



# **GEOVENT**

## INSTRUCTION MANUAL



# DUSTBOX

CFU-1000



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## 1.0 Introduction

This manual is made and designed in order to facilitate the best and most secure interaction with the product. The manual is relevant for people involved in transportation, stocking, installation, using, maintaining and all other thinkable interaction with the product.

The manual must be read in full and understood before interacting with the product.

When the manual has been read and understood in full, the table of contents can be used to find the relevant information in each case.

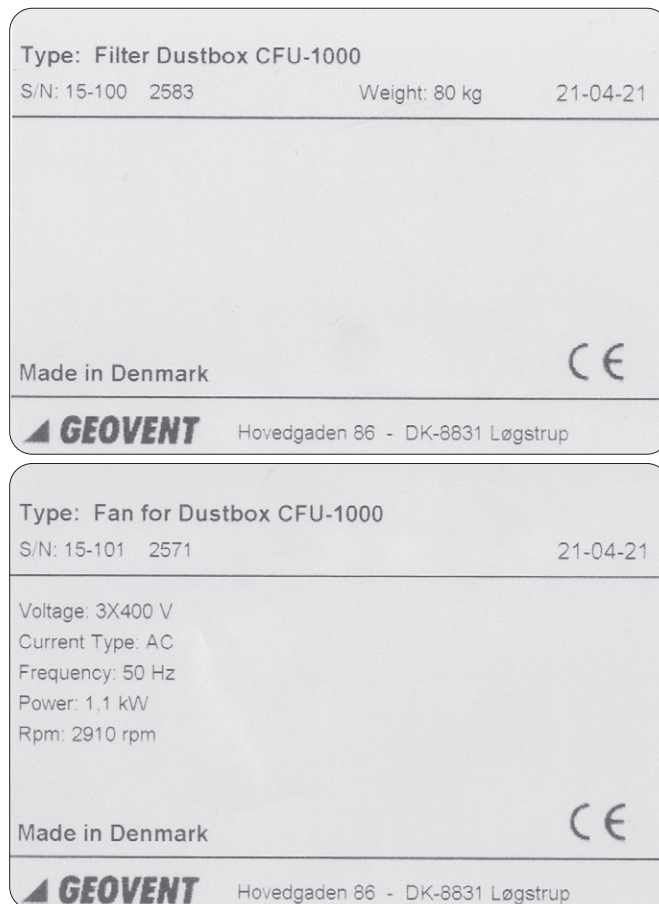
The product is manufactured by:

Geovent A/S  
Hovedgaden 86  
DK-8861 Løgstrup  
DENMARK

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E-mail: salg@geovent.dk  
www.geovent.com

This manual is to be used for all interactions with the product including: Transportation, stocking, installation, operation and maintenance.

This product is marked with: (example)



## 2.0 Safety

### 2.1 General safety

Carefully read this manual before use and observe the safety instructions in order to avoid injuries! Keep this manual in a safe place!

Secure that all users of the product have read this manual and that they follow the instructions as described. Observe all instructions marked on the product! Observe the indications of the manufacturer. Never use the product if you are in doubt about how it works or what you should do.

When doing maintenance follow the instructions in chapter 7.0.

Wires, hoses and other parts must be replaced immediately if they are damaged. This replacement must be performed by trained and qualified personnel. Do not modify the product or use spare parts from other suppliers than Geovent, as this may hamper the product and the function.

## 2.2 Danger

You must wear safety gloves when handling or using the product to protect your hands from scratches etc.

Be aware that the product may tilt when you move it. You must handle the product with care and tie it safely to the truck or the fork lift when it is in transport.

Follow the instructions in chapter 7.0 when the product is maintained.

When handling the product be sure that there is no risk for the installer, and secure that there are no people around the product, secure that the product cannot fall down risking to injure persons or subjects.

In case of an accident or a fire:  
Call for help.

The product is not to be used in areas categorised as ATEX zones, e.g. with dust from aluminium, flour, wood, and other mediums that present an explosion hazard.  
In case of problems:  
If a repair is not possible you should dispose of the product. Please follow the instruction for disposal in chapter 10.0.

## 3.0 Machine overview

### 3.1. Description

Geovent Dustbox CFU-1000 is a compact filter unit, which is suitable for extraction of smoke and particles from grinding and welding processes.  
The Dustbox can be used as a decentralized system with its own fan, or in connection with a larger central extraction system.

Delivered complete with any accessories fitted.

### 3.2 Intended use

The Geovent Dustbox is used for filtering of contaminated air from industrial processes such as: Welding smoke, grinding and sanding.  
The Dustbox CFU-1000 filter is not to be used in areas which require the use of ATEX certified products.

The Geovent Dustbox CFU-1000 is supplied with a filter cartridge. (Filtration efficiency: Min. 99,90% according to BIA-test.)

Cleaning of the filter is manual. A shot of pressurized air is sent through the filter cartridge loosening the particles attached to the fabric of the cartridge.

It is recommended that the filter shot valve is released after each use. Press the button on the side of the filter to release the valve.

## 3.3 Machine specifications

### 3.3.1 Design

Housing: Warm Galvanized steel.  
(Corrosion class III), with duct connection.

Compressed air tank: Powder coated steel

Collection drawer: Galvanized – capacity up to 38L

### 3.3.2 Technical data

#### Dimensions

Model/ Dimension	Outlet [mm]	Inlet [mm]	Clearance [mm]	Weight [kg]
Dustbox CFU-1000 ex. fan	ø160np	ø160np	150	60

Model/ Dimension	Outlet [mm]	Inlet [mm]	Clearance [mm]	Weight [kg]
Dustbox CFU-1000 incl. fan	ø160np	ø160np	320	80

Compressed air: 3,5 - 6 bar - clean and dry air  
Air consumption: 3.0 liters of compressed air per valve  
Power supply: 24VDC el. 230VAC (standard)  
Temperature: -12°C - +80°C (extracted air)  
Corrosion Class: III  
Duct sealing: Class C

Temperature extracted air: Max 80°C  
Temperature surroundings: -20°C - +40°C

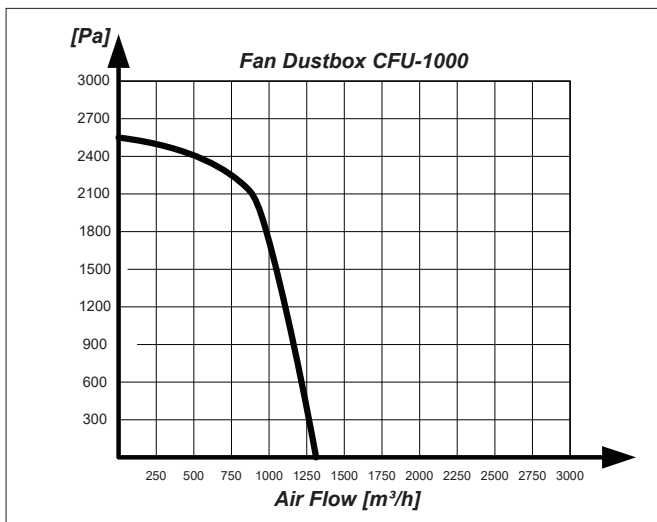
Operating relative humidity: <90%  
Connection: 1"

#### Differential pressure Geovent Dustbox CFU-1000

Typical pressure drop: 1000-1500 Pa

The pressure drop over the filter will vary according to work load and how dirty the filter cartridge is.  
When the pressure drop reaches 1800 Pa the filter cartridge must be replaced.

**Differential pressure can not exceed 1800 Pa.**



## 4.0 Transport, handling and storage

During transport in a truck or in another means of transportation the product must be securely packed in a box or a pallet and covered with a water proof material. The product must be securely stowed in the truck so that it will neither tilt nor shift during transport.

During transport over a short distance e.g. in a stock or a factory, the product can be moved by means of a forklift or a stabeler.

When moved it must be secured that the product does not tilt or shift. And it must be secured that the limitations of the means of transportation is not exceeded.

Secure that there are no people around the product, when the product is moved.

The product must be placed in a dry place and covered securely, in order to secure that moist, metal parts or other substances do not damage the product. It is not allowed to place anything on top of the product.

## 5.0 Assembly, installation and start of operation

### 5.1 Location

We recommend that the filter unit is placed indoor. Out-doors placing can give problems with condensation or water coming into the filter unit (due to the vacuum in the filter unit). Further there may be a problem with the electronics.

If the filter unit is placed out-doors, anyway, we suggest that the filter unit is placed under a protective roof or in a shelter to shield the filter from rain. Adding a thermal insulation will reduce the risk for condensation.

Before installing the filter unit, please make sure that the optimum place for installation is selected. Is there room enough for the filter unit? Is there space enough for carrying out satisfactory service and change of filter cartridges?

Place the product upon a solid, flat foundation (e.g. a concrete floor) and anchor it.

### 5.2 Installation

Geovent Dustbox CFU-1000 must be installed indoors in a room with plenty supply of fresh air. Outdoor installation is normally not recommended. This to avoid condensation issues.

If placed outdoors, place the filter in a dry area where the temperature is not below -20°C

The Geovent Dustbox CFU-1000 is supplied complete and ready for installation.

Before installation consider the best placement for the Dustbox filter.

The following installation should be done by a trained professional.

#### Procedure:

1. Geovent Dustbox CFU-1000 is placed on a firm and level foundation. ( e.g. a concrete floor.)  
Allow room for filter change.
2. Geovent Dustbox CFU-1000 is connected to circular ducts on both dirty and clean side.  
(The lower duct connection is always the dirty side.)  
Seal the duct connection using tape or rubber seal.
3. To ensure free mixing of air the outlet should be placed at least to meters over the ridge of the roof with a wind speed of min. 8 m/s.

#### Connecting the fan (must be purchased) to power:

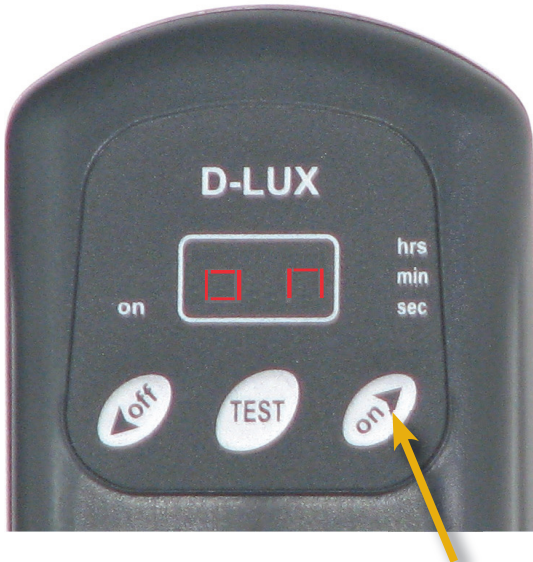
4. Connection of the Geovent Dustbox CFU-1000 filters electrical components can only be carried out by a trained electrician.
5. For connection options, see drawings on page 7.



### 5.2.1 Timer setting

Timer is accessories

To change the ON time, simply press the right 'on/arrow up' button and 'on' will appear briefly on the display.



You can now press the left 'off/arrow down' button for decreasing the time or the right 'on/arrow up' button to increase the time.



If the desired "ON" time is set, then simply do not press any buttons and after a few seconds the display will start flashing illustrating that the new time is being saved. Once the new time is saved, the unit will start operating with the new time setting.

To change the "OFF" time simply press the left 'off/arrow down' button and "OFF" will appear briefly on the display.



If the desired OFF time is set, then simply do not press any buttons and after a few seconds the display will start flashing illustrating that the new time is being saved. Once the new time is saved, the unit will start operating with the new time settings.

The unit is now fully programmed to your desired time settings and will work fully automatically.

Press the "TEST" button to check the valve function.



Default values: ON: 0,2 seconds  
OFF: 30 seconds

### 5.3 Control and test of the security system

Before use the function of the filter should be tested. Also make sure the filter cleaning system works.

Make sure that the entire installation is air tight. If a whistling sound is heard locate the leak and seal using flexible mastic.

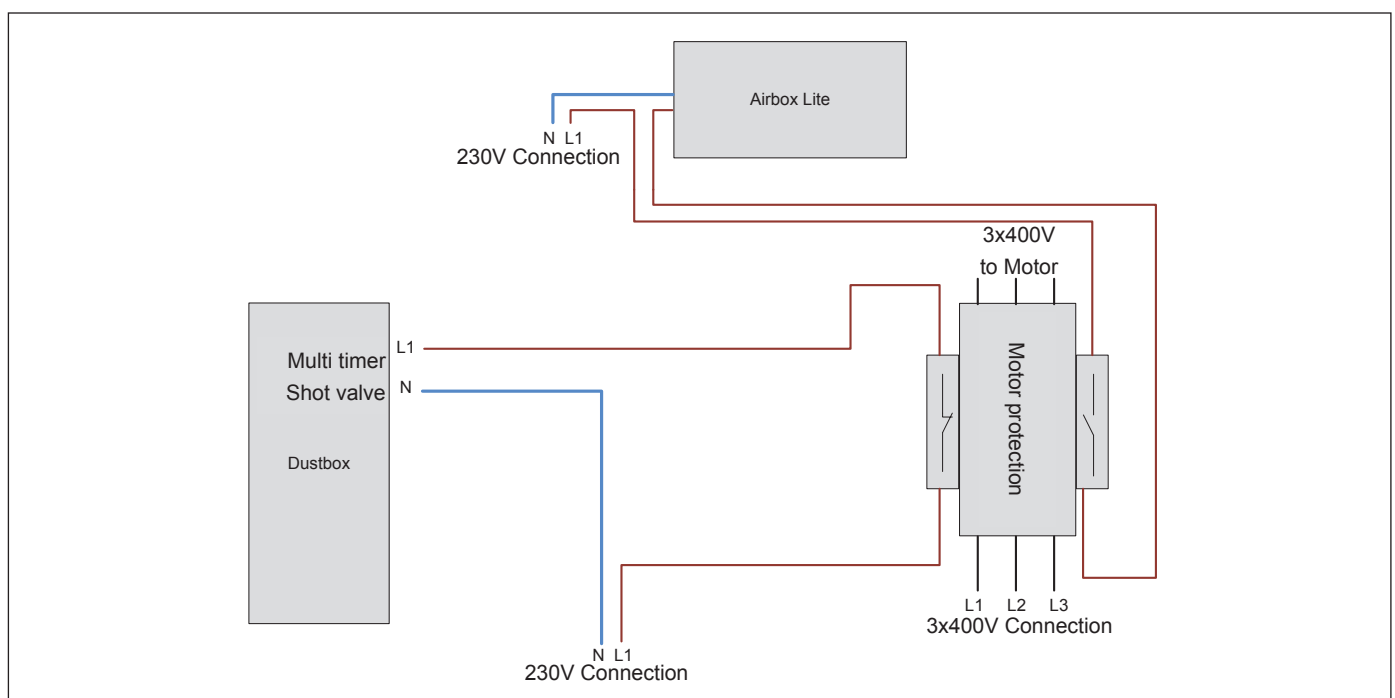
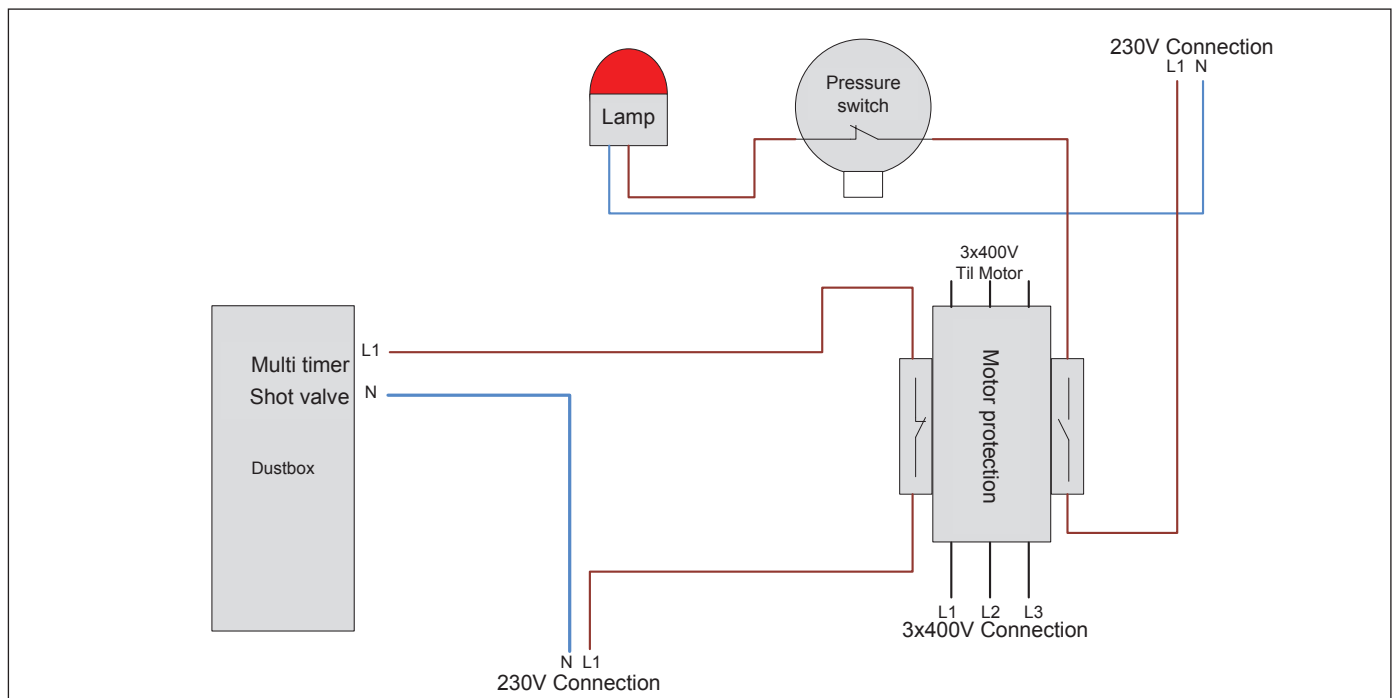
It is recommended that the ventilation unit delivers the amount of air for which it is dimensioned. Adjust the supplied amount of air using an adjustment damper. At excess capacity the power consumption (Amps) can exceed the capacity of the fan motor causing it to malfunction.

### 6.0 Commissioning

The entire extraction installation should be checked at least once a year by a qualified service technician.

#### Periodic maintenance:

- All electrical components should be checked yearly.
- Make sure that the air supply for the compressed air system is clean and dry. Otherwise the filter cartridge and shot valves can be damaged by condensation.
- Check the pressure drop of the filter. If the pressure drop exceeds 1800 Pa replace the filter cartridge.
- Check the clean side of the filter for dust particles regularly and replace the filter cartridge if leaking.



## 6.1 After installation

Check the installation according to chapter 5.3.

## 7.0 Control, test and maintenance

### 7.1 Control

Check the installation according to chapter 5.3.

### 7.2 Maintenance

#### Emptying the collection bucket

The collection bucket should be emptied when it is approx. 2/3 full as it may otherwise load the filter cartridge.

1. The collection bucket is held by two brackets. Release the brackets and carefully pull out the bucket. The contents of the bucket must be disposed of it according to local regulations.
2. Reattach the bucket under the filter unit.



## 7.3 Replacing filter cartridge

The filter cartridge should be replaced after 4000-8000 hours of operation or after 4 years.

This is dependent of the load put on the filter.

#### Procedure:

1. Before dismantling the service hatch on the side of the filter it is very important that the service technician is properly protected using safety gear.
2. All power must be disconnected. Make sure that the power can not be turned on by accident.
3. The compressed air connection should be disconnected using the ball valve. If a ball valve is not fitted, shut off the compressor and empty the tank manually using release button.
4. Unscrew all finger screws and remove the service hatch.
5. The filter cartridge is held in place by three latches in a flange at the top of the cartridge.
6. Loosen the filter cartridge by simply turning it so that the latches release.
7. Carefully remove the contaminated filter cartridge and place it in a large sealed plastic bag.
8. Carefully place the new filter cartridge and secure it by turning it.
9. Reattach the service hatch and fasten the screws. (Remember to reconnect power and compressed air.)
10. Control the filter for function and leaks.
11. Dispose of the contaminated filter cartridge according to local regulations.

## 8.0 Cleaning

The outside of the product is cleaned with a vacuum cleaner or a cloth.

## 9.0 Troubleshooting

In case of low pressure or low airflow please check the following issues.

#### Shot valve makes a "snoring" noise

The "snoring" is caused by foreign objects in the tank. Trigger the shot valve and the "snoring" stops.

#### Dust reverses and comes out of the inlets

The cleaning system cannot keep up with the load put on the filter. Increase the frequency with which you activate the shot valve.



### The pressure drop increases rapidly and the air flow drops

The cleaning system cannot keep up with the load put on the filter. Release the shot valve more often. If this does not help, replace filter cartridge.

## 10.0 Dismantling, disabling and scrapping

Deactive the product by disconnection the electrical mains. Dismantle compressed air pipes and other pipes or wires etc.

Dismantle the filter cartridge by unscrewing the finger screws and remove the service hatch.

Turn the filter cartridge so that is loosens from the latches at the top of the cartridge.

Carefully remove the contaminated filter cartridge, place it in a plastic bag and seal the bag.

Dispose of it according to local regulations.

The inside of the product must be cleaned by means of a vacuum cleaner with a filter which suits the purpose.

Dismantle plastic parts and dispose of it according to local regulations.

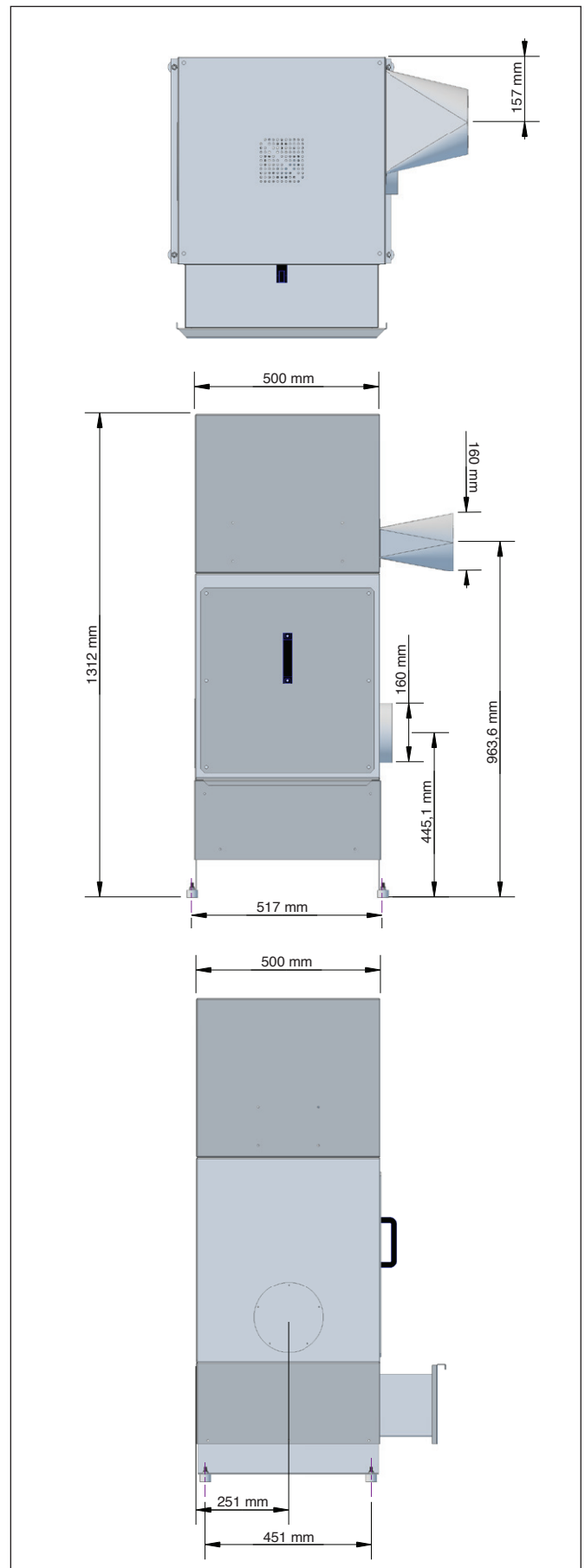
Dismantle the metallic parts by unscrewing screws and bolts. Afterwards cut the larger pieces into smaller pieces and dispose of it according to local regulation.

Dismantle plastic parts and dispose of it according to local regulations.

The packing material must be sorted according to local regulation in order to be able to reuse the material.

## 11.0 Dimensions

Dustbox CFU-1000



## 12.0 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 (reparation 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 as a result of defects on products from Geovent.

Wear on parts such as filter cartridges and hose is not included in the warranty.

### User liability

In order for Geovent to be capable of granting the declared warranty, the user/fitter must follow this instruction manual in all respects.

Under no circumstances may the products be changed in any way, without prior written agreement with Geovent A/S.

Please refer to the current sales and delivery conditions at [www.geovent.com](http://www.geovent.com)

## 13.0 Declaration of conformity

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

Hereby declares that:

The product: GeoFilter Dustbox  
Model: CFU-1000

Complies with the relevant parts of the following directives and standards:

Directive 2006/42 / EC of the European Parliament and of the Council of 17 May 2006 on machines and amending directives 95/16 / EC


This declaration is no more valid if changes are made to the product by others than the manufacturer.

Authorized to collect the technical file:

Lise Cramer

Date: 20.12.2022

Position: Director  
Name: Thomas Molsen

Signature: 

CE

## 14.0 Spare part list

Art. no.	Description
15-101	Fan for CFU-1000 1,1 kW, 3x400V 50Hz, 2,6A, 2800rpm
15-102	Sound proofing - internal
15-103	Automatic control for CFU-1000. Motor guard, pressure guard and more. Not installed from factory.
15-104	Manual compressed air cleaning
15-105	Automatic compressed air cleaning
15-108	Filter cartridge for CFU-1000



***GEOVENT***

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