



# EHC Exhaustfilter



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### EHC P15 Filter

For starting and driving of cars and light transport vehicles.



6-7

### EHC L20 Filter

For starting and driving of trucks, buses and other heavy vehicles.



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### EHC HT Filter

For permanent installation on heavy vehicles, forklifts and working machinery.



10-11

### EHC PF Filter

"Heavy Duty" exhaust filter for permanent installation.



# Exhaust gases damage your health!

Vehicles with petrol or diesel motors that are started and driven indoors represent a health hazard. Among the especially exposed occupational groups are truck drivers, workshop personnel and personnel in mines or at harbors. While the health risks are naturally more evident for those who drive or work close to the vehicles, persons in adjoining areas are also exposed.

It is important to point out that within industry and trade, it is more common than one might believe that vehicles are started or driven short distances indoors, more or less routinely.

## **The very small particles are the big problem**

Engine exhausts are a mixture of gases and carbon particles coated with various organic and non-organic substances. Exhaust gases contain more than 40 substances that are listed as hazardous air pollutants. Of these, 15 cause cancer.

One of the problems is that we can only see particles down to 20 microns with the naked eye, while 90 percent of exhaust gas particles are less than 1 micro. This means that we seldom see the gases and this especially applies to modern petrol and diesel motors.

Diesel motors produce 20 to 100 times more particles than petrol vehicles, moreover, new-generation diesels primarily produce small 'invisible' particles and these small, lighter particles stay in the air longer. In other words, exhaust hazards are not at all behind us, even if your company modernizes its vehicle park.

## **Particles fasten in the lungs**

Each time you inhale particles, a portion of them fasten in the lung tissue. The smaller the particles are, the further they penetrate. The short-term effects are coughing, difficulties in breathing or asthma attacks. On the long-term, problems arise with chronic bronchitis, reduced lung capacity, and in the worst event, lung cancer.

There is thus every reason to solve the problem of exhaust gases indoors. An indoor system employing exhaust hoses is the classic solution but in very many cases, this is neither economically nor practically feasible. The alternative solution is with mobile exhaust filters that are easily mounted directly on exhaust pipes - EHC filters that stop 99% of hazardous particle emissions.

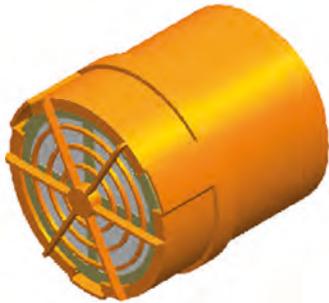


# Exhaust cleaner for vehicles

**EHC P15** is an exhaust cleaner for temporary driving of vehicles in factories, ships, workshops, exhibition halls etc.

The filter work from start and are insensitive to humidity

The filter separates mutagenic, cancerous and allergy-producing substances attached to particles in the exhaust.



## Technical Data

Reduce:

Particles > 99 % of 0,12 $\mu$  particles and bigger.

## Engine size

Up to 4 L

## RPM/min, max.

2500 r/min

## Temperature,

200°C

## Filter life

EHC P15 ~ 150 starts

The lifetime is dependent on the engine size, engine type, how it is used and engine condition

## Weight

Complete 0,4kg

Filter EHC P15 easily comply emissions standard in TRGS 554 (D), COSHH (GB), VERT B272 and TÜV Nord nr. 0931TP00149.

EHC replacement filters are treated as normal waste.



### Connection cone

- Ø 45 - 25 mm
- Ø 70 - 35 mm
- Ø 100 - 50 mm



### Connection cone with plug

- Ø 35 - 60 mm

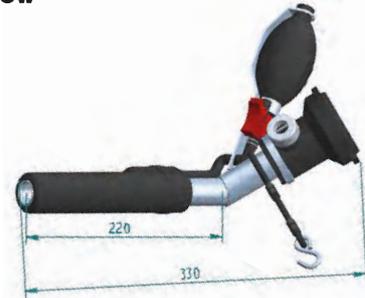


### Connection cone, Angel

- Ø 50 - 30 mm
- Ø 70 - 30 mm



### Connection with bellow

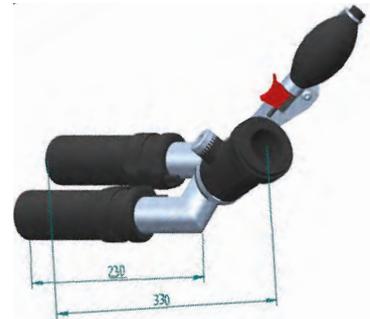


### Connection cone, double

- Ø 45 - 25 mm
- Ø 65 - 35 mm



### Connection double with bellow



# Exhaust cleaner for heavy vehicles

**EHC L20** is an exhaust cleaner for temporary driving of vehicles in factories, ships, workshops, exhibition halls etc.

The filters work from start and are insensitive to humidity

The filter separates mutagenic, cancerous and allergy-producing substances attached to particles in the exhaust.



EHC L20 Filter

## Technical Data

Reduce:

Particles > 99 % of 0,12 $\mu$  particles or bigger.

## Engine size

EHC L20, max. 10 L

## RPM/min, max.

1200 r/min

## Temperature

Standard filter element (4120171) 200°C

Reinforced filter element (4120371) 300°C

## Filter life

EHC L20 ~ 100 starts

The lifetime is dependent on the engine size, engine type, how it is used and engine condition.

## Weight

EHC L20 complete 7 kg

EHC L20 x 2 complete 11 kg

Filter EHC L20 easily comply emissions standard in TRGS 554 (D), COSHH (GB), VERT B272 and TÜV Nord nr. 0931TP00149.

EHC replacement filters are treated as normal waste.



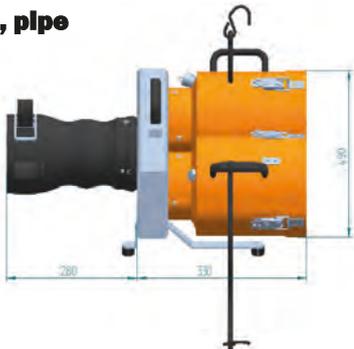
**EHC L20 pipe**



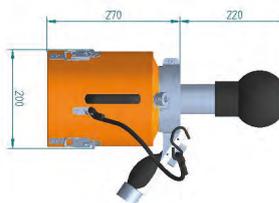
**EHC L20 double, hose**



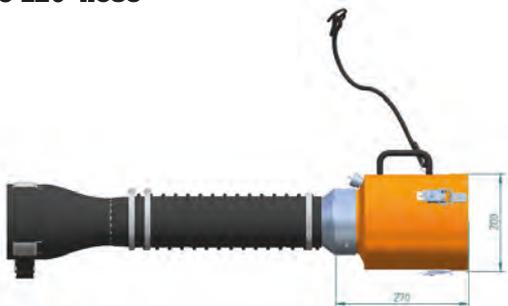
**EHC L20 double, pipe**



**EHC L20 bellow**



**EHC L20 hose**



**EHC L20 bellow, angel**



EHC L20 Filter



# Exhaust filter for diesel engines

**EHC HT** filter are designed for permanent use on diesel engines and are available in SS and alu zinc. The filters work from start and are insensitive to humidity.

All filters are delivered with:

- filter
- flanges on inlet
- heat shield
- pressure switch control lamp and buzzer to warn the driver when filter needs changing or membrane

EHC HT filter is recommended when people are confronted with running diesel exhaust in confined spaces.

For: Building machinery, heavy vehicle, industrial machines and forklift trucks.

Rental of EHC HT for temporary jobs.



## Technical Data

Separation:

Reduces particles > 99 % of > 0,4 $\mu$  particles and bigger. Even mutagenic, cancerous and allergy producing substances attach to the particles.

**Temperature, max.**

250°C

**Filter life**

The lifetime is dependent on the engine size, engine type, how it is used and engine condition.

**Weight**

EHC HT 10 Complete 23 kg

EHC HT 20 Complete 34 kg

EHC HT 35 Complete 50 kg

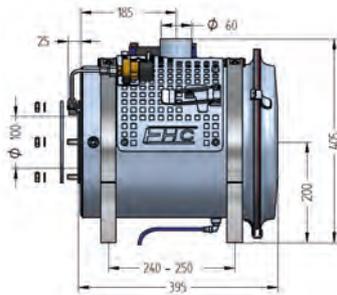
Filter EHC HT meets well emission standard in TUV S 129.99.00, TRGS 554 (D), COSHH (GB) and VERT Filter List (CH) B135.

EHC replacement filters are treated as normal waste.

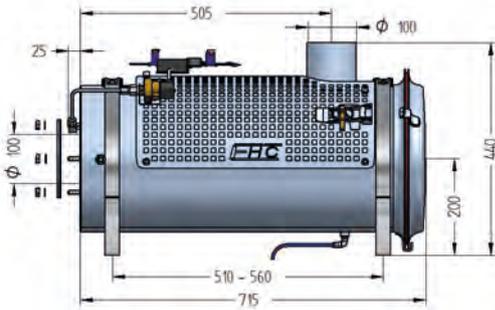
EHC HT Filter



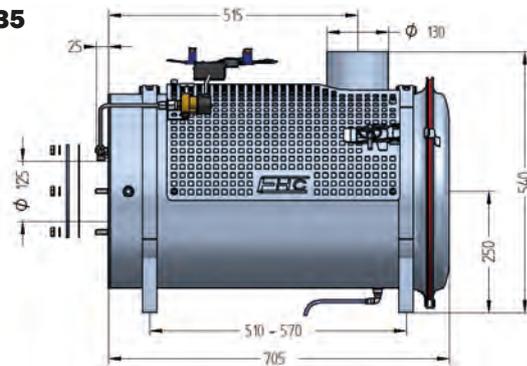
## EHC HT 10



## EHC HT 20



## EHC HT 35

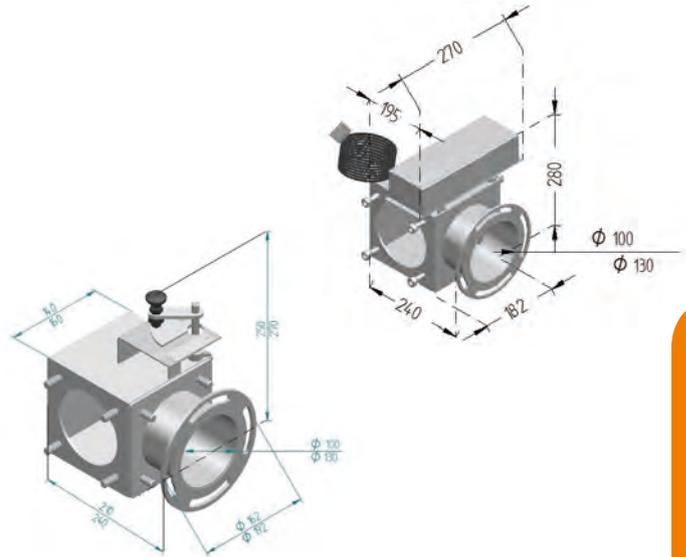


## 3-way Valve

When EHC HT is for double use (indoors & outdoors) a 3-way valve can be mounted in front of the filter, this makes it possible to use the filter when driving outdoors.

The EHC 3-way valve can be manual or electric. When electric the driver can control the valve from the driver seat. A control lamp will indicate in which position the valve is.

It's also possible to make the valve command fully automatic. This is done by using sensors that will open and close the valve when the vehicle leaves or enter the building.



# "Heavy Duty" exhaust filter

**EHC PF** filter is a closed self regenerating exhaust filter developed for permanent use on all kinds of vehicles, machines etc. The filter is made of Silicon Carbide (Sic) which is a durable and Heat resisting material.

The element has a honey comb structure. Each canal is alternately closed at the inlet or outlet side. The exhaust gases go through the porous walls and the exhaust particles are caught in the filter element (minimum 95%). The PF filters also have a positive effect on of the emissions of CO and HC (<85%).



## Application

EHC PF filter are developed for "Heavy Duty" applications. They can be used when engines are running long periods and with high work loads (min exhaust temp 300C°). There for it's very important to analyse the working conditions of the engine (temp logging).

## Self regeneration

The particles (also called soot) which are trapped in the filter are burned automatically. To bring down the regeneration temp (from 650C° to 300C°) there are 2 solutions:

- 1) use of additive:
  - adding the additive can be manuel (bulk) or automatic on-board dosing system
  - max sulfur 50 ppm
- 2) coating:
  - coating replace the additive
  - max sulfur 50ppm

The choice is depending on the numbers of hours an engine is running per year and what the engine is consuming

EHC PF Filter



## EHC PF A-C



### Maintenance

Like all regenerating filters the EHC PF filters needs some maintenance. The interval is depending on the fuel quality, oil consumption, the engine condition, the use, etc.

The average interval is 1000 hours. The back pressure kit that is standard equipment for all PF filters will monitor the back pressure, orders separate.

### Efficiently

PM > 95%  
CO och HC < 85%  
Noise > 15%

### Exhaust temp

Min 300° C

### Installation

The EHC PF needs to be mounted as close as possible to the engine. There for the PF filter may replace the original muffler.

### Choice

Right filter size is determined by the engine specifications.

### Description

All EHC PF filters are incorporated in a stainless steel muffler and delivered with:

- flanges on the in and outlet
- quick clips
- mounting legs

The EHC PF filter can be delivered with the in or outlet on the front or on the side. The in and outlet can be turned 360° to maket the mounting more friendly

All PF filters are VERT approved (B289)

## EHC PF B-D



EHC Teknik has developed and manufactures filter systems for exhaust emission control on vehicles since 1983. Our main office is in Partille, outside of Gothenburg, and our customers are primarily in Europe. Besides Sweden, we now have sales offices in England, Belgium and Germany.

Although EHC filter systems are produced in standard series, we also help our customers in situations requiring various specially designed products.

Original - EHC Particlefilter - 30 years on the market



# EHC<sup>®</sup>

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