Leadership in Filtration

MANN+HUMMEL

reddot award 2016
winner

ENTARON HD
Compact with excellent application flexibility

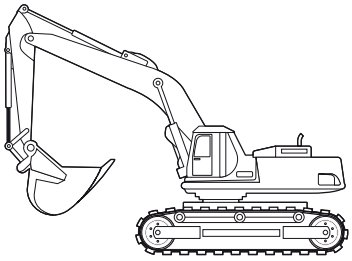
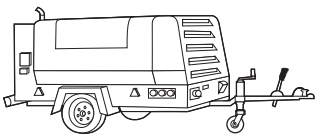
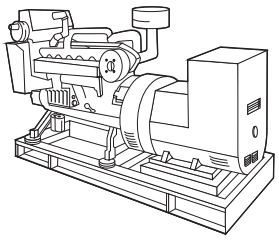
The ENTARON HD series from MANN+HUMMEL replaces the Europiclon series. The ENTARON HD covers nominal volume flow rates from 2 to 10 m^3/min. With installation space becoming ever tighter the new series is a compact air cleaner for construction and agricultural machines and compressors. In terms of installation space it is one of the smallest air cleaners in its class. In comparison to similar air cleaners, its design is approximately a third smaller while having a similar filtration performance.

FEATURES

- Available as a two-stage air cleaner (ENTARON HD), a single-stage air cleaner (ENTARON CD) and as a vacuum variation (ENTARON HD 4 VAC)
- Best protection for your engine and its components right from the start (e.g. MAF sensor) through a high-performance filter element
- Initial separation efficiency > 99.75 %*
- Final separation efficiency > 99.99 %*
- Two-stage air cleaner with tangential inlet and a pre-separation efficiency higher than 85 %.
- Secondary element (optional) available for maximum engine protection during servicing and operation of the engine
- Dust discharge through pulsation via dust discharge valve
- Equipped with seal as standard, therefore prepared for highest protection against ingress of water and minimized entry of hot intake air into engine compartment
- The ENTARON HD can replace already installed competitor products with a minimum of effort

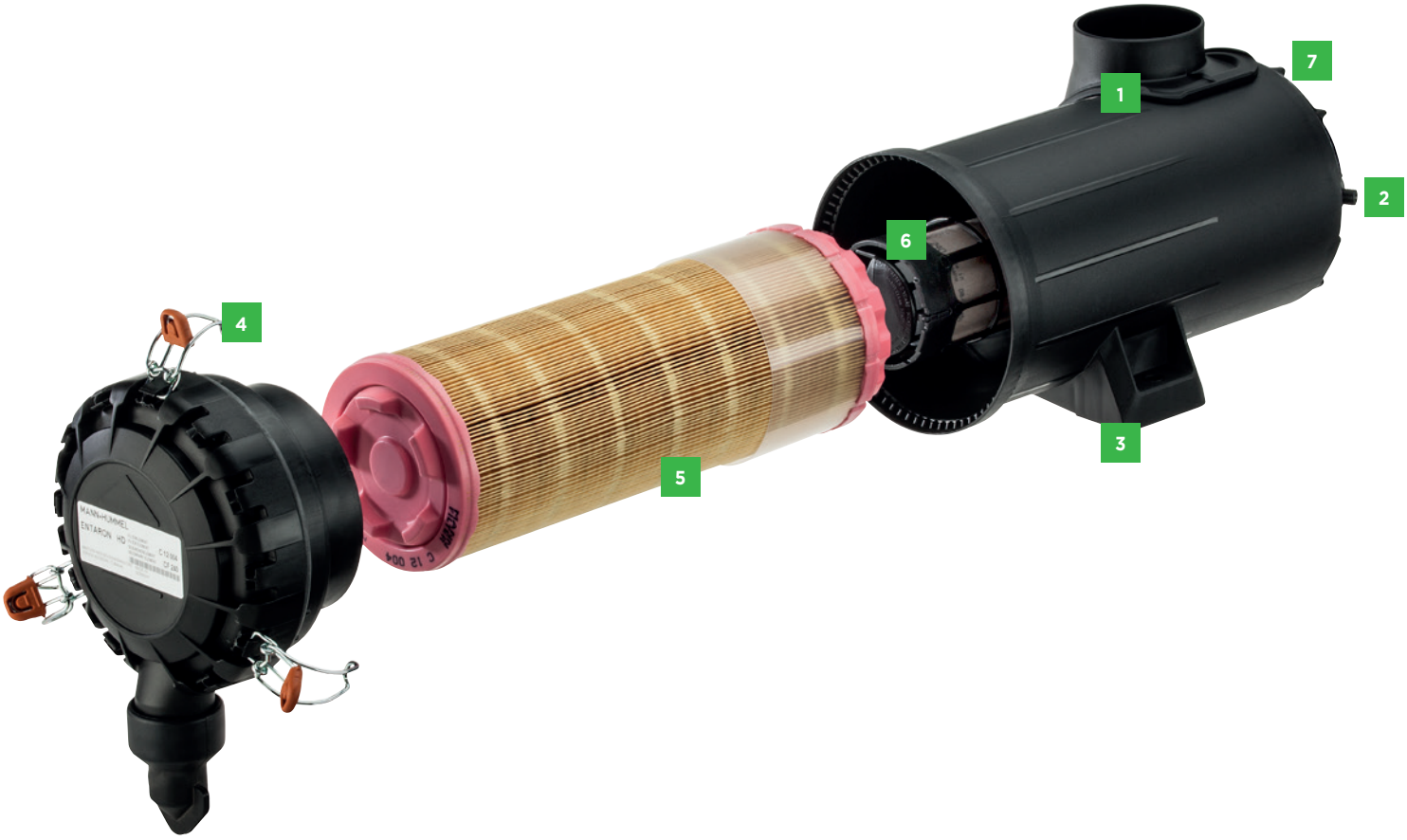
YOUR BENEFITS

- Excellent installation space flexibility
- Solution for all installation requirements
- Compact design – up to a third smaller than comparable air cleaners
- Long service life
- Increased filtration efficiency (separation efficiency)
- New sealing concept with reliable function
- Customized variations easy to generate
- Mirror image version for dirty air connection available
- Selection of welded clean air connection available as option: metric or inches, 90° bend, MAF sensor connection
- The ENTARON HD is easy to service without the need for tools
- Winner of the Red Dot Design Award in 2016

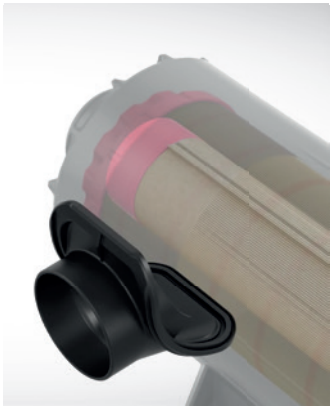





* ISO 5011, test dust, ISO coarse

ENTARON HD
Design and benefits in detail



1 HOUSING



The three-part housing concept offers the best possible flexibility for positioning of the connections relative to the integrated bracket. The HD 10 size is also available without the bracket*.

ENTARON CD – the single-stage variation is available for stationary applications with a requirement for a minimized flow resistance. As no piping is required, the installation costs are also reduced.

* Option available on request

2 SERVICE SWITCH

The ENTARON HD has a connection for a service switch integrated in the housing. It is designed to use the minimum space and is in a protected position.

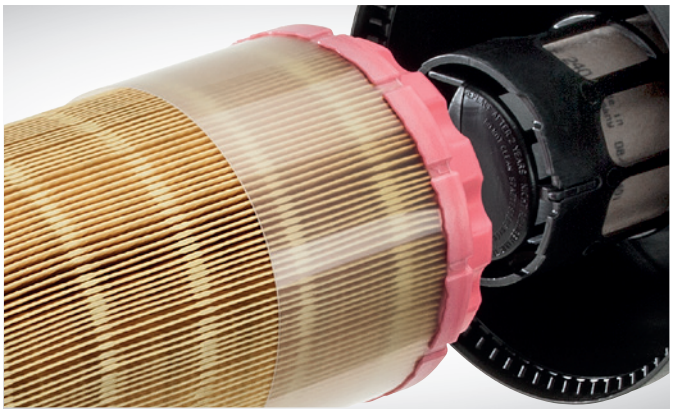
3 MOUNTING POSSIBILITIES

The bracket integrated in the housing offers two mounting possibilities: through-holes (as standard with M8 screws) and threaded inserts*.

4 END CAPS

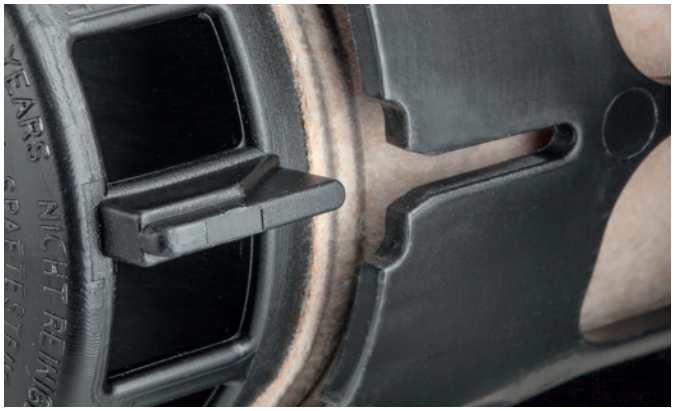
The special end caps prevent jamming of the cover and housing. Color-coded fasteners enable reliable servicing even when visibility conditions are unfavorable. In order to meet the installation space requirements, the fasteners can be positioned on the cover according to customer requirements.

5 MAIN ELEMENT



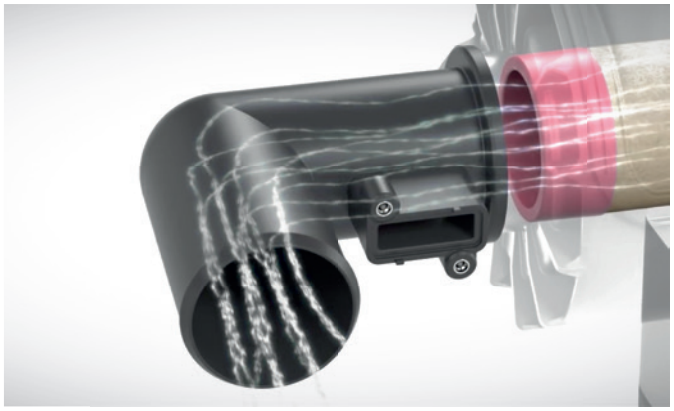
The innovative filter medium offers the best separation performance with a simultaneously long service life. The filter element is equipped with a new sealing system which reliably ensures the tightness of the element to the housing. The primary and secondary elements are metal-free and fully incinerable and are therefore less expensive to dispose of in an environment-friendly manner.

6 SAFETY ELEMENT



The center tube attached to the housing protects the safety element and defines the installation position. This excludes unintentional removal or incorrect fitting.

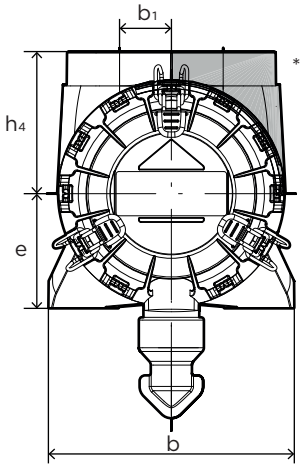
7 DESIGNED FOR MAF SENSOR



Through the defined fitting position of the secondary element and the welded clean air connection available as an option, the ENTARON HD is perfectly prepared for a MAF sensor with the best signal quality.

* Option available on request

ENTARON HD
Installation positions and order numbers



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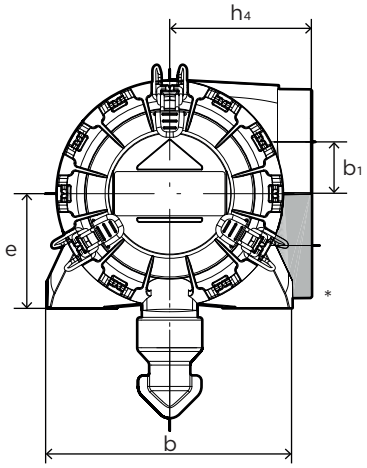

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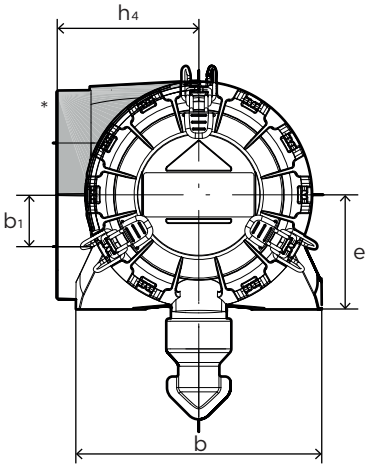

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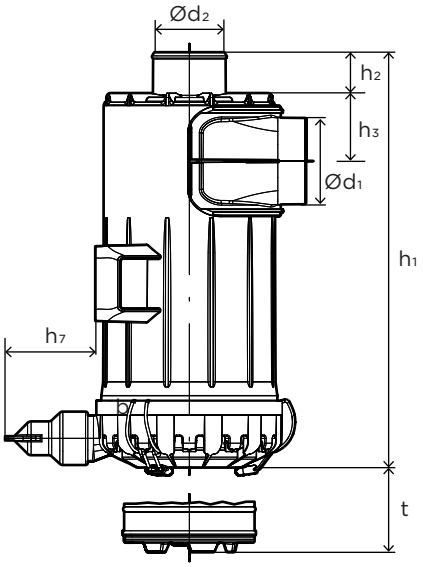
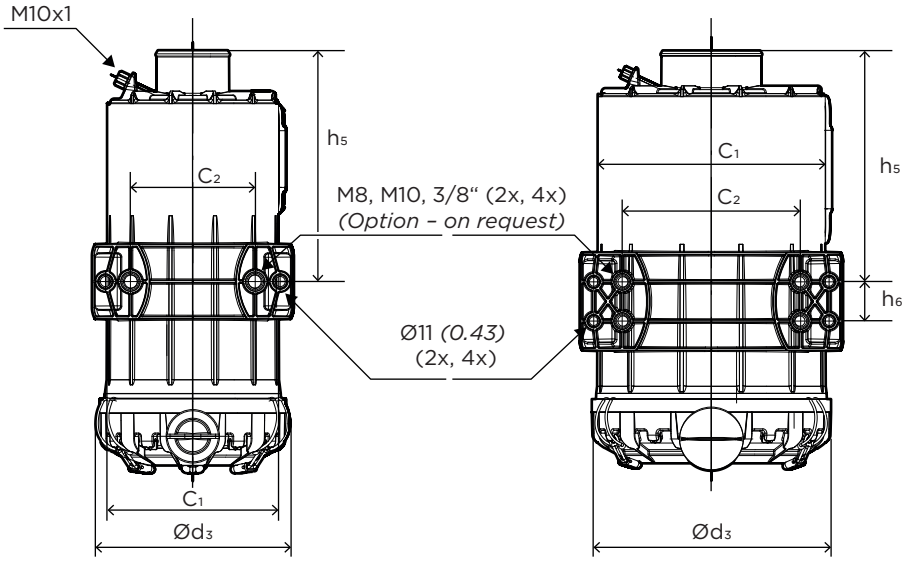
Model	Nominal flow rate (m^3/min)	Fitting position	Fig.	Order number		Replacement filter element		Weight (kg)
				without secondary element	with secondary element	MANN-FILTER main element	MANN-FILTER secondary element	
ENTARON HD4	2 – 4	left	1	45 131 92 950	45 131 92 910	C 12 004	CF 240	1.4
			2	45 131 92 951	45 131 92 911			
			3	45 131 92 952	45 131 92 912			
		right	4	45 132 92 950	45 132 92 910			
			5	45 132 92 951	45 132 92 911			
			6	45 132 92 952	45 132 92 912			
ENTARON HD 5.5	3 – 5.5	left	1	45 151 92 950	45 151 92 910	C 13 009	CF 355	1.7
			2	45 151 92 951	45 151 92 911			
			3	45 151 92 952	45 151 92 912			
		right	4	45 152 92 950	45 152 92 910			
			5	45 152 92 951	45 152 92 911			
			6	45 152 92 952	45 152 92 912			
ENTARON HD 7.5	4 – 7.5	left	1	45 171 92 950	45 171 92 910	C 15 002	CF 475	2.2
			2	45 171 92 951	45 171 92 911			
			3	45 171 92 952	45 171 92 912			
		right	4	45 172 92 950	45 172 92 910			
			5	45 172 92 951	45 172 92 911			
			6	45 172 92 952	45 172 92 912			
ENTARON HD 10	5 – 10	left	1	45 191 92 950	45 191 92 910	C 16 100	CF 510	3.1
			2	45 191 92 951	45 191 92 911			
			3	45 191 92 952	45 191 92 911			
		right	4	45 192 92 950	45 192 92 910			
			5	45 192 92 951	45 192 92 911			
			6	45 192 92 952	45 192 92 912			

* Mirror image version of dirty air connection

ENTARON HD
Dimensions and specifications





ENTARON HD 4 / 5.5 / 7.5

ENTARON HD 10

Model	Dimension in mm (inches)															
	b	b1	c1	c2	d1	d2	d3	e	h1	h2	h3	h4	h5	h6	h7	t
ENTARON HD 4	178 (7.01)	37.5 (1.48)	154 (6.07)	110 (4.33)	76 (2.99)	64 (2.52)	164 (6.46)	83 (3.27)	330 (13.00)	36 (1.42)	60 (2.36)	103 (4.06)	204 (8.04)	-	80 (3.15)	300 (11.82)
ENTARON HD 5.5	193 (7.60)	40 (1.58)	165 (6.50)	110 (4.33)	90 (3.55)	76 (2.99)	189 (7.45)	95.5 (3.76)	340 (13.40)	36 (1.42)	68 (2.68)	118 (4.65)	212 (8.35)	-	80 (3.15)	310 (12.21)
ENTARON HD 7.5	230 (9.06)	46 (1.81)	190 (7.49)	127 (5.00)	102 (4.02)	89 (3.51)	216 (8.51)	109 (4.29)	360 (14.18)	36 (1.42)	74 (2.92)	131 (5.16)	221 (8.71)	-	80 (3.15)	330 (13.00)
ENTARON HD 10	268.6 (10.58)	51 (2.01)	240 (9.46)	182 (7.17)	130 (5.12)	102 (4.02)	244 (9.61)	123 (4.85)	385 (15.17)	36 (1.42)	85.5 (3.37)	143 (5.63)	236 (9.30)	40 (1.58)	90 (3.55)	355 (13.99)

SPECIFICATIONS

Operating temperature	Discharge opening of valve downwards	Recommended tightening torque			Materials				
		Hose clamp (DIN 3017)	Service switch	Mounting screws	Housing	Clip lock	Fasteners	Sleeve	Dust discharge valve
-30 to 80°C for a short time up to 110°C	± 15°	max. 5 Nm	max. 2.5 Nm	max. 25 Nm	PP T20 black	PA6 GF30	Spring steel with surface protection	Steel with surface protection	NBR


MANN+HUMMEL
ENTARON HD
C 12 004
CF 240
MADE IN GERMANY
FILTER
C 12 004

ENTARON HD
Replacement parts and accessories

REPLACEMENT PARTS

Model	Order number replacement part		
	Cover (Fig. 1)	Main element (Fig. 2)	Secondary element (Fig. 3)
ENTARON HD 4	45 131 17 909	C 12 004	CF 240
ENTARON HD 5.5	45 151 17 909	C 13 009	CF 355
ENTARON HD 7.5	45 171 17 909	C 15 002	CF 475
ENTARON HD 10	45 191 17 909	C 16 100	CF 510

DUST DISCHARGE VALVE (FIG. 4)

Model	Connection diameter dust discharge	Order number replacement part		
		Dust discharge small (standard, Fig. 4)	Dust discharge large/offset	Dust discharge large/straight
ENTARON HD 4	40 mm	39 000 40 391	39 000 40 661	39 000 40 102
ENTARON HD 5.5	40 mm	39 000 40 391	39 000 40 661	39 000 40 102
ENTARON HD 7.5	40 mm	39 000 40 391	39 000 40 661	39 000 40 102
ENTARON HD 10	54 mm	39 000 40 731	-	-

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