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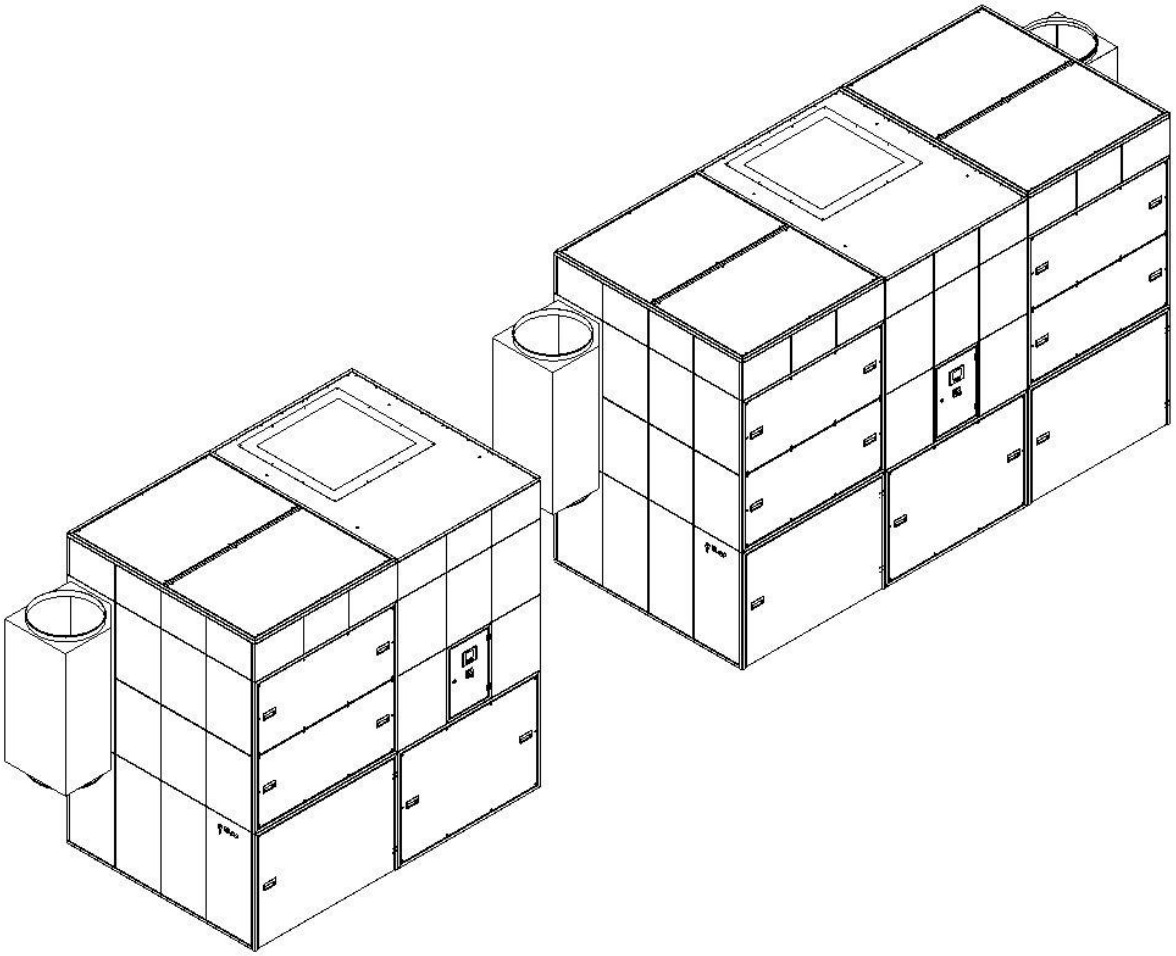

WeldFil

EN – Operating Manual

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1 General

1.1 Introduction

This manual is an essential aid for the proper and safe operation of the product.

These operating instructions contain important information to ensure safe, proper and efficient operation of the product. Observing these instructions helps avoiding danger, reducing repair costs and downtimes and increasing the reliability and service life of the product. The operating instructions must be kept available at all times and have to be read and applied by every person who is assigned to work on or with the product.

These include amongst others:

- the operation and troubleshooting during operation
- the maintenance (care, maintenance, repair)
- the transport
- the assembly
- the disposal

Technical modifications and errors expected.

1.2 References to copyright and industrial property rights

These Operating Instructions should be kept confidential. They should be made accessible only to authorised persons. They may be passed on to third parties only with the written consent from KEMPER GmbH, referred to as manufacturer in the following.

All documents are protected under the Copyright Act. The reproduction and distribution of documents, including excerpts, as well as re-use and passing on of their contents is not permitted. Unless this is expressly permitted in writing.

Violations are liable to prosecution and liable for damages. The manufacturer reserves the right to exercise all intellectual property rights.

1.3 Notes for the operating company

The operating instructions are an essential part of the product.
The operating company must ensure that the operating personnel is aware of the contents of this manual.

Based on national regulations for accident prevention and environmental protection, the operating instructions are to be supplemented by the operating company's own operating instructions, including information on regulatory and reporting requirements to meet specific operating requirements, such as work organisation, work flow and staff employed. In addition to the operating instructions and the relevant obligatory

regulations for accident prevention applicable in the country of use, it is also imperative to comply with the recognised technical rules for safe and professional handling.

Without prior consent from the manufacturer, the operating company may not carry out any changes, conversions or additions to the product which may impair safety. Spare parts used must comply with the manufacturer's specified technical requirements. This is always the case with original replacement parts.

Only use trained and instructed staff for the operation, maintenance, repair and transport of the product. Clearly define for staff who is responsible for operation, maintenance and transport.

2 Safety

2.1 General information

The product is designed and built according to state-of-the-art technology and the recognised safety rules and regulations. When operating the product, technical hazards for the operator or impairment of the product as well as other property may occur, if:

- it is not operated by trained or instructed personnel
- it is not used for the purpose intended and/or
- it is improperly maintained

2.2 Information on signs and symbols

⚠ DANGER

This symbol in conjunction with the signal word "Danger" indicates imminent danger. Non-adherence of the safety note leads to death or serious injuries.

⚠ WARNING

The symbol in conjunction with the signal word "Warning" indicates a potentially dangerous situation. Non-adherence to the safety notice may lead to death or serious injuries.

⚠ CAUTION

The symbol in conjunction with the signal word "Caution" indicates a potentially dangerous situation. Non-adherence of the safety note may lead to slight or negligible injuries.
May also be used for warnings against property damage.

NOTE

The general information is simple additional information which does not warn about personal injury or property damage.

1. Enumerations of action steps are marked as numbers with a dot, where the order is important.

- Bullet points indicate lists of parts in a legend or instructions for which the sequence is unimportant

2.3 Markings/signs to be affixed by the operating company

The operating company is obliged to post further markings and signs on the product and the surrounding area if necessary.

Such markings and signs might be related, for example, to the requirement for wearing personal protective equipment.

2.4 Safety instructions for operating staff

Before use, the operator of the product must be instructed through information, instructions and training on the handling of the product and the materials and aids to be used.

The product system may only be used in technically perfect condition, for its intended purpose, in full awareness of the safety aspects and potential dangers and in accordance with these instructions. All errors, especially those that may affect safety, must be removed immediately.

Every person who is charged with commissioning, operation or maintenance must have fully read and understood these operating instructions. This specifically applies to staff who only operate the product occasionally.

The operating instructions must always be within reach of the product.

We accept no liability for any damages or injuries caused by failure to observe these operating instructions.

The relevant accident prevention regulations and other generally recognised safety and occupational health regulations must be observed.

The responsibilities for the various activities included in maintenance and repair must be clearly defined and adhered to. Only then will human error - especially in dangerous situations - be avoided.

The operating company is to enforce wearing of personal protective equipment by operating and maintenance staff. These include in particular safety shoes, safety glasses and gloves.

Do not wear loose, long hair, loose clothing or jewellery. In theory, there is a risk of getting caught on something, or being pulled in or dragged along by moving parts.

If there are any safety-related changes to the product, immediately halt the process, secure it and report the occurrence to the relevant authority/person!

Work on the product may only be carried out by reliable, trained staff. Observe the minimum legal age.

Staff who require training, teaching or instructing or staff who undergo a general apprenticeship may only operate the product under the supervision of an experienced member of staff.

2.5 Safety instructions for maintenance/troubleshooting

Service and maintenance doors must be freely accessible at all times.

Setting up, maintenance and repair work and troubleshooting must only be performed when the product is switched off.

Always tighten bolt connections that have been loosened during repair work. If specified, tighten the relevant bolts with a torque wrench.

In particular, protect connections and screw connections from dirt or care products at the beginning of maintenance/repair/care

The time frames for periodic testing/inspections stipulated or specified in the operating instructions must be observed.

Before disassembling, mark the parts that belong together.

2.6 Notes regarding special types of hazard

⚠ DANGER

Danger of electric shock!

Any work on the electrical equipment of the product must only be performed by a qualified electrician or by operating personnel under the direction and supervision of a qualified electrician in accordance with electronic regulations.

Before opening the product, pull the plug, if available, and secure it against accidental switch-on.

For faults with the product's electrical energy supply, immediately switch the product off at the on/off switch and if available, also pull the plug.

Use only original fuses with the prescribed amperage.

Electrical components, on which inspection, maintenance and repair work must be carried out, must be disconnected from the power supply. Secure equipment that has been used for disconnection against unintentional or automatic reconnection. Firstly check that no voltage is present in activated, electrical components, then isolate adjacent components under voltage. When making repairs, ensure that constructive characteristics are not altered in a way that reduces safety.

Check cables regularly for damage and replace if necessary.

⚠ WARNING

Electric shock if earthing is missing!

If the protective earth connection of devices is missing or incorrectly executed, high voltages may be present on exposed parts or housing parts which, if touched, can lead to serious injury or death.

⚠ WARNING

Electric shock if an unsuitable power supply is connected!

The connection of an unsuitable power supply can cause parts that can be touched to be under dangerous voltage. Contact with dangerous voltage can lead to serious or fatal injury.

For electrical connection data, see the name plate of the product

Power supply

The product is designed for the mains voltage indicated on the name plate. If mains cables or mains plugs are not fitted to the product, they must be fitted in accordance with national standards.

⚠ CAUTION

Insufficiently dimensioned electrical installation can lead to serious damage to property.

The mains supply line and its fuse protection must be designed in accordance with the existing power supply. Observe the technical data on the name plate.

The mains fuse should be equipped with at least a **category C** circuit breaker.

Note on connection to the mains supply for products with extraction capacity control

⚠ DANGER

Danger of electric voltage!

Products with extraction power control (frequency inverters) are intended for protection by line protection fuses.

If the product is operated on a mains supply with a residual current circuit breaker (RCCB) connected upstream, the following must be observed.

Since the operation of the frequency inverter on the protective earth conductor can cause a direct current, the residual current circuit breaker (RCCB) connected in series with the mains must meet the following requirements.

Category type:	Rated current	Tripping fault current	Note
Type B	40 A	300 mA	short time-delayed
Type B	63 A	300 mA	short time-delayed
Type B	80 A	300 mA	short time-delayed
Type B	100 A	300 mA	short time-delayed
Type B	125 A	300 mA	short time-delayed

Tab. 1: Requirements for residual current circuit breaker

⚠ DANGER

Suspended loads

Tipping or falling loads lead to severe to fatal injuries.

- Never step under suspended loads.
- Always remain outside the danger zone.
- Observe the total weight, attachment points and centre of gravity of the load.
- Observe the transport instructions and symbols on the transported goods.

⚠ WARNING

Health hazards caused by welding fume particles

Do not inhale welding dust / smoke! Serious injury to the lungs and respiratory tract is possible!

Sweat smoke contains substances that can cause cancer!

Skin contact with cutting and welding fumes etc. can cause skin irritation in sensitive persons!

Repair and maintenance work on the product may only be carried out by trained and authorised personnel while complying with the safety rules and the applicable accident prevention regulations.

To avoid contact with and inhalation of the dust particles, wear disposable overalls, protective goggles, gloves and a suitable Class FFP2 respiratory protection filter mask in accordance with EN 149.

The release of hazardous dust particles during repair and maintenance is to be avoided to ensure that persons not charged with the task are not affected.

⚠ WARNING

Work on the compressed air vessel and on the compressed air lines and components may only be performed by persons with expertise in pneumatics.

The pneumatic system must be isolated and depressurised prior to the performance of maintenance and repair work on the external compressed air supply.

⚠ WARNING

Danger from mobile radiation!

Mobile radiation can affect electronic and medical products.

The product:

- Do not use near medical instruments such as pacemakers, insulin pumps and the like.
- Do not use in hospitals, petrol stations and medical facilities
- Do not use near high-precision electronic equipment
- Do not operate near strong electromagnetic fields

⚠ CAUTION

Health hazard due to noise!

The product can produce noise, please refer to information in the technical data. In connection with other machines and/or local conditions, a higher noise level can occur at the operation site of the product. In this case, the operating company is obliged to provide the operating personnel with the appropriate protective equipment.

3 Product information

3.1 Functional description

The product is a filter system that is used to aspirate and filter contaminated air, the properties for which are listed under “Intended application”.

The captured pollutants are also transported to the product in the air stream via a ducting system. The polluted air flows past the baffle plates installed in the product. These protect the filter cartridges against coarser particles. The polluted air then passes through the filter medium.

The deposited particles collect on the surface of the filter cartridges and result in a slow increase in the pressure difference at the filter cartridges. This is assessed by the intelligent control system that initiates a cleaning process as required. A blast of compressed air is precisely distributed across the total filter surface of each filter cartridge via a rotation nozzle. The deposited particles are dislodged and fall into the dust collection container in the lower section of the product. The filter cartridges are cleaned during operation. Work does not need to be interrupted. So-called ‘post-cleaning’ is performed once the product has been switched off. This cleaning method is the more effective of the two.
The cleaned air flows up through the inside of the filter cartridges into the clean air area of the product from where it is either returned directly to the working space or routed outdoors via an exhaust pipe.

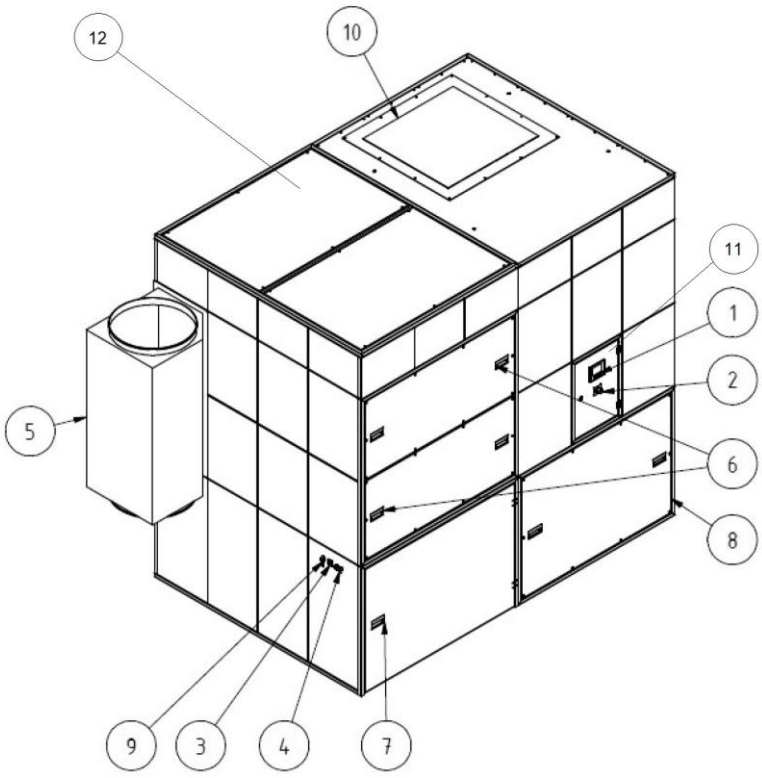


Fig. 1: 34110 - 34130

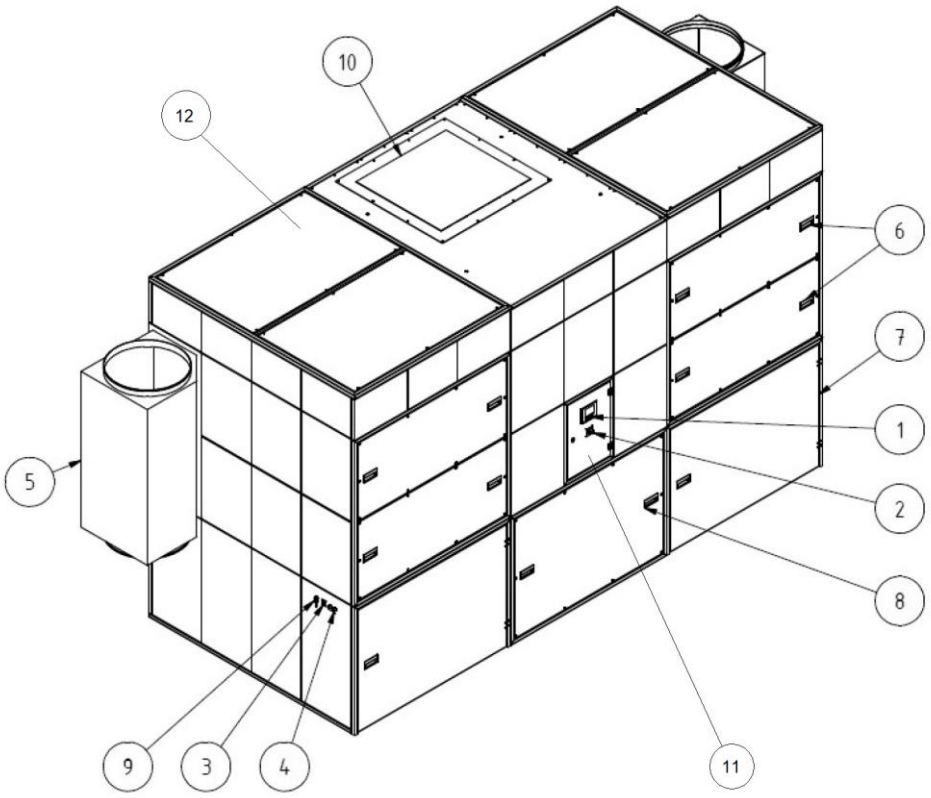


Fig. 2: 34160 - 34270

Item	Description	Item	Description
1	Operating control	7	Dust collection container door
2	Main switch	8	Maintenance cover, fan area
3	Connection socket for external operating element	9	Connecting sleeve for 9 mm compressed air connection
4	6 and 12-pole connection socket for connecting extensions	10	Exhaust opening (optional transition piece for exhaust air)
5	Suction-side connection box	11	Control cabinet
6	Maintenance cover, filter area	12	Maintenance cover for compressed air vessel + safety valve

Tab. 2: Positions on the product

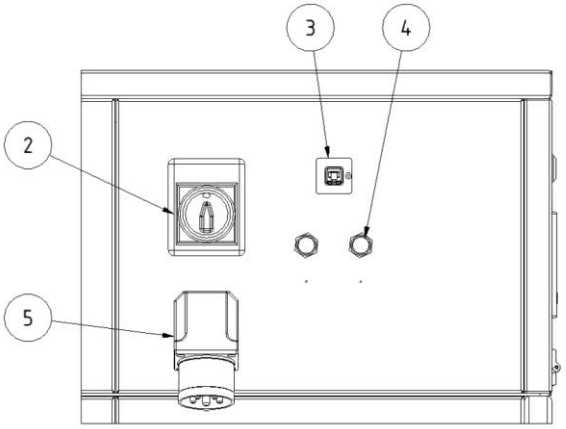


Fig. 3: Connection panel

3.2 Functional description of extraction capacity regulation (optional)

Products with automatic extraction capacity regulation are fitted with systems that keep the extraction capacity constant according to requirements. This is accomplished by fitting the product with an extraction capacity regulation system.

The product's automatic extraction capacity regulation has a range of advantages which make the extraction of dusts that are harmful to health more effective and, especially, more efficient.

Benefits:

- The product extraction capacity is always constant, regardless of how many workplaces are currently operating. It only ever extracts as much as is necessary. This means that employees always have the same working conditions and do not notice any differences resulting from a deteriorating extraction capacity due to higher volume of usage. The extraction capacity is always matched to the current demand.
- Extraction capacity is of course also regulated if new filter cartridges have been installed, for example. The flow resistance of new cartridges is significantly lower. The product, however, continues to operate with the same extraction capacity, but with lower consumption. As filter cartridge soiling levels increase the product's extraction capacity changes accordingly.

NOTE

The product must always be shut down completely before it can be restarted. The following message appears on the operating control during this run-down time:

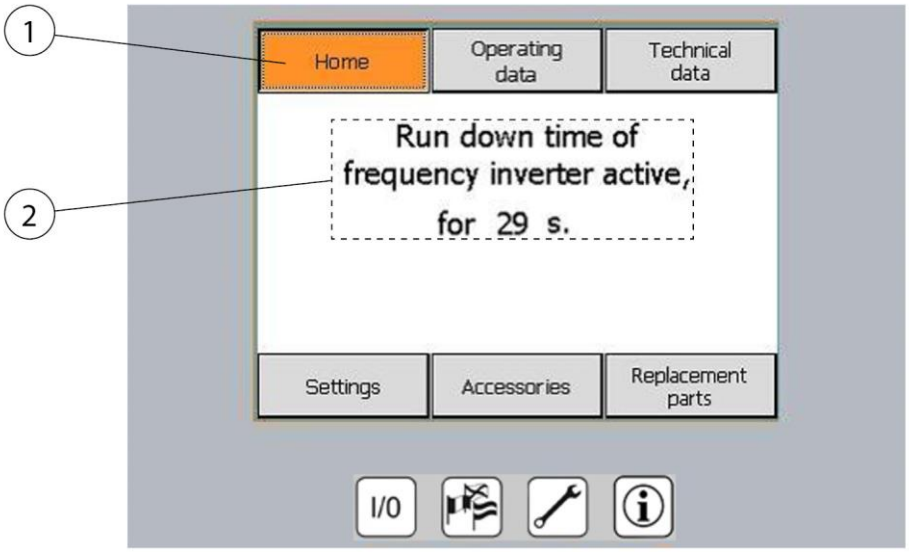


Fig. 4: Run-down time

Item	Description	Item	Description
1	Main menu	2	Message: Run-down time of the frequency converter (fan) active for 29 seconds

Tab. 3: Run-down time

3.3 Distinguishing feature – W3 certified

The product is manufactured in two versions:

- **Version – non W3 certified**
- **Version – W3 certified**

Attention

Only products labelled with the W3 sticker have been tested and certified accordingly.

See also chapter technical data: Welding fume class and test standard.

W3-tested:

The product has been tested by the IFA (Institute for Occupational Safety and Health of the German Social Accident Insurance Institutions). It fulfils the requirements of welding fume separation class W3 and conforms to EN ISO 21904-1.

The tested products are labelled with the DGUV test mark and a W3-tested (marking of the welding fume separation class) in the form of a sticker.

Labelling on the product	Meaning/explanation	Reference logo
W3 sticker	Type "W3 certified" according to test standard – see chapter "Technical data"	

Tab. 4: W3 label

3.4 Distinguishing features between the indoor and outdoor versions

The product is manufactured in two versions:

- Model – as an indoor version
- Model – as an outdoor version (optional)

The standard model of the product is manufactured as an indoor version and is therefore exclusively intended for operation inside buildings. The product is not weatherproof.

The outdoor version of the product is intended for installation outside buildings. The product is weatherproof, but must be protected from direct rainfall by a roof and a fan outlet-side accessory set.

A suitable weather protection roof with a fan outlet-side accessory set can be optionally purchased from the manufacturer.

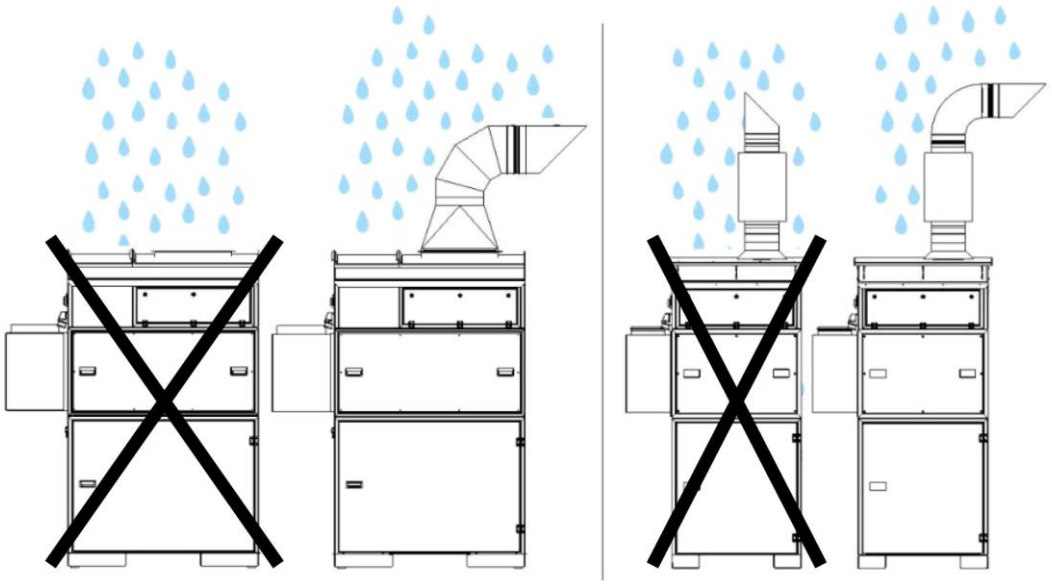


Fig. 5: Outdoor version

3.5 Distinguishing feature – cloud connection

Settings and queries:

Some products have a cloud connection, which allows the product software to be kept up to date.

Operating parameters of the product can also be queried and tracked in real time.

Settings and queries are made via the cloud: www.kemperconnect.de

NOTE

Required mobile radio standard

The product uses a mobile wireless standard that can be operated worldwide. An adjacent mobile network, radio standard 2G, 3G, 4G is required.

3.6 Intended use

The product is designed to extract and filter out the welding fumes produced when welding metallic materials at the point of origin. In general, the product can be used for all work processes in which welding fumes are released. However, care must be taken that no glowing sparks are drawn into the product.

Dimensions and further product details that must be observed can be found in the technical data.

NOTE

Only products labelled with the W3 sticker have been tested and certified accordingly. See also chapter Technical data: Welding fume class and test standard.

NOTE

When welding alloyed or high-alloy steels with filler metals above 5% chromium/nickel, carcinogenic CMR substances (carcinogenic, mutagenic, reprotoxic) are released. In accordance with official regulations, only tested and approved products may be operated in Germany to extract these harmful smoke particles using the so-called recirculation method.

Only products that meet the requirements of welding fume separation class W3/IFA certified may be operated for the aforementioned welding processes using the recirculation method.

When extracting welding fumes with carcinogenic components (e.g. chromates, nickel oxides, etc.), the requirements of TRGS 560 (technical rules for HAZMAT) and TRGS 528 (welding work) must be obeyed.

NOTE

The information in the "Technical data" chapter must be observed and strictly adhered to.

Intended use also includes observation of the instructions and information on

- safety
- operation and control
- maintenance and servicing

contained in this manual.

Any other use or use going beyond this is considered improper use. The company operating the product is solely responsible for any damage resulting from it. This also applies to unauthorised modifications to the product.

3.7 General requirements in accordance with DIN EN ISO 21904

NOTE

Connection of ducting systems, extraction arms and hoses.

Ducting systems, extraction arms and hoses connected to the product can lead to a pressure drop and must be taken into account by the system designer or user.

The connected components must be suitable for the product and ensure the required minimum volume flow (extraction capacity).

A possible design of the ducting can be requested from the manufacturer.

The connected components must be checked regularly for proper seating, leaks and blockages.

The required extraction capacity must be checked at the central extraction element.

NOTE

Returning the air to the workplace atmosphere

In some Federal States, recirculation of air into the workplace atmosphere is not recommended or is prohibited. It may be necessary to conduct the exhaust air to the outside via a duct.

3.8 Reasonably foreseeable misuse

No reasonable, foreseeable misuse is possible that could lead to dangerous situations with personal injury when working with the product whilst adhering to its intended use.

The operation of the product in industrial areas that do not comply with the requirements for explosion protection is not permissible.

Furthermore, the operation is prohibited for:

1. Processes that are not in the intended use list and in which the extracted air is:

- is mixed with sparks, e.g. from grinding processes, which due to their size and quantity might lead to damage to the filter media or even to a fire;

- mixed with liquids and the resulting contamination of the air flow with vapours containing aerosols and oils;
- mixed with highly flammable, combustible dust and/or with substances that can form explosive mixtures or atmospheres;
- is mixed with other aggressive or abrasive dust that could damage the product and the filter elements employed;
- is mixed with organic, toxic substances or a proportion of substances that are released when cutting the material.

2. Outdoor locations where the product is exposed to weather conditions because the product must only be installed in closed buildings.
   If there is an outdoor variant of the product available, this may be installed outside. Please note that additional accessories may be required for the outdoor installation.

3.9 Markings and signs on the product

Various markings and signs are affixed to the product. If these are damaged or removed, please replace them immediately with new ones in the same location.

The operating company is obliged to post further markings and signs on the product and the surrounding area if necessary.

Such notes and signs might be related, for example, to the requirement for wearing personal protective equipment.

In the country of use, additional required safety instructions and pictograms can be provided by the manufacturer in accordance with applicable law.

3.10 Residual Risk

Even when all safety rules are observed, when operating the product a residual risk remains, as described below.

All persons working on and with the product must be aware of these residual risks and follow the instructions that prevent these residual risks from causing accidents or damages.

⚠ WARNING

Danger of serious injury to the lungs and respiratory tract – always wear respiratory protection, Class FFP2 or higher.

Skin contact with welding fume particles may cause skin irritation in sensitive persons – wear protective clothing.

Before starting the welding process, ensure that the product is properly adjusted and in operation. The filter elements must be complete and in undamaged condition.

The connected detection element must reliably detect the welding fumes. For the correct positioning, refer to the documentation of the detection element.

When changing the filter inserts, skin contact with the separated dust particles may occur and parts of the dust particles may also be stirred up by the work. Respiratory protection and protective clothing must be worn.

Embers in the filter elements may cause smouldering fires – switch off the product, close the damper flap in the collection element if fitted and let the device cool down in a controlled manner.

4 Transport and Storage

4.1 Transport

⚠ DANGER

Life-threatening crushing possible when loading and transporting the product!

Improper lifting and transporting may cause the pallet (if present) to tilt and fall!

- Never stand under suspended loads.
- Observe the permissible loads of the transport and lifting aids.
- Observe the applicable accident prevention and occupational safety regulations.

For transporting products with a pallet, use a suitable pallet truck or forklift.

The weight of the product can be found on the name plate.

4.2 Storage

The product must be stored in its original packaging at an ambient temperature of 20 °C to +50 °C in a dry and clean place. The packaging must not be loaded by other objects.

The storage duration is not critical for all products.

4.3 Storage period for products with belt drive

If the product is stored and/or shut down for prolonged periods (longer than 6 months), the belt drive must be slackened so that the fan bearings are not subject to any unnecessary punctual permanent load.

The manufacture start date is printed on all nameplates.

How to determine the production date:

- The manufacturing date can be seen on the 1st to the 4th digit of the serial number, e.g.: 203700641
- In this case, these digits are 2037,
  20 indicates the production year = 2020
  37 indicates the production week = week 37

Please refer to the “Maintenance” chapter for instructions on re-tightening the belt drive.

Maintenance work must be recorded in the maintenance schedule.

5 Assembly

Instructions for safe installation of the product

NOTE

The operating company of the product may only assign specialists to carry out independent assembly.

- At least two people are needed to assemble the product.
- Only use suitable transport and lifting equipment.
- It must be ensured that the assembly location provides sufficient load-bearing capacity.
- Only use suitable fixing material.
- The fixing material must be selected according to the local conditions.
- The product must not obstruct anyone in their working area.
- Existing air outlet grilles must not be covered.
- Existing maintenance doors and covers must be freely accessible.

⚠ DANGER

Falling parts may cause life-threatening injuries!

Tipping or falling loads lead to severe to fatal injuries.

- Never step under suspended loads.
- Always remain outside the danger zone.
- Observe the total weight, attachment points and centre of gravity of the load.
- Observe the transport instructions and symbols on the transported goods.

⚠ WARNING

Incorrect connections may cause serious injuries!

Please note the necessary safeguards and only have the product connected by trained specialists.

5.1 Unpacking and assembling the product

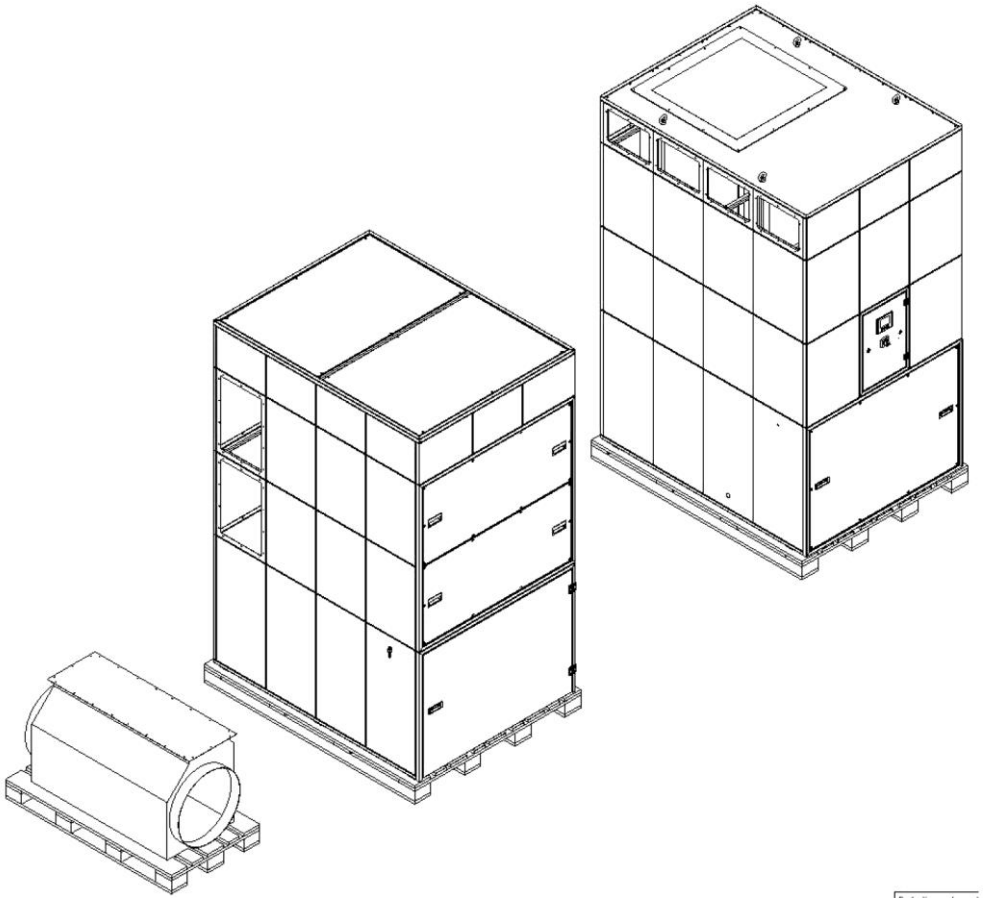


Fig. 6: Condition as supplied to the customer

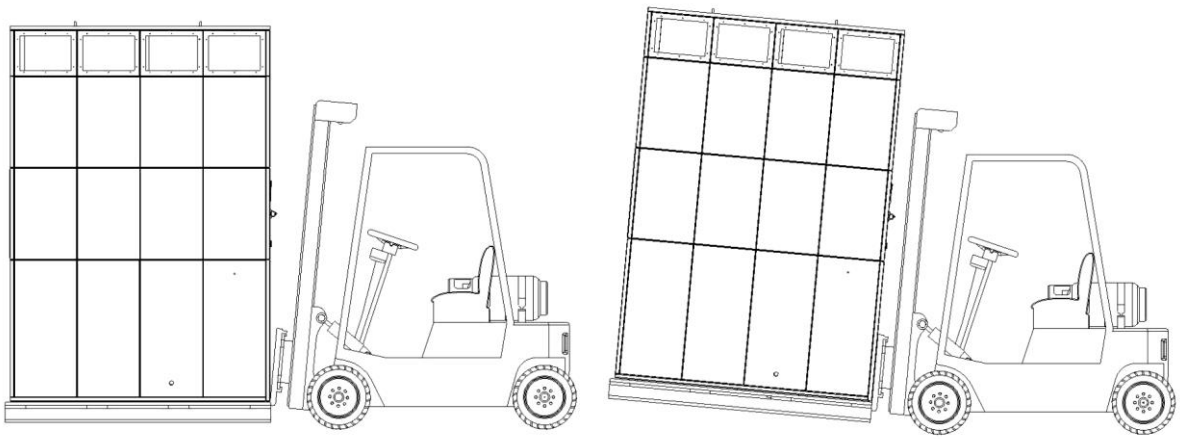


Fig. 7: Transporting the product

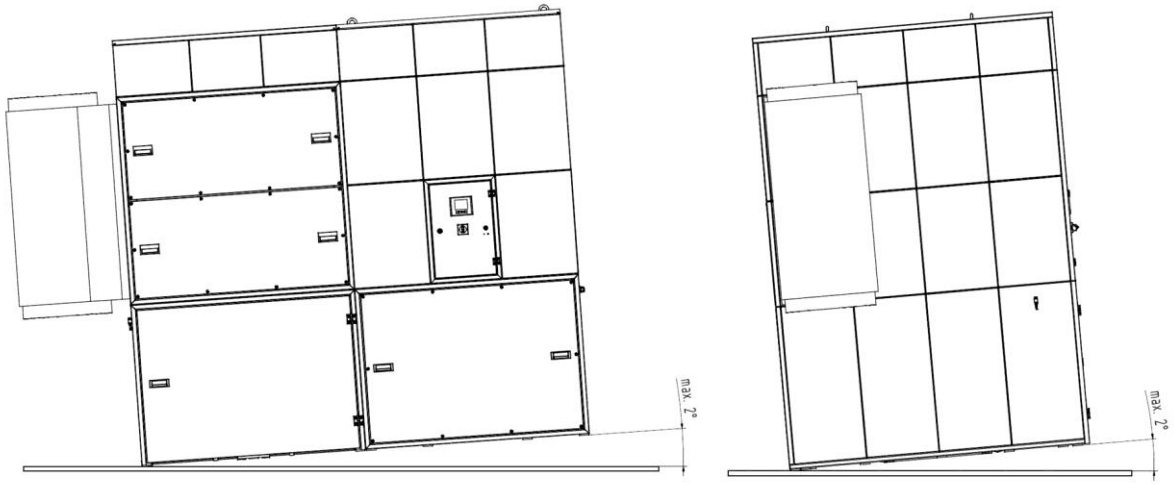


Fig. 8: Installation

The product must be aligned at the installation location according to the local conditions, so that an all-round clearance is maintained to the walls, etc., of approx. 0.5 m and of 1.5 m to the front. The filter unit does not need to be fixed to the floor! The amount of floor space required for the product is given by the dimension drawing in the Chapter “Dimension Sheets”.

Assembling the fan unit

Carry out assembly as follows:

1. Unpack the product and remove the protective film.
2. Transport the fan section to the place of installation.

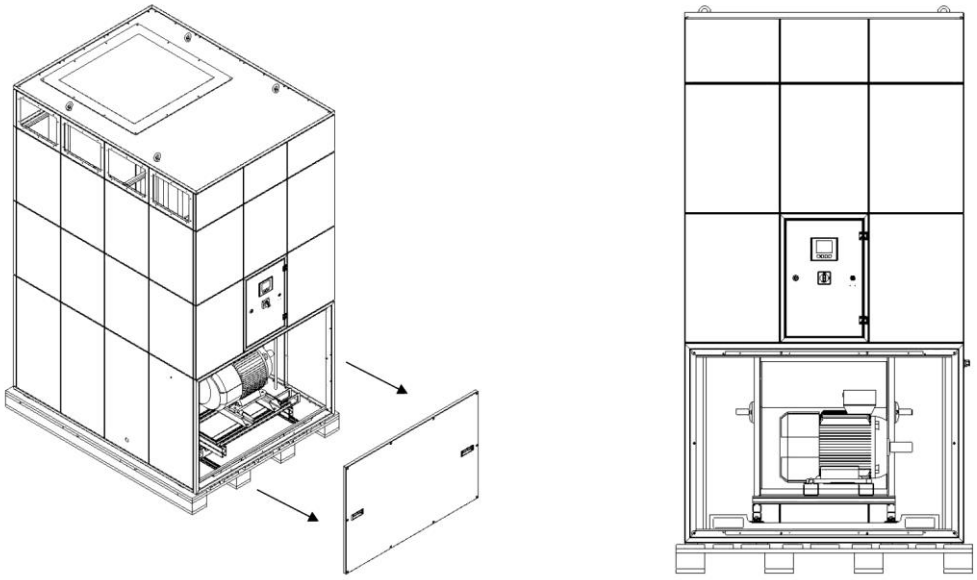


Fig. 9: Opening the maintenance door of the fan unit

3. Remove the screwed-on timber blocks from the pallet.
4. Open the front maintenance door. To do so, the Allen screws must be removed all around.

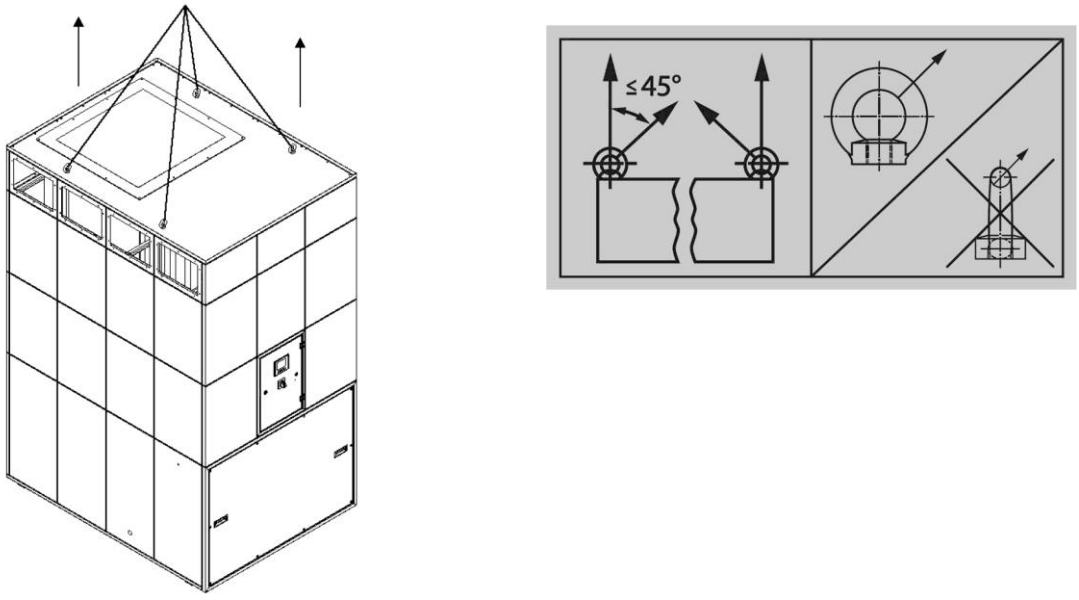


Fig. 10: Lifting the fan unit with a crane

5. Lift the fan unit approx. 5 cm with a crane, using a suitable sling.

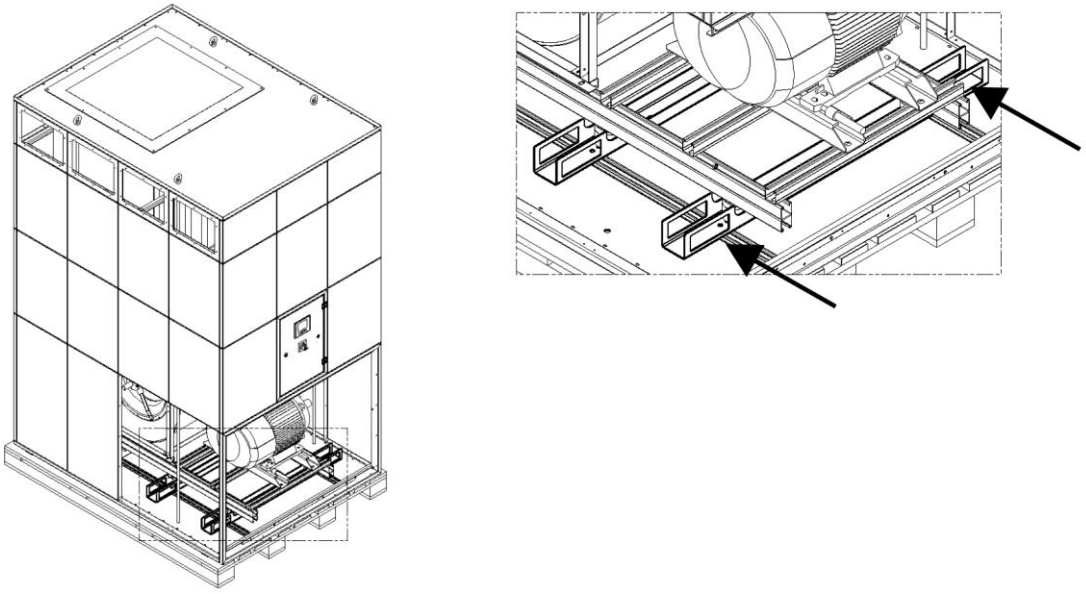


Fig. 11: Lifting the fan unit with a fork-lift

6. Alternatively, the fan unit can also be lifted with a fork-lift. Move the fork-lift prongs into the fork-lift pockets provided and lift the fan unit approx. 5 cm.
7. Then remove the pallet from the side. Do not under any circumstances reach under the fan part!
8. Now slowly lower the fan unit and align it to the set-up position.

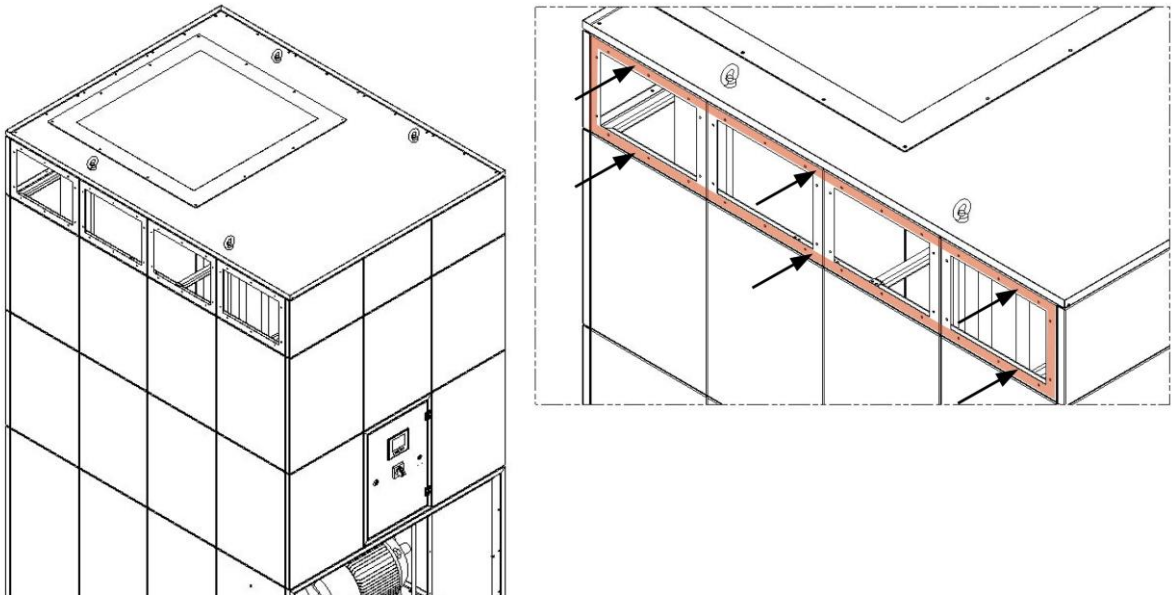


Fig. 12: Clean air passageway

9. Affix the included sealing tape (4x 20 mm) all around the opened panels.
10. The fan unit is now in position. The maintenance door must, however, remain open.

Assembling the filter unit

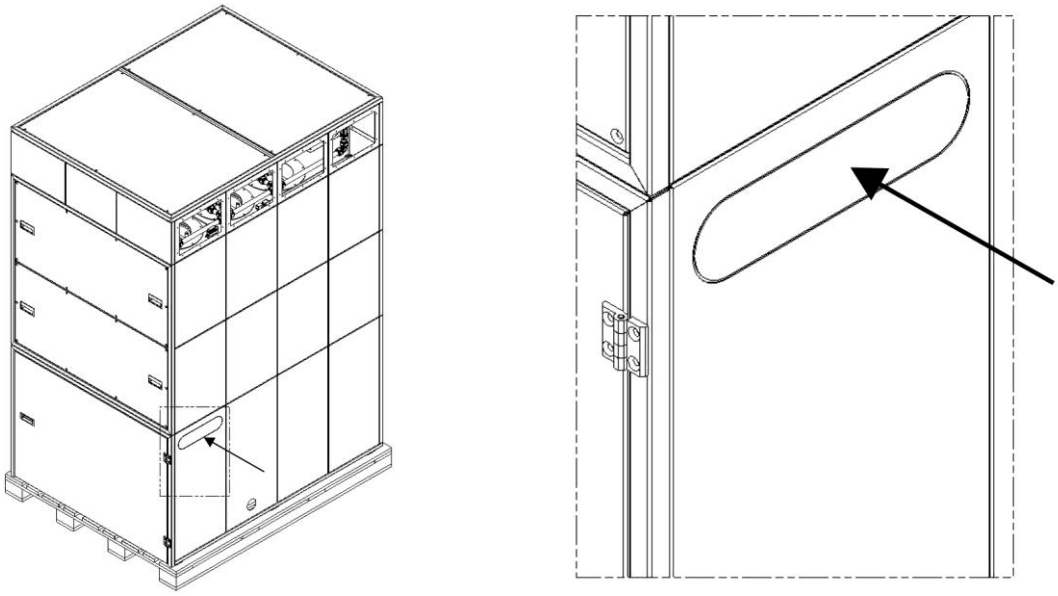


Fig. 13: Perforated plate

11. Remove the perforated plate on the filter unit by turning it slightly, so that it can be taken off. Deburr the bars that remain.
12. Transport the filter section to the place of installation on its pallet.
13. Remove the screwed-on timber blocks from the pallet.

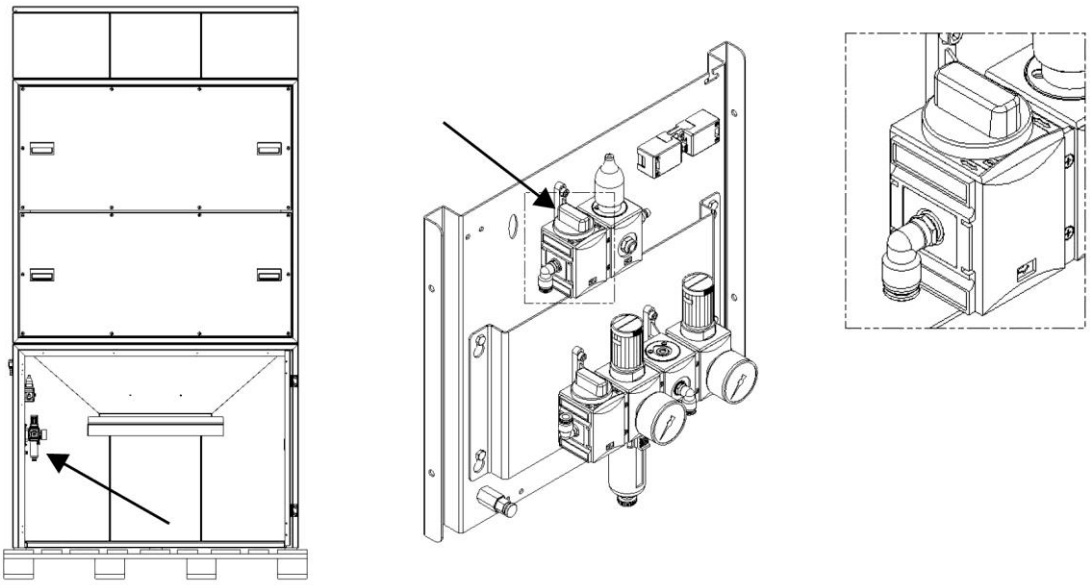


Fig. 14: Lowering valve, compressed air vessel

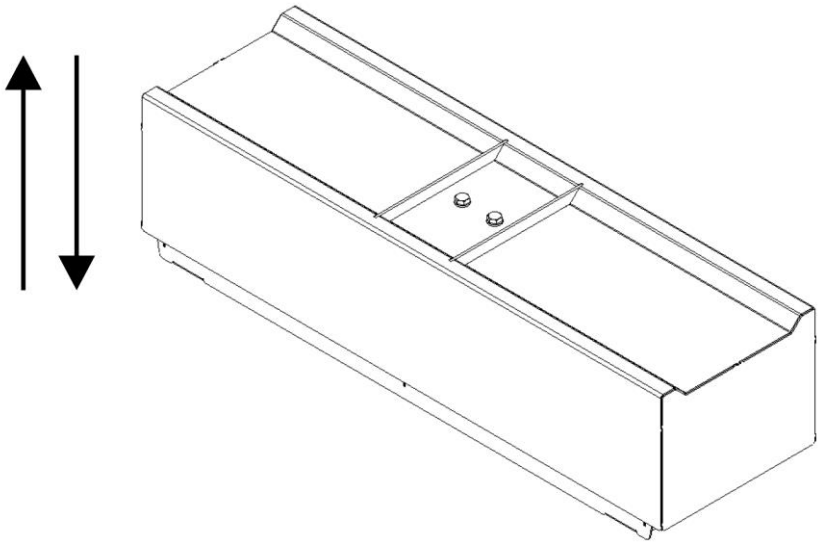


Fig. 15: Lifting device

14. Open the front door and lower the dust collection container. Activate the lowering valve to do so.

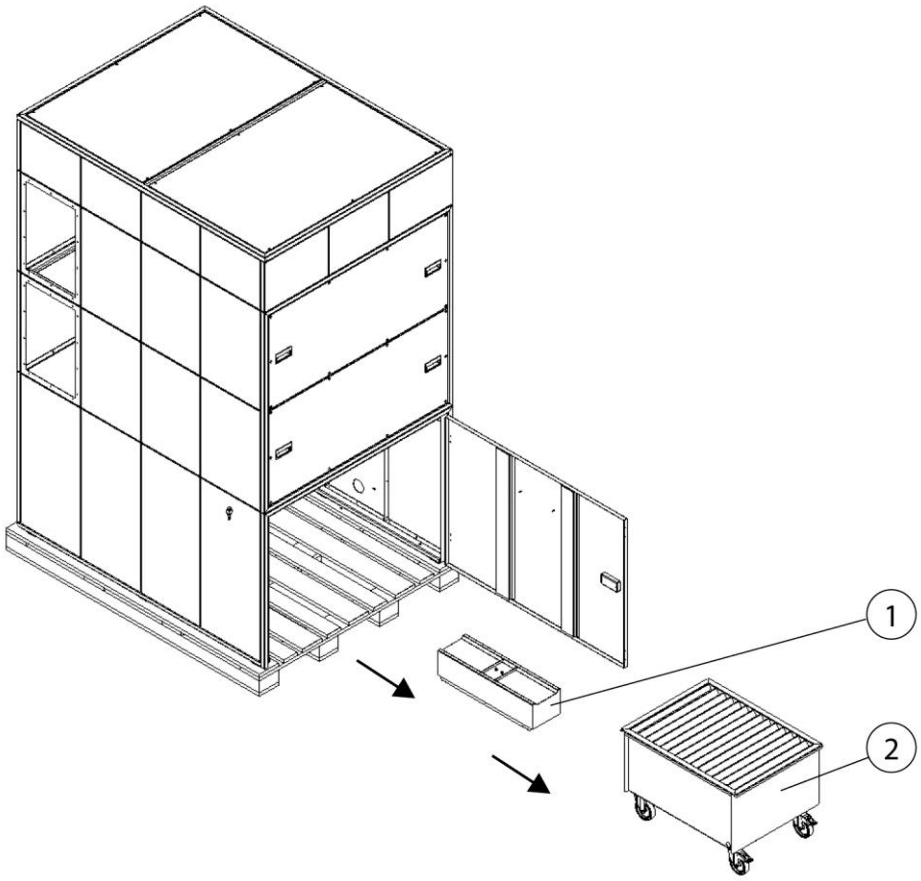


Fig. 16: Removing the dust collection container and lifting device

Item	Description	Item	Description
1	Lifting device	2	Dust collection container

Tab. 5: Positions on the product

15. Remove the vacuum hose on the dust collection container. The hose can be removed without any tools.
16. Remove the compressed air hose on the lifting device. The hose can be removed without any tools.
17. Remove the dust collection trolley and the lifting device, and store outside of the product.

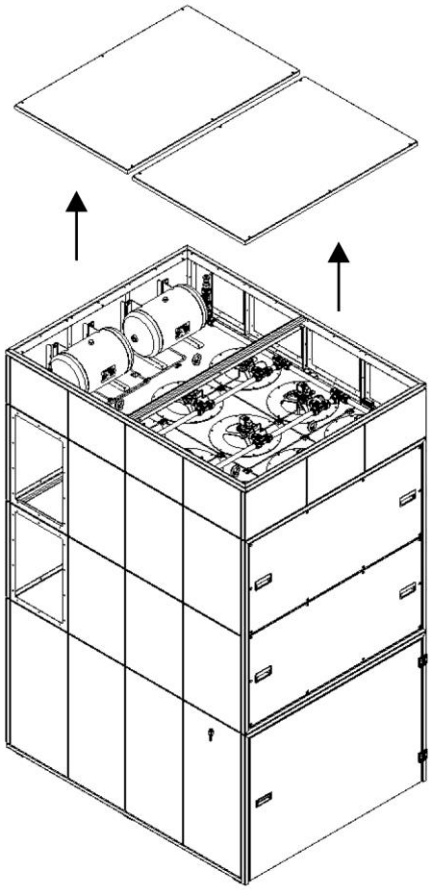


Fig. 17: Removing the cover plates

18. Unscrew the cover plates from the filter unit in order to access the eye bolts.

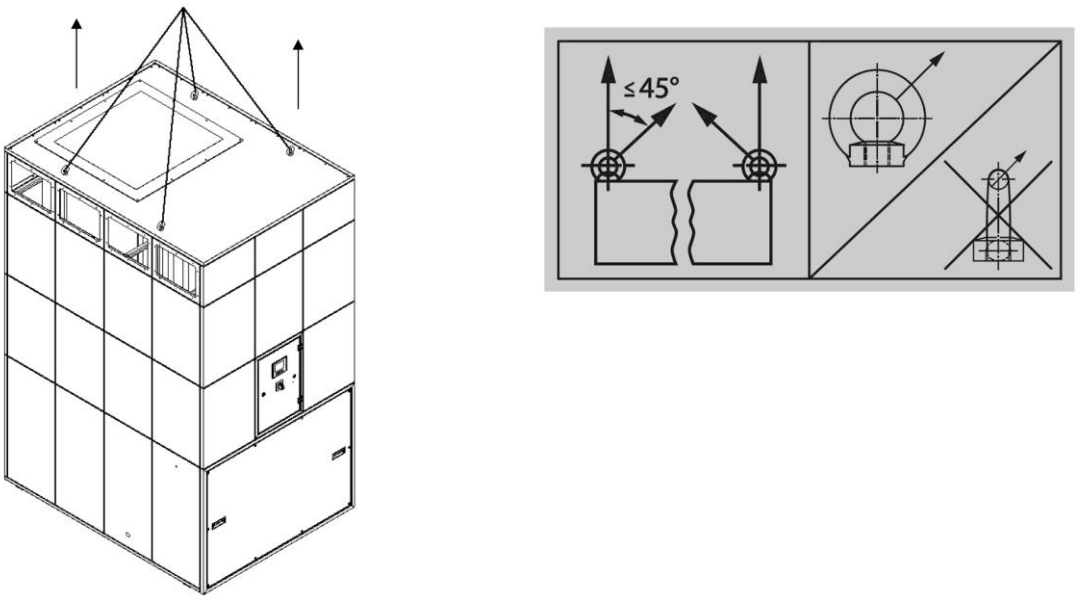


Fig. 18: Lifting the filter unit with crane

19. Lift the filter unit approx. 5 cm with a crane and suitable lifting straps.

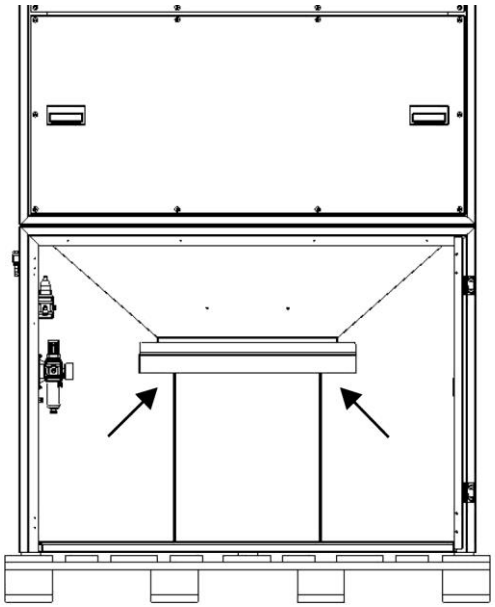


Fig. 19: Lifting the filter unit with a fork-lift

20. Alternatively, the filter unit can also be lifted with a fork-lift. Steer the fork-lift prongs into the filter unit under the dust chute. Ensure that the fork-lift prongs are positioned between the guide brackets. Then lift the filter unit approx. 5 cm.
21. Then remove the pallet from the side. Do not under any circumstances reach under the fan part!

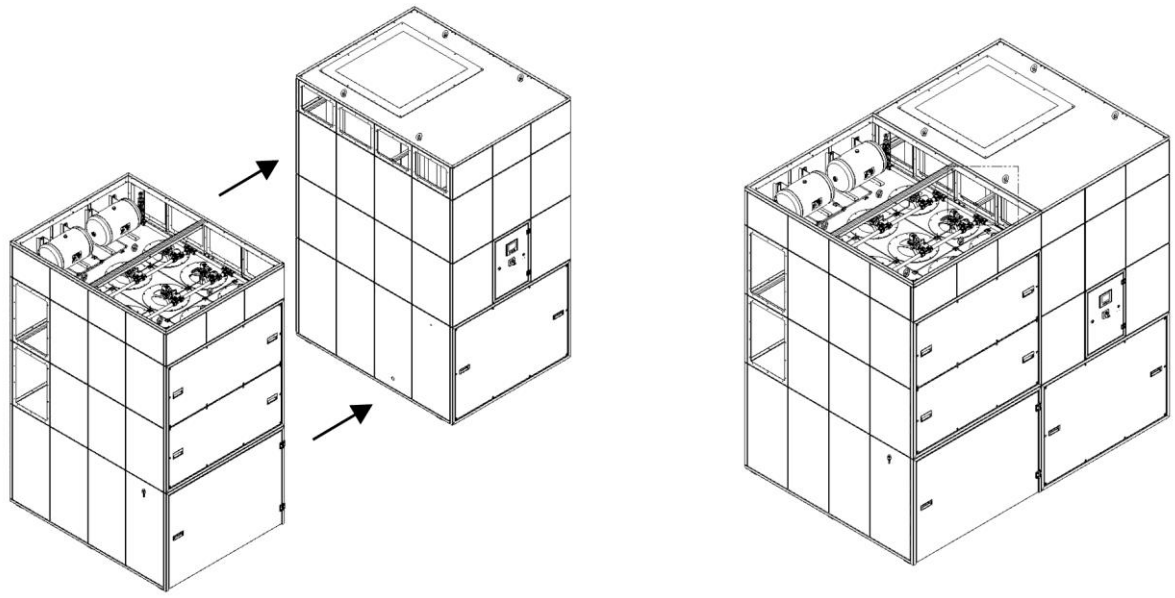


Fig. 20: Connecting the filter unit to the fan unit

22. Now carefully lower the filter unit until it is exactly beside the fan unit and align.
23. Then guide the plug in the front section of the fan unit through the slot to the filter unit.

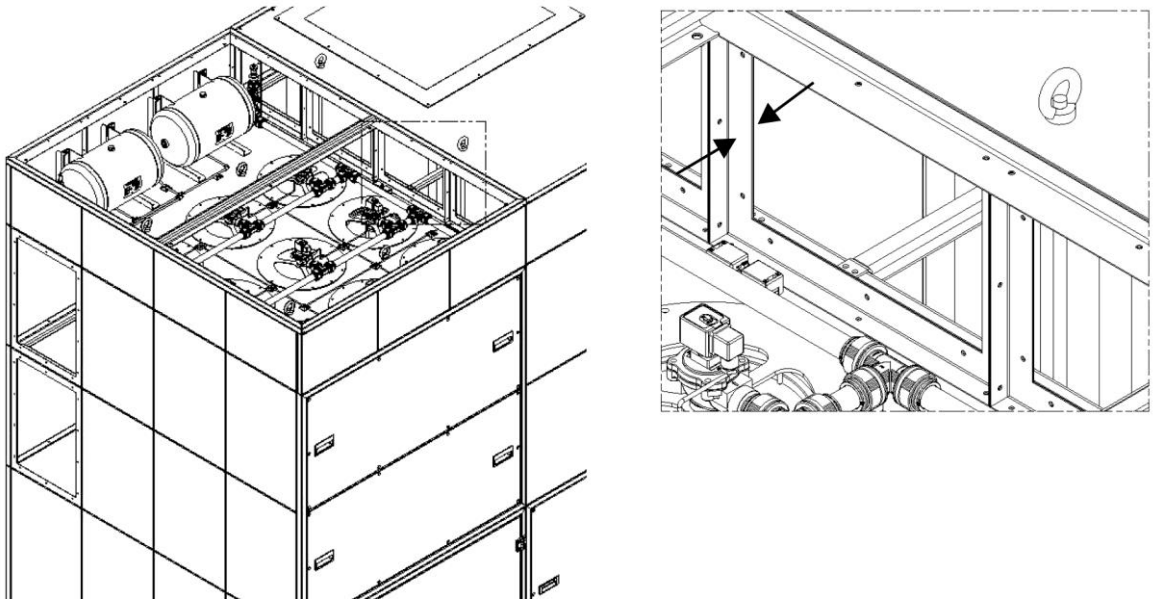


Fig. 21: Connecting the fan unit to the filter unit

24. Bolt the upper panelling of filter and fan units together.

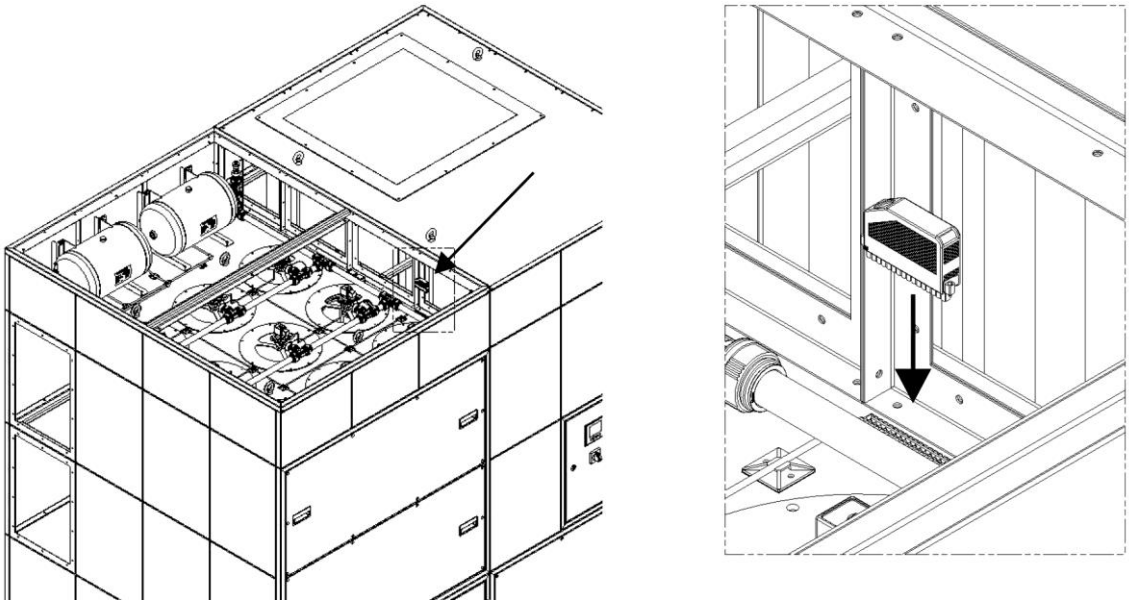


Fig. 22: Assembling the green plug

25. Pull the cable with the green plug at the top left of the filter unit through the panel opening to the fan unit and connect it to the socket in the fan unit.
26. Pull the transparent 6/4 mm hose at the top left of the filter unit through the panel opening to the control cabinet in the fan unit and place it on the designated bulkhead fitting.
27. The top covers can now be replaced and secured.

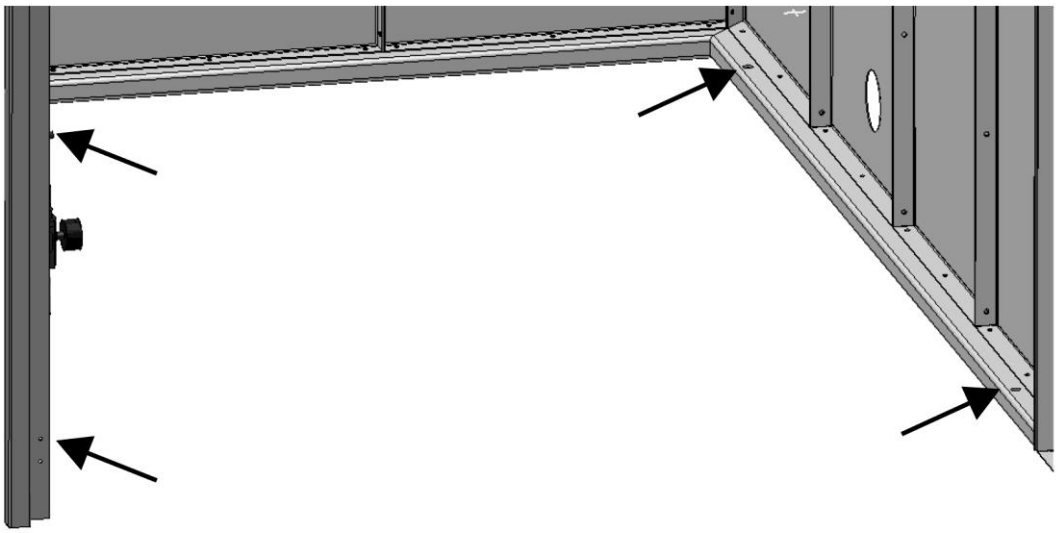


Fig. 23: Attaching the filter unit to the floor

28. Bolt the filter unit to the floor via the 4 drill holes in the base frame.

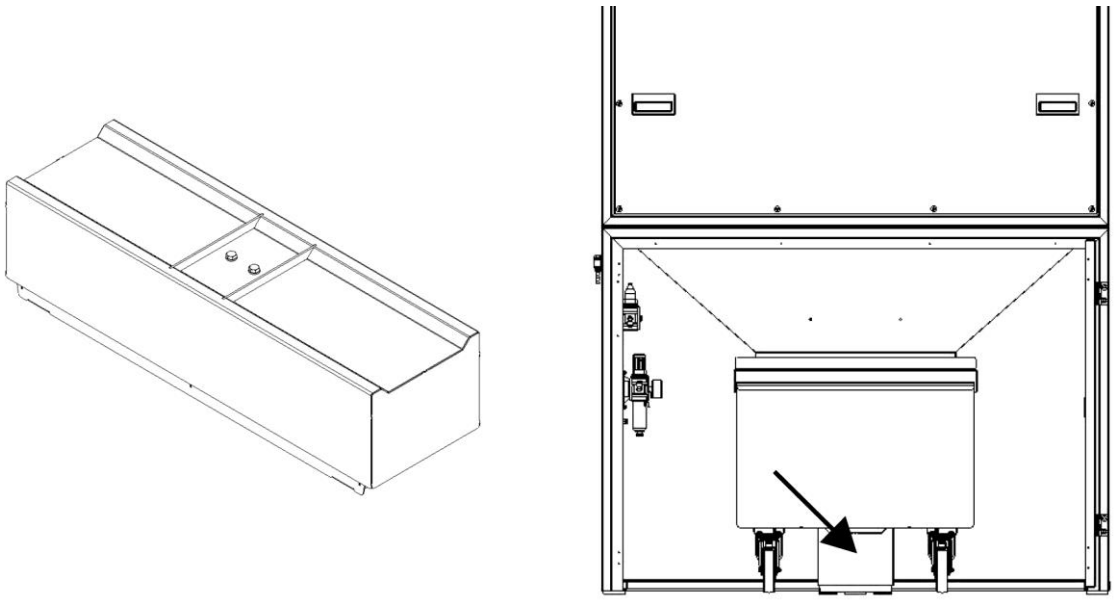


Fig. 24: Attaching the lifting device to the floor

29. Attach the lifting device to the floor. Loosen the 4 hex bolts in the recess of the lifting device and remove the top cover.
30. The lower part is to be positioned centrally underneath the dust hopper and secured with screw and dowel to the floor.
31. Replace bellows and top cover and secure.
32. Connect the dust collection container with the vacuum hose.
33. Place a bin liner in the carriage and replace in the filter unit.

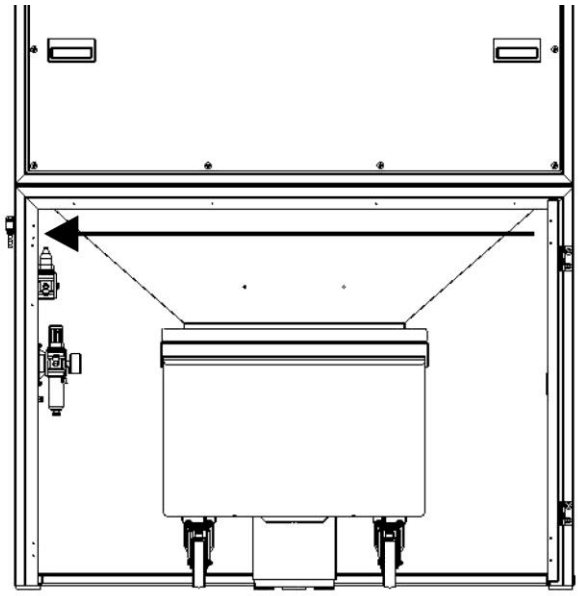


Fig. 25: Laying the cable through the cable duct

34. Now pull the plug that was previously fed through the slot through the cable duct above the door to the left to the compressed air unit.

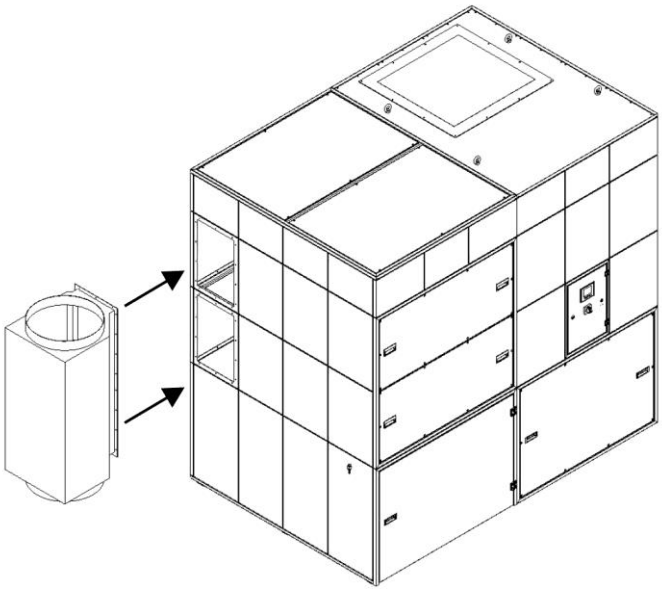


Fig. 26: Mounting the connection box on the inlet side

35. Now fit the inlet-side connection box to the product. The bolts required are in a bag on the interior of the door.

5.2 Connecting the product

NOTE

Always follow the manuals included for any add-on products during assembly.

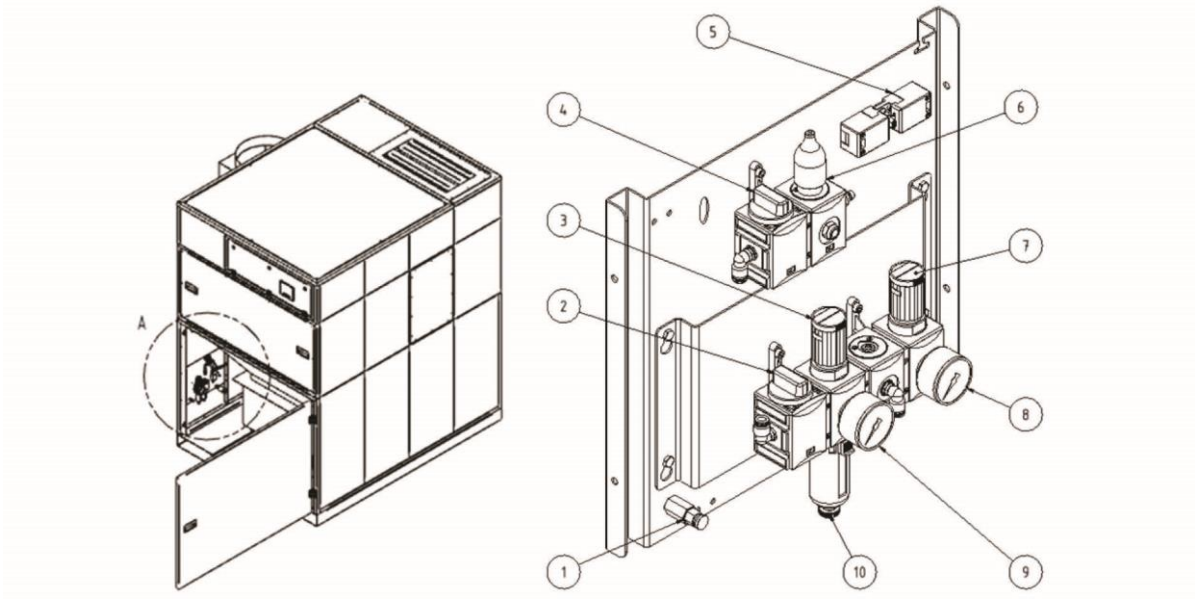


Fig. 27: Compressed air unit

Item	Description	Item	Description
1	Condensate drain valve for compressed air vessel	6	Pressure switch, dust collection container monitoring
2	Main block valve compressed air supply	7	Pressure regulator button lifting device dust collection container
3	Pressure regulating button compressed air vessel	8	Pressure regulator lifting device dust collection container
4	Lowering valve, compressed air vessel	9	Pressure regulator compressed air vessel
5	Connection plug, pressure switch compressed air vessel	10	Compressed air maintenance unit condensate drain

Tab. 6: Compressed air unit

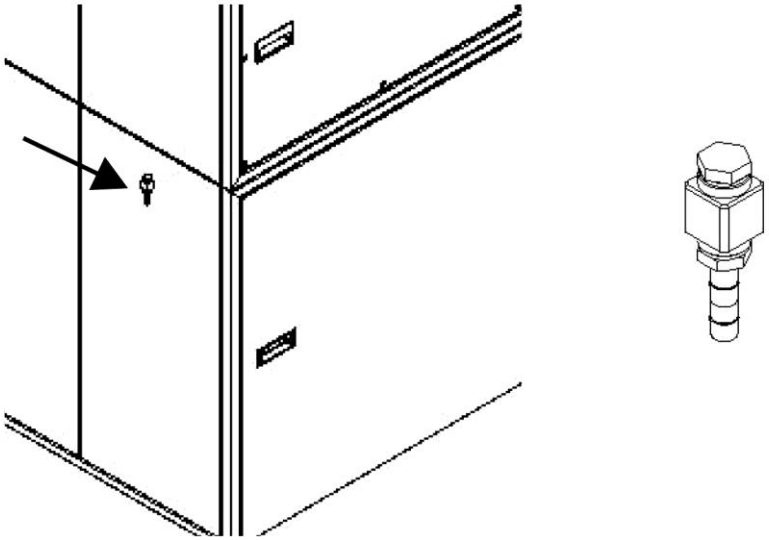


Fig. 28: Connecting to the compressed air supply

Carry out assembly as follows:

1. Connecting to the compressed air supply

   Now connect an on-site compressed air hose with an internal diameter of 9 mm. To do this, the hose is pressed onto the grommet and fixed with a band clamp. The hose and band clamp are not included in delivery.

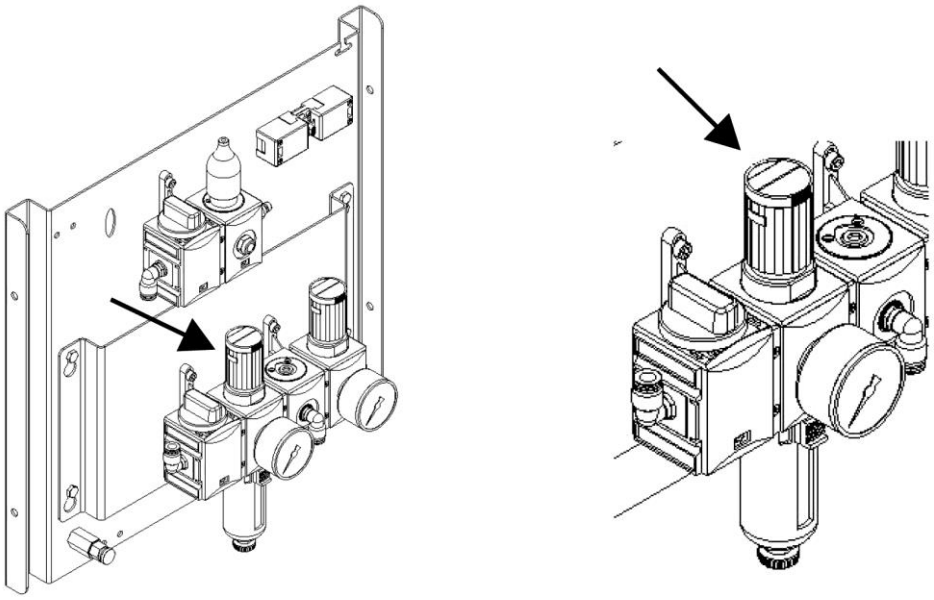


Fig. 29: Adjusting the operating pressure

2. Adjusting the operating pressure

   The pressure at the compressed air maintenance unit has been pre-set to 5–6 bar by the manufacturer, but must be readjusted on site.

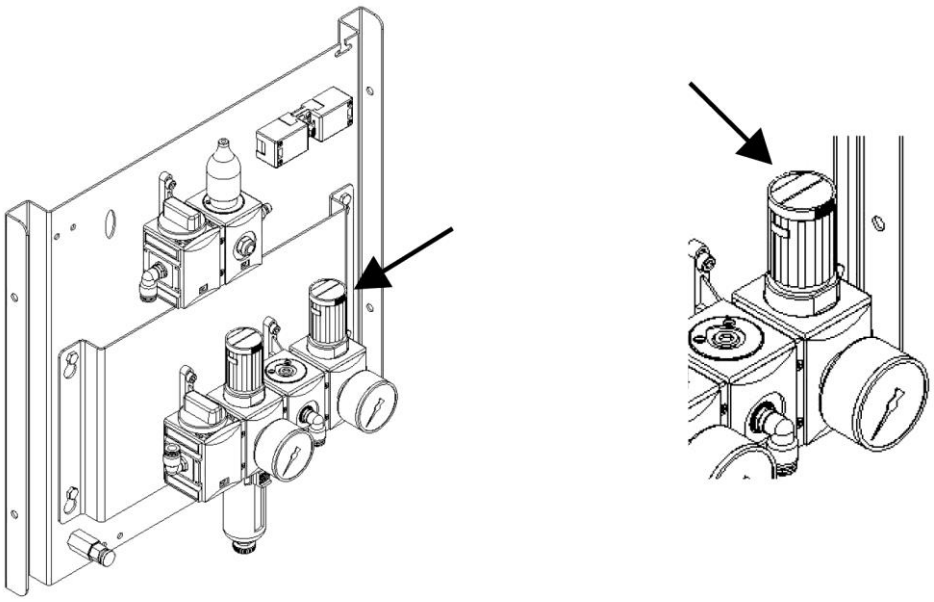


Fig. 30: Adjusting the lifting device/dust collection container pressure

3. Adjusting the lifting device/dust collection container pressure

Also check that the specified value of 2.5 bar has been set on the compressed pressure regulator, readjust if necessary. The value may not exceed 3.0 bar.

4. Connecting the power supply

   Connect the product to the existing on-site power supply. Here the connecting cable, depending on the layout of the filter unit and the fan unit, is pulled through the cable guides provided, up to the connection box. When doing so, ensure the supply cable has the correct fuse protection. Also observe the details and information given in the circuit diagram.

NOTE

The compressed air supply connected to the product must provide Class 2:4:2 compressed air in accordance with ISO 8573-1 at a pressure of 5–6 bar

NOTE

The product may only be operated with a dust collection container inserted.

5.3 Connecting the product (outdoor version)

The optionally available outdoor version of the product is intended for installation outside buildings.

In the outdoor version, the compressed air maintenance unit is placed separately in a frost-proof space outside the product.

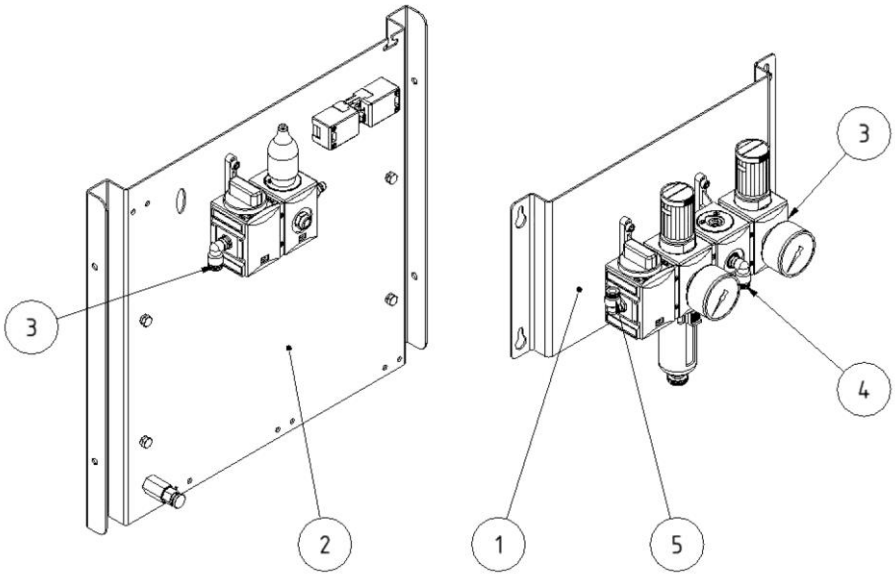


Fig. 31: Compressed air unit

Item	Description	Item	Description
1	Compressed air maintenance unit	4	Compressed air vessel connection (product)
2	Compressed air unit (product)	5	Compressed air supply connection (compressed air network/ compressor)
3	Compressed air connection lifting device		

Tab. 7: Positions of compressed air unit

Carry out assembly as follows:

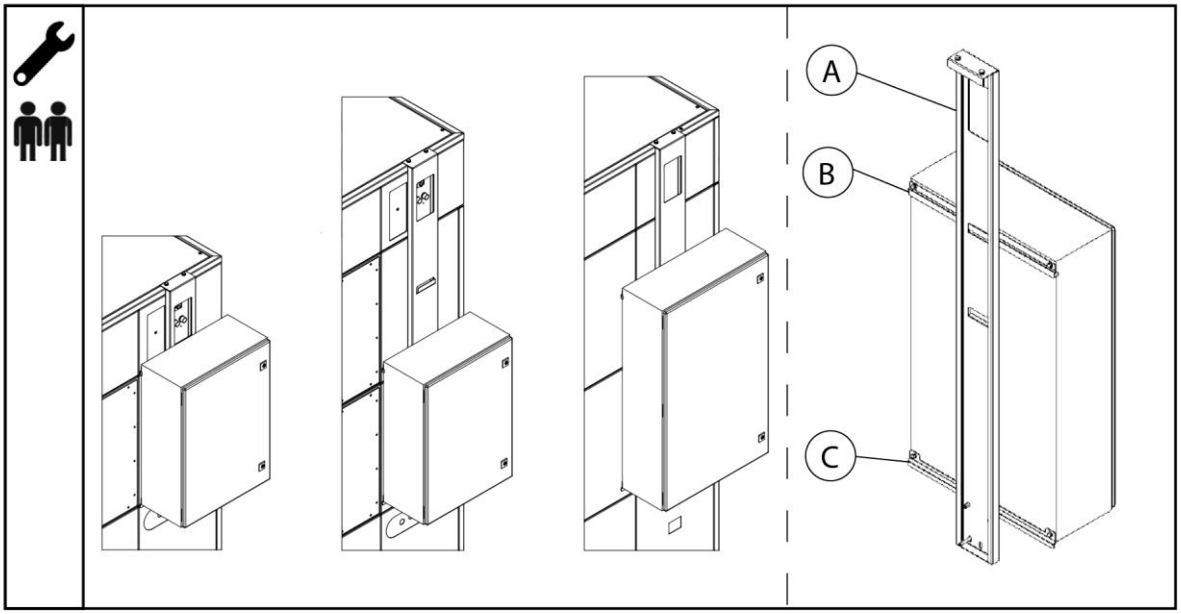
1. Install the compressed air maintenance unit (item 1) outside the product in a frost-proof space.
2. Connect the compressed air maintenance unit to the on-site compressed air network. (Item 5).
3. Connect the compressed air maintenance unit (item 1) to the compressed air unit of the product (item 2) using the compressed air hoses supplied.

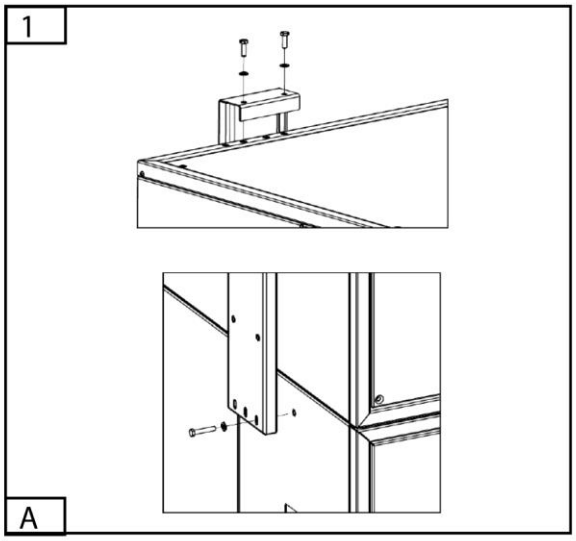
ATTENTION

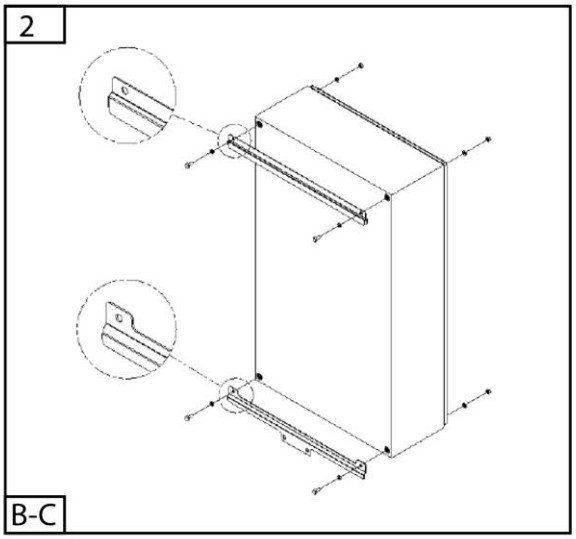
Damage to the product as a result of confusing the compressed air hoses.

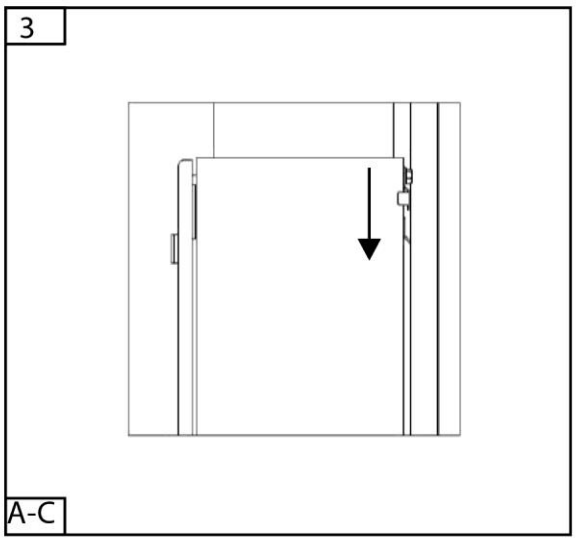
It is imperative to observe the compressed air hose labelling.

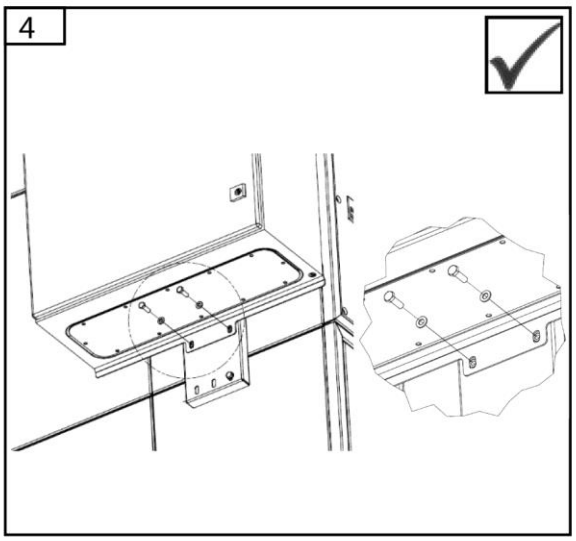
5.4 Mounting case - suction power control on the product



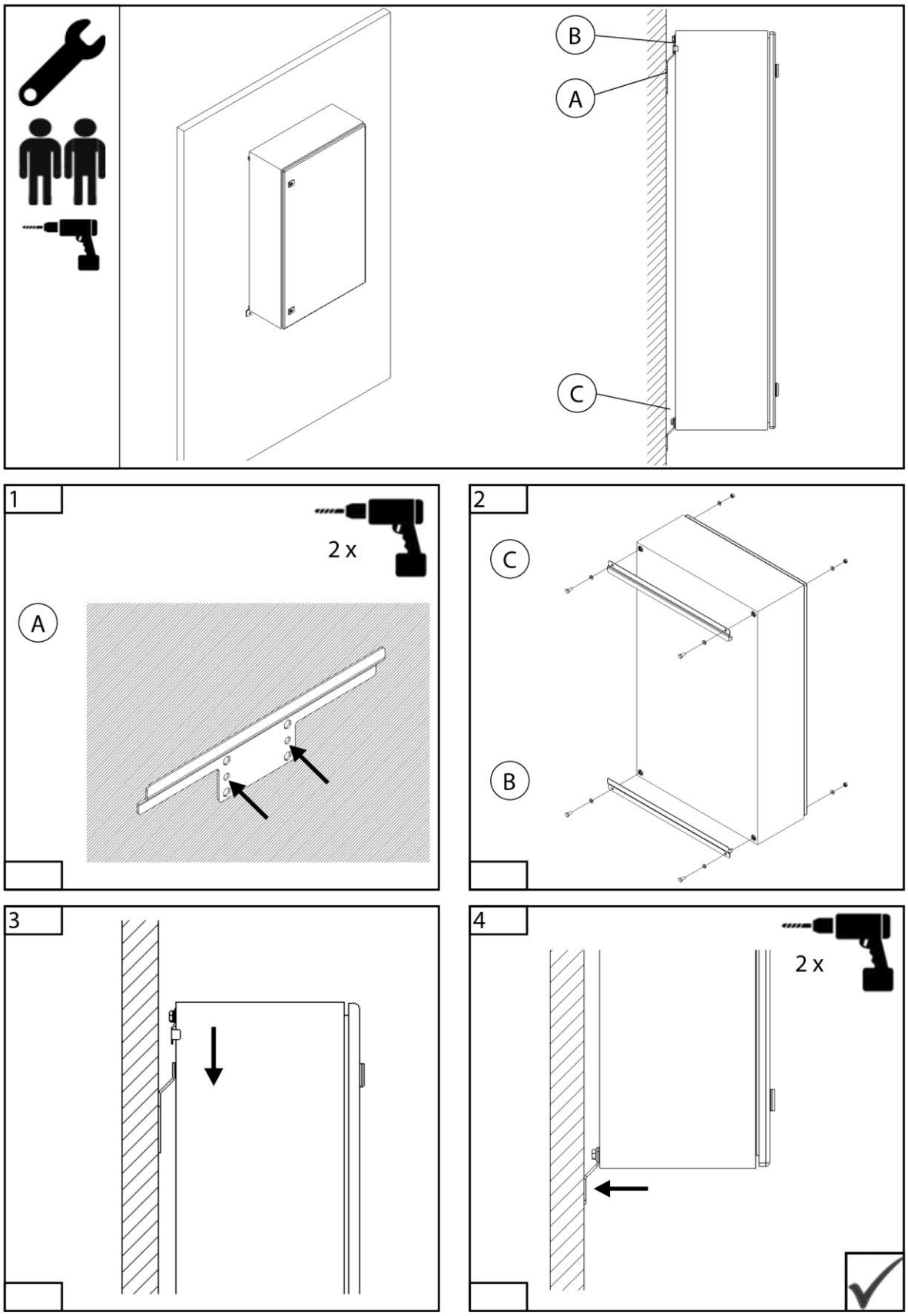




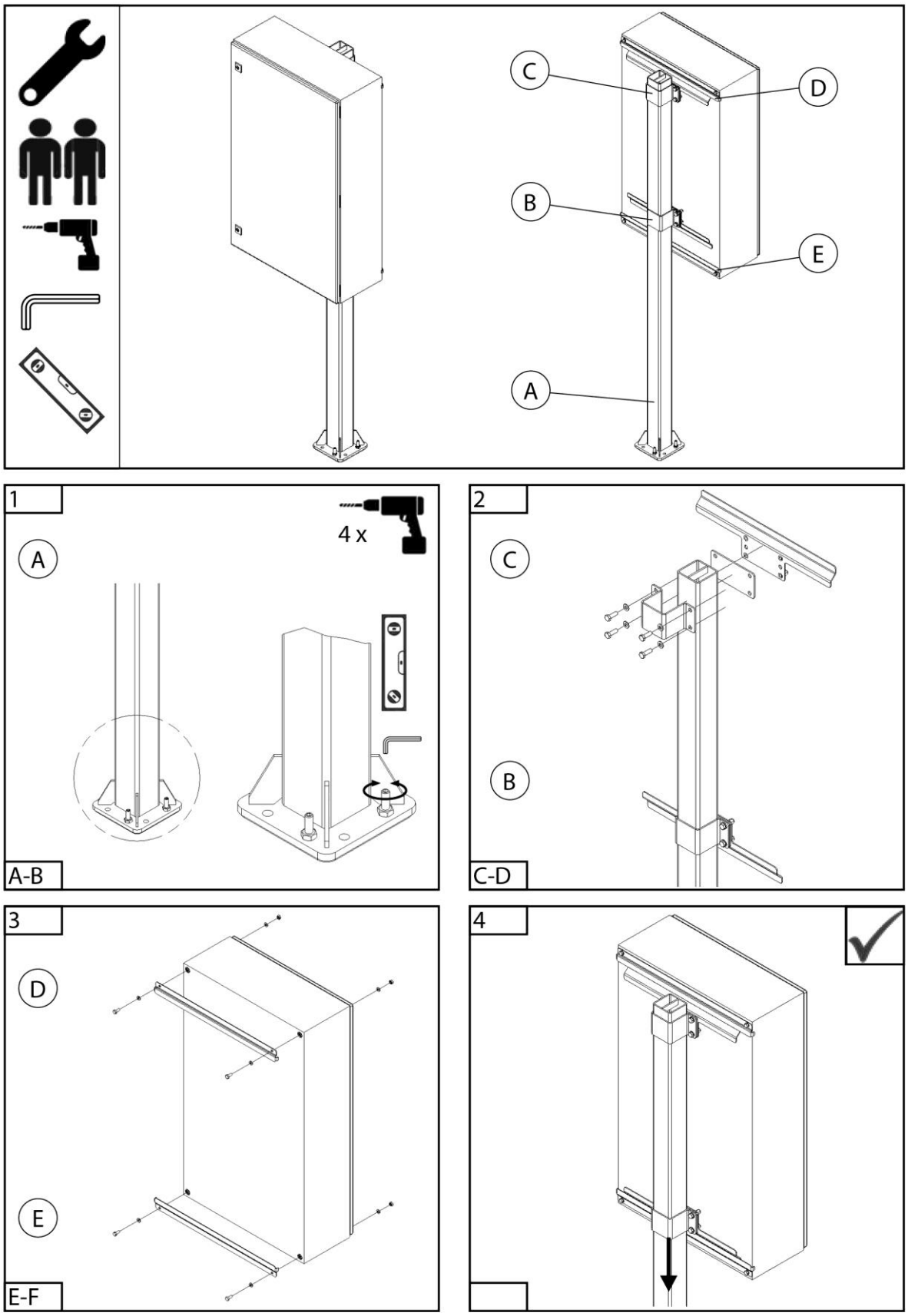




5.5 Mounting case - suction power control on wall



5.6 Mounting case - suction power control on column



5.7 Wiring diagram

5.7.1 General information on the wiring diagram

NOTE

Mains supply connection

On site, ensure the correct pre-fusing and the correct cable cross-section of the mains supply connection cable.

Rated current: See nameplate/data sheet

Rated current	Back-up fuse
0-9 A	Circuit breaker 3x16 A category C
9-12 A	Circuit breaker 3x16 A category C
12-22 A	Circuit breaker 3x32 A category C
22-35 A	Circuit breaker 3x50 A category C
35-45 A	Circuit breaker 3x63 A category C
45-55 A	Circuit breaker 3x80 A category C
55-70 A	Circuit breaker 3x100 A category C
70-85 A	Circuit breaker 3x125 A category C

Tab. 8: Selecting the pre-fusing

Product connection variants

Connection type	Product without extraction capacity regulation	Product with extraction capacity regulation
CEE connection plug on the product	3420-3485 322014-326528	-
Terminal strip connection for control cabinet, product	34110-34270 328528-32180218	3420-3485 34110-34270 322014-326528 328528-32180218

Tab. 9: Connection variants

Colours of the cable wires

Color	Description	Color	Description
BK	Black	BU	Blue
BN	Brown	WH	White
GR	Grey		
GN/YE	Green/Yellow	SH	Cable shielding

Tab. 10: Wire colours

5.7.2 Product with plug connection

Product is supplied ready to plug in and can be operated immediately.

To do this, connect the mains supply cable provided by the customer to the CEE plug of the product.

5.7.3 Product with connection terminals

Selection of the mains supply connection cable

Rated current	Mains supply connection cable	Rated current	Mains supply connection cable
0-9 A	5 x 1.5 mm^2	35-45 A	5 x 16 mm^2
9-12 A	5 x 2.5 mm^2	45-55 A	4 x 25 mm^2
12-22 A	5 x 6 mm^2	55-70 A	4 x 35 mm^2
22-35 A	5 x 10 mm^2	70-85 A	4 x 50 mm^2

Tab. 11: Selection of the mains supply connection cable

NOTE

Rated current: See nameplate/data sheet.

Dimensioning: Mains supply connection cable up to a maximum cable length of 50 metres.

5.7.3.1 Product without extraction capacity regulation

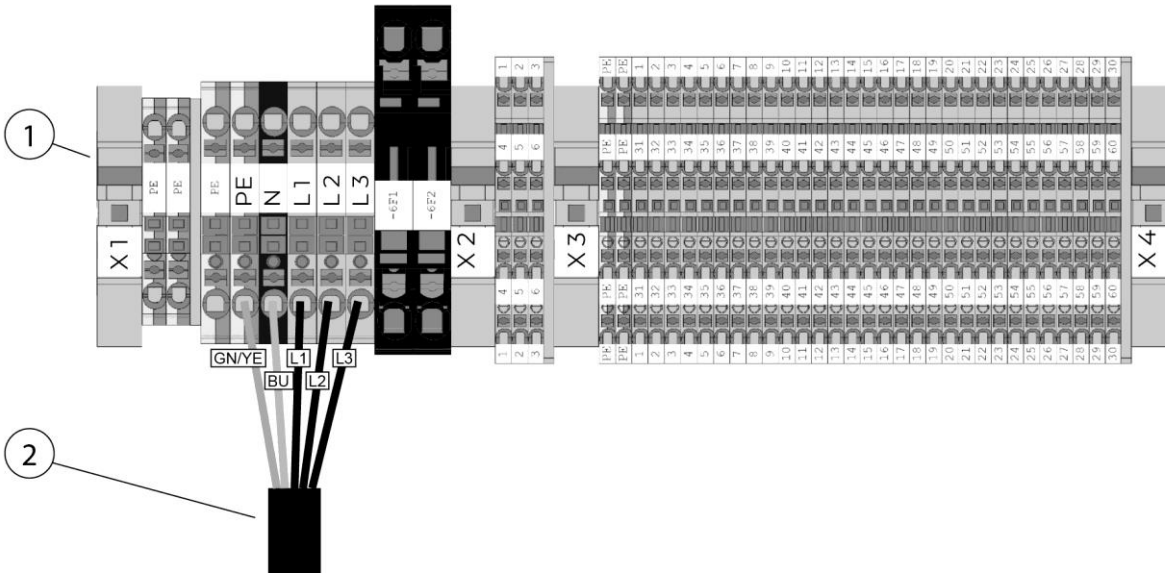


Fig. 32: Terminal strip for control cabinet, product

Item	Description	Item	Description
1	Terminal strip for control cabinet, product	2	Mains supply connection cable

Tab. 12: Power supply

Connect as follows:

1. Pull the mains supply connection cable provided by the customer through the cable guides provided in the product up to the control cabinet.
2. Connect the mains supply cable to the terminal strip in the control cabinet as shown in the diagram.

5.7.3.2 Product with extraction capacity regulation

Note on connection to the mains supply for products with extraction capacity control.

⚠ DANGER

Danger of electric voltage!

Products with extraction power control (frequency inverters) are intended for protection by line protection fuses.

If the product is operated on a mains supply with a residual current circuit breaker (RCCB) connected upstream, the following must be observed.

Since the operation of the frequency inverter on the protective earth conductor can cause a direct current, the residual current circuit breaker (RCCB) connected in series with the mains must meet the following requirements.

Category type:	Rated current	Tripping fault current	Note
B	40–125 A	300 mA	short time-delayed

Tab. 13: Requirements for residual current circuit breaker

Example: Cable laying for the extraction capacity regulation

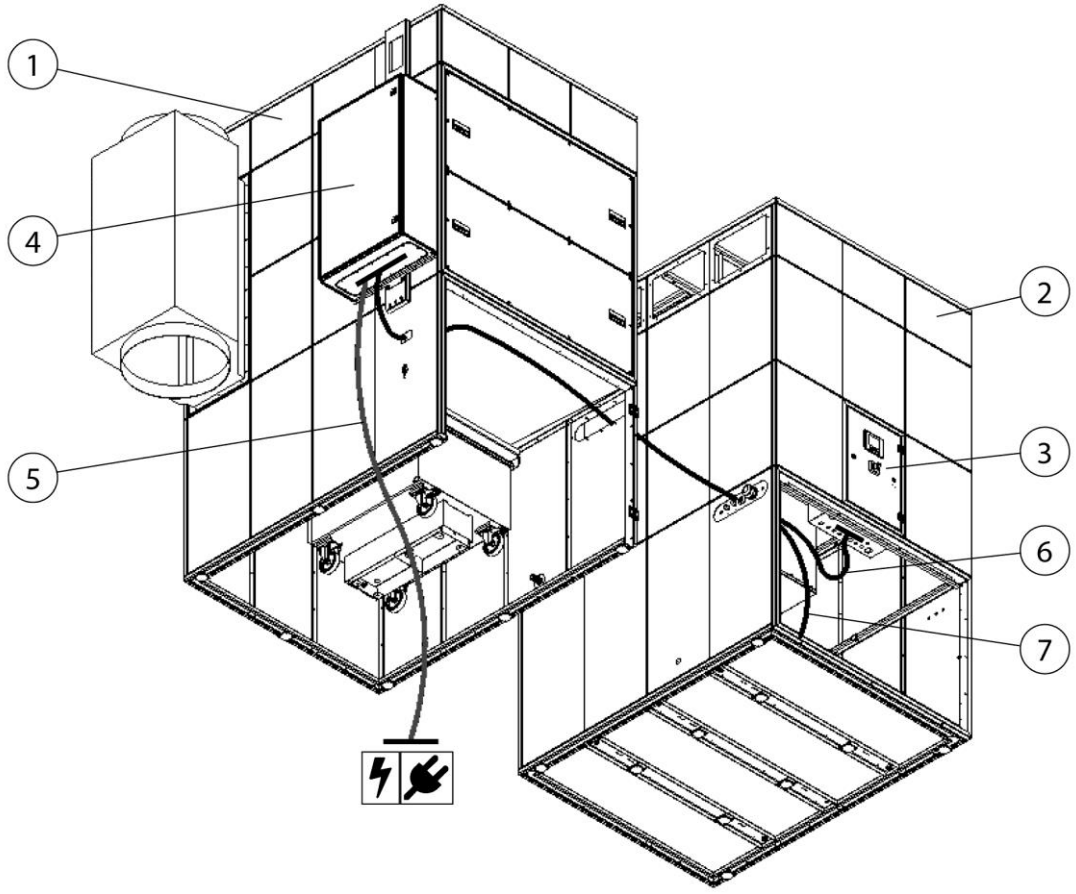


Fig. 33: Example: Cable laying for the extraction capacity regulation

Item	Description	Item	Description
1	Filter component	5	Mains supply connection cable
2	Fan component	6	Control cable (3x)
3	Control cabinet, fan unit	7	Motor lead
4	Control cabinet, extraction capacity regulation		

Tab. 14: Positions on the product

NOTE

Extraction capacity regulation connection

The connection cables are already prepared and are either coiled up in the fan unit or hang out of the side of the fan unit connection panel.

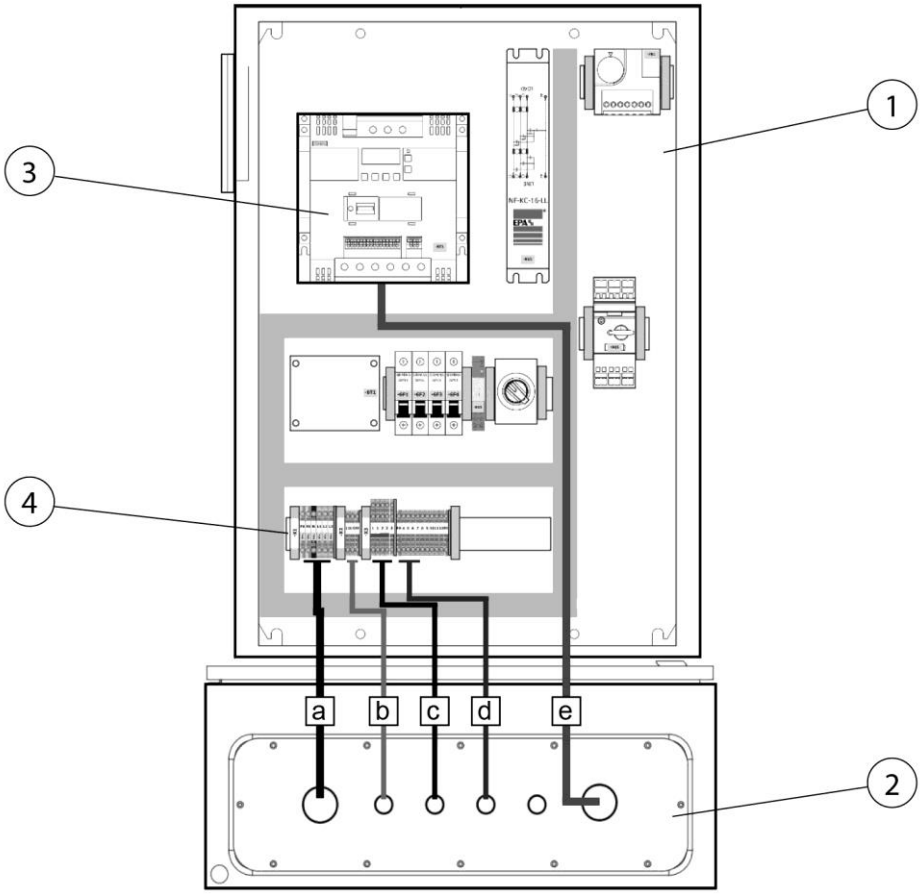


Fig. 34: Control cabinet, extraction capacity regulation

Item	Description	Item	Cable designation
1	Control cabinet, extraction capacity regulation	a	Mains supply connection cable
2	Cable bushings on the underside of the extraction capacity regulation unit	b	Power supply cable for product
3	Frequency converter – fan motor	c	Sensor cable
4	Connector panel	d	Control cable, on/off/fault
		e	Motor lead

Tab. 15: Positions of the extraction capacity regulation unit

Connect the cable as follows:

1. Depending on the product version, lay the cables through the provided openings and cable ducts to the control cabinet of the extraction capacity regulation unit.

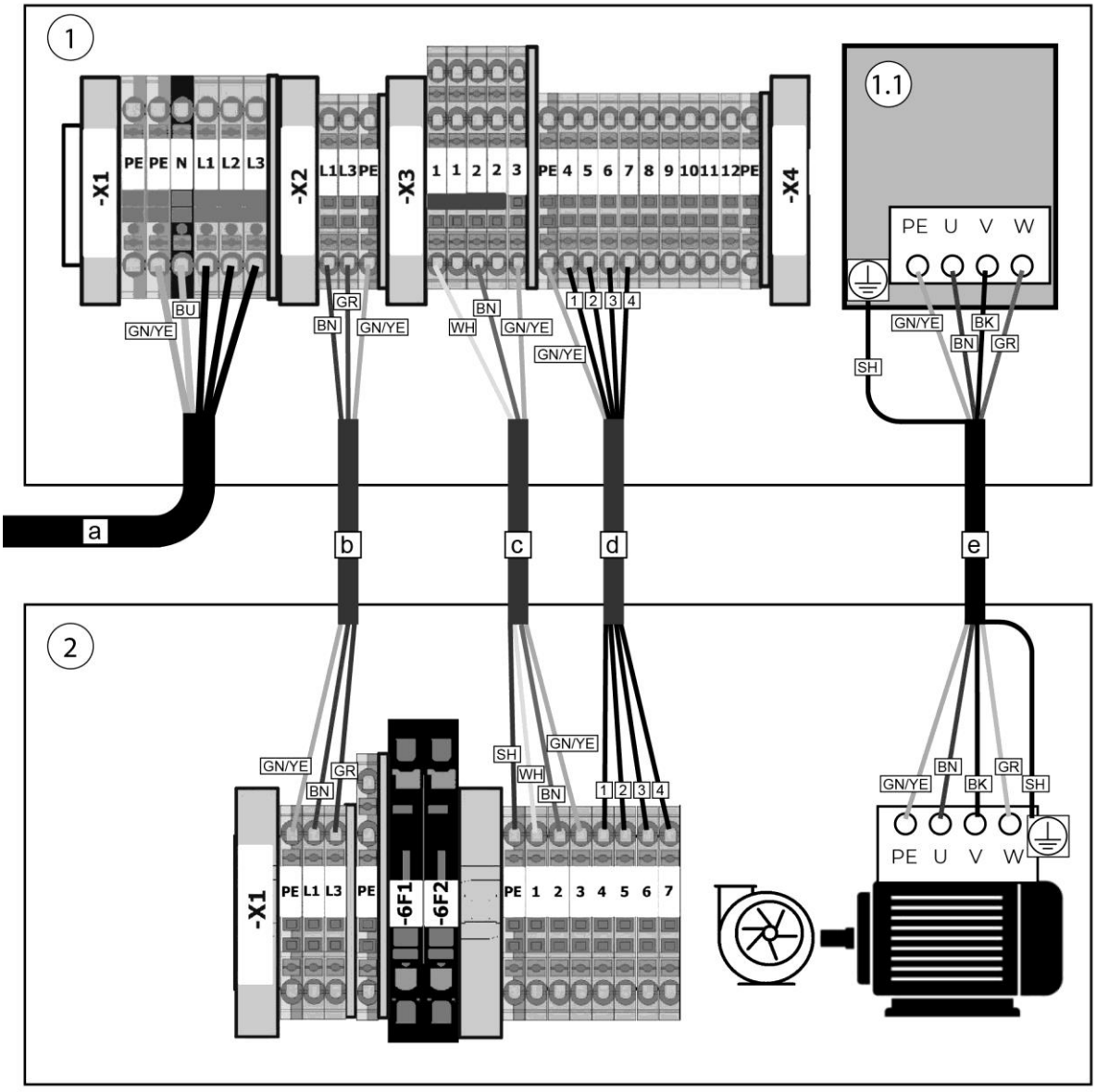


Fig. 35: Wiring diagram for extraction capacity regulation with product

Item	Description	Item	Description
1	Control cabinet, product	2	Control cabinet, extraction capacity regulation
1.1	Frequency converter		

Tab. 16: Wiring diagram for extraction capacity regulation with product

2. Connect the cables according to the wiring diagram.

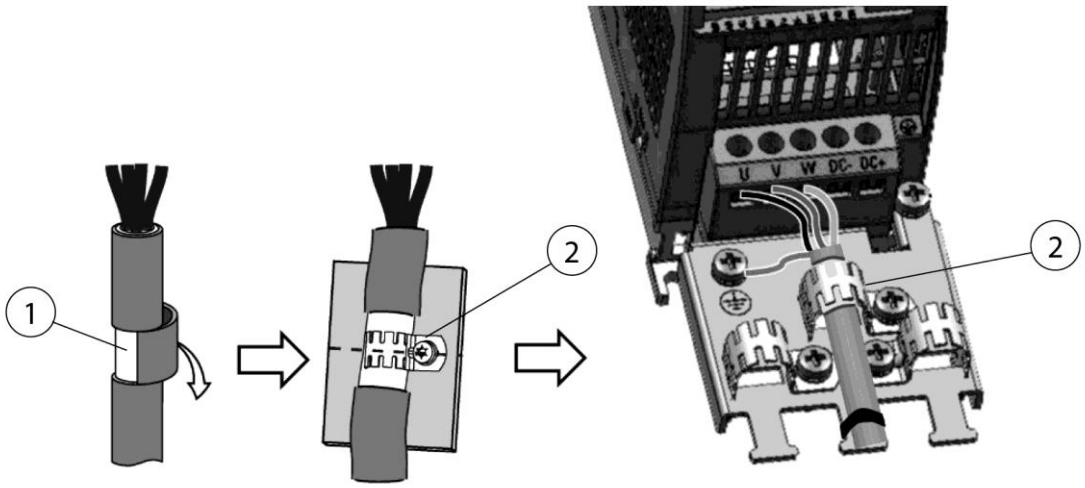


Fig. 36: Connecting the motor cable shielding

3. Expose the shield (Pos. 1) by removing the cable insulation.
4. Connect the motor cable shielding according to (Pos. 2).

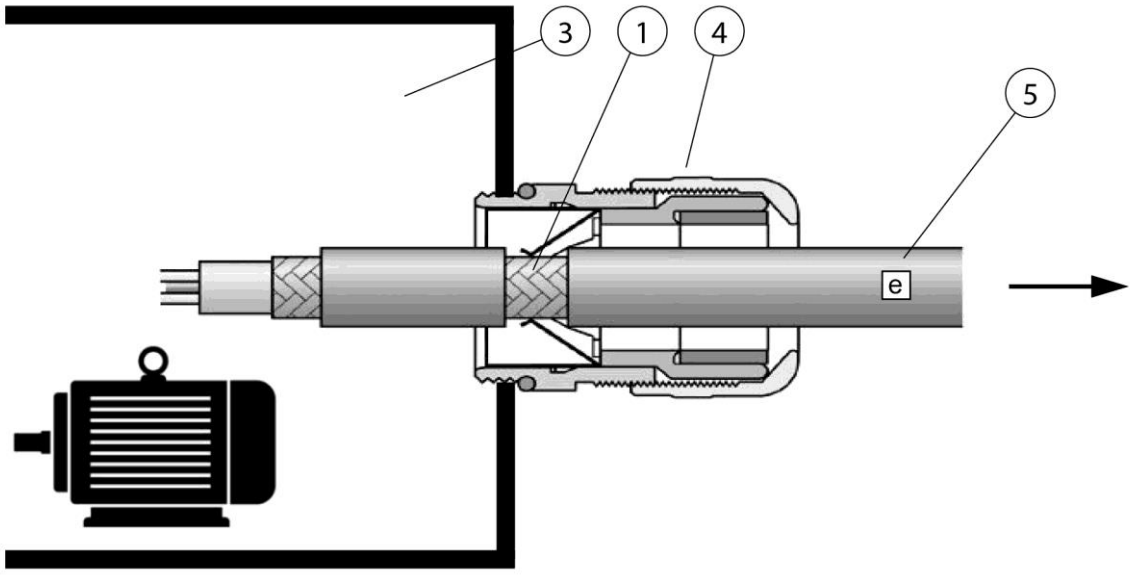


Fig. 37: Connecting the motor cable shielding

Item	Description	Item	Description
1	Cable shielding	4	EMC cable gland
2	EMC cable clamp	5	Connection cable
3	Motor connection panel		

Tab. 17: Connecting the motor cable shielding

5. When connecting the motor cable [e] (item 5), make sure that the cable shielding (item 1) is screwed to the EMC cable gland (item 4) as shown in the illustration.

6 Use

Every person who deals with use, maintenance and repair of the product must have thoroughly read these operating instructions as well as the instructions for any attachment and accessory products and have understood them.

6.1 Qualification of the operating personnel

The operating company of the product may only commission persons to use the product independently if they are well-versed in this task.

Those familiar with this task includes those who have been instructed appropriately in the task and know the operating instructions as well as the operational issues in question.

The product should only be used by trained or instructed personnel.
This is the only way to ensure safety and hazard awareness of all personnel during work.

6.2 Operating control and monitoring technology

6.2.1 Main menu – Switching the product on/off

The product is fitted with a 4.3” colour touchscreen or a 5.7” colour touchscreen. The interface is operated by tapping the display or by pressing one of the four keys below the display.

The operating interface is set up as follows:

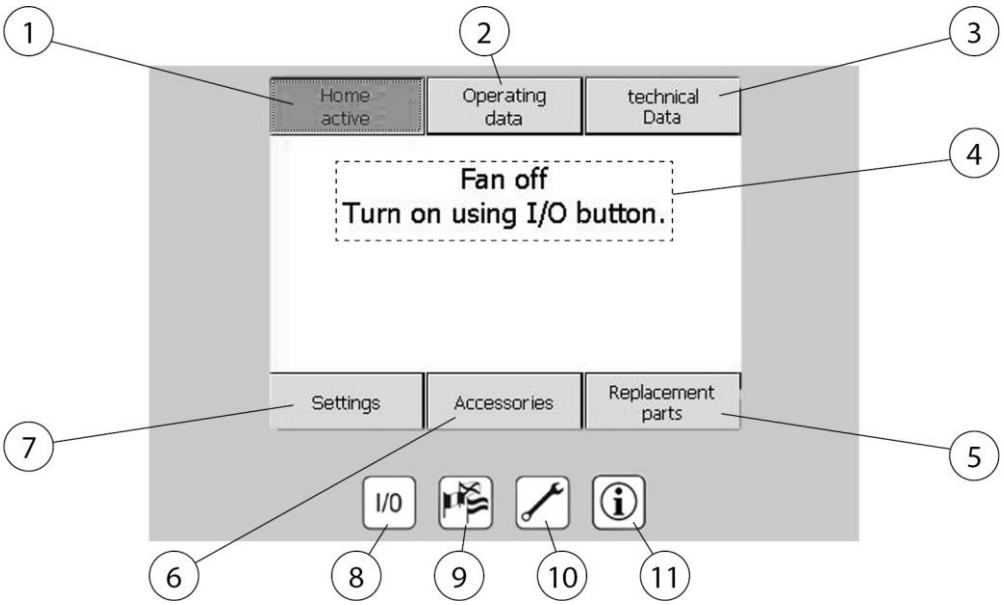


Fig. 38: Operating elements

Item	Description	Function
1	Main menu	Returns to main screen
2	Operating data menu	Overview of current operating parameters
3	Technical data menu	Information on product and software
4	Status information	Messages concerning the product
5	Spare parts menu	Information on available spare parts
6	Accessories menu	Information on optional accessories
7	Settings menu	Modification of operating parameters
8	On/Off button	Switches the product on or off
9	Language selection button	Menu for selecting the language
10	Maintenance menu button	Shows information on maintenance
11	Manufacturer information button	Shows information about the manufacturer

Tab. 18: Operating elements

The main menu indicates whether the product is switched on or off and whether filter cartridges are currently being cleaned. This display appears after approx. 30 seconds after the product has been switched on at the main switch. If the user interface is not activated for two minutes, the user interface automatically returns to this menu.

I/O switch (Pos. 8)

Switches product on and off.

NOTE

The product should not be switched off at the main switch or by removing the mains plug even for longer work breaks or at the weekend because filter cleaning is carried out even when the device is at a standstill.

6.2.2 Operating data queries

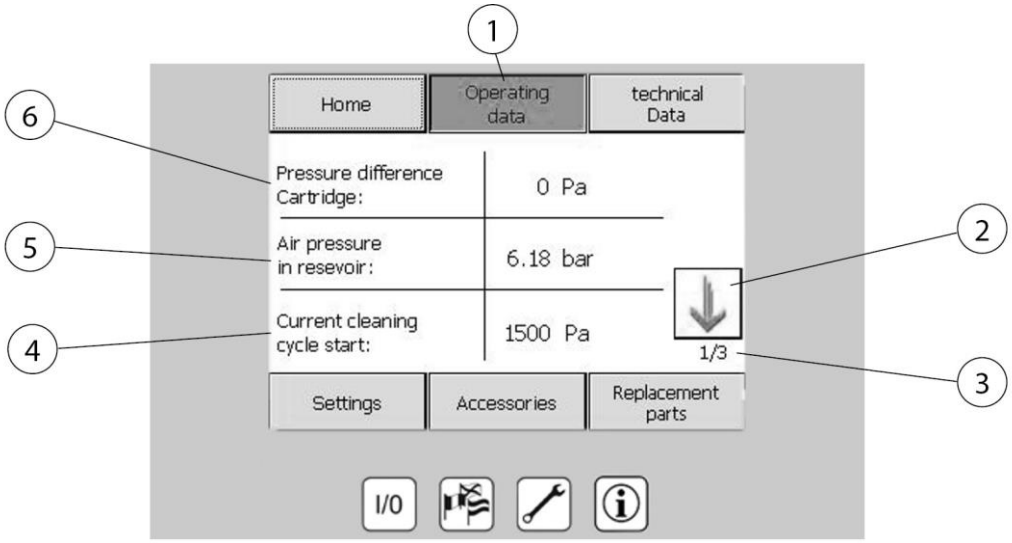


Fig. 39: Operating data

Item	Description	Item	Description
1	Operating data menu	4	Current pressure difference for cleaning start
2	Arrow keys for changing the pages	5	Current pressure in the compressed air vessel
3	Page 1 of 3	6	Filter cartridge pressure difference (saturation)

Tab. 19: Operating data

Displays current device data and measured product values.

6.2.3 Technical data queries

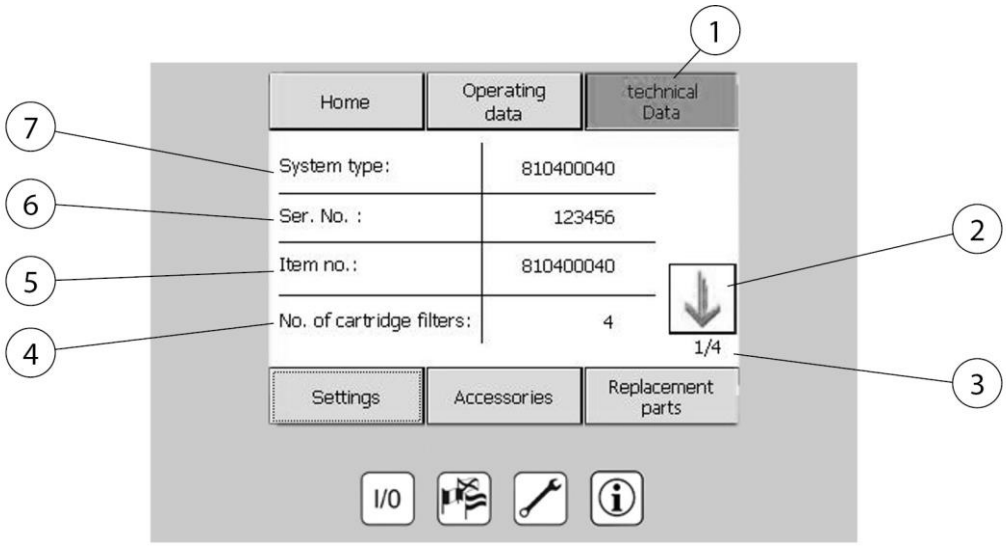


Fig. 40: Technical data

Item	Description	Item	Description
1	Technical data menu	5	Product item number
2	Arrow keys for changing the pages	6	Machine number
3	Page 1 of 4	7	System type
4	Number of installed filter cartridges		

Tab. 20: Technical data

Pos. 1 Display of the product technical data.

NOTE

In the event of a service request or a fault, this menu displays all system data required by our employees to identify the product correctly.

6.2.4 Technical settings

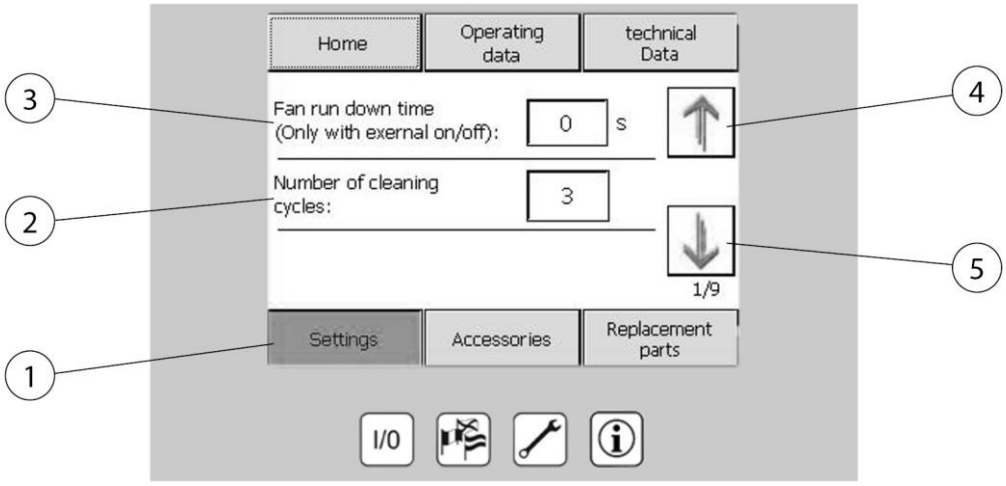


Fig. 41: Technical settings

Item	Description	Item	Description
1	Settings menu	4	Arrow key for changing the page
2	Number of filter cleaning session in standstill	5	Arrow key for changing the page
3	Fan run-on time (with external on/off only)		

Tab. 21: Technical settings

- **Settings (Pos. 1)**
  Display and setting of the operating parameters.

6.2.5 Accessories queries

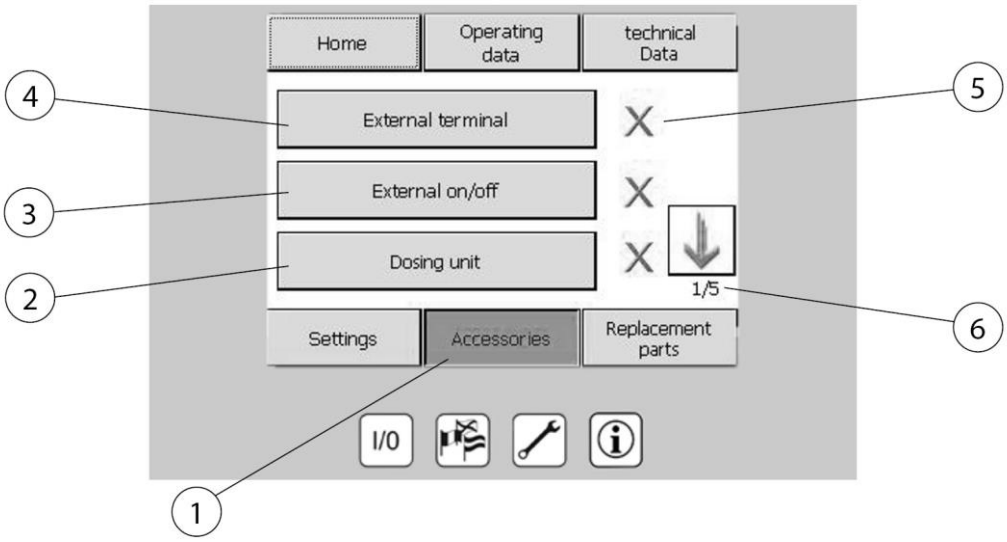


Fig. 42: Accessories

Item	Description	Item	Description
1	Accessories menu	4	Page 1 of 5
2	Dosing device for filter aid	5	X = accessory not available ✓ = accessory available
3	Fan on/off via external switching point	6	Page 1 of 5

Tab. 22: Accessories

Information about installed or optionally available accessories for the product.

NOTE

Information on the installation, configuration and operation of optional accessories can be found in the enclosed operating manuals.

An information screen for any optionally available accessory components can be opened by pressing the relevant button.

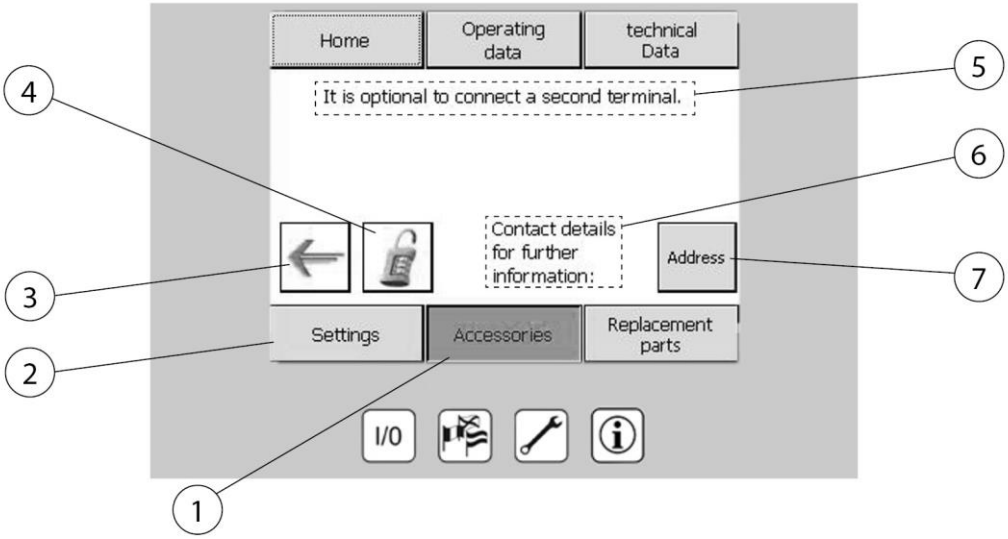


Fig. 43: Accessories contact data

Item	Description	Item	Description
1	Accessories menu	5	Note: Second operating terminal is connected (optional)
2	Settings	6	Contact data for further information
3	Arrow key: Page back	7	Query manufacturer's contact data
4	Entry of release code for purchased components		

Tab. 23: Accessories contact data

6.2.6 Spare parts queries

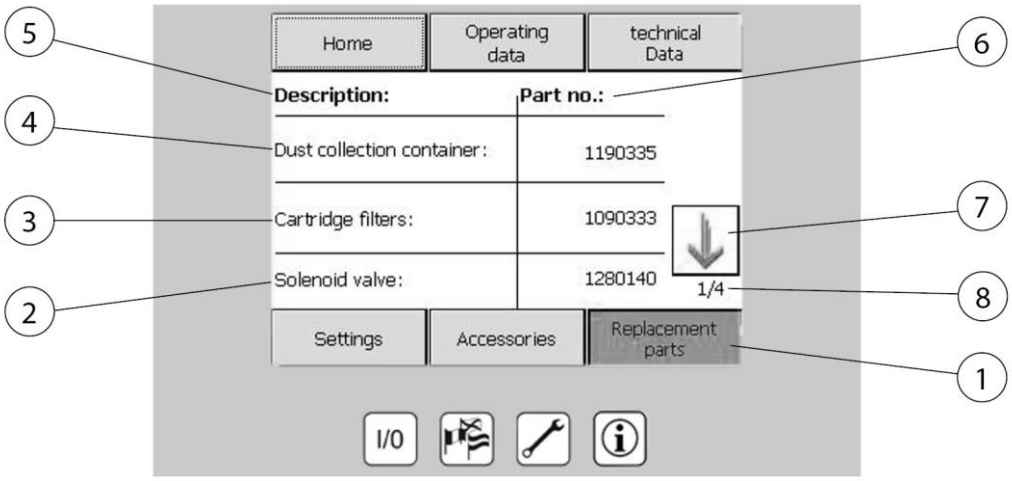


Fig. 44: Spare parts queries

Item	Description	Item	Description
1	Spare parts menu	5	Description
2	Solenoid valve	6	Item no.
3	Filter cartridge	7	Arrow key for changing the page
4	Disposal container	8	Page 1 of 4

Tab. 24: Spare parts queries

Spare parts menu (Pos. 1)

Necessary spare parts numbers can be queried via the spare parts menu.

6.2.7 Language selection menu

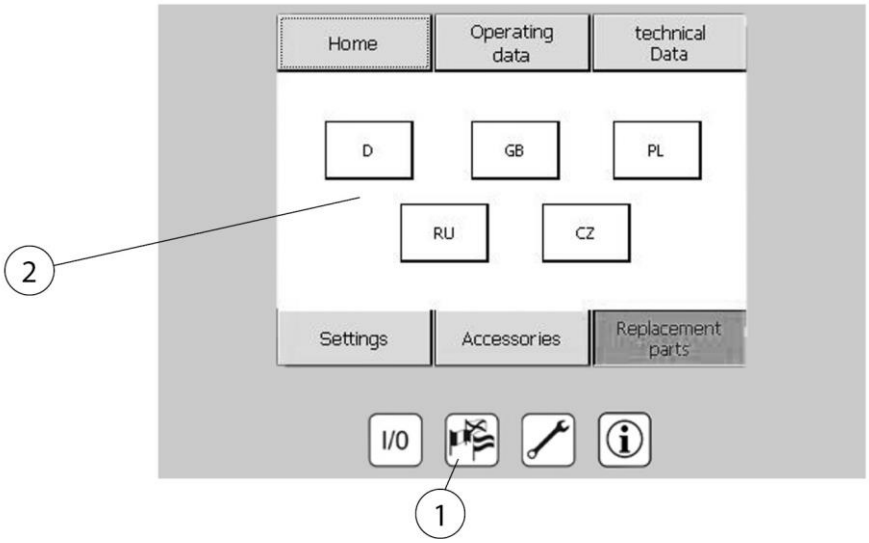


Fig. 45: Language selection

Item	Description	Item	Description
1	Language selection button	2	Selectable languages

Tab. 25: Language selection

Language selection button (Pos. 1)

Choice of display language. The available languages are represented by the national flags.

6.2.8 Maintenance menu

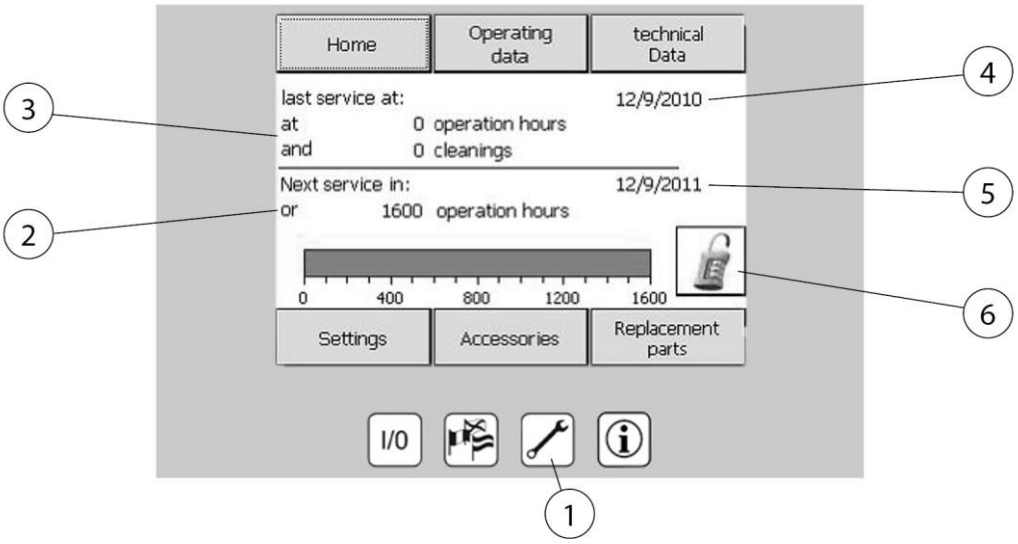


Fig. 46: Maintenance menu

Item	Description	Item	Description
1	Maintenance menu button	4	Date of last service
2	Next service on:	5	Date when service due
3	Last service on:	6	Activation codes entry

Tab. 26: Maintenance menu

Maintenance menu button (Pos. 1)

Displays next maintenance date and the date of last maintenance performed. Activation code entry for optional accessories.

NOTE

since the product is a safety-relevant device, it is mandatory that correct and proper functioning is checked at regular intervals and that any necessary maintenance work is carried out. Maintenance frequency depends on the product operation time. If this is exceeded, a warning message will be displayed to remind you of the overdue, legally required maintenance. Please contact the manufacturer as soon as possible to arrange a maintenance date.

6.2.9 Setting the system parameters

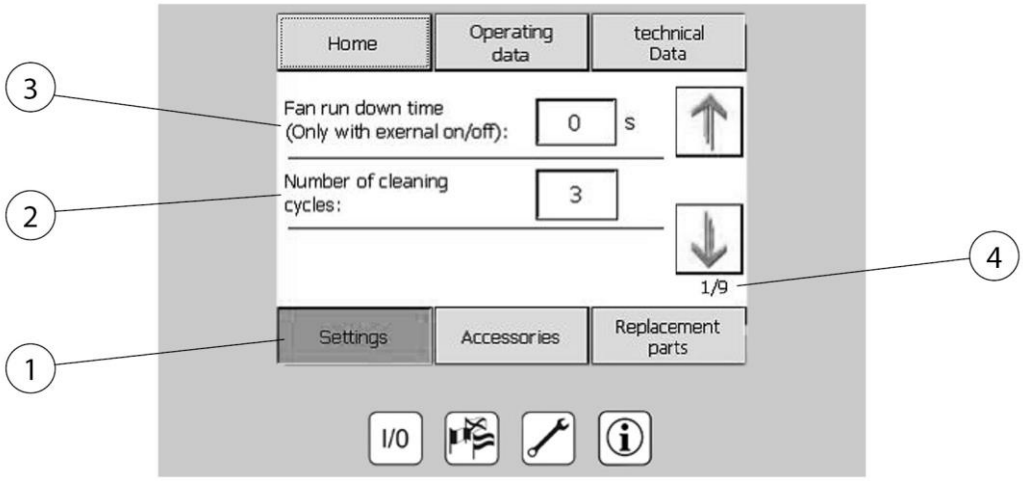


Fig. 47: Parameter settings

Item	Description	Item	Description
1	Settings menu	3	Fan run-on time
2	Number of cleaning processes	4	Page 1 of 9

Tab. 27: Parameter settings

The following system parameters can be modified in the **Settings (Pos. 1)** menu:

- Fan run-on time (only if “external on/off” option is activated)
- Number of filter cleaning cycles when at a standstill
- Time and date

Note: The product setting parameters are access-protected and can only be changed by authorised specialist personnel.

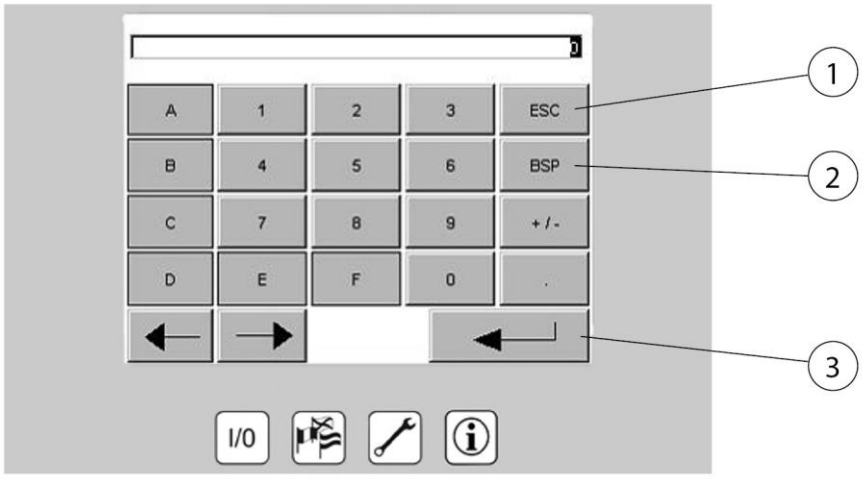


Fig. 48: Parameter entry keypad

Item	Description	Item	Description
1	Delete	3	Confirm
2	One digit back		

Tab. 28: Parameter entry keypad

To change parameters, press the value to be changed and enter and confirm the new value using the keypad.

6.2.10 Calibration of the control display

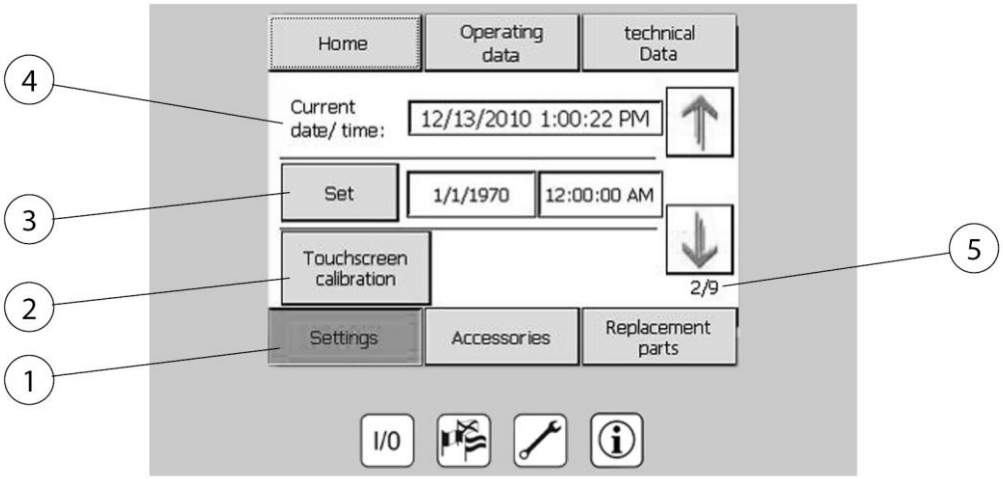


Fig. 49: Calibrating the control display

Item	Description	Item	Description
1	Settings menu	4	Current date and time
2	Calibrating the control display – make settings	5	Page 2 of 9
3	Setting/Confirming		

Tab. 29: Calibrating the control display

If touchscreen operation becomes inaccurate or the control display does not react correctly to entries, the touchscreen must be recalibrated. To do this, please (Item 2) tap the “Calibrate control display” button. Then follow the instructions on the screen.

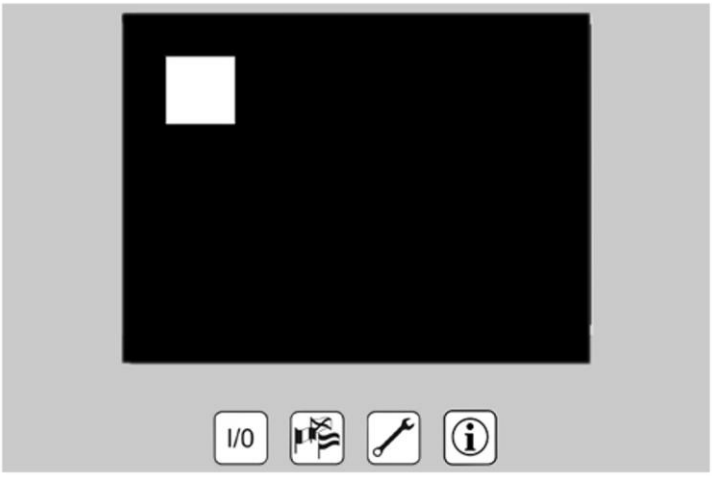


Fig. 50: Screensaver

Screensaver:

a screensaver will start after 15 minutes without user input. As soon as any point on the control display is tapped, the screensaver disappears and the normal screen is displayed. You can still switch the system on or off using the I/0 key if the screensaver is active.

6.2.11Operating elements error messages

If there is a product malfunction, critical errors and warnings are distinguished. Critical error which result in immediate product switch-off are labelled using a warning window with a red background.

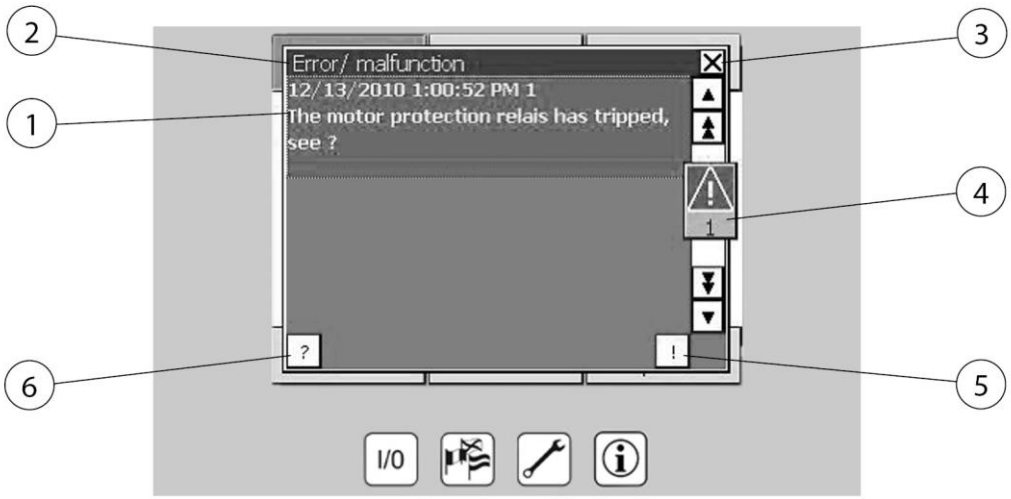


Fig. 51: Operating elements error message

Item	Description	Item	Description
1	Example of error message	4	Error indicator (number of error messages)
2	Error/Fault/Warning	5	Acknowledgement of error message
3	Hide fault message	6	Show info text for error message

Tab. 30: Operating elements error message

Critical error:

These errors cause the product being to be switched off immediately. Once the error has been rectified it can be acknowledged by tapping the acknowledge button (Pos. 5). The product can only be switched on again once the error has been rectified and acknowledged.

For each error message, a help text can be displayed via the button (Pos. 6), in which the error that has occurred is explained in more detail. The “Error/Fault” window can be hidden by tapping the button (Pos. 3). If an error is present which has not been acknowledged the error indicator (Pos. 4) will notify you of this. If this indicator is tapped, the “Warning” and “Error/Malfunction” windows both appear. Either of these windows can be closed if it does not contain a warning or an error by tapping (Pos. 3). If more than one message is being displayed you can select and acknowledge each one by tapping it after the error has been eliminated.

6.2.12 Error messages for optional extraction capacity regulation

If there is an error in the frequency converter, the following message appears on the control display:

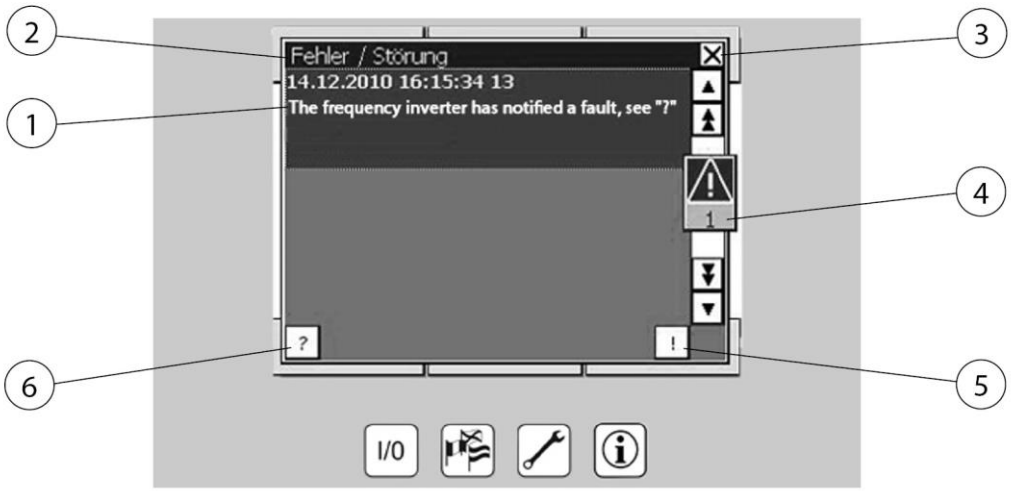


Fig. 52: Frequency converter error message

Item	Description	Item	Description
1	Fault: Frequency converter fault	4	Error indicator (number of error messages)
2	Error/Fault	5	Acknowledgement of error message
3	Hide fault message	6	Show info text for error message

Tab. 31: Frequency converter error message

Please contact our service department if this error message is displayed.

6.2.13 Warnings

Warnings are used to notify the system operator of non-critical system conditions or pending maintenance.

Fig. 53: Warnings

Item	Description	Item	Description
1	Example warning	4	Error indicator (number of warnings)
2	Warning	5	Acknowledge warning
3	Hide warning	6	Info text for warning

Tab. 32: Warnings

Warnings are not critical for system operation and can be hidden at any time by acknowledging them by tapping (Pos. 3). If the warning condition remains the message will be displayed again in 5 minute intervals and must be acknowledged.

In any warning message, you can use Pos. 3 to display a help text which will explain the warning condition in more detail. You can hide the entire window by tapping Pos. 1.

If the warning is not acknowledged and the window is hidden the error indicator indicates that there is a warning. If this indicator is tapped, the “Warning” and “Error/Malfunction” windows both appear. You can then acknowledge the warning there. You can close either of these windows if it does not contain a warning or an error by tapping (Pos. 1).

6.3 Setting the extraction capacity regulation (optional)

The automatic extraction power control constantly monitors the vacuum set in the connected piping system. Depending on the activation of the central extraction systems (air requirement) and saturation of the filters, it

automatically controls the fan speed so that there is always a constant extraction capacity at the individual central extraction systems.

The product therefore only works demand-oriented, which results in the following advantages:

- Constant extraction capacity on each central extraction system
- Energy saving due to optimum fan speed (energy efficiency).
- Protects filters and product components (longer service life)
- Reduction of noise emissions (health and safety).

⚠ DANGER

Danger of electric voltage!

The extraction capacity can only be set in the switched-on operating mode and when the control cabinet is open.

Adjustment work may only be carried out by a qualified electrician or the manufacturer's service department.

To adjust the extraction capacity, proceed as follows:

Example illustration:

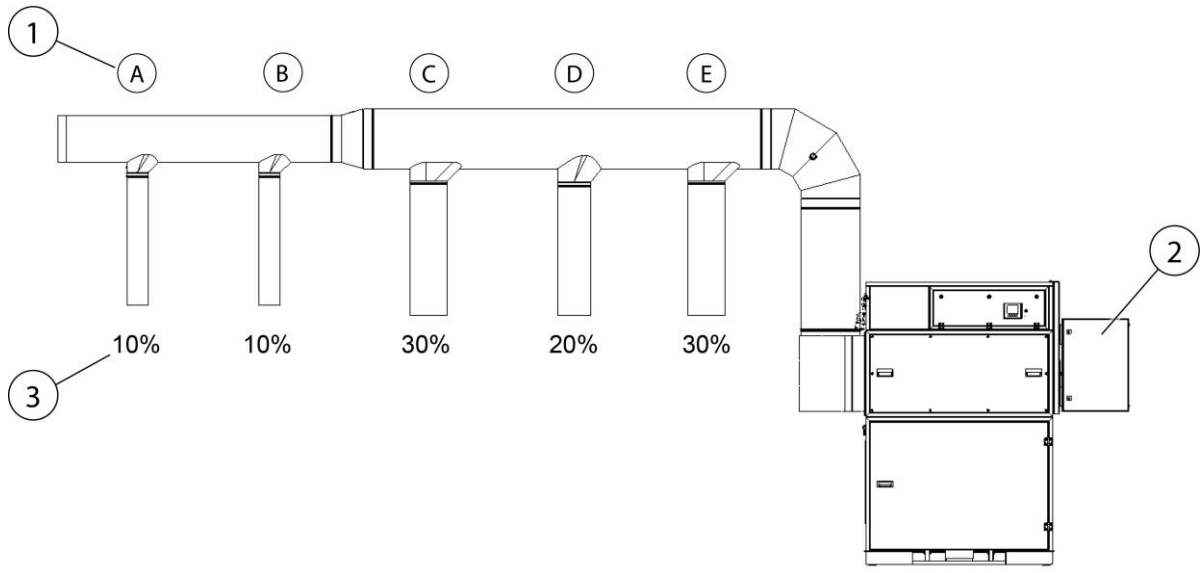


Fig. 54: Setting the extraction capacity regulation

Pos.	Designation	Pos.	Designation
1	Central extraction elements (A – E)	3	Potentiometer
2	Control cabinet	4	Free cross-sectional area of the central extraction elements in %.

Tab. 33: Setting the extraction capacity regulation

1. Close all detection elements (Pos. 1).
2. Switch on the product. (See also chapter Commissioning)
3. Now open the most distant central extraction elements fully so that approx. 20% of the free cross-sectional area is reached. In this example, A + B must be opened.
4. Open the control cabinet (Pos. 2) and, on potentiometer (Pos. 3), adjust the extraction capacity so that it matches the required need or regulations.
5. Further extraction elements can now be opened. The extraction capacity control detects the falling negative pressure and automatically regulates the air requirement so that the previously set extraction capacity is guaranteed at the respective central extraction elements.

NOTE

It is not the potentiometer that is used to set the fan speed, but the vacuum in the extraction pipe. Please note the following:

The filter cartridges become saturated over their life cycle, which means that the extraction capacity decreases. The extraction power compensates this automatically, but only until the maximum fan speed is reached. Any further readjustment via the potentiometer is then ineffective.

When the maximum fan speed is reached, the optimum extraction capacity at the respective central extraction elements can no longer be guaranteed. A filter change is required.
See also chapter "Troubleshooting".

6.4 Commissioning services

⚠ WARNING

Danger due to faulty product condition.

The product must be fully installed before commissioning begins. All doors must be closed and the necessary connections must have been made.

1. Ensure that the product is supplied with compressed air and power.
2. Press the main switch of the product.
3. Switch on the product using the button on the operating control labelled “0” and “I”.
4. The fan starts and the display indicates error-free operation of the product.
5. Fault-free operation is signalled by a green background in the operating display.

If there is a fault, please refer to the “Troubleshooting” chapter.

7 Maintenance

The instructions in this chapter are intended as minimum requirements. Depending on the operating conditions, further instructions may be required to keep the product in optimal condition.

The maintenance and repair work described in this chapter must only be performed by specially trained repair personnel of the operating company.

Spare parts used must comply with the manufacturer's specified technical requirements.

This is guaranteed if original spare parts are used.

The safe and environmentally friendly disposal of operating materials and replacement parts must be ensured.

The safety instructions in these operating instructions must be observed during maintenance work.

7.1 Care

The care of the product is essentially limited to cleaning all surfaces of the product and – if present – checking the filter inserts.

The warning notices listed in the chapter "Safety notes for maintenance and fault removal" must be observed.

NOTE

The product may not be cleaned with compressed air. This may result in dust and/or dirt particles getting into the ambient air.

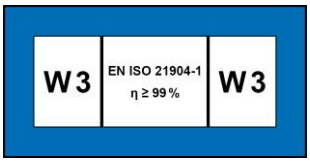
Proper care helps to maintain the product in a continuous functional state.

For optimum care and cleaning of the powder-coated surfaces, the following must be observed:

- Thoroughly clean the product monthly or as needed.
- Clean the exterior areas of the product with a suitable industrial vacuum cleaner of dust classification H or with damp soft cloths/industrial cotton wool.
- For stubborn dirt, use commercially available household cleaners. Avoid vigorous rubbing.
- Do not use any abrasive agents that scratch.
- Do not use any acidic or strongly alkaline cleaning agents.
- Do not use organic solvents containing esters, ketones, alcohols, hydrocarbons or similar.

7.2 Maintenance

NOTE



If the product is labelled with the W3 sticker, the product has IFA approval and has been tested in accordance with the requirements of welding fume separation class W3.

The IFA approval becomes void if:

- The product is used other than as intended or is subject to constructive modifications.
- Non-original spare parts, in accordance with the spare parts list, are used.

The quality standard can only be guaranteed if original spare parts are used.

The manufacturer accepts no liability for damage caused by the use of non-original parts.

All maintenance work must be recorded in the maintenance logbook.

7.2.1 Emptying the dust collection container

The dust collection container fill level must be checked at regular intervals. How often the dust collection bucket/disposal bag needs replacing depends on the type and quantity of the deposited dust particles. For this reason, we cannot state specific replacement intervals. Since particularly light dust particles can be stirred up simply by the airflow through the inside of the product and in the course of the dust collection bucket/disposal bag replacement, the dust collection bucket/disposal bag may only be filled up to 50 mm below the top lip of the dust collection container.

⚠ WARNING

Health hazards caused by welding fume particles

Inhalation of welding fume particles, especially welding fume particles from welding processes on alloyed steels, can damage your health as they are 'respirable'. Skin contact with welding fume particles can cause skin irritation in sensitive individuals.

To avoid contact with and inhalation of these dust particles, wear disposable overalls, protective goggles, gloves and a suitable Class FFP2 respiratory protection filter mask in accordance with EN 149.

When emptying the dust collection container, please proceed as follows:

1. Switch off the product using the I/O pushbutton.
2. Wait 2 minutes for the dust particles to settle inside the filter section.
3. Open the door to the product dust collection area.
4. Lower the dust collection container by actuating the rotary knob on the compressed air valve. The compressed air valve is located behind the door in the dust collection area.

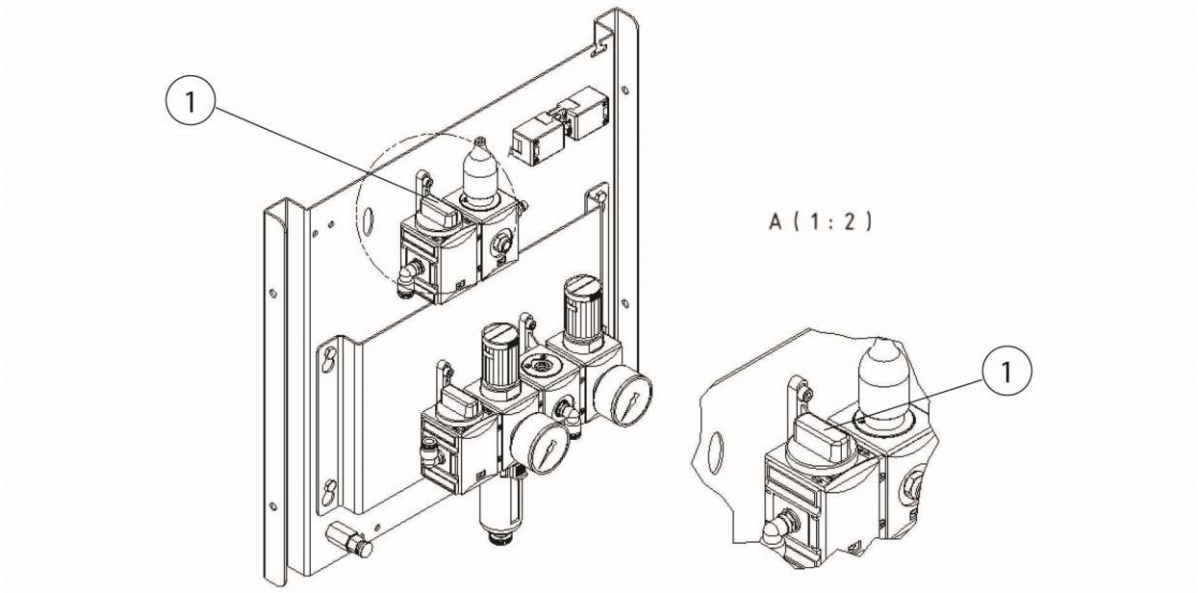


Fig. 55: Dust collection container compressed air valve

5. The following error message appears:

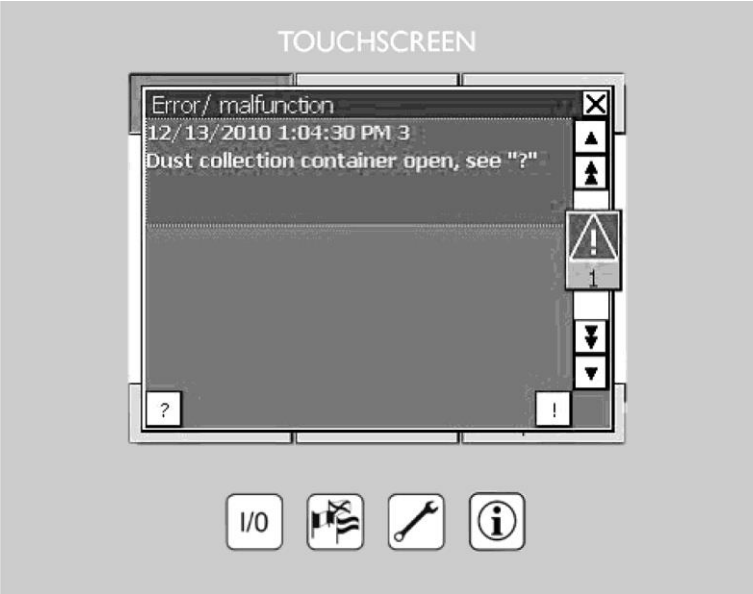


Fig. 56: Dust collection container error message

For products with dust collection buckets

6. Carefully remove the dust collection bucket from the lifting device without stirring up dust particles, then close the bucket with the included lid and clamp fastener. Then insert a new dust collection bucket.

⚠ WARNING

This container must be disposed of properly. Never empty and reuse the container.

For products with dust collection trolleys

7. Carefully pull the dust collection trolley from the lifting device without swirling up dust particles and remove the frame with the dividers from the dust collection trolley.
8. Close the disposal bag and properly dispose of it.

⚠ WARNING

This container must be disposed of properly. Never empty and reuse the container.

9. Insert a new disposal bag into the dust collection trolley and place the frame with the dividers on the dust collection trolley again.

10. Push the dust collection trolley back over the lifting device as far as it will go. Then actuate the compressed air valve until the dust collection trolley is pressed firmly against the sealing surface.

⚠ WARNING

Danger of crushing!

Make sure that no body parts or objects are located between the sealing flange on the dust collection bucket/dust collection trolley and the dust chute during the lifting process.

11. Now acknowledge the error message, close the maintenance door and switch on the product again.

7.2.2 Changing the filter – Safety instructions

The life of the filter inserts depends on the type and amount of deposited particles.

As the dust accumulation in the filter increases, its flow resistance increases and the extraction capacity of the product decreases.

Even with products that may have automatic filter cleaning, adhering deposits can reduce the extraction capacity.

A filter change is required.

⚠ WARNING

Health hazards caused by welding fume particles

Do not inhale welding dust / smoke! Serious injury to the lungs and respiratory tract is possible!

Sweat smoke contains substances that can cause cancer!

Skin contact with welding fume particles can cause skin irritation in sensitive individuals.

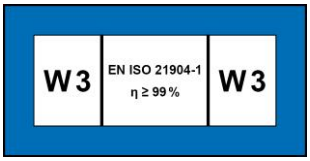
To avoid contact with and inhalation of these dust particles, wear disposable overalls, protective goggles, gloves and a suitable Class FFP2 respiratory protection filter mask in accordance with EN 149.

⚠ WARNING

Cleaning the filter inserts is not permitted. This inevitably leads to damage to the filter element, meaning the filter ceases to function and hazardous substances enter the air.

During the work described in the following section, pay particular attention to the seal on the main filter. Only an undamaged seal allows the product to achieve a high filter efficiency. Main filters with a damaged seal must therefore be replaced every time.

NOTE



Products with W3 certification according to requirements for W3/IFA certified welding fume separation class. (See "Technical data" chapter)

The W3 approval becomes void if:

- The product is used other than as intended or is subject to constructive modifications.
- Non-original spare parts, in accordance with the spare parts list, are used.

- Only original replacement filters, because they guarantee the necessary filter efficiency and are matched to the product and its performance characteristics.
- Switch the product off using the on/off switch.
- Secure the product against unintentional switching on. If available, pull out the mains plug or secure the main switch in the 0 position with a padlock.
- Disconnect the pressure supply, if present, and let the compressed air present in the product flow out via the condensate drain valve.

7.2.3 Extraction capacity regulation filter mat replacement

Depending on use, but at least once a month, check and replace the pre-filter mat of the extraction capacity control if necessary. Increased soiling can result in product breakdown. Filter replacement can be carried out while the product is in operation.

Perform the filter change as follows:

1. Unlock the front grate in the upper area by hand and fold down.
2. Remove the soiled filter pre-filter mat and dispose of it in accordance with current regulations.
3. Insert a new pre-filter mat, close the front grate and lock.

Fig. 57: Filter replacement in control cabinet

7.2.4 Filter replacement – safety filter for dust collection container

Depending on usage, but at least once per week, check and replace the pre-filter mat in the safety filter if necessary.

The safety filter is located in the fan housing section and is connected to the dust collection container via a hose.

The increased negative pressure from the fan section means the disposal bag in the dust collection container cannot suck itself up.

A heavily soiled safety filter signals that there is a leak or that the disposal bag has been damaged.

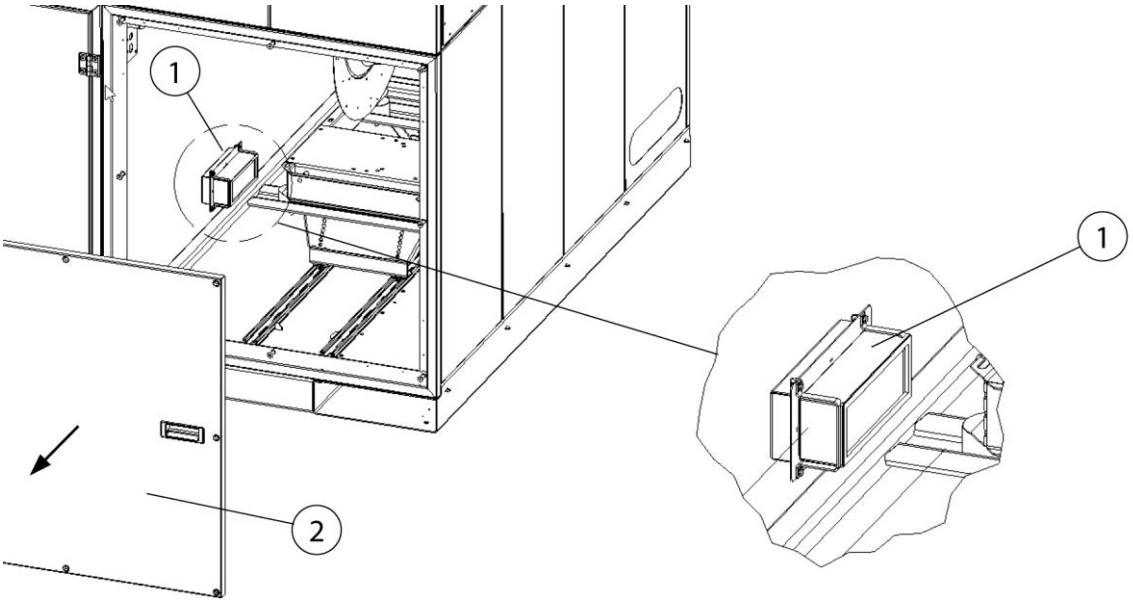


Fig. 58: Access to the safety filter

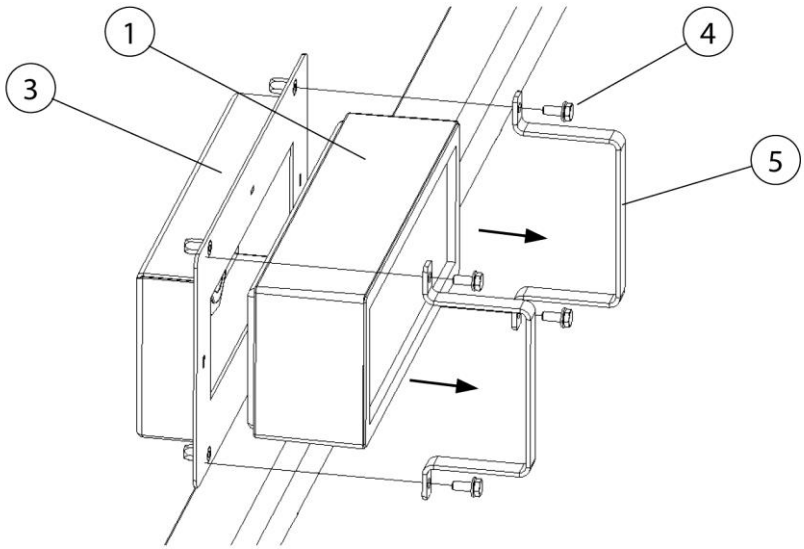


Fig. 59: Changing the safety filter

Item	Description	Item	Description
1	Safety filter	4	Screw (4 x)
2	Maintenance cover	5	Fastening bracket (2x)
3	Filter holder		

Tab. 34: Positions on the product

Perform the filter change as follows:

1. Switch off the product at the I/O key. Set the main switch to 0 and secure with a padlock.
2. Remove the maintenance cover (item 2) from the fan section using suitable tools.
3. Dismantle the two fastening brackets (item 5) of the filter holder (item 3) by loosening the four screws (item 4).
4. Remove the contaminated safety filter (item 1) and dispose of it in accordance with the applicable regulations.
5. Re-insert the new safety filter (item 1) in reverse order and secure it.
6. Screw the maintenance cover (item 2) back on.
7. Remove the padlock from the main switch and put the product back into operation. See also the chapter Commissioning.

7.2.5 Main filter replacement

Access to the filter cartridges:

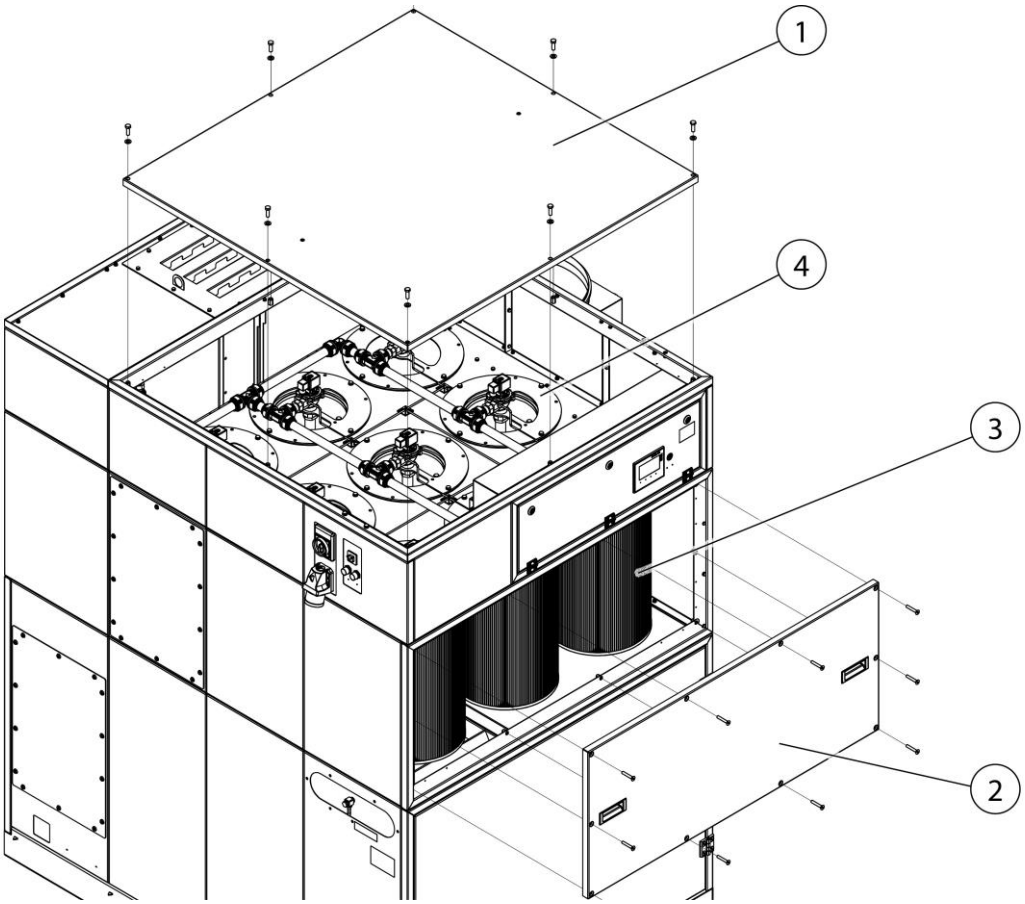


Fig. 60: Access to the filter cartridges

Pos.	Description	Pos.	Description
1	Cover plate	3	Filter cartridge
2	Maintenance cover	4	Filter cartridge mounting

Tab. 35: Access to the filter cartridges

Depending on the product variant, the filter change is carried out from the front or from above. The filters in the front two rows can be changed from the front.

For product variants with 3 or 4 rows of filter cartridges, the filter change must always be carried out from above.

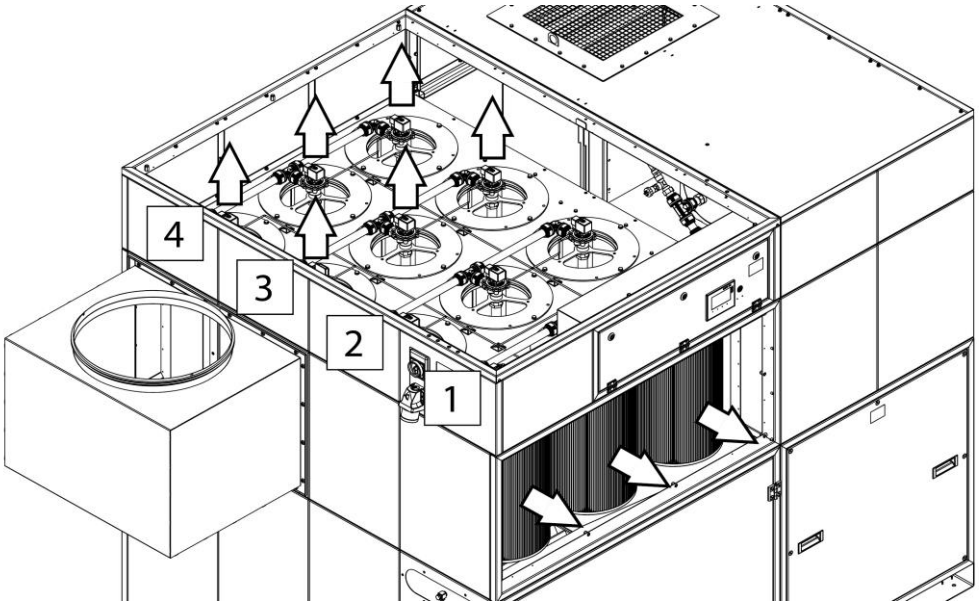


Fig. 61: Changing filters

⚠ WARNING

Entry/access to the maintenance area is prohibited!

7.2.6 Filter replacement from the front

Perform the filter replacement as follows:

1. Disconnect the product from the mains supply and compressed air network and allow any stored compressed air to escape from the system.
2. Secure the product with a padlock to prevent unintentional restarting.

3. Make sure the original replacement filter cartridges and the enclosed disposal bag are available.

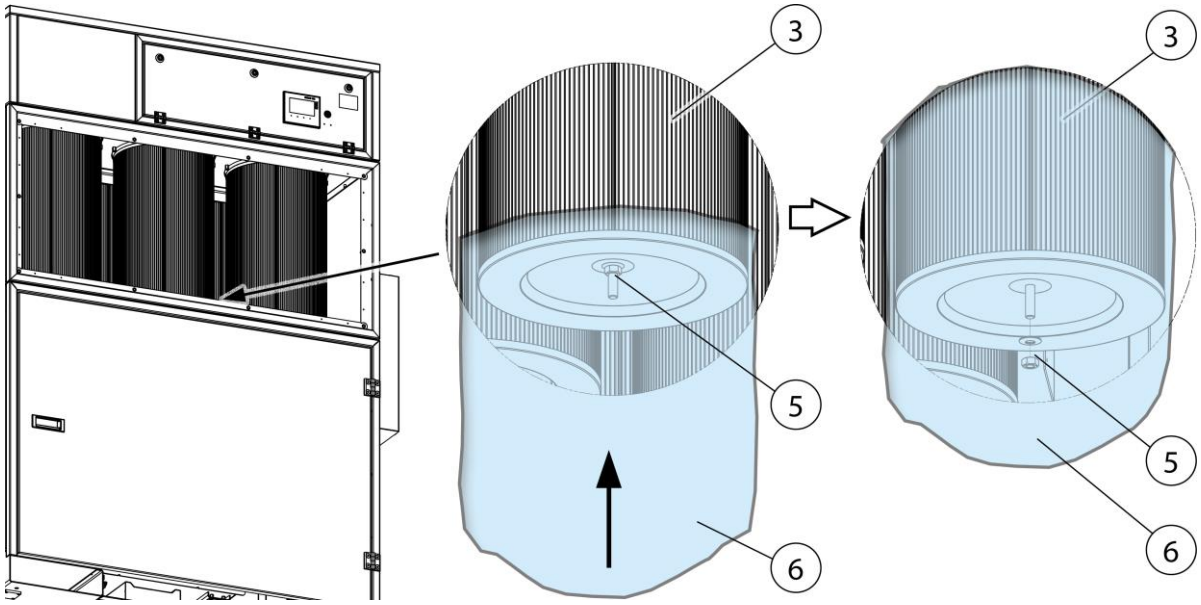


Fig. 62: Changing filters -

Pos.	Description	Pos.	Description
3	Filter cartridge	6	Disposal bag
5	Hexagon nut + sealing washer		

Tab. 36: Changing filters

4. Remove the maintenance cover (Pos. 2) using suitable tools.
5. Loosen the hexagon nut (Pos. 5) in the lower area of the filter cartridge (Pos. 3), but do not remove it yet.
6. Carefully place the disposal bag (Pos. 6) over the filter cartridge (Pos. 3) without raising dust.
7. Hold the filter cartridge (Pos. 3) and completely undo the hexagon nut (Pos. 5) and let them fall together with the sealing washer into the disposal bag (Pos. 6).
8. Seal the disposal bag with the contaminated filter cartridge hermetically, remove it from the product and dispose of it in accordance with the applicable regulations.
9. Perform positions 5 – 8 for all filter cartridges.

NOTE

For disassembly or for better access to the filter cartridges, it may be necessary to remove the rotating nozzles.

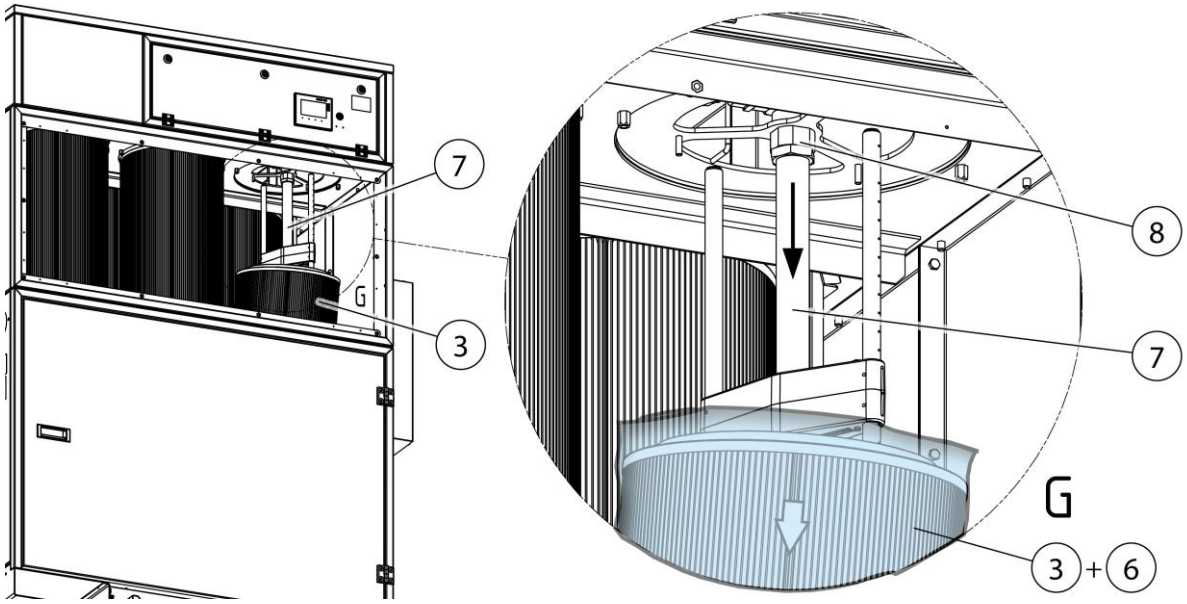


Fig. 63: Removing the rotating nozzles

Pos.	Description	Pos.	Description
3	Filter cartridge	7	Rotating nozzle
6	Disposal bag	8	Hexagon nut

Tab. 37: Removing the rotating nozzles

10. Undo the hexagon nut (Pos. 8) by turning it anti-clockwise while simultaneously tightening the locknut and unscrewing the pipe of the rotating nozzle (Pos. 7).
11. After removing the contaminated filter cartridges, the maintenance room must be cleaned. Use a suitable vacuum cleaner of filter class M or, better yet, clean the maintenance room.
12. The new filter cartridges are installed in the reverse order.
13. When installing the new filter cartridges, make sure that the seals of the filter cartridges are clean and flush with the cartridge mounting plate.

After replacing the filter, carry out the following steps:

1. Screw/close maintenance doors.

2. Remove the padlock and unlock the product.
3. Restore the compressed air and power supply.
4. Commission the product. See also the chapter “Commissioning”.

7.2.7 Filter replacement from above

ATTENTION

Sufficient mounting space must be available above the filter system to remove the filter cartridges.

A lifting aid is recommended for removing the filter cartridges.

⚠ CAUTION

Caution: Danger of falling!

Due to the mounting height, a fall prevention device must be provided for filter changes.

Perform the filter replacement as follows:

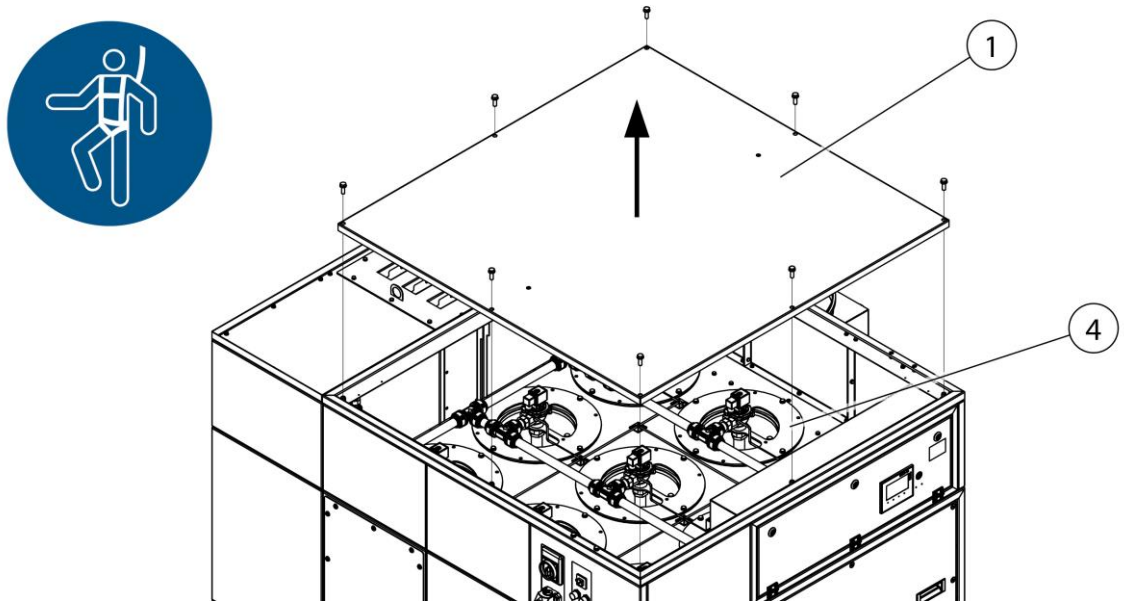


Fig. 64: Changing filters – removing the cover plate

Pos.	Description	Pos.	Description
1	Cover plate	4	Filter holder

Tab. 38: Changing filters – removing the cover plate

1. Disconnect the product from the mains supply and compressed air network and allow any stored compressed air to escape from the system.
2. Secure the product with a padlock to prevent unintentional restarting.
3. Make sure the original replacement filter cartridges and the enclosed disposal bag are available.
4. Remove the cover plate (Pos. 1) using suitable tools.

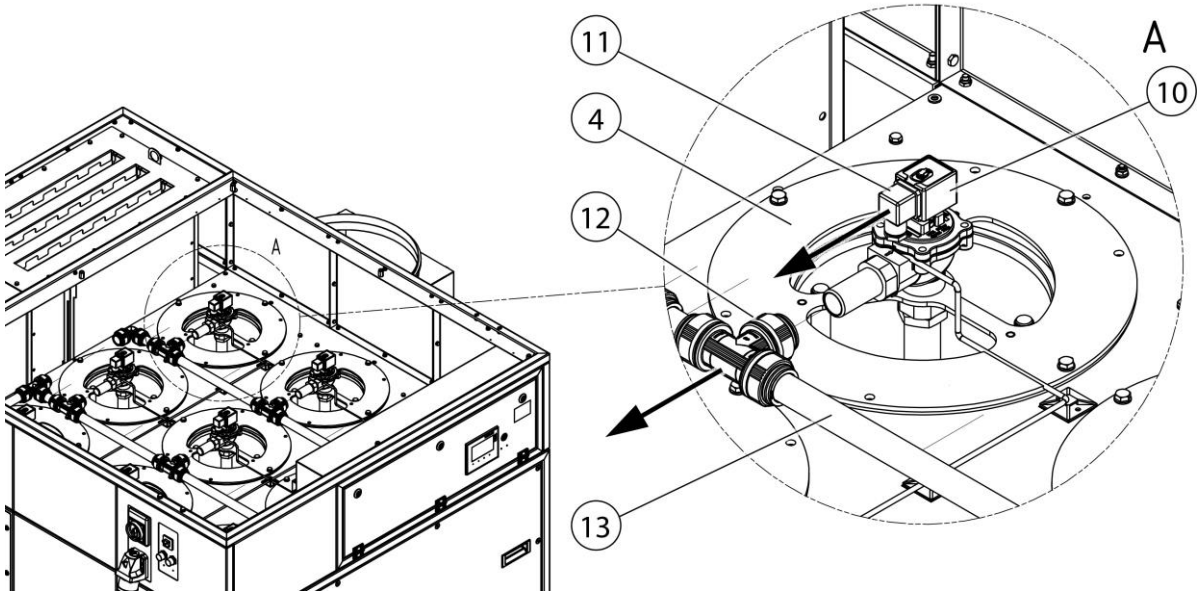


Fig. 65: Changing filters – removing the connections

Pos.	Description	Pos.	Description
4	Filter holder	12	Compressed air screw connection
10	Compressed air solenoid valve	13	Compressed air pipework
11	Compressed air solenoid valve connection plug		

Tab. 39: Changing filters – removing the connections

5. Undo the screw on the connection plug (Pos. 11) and remove the plug from the compressed air solenoid valve (Pos. 10).
6. Remove the compressed air pipework (Pos. 13) from the compressed air solenoid. Undo the bolt connection (Pos. 12).

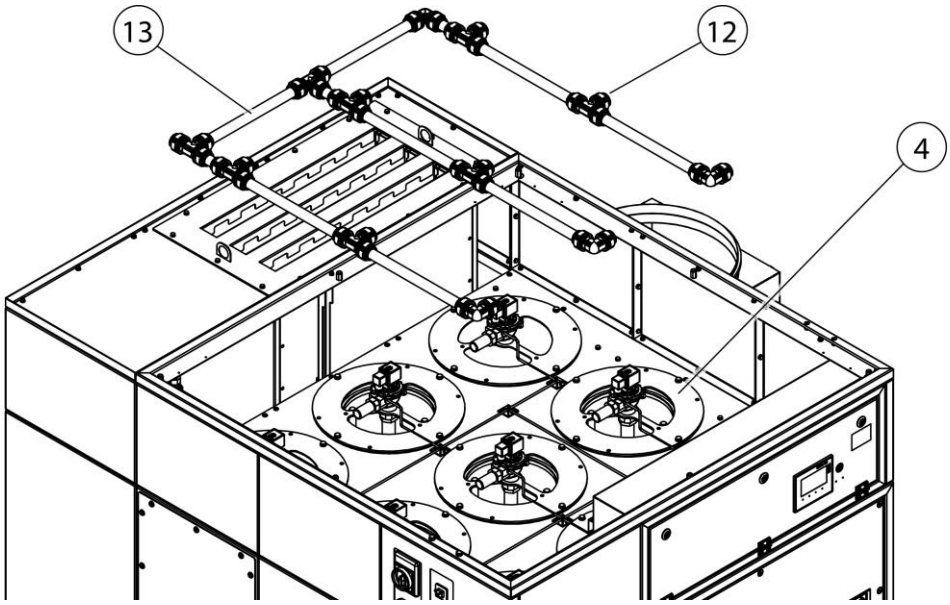


Fig. 66: Changing filters – removing the compressed air pipework

7. Carry out steps 5 + 6 for all filter mountings (Pos. 4). Disconnect the compressed air pipework from the compressed air solenoid valves.

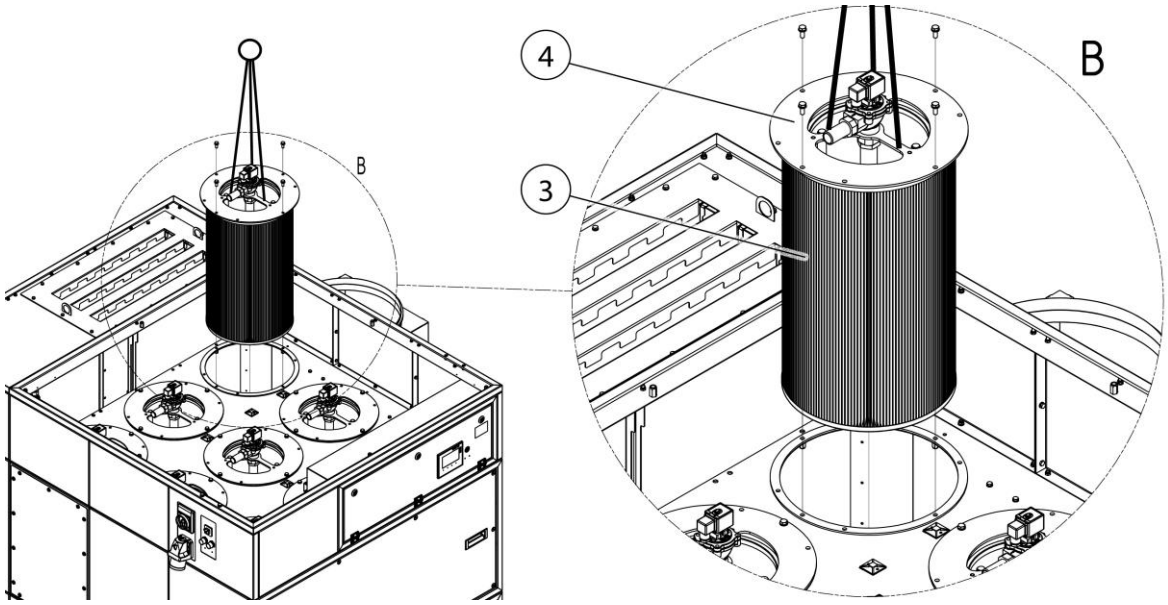


Fig. 67: Changing filters – removing the filter mounting

Pos.	Description	Pos.	Description
3	Filter cartridge	4	Filter holder

Tab. 40: Changing filters – removing the filter mounting

8. As shown in the illustration, remove the four hexagon bolts of the filter mounting (Pos. 4).
9. Lift the filter mounting (Pos. 4) + filter cartridge (Pos. 8) out of the product using a lifting device.

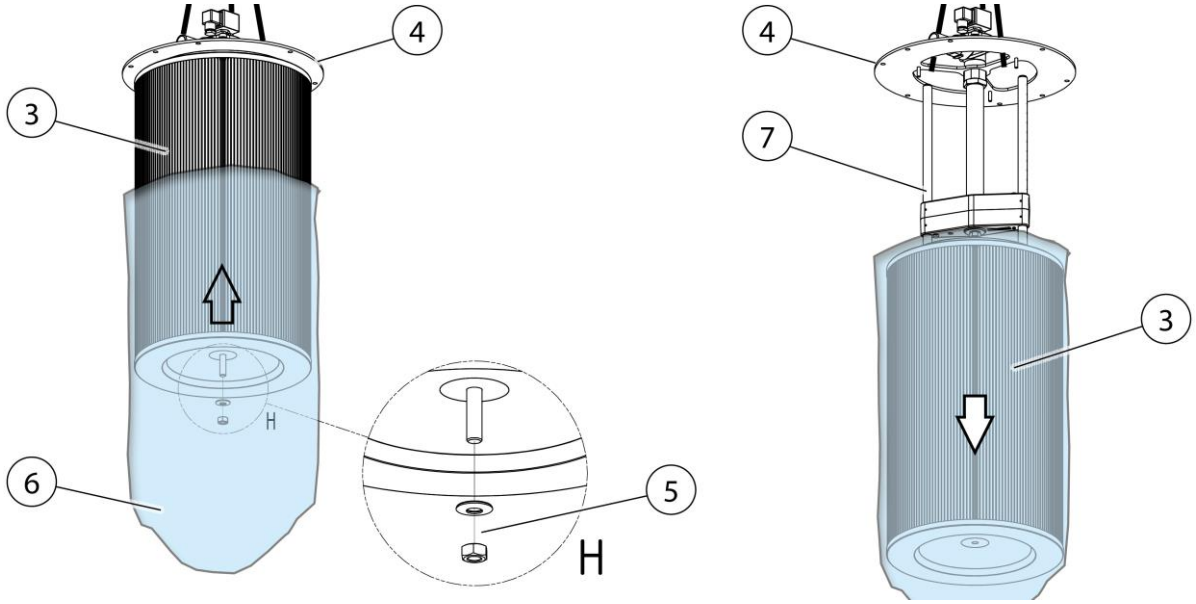


Fig. 68: Changing filters – removing the filter cartridge

10. Loosen the hexagon nut (Pos. 5) in the lower area of the filter cartridge (Pos. 3), but do not remove it yet.
11. Carefully place the disposal bag (Pos. 6) over the filter cartridge (Pos. 3) without disturbing dust particles.
12. Hold the filter cartridge (Pos. 3) and completely undo the hexagon nut (Pos. 5) and let them fall together with the sealing washer into the disposal bag (Pos. 6).
13. Pull the disposal bag with the contaminated filter cartridge downwards from the rotation nozzle. Seal the disposal bag airtight and dispose of it in accordance with the applicable regulations.

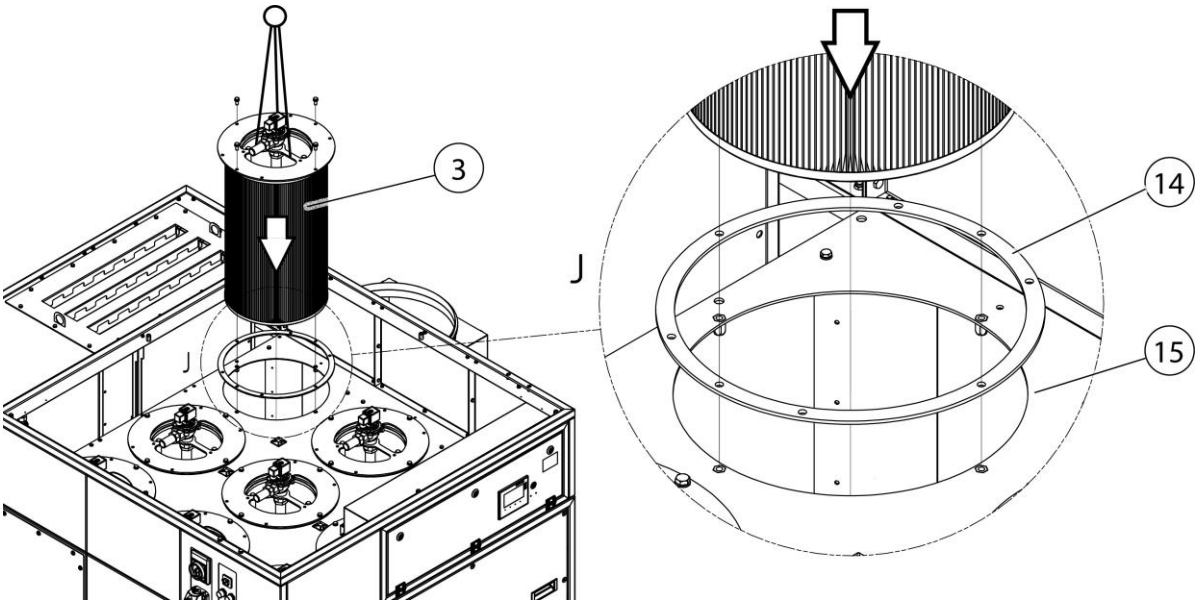


Fig. 69: Changing filters – filter mounting seal

Pos.	Description	Pos.	Description
3	Filter cartridge (new)	14	Gasket ring
		15	Sealing surface

Tab. 41: Changing filters – filter mounting seal

14. Pull the new filter cartridge (Pos. 3) over the rotating nozzle (Pos. 4) and screw it in place with the sealing washer + hexagon nut.
15. Before installing the new filter cartridge, the sealing ring (Pos. 14) of the filter holder must be fitted, to do this, first remove the old seal and thoroughly clean the sealing surfaces (Pos. 15).
16. Insert the filter mounting with the new filter cartridge (item 3) and screw it in place with the four hex bolts. Ensure that the compressed air solenoid valve (Pos. 10) is positioned correctly.
17. Carry out steps 8 – 16 for each filter.
18. After all filter cartridges have been changed, further mounting is carried out in reverse order with steps 6 – 4.

After replacing the filter, carry out the following steps:

1. Screw/close maintenance doors.
2. Remove the padlock and unlock the product.
3. Restore the compressed air and power supply.
4. Commission the product. See also the chapter “Commissioning”.

7.2.8 Draining the compressed air vessel condensate

Depending on usage, but at least once a month, the condensate must be drained from the compressed air vessel.

A condensate drain valve is located on the side of the compressed air maintenance unit.

- Hold a beaker or other suitable container under the condensate drain valve outlet opening and open the valve slowly with the other hand.
- Only close the valve again when just air is escaping.

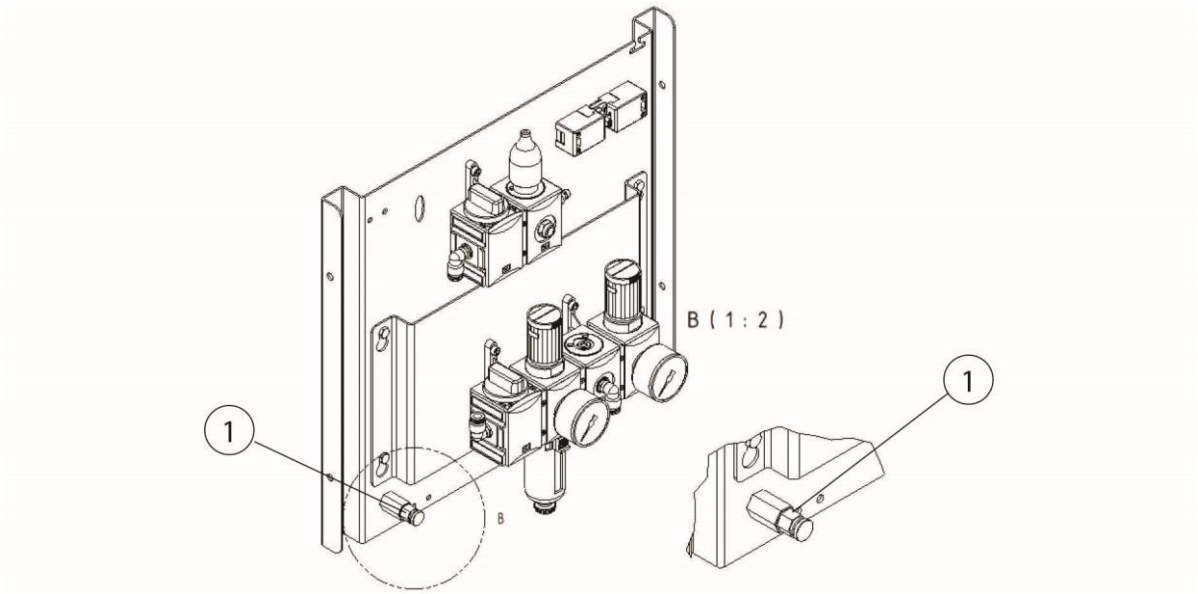


Fig. 70: Condensate drain valve for compressed air vessel

7.2.9 Draining the compressed air maintenance unit condensate

Depending on usage, but at least once per week, the condensate must be drained from the compressed air vessel.

The condensate drain valve is located below the sight glasses on the compressed air maintenance unit.

Maintenance is especially important to guarantee proper functioning of the filter cleaning system.

- Hold a suitable container under the condensate valve outlet opening and slowly open the valve.
- Only close the valve again when just air is escaping.

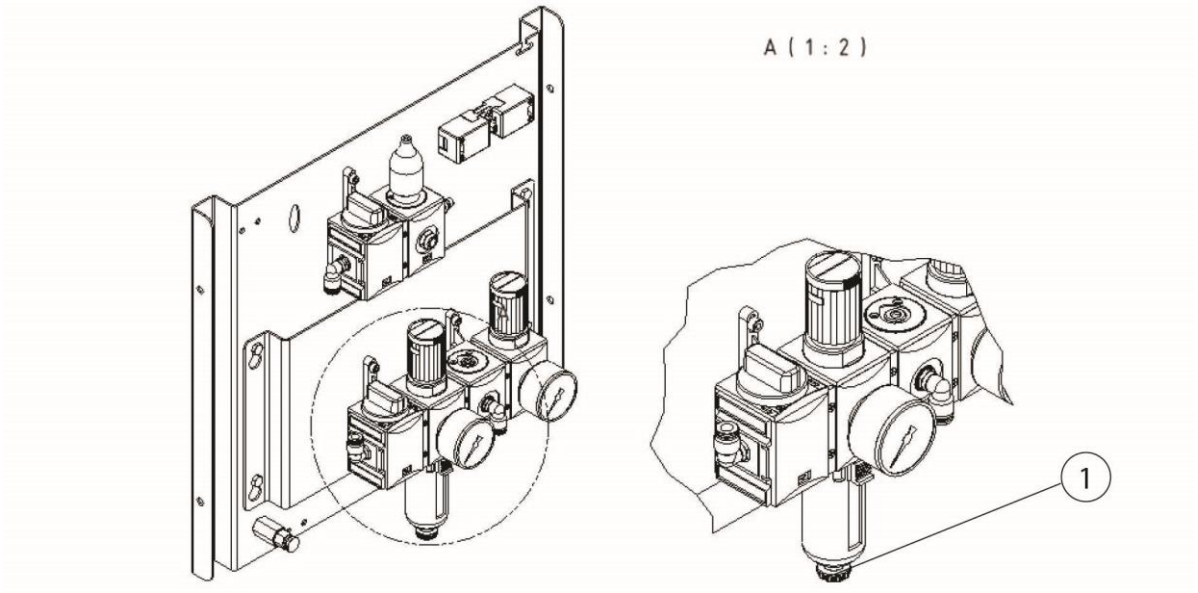


Fig. 71: Condensate drain valve for compressed air maintenance unit

7.2.10 Replacing/retensioning the fan belt drive

After 10 fan starts, the V-belt tension and the alignment of the V-belt pulleys must be checked for the first time.

We recommend replacing the V-belts every 1,600 operating hours or after 12 months at the latest.

Please proceed as follows when tensioning/replacing the V-belt:

1. Switch the product off at the I/O key and set the main switch to the O position. Secure the main switch with a padlock.
2. Now open the fan maintenance cover to access the belt drive.
3. Make sure a new V-belt is available.
4. Release the tension on the motor tensioning carriage and remove the V-belt(s).
5. Check the V-belt pulleys for unusual wear or significant damage. If necessary, use a disc groove gauge for checking.
6. Insert the new V-belt and pretension the motor tensioning carriage.
7. Move the V-belt by hand for several revolutions.

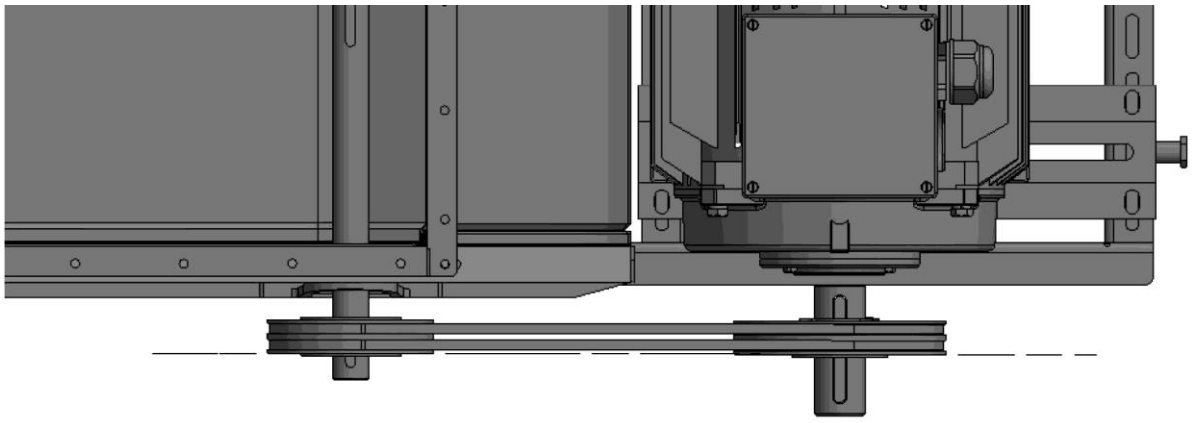


Fig. 72: Alignment and parallelism of the pulleys

8. Check/adjust the alignment and parallelism of the V-belt pulleys using a suitable laser measuring tool. Manufacturer: Optibelt Laser Pointer, for example

   Note: Allowed tolerance +/- 1 mm offset per 100 mm axis distance.

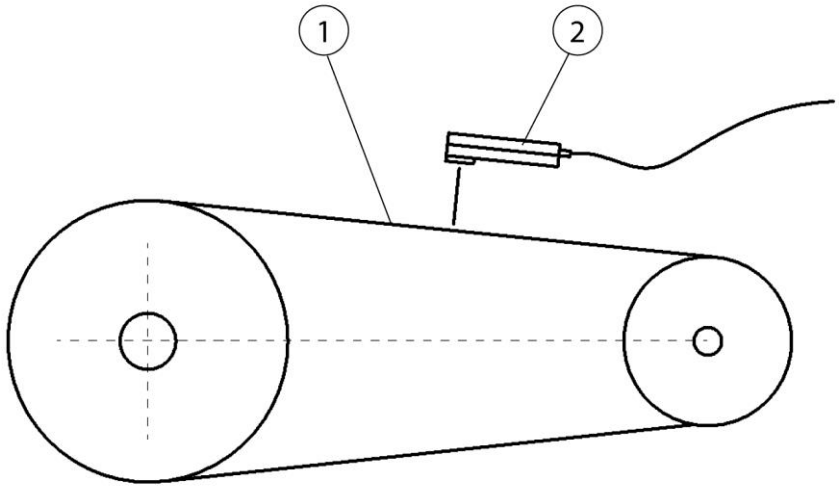


Fig. 73: Checking the V-belt tension

9. Check the V-belt tension and adjust using a suitable frequency meter/trummeter (Pos. 2): Manufacturer: e.g. optibelt TT.

   Adjustable V-belt tension (Hz): see fan name plate.

Note: Permitted measuring tolerance -0 + 5 Hz.

10. Close the maintenance door again.
11. Remove the padlock from the main switch and turn on the main switch.
12. Switch the product on again with the I/O key.

ATTENTION

When a new V-belt is fitted, the tension must be checked after the fan has been started up 10 times and adjusted if necessary.

NOTE

If the product is stored and/or shut down over longer periods (longer than 6 months), the belt drive must be given slack so that the fan bearings are not subject to any unnecessary punctual permanent load.

7.2.11 Lubricating the fan bearings

Two different versions are fitted:

- Variant with lubrication nipple:

  The fan bearings must be lubricated, initially after a short run-in phase and thereafter at regular intervals, every 6 months or every 12 months at the latest.

  In each case, approx. 10 g will be greased. This is equivalent to approx. 8 x 1.2 g strokes using a standard grease gun. If measured lubrication is not possible, grease until lubricant escapes from the bearing.

- Variant without lubrication nipple:

  If no lubrication nipple is visible on the bearing, the version being used is a fan with lifetime lubrication. In this case no lubrication is necessary.

7.2.12 Checking the compressed air container with compressed air safety valve

NOTE

The product has one or more compressed air containers with compressed air safety valve.

Products with compressed air container and safety valve must be serviced/checked according to current national regulations.

7.2.13 Access to compressed air vessel + compressed air safety valve

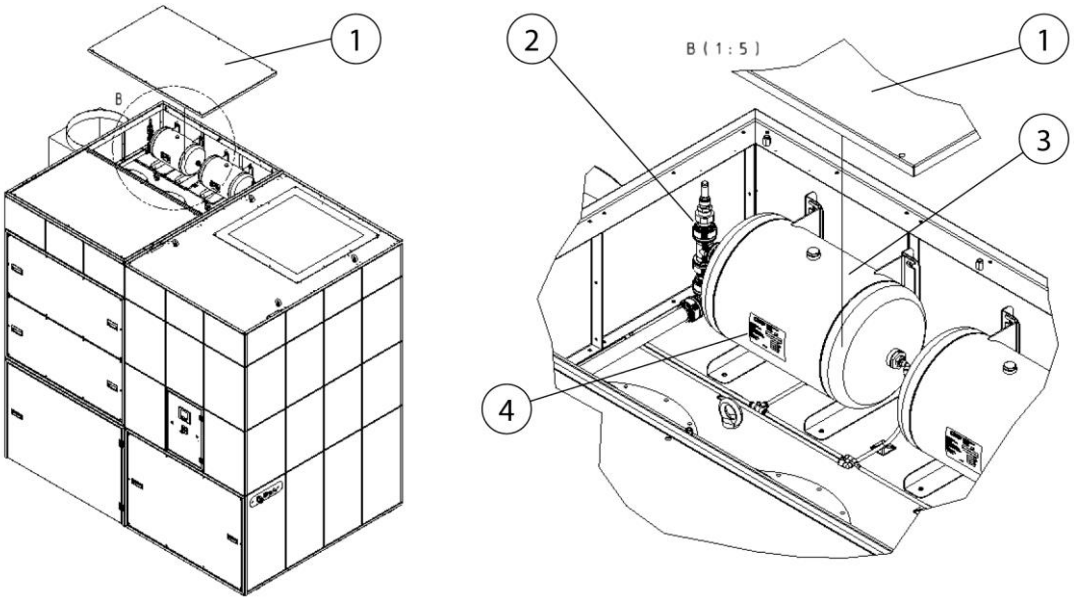


Fig. 74: Access to compressed air vessel + compressed air safety valve

Pos.	Designation	Pos.	Designation
1	Cover plate	3	Compressed air vessel
2	Compressed air safety valve	4	Compressed air vessel nameplate

Tab. 42: Access to compressed air vessel + compressed air safety valve

The product has one or more compressed air vessels with safety valve.

To gain access to the compressed air vessel(s) (Pos. 3), the cover plate (Pos. 1) must be removed.

7.2.14 Maintenance schedule

Activities	Time/interval	Information:
Emptying the dust collection container	As required	
Draining the condensate from the compressed air vessel	As required, but at least once per month	
Draining condensate from the compressed air maintenance unit	As required, however at least once per week	
Checking the belt drive for tension and alignment	Initially after 10 ventilator start-ups, then every 1600 hours/after 12 months at the latest	
Changing the V-belt	Every 1600 hours/after 12 months at the latest	Recommendation of the manufacturer
Lubricating the fan bearings	Initially after brief start-up phase, then every 1600 hours/after 12 months at the latest	
Replacing the main filter cartridge	As required	See the control display for current status, filter replacement at 2300 Pa
Filter mat replacement Extraction capacity regulation	Once per month	Optional if fitted
Filter replacement Safety filter Dust collection container	Every 1600 hours/after 12 months at the latest or if damaged/if disposal bag is missing	

Tab. 43: Maintenance schedule

7.2.15 Maintenance log (master copy)

Product machine number	Fan device number/ AB number

Device identification – see nameplate:

Type of activity	Operating hours	carried out on	Name/ Signature

Tab. 44: Maintenance log

Note:

The maintenance log must be included with every customer complaint. Complaints cannot be processed without the necessary documentation.

7.3 Troubleshooting

Fault	Cause	Note
Motor protection switch has triggered	Current consumption too high due to voltage variations or fault in fan	Have adjustment checked by a qualified electrician
		Contact service department
Fault in power supply	Polarity reversal in electrical connection, phase breakdown	Check of the power supply by a qualified electrician
Dust collection container missing or open	Dust collection container not properly connected	Lift the dust collection container using the compressed air valve
Fault in protection contactor	A fault has occurred in the mains contactor or soft starter.	Contact service department
Compressed air supply not available/insufficient	The compressed air supply is not sufficient or the compressed air maintenance unit is not correctly adjusted or the filter inserts are clogged	Check the compressed air supply and compressed air connections, required pressure 5–6 bar
Compressed air supply insufficient	Compressed air could not be provided at sufficient quantity or fast enough during filter cartridge cleaning	Check compressed air supply and compressed air connections
Error differential pressure sensor	The differential pressure sensor is defective or has wire breakage	Contact service department
Signal horn sounds	The set minimum extraction capacity has not been reached. Filter cartridges saturated	Filter replacement required/contact service
Product switches off	The negative pressure in the filter area is too high Emergency switch-off to protect against destruction of the filter cartridges The set minimum extraction capacity is greatly undercut.	Filter change required/contact service Trigger threshold 2800 Pa differential pressure at the filter cartridges

	Filter cartridges saturated	

Tab. 45: Troubleshooting

7.4 Emergency measures

In case of fire of the product or its detection elements, the following steps should be taken if necessary:

1. Disconnect the product from the mains! If present; pull out mains plug; set main switch to 0-position; disconnect supply fuses.
2. If present, disconnect the compressed air supply.
3. Fight fire with a commercially available dry powder extinguisher.
4. Notify local fire brigade if necessary.

⚠ WARNING

Do not open products with maintenance door. Flash flame formation!

In the event of a fire, do not touch the product under any circumstances without proper protective gloves. Risk of burns!

8 Disposal

⚠ WARNING

Skin contact with welding fumes, etc. can cause skin irritation in susceptible individuals.

Disassembly work on the product may only be carried out by trained and authorised personnel while complying with the safety rules and the applicable accident prevention regulations.

Serious injury to the lungs and respiratory tract is possible!

In order to avoid contact with and inhalation of dust particles, use protective clothing, gloves and a blower respirator system.

The release of hazardous dust particles must be avoided during dismantling work so that persons in the vicinity are not harmed.

⚠ CAUTION

All work on and with the product must comply with the legal obligations for waste avoidance and proper recycling/disposal.

8.1 Plastics

Plastics, if present, must be sorted as far as possible. Plastics must be disposed of in compliance with the legal requirements.

8.2 Metals

Metals, if present, must be separated and disposed of.
Disposal must be carried out by an authorised company.

8.3 Filter elements

Filter elements, if present, must be disposed of in compliance with the legal requirements.

9 Annex

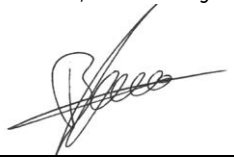
9.1 EC compliance statement

Designation:	Welding fume filter unit
Series:	WeldFil
Type:	**34110, 34130, 34160, 34180, 34200, 34220, 34240, 34270** (if necessary, different item numbers for other product variants)
Machine ID:	See name plate in front section of this operating manual
	This product is developed, designed and manufactured in accordance with EC directives 2006/42/EC – Machinery Directive
	The product continues to comply with the provisions of the 2014/53/EU - Radio Equipment Directive 2014/30/EU - Electromagnetic Compatibility Directive 2014/29/EU - Pressure Equipment Directive 2014/35/EU - Low Voltage Directive 2011/65/EU - RoHS Directive
	At the sole responsibility of
Company:	**KEMPER GmbH** Von-Siemens-Str. 20, D-48691 Vreden

The following harmonised standards are used:
EN ISO 12100:2010 Safety of machinery - General principles for design
EN ISO 13857:2019 Safety of machinery - Safety distances
EN ISO 13854:2019 Safety of machinery - Minimum gaps
EN ISO 21904-1:2020 Health and safety in welding and allied processes
EN ISO 4414:2010 fluid power - General rules and safety requirements for systems and their components
EN IEC 61000-6-2:2019 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments
EN IEC 61000-6-4:2019 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
EN 60204-1:2018 Safety of machinery - Electrical equipment of machines
EN ISO 13849-1:2015 Safety of machinery - Safety-related parts of control systems
ETSI EN 301 489-1 Electromagnetic Compatibility (EMC)
ETSI EN 301 489-52 Electromagnetic Compatibility (EMC)
ETSI EN 301 511 Global System for Mobile communications (GSM)
ETSI EN 301 908-2 IMT cellular networks

A complete list of standards, directives and specifications applied is available from the manufacturer. The operating manual belonging to the product is available.
Additional information:
If it is not used for as intended or the design is altered, the Declaration of Conformity expires, unless confirmed in writing by us as manufacturers.

Mr Marcel Kusche is authorised to compile the technical documentation. Kemper GmbH, Von-Siemens-Str. 20, 48691 Vreden, Germany



Vreden, 08.04.2024		CEO
Place, date	B. KEMPER	Identification of the signatory

9.2 UKCA Declaration of Conformity

Designation:	Welding fume filter unit
Series:	WeldFil
Type:	**34110, 34130, 34160, 34180, 34200, 34220, 34240, 34270** (possibly different article numbers for other product variants)
Machine ID:	See name plate in front section of this operating manual
	This product is developed, designed and manufactured in accordance with the UKCA directives Supply of Machinery (safety) Regulations 2008
	The product continues to comply with the provisions of the Radio Equipment Regulations 2017 Electromagnetic Compatibility Regulations 2016 Electrical Equipment (Safety) Regulations 2016 Pressure Equipment Regulations 2016
	At the sole responsibility of
Company:	**KEMPER GmbH** Von-Siemens-Str. 20, D-48691 Vreden

The following designated standards and technical specifications have been applied:

BS EN ISO 12100:2010 Safety of machinery - General principles for design
BS EN ISO 13857:2019 Safety of machinery - Safety distances
BS EN ISO 13854:2019 Safety of machinery
BS EN ISO 21904-1:2020 Health and safety in welding and allied processes
BS EN ISO 4414:2010 fluid power - General rules and safety requirements for systems and their components
BS EN IEC 61000-6-2:2019 Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments
BS EN IEC 61000-6-4:2019 Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments
BS EN 60204-1:2018 Safety of machinery - Electrical equipment of machines
BS EN ISO 13849-1:2016 Safety of machinery - Safety-related parts of control systems
ETSI EN 301 489-1 Electromagnetic Compatibility (EMC)
ETSI EN 301 489-52 Electromagnetic Compatibility (EMC)
ETSI EN 301 511 Global System for Mobile communications (GSM)
ETSI EN 301 908-2 IMT cellular networks
BS EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

A complete list of standards, directives and specifications applied is available from the manufacturer. The operating manual belonging to the product is available.
Additional information:
If it is not used for as intended or the design is altered, the Declaration of Conformity expires, unless confirmed in writing by us as manufacturers.

UK Authorised Representative (for authorities only): Mr. Marc Crawford
United Kingdom KEMPER (U.K.) Ltd.
Venture Court, 2 Debdale Road, Wellingborough, Northamptonshire NN8 5AA

Vreden, 08.04.2024 CEO

Place, date	B. Kemper	Identification of the signatory

9.3 Technical data 34110- 34130

Designation	Type	
Filter	34110	34130
Filter stages	1	
Filter method	Cleanable filter	
Cleaning method	Rotating nozzle	
Filter surface m² [ft²]	20 [215]	
Number of filter elements	7	9
Total filter surface m² [ft²]	140 [1507]	180 [1938]
Type of filter	Filter cartridge	
Filter material	ePTFE membrane	
Filter efficiency ≥ %	99.9	
Welding fumes class	W3	
Test standard	DIN EN ISO 21904-1+2	
Filter class/Dust classification	M	
Basic data		
Maximum fan capacity m³/h [CFM]	15000 [8828]	18000 [10593]
Extraction capacity m³/h [CFM]	7500-10800 [4414-6356]	9000-12960 [5297-7627]
Vacuum Pa [inch WC]	2600-1700 [10-7]	2250-1500 [9-6]
Minimum extraction capacity (triggering threshold for volume flow monitoring) m³/h [CFM]	6938 [4083]	8125 [4782]
Motor power kW [hp]	11.0 [14.75]	
Power supply/rated current/ protection type/ISO class	See name plate	
Permissible ambient temperature °C [°F]	-10 to +40 [+14 to +104]	
Duty cycle [%]	100	
Noise level dB(A)	65	
Compressed air supply bar [PSI]	5-6 [73–87]	
Compressed air consumption Nl/min [CFM]	307 [11]	
Compressed air class	2:4:2 ISO 8573-1	

Basic product dimensions	See dimension sheet	
Basic product weight kg [lbs]	1550 [3418]	1600 [3528]
Additional information		
Fan type	Radial fan, belt-driven	

Tab. 46: Technical data 34110.34130

9.4 Technical data 34160- 34180

Designation	**Type**	
Filter	34160	34180
Filter stages	1	
Filter method	Cleanable filter	
Cleaning method	Rotating nozzle	
Filter surface m² [ft²]	20 [215]	
Number of filter elements	11	12
Total filter surface m² [ft²]	220 [2368]	240 [2583]
Type of filter	Filter cartridge	
Filter material	ePTFE membrane	
Filter efficiency ≥ %	99.9	
Welding fumes class	W3	
Test standard	DIN EN ISO 21904-1+2	
Filter class/Dust classification	M	
Basic data		
Maximum fan capacity m³/h [CFM]	22000 [12947]	24000 [14124]
Extraction capacity m³/h [CFM]	11000-15840 [6474-9322]	12000-17280 [7062-10169]
Vacuum Pa [inch WC]	2330-1600 [9-6]	2550-1800 [10-7]
Minimum extraction capacity (triggering threshold for volume flow monitoring) m³/h [CFM]	10000 [5885]	11250 [6621]
Motor power kW [hp]	11 [14.75]	15 [20.12]
Power supply/rated current/ protection type/ISO class	See name plate	

Permissible ambient temperature °C [°F]	-10 to +40 [+14 to +104]	
Duty cycle [%]	100	
Noise level dB(A)	65	
Compressed air supply bar [PSI]	5-6 [73–87]	
Compressed air consumption Nl/min [CFM]	614 [22]	
Compressed air class	2:4:2 ISO 8573-1	
Basic product dimensions	See dimension sheet	
Basic product weight kg [lbs]	2280 [5027]	2300 [5071]
Additional information		
Fan type	Radial fan, belt-driven	

Tab. 47: Technical data 34160.34180

9.5 Technical data 34200- 34220

Designation	**Type**	
Filter	34200	34220
Filter stages	1	
Filter method	Cleanable filter	
Cleaning method	Rotating nozzle	
Filter surface m²[ft²]	20 [215]	
Number of filter elements	13	15
Total filter surface m² [ft²]	260 [2799]	300 [3229]
Type of filter	Filter cartridge	
Filter material	ePTFE membrane	
Filter efficiency ≥ %	99.9	
Welding fumes class	W3	
Test standard	DIN EN ISO 21904-1+2	
Filter class/Dust classification	M	
Basic data		
Maximum fan capacity m³/h [CFM]	27000 [15890]	30000 [17655]
Extraction capacity m³/h [CFM]	13500-19440 [7945-11440]	15000-21600 [8828-12712]

Vacuum Pa [inch WC]	2250-1600 [9-6]	2550-1800 [10-7]
Minimum extraction capacity (triggering threshold for volume flow monitoring) m^3/h [CFM]	12500 [7356]	13750 [8092]
Motor power kW [hp]	15.0 [20.12]	18.5 [24.81]
Power supply/rated current/ protection type/ISO class	See name plate	
Permissible ambient temperature °C [°F]	-10 to +40 [+14 to +104]	
Duty cycle [%]	100	
Noise level dB(A)	65	
Compressed air supply bar [PSI]	5-6 [73–87]	
Compressed air consumption Nl/min [CFM]	614 [22]	
Compressed air class	2:4:2 ISO 8573-1	
Basic product dimensions	See dimension sheet	
Basic product weight kg [lbs]	2330 [5137]	2360 [5203]
Additional information		
Fan type	Radial fan, belt-driven	

Tab. 48: Technical data 34200.34220

9.6 Technical data 34240- 34270

Designation	**Type**	
Filter	34240	34270
Filter stages	1	
Filter method	Cleanable filter	
Cleaning method	Rotating nozzle	
Filter surface m^2 [ft^2]	20 [215]	
Number of filter elements	16	18
Total filter surface m^2 [ft^2]	320 [3444]	360 [3875]
Type of filter	Filter cartridge	
Filter material	ePTFE membrane	
Filter efficiency ≥ %	99.9	

Welding fumes class	W3	
Test standard	DIN EN ISO 21904-1+2	
Filter class/Dust classification	M	
Basic data		
Maximum fan capacity m³/h [CFM]	33000 [19421]	37000 [21775]
Extraction capacity m³/h [CFM]	16500-23760 [9710-13983]	18500-26640 [10887-15678]
Vacuum Pa [inch WC]	2250-1800 [9-7]	2550-1800 [10-7]
Minimum extraction capacity (triggering threshold for volume flow monitoring) m³/h [CFM]	15000 [8828]	16875 [9931]
Motor power kW [hp]	18.5 [24.81]	22.0 [29.50]
Power supply/rated current/ protection type/ISO class	See name plate	
Permissible ambient temperature °C [°F]	-10 to +40 [+14 to +104]	
Duty cycle [%]	100	
Noise level dB(A)	65	
Compressed air supply bar [PSI]	5-6 [73–87]	
Compressed air consumption Nl/min [CFM]	614 [22]	
Compressed air class	2:4:2 ISO 8573-1	
Basic product dimensions	See dimension sheet	
Basic product weight kg [lbs]	2400 [5292]	2420 [5336]
Additional information		
Fan type	Radial fan, belt-driven	

Tab. 49: Technical data 34240.34270

9.7 Dimension sheets

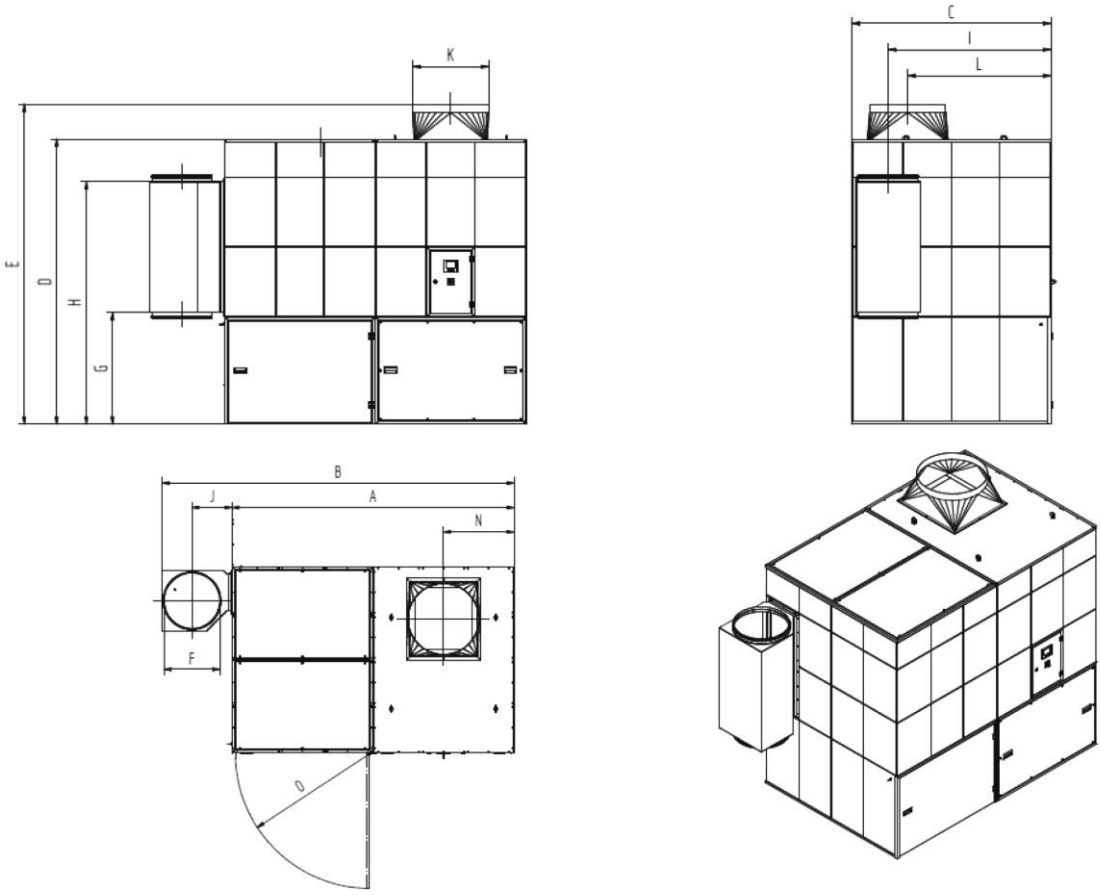


Fig. 75: Dimension sheet 34110

Symbol	Dimensions mm [in]	Symbol	Dimensions mm [in]
A	2826 [111.3]	I	1524 [60.0]
B	3526 [138.8]	J	400 [15.87]
C	1864 [73.4]	K	560 [22.0]
D	2670 [105.1]	L	1341 [52.8]
E	3020 [118.9]	N	707 [27.8]
F	560 [22.1]	O	1347 [53.0]
G	1047 [41.2]		
H	2271 [89.4]		

Tab. 50: Dimension table 34110

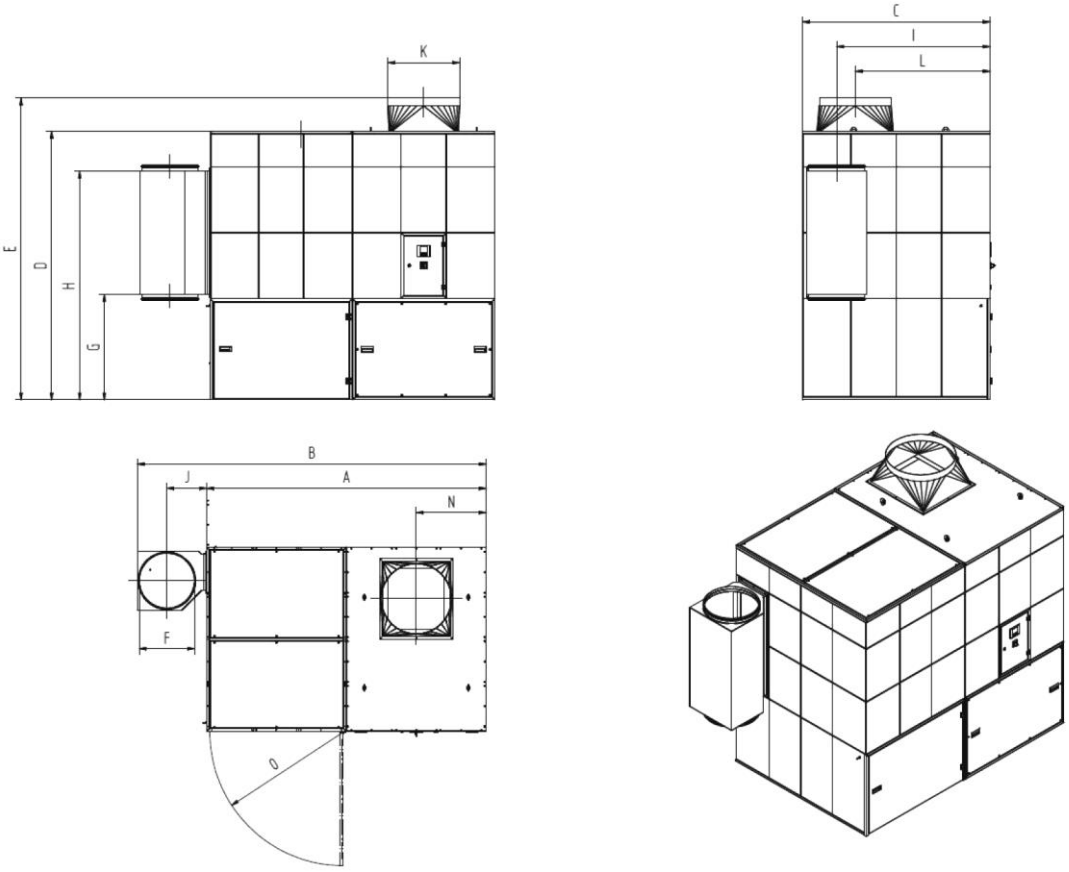


Fig. 76: Dimension sheet 34130

Symbol	Dimensions mm [in]	Symbol	Dimensions mm [in]
A	2826 [111.3]	I	1524 [60.0]
B	3526 [138.8]	J	400 [15.8]
C	1864 [73.4]	K	710 [28.0]
D	2670 [105.1]	L	1341 [52.8]
E	3020 [118.9]	N	707 [27.8]
F	560 [22.1]	O	1347 [53.0]
G	1047 [41.2]		
H	2271 [89.4]		

Tab. 51: Dimension table 34130

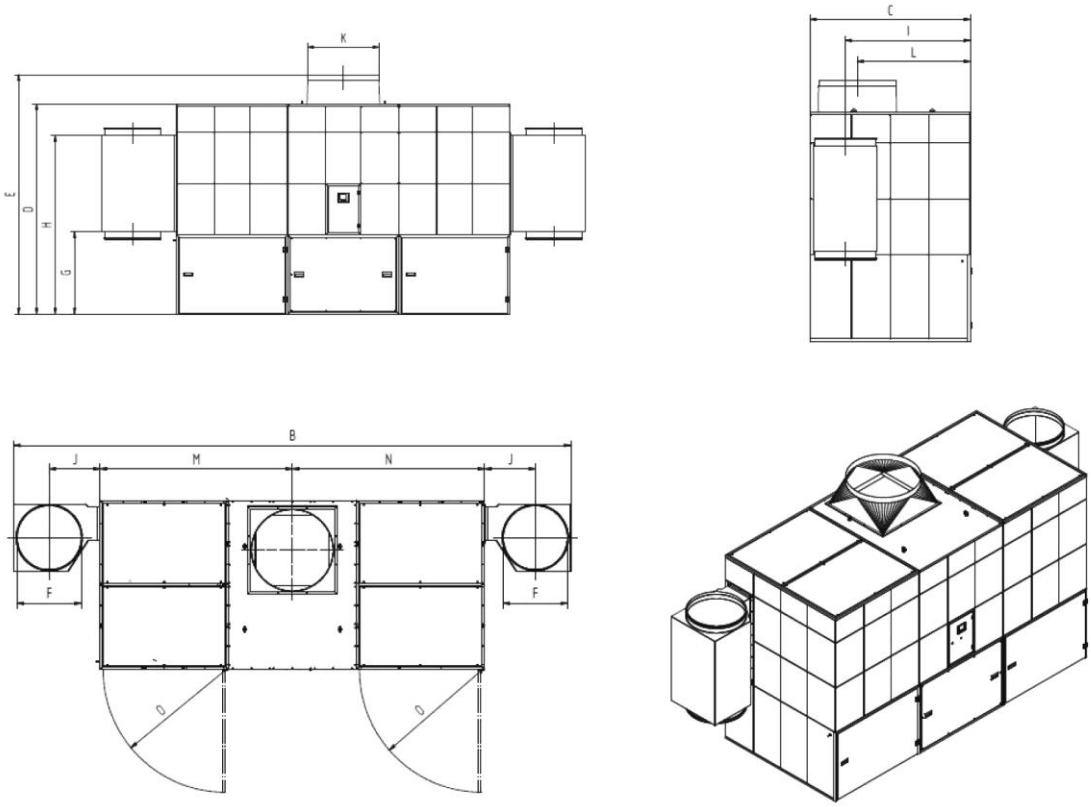


Fig. 77: Dimension sheet 34160

Symbol	Dimensions mm [in]	Symbol	Dimensions mm [in]
A		I	1524 [60.0]
B	5639 [222.0]	J	400 [15.8]
C	1864 [73.4]	K	710 [28.0]
D	2670 [105.1]	L	1341 [52.8]
E	3020 [118.9]	M	2119.5 [83.4]
F	560 [22.1]	N	2119.5 [83.4]
G	1047 [41.2]	O	1347 [53.0]
H	2271 [89.4]		

Tab. 52: Dimension table 34160

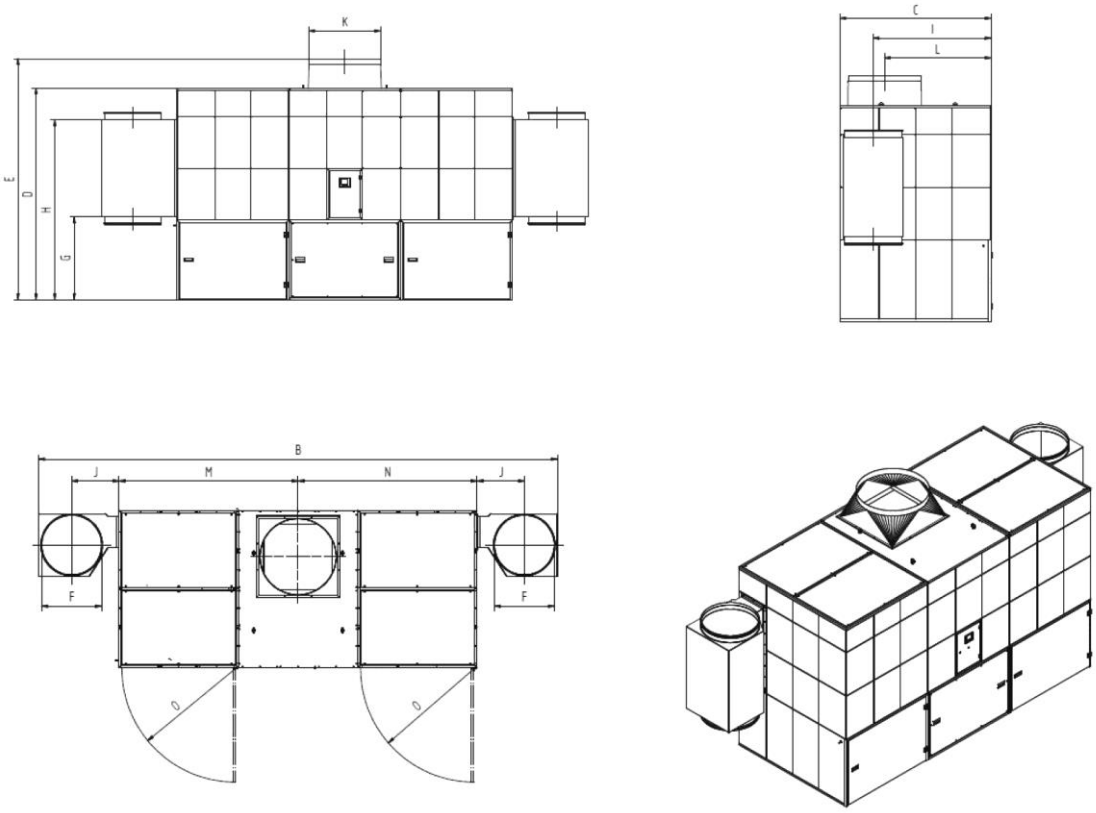


Fig. 78: Dimension sheet 34180

Symbol	Dimensions mm [in]	Symbol	Dimensions mm [in]
A		I	1524 [60.0]
B	5639 [222.0]	J	400 [15.8]
C	1864 [73.4]	K	710 [28.0]
D	2670 [105.1]	L	1341 [52.8]
E	3070 [120.9]	M	2119.5 [83.4]
F	560 [22.1]	N	2119.5 [83.4]
G	1047 [41.2]	O	1347 [53.0]
H	2271 [89.4]		

Tab. 53: Dimension table 34180

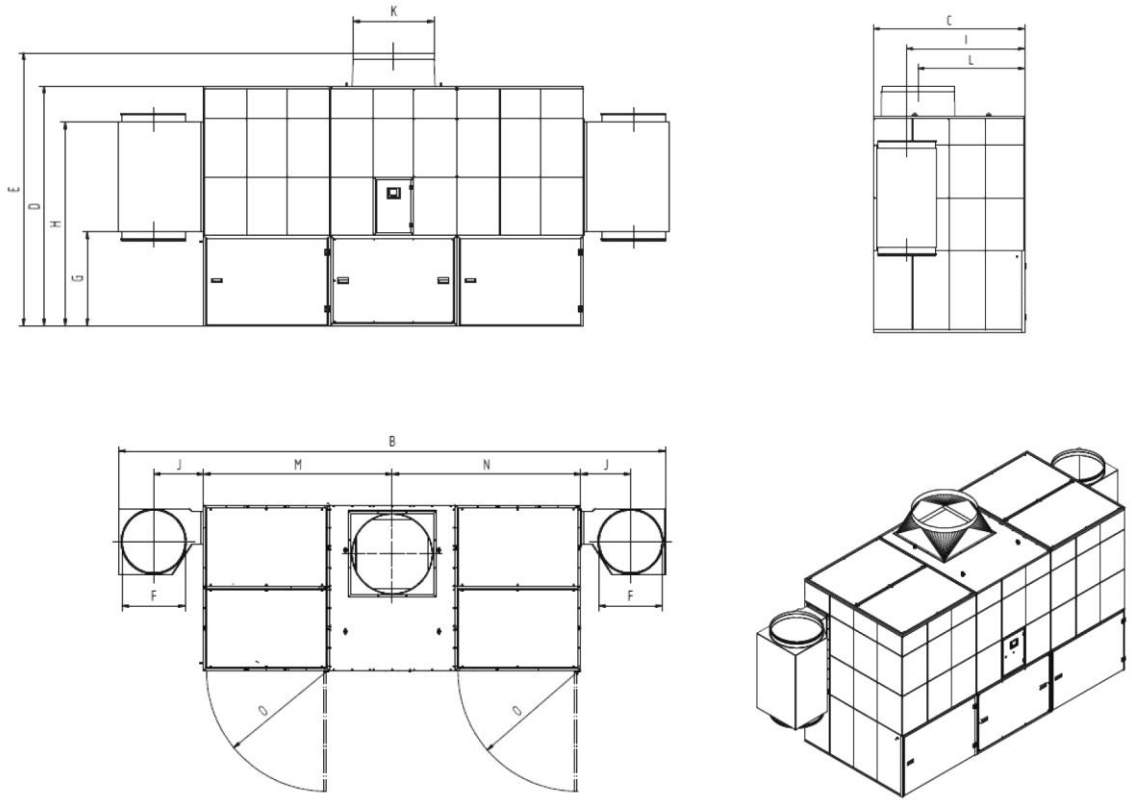


Fig. 79: Dimension sheets 34200 + 34220

Symbol	Dimensions mm [in]	Symbol	Dimensions mm [in]
A		I	1524 [60.0]
B	5639 [222.0]	J	400 [15.8]
C	1864 [73.4]	K	800 [31.5]
D	2670 [105.1]	L	1341 [52.8]
E	3070 [120.9]	M	2119.5 [83.5]
F	560 [22.1]	N	2119.5 [83.4]
G	1047 [41.2]	O	1347 [53.0]
H	2271 [89.4]		

Tab. 54: Dimension tables 34200 + 34220

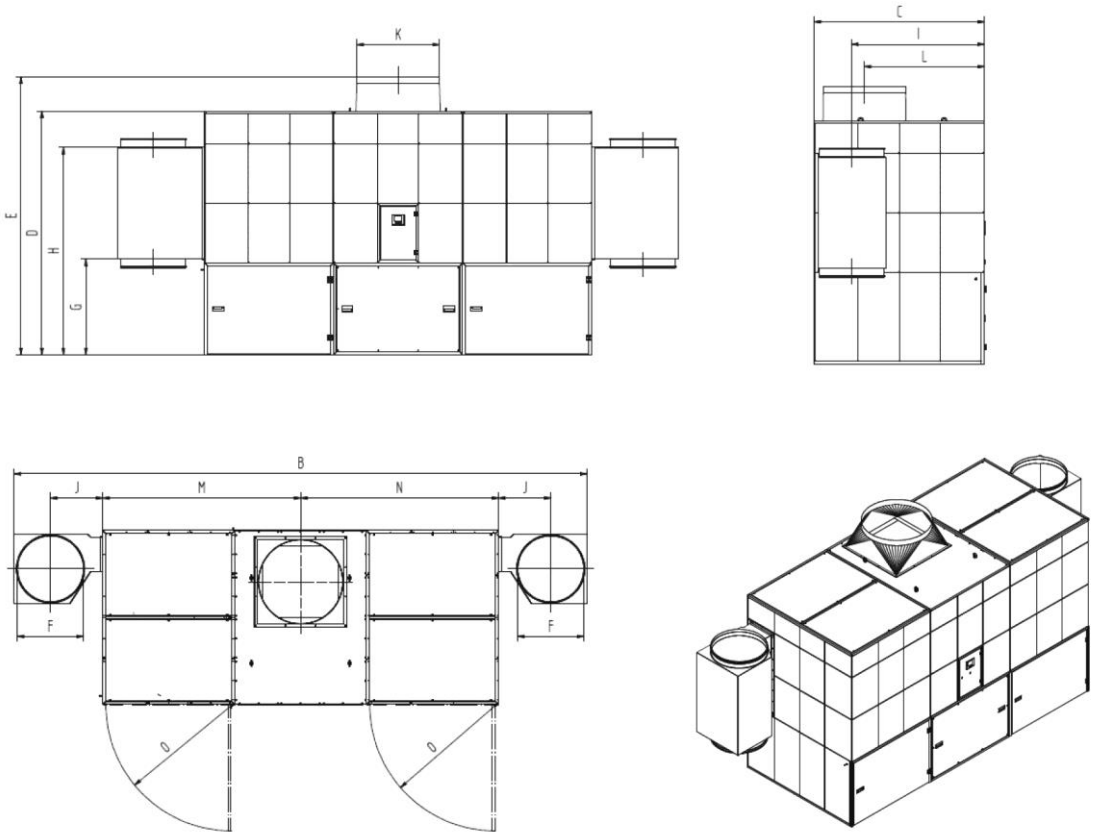


Fig. 80: Dimension sheets 34240 + 34270

Symbol	Dimensions mm [in]	Symbol	Dimensions mm [in]
A		I	1453 [57.2]
B	6139 [241.7]	J	560 [22.1]
C	1864 [73.4]	K	900 [35.4]
D	2670 [105.1]	L	1341 [52.8]
E	3070 [120.8]	M	2119.5 [83.4]
F	710 [28.0]	N	2119.5 [83.4]
G	1047 [41.2]	O	1347 [53.0]
H	2271 [89.4]		

Tab. 55: Dimension tables 34240 + 34270

9.8 Spare parts and accessories

Consec. no.	Description	Note	Item no.
1	Disposal bag (10 pcs.)		1190139
2	Lubricating grease cartridge		1610086
3	ePTFE filter cartridge 20 m² incl. sealing ring		1090447
4	Safety filter dust collection container		1090553
5	Extraction capacity regulation filter mat (5 pcs.)	Only if extraction capacity regulation present	1560024

Tab. 56: Spare parts and accessories

Deutschland (HQ)
KEMPER GmbH
Von-Siemens-Str. 20
D-48691 Vreden
Tel. +49 2564 68-0
Fax +49 2564 68-120
mail@kemper.eu
www.kemper.eu

United Kingdom
KEMPER (U.K.) Ltd.
Venture Court
2 Debdale Road
Wellingborough
Northamptonshire NN8 5AA
Tel. +44 1327 872 909
Fax +44 1327 872 181
mail@kemper.co.uk
www.kemper.co.uk

France
KEMPER sàrl
7 Avenue de l'Europe
F-67300 Schiltigheim
Si vous appellez de France
Tél. +33 800 91 18 32
Fax +33 800 91 90 89
De Belgique ou de l'étranger
Tél. +492564 68-135
Fax +492564 68-40135
mail@kemper.fr
www.kemper.fr

China
KEMPER China
Floor 2, Building 6
No. 500 Huapu Road
Shanghai 201799
P.R. of China
Tel. +86 (21) 5924-0978
Fax +86 1852-1069-401
info@kemper-china.com.cn
www.kemper.cn.com

Česká Republika
KEMPER spol. s r.o.
Pyšelská 393
CZ-257 21 Poříčí nad Sázavou
Tel. +420 317 798-000
Fax +420 317 798-888
mail@kemper.cz
www.kemper.cz

United States
KEMPER America, Inc.
2460 Industrial Park BLVD.
Cumming, GA 30041
Tel. +1 770 416 7070
Fax +1 770 828 0643
info@kemperamerica.com
www.kemperamerica.com

Nederland
KEMPER B.V.
Demmersweg 92
Begane grond
7556 BN Hengelo
Tel. +492564 68-137
Fax +492564 68-120
mail@kemper.eu
www.kemper.eu

España
KEMPER IBÉRICA, S.L.
Avda Diagonal, 421 3°
E-08008 Barcelona
Tel. +34 902 109-454
Fax +34 902 109-456
mail@kemper.es
www.kemper.es

India
KEMPER India
55, Ground Floor, MP Mall
MP Block, Pitam Pura
New Delhi -110034
Tel. +91.11.42651472
mail@kemper-india.com
www.kemper-india.com

Polska
Kemper Sp. z o.o.
ul. Grzybowska 87
00-844 Warszawa
Tel. +48 22 5310 681
Faks +48 22 5310 682
info@kemper.pl
www.kemper.pl