

TAC 1500 / TAC 3000

EN

OPERATING MANUAL
AIR CLEANER

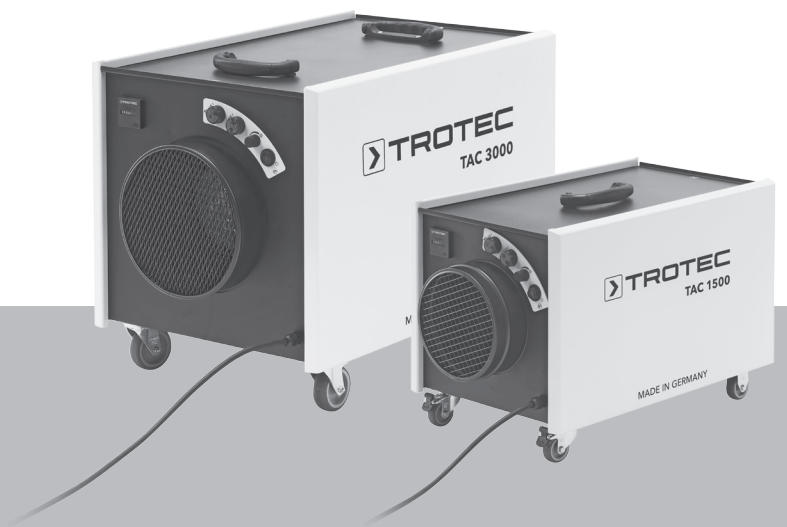


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Notes regarding the operating manual

Symbols

**Danger!**

Warns of a hazard which can lead to injuries.

**Hazardous electric voltage!**

Warns of a hazard resulting from electric voltage which can lead to injuries.

**Caution!**

Warns of a hazard which can lead to damage to property.

The current version of the operating manual can be found at:
www.trotec.de

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Information about the device

Description of the device

Air cleaners are used to clean the room air. On building sites and renovation areas high concentrations of dust can arise, for instance when using angle grinders or during blasting, chiselling or demolition operations as well as when mixing dry mortar or tile cement. The air cleaners of the TAC series serve to eliminate various dusts, e.g. from asbestos, building rubble, quartz, flour, wood, etc., but also mould spores, paint particles and mineral fibres in the air, possibly arising during the above-mentioned operations.

A TAC air cleaner is fundamentally made up of the following components:

- housing
- adjustable fan for air transport
- filter boxes for the integration of filter technology

The air cleaners of the TAC series can be equipped with various filters. The filters are inserted in filter boxes, which are then slid into the housing. Within the device housing the filter boxes can then be flexibly arranged according to the respective application.

Device depiction

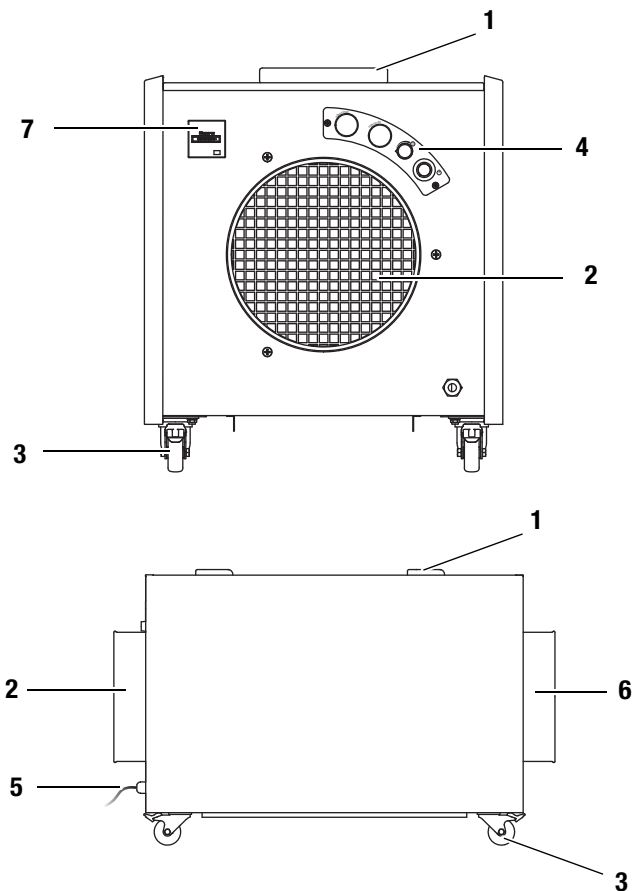


Fig. 1 Front and side view

No.	Operating element
1	carrying handle
2	air outlet
3	feet (TAC 1500) or rollers (TAC 3000)
4	control panel
5	power cable
6	air inlet
7	operating hours counter

Safety

Carefully read the operating manual before using the device and keep it within reach!

- Do not use the device in potentially explosive rooms.
- Do not use the device in atmospheres containing oil, sulphur, chlorine or salt.
- Set the device in an upright and stable position.
- Ensure that air inlet and air outlet are not obstructed.
- Never insert objects into the device.
- Do not cover or transport the device during operation.
- Ensure that all electric cables outside of the device are protected from damage (e.g. from animals).
- Only use extensions to the connecting cable which are appropriate to the device power consumption, the length of its cable and its use. Avoid electrical overload.
- Dispose of replaced filters properly.
- Do not remove any safety signs, stickers or labels from the device. Keep all safety signs, stickers and labels in legible condition.
- Observe the storage and operating conditions (see chapter Technical data).

Intended use

Only use the device to clean atmospheric air whilst adhering to the technical data.

Improper use

Do not place the device on damp or flooded ground. Any unauthorised changes, modifications or alterations of the device are forbidden.

Personnel qualifications

People who use this device must:

- be aware of the dangers that occur when working with electric devices.
- have read and understood the operating manual, especially the Safety chapter.

Residual risks



Hazardous electric voltage!

Work on the electrical components must only be carried out by an authorised specialist company!



Hazardous electric voltage!

Before any work on the device, remove the mains plug from the mains socket!



Danger!

Do not leave the packaging lying around. Children may use it as a dangerous toy.



Danger!

Dangers can occur at the device when it is used by untrained people in an unprofessional or improper way. Observe the personnel qualifications.



Caution!

To avoid damages to the device, never operate the device without a filter inserted!

Transport and storage

Transport

To make the device easier to transport, it is fitted with wheel.

Before transporting the device, proceed as follows:

1. Switch off the device.
2. Remove the mains plug from the mains socket. Do not use the power cable to drag the device!

Storage

When the device is not being used, observe the following storage conditions:

- dry,
- protected from dust and direct sunlight,
- with a plastic cover to protect it from invasive dust, if necessary.

Configuration

The TAC series comes with Vario-shift function. This means that the filter elements can be variably arranged for all application scenarios and in line with the regulations.

Cleanroom filtration

The operational requirements of cleanroom filtration include the provision of having a HEPA filter as the last element in the filter ladder. It must be positioned upstream of fan and pre-filters (coarse and fine particulate air filter).

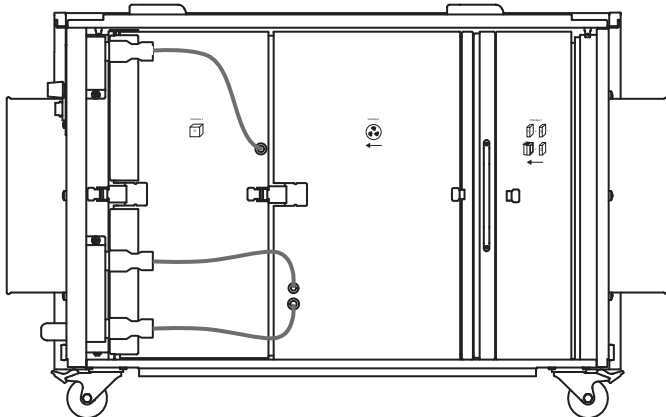


Fig. 2 Cleanroom arrangement – wiring

- For proper monitoring of the filter technology, the pressure sensor hoses must be connected as indicated in the figure below:

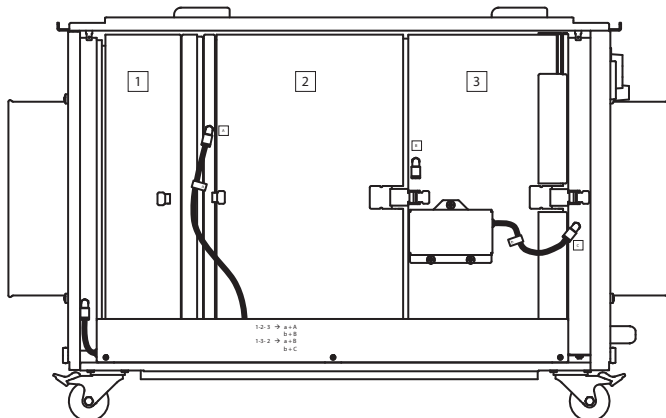


Fig. 3 Connection diagram of pressure sensor hoses in the cleanroom arrangement

Standard arrangement

Here, the motor is positioned as the last element in the filter ladder. This ensures that only pure, filtered air is fed through the fan. This way, the device can be configured for the next application site without any residues.

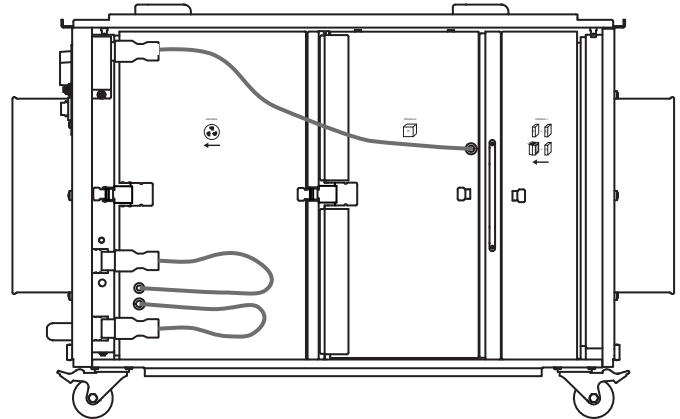


Fig. 4 Standard arrangement – wiring

- For proper monitoring of the filter technology, the pressure sensor hoses must be connected as indicated in the figure below:

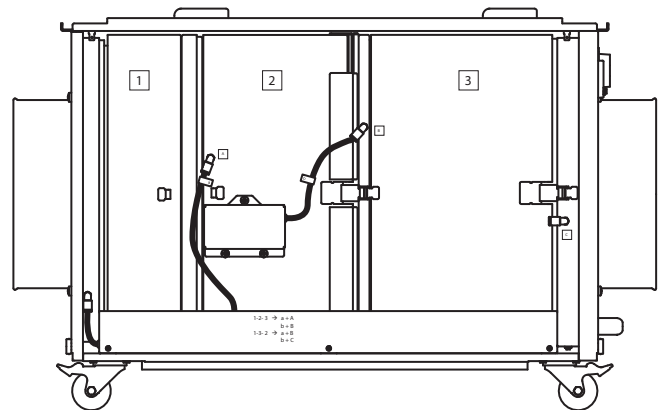


Fig. 5 Connection diagram of pressure sensor hoses in the standard arrangement

Bag filter arrangement

Instead of cassette filters it is also possible to use a bag filter in the device. In that event, the box for the HEPA filter is to be linked to the pre-filter box. Thus, there is enough space for the filter to spread its dust collection bags. For this purpose the HEPA filter box has to be turned.

The bag filter is slimmer than a cassette filter. To be able to insert the bag filter (3), the insert frame (2), which is to be inserted in the pre-filter box, has to be turned over.

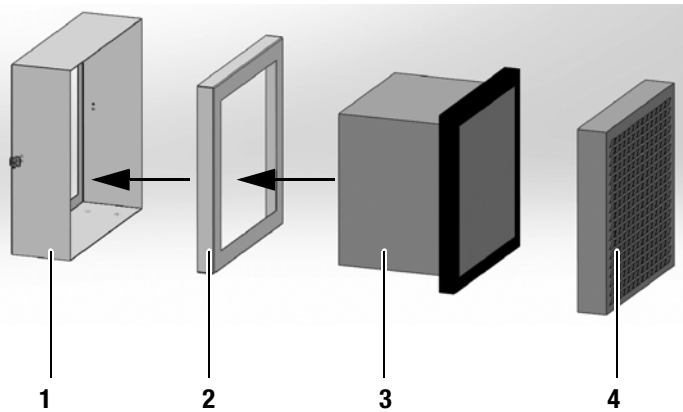


Fig. 6 a) Arrangement in the pre-filter box

No.	Designation
1	Pre-filter box
2	Insert frame
3	Bag filter
4	Pre-filter

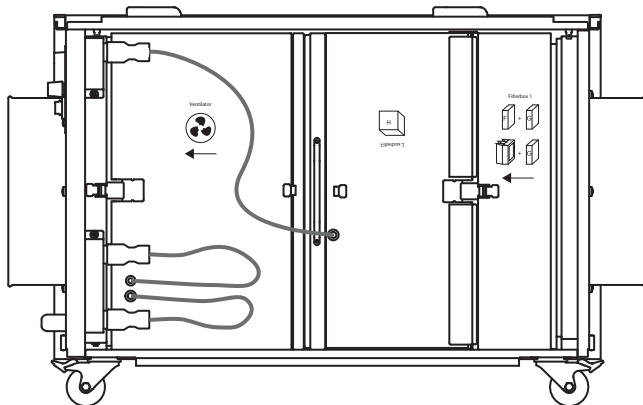


Fig. 6 b) Bag filter arrangement – wiring

- For proper monitoring of the filter technology, the pressure sensor hoses must be connected as indicated in the figure below.

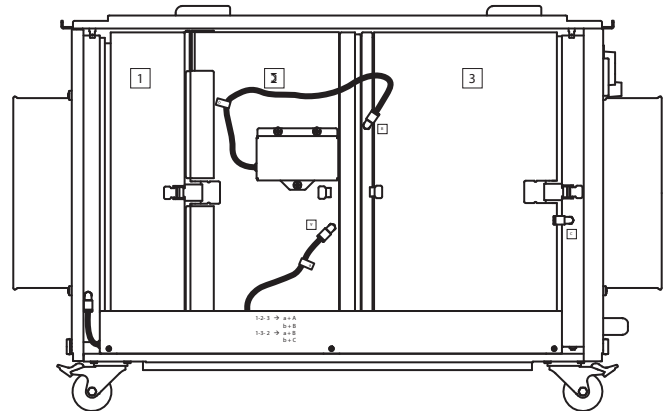


Fig. 7 Connection diagram of pressure sensor hoses in the bag filter arrangement

Inserting and connecting the filter boxes

When the filters are inserted in the dedicated box, the box can be inserted in the housing. Make sure

- that the filter box does not get jammed when inserting it.
- to insert the box the right way round.
- to connect the electrical plugs of the filter boxes.
- to connect the pressure sensor hoses correctly.

Operation

- When putting up the device, position it in the room's centre the air of which is to be cleaned. Alternatively, you can also position the device near the source of air contamination.
- Prior to operation you have to ensure that the filters have been installed in the device as desired.
- Also check, whether the pressure sensors are connected correctly. If the device, during operation, emits a warning of a filter being spent, the respective filter has to be replaced.
- Put the device up in a level, upright and stable position.
- Do not create tripping hazards when laying the power cable or other electrical cables.
- Ensure that extension cords are completely unrolled.

Installation of the device in the room, the air of which is to be purified

- The device works in recirculation mode, this means that the contaminated air enters the air cleaner via the air inlet and is blown out through the air outlet in purified state.

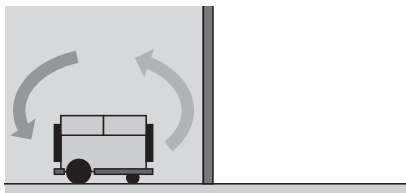


Fig. 8 Air purification in sealed off area via air circulation

Installation of the device outside of the room, the air of which is to be purified

The device can be connected in either recirculation or ventilation mode.

- In recirculation mode, the air to be cleaned is led via a hose from the room into the air inlet of the device. The purified air is fed through another hose from the air outlet and back into the room.
- In ventilation mode, the air to be cleaned is led via a hose from the room into the air inlet of the device. This creates a slight negative pressure in the room. Clean, fresh air flows in from outside.



Fig. 9 Installation variants for maintaining the pressure

When connecting pipes or hoses, the following is to be observed:

- The used pipes and hoses must be designed for the available static compression of the fans. They should preferably be laid in a straight line and at full length. 7.6 m of air hose each can be connected to both the TAC 1500's air inlet and outlet.
- To prevent an immediate neutralization of the air flows, air inlet and air outlet should be positioned at a distance of at least 1 m from one another.

Control panel

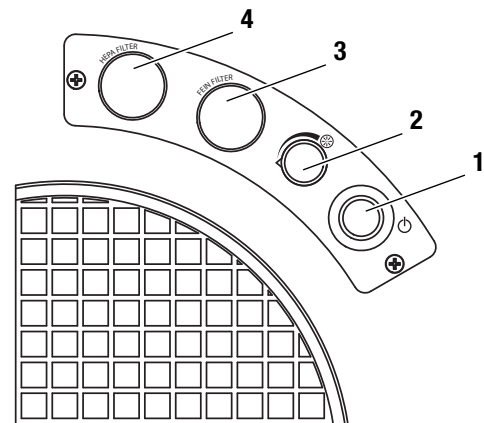


Fig. 10 Control panel

No.	Designation
1	mains switch
2	fan speed controller
3	filter indication pre-filter (coarse particulate air filter G4 & fine particulate air filter F7)
4	filter indication high-efficiency particulate air filter (HEPA H13)

Switch-on

- Switch the device on by actuating the mains switch (1). Ensure that air inlet and outlet are not covered. The integrated indicator light lights up.

Switch-off

- Switch the device off by actuating the mains switch (1). The integrated indicator light goes off.

Adjusting the air volume

- By use of the speed controller (2) you can adjust the fan speed and thus regulate the air flow rate of the device. Turn the button to the right to increase the air flow rate and to the left for reducing it.
- With the filter arrangement G4, F7 and H13 to meet the requirements of dust class H, the TAC 1500 with connected exhaust air hose (7.6 m, laid in 2 90° arcs) reaches an air flow rate of 600 m³/h (TAC 3000 = 1150 m³/h). When the device warns of a spent pre-filter and/or HEPA filter, still a flow rate of 500 m³/h (TAC 3000 = 1000 m³/h) is ensured. When that happens, replace the filters as soon as possible.

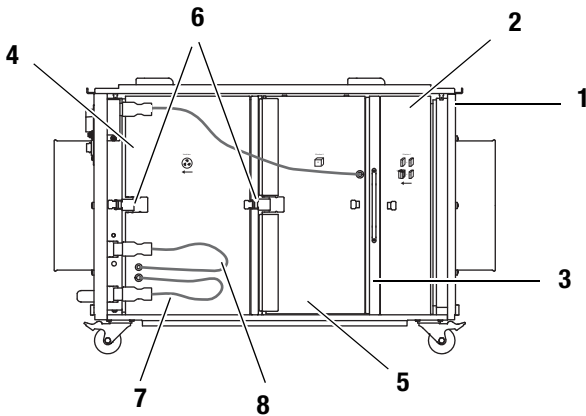


Fig. 11 Side view 1 of the TAC without side panel

No.	Designation
1	housing
2	pre-filter box
3	tensioning frame
4	fan casing
5	HEPA filter box
6	spring tension element
7	electrical connection plug fan
8	electrical connection plug fan control
9	electrical connection plug HEPA filter box

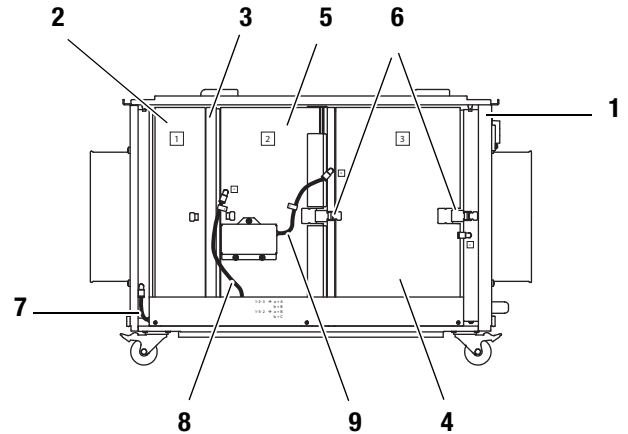


Fig. 12 Side view 2 of TAC 3000 without side panel

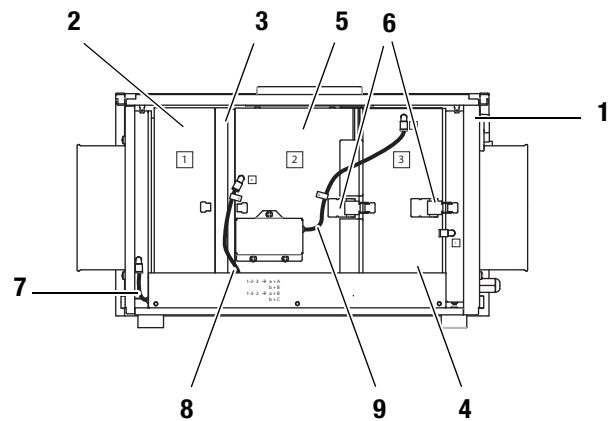


Fig. 13 Side view 2 of TAC 1500 without side panel

No.	Designation
1	housing
2	pre-filter box
3	tensioning frame
4	fan casing
5	HEPA filter box
6	spring tension element
7	pressure sensor hose air inlet (fixed)
8	pressure sensor hose pre-filter
9	pressure sensor hose HEPA filter

Shutdown

1. Switch off the device.
2. Remove the mains plug from the mains socket.
3. Clean the device according to chapter Maintenance.
4. Store the device according to chapter Storage.

Errors and faults

The accurate functionality of the device was tested during production a number of times. However, if functionality faults do occur, then check the device according to the following list.

The device does not start:

- Check the power connection (230 V/1~/50 Hz).
- Check the mains plug for damages.

Never try to make any modifications or repairs on the device. Have a certified specialist workshop perform the repair work. In case of a technical problem please try to rule out handling or application errors before contacting our customer service. For further questions regarding the function and operation of the air cleaner as well as for more information in the case of an error or else for warranty issues we are of course always happy to be of service.

Your device still does not operate correctly after these checks?

Bring the device to a specialist company or to TROTEC® for repairs.

Maintenance

Activities required before starting maintenance

- Do not touch the mains plug with wet or damp hands.
- Before any work, detach the mains plug!



Maintenance tasks which require the housing to be opened must only be carried out by a specialist company or by TROTEC®.



Filter change coarse and fine particulate air filter

1. Switch the device off.
2. Remove side panel 1. Watch out for the earth cable in doing so. It may be necessary to remove the earth cable from the side panels.

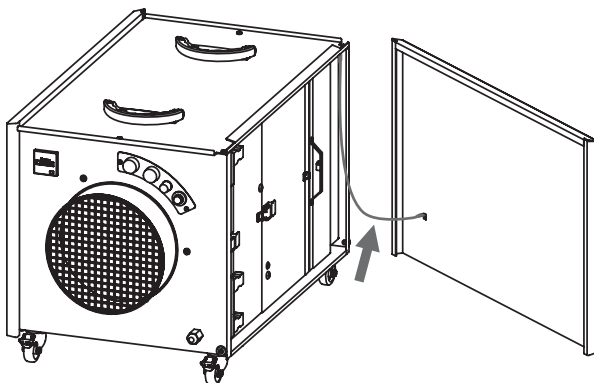


Fig. 14 Earth cable of the side panel

3. Pull the tensioning frame out of the housing.
4. Pull the pre-filter box out of the housing.
5. Remove the coarse particulate air filter (G4).
6. Remove the fine particulate air filter (F7).
7. Check the filters. Check whether both filters are dirty or only the coarse particulate air filter.
8. Replace dirty filters. Insert the new filter in the filter box. An arrow denotes the direction of the air current. Make sure to insert the filters correctly. For optimum performance the filter pleats should be in a vertical position.

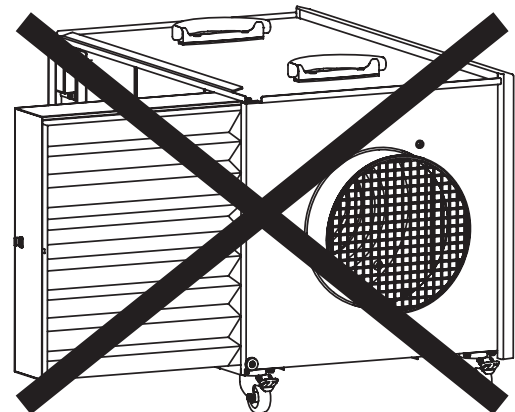
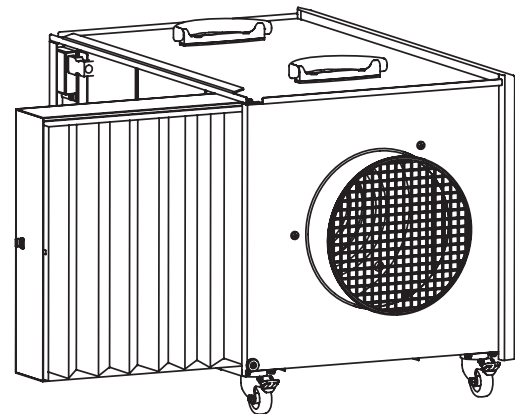


Fig. 15 Filter insertion (top: correct, below: incorrect)

9. Push the tensioning frame back in between the pre-filter box and the fan housing.
10. Mount the side panel. Make sure that the side panels are grounded.

Filter change high-efficiency particulate air filter (HEPA H13)

1. Remove both side panels. Watch out for the earth cable in doing so. It may be necessary to remove the earth cable from the side panels.
2. Pull the tensioning frame out of the housing.
3. Detach the spring tension elements at the fan housing and the HEPA filter box from both sides. On the other side, remove the pressure sensor hoses from fan housing and HEPA filter box.
4. Pull the HEPA filter box out of the housing. Remove the cover and then the HEPA filter.
5. Check the filter. Replace it, if required, and insert the new filter in the filter box. Put the cover back on and push the filter box into the housing.
6. Hook the spring tension elements back in and connect the pressure sensor hoses as required (connection diagram see Configuration on page 4).
7. Push the tensioning frame back in between the pre-filter box and the fan housing.
8. Mount the side panels. Make sure that the side panels are grounded.

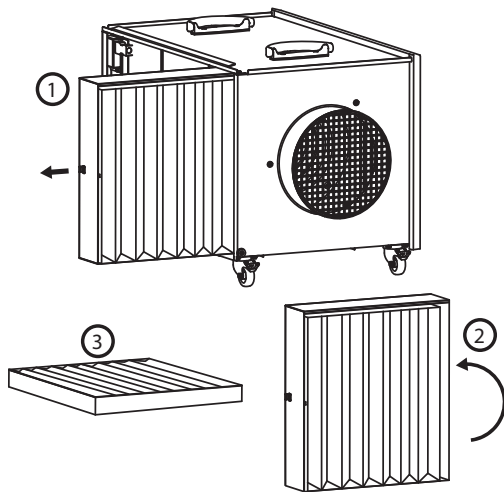


Fig. 16 Removing the filter

When the device warns of a spent pre-filter and/or HEPA filter, still a flow rate of 500 m³/h is ensured. For an effective filtration of pollutants the scheduled directives of the (German) employer's liability insurance association recommend to exchange the filter.

Cleaning the housing and filterboxes



Caution!

Do not use a high-pressure cleaner.

- The housing and filterboxes may be cleaned with a warm jet of water and a mild cleaning agent.
- The fan box ought to be wiped down on the outside using a damp cloth and carefully rinsed on the inside with a jet of warm water.

Disposal



In the European Union, electronic equipment must not be treated as domestic waste, but must be disposed of professionally in accordance with Directive 2002/96/EC of the European Parliament and Council of 27th January 2003 concerning old electrical and electronic equipment. At the end of its life, please dispose of this instrument in a manner appropriate to the relevant legal requirements.

Declaration of conformity



EC Declaration of Conformity in accordance with EC Machinery Directive 2006/42/EC

TROTEC® GmbH & Co. KG
Grebbener Straße 7
D-52525 Heinsberg

herewith declares, that due to its design and construction, and in the version introduced by us, the following machinery conforms with the relevant fundamental requirements of the listed EC directives.

Important note:

In case of improper use, installation, maintenance etc. or unauthorized changes of the factory-supplied device version, this declaration loses its legal validity.

Device version:	Air Cleaner
Series:	TAC
Year of manufacture:	as of April 2014
Applicable regulations:	2006/42/EC Machinery Directive 2004/108/EC EMC Directive

Applied harmonised standards:	EN 12100:2010 EN 60204-1 EN 60335-1 EN 60335-2-40:2003 + A11:2004 + A12:2005 + A1:2006 EN 55011:2009 + A1:2010 EN 61000-3-2:2006 + A1:2009 + A2:2009 EN 61000-3-3:2008
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Producer and authorised representative of the technical documentation:
Trotec GmbH & Co. KG · Grebbener Straße 7 · D-52525 Heinsberg
Phone: +49 2452 962-400 · Fax: +49 2452 962-200 · E-mail: info@trotec.com

Heinsberg, 31 March 2014


Managing Director: Detlef von der Lieck

Technical data

Parameter	Value	
Model	TAC 1500	TAC 3000
Article number	1.580.000.105	1.580.000.115
Recommended air volume for dust class H (m ³ /h)	500	1000
Dust class (as per DIN EN 60335-2-69)	Dust class H (transmittance ≤ 0.005%) for substances with a maximum allowable concentration of ≤ 0.1 mg/m ³ , carcinogenic hazardous substances as per GefStoffV § 11 (Ordinance on Hazardous Substances), TRGS 905 or 906 (Technical Rules for Hazardous Substances), approvable for asbestos abatement as per TRGS 519	
Infinite adjustment of air volume	yes	yes
Filter change indication, visual and acoustic	yes	yes
Vario-shift function for the variable configuration of use with terminal fan or HEPA filter	yes	yes
Motor power	175 W	450 W
Input voltage	230 V / 50-60 Hz	230 V / 50-60 Hz
Current consumption	1.4 A	2.8 A
Electrical connection	Safety plug (CEE 7/7)	
Connecting cable	Rubber conduits (H05RN-F), length 3 m	
Air transport hose (blow-out and suction side)	200	250
Sound level (distance 1 m)	61 dBA	65 dBA
Dimensions (L x W x H)	705 mm x 362 mm x 377 mm	833 mm x 460 mm x 519 mm
Weight (full)	22 kg	36 kg
Mobility: portable / wheeled / stackable	yes / yes / yes	yes / yes / yes

Recommendation for filter combinations specific to the application and corresponding room size suitability		TAC 1500		TAC 3000	
		suitable for rooms sized up to ¹⁾			
Fields of application	Filter combination	m ³	m ³	m ³	m ³
Coarse dust ²⁾ (≤ 3 LW/h ⁶⁾)	G4	220	75	500	170
Fine particulates ³⁾ (≤ 3 LW/h ⁶⁾)	G4 + F7 to F9	110	37	270	90
Suspended matter ⁴⁾ (≥ 10 LW/h ⁶⁾)	G4 + H13	50	17	100	34
Hygienic areas ⁵⁾ (≥ 15 LW/h ⁶⁾)	G4 + H13	35	12	70	23

¹⁾ With an assumed room height of 3 m; ²⁾ Typical coarse dust tasks: sawing, filing; ³⁾ Typical fine dust tasks: restoration works with materials containing minerals or glass wool; ⁴⁾ Typical suspended matter tasks: grinding, asbestos abatement or mould remediation, mineral dusts etc.; ⁵⁾ H13 downstream; ⁶⁾ Air exchange per hour

Optional equipment	TAC 1500	TAC 3000
Guiding wheels with pneumatic tyres, traceless	upon request	upon request
Trestle rollers (instead of guiding wheels)	upon request	upon request
Fork pockets for fork lifts	upon request	upon request

Filter elements (accessory consumables) ⁷⁾	TAC 1500	TAC 3000
G4 Z line filter	Article number 7.160.000.404	Article number 7.160.000.428
F7 pleated filter cartridge	Article number 7.160.000.409	Article number 7.160.000.429
F7 bag filter	Article number 7.160.000.414	Article number 7.160.000.430
H13 HEPA filter approved for dust class H	Article number 7.160.000.424	Article number 7.160.000.431

Available accessories	TAC 1500	TAC 3000
Air transport hose Tronect SP-T, length 7.6 m	Article number 6.100.001.200	Article number 6.100.001.205
Professional extension cable, length 20 m, 230 V / 2.5 mm ²	Article number 7.333.000.376	Article number 7.333.000.376

Performance charts of the TAC series

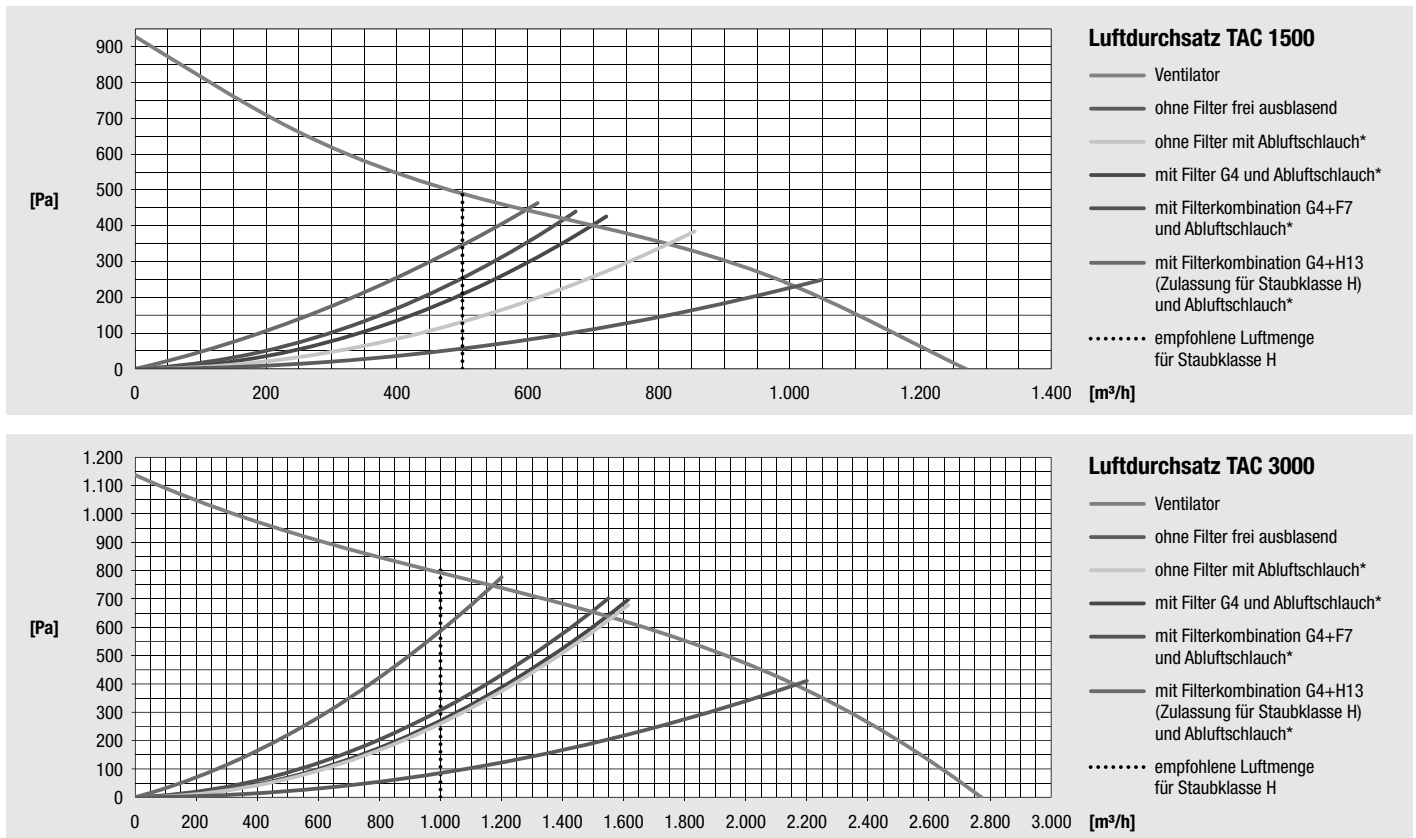


Fig. 17 Performance charts of the TAC series

Trotec GmbH & Co. KG

Grebener Str. 7
D-52525 Heinsberg

☎ +49 2452 962-0

☎ +49 2452 962-200

info@trotec.com

www.trotec.com