



**Simply intelligent: the new SintAC diesel particulate filter**  
**Active regeneration on a new level**





## **MANN+HUMMEL SintAC – the new benchmark for active DPF systems**

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

The new SintAC diesel particulate filter from MANN+HUMMEL is the ultimate solution for nonroad applications with engine outputs up to 130 kW. Controlled by intelligent software and using modern electronics, the system enables fully-automatic active

regeneration with the soot oxidation triggered as soon as the filter is loaded with soot particles. The self-learning system from MANN+HUMMEL raises efficiency, economy and operational reliability once more to a new level.

### **Three filters with excellent efficiency**

#### **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 mining vehicles, construction machines and agricultural machines.



#### Clever control

The new electronics is self-learning, functions as a datalogger, and acquires temperature and pressure data. The electronics monitors the emission behaviour of the engine and the regeneration success of the SintAC. Using this information the software develops a regeneration strategy with precise and reliable additive dosing. Lower emissions mean less additive consumption and this in turn reduces running costs and saves money.



#### 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

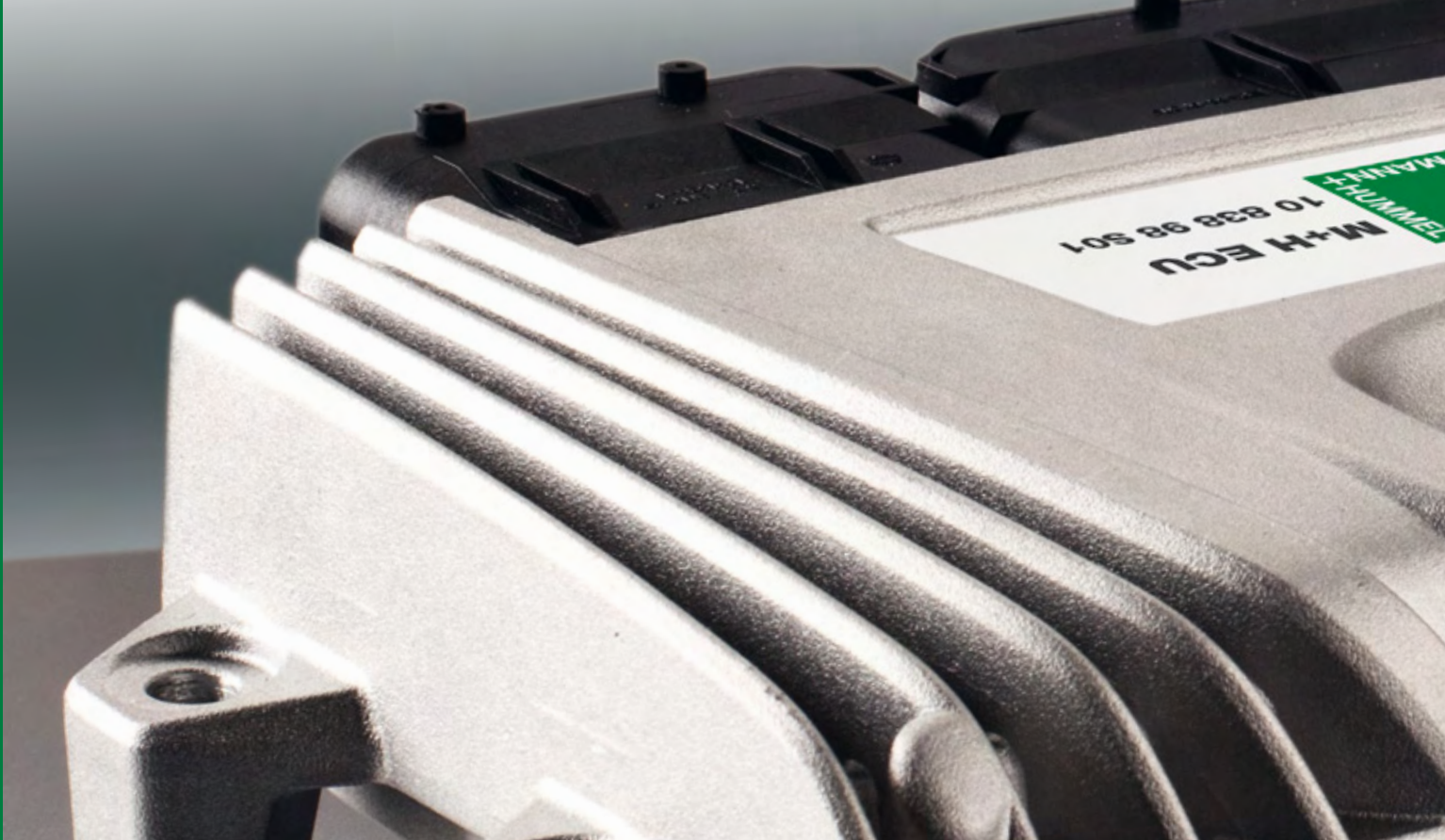
The modular configuration of the system enables excellent flexibility for installation in small and also large machines. The electronics can be used with any power supply from the engine between 12 and 24V and can therefore find universal use.



#### Quick service

Service master is a special software for the installation and maintenance of diesel particulate filters. The software has an intuitive user interface and is easy to use. A big advantage is that the maintenance does not require use of a laptop.

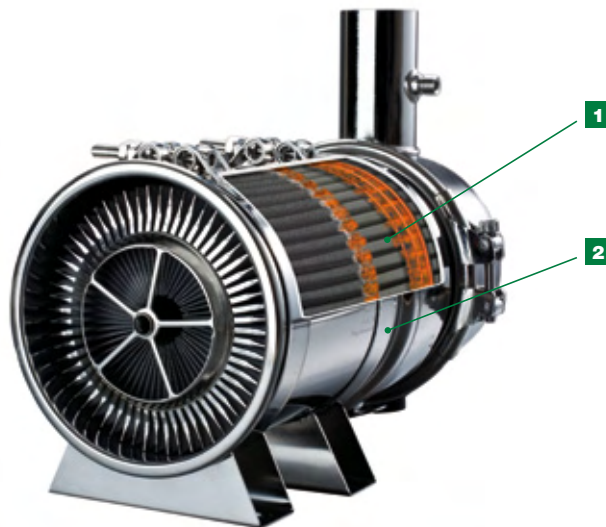




## SintAC: The values add up – inside and outside

### 1 Durable and low-maintenance: the filter element

- Extremely robust 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 chambers 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: SintAC with a clear advantage

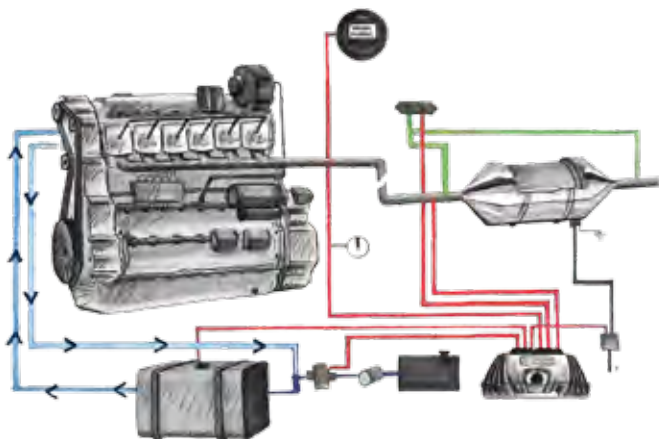
- Ideal nonroad solution for mobile and stationary diesel engines up to 130 kW
- NO<sub>2</sub> reduction – depending on the application up to 70%
- No machine downtimes caused by regeneration
- Very long service interval thanks to extremely high ash loading capacity
- Excellent durability – for the average engine lifetime
- Wide range of applications for exhaust gas temperatures and many application possibilities which are not possible with the passive system



## The difference is the new electronics!

### Simply brilliant! The most intelligent control system on the DPF market

- Fully-automatic additive dosing – varying according to the actual emission behaviour
- 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 SintAC DPF system works

Sensors monitor the load status of the filter. The electronic control checks the emission behaviour of the engine, elaborates the ideal regeneration strategy by itself and precisely selects the corresponding additive dosing. A heating element ignites the soot during normal operation and is completely oxidized over the whole filter in less than 6 minutes.





## Dimension table for filter systems

System	Inlet and outlet cone		Dimensions in mm															
			A	B1	B2	B3	C1	C2	D1	D2	E	F	G1	G2	G3	H	K	
SintAC 1.2	axial	axial	483	104	192	187	Ø158		Ø182	223						Ø55	Ø55	
SintAC 1.2	axial	radial	386	104	192	90	Ø158		Ø182	223		184			341	Ø55	Ø40	
SintAC 1.2	radial	axial	469	90	192	187	Ø158		Ø182	223	100		424			Ø55	Ø55	
SintAC 1.2	radial	radial	372	90	192	90	Ø158		Ø182	223	100	184	327	282	327	Ø55	Ø40	
SintAC 1.8	axial	axial	563	104	272	187	Ø158		Ø182	223						Ø55	Ø55	
SintAC 1.8	axial	radial	466	104	272	90	Ø158		Ø182	223		184			421	Ø55	Ø55	
SintAC 1.8	radial	axial	549	90	272	187	Ø158		Ø182	223	100		504			Ø55	Ø55	
SintAC 1.8	radial	radial	452	90	272	90	Ø158		Ø182	223	100	184	407	362	407	Ø55	Ø55	
SintAC 2.7	axial	axial	695	104	404	187	Ø158		Ø182	223						Ø55	Ø55	
SintAC 2.7	axial	radial	598	104	404	90	Ø158		Ø182	223		184			553	Ø55	Ø55	
SintAC 2.7	radial	axial	681	90	404	187	Ø158		Ø182	223	100		636			Ø55	Ø55	
SintAC 2.7	radial	radial	584	90	404	90	Ø158		Ø182	223	100	184	539	494	539	Ø55	Ø55	
SintAC 3.8	axial	axial	759	134	409	216	Ø208,5		Ø232	266						Ø70	Ø70	
SintAC 3.8	axial	radial	653	134	409	110	Ø208,5		Ø232	266		212			598	Ø70	Ø70	
SintAC 3.8	radial	axial	735	110	409	216	Ø208,5		Ø232	266	110		680			Ø70	Ø70	
SintAC 3.8	radial	radial	629	110	409	110	Ø208,5		Ø232	266	110	212	574	519	574	Ø70	Ø70	
SintAC 5.4*	axial	axial	728	209	310	209	Ø299	Ø319	Ø325	353,5						Ø130	Ø130	
SintAC 5.4*	axial	radial	706	209	310	187	Ø299	Ø319	Ø325	353,5		192			604	Ø130	Ø130	
SintAC 5.4*	radial	axial	709,5	190,5	310	209	Ø299	Ø319	Ø325	353,5	192		604			Ø130	Ø130	
SintAC 5.4*	radial	radial	687,5	190,5	310	187	Ø299	Ø319	Ø325	353,5	192	192	582	480	586	Ø130	Ø130	
SintAC 8.1*	axial	axial	863	209	445	209	Ø299	Ø319	Ø325	353,5						Ø130	Ø130	
SintAC 8.1*	axial	radial	841	209	445	187	Ø299	Ø319	Ø325	353,5		192			739	Ø130	Ø130	
SintAC 8.1*	radial	axial	844,5	190,5	445	209	Ø299	Ø319	Ø325	353,5	192		739			Ø130	Ø130	
SintAC 8.1*	radial	radial	822,5	190,5	445	187	Ø299	Ø319	Ø325	353,5	192	192	717	615	721	Ø130	Ø130	
<b>Tolerance</b>			±5	±1	±2	±1	±1	±1	±1	±1	±1	±1	±1	±5	±5	±5	±1	±1

\* The SintAC systems 5.4 and 8.1 require an inlet and outlet cone

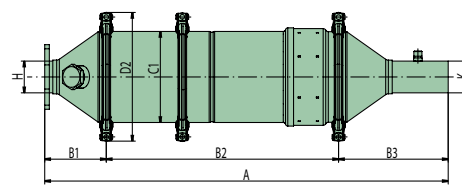
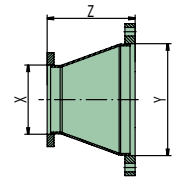


System	Inlet and outlet cone		Suitable for engine outputs in kW	Weight in kg
SintAC 1,2	axial	axial	0 - 25	7,6
SintAC 1,2	axial	radial	0 - 25	7,4
SintAC 1,2	radial	axial	0 - 25	7,9
SintAC 1,2	radial	radial	0 - 25	7,8
SintAC 1,8	axial	axial	20 - 30	9,6
SintAC 1,8	axial	radial	20 - 30	9,8
SintAC 1,8	radial	axial	20 - 30	10,0
SintAC 1,8	radial	radial	20 - 30	10,1
SintAC 2,7	axial	axial	30 - 50	13,6
SintAC 2,7	axial	radial	30 - 50	13,7
SintAC 2,7	radial	axial	30 - 50	13,9
SintAC 2,7	radial	radial	30 - 50	14,1
SintAC 3,8	axial	axial	50 - 75	19,7
SintAC 3,8	axial	radial	50 - 75	20,1
SintAC 3,8	radial	axial	50 - 75	20,6
SintAC 3,8	radial	radial	50 - 75	21,0
SintAC 5,4	axial	axial	75 - 100	36,4
SintAC 5,4	axial	radial	75 - 100	38,7
SintAC 5,4	radial	axial	75 - 100	39,6
SintAC 5,4	radial	radial	75 - 100	41,9
SintAC 8,1	axial	axial	100 - 130	45,4
SintAC 8,1	axial	radial	100 - 130	47,7
SintAC 8,1	radial	axial	100 - 130	48,6
SintAC 8,1	radial	radial	100 - 130	50,9

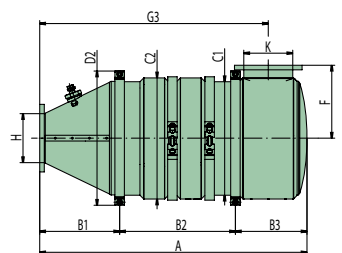
Rough estimate, check in individual cases

#### Inlet and outlet cone

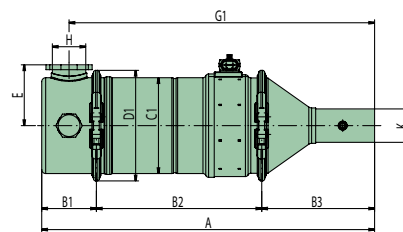
REDUCER	Dimensions in mm		
	X	Y	Z
INLET 5.4	Ø81	Ø131	103
OUTLET 5.4	Ø131	Ø81	197
INLET 8.1	Ø105	Ø131	73
OUTLET 8.1	Ø131	Ø105	167



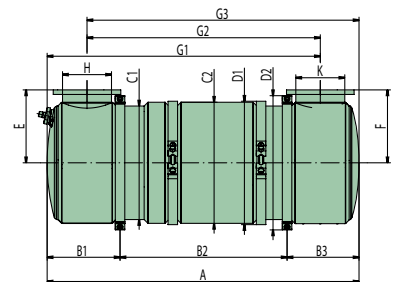
Axial - Axial



Axial - Radial



Radial - Axial



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 the 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.

