



**GEOVENT**

## INSTRUCTION MANUAL



# GEOFILTER GFO-XT

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## 1.0 General safety precautions

**IMPORTANT** - Please study all the instructions before installing and commissioning the filter. Please keep manual for future reference. Instruct all users in the function and operation of the product.

Maintenance, replacement of filter cartridges should only be done in accordance with section 4 in this manual.

Power cables and pneumatic air hoses should be replaced at once, if they are damaged. This should only be done by trained electrician and ventilation fitter.

Do not dismantle any factory-mounted parts, since it impedes the commissioning of the equipment.

All electrical installations must be carried out by an authorised electrician.

### 1.1 Danger

It is dangerous to dismantle the filter while in operation. When installing or servicing of the filter make sure that the power is disconnected.

### 1.2 Field of application

GeoFilter GFO-XT is used for filtration of oil saturated air or fumes from polluting industrial processes such as machining, cutting and metal working involving cutting oil.

The GeoFilter GFO-XT comes with filter cartridges of different pleated textiles with or without coating (minimum filtration efficiency of 99,90% according to BIA-test - see section 1.3.)

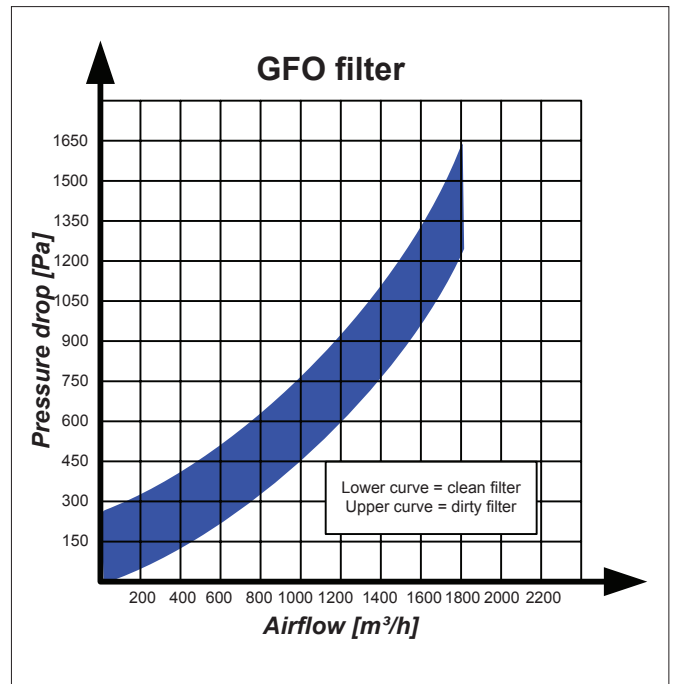
## 1.3 Technical data

Model	No. of cartridges	Filter area [m <sup>2</sup> ]	Max. Air flow
GFO-XT-3	3	14,7 m <sup>2</sup>	1.800 m <sup>3</sup> /h
GFO-XT-6	6	29,4 m <sup>2</sup>	3.600 m <sup>3</sup> /h
GFO-XT-9	9	44,1 m <sup>2</sup>	5.400 m <sup>3</sup> /h
GFO-XT-12	12	58,8 m <sup>2</sup>	7.200 m <sup>3</sup> /h

Model	Dimensions (HxBxD) mm.	Inlet	Outlet
GFO-XT-3	2032x325x927	Ø250mm	Ø250mm
GFO-XT-6	2032x625x927	Ø315mm	Ø315mm
GFO-XT-9	2032x925x927	Ø400mm	2xØ315mm
GFO-XT-12	2032x1225x927	Ø500mm	3xØ315mm

Temperature surroundings -10°C - +65°C  
 Relative humidity must be below <90%

The pressure drop in the filter will vary depending on the load and how dirty the filter cartridges are. The filter cartridges must be replaced, when the pressure drop exceeds 1.200 Pa.



## 1.4 Construction

Cabinet: Sturdy frame/cabinet, made of galvanised steel plate (corrosion class III), with filter cone and deflector in the inlet.

## 2.0 Installation

To avoid condensation problems the filter should be installed inside. However, if this is not possible, it can be placed under a protection roof and the surrounding temperature does go below minus 12°C. make sure to use clean and dry air.

Consider the optimum installation area before installation. Is placement of the filter inside possible? Is there enough room for installation and service of GFO-XT filter? Is there optimal connectivity for piping? Make sure that there is sufficient ground clearance, so you can disconnect GFO-XT filter lid when replacing the filter cartridge. At the bottom of GFO-XT filter there must be room for the filter to drain the oil from the mounted tank drain tap.

Procedure:

1. GFO-XT filter is inserted in the vertical duct system or console
2. GeoFilter GFO XT is to be connected to a circular spiral ventilation duct (SPIRO) on both clean and dirty side. (The lower pipe connection is always dirty side). Remember to seal the connection with joint compound and/or tape!
3. To ensure the free flow of air, the return should be two meters above the ridge of the roof with an air velocity rate of at least 8 m/s.

## 2.2 Test Run - adjusting

We recommend you ensure the ventilation system supplies the air flow, the system is dimensioned for. Measure the airflow and adjust using adjustment damper. In case of overcapacity the power consumption (amps) may exceed the capacity of the motor of the fan which may cause the motor to overheat and eventually fail.

## 3.0 User instruction

When the filter has been mounted and properly installed, ready to use, there will be no interaction between user and filter. Of course, the user must be aware of is the correct flow in the system.

After max 8 hours of operation followed by min. 8 hours rest.

## 4.0 Maintenance

A qualified technician should inspect the entire exhaust ventilation system - at least once a year.

Periodic maintenance:

- Check pressure drop across filter and replace

filter cartridges, if this exceeds 1.200 Pa.

- Check the filter's clean side of oil periodically and replace filter cartridges in case of leaks.
- Empty the filter reservoir of oil using the drain tap at the bottom.

### 4.1. Replacing filter cartridges

1. It is important that the service technician is wearing the appropriate personal safety precautions as prescribed by the Danish Working Environment Authority. This must be in place before removing the top of the filter.
2. Loosen the bolts holding the lid in place.
3. Lift the lidtop of to gain access to the top plate in which the filter cartridge is mounted.
4. Loosen the plate holding the filter cartridges in place and remove the cartridges.
5. Place the contaminated filter cartridges in a plastic bag, which is sealed and disposed of according to local regulations for disposal of oil and chemical waste.
6. Install the new filter cartridge on the top plate and secure it with the top plate and close lid.



## 4.2 Trouble shooting

**Problem:** The filter does not absorb oil from saturated, polluted air, as it is supposed to.

**Possible solution:**

Check if the filter cartridge is correctly oriented. Filter cartridge opening should be facing up.

**Problem:** Insufficient airflow.

**Possible solution:**

Check if replacement of the filter cartridge needs replacement.

Replace the filter cartridge, if that is the case.

**Problem:** Noise from the filter.

**Possible solution:**

Check if the filter cartridge is properly secured to the top plate. Secure the filter cartridge.

**Problem:** Oil in the filter reservoir does not bleed.

**Possible solution:**

Check if grinding dust or metal shavings blocks the drain tap.

Clean, if this is the case.

## 5.0 Liability

### Warranty:

Geovent A/S grants a warranty for products, which are defective, when it can be proved that the defects are due to poor manufacture or materials on the part of Geovent.

The warranty comprises remedial action (repair or exchange) until one year after the date of shipment. No claims can be made against Geovent A/S in relation to loss of earnings or consequential loss because of defects on products from Geovent.

Wear parts as fan wheels and hoses are not included in the warranty.

### User liability:

In order for Geovent to grant the declared warranty, the user/fitter must follow this Instruction manual in all respects.

Under no circumstances may the products be altered in any way without prior, written consent from Geovent A/S.

Moreover, we refer to the current terms of sale and delivery at [www.geovent.com](http://www.geovent.com).

[WWW.GEOVENT.COM](http://WWW.GEOVENT.COM)

## 6.0 Declaration of conformity

The manufacturer: GEOVENT A/S  
HOVEDGADEN 86  
DK-8831 LØGSTRUP

hereby declares that:

The product: GFO-XT filter  
Model: GFO-XT-3, GFO-XT-6,  
GFO-XT-9, GFO-XT-12

has been manufactured in compliance with the following directives and standards:

European Parliament and Council Directive 2006/42/EC of 17 May 2006 on machinery, and amendments to Directive 95/16/EC.

EN ISO 14121-1:2007 Risk assessment – part 1  
EN ISO 12100-1:2005 Basic concepts and general principles for design.  
EN ISO 12100-1:2009 construction and design Part 1: Basic terminology and methodology  
EN ISO 12100-2:2005 Basic concepts and general principles for design.  
EN ISO 12100-2:2009 Construction and design Part 2: Technical principles

HOVEDGADEN 86 • DK-8831 LØGSTRUP  
(+45) 8664 2211 • [salg@geovent.dk](mailto:salg@geovent.dk)

Date: May 11th -2018

Position: Managing director  
Name: Thomas Molsen



Signature : \_\_\_\_\_

