TAC 5000 / TAC 6500

EN

OPERATING MANUAL
AIR CLEANER

TROTEC
AT WORK.

TRT-BA-TAC500_6500-TC-002-EN

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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

Legal notice

Information about the device

Description of the device

Air cleaners are used to filter 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. This dust is to be vacuumed off as close as possible to the point of origin in order to reduce the pollution of the breathing air to a minimum.
Depending on the used filter quality it is permissible to employ devices for the separation of quartziferous mineral dusts, wood dust, lead-containing dusts, artificial mineral fibres such as old mineral wool or high-temperature fibres. Application as vacuum generator for mould remediation and asbestos abatement is also a possibility. In case of other hazardous substances, further requirements may result from HAZMAT regulations
(Please observe the applicable TRGS [Technical Rules for Hazardous Substances] or provision!).

TAC air cleaners are therefore ideally suited for:

- producing a vacuum in a room, e.g. heavily contaminated spaces;
- producing overpressure in a room, e.g. cleanroom;
- air purification in workspaces via air circulation, e.g. indoor building sites, workshops etc.;
- supplying filtered fresh air.

The air cleaners TAC 5000 and TAC 6500 are basically made up of the following:

- housing with stacking aid
- set of wheels with at least 2 swivel castors with brake
- boxes for pre-filter and main filter
- filter monitoring each for pre-filter and main filter
- fan with speed control
- Flowmatic for constant volumetric flow control

Filterboxes

The filterboxes can be fitted with various air filters depending on the application or requirement:

- Filterbox 1: coarse filter (Z-Line G4) and/or fine filter (pleated M5 to F9)
- Filterbox 2: HEPA filter (E10…H14 or dust class M to dust class H)

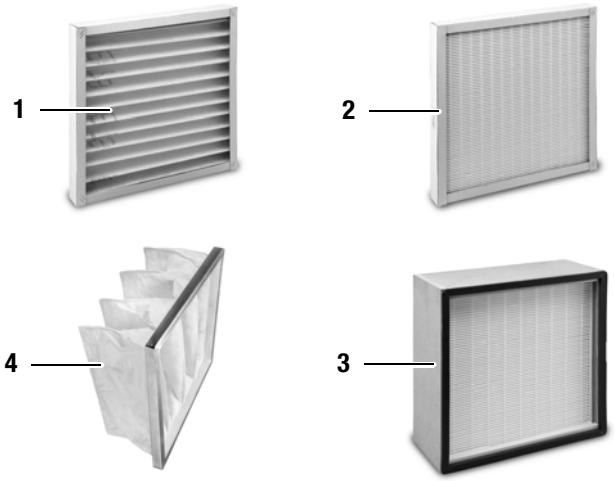
alternatively:

- Filterbox 2: bag filter (M5 to F9), in that event the fine filter in filterbox 1 can be omitted

The filterboxes are made of aluminium sheet and powder-coated.

Filter types (not included in the scope of delivery)

The designated air filters are especially geared to our devices and come with the largest possible filter surface based on the geometric dimensions. This ensures maximum air flow rate and lifetime for safe operation.



No.	Designation
1	Z-line filter G4
2	pleated filter M5 to F9
3	HEPA filter E10 to H14 / dust class M + H
4	bag filter M5 to F9

Filter monitoring

Monitoring is effected respectively for the pre-filter (filterbox 1) and main filter (filterbox 2) by means of individual differential pressure switches. These are integrated in the fan box.
Settings:

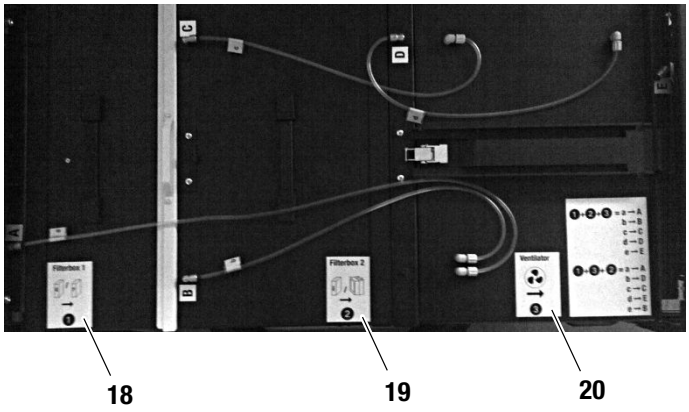
- Filter 1 = 300 Pa
- Filter 2 = 650 Pa

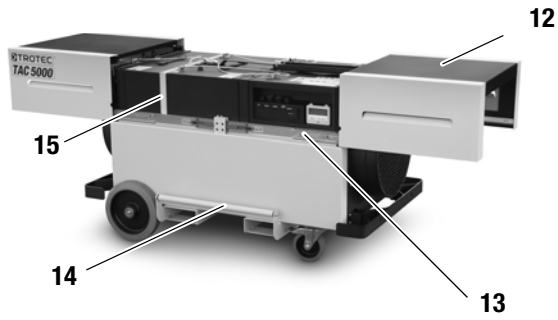
The alarm is indicated both visually and acoustically via warning lights (filter 1 and filter 2).

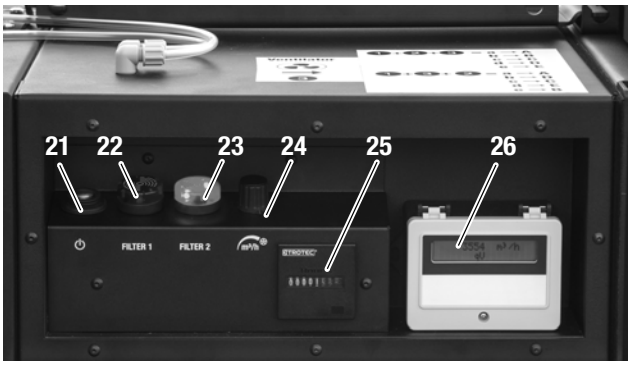
Flowmatic

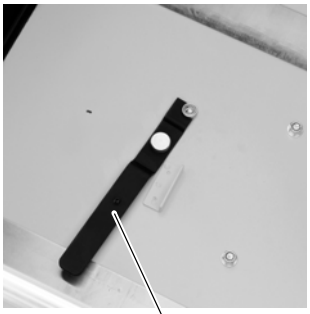
The Flowmatic is a configurable differential pressure transmitter with display. It serves to analyse the measured differential pressure at the fan's injection nozzle. The specific nozzle factor (K value; depending on the type of nozzle) is used to convert the differential pressure to volumetric flow and to display it. At the same time the current value is transmitted to the fan's internal controller via a standard signal (0…10 V).
The controller now compares the actual value with the nominal value preset by use of the speed controller and compensates the discrepancy by lowering or raising the engine speed. Should the maximum engine speed be reached and the volumetric flow still be too low, it cannot be compensated.

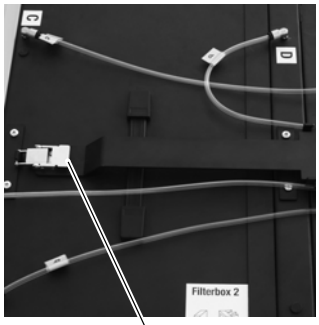
Device depiction

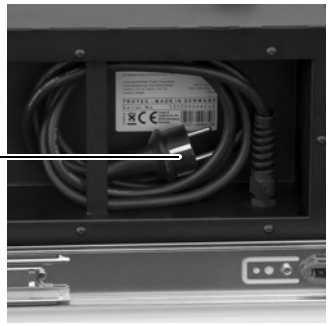












No.	Designation	No.	Designation
5	stacking / push handle	17	clasp
6	hose / pipe connection (2x)	18	pre-filter
7	shock protection (2x)	19	main filter
8	swivel castor with brake (rubber, non-marking)	20	fan
9	wheel (rubber, non-marking)	21	on/off switch
10	forklift pockets	22	warning light filter 1
11	hinged cover (4x)	23	warning light filter 2
12	sliding cover (2x)	24	speed controller
13	telescopic slides (4x)	25	operating hours counter
14	lifting handle	26	Flowmatic with display (volumetric flow indication)
15	tensioning frame	27	cable storage compartment with supply line and mains plug
16	locking lever		

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.
- Only put up the device in a stable position on firm ground.
- Provide appropriate weather protection.
- Keep air inlets and outlets clear.
- Never insert objects into the device.
- Do not cover or transport the device during operation.
- Never use the device as storage place or footstep.
- 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 from non-conducting and non-combustible dusts or suspended matter whilst adhering to the technical data.

Improper use

Do not use the device in potentially explosive areas.
Do not place the device on damp or flooded ground.
Do not use the device to siphon off fluids.
Any unauthorised changes, modifications or alterations to the device are forbidden.

Personnel qualifications

People who use this device must:

- be aware of the dangers that occur when working with electric devices in damp areas.
- 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:

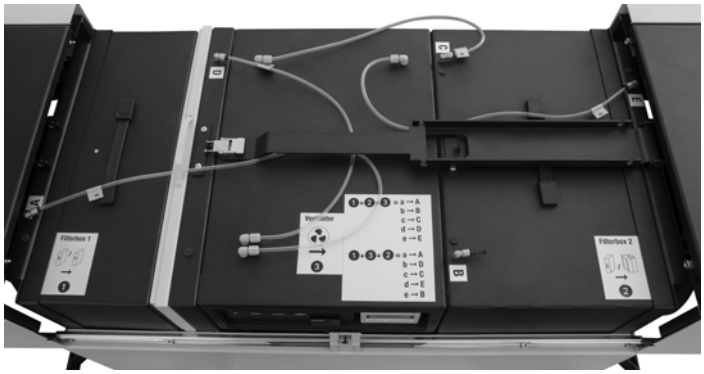
- dry,
- protected from dust and direct sunlight,
- with a plastic cover to protect it from invasive dust, if necessary.

Configuration

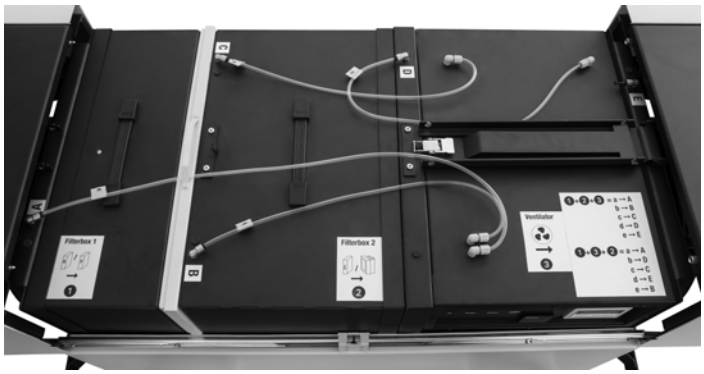
This devices provides the user with the possibility to adjust the filter qualities and the array of the filter ladder in a few simple steps according to the applicable provisions and guidelines. There are three basic applications:

1. The **building site configuration** for separation of suspended matter as per DIN EN 60335-2-69 to dust class H; main priority with these applications has the filtering of dust particles dangerous to health, to some extent even carcinogenic. The entire filter ladder has to be operated at underpressure to prevent unfiltered air from escaping even in case of leakages when sucking off these dusts. Which means that the **fan is to be positioned downstream of the main filter!** These are to be braced using tensioning elements on the unit side so that the high-efficiency particulate air filter does not come into contact with polluted air at the outlet during the entire operating time and the risk of leaks is minimized!

2. The **cleanroom configuration** for separation of suspended matter as per DIN EN 1822-1:1998 to filter class H14 (in case of a substantially reduced air volume filters with higher filtration efficiencies are also an option); as a rule air from a polluted area is fed to a cleanroom, e.g. as fresh air supply. The applicable regulations usually demand that the filtered air may only come into contact with a clean air pipe/duct operated at overpressure. Therefore, the **fan is to be positioned upstream of the main filter!** Here, too, the elements are to be braced as stated in point 1!

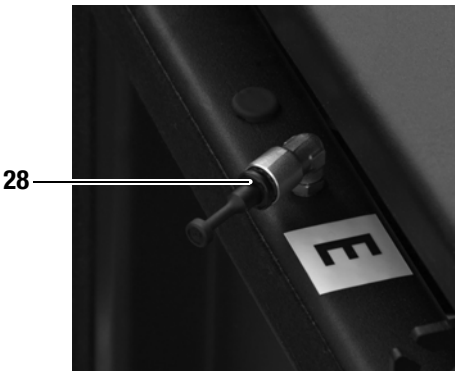


3. Generic configuration for simple air purification applications for filtering coarse dust or fine particulates as per DIN EN 779 to filter class F9; these applications do not require any particular fan position. For reasons of simplified filter change management it is recommended for the fan to be the **last element** to be incorporated and braced.



Note:

For the individual configurations it is important to make sure that the air hoses (marked a, b, c, d) and the dummy plug (28) are connected to the measuring points (marked A, B, C, D, E) according to the box arrangement (pre-filter=1+main filter=2 +fan=3). Otherwise the filter monitoring will not be working!
Example:



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.
- Set the device up in a level, upright and stable position.
- Do not create tripping hazards when laying the power cable or other electric cables.
- Make sure that no curtains or other objects interfere with the air flow.
- Ensure that extension cords are completely unrolled.

Sliding cover

1. For opening pull stacking handles up and fold them down.
2. Pull the sliding cover outwards with a jerk and shove it apart all the way to the stop.
3. For closing push the sliding covers together until they lock in place.
4. Tilt the stacking handles up and lock them.

Hinged cover

- Swing the hinged covers upward until they are held (magnet).
- Proceed in reverse for closing.

Start-up

1. Open the sliding cover, remove the power cable from the box (fan) and hook it into the recess. Make sure that the cable will not be crushed when closing the sliding cover.
2. Actuate the green switch (lights up).
3. Adjust the speed controller until the desired volumetric flow is indicated.

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 AC/50 Hz).
- Check the mains plug for damages.

Your device still does not operate correctly after these checks?

Bring the device to TROTEC® for repair.

Maintenance

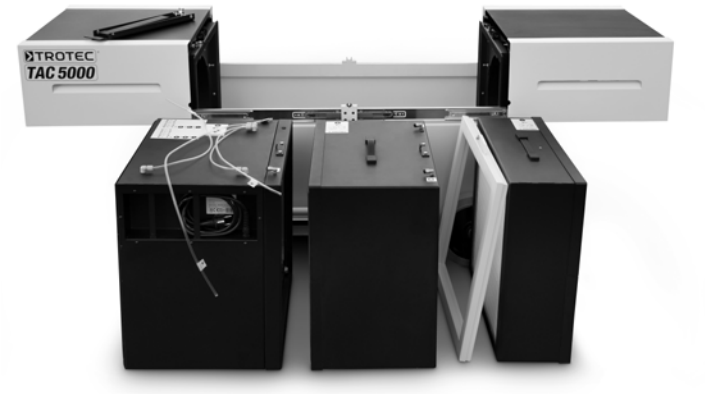
Activities required before starting maintenance

- 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 electrically skilled persons or by TROTEC®.

Filter change

1. Disconnect the air hose (a) from the measuring point.
2. Remove the tensioning frame (11) in an upward motion.
3. Pull out filterbox 1 (pre-filter) at the top and remove the filter.
4. If required, also loosen the clasp (13) and the locking lever (12).
5. Disconnect the air hoses (b and c) from the measuring points.
6. Move filterbox 2 a little to the side.
7. Pull out filterbox 2 at the top and remove the filter.
8. For box integration please proceed in reverse order.



Lubricating telescopic slides

- The covers' telescopic slides are to be lubricated as needed or after cleaning.

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 (Translation of the original)

TROTEC

CE

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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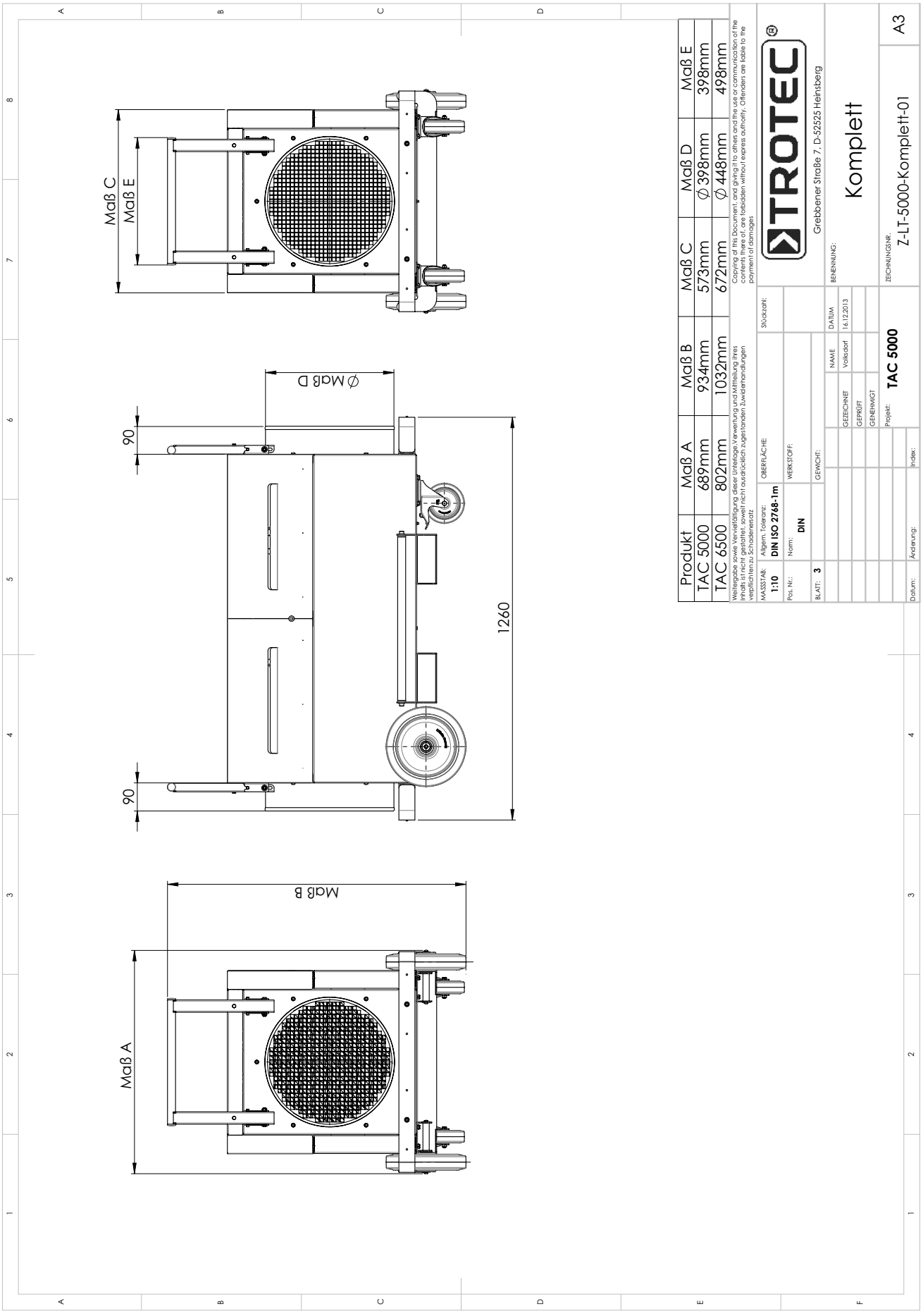
Heinsberg, 31 March 2014

Managing Director: Detlef von der Lieck

Drawing



Produkt	Maß A	Maß B	Maß C	Maß D	Maß E
TAC 5000	689mm	934mm	573mm	∅ 398mm	398mm
TAC 6500	802mm	1032mm	672mm	∅ 448mm	498mm

MASSSTAB: 1:10
Allgem. Toleranz: DIN ISO 2768-1m
OBERFLÄCHE:
Pos. Nr.:
Norm: DIN
WERKSTOFF:
BLATT: 3
GEWICHT:
Stückzahl:

	NAME	DATUM
GEZEICHNET	Vollsdorf	14.12.2013
GEPRÜFT		
GENEHMIGT		

TROTEC
Grebbener Straße 7, D-52525 Heinsberg

BENENNUNG: Komplett

Projekt: TAC 5000
ZEICHNUNGSNR.: Z-LT-5000-Komplett-01
A3

Datum:
Änderung:
Index:

Technical data

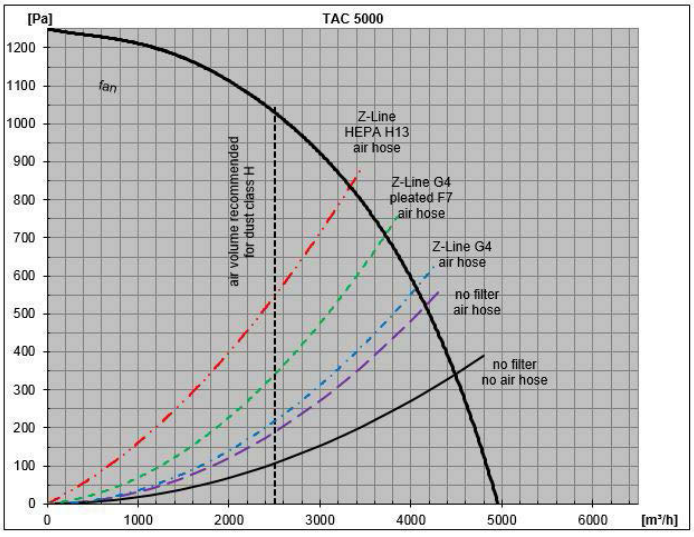
Parameter	Value	
Model	TAC 5000	TAC 6500
Article number	1.580.000.125	1.580.000.135
Max. amount of air	4500 m^3/h	5700 m^3/h
Air volume / room size (air exchange = 15x) recommended for dust class H at a HEPA filter surface of...	2500 m^3/h / 170 m^3 at 18.0 m^2	3000 m^3/h / 200 m^3 at 26.0 m^2
Power input max.	1.27 kW	1.4 kW
Nominal current consumption	5.6 A	6.0 A
Input voltage	200-277 V AC	
Supply line – plug type – length	H05RN-F - CEE 7/7 – 2.5 m	
Sound level (1 m)	68 dB(A)	68 dB(A)
Air inlet and outlet connections	Ø 398 mm	Ø 448 mm
Dimensions (LxWxH)	1252 mm x 690 mm x 926 mm	1252 mm x 790 mm x 1026 mm
Weight (filter included)	125 kg	136 kg

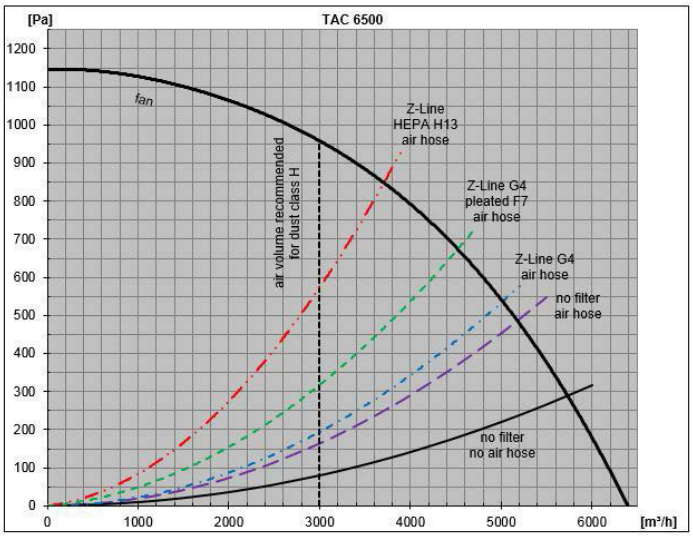
Accessories and supplies

Item	TAC 5000	TAC 6500
Z-line coarse filter G4 (approx. m^2) art. no.	7.160.000.448 / 1.15	7.160.000.475 / 1.35
Pleated fine filter F7 (approx. m^2) art. no.	7.160.000.449 / 8.5	7.160.000.476 / 12.25
HEPA filter H13 / dust class H (approx. m^2) art. no.	7.160.000.451 / 18.0	7.160.000.478 / 26.0
Fine filter bag filter F7 (approx. m^2) art. no.	7.160.000.450 / 2.6	7.160.000.477 / 3.1
Air hose art. no.	Tronect SP-T- 425 6.100.001.212	Tronect SP-T- 457 6.100.001.214

Characteristics

The following characteristic curves were determined with the spiral air hose connected on the pressure side.
This hose has a length of 7.6 m and is laid in one 90° arc. The curves are only intended as estimates (uncertainty of up to 20 %) and are valid when using the filters and air hosed specified above.





List of spare parts

Spare part	TAC 5000	TAC 6500
fan article number	SP fan TAC 5000 7150000003	SP fan TAC 6500 7150000004
tensioning frame article number	SP tensioning frame TAC 5000 7330000003	SP tensioning frame TAC 6500 7330000004
Flowmatic article number	SP Flowmatic 7140000018	
speed controller article number	SP potentiometer TAC 5000/6500 7121000001	
warning light article number	SP warning light TAC 5000/6500 7141000001	
operating hours counter article number	SP operating hours counter 48x48 7140000313	
guide wheel article number	SP wheel 250 mm 600 kg 7600000002	
swivel castor article number	SP swivel castor 125 mm 150 kg flange plate 7600000004	
clasp article number	SP clasp TAC 7214000001	

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