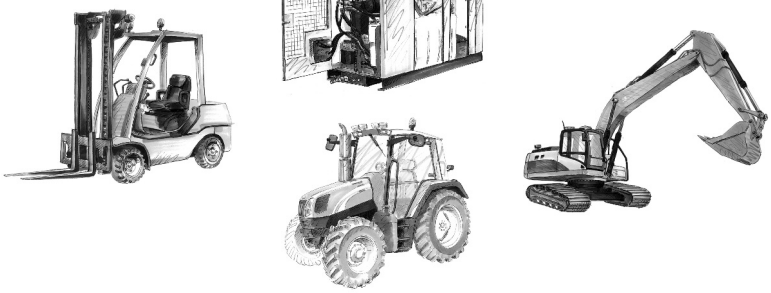
MANN+HUMMEL ENTARON

The new two-stage filter – flexible and designed for compact installation spaces

ENTARON: developed for the highest requirements

MANN+HUMMEL has developed a new two-stage filter for applications with heavy dust loads: the ENTARON. The compact design of the new filter combines high performance with a small installation space and so takes into account the requirements of next generation machines and vehicles. The ENTARON 10 is the first product of a new series designed for flow rates from 2 to 10 m³/min. Further sizes are currently under development.



Advantages at a glance:

- **excellent flexibility through variable modular system**
- **corrosion-free and robust housing through use of fibre-glass reinforced plastic**
- **easy handling with tool-free element replacement**
- **excellent reliability through robust elements and patented sealing system**
- **eco-friendly disposal through metal-free filter element (fully incinerable)**
- **easy adaptation to different machines through different port positions**
- **quick first installation on vehicle through screw threads integrated in housing**

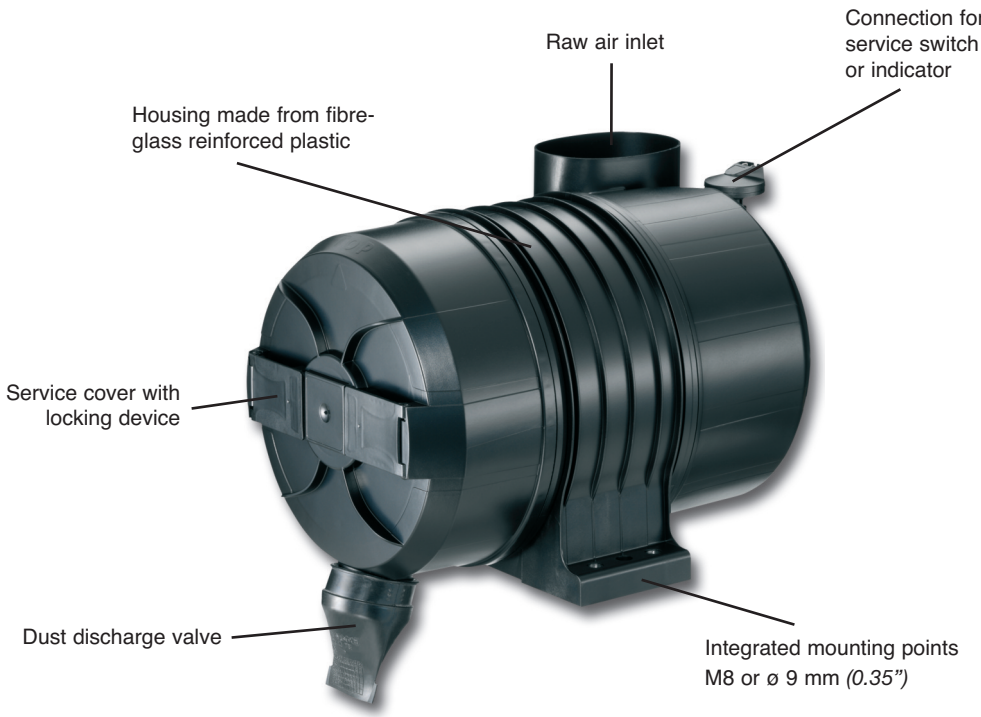
Robust housing

The housing of the new ENTARON is made from fibre-glass reinforced plastic. This means the filter is able to handle extreme physical conditions. At the same time the design has the advantage that it is resistant to corrosion.

The housing consists of three parts with the casing attached to the ports using a special welding process. This welding ensures robust and reliable joining and at the same time enables practically every required orientation of the port to the integrated bracket. The result is high flexibility and easy adaptation of the filter to almost all installation situations.

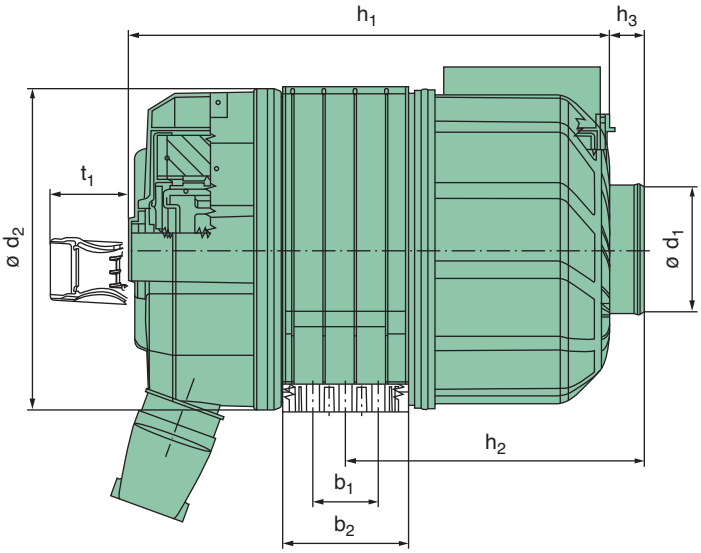
A high separation efficiency of over 88% makes the new ENTARON ideal for applications with heavy dust loads. This high value also enables a more compact filter design without shortening service life. In its class, the new ENTARON represents the current benchmark for small installation spaces and service life.

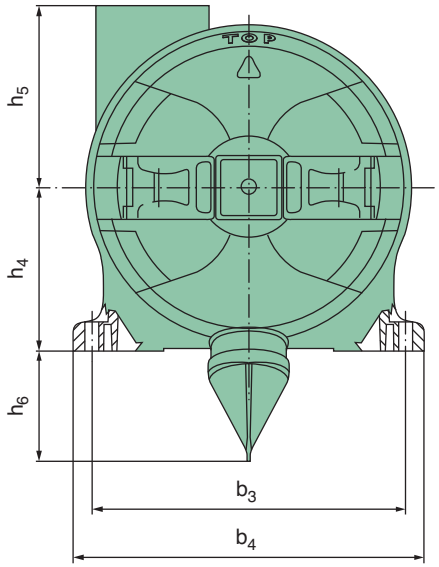
Naturally the standard version is equipped with an integrated connection point for a service switch or indicator.

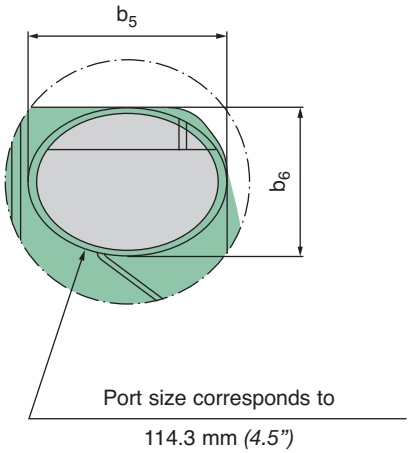


ENTARON

Dimensions and part numbers







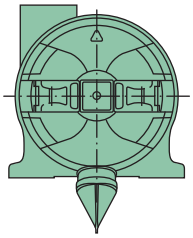


Fig. 1

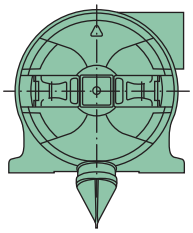


Fig. 2

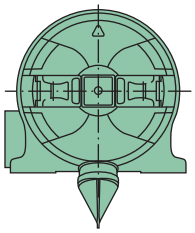


Fig. 3

Size	Nominal flow rate [m³/min]	Fig.	Part no. without secondary element	Part no. with secondary element	MANN-FILTER replacement element MANN-FILTER main element	MANN-FILTER replacement element MANN-FILTER secondary element
ENTARON 10	7.5 - 10	1	**40 450 92 951**	**40 450 92 941**	**C 19 450**	**CF 450**
		2	**40 450 92 950**	**40 450 92 940**		
		3	**40 450 92 952**	**40 450 92 942**		

Size	Dimensions in mm *[Dimensions in inches]*														
	d_1	d_2	h_1	h_2	h_3	h_4	h_5	h_6	b_1	b_2	b_3	b_4	b_5	b_6	t_1
ENTARON 10	102 *(4.02)*	256 *(10.08)*	383 *(15.08)*	210 *(8.27)*	27,6 *(1.09)*	130 *(5.12)*	145 *(5.71)*	88 *(3.46)*	52 *(2.05)*	100 *(3.94)*	250 *(9.84)*	280 *(11.02)*	124 *(4.88)*	91 *(3.58)*	63 *(2.48)*

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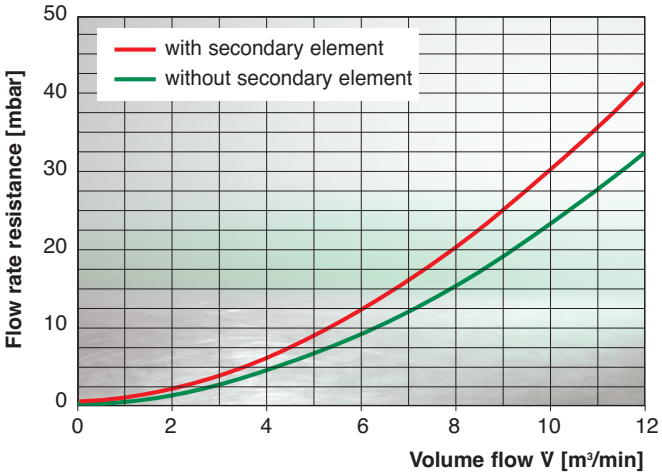
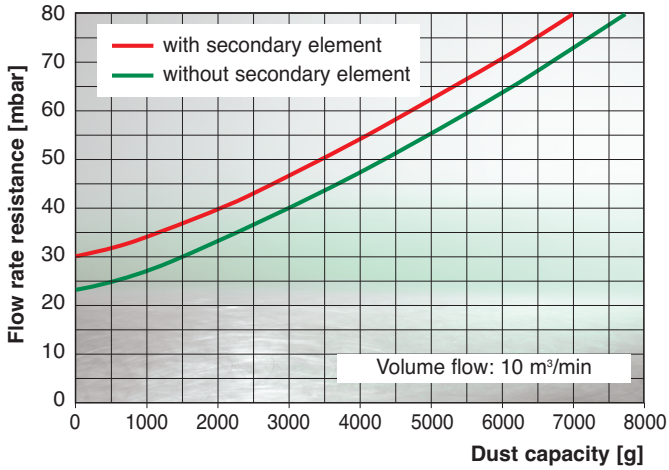
Flow characteristics and specifications

... for flow rates as per ISO 5011
ENTARON 10



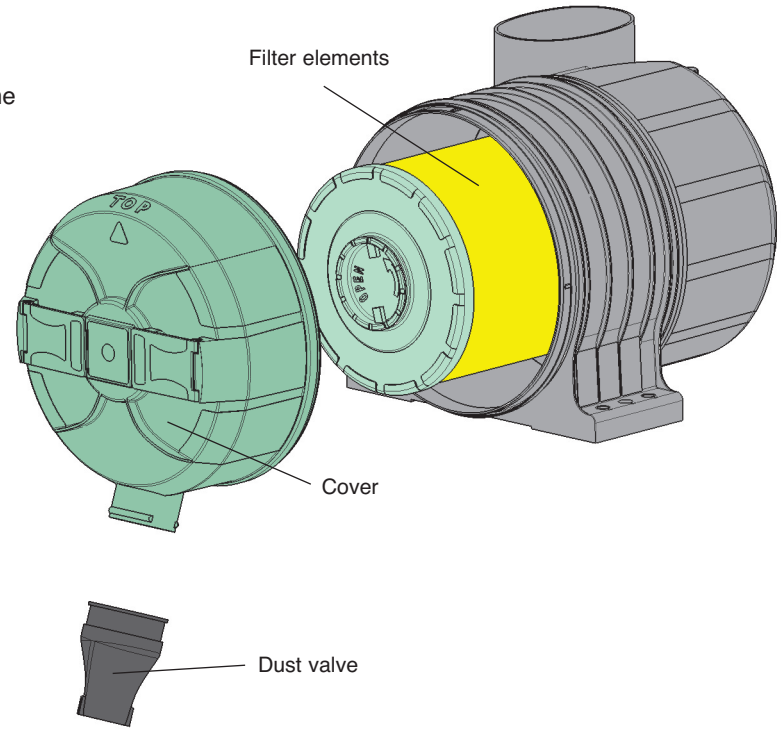
... for dust capacity as per ISO 5011
ENTARON 10



Further specifications

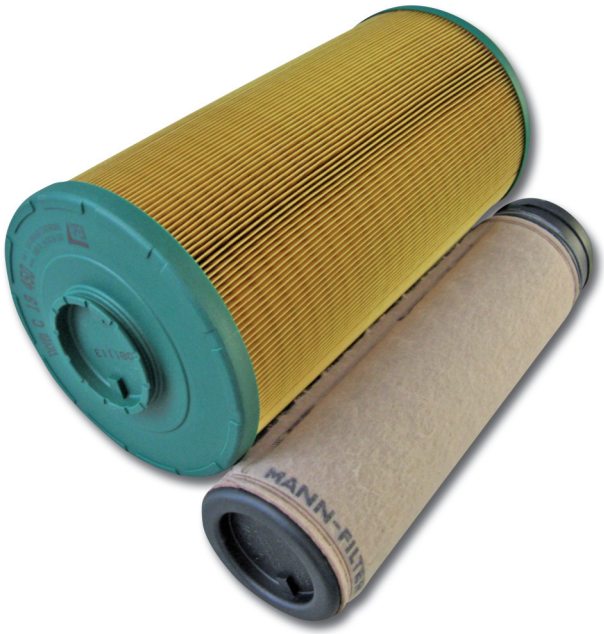
Operating temperature with continuous duty	-30 °C to +90 °C
	+110 °C for a short time
Tightening torque for mounting screws	25 Nm
Tightening torque for hose clamp (on the clean air side)	max. 6 Nm
Housing material	PP GF 30

Replacement parts



Size	Cover	Dust valve	Replacement filter element	
			MANN-FILTER main element	MANN-FILTER secondary element
ENTARON 10	**40 450 17 999**	**39 000 40 731**	**C 19 450**	**CF 450**

High performance filter elements



The filter elements of the new ENTARON are designed to handle demanding applications:

- A patented sealing system ensures reliable sealing between elements and housing.
- A robust middle tube made from plastic reinforces the filter element and therefore protects the machine.
- The safety element in the ENTARON is screwed to the housing to prevent the possibility of unintentional removal and to ensure reliable function of the filter.

Filter servicing

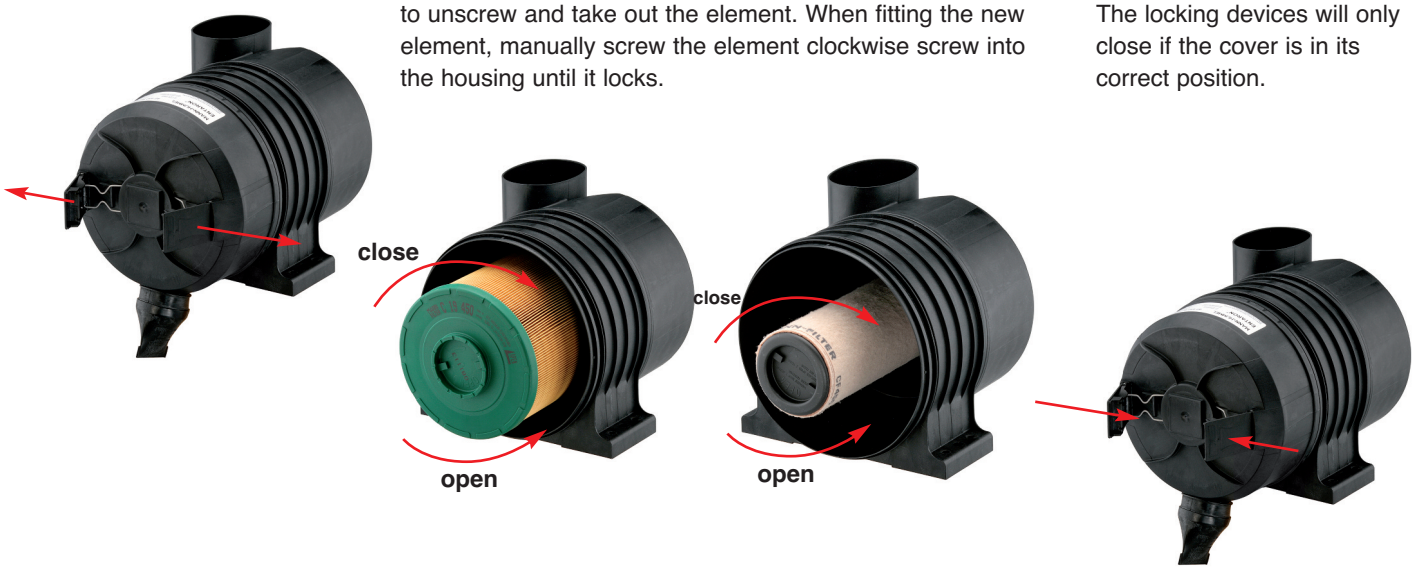
The ENTARON was developed especially to meet the requirements of next generation machines. The increasing complexity of exhaust systems today makes the available installation space more and more important.

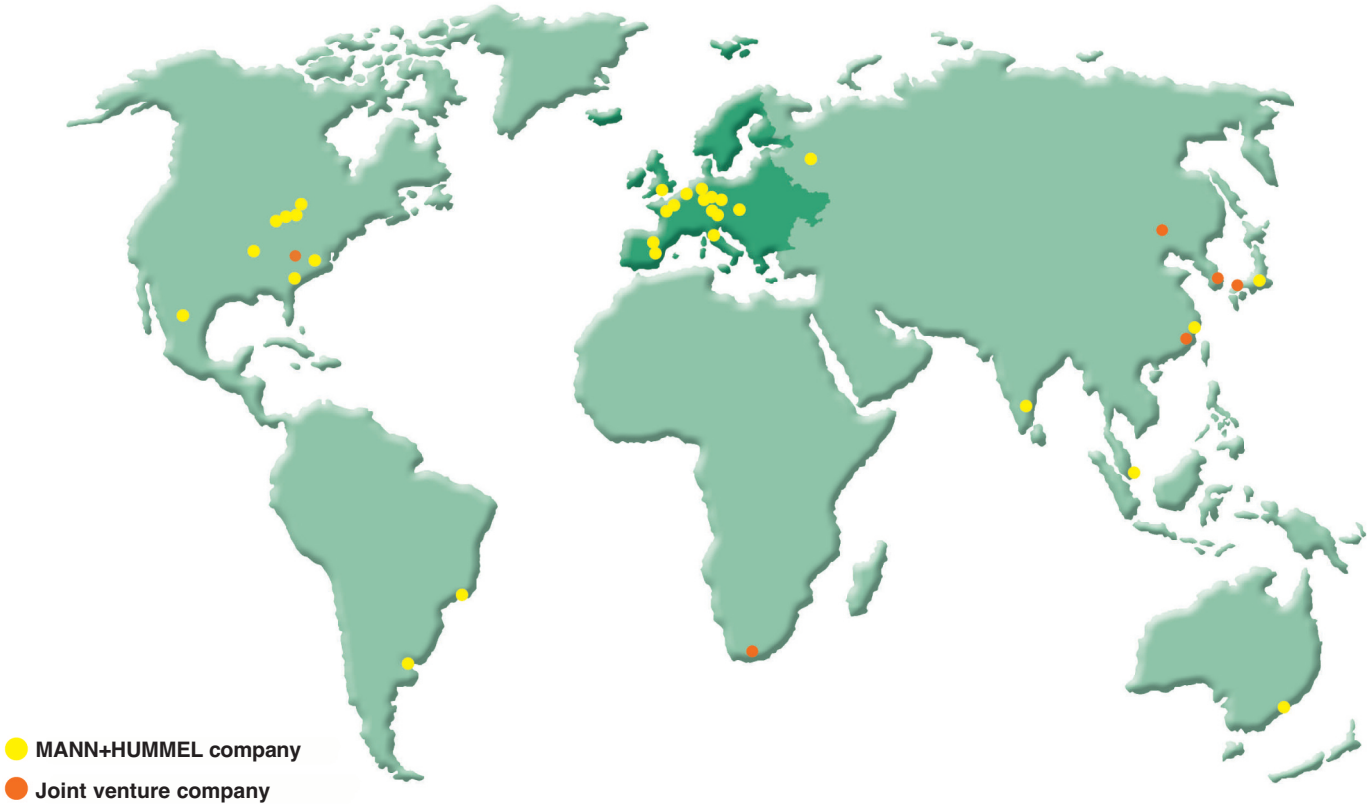
In fact installation space is not just important when fitting the filter to the machine. The task of servicing the filter in a tight and hot engine compartment makes efficient use of the installation space a must. In addition, replacement of the filter element has to be easy and quick to carry out. The ENTARON filter from MANN+HUMMEL solves this problem using a newly-developed system to combine use of well-established concepts (e.g. tie rods) with modern handling (e.g. locking device on the service cover). This enables filter servicing from the end of the filter without having to grip around the filter. Field trials and tests with service technicians in the construction industry have confirmed the effectiveness of the concept!

Step 1
Open the locking devices and remove the cover.

Step 2
Remove the used element and insert the new one. Please note: the ENTARON filter elements are firmly screwed inside the housing. When removing the element turn anti-clockwise to unscrew and take out the element. When fitting the new element, manually screw the element clockwise screw into the housing until it locks.

Step 3
Replace the cover in the correct position and close the plastic locking devices. The locking devices will only close if the cover is in its correct position.





MANN+HUMMEL Group

The MANN+HUMMEL Group is an international company with its headquarters in Ludwigsburg, Germany. The group employs approx. 13,200 people worldwide at more than 41 locations.

The company develops, produces and sells technically complex components for the automotive and other industries. A key area is high quality filtration products for vehicles, engines and industrial applications. The OEM business with global market leaders and producers of vehicles, machines and installations defines the quality and performance of the group. Filters for the international aftermarket are sold under numerous international brands as well as under the MANN-FILTER brand.

MANN+HUMMEL Industrial Filters

The Industrial Filters Business Unit with its headquarters in Speyer, Germany is specialised in meeting the requirements of off-highway vehicle and engine applications, compressed air and vacuum technology, mechanical engineering and plant construction. For these and other industrial fields MANN+HUMMEL Industrial Filters offers high performance products for the filtration and separation of air, gases and liquids.

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