Original Operating Instructions

ecomax 100

Jan. 2018, Version 02.00

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Revision				
Date	**Version**	**Chapters**	**Reason**	**Responsible**
18.08.2016	01.00	All	New creation	Thomas Nuber tomtrailer UG (limited liability)
30.08.2017	01.01	6	Filter status display	Thomas Nuber tomtrailer UG (limited liability)
19.10.2017	01.02	7 3	Filter change, development operating unit superstructure	Anne Federer tomtrailer UG (limited liability)
07.11.2017	01.03	3 7.5	Data, Design Filter Design control unit	Anne Federer tomtrailer UG (limited liability)
29.01.2018	02.00	1,3,4,6,7	Reengineering	Anne Federer tomtrailer UG (limited liability)

All information and drawings were up to date at the time of printing.

These operating instructions have been compiled by us to the best of our knowledge. Should you find any errors or ambiguities, please inform us. We would be grateful for any further information and suggestions.

Subject to technical changes without notice.

Tamm, 29 Jan 2018

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1 Notes on documentation

1.1 Purpose

These operating instructions are intended to help you become familiar with the machine and to make full use of its high performance.

The operating instructions contain important information for the safe, proper and effective use of the machine. The instructions must be followed carefully in order to avoid safety hazards, reduce repair costs and downtime and increase the reliability and service life of the machine.

The operating instructions must be read, understood and observed by all persons responsible for the installation, commissioning, operation or maintenance of the machine. For this reason, it must always be kept at the place where the machine is operated. The local safety and accident prevention regulations and the chapter on "Safety" (see chapter 2) must be observed.

1.2 Liability

aeropur GmbH assumes no liability for damages and malfunctions caused by non-observance of the operating instructions.

For safety reasons, unauthorised modifications and conversions to the machine are strictly forbidden. If aeropur GmbH has not given its explicit approval for modifications and alterations to the machine, aeropur GmbH shall not be liable for any resulting damage.

Such changes include, for example:

- Remove protective devices

aeropur GmbH does not assume any liability for damages which can be attributed to such interventions. The risk is borne solely by the user!

We reserve the right to make technical changes which serve the further development and improvement of the machine as well as technical progress.

1.3 Target audience

These operating instructions are intended for the following target groups:

- Instructed operators
- Instructed maintenance personnel
- Technically competent cleaning and testing personnel

1.4 Presentation of information

To enable you to work quickly and safely with this manual, uniform formatting, figures, symbols, safety instructions (see Chapter 2.1), terms and abbreviations are used.

Instructions for action are indicated by an arrow.

- You can recognize enumerations by a preceding point.

NOTE Here you will find information on how to avoid possible damage to property.

INFORMATION Here you will find helpful information on the product in general or on handling.

1.5 Structure of the safety and warning notices

The safety instructions in these operating instructions are structured according to a uniform scheme. They describe residual hazards which can cause personal injury or damage to property.

General structure

⚠ **SIGNAL WORD**

(Warning Sign)

Nature and source of danger.

Consequences of non-compliance

▶ Security measures

The rule is:

Warning sign: Draws attention to the danger

Signal word: Indicates the severity of the danger.

The safety instructions are followed by instructions for action. The instructions for action must be adhered to in order to avert danger.

1.6 Retention of records

These operating instructions and all other related documents must always be kept at hand for all persons working on the machine. The location of the documents must be clearly visible to these persons.

1.7 Validity of the manual

These operating instructions are only valid for the ecomax 100 dedusting device.

2 Safety and security

- When using, troubleshooting and servicing the machine, observe the warnings that precede each action and all safety labels attached to the machine.

2.1 Classification of action-related warnings

⚠ DANGER

Indicates an immediately hazardous situation which, if not avoided, will result in death or serious injury.

Consequences of non-compliance

- Security measures

⚠ WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

Consequences of non-compliance

- Security measures

⚠ CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or light injury.

Consequences of non-compliance

- Security measures

2.2 Machine stickers, warnings, prohibitions and mandatory signs used

The information and safety labels attached to the machine must be observed. They may not be altered or removed. Damaged signs must be replaced immediately. The following list explains the symbols in this manual or on the machine.

Information and warning signs

Warning of danger point

Warning of dangerous electrical voltage

Suspended load warning

Warning of danger of being drawn in

Warning of danger of falling

Warning of danger of crushing

Warning of hot surfaces

Warning of biohazard (infection)

Mandatory signs

Activate before working!

Eye protection must be used!

Mask (or respiratory protection) must be worn!

Protective gloves must be worn!

Safety shoes must be worn!

Follow the instructions!

2.3 General safety instructions

The basic prerequisite for safe handling and trouble-free operation of the mobile dedusting device is knowledge of the basic safety instructions and occupational safety regulations.

These operating instructions contain all important information for safe operation of the mobile dust extractor.

Although the use of the dedusting unit is mobile thanks to the caster rollers, the device must nevertheless be assigned a fixed destination and possibly also protected depending on local conditions (e.g. forklift traffic). The intake and exhaust grilles must be kept clear.

The on-site work safety regulations must be observed.

DANGER **Danger of explosion if used in dust explosive areas of zones 21 and 22.**

- Do not use the devices under any circumstances in dust explosive areas (zones 21 and 22 in accordance with Directive 1999/92/EC) or underground!

DANGER **Danger to life from touching parts that have become live in the event of a fault.**

- All work on the electrical control system must be carried out in accordance with the statutory regulations and those of the employers' liability insurance association.

NOTE **Corrosion, failure of machine parts, material damage.**

- Only operate the mobile dust collector in closed, dry rooms.
- Only dry and non-explosive substances may be filtered.
- Operation in damp or explosive areas is not permitted.

NOTE The operation of the mobile dedusting device without safety systems is negligent action! Operating the mobile dedusting device without safety systems does not qualify as "foreseeable misuse"!

For this reason, these operating instructions do not explicitly draw attention to dangers that may arise from operating the mobile dedusting device without safety systems.

Residual hazards

Residual hazards are hazards which, despite a safe design and technical protective devices, represent an unavoidable, non-obvious risk due to the use of the product.

All safety instructions in this operating manual must be observed in order to avert residual hazards.

All work on the mobile dedusting device must comply with the statutory and employers' liability insurance association regulations.

Unauthorized changes

Unauthorized modifications can cause dangers for the mobile dust removal unit. Modifications, additions or conversions that may compromise safety must not be made to the mobile dust collector.

2.4 General protective measures

Everyone who works on the mobile dedusting device must make sure that there is never any danger to people. This is especially important if there are several people in the vicinity of the mobile dust collector.

Safety devices, protective devices and protective equipment must be used and maintained appropriately. Misuse, unauthorized removal and damage are prohibited.

Children must always be denied access to the equipment. In case of disregard aeropur GmbH cannot be held liable.

The measures taken against unauthorised starting and unauthorised operation of the mobile dedusting device must not be bypassed.

Repairs to working machines during operation as well as the cleaning of running parts are prohibited.

The following accident prevention regulations have been complied with for the mobile dedusting device.

General regulations	DGUV V1 (former BGV A1 or VBG 1)
Electrical machinery	DGUV V3 (prev. BGV A3 resp. VBG 4)

2.5 Personal protective equipment

During operation, maintenance, set-up or troubleshooting, personal protective equipment must be used, including, but not limited to

- Eye protection
- Respiratory protection
- Hand protection
- Foot protection

2.6 Obligations of the operator

The operator of the mobile dedusting device must ensure that

- The commissioning and operation of the machine is carried out exclusively by trained personnel.
- The cleaning and tests according to VDI 6022 are carried out by trained specialist personnel.
- These operating instructions must always be available. They are a part of the product.
- The operating instructions and particularly the safety instructions have been read and understood by the assigned personnel prior to operation, maintenance and repair.
- The permissible operating conditions are complied with.
- In case of replacement only original parts, parts approved by the manufacturer or parts with corresponding specifications are being used. Other spare parts may only be used after consultation with the manufacturer of the mobile dust collector.
- The mobile dedusting device is only operated in a perfect and safe condition. The technical condition must always comply with the country-specific legal requirements and regulations.
- The mobile dedusting device is only used as intended.
- All safety regulations are complied with.
- All maintenance tasks are carried out on schedule and professionally.
- All maintenance tasks are carried out exclusively by trained personnel.
- All maintenance work is carried out exclusively by qualified personnel.

2.7 Staff training

The personnel must be comprehensively instructed before commissioning the mobile dedusting device about:

- The signs of an impending filter change
- Carrying out the filter replacement in a professional manner

The operator must ensure that the instruction is repeated at appropriate intervals.

3 Functional description

3.1 Intended Use

The mobile dedusting device of aeropur GmbH is designed for the improvement of breathing air quality in closed rooms. It works according to the recirculation process, which means that the different air layers are circulated with simultaneous filtering of the air particles.

The unit is designed exclusively for conveying and filtering of air.

Any other use or use beyond that is considered improper and constitutes misuse of the equipment.

Customer equipment must be able to withstand the mechanical and thermal stresses that may be caused by this equipment.

Intended use also includes:

- Use the device only in networks earthed to the outer conductor.
- Connect the unit to a residual current circuit breaker (RCD).
- Use the device at an ambient air pressure of 750 mbar to 1050 mbar.
- Use the device according to the permissible ambient temperature (see chapter 3.8 Safety systems).
- Only operate the device with all protective systems.
- Observe the operating instructions.

3.2 Reasonably foreseeable misuse

Any use other than that described above may result in hazards and damage and is not intended. This includes in particular:

- Conveying air without filters or guards
- Operation with fully or partially dismantled or manipulated protective devices
- The conveyance of air which has a highly corrosive effect, e.g. salt spray
- Operation in the vicinity of flammable substances or components
- The operation of the device in an explosive atmosphere
- The use of the device as a safety-related component or for the assumption of safety-relevant functions

- The use of non-tested air filters
- The use of air filters of a class other than the specified one
- Operation, maintenance and servicing by untrained personnel
- All other application possibilities not mentioned in the intended use

3.3 Subsequently installed components

- For subsequently installed components and conversions, the operator must carry out a corresponding assessment of the hazards.

3.4 Structure of the mobile dedusting device

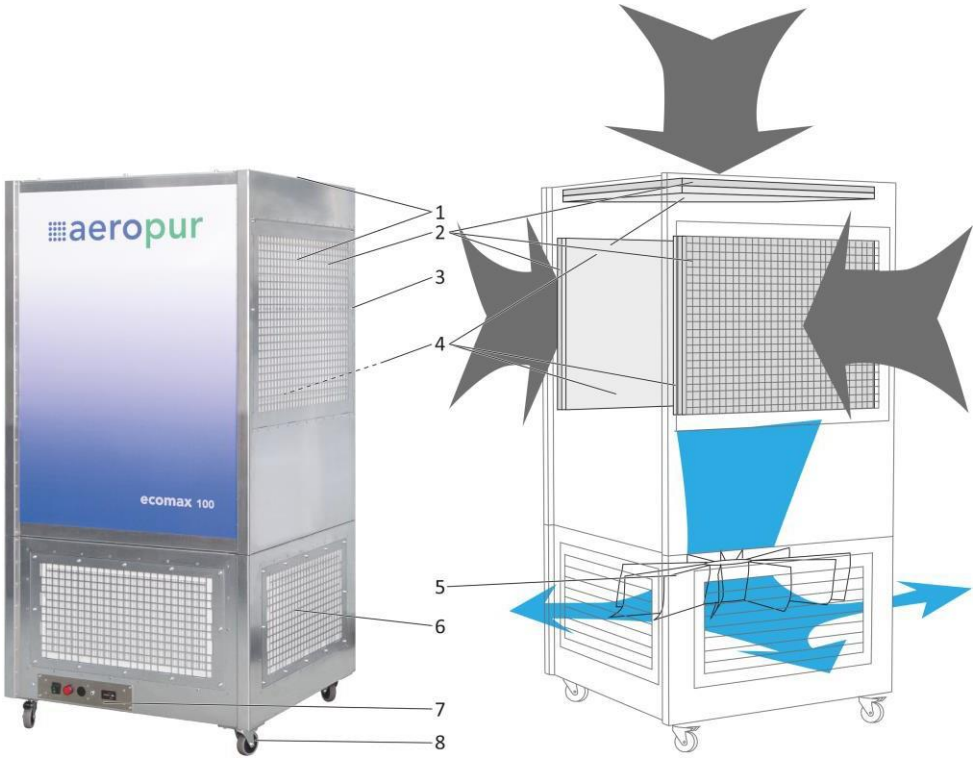

Fig. 1 Mobile dedusting unit, overview

Pos.	Description	Pos.	Description
1	Air inlet, protected by a filter cover	5	Fan
2	Prefilter G4	6	Air outlet, protected by grille
3	Hexagon socket screws filter cover	7	Control unit (see chapter 3.6)
4	Main filter (filter cell F8)	8	Floor casters

3.5 Specifications of the device

Housing

Housing made of galvanized steel.

We recommend a neutral cleaner with a pH value of 5-8 for cleaning.

Fan

Low-noise centrifugal fan with highly efficient EC motor. SFP

Class 1, (< 500 Watt/m³/s)

Filters

The standard equipment of the mobile dust collector includes class G4 pre-filters and class F8 or F9 main filters. These allow a high indoor air quality according to EN 13779.

The air filters used are certified in accordance with DIN EN 779:2012.

For the filtration of hazardous substances, suspended matter filters such as Hepa or ULPA filters are required. Further information on hazardous substances can be found in TRGS900 (Technical Rules for Hazardous Substances).

Spare parts

Damaged parts and filters must be replaced immediately. Only if original spare parts are used aeropur GmbH guarantees the full performance of the mobile dust collector according to the technical data as well as an optimal service life and durability of all components.

3.6 Operating unit

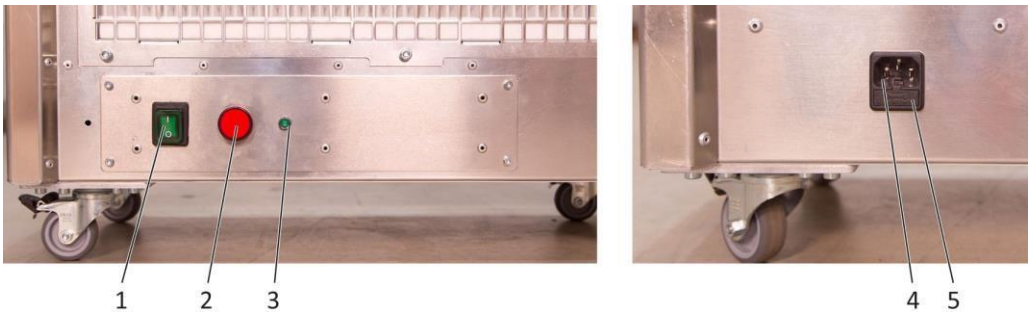

Fig.2 Operating unit and rear view

Pos.	Description	Function
1	Main switch	Lights up green when "ON"
2	Filter status display	LED off: The filters work perfectly. LED flashes: The filters must be replaced, starting with the prefilter. If the LED still flashes afterwards, the main filter must also be replaced. See chapter 7.2 Filter change
3	Operation and fault message display (green LED)	LED off: Fan malfunction LED on: Faultless function
4	Plug connection 230V AC	
5	Fine-wire fuse / Slow 10 A	NOTE: Always disconnect the device plug from the mains before changing the fuse.

3.7 Typeplate

Fig.3 Nameplate

3.8 Safety Systems

Protective grille fan

The fan is protected from the top by a protective grille.

Fig.4 Protective grille fan

Fault monitoring for radial fan

Integrated protection functions

In the event of the following faults, the motor is automatically switched off by integrated protective functions.

Fault	Description / Protective function
Rotor position detection error	The motor restarts automatically.
Blocked rotor	When the blockage is removed, the motor restarts automatically.
Mains undervoltage (mains voltage is outside the permissible nominal voltage)	When the mains voltage has returned to permissible values, the motor restarts automatically.

3.9 Technical data

	ecomax 100
Voltage	230 V / 50/60 Hz
Power consumption	750 W
Current consumption	3,3 A
Weight	230 kg
Dimensions L x W x H	90 x 90 x 182 cm
Noise level	69 dB (A)
Housing material	Galvanised steel
Degree of protection	IP50
Filter steps	2 (3 suction sides)
Filter class according to EN 779	G4 / F8 Standard
Nominal volume flow	12.000 m³/h
Filter capacity G4+F8	10.000 m³/h
Filter change (pressure controlled)	LED red / flashing
Operating and fault message	LED green / without malfunction
Ambient temperature	-20 °C to +40 °C
EC centrifugal fan	Backward curved
Speed control	yes
Installation category	A
Efficiency category	Static
Efficiency class N	74,4

Further technical equipment:

- Power limit
- Motor current limitation
- Soft start
- Overheating protection
- Motor protection: anti-lock protection
- Motor protection: internal temperature sensor

4 Storage, transport and installation

4.1 General information on storage, transport and installation

- During storage, completely protect the product against the effects of weather, humidity, temperature fluctuations and other influences that may cause damage.
- To protect against soiling, cover the product with a protective film for storage.
- The permissible ambient temperature for transport and storage is -40 to +80 degrees.

When setting up the machine, the following safety instructions must be observed - this will prevent fatal injuries, machine damage and other material damage.

⚠ WARNING **Risk of impact and crushing during loading.**

If the machine as an entire unit falls during loading, severe injuries may occur if someone is standing under the machine.

- ▶ When lifting by crane, use sufficiently dimensioned hoisting and slinging gear.
- ▶ When lifting with a forklift, ensure horizontal transport.
- ▶ Nobody must be standing under a lifted load.
- ▶ Wear PPE: head protection, gloves, foot protection.

- ▶ Before first use, remove all packaging material (disposal of packaging material: see chapter 9.1).
- ▶ When unpacking, check whether the dedusting device has been damaged during transport.
- ▶ To prevent personal and material damage, place the unit on a firm surface so that it cannot tip over.
- ▶ Observe the regulations of the statutory accident prevention regulations.
- ▶ Make sure at all times that the air supply to the air intake panel is not covered or otherwise interrupted. In this case, the device no longer provides any power and a device defect cannot be ruled out.
- ▶ Please also read the chapter "General safety instructions".

4.2 Mounting the floor casters

⚠ WARNING **Danger of crushing and postural damage during wheel assembly.**

To mount the wheels, the dedusting unit must be tilted by 90°. If the machine is tilted carelessly, parts of the body can get trapped under the machine.

- Tilt the dedusting device with the help of another person.
- Secure the dust collector against slipping.

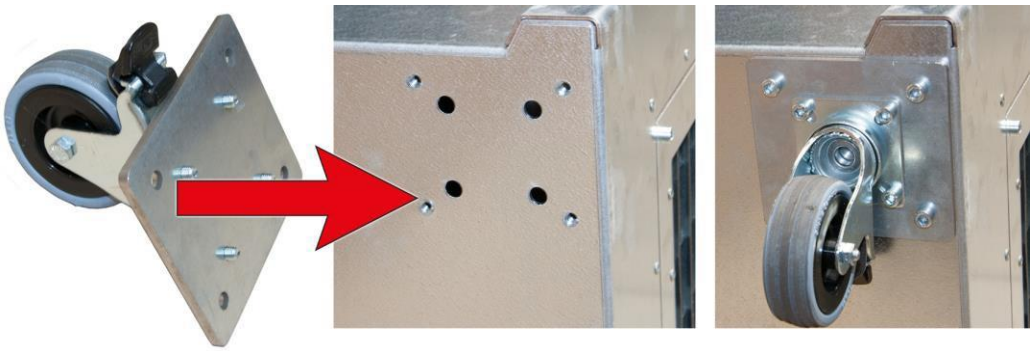

Fig.5 Mounting of the floor casters

- Carefully place the deducting device on one side.
- Mount the four floor rollers on the four corners of the bottom of the dedusting device using an Allen key as shown in Figure 5.

⚠ CAUTION **Risk of crushing and impact.**

The dedusting unit can unintentionally roll away if it is standing on uneven ground and/or on level ground with unlocked rollers.

- Place the dedusting unit on a firm, flat and horizontal surface.
- Lock the rollers.

4.3 Electrical Installation

- Lay the cable in such a way that it does not cause any tripping hazards.
- Damaged cables (broken, cracked) must be replaced immediately to prevent personal injury.
- Connect the unit to a grounded outlet to prevent personal injury.
- Turn off the power switch before disconnecting the appliance from the wall outlet.
- Connect the unit to a residual current circuit breaker (RCD).

The dedusting unit supplied with filters is ready for operation.

5 Operation

▶ Switch on the dedusting unit at the main switch (see 3.6, Fig.2, Pos. 1).

The dedusting unit is now in operation.

CAUTION

Stress caused by noise when the fan is faulty.

Parts rotating with unbalance may cause vibrations of the dedusting device or loud disturbing noise.

▶ Replace fan. Only use original spare parts.

- If the operator notices any safety-relevant changes to the machine, he is obliged to report them immediately to the responsible person.
- Check the safety devices for proper operation every working day after the machine has been started for the first time.

CAUTION

Risk of crushing and impact.

The dedusting unit can unintentionally roll away if it is standing on uneven ground and/or on level ground with unlocked rollers.

▶ Place the dedusting unit on a firm, flat and horizontal surface.

▶ Lock the rollers.

6 Faults

DANGER

Risk of death due to electric shock.

Contact with live parts may result in death or serious injury.

- Disconnect the mains plug before carrying out any maintenance or repair work!

DANGER

Danger to life due to unexpected, unintended start-up.

When working on the switching unit and fan: long hair, loose clothing can be drawn in or become trapped by the fan when the machine is open and the filters removed when the fan is switched on.

Severe injuries to fingers and hands when reaching into the fan with the machine open and filters removed when fan is switched on.

- Disconnect the mains plug before carrying out any maintenance or repair work!
- The repairer must completely remove the power cable and store it safely so that a third party cannot (un)intentionally switch on the machine during repair work.

CAUTION

Burning/combustion.

Touching the fan motor may cause burns if it has overheated due to a fault.

- Allow fan and motor to cool off for 20 minutes before removing parts.

CAUTION

Risk of crushing and impact.

The dedusting unit can unintentionally roll away if it is standing on uneven ground and/or on level ground with unlocked rollers.

- Place the dedusting unit on a firm, flat and horizontal surface.
- Lock the rollers.

The device is ready for operation when the green LED lights up. If the LED does not light up, there is a mechanical or electrical fault.

Fault	Possible cause	Remedy
Fan does not rotate/unit does not start. Green LED is off.	Mechanical blocking	Switch off the device, disconnect from the power supply and remove the mechanical blockage.
	Mains voltage is faulty	Check mains voltage, then restore power supply.
	Fuse has failed	Check the fine-wire fuse on the back of the device and replace if necessary. Ecomax 100=10 A/Slow
	Connection is faulty	Switch off the device, disconnect it from the power supply and correct the connection. See wiring diagram.
	Temperature sensor has responded	Allow the engine to cool off and find the cause of the fault. Air inlets and outlet must not be obstructed.
	Operating unit/electronics defective	Pull out the mains plug and replace the control unit. (See chapter 7.6 Removal and installation of the control unit)
Overheating electronics / motor Green LED is off.	Inadequate cooling	Allow the unit to cool down. Air inlets and outlet must not be obstructed.
	Ambient temperature too high	Check ambient temperature. To reset the error message, switch the mains voltage off for at least 25 seconds and on again.
	Improper operating point	Check operating point or filter. Allow the unit to cool down.
Filter status indicator flashes red	Filter is full	Change filter. Start with prefilter. If the flashing continues, also change the main filter. (See chapter 7.2 Filter change.)
	Incorrect filter is used	The original configured filter is not used. Replace filter.
	Differential pressure is set incorrectly	Cover the air inlet to 90% and turn the differential pressure regulator in the control electronics until the red LED just starts to light up. Standard setting ecomax 100 = 350 P
Fan does not run smoothly	Unbalance of rotating parts	Clean the device. Make sure that no balancing clamps are removed. If there is still unbalance after cleaning, replace the fan.

In case of further disturbances please contact aeropur.

7 Maintenance and control

When maintaining the machine, the following safety instructions must be observed unconditionally - this will prevent life-threatening injuries to persons, machine damage and other material damage as well as environmental damage.

Cleaning and maintenance work may only be carried out by authorised operating personnel - the operating instructions must be followed exactly.

Repair work may only be carried out by authorised specialist personnel - the accident prevention regulations must be observed.

All work on the electrical equipment of the machine may only be carried out by licensed electricians.

Please also read chapter 2.3 'General safety instructions'!

NOTE After completion of a maintenance or repair, make sure that all tools, cleaning objects or other parts are removed from the machine.

NOTE In your own interest, please note that any necessary repairs or maintenance which goes beyond this technical documentation during the warranty period can only be carried out by aeropur GmbH itself.

7.1 Checklist for maintenance work

Part	Check	Action	Interval
Air filters	Damage, soiling	Exchange	After differential pressure exceeding or service life exceeding (first filter stage every 12 months, second filter stage every 24 months)
Instrument housing	Damage, corrosion, soiling, water formation	Maintenance, cleaning, if necessary, determination of the cause of water formation	Every 12 months
Fan, parts in contact with air	Damage, corrosion, contamination	Maintenance, cleaning	Every 12 months
Air diffusers, interior, filter cover, exhaust air outlet (blow-out damper)	Damage, corrosion, contamination, solid deposits, leakages	Cleaning	Every 12 months
		Exchange	When required

Part	Check	Action	Interval
Electronics of the operating unit, ports	Damage, condition, function, leakages	Maintenance	Every 12 months

7.2 Filter change

DANGER

Infection, poisoning, breathing difficulties and sensitization when changing fine dust filters or Hepa filters.

Inhaling or touching harmful dust and glass fibres when changing the filter.

- Wear mouth/respiratory protection and gloves to change filter.
- Do not reach into the filter.
- Do not shake the filter.
- Pack filter dust-tight (e.g. in optionally available aero-hygiene-bag).
- When disposing of waste, observe the local regulations for waste in accordance with the Waste Management Ordinance, code number AVV 150202.

WARNING

Respiratory distress, sensitization.

When changing the filter, inhale or touch dusts that may be harmful in this high concentration.

- Wear mouth/respiratory protection and gloves to change filter.
- Do not reach into the filter.
- Do not shake the filter.
- Pack filter dust-tight (e.g. in optionally available aero-hygiene-bag).
- Observe local regulations for disposal.

WARNING

Long hair and loose clothing can be drawn in or caught by the fan when the machine is open at the side and the fan is switched on.

Fingers and hands can be severely injured by the fan when the fan is switched on and the machine is opened from the side at the bottom.

- The mains plug must be disconnected when working on the fan.
- The repairer must completely remove the power cable and store it safely so that a third party cannot (un)intentionally switch on the machine during repair work.

⚠ WARNING **Slipping, tripping and falling when changing the upper filters.**

Lock casters, use safe ladders/ steps (see also DGUV Information 208-016 - Handlungsanleitung für den Umgang mit Ladern und Trittern (BGI 694).

- ▶ Always ensure a secure footing during filter replacement.

⚠ CAUTION **Risk of crushing and impact.**

The dedusting unit can unintentionally roll away if it is standing on uneven ground and/or on level ground with unlocked rollers.

- ▶ Place the dedusting unit on a firm, flat and horizontal surface.
- ▶ Lock the rollers.

Requirements for changing the filter

The air filter inserts must be replaced at the latest when the permissible final pressure difference is reached or in the event of technical or hygienic functional defects.

Only air filters tested according to DIN EN 779 or DIN EN 1822 may be used. These are individually and clearly visibly marked.

The coarse dust prefilter is at least class G4, the second filter stage (main filter) at least F7, better F8 or F9.

For hygienic reasons, the maximum service life should be limited:

- 12 months for the 1st filter stage
- 24 months for the 2nd filter stage

If the intervals are not observed, there is a danger that particles that have already been filtered will be "carried away" again by the increasing system pressure, thus contaminating the air again.

Gas filters (e.g. activated carbon) do not influence the pressure loss during normal operation.

When changing a Hepa or ULPA filter, the inside of the filter material must not be touched under any circumstances.

Operations

1

- Switch off the dedusting device.
- Loosen the two filter covers on opposite sides using 4 screws
- Loosen the filter cover on the top using 8 screws (see arrows)

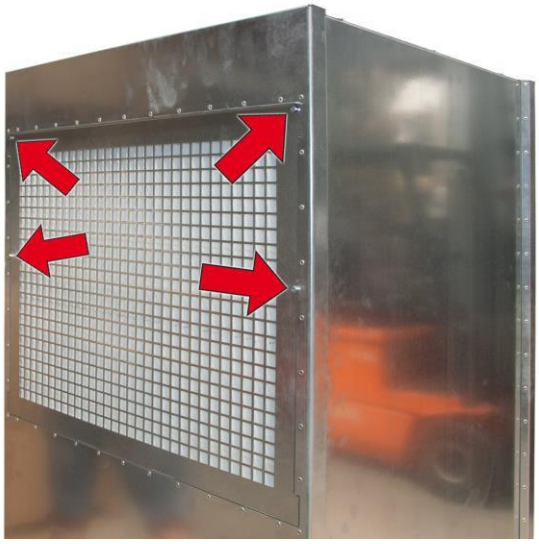

Fig. 6 Loosening side filter cover

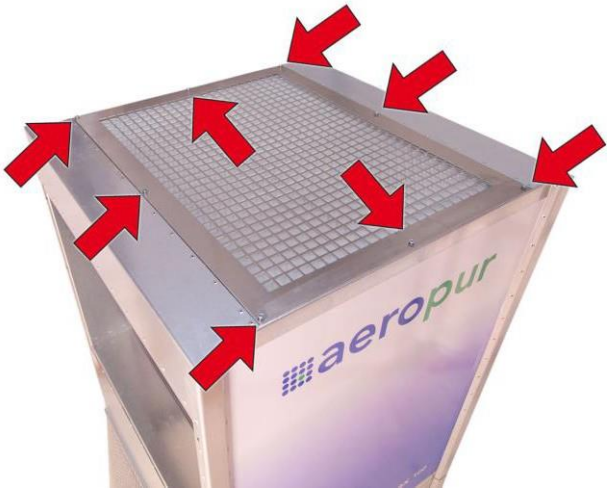

Fig. 7 Loosening upper filter cover

2

Side: The filter covers are inserted at the bottom.

- Fold down the filter cover (1).
- Pull the filter cover towards you (2).

Top: The filter cover is inserted on one side.

- Ensure that the filter is securely positioned.
- Fold the filter cover upwards.
- Pull the filter cover towards you.

Fig.8 Remove filter cover

3

- For your own safety, use mouth/respiratory protection and gloves.
- Hold the pre-filters by the frame and remove them.
- Pack them immediately in dustproof packaging.
- If only replacing the prefilter: continue at 6.

Fig. 9 Remove side prefilter

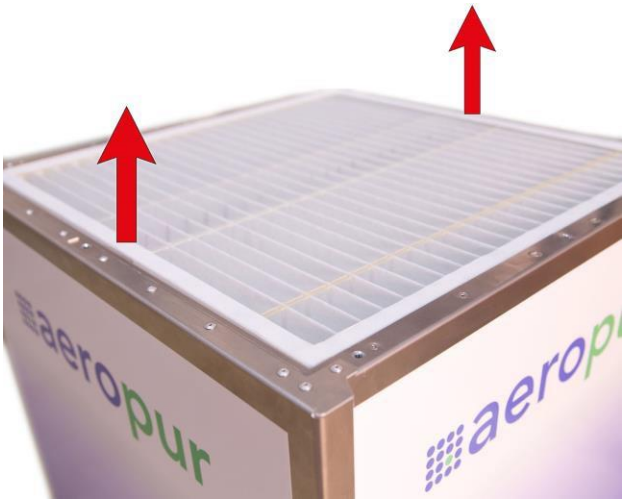

Fig. 10 Removing the upper prefilter

4

- Hold the main filters by the frame and remove them.
- Pack them immediately in dustproof packages.

Fig. 11 Removing the main filter

5

- Hold the new main filters by the frame and check them for visible damage.
- Only use filters without damage.
- Insert the filters properly.
- Ensure that the label is visible (oval).

Fig. 12 Inserting the main filter

6

- Hold the new pre-filters by the frame and check them for visible damage.
- Only use filters without damage.
- Insert the filters properly.
- Ensure that the label is clearly visible (oval).
- Insert the filter covers and screw them tight.
- Switch on the dedusting device and at 100% power check that the filter status indicator is off.

Fig. 13 Inserting the side prefilter

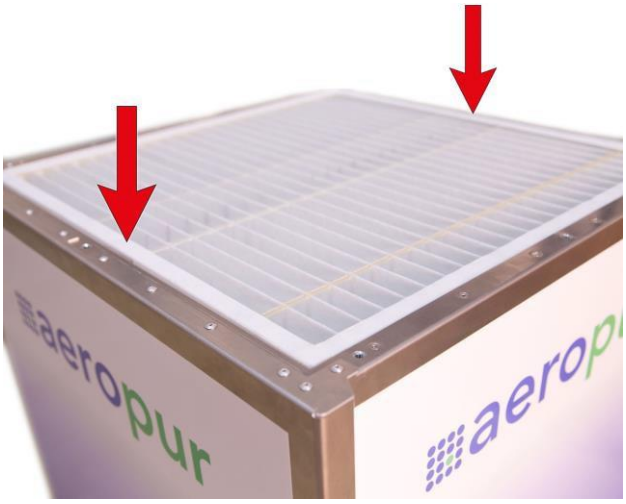

Fig. 14 Inserting the upper prefilter

7.3 Cleaning the filter covers

- Remove the filter covers as described in chapter 7.1, no. 1.
- Clean the filter covers from both sides using a brush, cloth or a damp sponge.
- Reinstall the filter covers.

7.4 Cleaning and inspection of the interior

WARNING **Hot motor housing.**

Fire hazard.

- Make sure that there are no flammable or combustible substances near the fan.
- Before switching on the device, check it for visible damage externally and for the functionality of the protective devices.
- Check the air ducts of the fan for foreign bodies and remove them.

NOTE Malfunction is possible after damage to the device during cleaning.

- Do not use a high-pressure cleaner to clean the unit.
- Do not use cleaners containing acidic or alkaline components or solvents.
- Do not use pointy or sharp-edged objects for cleaning.

NOTE When handling cleaning agents and disinfectants, the safety precautions and manufacturer's instructions must be strictly adhered to.

- Disconnect the mains plug and secure it against reconnection.
- Remove the filters as described in chapter 7.1.
- Carry out the hygiene cleaning of the interior according to VDI 6022.
- Use a brush, a cloth or a damp sponge for the inside of the filter unit and the mounting frame.
- Loosen the protective grille in front of the fan.
- Check the inside of the fan blades for dirt and scaling and clean them if necessary.

Water must not get into the fan or the control electronics! Do not use pointy objects! Do not spray the unit with compressed air, water or steam!

- Document the results.
- Re-attach the protective grille.
- Screw the protective grille on tightly.
- Insert the filters as described in chapter 7.1.
- Check whether the fan can blow out freely and the filter suction plate can suck in freely without resistance.

7.5 Filter change blow-out damper

The blow-out damper must be replaced once a year, depending on the degree of soiling.

Operations

1

- Switch off the dedusting device.
- Loosen the four filter covers using 6 screws (see arrows)

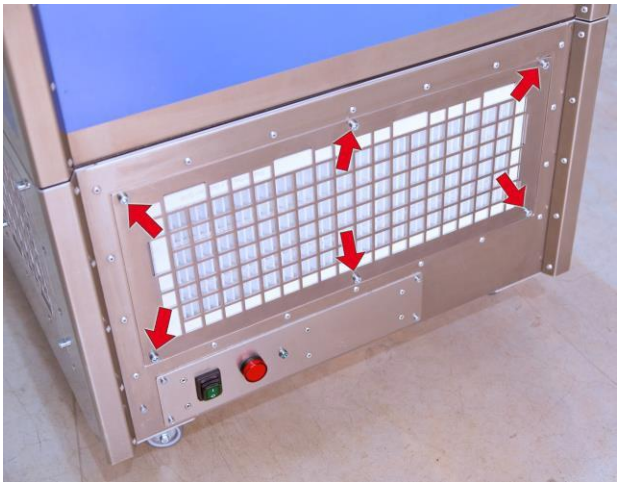

Fig. 15 Loosening the cover

2

- For your own safety, use mouth/respiratory protection and gloves.
- Fold away the safety clamp (1).
- Pull out the blow-out damper (2).
- Pack it immediately in dustproof packaging.

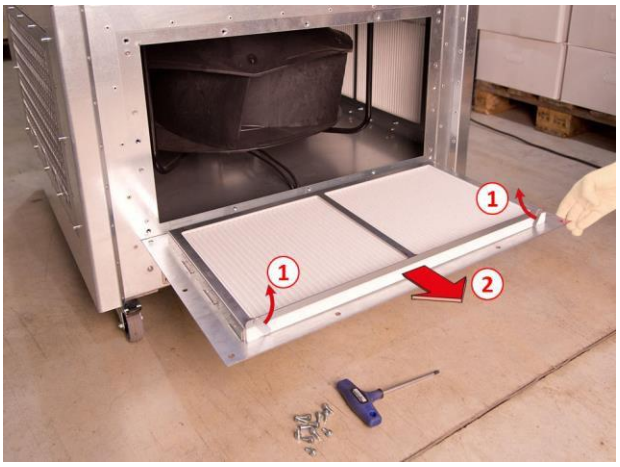

Fig. 16 Removing the blow-out damper

3

- Hold the new blow-out damper by the frame and check it for visible damage.
- Only use blow-out dampers without visible damage.
- Insert the blow-out damper properly (1).
- Ensure that the dust-air side is at the top when inserting the cover and thus points into the fan chamber at the rear after mounting the cover.
- Fold the safety clamp in front of the blow-out damper (2).
- Insert the cover and screw it on tightly.
- Switch on the dedusting device and at 100% power check that the filter status indicator is off.

Fig. 17 Inserting the blow-out damper

7.6 Removal and installation of the control unit

Operations

1

- Switch off the dedusting device.
- Disconnect the mains plug.
- Loosen the 4 screws of the control unit (see arrows).

Fig. 18 Loosening the control unit screws

2

- Carefully pull out the control unit.

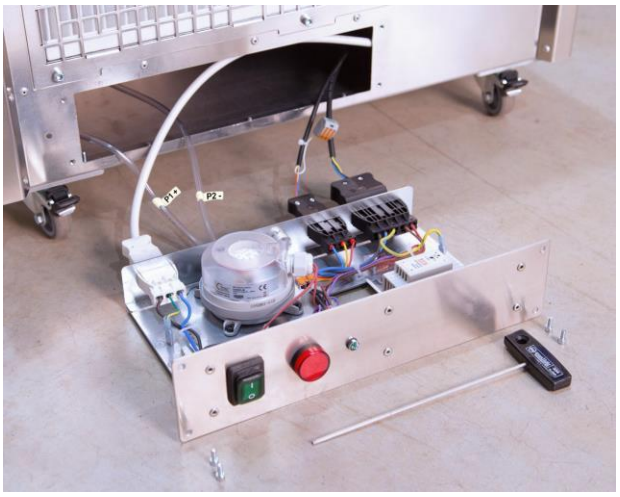

Fig. 19 Removing the control unit

3

- Disconnect the cables and hoses.

NOTE: If the hoses are not labelled, label them before removing them.

- Send the faulty control unit to your dealer for replacement.

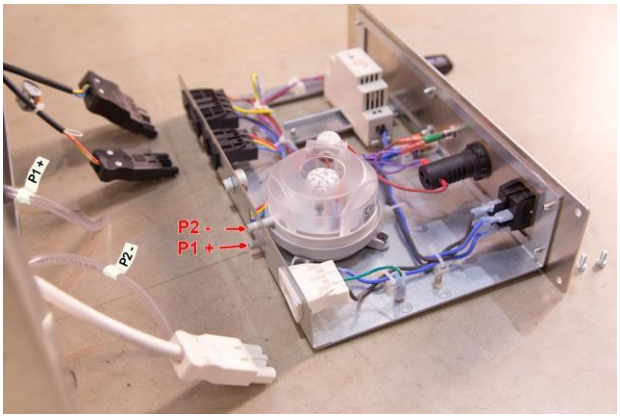

Fig. 20 Disconnecting cables and hoses

As soon as you have received the new control unit:

- Check that the control unit is not damaged.

NOTE

- Only install an undamaged control unit.

- Plug-in the cables and hoses.
- Carefully insert the control unit.
- Screw the control unit on tightly.
- The dedusting unit is now ready for operation.

7.7 Repairs

NOTE

Necessary repairs are only to be carried out by authorized and appropriately trained specialist personnel.

8 Removal and decommissioning

When decommissioning the mobile dedusting unit, the steps as described in section 2.3. "General Safety Instructions" must strictly be observed.

The mobile dust extractor may only be taken out of operation by qualified personnel in compliance with the safety instructions.

DANGER

Danger to life from touching live parts of the control system and equipment

- Work on the system may only be carried out when it is detached from power sources.
- Work on the control unit and/or the electrical supply may only be carried out by trained specialist personnel.

8.1 Decommissioning

For temporary shutdown, the mobile dust collector must be switched off at the main switch.

8.2 Final decommissioning

For the final decommissioning, the main switch must be secured against being switched on again in addition to the points mentioned above.

Used filters must be disposed of in accordance with Section 9.2.

9 Recycling and disposal

9.1 Packaging material

Machine parts and components were packaged for shipment in accordance with the transport regulations. After use, the packaging should therefore be collected and disposed of separately for each material. Recycling should be preferred in order to avoid waste.

9.2 Filters

The aeropur fine dust filters are made of environmentally friendly components, free of dyes, binders or solvents and completely incinerable. If there are environmentally hazardous materials in the application area of the filters, it is possible that the filters may also be contaminated. In this case, dispose of the filters in accordance with local regulations.

- When disposing of contaminated filters, note whether they fall within the scope of the Waste Management Ordinance, code number AVV 150202.
- If this is the case, dispose of them accordingly.

9.3 Device

The mobile dedusting unit consists largely of valuable recyclable materials that are to be recycled. Due to its modular construction, it can be easily dismantled into its components.

Ensure that all applicable laws, standards, ordinances and regional regulations are complied with when disposing of the mobile dedusting device.

- Take the mobile dedusting device completely out of operation.
- Separate the dismantled parts according to recyclable materials.
- Ensure that the parts and any accessories are disposed of properly.
- When the mobile dust collector has reached the end of its life cycle, it must be dismantled and disposed of safely and professionally, particularly those parts or substances which are harmful to the environment.

INFORMATION

We recommend that you contact a certified regional specialist waste management company with the disposal of the decommissioned device.

10 Warranty (German)

aeropur GmbH takes over a manufacturer warranty of 2 years. The warranty does not cover defects resulting from normal wear and tear, negligence, misuse or unauthorised intervention during the warranty period. The warranty also expires if unsuitable filter materials are used, as these are directly related to the fan performance.

11 Declaration of conformity

aeropur
mobile Entstaubungsgeräte

EG-Konformitätserklärung

im Sinne der EG-Maschinenrichtlinie 2006/42/EG, Anh. II 1. A

Hersteller

Aeropur GmbH
Bauhofring 8
71732 Tamm

In der Gemeinschaft ansässige Person, die bevollmächtigt ist, die technischen Unterlagen zusammenzustellen

Lauterbach, Fabian

Beschreibung und Identifizierung der Maschine

Produkt/Erzeugnis	Mobiles Entstaubungsgerät
Typ	ecomax 100
Seriennummern	9000-01ff
Maschinennummern	
Funktion	Verbesserung der Atemluftqualität in geschlossenen Räumen nach dem Umluftverfahren (Sekundärluftverfahren gemäß VDI 6022)

Es wird ausdrücklich erklärt, dass die Maschine allen einschlägigen Bestimmungen der folgenden EGRichtlinien bzw. Verordnungen entspricht:

2006/42/EG	Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates vom 17. Mai 2006 über Maschinen und zur Änderung der Richtlinie 95/16/EG (Neufassung)
2014/35/EU	RICHTLINIE 2014/35/EU DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 26. Februar 2014 zur Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung elektrischer Betriebsmittel zur Verwendung innerhalb bestimmter Spannungsgrenzen auf dem Markt (Neufassung)

Fundstelle der angewandten harmonisierten Normen entsprechend Artikel 7 Absatz 2:

EN ISO 12100:2010	Sicherheit von Maschinen - Allgemeine Gestaltungsleitsätze - Risikobewertung und Risikominderung (inkl. Berichtigung zu DIN EN ISO 12100:2011:03)
EN 60204-1:2006	Sicherheit von Maschinen - Elektrische Ausrüstung von Maschinen - Teil 1: Allgemeine Anforderungen
EN ISO 13849-1:2015	Sicherheit von Maschinen - Sicherheitsbezogene Teile von Steuerungen - Teil 1: Allgemeine Gestaltungsleitsätze
DIN EN ISO 13849-2:2012	Sicherheit von Maschinen - Sicherheitsbezogene Teile von Steuerungen - Teil 2: Validierung
EN ISO 14120:2015	Sicherheit von Maschinen - Trennende Schutzeinrichtungen - Allgemeine Anforderungen an Gestaltung und Bau von feststehenden und beweglichen trennenden Schutzeinrichtungen
EN 1037:1995+A1:2008	Sicherheit von Maschinen - Vermeidung von unerwartetem Anlauf
EN 614-1:2006+A1:2009	Sicherheit von Maschinen - Ergonomische Gestaltungsgrundsätze - Teil 1: Begriffe und allgemeine Leitsätze

Tamm, 16. Feb. 2018
Ort, Datum

Unterschrift
Fabian Lauterbach (Geschäftsführer)

F. Lauterbach