to filtering out the soot and regenerating, the DPF filter also reduces the nitrogen dioxide present in the exhaust gas by up to 70%.

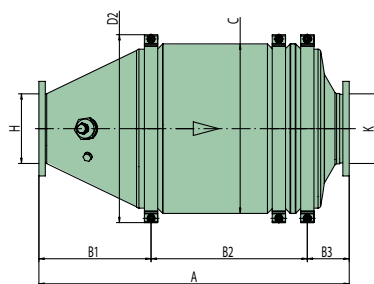


Dimension table for filter systems

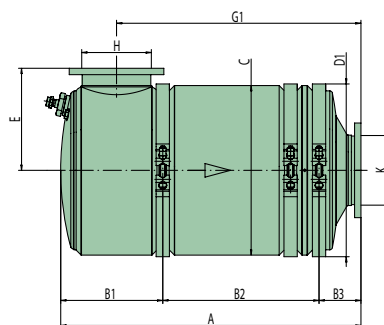
System	Inlet cone	Outlet cone	Dimensions in mm													
			A	B1	B2	B3	C	D1	D2	E	F	G1	G2	G3	H	K
SintROC 5.4	axial	axial	584	211	294	79	Ø319	Ø325	353,5						Ø130	Ø130
SintROC 5.4	axial	radial	694	211	294	189	Ø319	Ø325	353,5		184			552	Ø130	Ø130
SintROC 5.4	radial	axial	565	192	294	79	Ø319	Ø325	353,5	192		460			Ø130	Ø130
SintROC 5.4	radial	radial	675	192	294	189	Ø319	Ø325	353,5	192	184	570	428	533	Ø130	Ø130
SintROC 6.5	axial	axial	627	211	337	79	Ø319	Ø325	353,5						Ø130	Ø130
SintROC 6.5	axial	radial	737	211	337	189	Ø319	Ø325	353,5		184			595	Ø130	Ø130
SintROC 6.5	radial	axial	608	192	337	79	Ø319	Ø325	353,5	192		503			Ø130	Ø130
SintROC 6.5	radial	radial	718	192	337	189	Ø319	Ø325	353,5	192	184	613	471	576	Ø130	Ø130
SintROC 8.1	axial	axial	716	211	426	79	Ø319	Ø325	353,5						Ø130	Ø130
SintROC 8.1	axial	radial	826	211	426	189	Ø319	Ø325	353,5		184			684	Ø130	Ø130
SintROC 8.1	radial	axial	697	192	426	79	Ø319	Ø325	353,5	192		592			Ø130	Ø130
SintROC 8.1	radial	radial	807	192	426	189	Ø319	Ø325	353,5	192	184	702	560	665	Ø130	Ø130
SintROC 10.2	axial	axial	716	211	426	79	Ø343	Ø350	378,5						Ø130	Ø130
SintROC 10.2	axial	radial	824	211	426	187	Ø343	Ø350	378,5		212			694	Ø130	Ø130
SintROC 10.2	radial	axial	693	188	426	79	Ø343	Ø350	378,5	204		592			Ø130	Ø130
SintROC 10.2	radial	radial	801	188	426	187	Ø343	Ø350	378,5	204	212	700	570	671	Ø130	Ø130
Tolerance			±5	±2	±2	±2	±2	±2	±2	±2	±2	±5	±5	±5	±2	±2
Flange	Outer diameter: Ø178; boreholes: 6 x 60° x Ø10, bolt pattern Ø159															



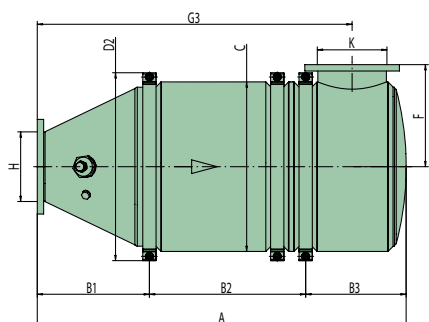
System	Inlet cone	Outlet cone	Suitable for engine outputs in kW	Weight in kg
SintROC 5.4	axial	axial	50 - 140	38
SintROC 5.4	axial	radial	50 - 140	43
SintROC 5.4	radial	axial	50 - 140	41
SintROC 5.4	radial	radial	50 - 140	46
SintROC 6.5	axial	axial	140 - 180	35
SintROC 6.5	axial	radial	140 - 180	40
SintROC 6.5	radial	axial	140 - 180	38
SintROC 6.5	radial	radial	140 - 180	43
SintROC 8.1	axial	axial	180 - 220	47
SintROC 8.1	axial	radial	180 - 220	52
SintROC 8.1	radial	axial	180 - 220	50
SintROC 8.1	radial	radial	180 - 220	55
SintROC 10.2	axial	axial	220 - 290	49
SintROC 10.2	axial	radial	220 - 290	54
SintROC 10.2	radial	axial	220 - 290	53
SintROC 10.2	radial	radial	220 - 290	58



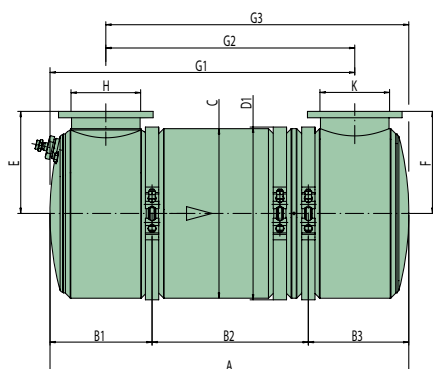
Axial - Axial



Radial - Axial



Axial - Radial



Radial - Radial

System solutions to reduce emissions



SintAC diesel particulate filter

The product selling worldwide eliminates the discharge of particulates in engines up to 130 kW and therefore satisfies current and future emission legislations. Special features are life time filter elements, high ash holding capacity and considerably lower running costs in comparison to conventional diesel particulate filters.



SintROC diesel particulate filter

Passive DPF system using additive technology for engine applications from 50 to 600 kW – particularly suitable for mining, construction and agricultural machines with changing operation conditions. The end user benefits from the same advantages as with the SintAC.



SintDOC diesel particulate filter

Compact and robust system designed specially for engines with high outputs (up to 600 kW). Regeneration is carried out continuously during operation with the aid of a diesel oxidation catalyst (DOC). The user advantages of the passive SintDOC DPF system correspond to those of the active SintAC.



Fuel pre-filter

Increased fuel injection pressures also lead to greater demands on fuel filtration with regard to water and particle separation. Injection pump manufacturers have defined the corresponding specifications. The PreLine preliminary fuel filter from MANN+HUMMEL achieves a water separation efficiency of at least 93% acc. to ISO 4020. Fuel pre-filtration protects modern injection systems against damage caused by corrosion and abrasion. The reduction of wear extends the lifetime of the engine and also reduces emissions.



Centrifuges

This product from MANN+HUMMEL for oil filtration efficiently separates contaminants such as soot and metal particles from the lube oil of diesel engines. This extends the service life of the oil, reduces running costs and thus enables the maximum period of use for vehicles with less downtime. Centrifuges also prevent unnecessary engine wear and so contribute towards the reduction of diesel engine emissions.



Crankcase ventilation

The MANN+HUMMEL ProVent series for open and closed crankcase ventilation is renowned the world over. This is due to its highly efficient oil separation, flexible use through compact design and low running costs through reduced oil consumption. Also convincing are the high operational reliability achieved by safeguarding against excessive crankcase pressure and the easy servicing.



Air cleaners

MANN+HUMMEL air cleaners are characterised by high separation efficiency, long service life and high dust holding capacity. Users also appreciate advantages such as flexible use through compact design, low running costs achieved by low pressure drop, and high operational reliability achieved by reliable seals. A further efficient side-effect which comes with the product is the problem-free recycling of the metal-free filter elements.

