

# MONOXIVENT<sup>®</sup>

Source Capture Systems

## Operation and Maintenance Manual

### Filtoo



**MONOXIVENT - SOURCE CAPTURE SYSTEMS**

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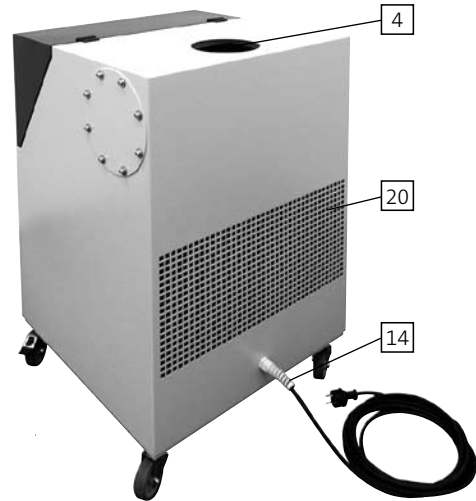
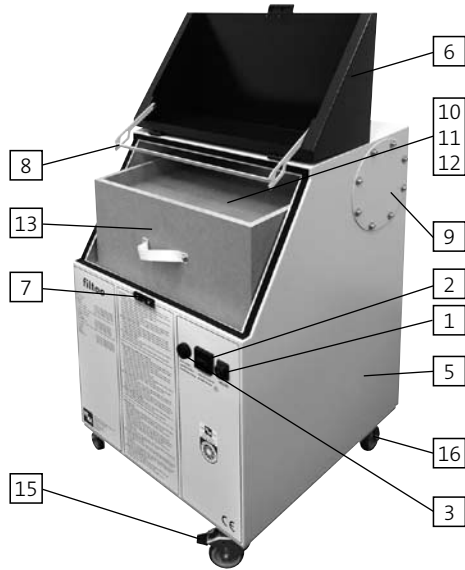
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**I. Product description of filltoo**



1	Main switch ON / OFF
2	Operating hours meter
3	Alarm horn signalling a necessary filter change
4	Connection opening for the suction arm
5	Filter housing
6	Maintenance door
7	Snap fastener for the maintenance door
8	Retainer
9	Connection for the suction hose (delivery including covering plate)
10	Gross filter (placed onto prefilter)

11	Prefilter (placed onto activated carbon filter)
12	Activated carbon filter (inserted in the main filter)
13	Main filter
14	Mains cable with mains plug
15	Swivel castor with brake
16	Swivel castor
17	Screw for assembly of the suction arm
18	Lock washer for assembly of the suction arm
19	Rotary flange for assembly of the arm
20	Outlet of the cleaned air

## II. Safety

### II. 1. Intended use



Read this manual before you use the system and observe the safety instructions in order to avoid injuries!

Keep this manual in a safe place!

Observe all instructions marked on the product!

Observe the indications of the manufacturer. Contact the manufacturer in case of uncertainties:

Telephone: +49 2863 9282-0

Fax: +49 2863 9282-72

The filter unit filltoo is mainly used for the extraction of dry dusts and fumes. To this end, the unit can be equipped with a flexible suction arm or a suction hose.



**Prohibition of application! Do not use the unit for the extraction of:**

*Moist fumes, explosive mixtures of substances, easily inflammable dusts and gases, liquids, aggressive or organic substances, burning or glowing substances etc.*

*Do not use the unit in explosive zones.*

The polluted air is taken in by the suction hood and enters into the filter unit. The operator can adjust the suction hood to every position within his reach. The extraction power can be regulated with the help of the regulating flap that is integrated in the hood.

In the filter unit, the gross dust particles are separated in the gross filter (pos. 10), while the finer dusts are separated in the prefilter (pos. 11). An activated carbon filter (pos. 12) is inserted between the prefilter and the main filter in order to absorb gases. The main filter (pos. 13) separates very fine fume particles with a separation efficiency of more than 99 %.

The cleaned air is returned to the working space via the outlet grid at the back of the unit.



**Attention!**

*As soon as, due to the separated particles, the resistance of the filter has achieved a maximum value, the integrated monitoring electronics triggers off the alarm of the signal horn (pos. 3) indicating that the filters must be replaced (see chapter „Maintenance“).*

## II. 2. Safety instructions

The unit is constructed according to the state of the art and the approved safety regulations. Nevertheless, the use can cause dangers to life and limb or damages of the machine. Due to this, read the following safety notes before using the product.

### **WARNING**

**Working with the device and at live components includes the danger of electric shocks or of accidentally restarting the device. Both cases mean danger to life and limb.**

- ▶ While opening, cleaning and maintaining the unit or while changing parts, disconnect the filter unit from the mains supply and secure it from being restarted.
- ▶ The unit must not be used if the mains cable is not in perfect condition.
- ▶ Do not use the filter unit if one or more parts of the unit are faulty, missing or damaged.
- ▶ Observe the approved supply voltage! (Observe the indications on the name plate).

**Without appropriate intake elements, the dusts and fumes are not sufficiently extracted. This also applies to missing filter inserts and a false conduct of the exhaust air because it can affect the cleaning function. This can lead to dangers for the respiratory tracts.**

- ▶ Before starting up the unit, all filter elements must be inserted (gross filter, prefilter, activated carbon filter, main filter). Filtoo must not be used without filter inserts.
- ▶ The extraction element (suction arm or suction hose) must be connected to the filter unit before the start-up. Position the extraction element as near as possible to the emission source.
- ▶ The air outlet opening must not be covered or blocked.
- ▶ Only use original Monoxivent spare parts! Otherwise, the warranty expires. The warranty regulations can be found in the General Terms and Conditions of Monoxivent GmbH.

## 1. Commissioning

### 1. 1. Unpacking the filtoo

The filtoo is delivery completely packed in a carton. The enclosed intake element (suction arm or suction hose) is separately packed.



**Attention!**

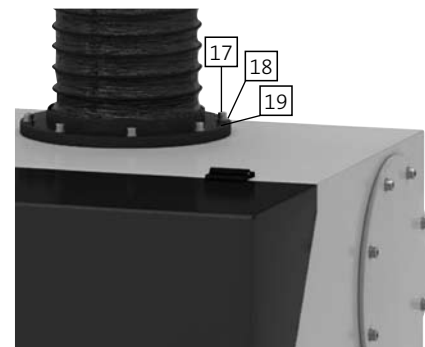
*The intake element must be fitted to the device before the start-up. Always make sure that the device is in a safe position and that the brakes at the swivel castors are pulled.*

### 1. 2. Connecting the intake elements

#### 1. 2. 1. Use of a suction arm

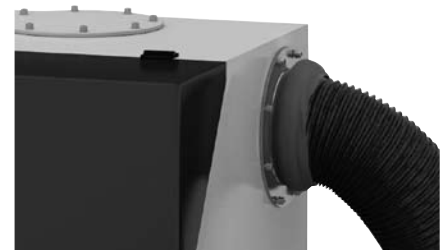
The suction arm is fixed with the help of the rotary flange (pos. 19), screws (pos. 17) and lock washers (pos. 18) at the upper connection opening (pos. 4) of the housing.

For further information, see the separate manual for the suction arm.



#### 1. 2. 2. Use of a suction hose

If you use a suction hose, fix it at the lateral connection opening (pos. 9). In this case, fix the cover panel to the upper intake opening.



### 1. 3. Connecting the device

Connect the device to the mains supply.

## 2. Explanation of the control elements

- Pos. 1 The main switch switches the filter unit on or off.
- Pos. 2 The operating hours meter counts the operating hours as soon as the main switch is pushed.
- Pos. 3 The signal horn indicates whether the suction performance is sufficient. If it is triggered off, the filters must be replaced.

## 3. Maintenance

### 3. 1. General indications

The filtration of the dust particles increases the saturation degree of the filter cartridge and reduces the extraction performance.

The saturation degree of the filter cartridge is monitored electronically. In order to maintain the extraction performance of the device, the filters must be replaced as soon as the signal horn (pos. 3) is triggered off.



**Warning!**

*Pull the mains plug for all kinds of maintenance tasks. Only replace the filters in sufficiently ventilated rooms and with an appropriate respiration protection. Dispose of the filters according to the national regulations.*

### 3. 2. Changing intervals of the filter elements

After a certain amount of operating hours, the filter elements must be replaced. This depends on the produced amount of dust or gas. Nevertheless, the filters must be replaced at the latest if the signal horn (pos. 3) is triggered off.

Depending on the application, it can be required to replace the filters even earlier.

We recommend the following changing intervals:

Filter element	Recommended operating period
Gross filter	50 operating hours
Prefilter	100 operating hours
Activated carbon filter	100 operating hours
Main filter	200 operating hours



### 3. 3. Replacing the filters



**Attention!**

*All filter elements are non-returnable filters. Every kind of manual cleaning can destroy the filter. Pollutants penetrate into the ambient air and can endanger your health.*

**Only use original Monoxivent spare filters.**

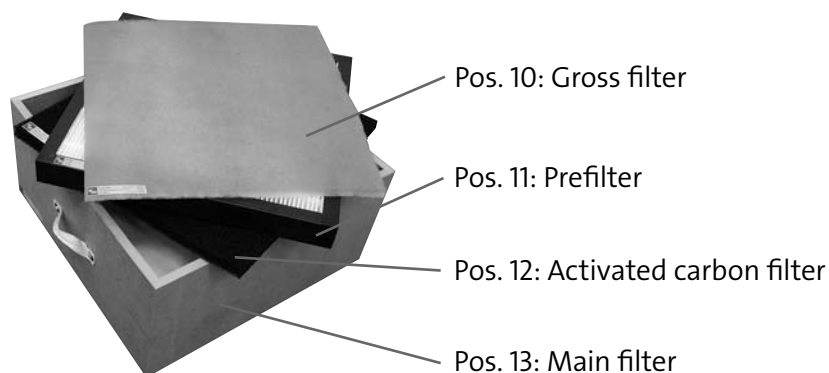
**Otherwise, the function of the filtoo cannot be guaranteed!**

#### 3. 3. 1. Withdrawing the filter elements

- ▶ Switch off the filtoo with the main switch (pos. 1).
- ▶ Open the snap fastener (pos. 7) and fold the maintenance door (pos. 6) up. Secure the filtoo from being accidentally restarted in disconnecting the mains plug from the socket.
- ▶ Take the handle of the main filter (pos. 13), lift it up slightly and pull it in your direction. Now grasp the wooden side at the back and lift the main filter carefully out of the device.
- ▶ While changing, place the main filter onto one of its wooden sides in order not to damage or pollute the sealing at the bottom.

#### 3. 3. 2. Replacing the filter elements

- ▶ Which filter element must be replaced depends on the pollution degree of the individual filters. It can vary and depends on the application. However, please consider our recommended changing intervals. We recommend: Note the amount of operating hours every time you replace a filter.
- ▶ The construction of the filter elements corresponds to the following order:



### 3.3.3. Inserting the new filters

- ▶ Insert the main filter including all 3 filter elements into the housing of the filltoo. The handle of the main filter must be adjusted to the front.
- ▶ Close the maintenance door (pos. 6). When doing so, the retainer (pos. 8) must slide inwards onto the wooden frame of the main filter in order to clamp the main filter into the housing.
- ▶ Close the snap fastener (pos. 7).

## 4. Disposal and disassembly

The owner of the filltoo is responsible for the disposal of the filter elements according to the national legal directives and regulations.

When finally decommissioning the filltoo, the owner is responsible for the appropriate disposal of all components and materials according to all national directives and regulations.

**Warning** Disconnect the device from the main supply before the disassembly.

## 5. Repair of faults

Fault	Possible cause	Remedy
Extraction performance too weak (Fumes are not or only hardly extracted).	Filter elements are saturated.	Replace the filter elements, dispose of the used filters appropriately!
	The throttle valve of the suction hood is closed.	Open the throttle valve.
	The suction hose or suction arm is not or not correctly closed.	Check the position of the suction hose or the suction arm and connect it if necessary.
	The clean air outlet is narrowed or covered.	Check the clean air outlet, repair the fault if necessary.
	The suction duct is narrowed.	Check the suction duct, repair the fault if necessary.
The device does not start.	The suction element is damaged.	Replace the extraction element.
	The mains plug is not or not correctly plugged into the socket.	Check/correct the mains connection.
	The socket is not supplied with voltage.	Check the electric circuit. If necessary, consult an electrician.

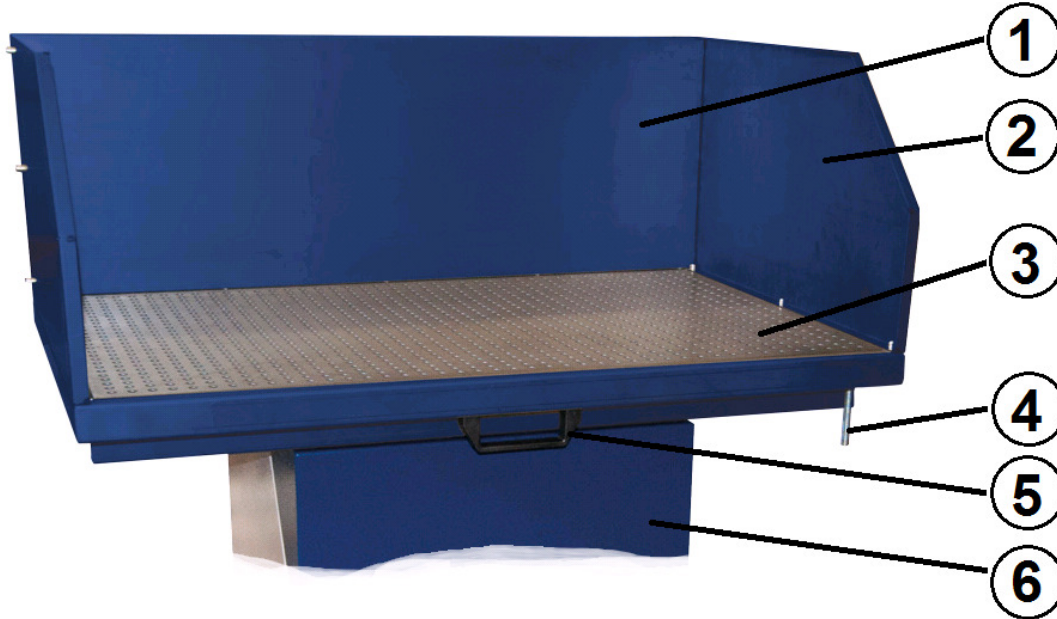
## 6. Technical data

Product designation	filtoo (115 V, 50 Hz)	filtoo (115 V, 60 Hz)	filtoo (230 V, 50 Hz)
Supply voltage	115 / 230 V		
Type of current	1 Ph		
Frequency	50 / 60 Hz		
Engine performance	1,1 kW		
Nominal current	7,0 A (at 230 V) / 13,2 A (at 115 V)		
Volumetric air flow max.	1600 m <sup>3</sup> /h		
Depression max.	1800 Pa		
IP rating	IP 54		
ISO class	F		
Control voltage	115 / 230 V		
Width	580 mm		
Depth	580 mm		
Height (without arm)	900 mm		
Weight	80 kg		
Filter elements	Gross filter, prefilter, activated carbon filter, main filter		
Extraction performance	> 99 %		
Sound pressure level	72 dB(A)		
Ambient temperature	+5 to +30 °C		
Air humidity	max. 70 %		

**10. List of spare parts**

Spare filters	Art. No.
Gross filter, 10 pieces	978003
Prefilter, 1 piece	978004
Main filter, 1 piece	978005
Activated carbon filter, 1 piece	978006
Other spare parts	Art. No.
Suction arm type filtoo complete, diam. 150	978009
Spare hose for suction arm type filtoo	978007
Spare hood for suction arm type filtoo	978008
Spare frame for suction arm type filtoo	978010
Set suction hose: 3 m hose diam. 150 with suction nozzles and hood	978011
PE bags for the disposal of the filters, 3 pieces	10030257

**1 Description of the system elements / Technical data**



Pos.1	Rear panel
Pos.2	Side panel
Pos.3	Perforated plate
Pos.4	Application point for the earth of the welding apparatus
Pos.5	Handle to fold up the work surface
Pos.6	Monoxivent filter unit „filtoo“ / „AirToo“
Supporting surface	approx. 1100 x 700 mm
Bearing capacity of the supporting surface	max. 30 kg <i>(remove all material from the supporting surface before moving the filter unit)</i>

## **2 Preface**

Congratulations on purchasing the filter system from Monoxivent.

Please observe the following for a successful use of the filter system:



Please read these instructions before operating the system, and observe the safety precautions to avoid injury!

Store this manual in a safe place! These instructions are to be regarded as a component of the product!

Adhere to all product notes!

Observe the manufacturer's instructions. Contact the manufacturer in case of any uncertainty.

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We thank you for your confidence in us and wish you every success.

## **3 Intended use**

The work surface attachment - mounted to the filter unit „filtoo“ / „AirToo“ - serves as a support for workpieces that are ground or welded. The dust or smoke particles produced during the processing can be extracted at the same time by the filter unit „filtoo“ / „AirToo“. The extraction of the particles takes place through the perforated plate of the supporting surface.



**Improper use of the work surface attachment can damage parts of it and may result in health hazards!**

The work surface attachment must only be used in conjunction with the filter unit „filtoo“ / „AirToo“ and the dust pre-separator "STAVO". Please also note the intended use of the filter unit „filtoo“ / „AirToo“. Also refer to the indications concerning the bearing capacity of the device in the technical data (see chapter 1).

## **4 Safety instructions / foreseeable misuse**

The work surface attachment is designed according to the state of the art and the recognised safety regulations. Nevertheless, its use may create health hazards. Therefore, read and follow the safety instructions before using the product.



**Do not use the work surface attachment if any components are defective, missing or damaged. Please also note the safety instructions of the filter unit „filtoo“ / „AirToo“. A defective condition of the unit may lead to health hazards.**

Check the orderly condition of the system before switching on. Please refer to the information in this manual.

## 5 Commissioning



**WARNING**

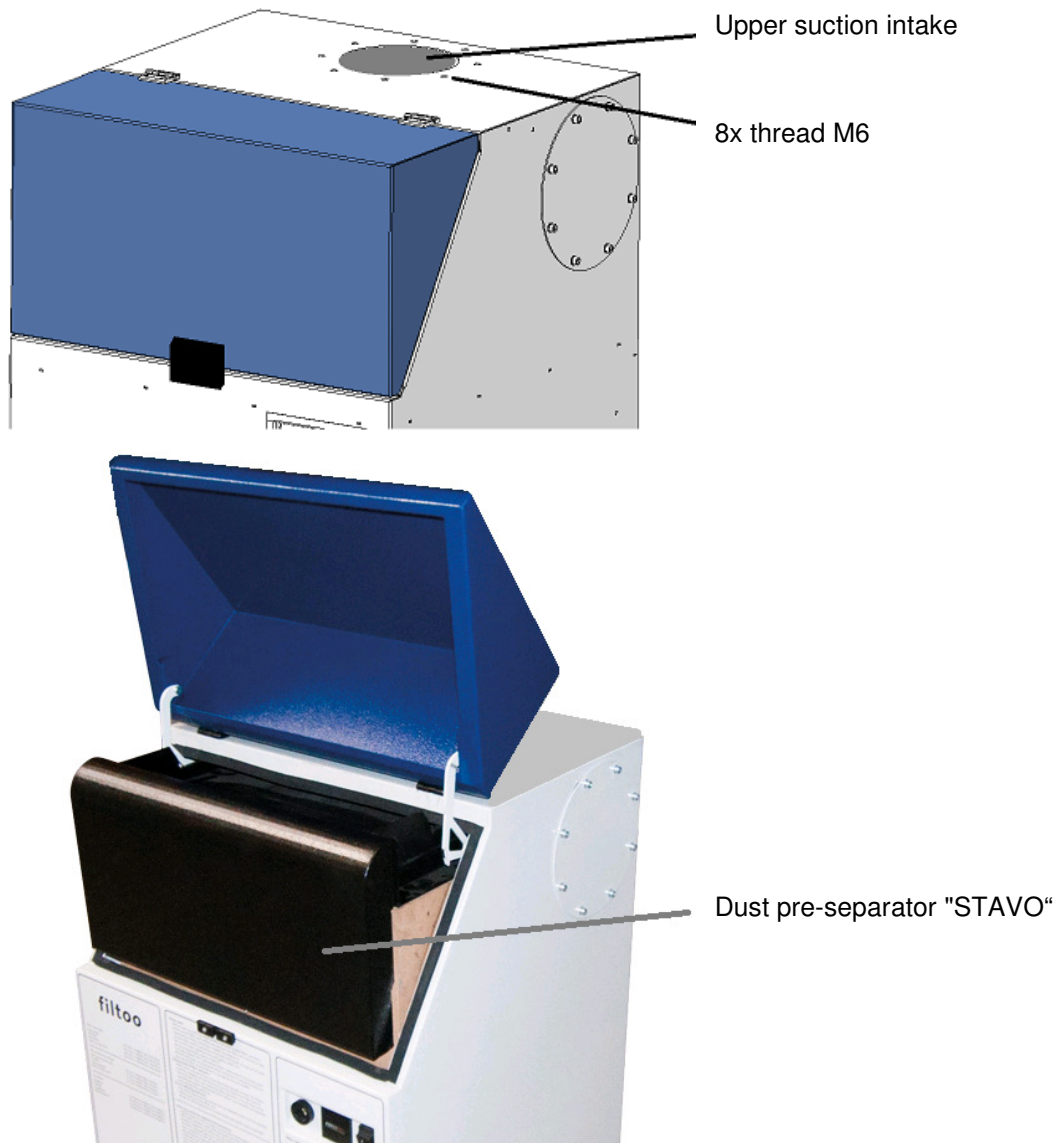
A start-up of the system in an inappropriate condition can lead to dangers to limb.

Before the system start-up the commissioning measures described in this chapter must be completed.

### 5.1 Preparing the „filtoo“ / „AirToo“

In order to correctly mount the work surface attachment, the upper suction intake at the „filtoo“ / „AirToo“ must be open which means that the intake must not be closed with a cover plate. The 8 threads M6 will be needed later for the mounting of the work surface attachment.

Make sure that the facility for the dust pre-separator "STAVO" is installed in the filter section of the „filtoo“ / „AirToo“.

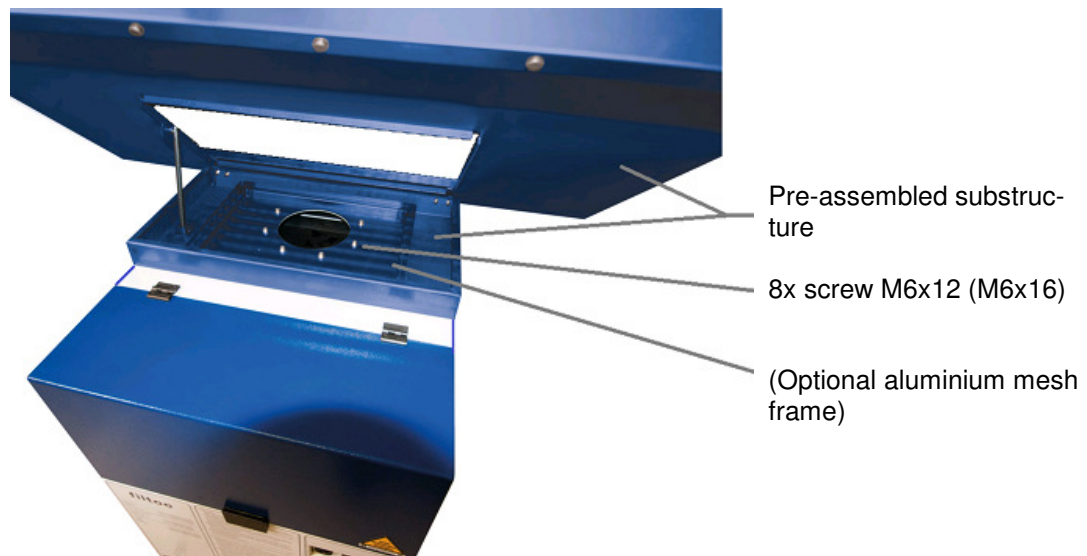


### **5.2 Mounting the substructure**

The substructure is delivered as a pre-assembled unit. Attach the substructure on the „filtoo“ / „AirToo“ by using the 8 screws M6x12 and the 8 threads of the „filtoo“ / „AirToo“. Please find the mounting position in the figure.

**NOTICE** The work surface attachment can optionally be equipped with an additional aluminium mesh filter.

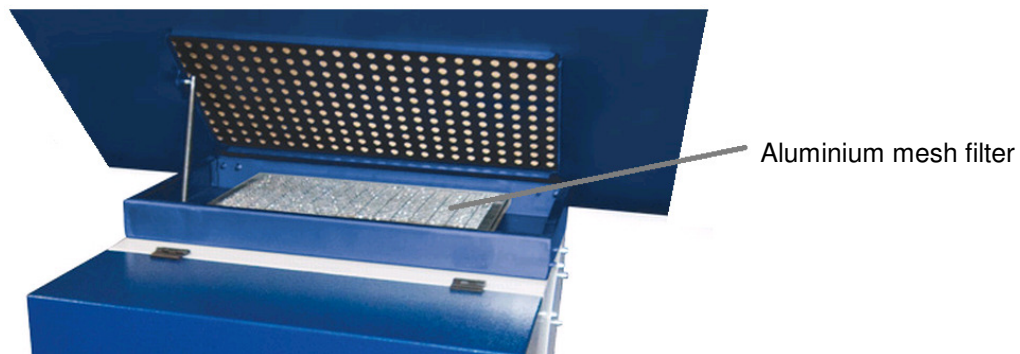
In this case the frame of the aluminium mesh filter must be mounted during the assembly. Therefore, use the 8 longer screws M6x16.



### **5.3 Optional aluminium mesh filter**

**NOTICE** The work surface attachment can optionally be equipped with an additional aluminium mesh filter.

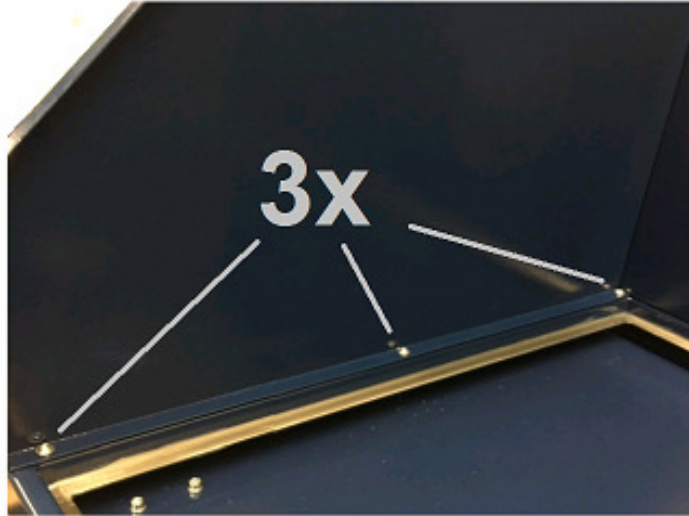
In this case fold up the work surface and insert the aluminium mesh filter into the frame.





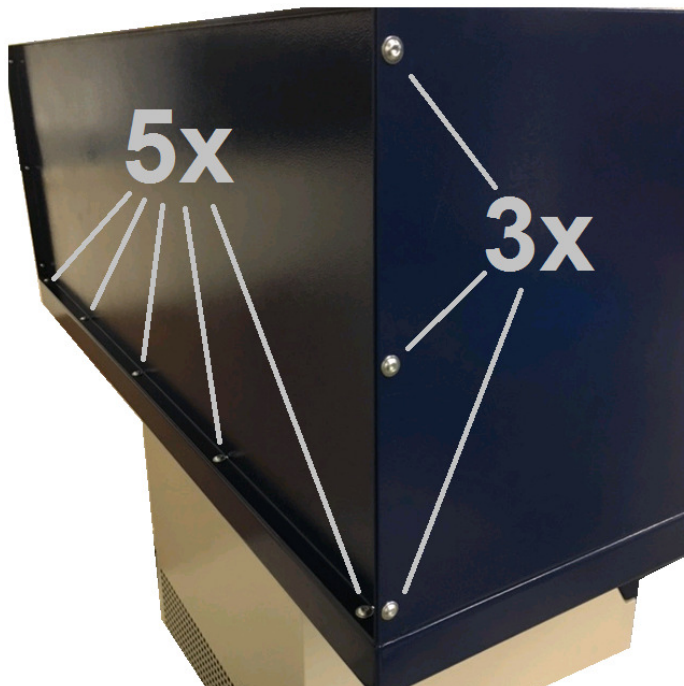
**5.4 Mounting the side panels**

Mount the side panels with 3 screws M6x12 each on the attachment.



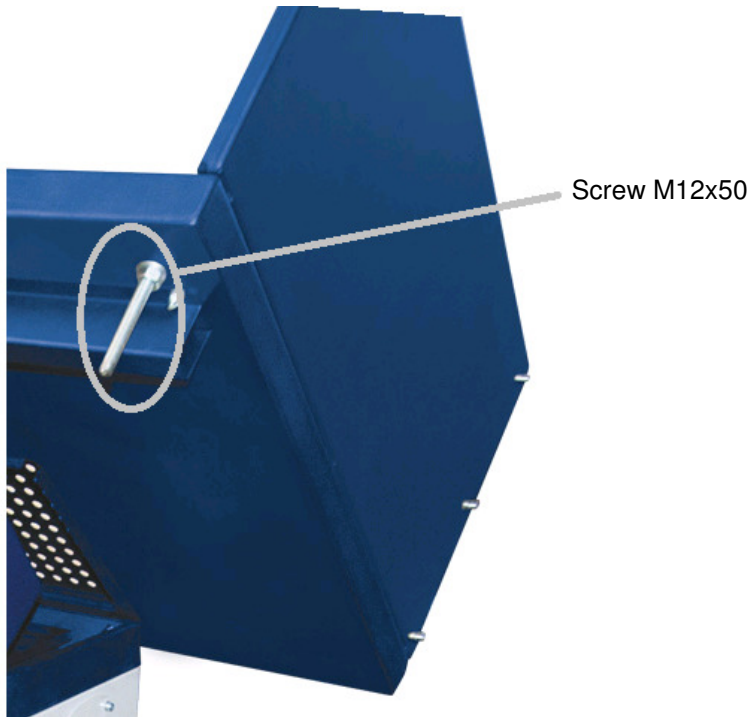
**5.5 Mounting the rear panel**

Mount the rear panel with 5 screws M6x12 on the attachment. In addition, the rear panel must be attached on both sides with 3 screws M6x12 each to the side panels.



**5.6 Mounting the screw M12x50**

Mount the screw M12x50 to the bore intended for this purpose. Please find the mounting position of the screw in the figure. The screw can be used as an application point for the earth of the welding apparatus in case of later welding applications.



**5.7 Inserting the perforated plate**

Insert the perforated plate into the device.



## **6 Maintenance**

The device must be cleaned occasionally due to the deposit of coarse dust particles. The cleaning interval depends on the respective operating conditions and can therefore not be determined beforehand.



**WARNING** Work on the open system entails the risk of accidental restart the system. This poses a danger to limb.

When cleaning and servicing equipment during the replacement of parts, the filter unit must be disconnected from the power supply and secured against restart.

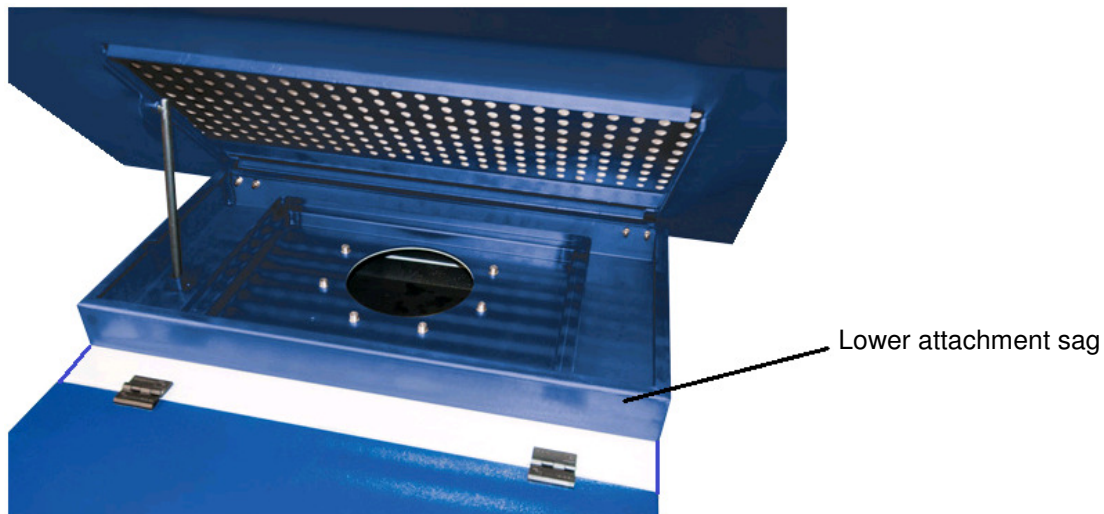
### **6.1 Cleaning the upper attachment sag**

Remove the perforated plate. Clean the inside of the upper attachment sag, for example with an industrial vacuum cleaner or a suitable cloth.



### **6.2 Cleaning the lower attachment sag**

Fold the work surface upwards. Clean the inside of the lower attachment sag, for example with an industrial vacuum cleaner or a suitable cloth.



**6.3 Cleaning / replacing the optional aluminium mesh filter**

**NOTICE** If your work surface attachment is equipped with an optional aluminium mesh filter, this must be cleaned occasionally as well.

The cleaning interval depends on the respective operating conditions and can therefore not be determined beforehand.

Fold the work surface upwards and remove the aluminium mesh filter. It can now be cleaned with a steam ejector and optionally with a suitable cleaning agent added.

**CAUTION** When cleaning with a steam ejector or another humid cleaning method the aluminium mesh filter must not be reinserted while being humid.

The aluminium mesh filter must be kept out to dry for at least one week.

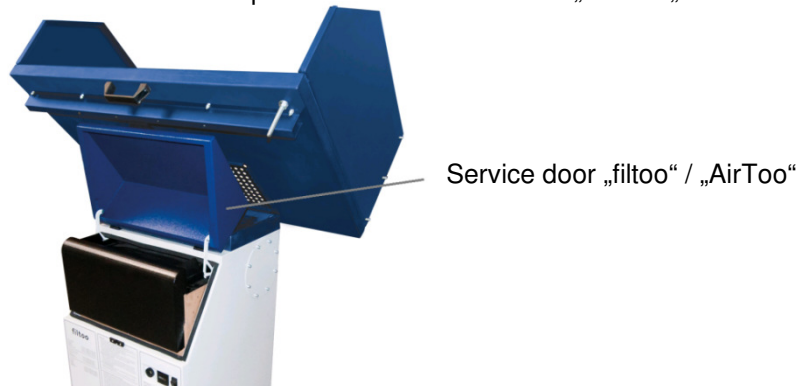
If the aluminium mesh filter is saturated in a way that the extraction capacity of the filter unit is affected even after a cleaning of the aluminium mesh filter, the aluminium mesh filter must be replaced (see spare part list). Remove the aluminium mesh filter from the device and insert the new aluminium mesh filter.

**NOTICE** Only use Monoxivent spare filters!



**6.4 Replacing the filter at the filter unit „filtoo“ / „AirToo“**

If a replacement of the filter at the filter unit „filtoo“ / „AirToo“ is necessary, fold the work surface upwards to be able to open the service door of the „filtoo“ / „AirToo“.



**7 Spare part list**

**Description:**

Expansion set for Aluminium mesh filter  
(1x Aluminium mesh frame, 1x Aluminium mesh filter 400x288x15, 10 layers)

Aluminium mesh filter 400x288x15, 10 layers

**part number:**

978018

978017