



Operating instructions

(Translation of the original operating instructions)

Handycart DC

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technologie GmbH

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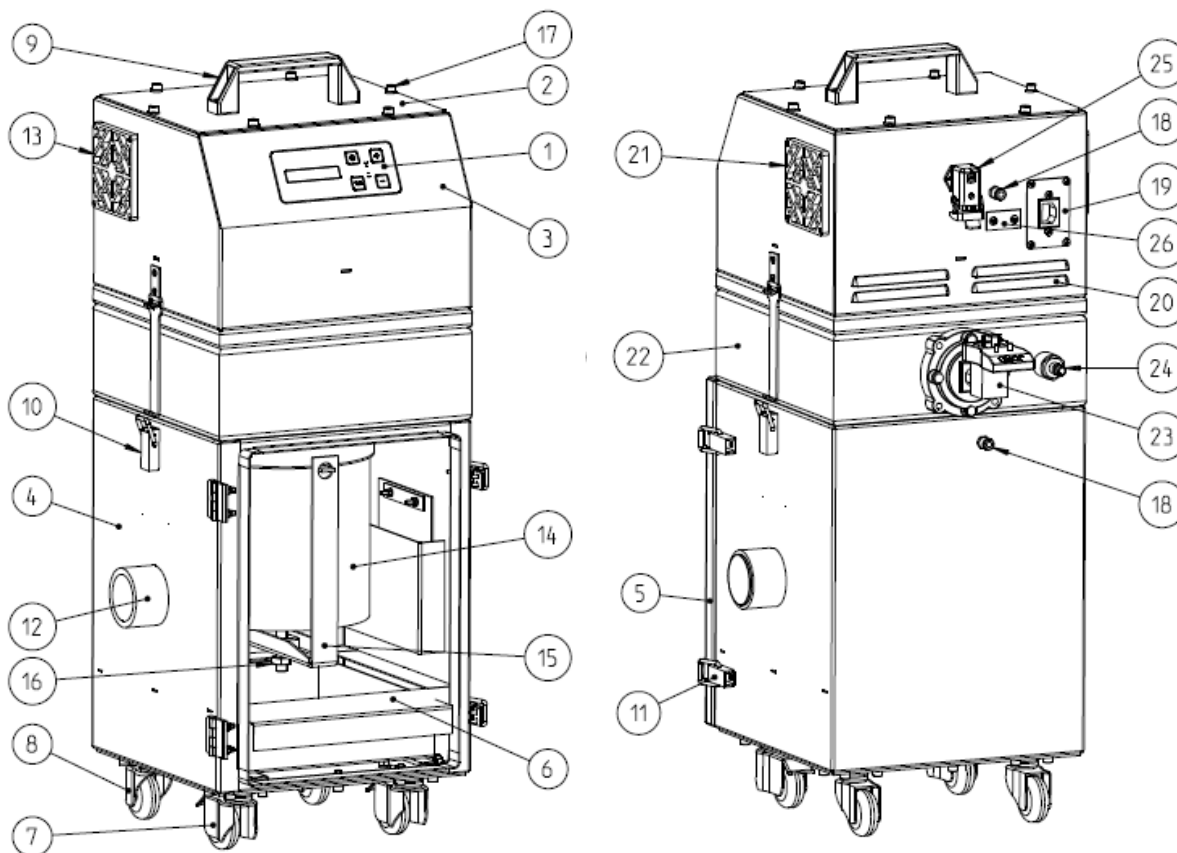
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1 Diagram/description of the elements



Z.Nr. 11195705

Pos.1	Airfilter control	Pos.15	Cartridge holder
Pos.2	Cover plate	Pos.16	Locking screw for the filter cartridge
Pos.3	Turbine housing	Pos.17	Connection screw
Pos.4	Cartridge housing	Pos.18	Measuring hose
Pos.5	Cartridge door	Pos.19	Mains cable with plug
Pos.6	Drawer	Pos.20	Exhaust grid
Pos.7	Caster	Pos.21	Cooling exhaust ventilator
Pos.8	Caster with brake	Pos.22	Dedusting housing (optional)
Pos.9	Handle	Pos.23	Clock generator for dedusting (optional)
Pos.10	Clamping lock	Pos.24	Compressed air connection (optional)
Pos.11	Clamping lock	Pos.25	Connector for dedusting (optional)
Pos.12	Intake stub	Pos.26	D Sub 9 connection (optional)
Pos.13	Exhaust grid		
Pos.14	Filter cartridge		

2 Preface

We congratulate you on the acquisition of the filter unit belonging to the series TEKA-Handycart.

Our engineers continuously advance our devices and therefore make sure that our filter systems correspond to the state of the art. Nevertheless, misuse or malfunction can endanger your safety.

Therefore, please note the following instructions in order to safeguard a successful application of the filter unit:



Read this manual before using the unit and observe the safety instructions in order to avoid injuries!

An improper use of the unit can lead to serious injuries or cause death!

Keep this manual in a safe place!

Observe all notes on the product!

Take into account the local conditions at the site!

Observe the instructions of the manufacturer. In case of doubt, contact the manufacturer:

Phone: +49 28 63 - 92 82 - 0

Fax: +49 28 63 - 92 82 - 72

We thank you for trusting us and wish you a successful application!

3 Function of the TEKA-Handycart

The TEKA-HANDYCART filter unit is primarily used for localised extraction of dust and fumes. For this purpose, the unit must be equipped with one or two flexible extractor hoses or application-specific fittings.

Limits of application:

welding fumes with oil mist, aluminium dust, grinding dust, extraction of metallic dust, gases, water etc.
(If you are uncertain, please contact the manufacturer!)

The polluted air is sucked by the application-specific fitting and transported through the extractor hose to the filter unit. Here, the particle-shaped pollutants are discharged on the surface of the installed filter cartridge (Pos.14). The cleaned air is then sucked in by the turbines and recycled to the air in the workshop through the exhaust grid (Pos. 13/20).

Caution:

As soon as the resistance of the filter cartridge through the accumulated dust particles has reached a maximum value, the LED display "Error" (red) of the airfilter control (Pos. 1) will light up. The fault message "check filter" appears in the display (see Chapter 6: "Operation of the airfilter control").

Manual cleaning should be carried out using a compressed air pistol, the compressed air must be distributed evenly over the whole surface of the filter to distribute the thick layer of dust. (see Chapter 7.1: "Cleaning the filter cartridge")

The dust that has been distributed is collected in the drawer (Pos.6) from where it can be removed. (see Chapter 7.3: "Emptying the draw")



4 Safety instructions

When using electrical equipment, the following basic safety rules must be observed, for protection against electric shock, injury, or fire hazards.

- Before using the equipment, read and observe these instructions!
- Keep the operating and maintenance instructions in a safe place!
- Only use the unit for extracting dry dust and fumes!
- Never use the equipment to extract easily inflammable or explosive gases!
- Do not use the unit in explosive zones, e.g. zone 0, zone 1, zone 2, zone 20, zone 21, zone 22!
- Do not use the unit for sucking burning or glowing materials, e.g. cigarettes, matches, metallic types of dust and/or splinters, paper, cleaning cloths, etc.!
- Do not use the unit for sucking burning and/or inflammatory materials, e.g. oils and/or oil mist, fats, separating agents (e.g. silicone spray), cleaning agents, etc.!
- Never use the unit for extracting aggressive media!
- Never use the equipment to extract any kind of liquid!
- Do not use the equipment for the extraction of organic substances without written approval from the manufacturer!
- Protect the connectors against heat, moisture, oil, and sharp edges!
- Pay attention to the permitted supply voltage! (Observe the data on the nameplate!)
- Only use TEKA spare parts!
- Do not operate the equipment without a filter insert!
- Disconnect the mains supply before opening the filter unit!!
- The exhaust vent must not be covered up or blocked!
- Always make sure that the unit is securely mounted and the brakes on the casters are fixed!
- The filter unit must be disconnected from the mains supply before cleaning or maintenance, replacing parts, or a functional conversion!
- Dispose of the filter in accordance with the statutory regulations!
- The mains supply cable for the unit must be checked regularly for possible damage!
- The unit must not be used if the mains supply cable is not in perfect condition!
- Only use dry and oil-free compressed air and an operating pressure of max. 2 bar.
- The TEKA–HANDYCART filter unit may not be moved using the connected extraction elements (e.g. extractor hose).
- Adjust the extractor arm, as far as possible by exploiting the thermal flow of the welding fumes.
- The maximum permissible distance of 25 cm to the welding point should not be exceeded.
- Do not use the filter unit if any one or more components of the system are defective, missing or damaged. In any one of these cases please contact the TEKA Service Department: Phone:++49 (0) 2863/92 82 0
- When extracting carcinogenic welding fumes as from the processing of nickel or chrome alloys, the requirements of the directives on clean air of the German TRGS 560 'Return of process air when working with carcinogenic media' must be observed. (And/or the equivalent national directives for the respective user.
- More information in reference to TRGS 560 is available in the BIA - Berufsgenossenschaftliches Institut für Arbeitssicherheit (Institute of Safety in the Workplace) at 53754 Sankt Augustin.



5 Initial operation

The filtering device is supplied ready for connection.

The extraction elements and possible other accessories must be installed or mounted on the unit before initial operation.

5.1 Assembly of the extraction element

- Push the hose stub as far as possible into the intake stub (Pos.12). When using a second hose, proceed as follows:
- Remove the sealing plug from the intake stub (Pos.12).
- Push the hose stub as far as possible into intake stub (Pos.12).

Caution:

A hermetic connection must be guaranteed in order for the filter unit to operate correctly.
The TEKA-Handycart filter unit may not be moved using the connected extraction elements (e.g. extractor hose).

5.2 Connection of the unit

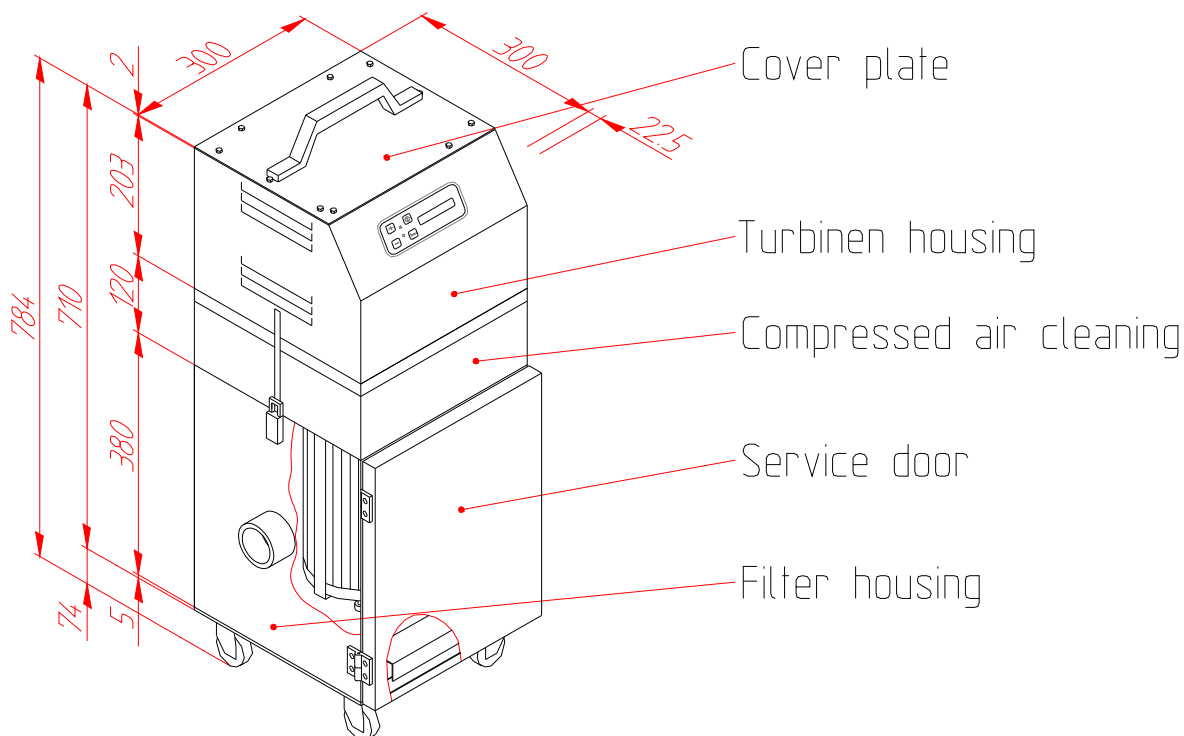
- Connect the filter unit to the power supply. (Please observe the information on the nameplate!)

Caution:

Work on electrical equipment may only be carried out by authorized skilled workers!
Please observe the information on the nameplate!

5.3 Connection of the automatic cleaning (optional)

When refitting the automatic cleaning for the TEKA-HANDYCART, proceed as follows:



- Disconnect the filter unit from the mains supply.
- Release the toggle clamps between the cartridge housing and the turbine housing and remove the turbine housing.
- Place the compressed air container onto the cartridge housing with the outlet drill holes pointing downwards. (When doing so, check the gasket on the cartridge housing for damages.)
- Fix the turbine housing to the compressed air container with the help of the longer closing hook.
- Connect the dedusting housing to the turbine housing (pos. 25) and the clock generator for the dedusting (pos. 23) with the help of the plug which is included in delivery.
- Connect the compressed air container to the external compressed air supply using the fast coupling. (The external compressed air supply must not exceed 2 bar.)
- Connect the filter unit to the mains supply.

Caution:

Work on electrical equipment may only be carried out by authorized skilled workers!
Please observe the information on the nameplate!
The compressed air supply must be dry and oil-free!
The compressed air container is to be emptied before carrying out all service and repair work!

6 Operation of the Airfilter control

The HANDYCART is operated on its membrane control panel with clear text display. All functions of the HANDYCART are set here.

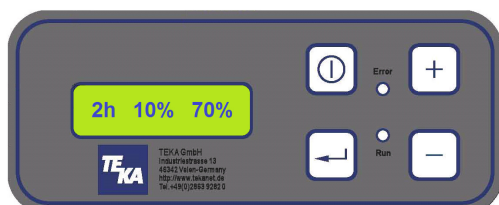


Fig.: Membrane control panel with clear text display

If the unit is switched on, the clear text display indicates the basic settings:

On the left the operating time in hours, in the middle the “filter time” given in percent of the maximal filter time and on the right the currently set number of revolutions of the turbine(s). The minimum value is set to 25 %.

You will find the following control elements on the membrane control panel of the HANDYCART:



ON/OFF button

The *button ON/OFF* is used to switch the HANDYCART on and off. When the unit is switched on you will clearly hear the turbine starting and the extraction of the gases/fumes will begin.

If you change the values (e. g. the number of revolutions of the turbines) these settings will be saved when the unit is switched off. When it is switched on again the HANDYCART will continue to run with these settings.



ENTER button

This button is only intended for use by your service technician for carrying out control and adjustment tasks at the electronic control of the HANDYCART. In addition, it is used to enter the filter code when the filter cartridges are replaced.

Important note: Do not attempt to make any unauthorized settings unless these are expressly permitted by TEKA GmbH.

If nothing is entered/changed for several seconds, the display automatically jumps back to the basic setting.



+ button

The number of revolutions of the turbine (s) is *increased* in % steps using this button. You can notice the increase in the number of revolutions by the increase in noise. The changed value is taken over directly.



- button

The number of revolutions of the turbine (s) is *reduced* in % steps using this button. You can notice the reduction in the number of revolutions by the reduction in noise. The changed value is taken over directly.



- Error *LED Error (red)*

○ When the LED Error red lights up, the filter cartridge is saturated or the maximal filter time has expired.
- Run *LED Run (green)*

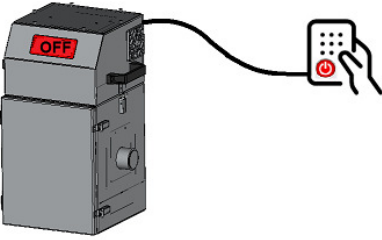
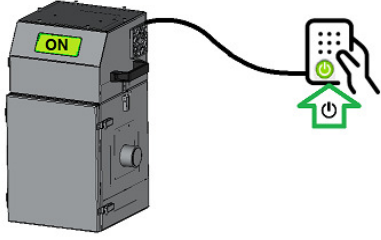
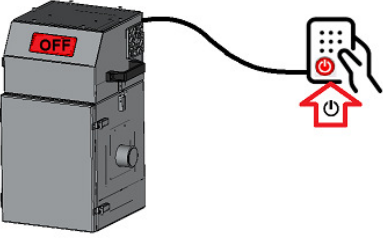
○ Indicates that the HANDYCART is switched on.

6.1 fault messages

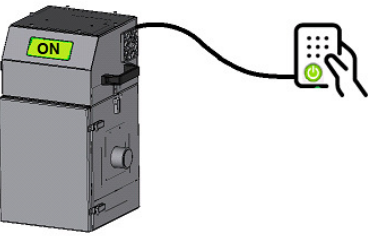
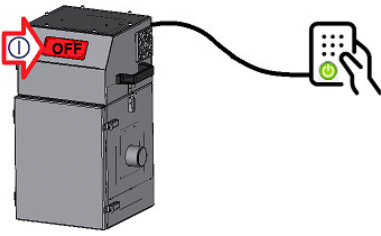
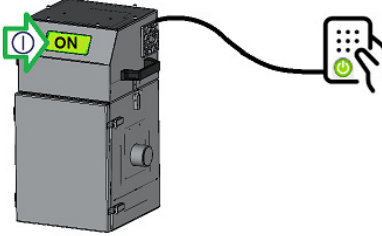
„Check Filter“	The filters are saturated. The filter has to be cleaned or replaced if necessary. (see chapters 7.1 and 7.4)
„Change Filter“	The maximal filter time has expired. The filter has to be replaced. (see chapter 7.4)

6.2 Switching on / off the Handycart

The Handycart can be switched on/off via an external control.

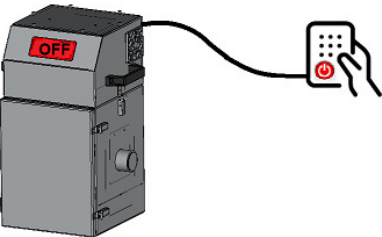
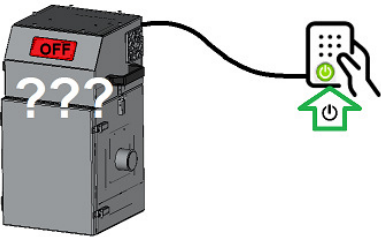
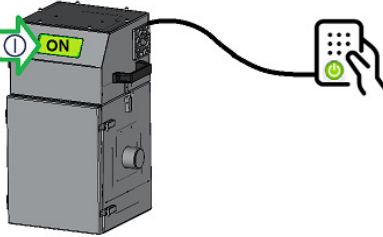
		
<p>Handycart switched off.</p>	<p>The Handycart is switched on via the external control.</p>	<p>The Handycart is switched off via the external control.</p>

The Handycart can also be switched off/on via its own membrane switch panel. (To this end it is necessary to separately switch on the external control.)

		
<p>Handycart in operating condition.</p>	<p>The Handycart is switched off via the membrane switch panel.</p>	<p>The Handycart is switched on via the membrane switch panel.</p>



IMPORTANT: The Handycart is switched on via the external control - but the Handycart is not starting the extraction. What is going wrong?

		
<p>Handycart switched off.</p>	<p>The Handycart is switched on via the external control, but the Handycart is not reacting.</p>	<p>Solution: In this case, the separate on/off switch at the membrane switch panel must be separately activated in addition.</p>



7 Maintenance

Through the filtration of dust particles the degree of saturation of the filter cartridge is increased and the suction performance is reduced.

The saturation level of the filter cartridge (Pos.14) is monitored electronically. In order to retain the permissible suction performance of the unit, the filter cartridges must be cleaned when the LED display "Error" lights up (see Chapter 7.1: "Cleaning of the filter cartridges")

The accumulated dust particles are blown off the filter by applying compressed air from the clean side. The released filter cake will fall into the intended drawer (Pos.6). (see Chapter 7.3: "Emptying of the drawer")

The useful service life of the filter cartridge greatly depends on the respective operational environment. For this reason, it cannot be predicted.

If it is no longer possible to reach the operating pressure of the filter unit after cleaning the filter cartridge, then the filter cartridge must be replaced. (see Chapter 7.4: "Replacement of filter cartridge")

The TEKA-HANDYCART filtering unit is supplied with a direct current turbine. The DC turbine is maintenance-free.

Caution:

The operation of the filter unit must be interrupted when changing the filter cartridge. Replacement of the filter cartridge and the disposal of the element may only be carried out in amply ventilated environments and when using an appropriate protective respiratory mask!

We recommend using a respiratory mask according to DIN EN 141/143 - Protection class P3. The task of changing the filter elements should be executed by trained personnel only!

7.1 Cleaning the filter cartridge

When the LED display of the Airfilter control (Pos.1) lights up the filter cartridge must be cleaned according to the following procedure:

- Disconnect the filter unit from the mains supply!
- Remove the turbine housing (Pos.3) by opening the clamping locks (Pos.10).
- Evenly apply the air jet from the compressed air pistol (available as an optional) to the filter cartridge (Pos.14) for approx. 5-10 minutes to blow the dust off. (see Chapter 7.2. "Compressed air supply")
- Place the turbine housing (Pos.3) on the cartridge housing (Pos.4) and fasten using the clamping locks (Pos.10). (Check the gasket under the turbine housing (Pos.3) for damages.)
- Connect the filter unit to the mains supply. (Observe the information on the nameplate!)

Caution:

Without compressed air supply the filter cartridge pollutes very quickly and the device indicates a fault message ("Check Filter")!

If the filter is manually shaken or washed it will destroy the filtering material and the pollutants will be released into the air in the working environment!



7.2 Compressed air supply

A suitable compressed air supply must be available to ensure the correct function of the unit.

- The compressed air must be dry and oil-free.
- External air supply via an approved pressure hose and at an operating pressure of max. 2 bar.

Caution:

Without compressed air supply the filter cartridge is contaminated very fast; the unit switches to fault ("Check Filter")!

7.3 Emptying of the drawer

The drawer (Pos.6) must be cleaned after a certain number of operating hours. This will be decided according to the actual volume of dust

- Disconnect the unit from the mains supply (Pull the plug).
- Open the cartridge door (Pos.5) by the clamping locks (Pos.11) and carefully remove the drawer (Pos.6).
- The accumulated dust must be stored properly in a suitable container and disposed of according to pertinent directives.
- Push the drawer (Pos.6) into the cartridge housing (Pos.4) again after it has been emptied completely and close using the clamping locks (Pos.11) (when doing so check the gasket on the cartridge housing (Pos.4) for damages
- Connect the filter unit to the mains supply. (Observe the information on the nameplate!)

Caution:

The dust collecting container may only be emptied in a well-ventilated area using an appropriate protective respiratory mask!

We recommend using a respiratory mask according to DIN EN 141/143 - Protection class P3.

The work processes specified above may only be carried out by a trained employee!

Dispose of the dust according to the statutory regulations!



7.4 Replacement of the filter cartridge

- Disconnect the unit from the mains supply (Pull the plug).
- Open the cartridge door (Pos.5) using the clamping locks (Pos.11).
- Release the locking screw (Pos.16) of the cartridge holder (Pos.15).
- Remove the filter cartridge (Pos.14).
- Push the new filter cartridge into the cartridge guidance.

Caution:

Only use original TEKA spare filters!

- Tighten the locking screw (Pos.16) of the cartridge holder (Pos.15).
- Close the cartridge door (Pos.5) using the clamping locks (Pos.11).
- Connect the filter unit to the mains supply. (Observe the information on the nameplate!)
- Select the menu item "Filter code" with the help of Enter and the button +/-.
- Enter the filter code enclosed in the filter via the button +/- and confirm via Enter.
- The message "Filter OK" appears in the display.

Caution:

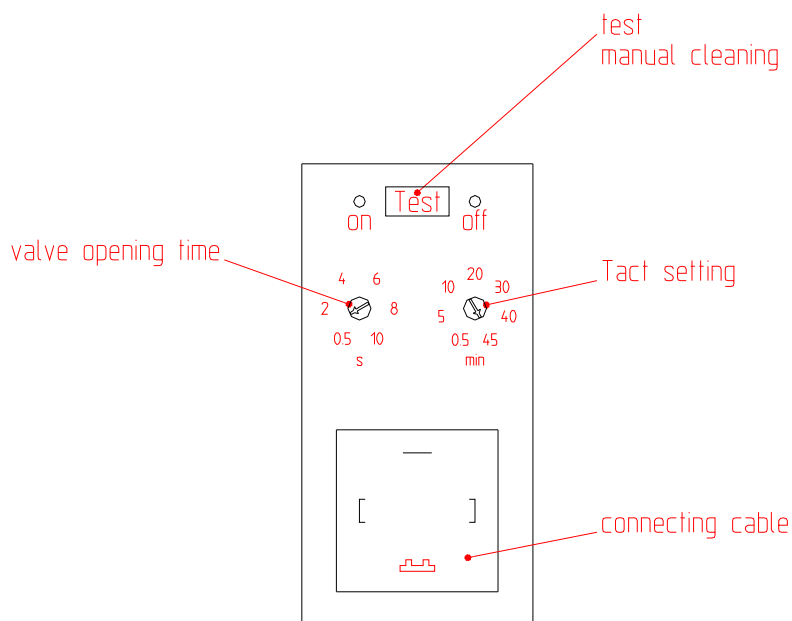
The replacement of the filter cartridge and the disposal of the element may only be executed in amply ventilated environments and when using an appropriate protective respiratory mask!
We recommend using a respiratory mask according to DIN EN 141/143 - Protection class P3.
The work processes specified above may only be carried out by a trained employee!
Dispose of the filter according to the statutory regulations!

7.5 Clock generator

The opening time is set to 1.25 seconds and the time setting to 45 minutes
If these settings should not fit to your filter operation, you can adjust these as follows.

Caution:

The compressed air container is to be emptied before carrying out any service and repair work.



8 Disposal

To facilitate the impeccable operation of your TEKA-HANDYCART extraction device, and the proper disposal of the extracted dust, we are pleased to offer you the following services:

- Assistance in finding a disposal company situated near you.
- A list of all the disposal companies in Germany is available free of charge.
- Service and maintenance contract
- Telephone advice service

Please speak to our service department that is available for you 24 hours a day.

Phone: 0 28 63 / 92 82 - 0

Fax: 0 28 63 / 92 82 72

9 Technical data

Filter unit		TEKA - HANDYCART
		Direct current turbine (DC)
Connection voltage	V	230
Type of current	Ph	1
Frequency	Hz	50
Power of the motor	kW	1.2
Maximum air flow	m ³ /h	320
Maximum negative pressure	Pa	21000
Type of protection		IP 54
ISO class		F
Control voltage	V	230
Duration switched on	%	100
Width x depth x height	mm	300 x 300 x 681
Weight	kg	approx. 23
Number of extractor hoses		2
Filter cartridge		Filter cartridges
Filtering surface of the filter cartridge	m ²	2.5
Separation performance	%	>99
Type of cleaning		manual/automatic (optional)
Noise level (Measured according to DIN 45635 T1 at 1 m distance from the surface of the machine in a free area)	dB(A)	66 (at 20% of the output power) 80 (at 100% of the output power)
Compressed air		external
Minimum pressure	bar	1,5
Maximum pressure	bar	2
Compressed air supply		dry / oil-free

10 List of spare parts

Name:

Filter cartridge (Pos.14)

Filter mats for the air outlet grid (pos.13) (10 pieces)

Article no.:

100281

200421120007079



11 Declaration of conformity TEKA-Handycart



TEKA

Absaug - und Entsorgungstechnologie GmbH

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D - 46342 Velen

Phone.:+49 2863 92820

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e-Mail: sales@teka.eu Internet: <http://www.teka.eu>

We hereby declare under our sole responsibility that the product mentioned above, from the serial number A14000010011001 resp. the production number P25000010011001 on, conforms to the following directives:

Directives on machine building: 2006/42/EG

Electromagnetic compatibility: 2014/30/EU

Directives on printing device: 2014/68/EU

Applied harmonised standards:

- DIN EN 349
- DIN EN ISO 12100
- DIN EN 60204 Part 1
- DIN EN ISO 13857
- DIN EN ISO 4414
- DIN EN 82079 part 1

plus further national standards and specifications:

- DIN 45635 part 1

This declaration will become void if changes are effected to the suction and filter systems which were not agreed upon in writing by the manufacturer.

Authorised representative for technical documentation: TEKA GmbH, Technical department, D-46342 Velen

A handwritten signature in black ink, appearing to read 'Rainer Kuhn', written over a light blue rectangular background.

Velen, the 29th of december 2016