



Operating instructions

(Translation of the original operating instructions)

TEKA – Caremaster

Wall Assembly, SF-W 1, SF-W 2

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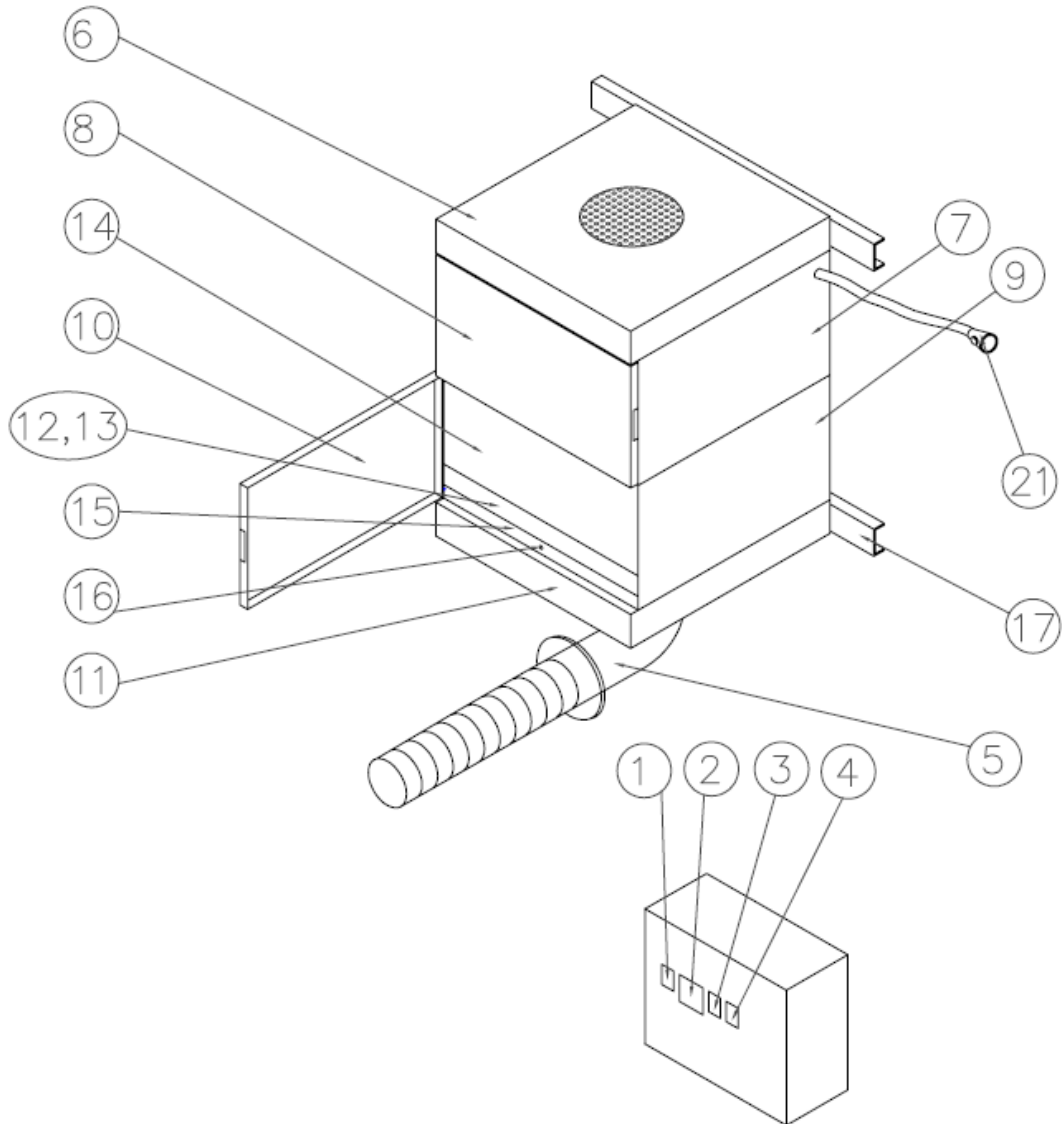
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1 Diagram/description of the components



Z.Nr.10183501

Pos.1	Main switch	Pos.12	Pre-filter tray
Pos.2	Operating hours counter	Pos.13	Pre-filter mat
Pos.3	Operating status lamp: green	Pos.14	Particle filter
Pos.4	Volume flow control lamp: red	Pos.15	Lifting device
Pos.5	Capturing element, e.g. extractor arm (SF-W 2: 2 capturing elements)	Pos.16	Locking screw for lifting device
Pos.6	Housing cover	Pos.17	Wall bracket
Pos.7	Ventilator housing	Pos.18	Screw for attaching arm
Pos.8	Ventilator door	Pos.19	Spring washer for attaching arm
Pos.9	Filter housing	Pos.20	Rotary flange
Pos.10	Filter door	Pos.21	Mains cable with power plug
Pos.11	Soil Lid		



2 Preface

One sector of extraction equipment has become very significant in recent years. The filtering of extracted pollutants and the recycling of filtered air to the working area.

This is surely a sign that the environmental consciousness of every one of us has altered very strongly in favour of our environment. For a long time now, no one has denied that pollution occurs during production. However, the pollutants depend on the process that is used. One can basically distinguish between gases and fumes (smoke). Fumes could also really be described as dust. If you examine this dust under a microscope, you will find that they consist of very fine particles, often with a size of 1 µm or smaller, that can enter the lungs.

The classical method of trying to improve the working conditions of polluted workplaces is general ventilation. In this case, the general rule is a multiple change of air in the workshop, i.e. the complete volume of air in the workshop is replaced. However, this method only achieves a small reduction in the level of pollution within the breathing space of the user.

The same applies to “overhead” extraction, i.e. the installation of large extractor hoods above the workplaces. This is the worst airflow imaginable, since the pollutants first pass through the breathing space of the user, and only afterwards are they contained and extracted. This is surely not the point of the exercise. A much more effective method than overhead/wide-area extraction is the removal of pollutants directly at their source, with localised extraction. Both the investment and the operating costs are substantially lower if localised extraction is used.

The environmental and workplace-safety measures are especially important requirements for successful application of a technology, in addition to the technological optimisation of the processing method. In a time of increasing sensitivity and tougher legislation, the task therefore lies in making an early assessment of the potential hazards for the workplace and the environment, and reducing them as appropriate.



3 Function of the TEKA - CAREMASTER

The TEKA – CAREMASTER filter unit is primarily used for localised extraction of dust and smoke particles. For this purpose, the unit can be equipped with one or two flexible extractor arms or application-specific fittings.

Limits of application:

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

The polluted air is sucked into the extractor hood (or application-specific fitting) and transported through the extractor arm (or extractor hose) to the filter unit. Here, the coarse dust particles are collected in the pre-filter mat (Pos.13). The subsequent particle filter (Pos.14) traps extremely fine dust particles with an efficiency of better than 99%. The cleaned air is then sucked in by the ventilator and recycled to the air in the workshop through the exhaust grid at the back of the unit.

Caution:

As soon as the resistance to the air flow from the accumulated dust particles on the filter cartridge markedly effects the suction performance, the filter elements shall be exchanged.
(refer to chapter 7.1: "Changing of pre-filter mat", chapter 7.2: "Change of particle filter")

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!
- Never use the equipment to extract easily inflammable or explosive gases!
- Never use the unit for extracting aggressive media!
- Never use the unit for extracting burning or glowing materials
- Do not employ the unit in explosive zones, e.g. zone 1, zone 2, zone 20, zone 21, zone 22!
- Do not employ the unit for sucking off burning or glowing materials, e.g. cigarettes, matches, metallic types of dust and/or splinters, paper, cleaning cloths, etc.!
- Do not employ the unit for sucking off burning and/or inflammatory materials, e.g. oils and/or oil mist, fats, parting agent (e.g. silicone spray), cleaning agent, etc.!
- Never use the equipment to suck up 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 supply voltage before opening the filter unit!
- The exhaust vent must not be covered up or blocked!
- Always make sure that the unit is securely mounted!
- The filter unit must be disconnected from the mains supply voltage before cleaning or maintenance, replacing parts, or a functional conversion!
- The filter inserts cannot be regenerated!
- Dispose of the filter inserts in accordance with the regulations!
- If an energy-saving automatic start/stop is being used, the earthing cable must be checked for possible damage before every welding session.
- The unit must not be used if the earthing cable is not in perfect condition.
- If external filter controls are used, the control cable must be checked for possible damage before every operating session.
- The unit must not be used if the control cable is not in perfect condition!
- 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!
- Do not use the filter unit if one or more of its components are faulty, missing, or damaged. In any of these cases, please call the TEKA service department on ++44-(0) 28 63-92 82-0.
- Always pay attention that the unit is securely fastened.
- Only affix the unit to suitable walls (statics, etc.)
- The statics must be examined in case of a hall carrier or carrier assembly.
- 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.)

5 Initial operation

The filter unit is supplied with all connections.

The filter unit must be mounted before initial operation.

The extractor fittings and possible other accessory equipment, must be installed or mounted on the unit before initial operation.

5.1 Mounting height of the filter unit

The mounting height of the filter unit depends on the capturing element connected to the filter unit.

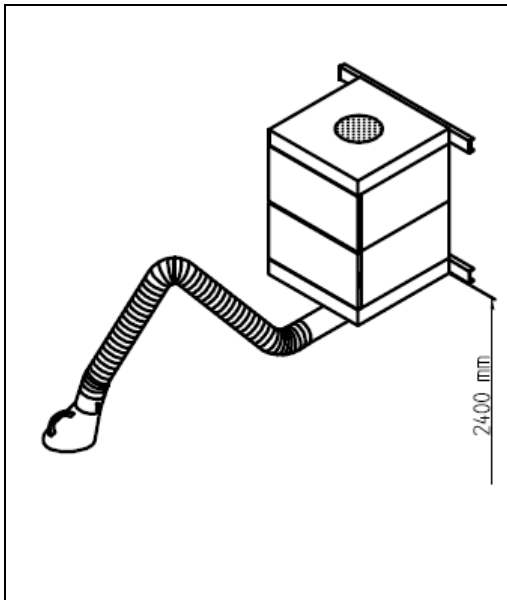


Fig.: device with a suction arm

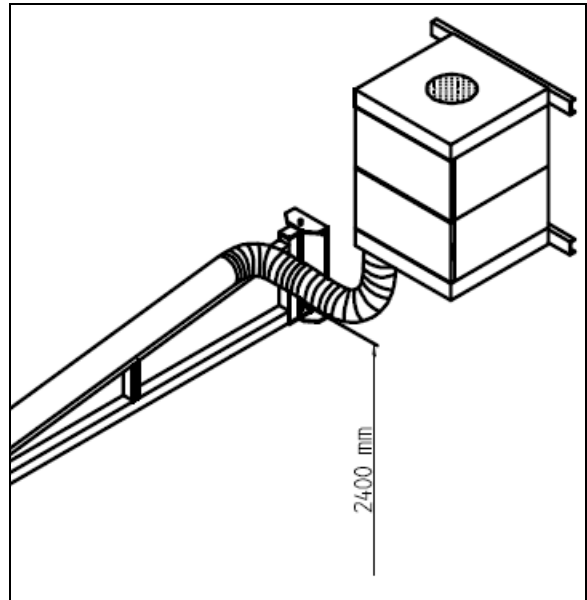


Fig.: device with a wall bracket

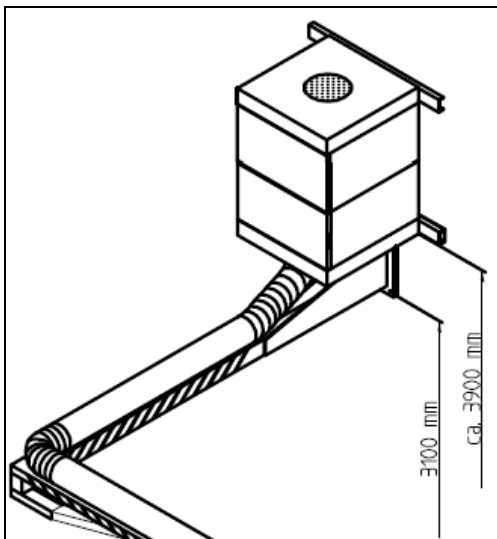
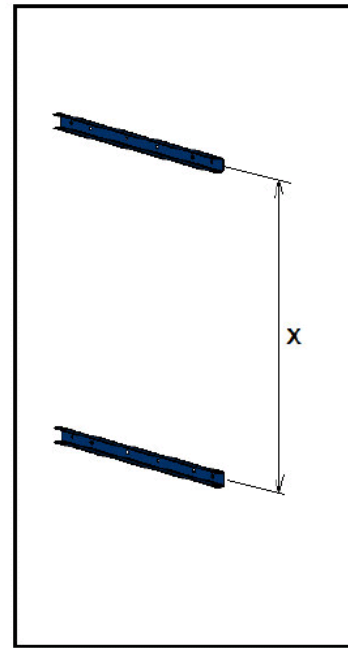
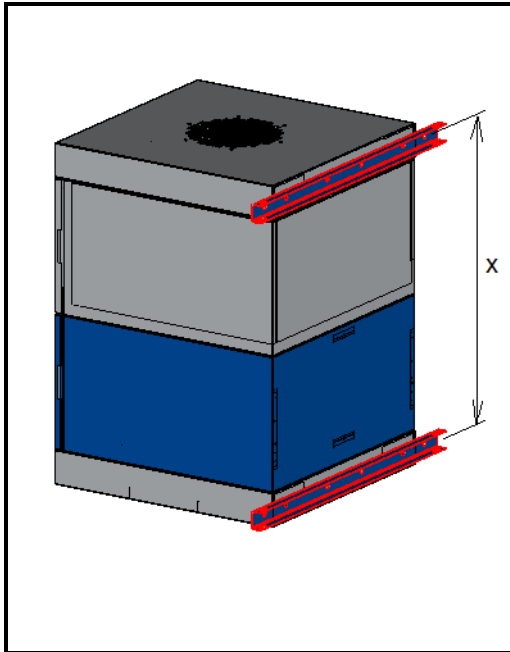


Fig.: device with an exhaust crane

5.2 Mounting of the unit to the wall

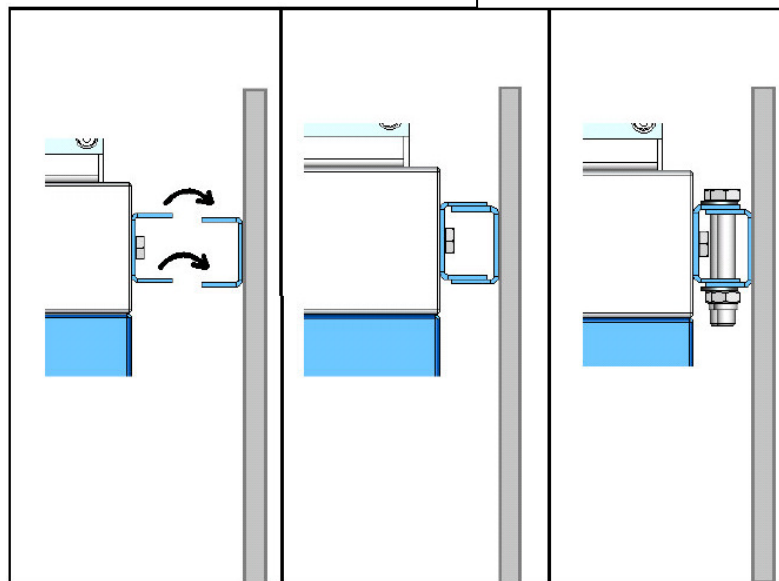


Step 1: Wall brackets are already attached to the filter unit upon delivery.

Step 2: The two other wall brackets must be screwed to the wall. Pay attention to an identical distance "X".



The operator must check the bearing capacity of the wall beforehand.



Step 3: Put the filter unit with its wall brackets on the wall brackets attached to the wall and screw them by means of the delivered screws.



5.3 Attaching the extractor fittings

The attachment of the capturing element (pos. 5) is described in its separate operating manual.

5.4 Electrical connection of the unit

- Connect the filter unit to the mains supply. (Observe the data on the nameplate!)
- Connect the ventilator to the mains supply via a motor circuit-breaker or a star-delta connection. If the motor runs in the wrong direction (reduced suction output) then disconnect the ventilator from the mains supply (pull out the plug) and change over to two phases at the infeed to the circuit breaker or the star-delta connection. (please comply with the data given on the nameplate!)
- Connect the filter unit to the power supply (Observe the data on the nameplate!)

Warning:

Work on the electrical sections must only be carried out by qualified and authorized personnel. (Observe the data on the nameplate!)

6 Explanation of the controls

- Pos.1 The main switch switches the filter unit on or off.
- Pos.2 The operating hour counter starts to count as soon as the filter unit is switched on.
- Pos.3 The operating status lamp shows if the filter unit is switched on.
- Pos.4 The indicator lamp for flow volume shows whether the suction power is adequate. If it lights up, the filter inserts must be replaced.



7 **Maintenance**

The accumulation of extracted particles on the filter cartridge will eventually lead to a reduction of the suction / extraction performance.

The saturation level on the filter is monitored electronically. In order to retain the permitted suction performance of the unit, the filters must be replaced when the red airflow volume indicator lamp (Pos. 4) lights up. (see Chapter 7.2: "Changing of particle filter")

The mechanical filter element ensures that more than 99% of the extracted pollutants are retained in the filter. This also applies to a partially or fully saturated filter. However, the extraction performance of the filter unit will decrease as the filter elements become increasingly saturated.

The pre-filter mat must be changed at regular intervals. However, the pre-filter mat should be replaced no later than when the particle filter is changed (see Chapter 7.1 'Changing of pre-filter mat')

The service life of the pre-filter mat and the particle filter depends to a large extent on the respective conditions of use. Therefore, this cannot be stipulated in advance.

Caution :

When changing the filter cartridge, the operation of the filter unit must be interrupted.

Exchange 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: a respiratory mask acc. DIN EN 141/143 - Protection class P3.

The job of changing the filter elements should be executed by trained personnel only. Filter disposal according to pertinent directives on special waste handling.

Manually beating the filter element, washing or air jet blasting will destroy the filter media. As a result the pollutants will be blown into the room.



7.1 Changing of pre-filter

The pre-filter mat (Pos.13) must be changed after a certain number of operating hours. The time depends on the amount of accumulated dust. At the latest, the pre-filter mat (Pos.13) must be changed when changing the particle filter (Pos.14).

The procedure is as follows:

- Disconnect the filter unit from the mains power supply.
- Open the air filter access door (Pos.10).
- Lower the lifting mechanism (Pos.15) by turning the locking screw (Pos.16) downward..
- Pull out the pre-filter tray (Pos.12).
- Take out the pre-filter mat (Pos.13).
- Install the new pre-filter mat.

<p>Warning: Only use original TEKA pre-filter elements.</p>
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- Insert the pre-filter tray (Pos.12).
- Raise the lifting mechanism (Pos.15) by turning the locking screw (Pos.16) until the pre-filter tray (Pos.12) sits tight under the lifting mechanism in the ventilator housing (Pos. 7). (At this time check the sealing gasket under the lifting mechanism in the ventilator housing for possible damage.
- Close the filter access door (Pos.10).

Connect the filter unit to the mains circuit. (Observe the data on the nameplate)



7.2 Changing of particle filter

When the extraction performance decreases, the particle filter (Pos. 14) must be changed according to the following procedure:

- Disconnect the filter unit from the mains power supply.
- Open the filter access door (Pos.10).
- Lower the lifting mechanism (Pos.15) by turning the locking screw (Pos.16) downward..
- Pull out the particle filter (Pos.14).
- Install the new particle filter element

Caution:

Only use original TEKA particle filter elements.

- Raise the lifting mechanism (Pos.15) by turning the locking screw (Pos.16) until the pre-filter tray (Pos.12) sits tight under the lifting mechanism in the ventilator housing (Pos.7). (At this time check the sealing gasket under lifting mechanism in the ventilator housing for possible damage.
- Close the filter access door (Pos.10).

Connect the filter unit to the mains circuit. (Observe the data on the nameplate)

8 Disposal

To ensure perfect operation of your TEKA - CAREMASTER extractor unit and proper disposal of the dust that has been extracted, we offer the following services:

- Help with finding a waste disposal company in your vicinity.
- On request, we can supply a list of all waste disposal companies in Germany, free of charge.
- A service and maintenance contract.
- A customer help line.

Call our service department for these options: they are at your service – round the clock.

Telephone: ++49-(0) 28 63 / 92 82 - 0

Fax: ++49-(0) 28 63 / 92 82 72



9 Technical data

Filter unit		SF-W 1	SF-W 2
Supply voltage	V	230 / 400 / 500	
Current type	Ph	1 / 3 / 3	
Frequency	Hz	50	
Motor power	kW	1.1	2.2
Max. airflow volume	m ³ /h	1270	2150
Max. vacuum	Pa	1800	2100
Enclosure type		IP 54	
ISO class		F	
Operating voltage	V	24	
Duty cycle	%	100	
Width x depth x height	mm	665 x 681 x 930	665 x 681 x 1010
Weight, without arm	kg	115	
Filter insert		pre filter mat, particle filter	
Filter area of the pre filter	m ²	0.37	
Filter area of the particle filter	m ²	11.5	
Filter performance	%	>99	
Noise level (measured as per DIN 45635 T1: in free air at 1m distance from the surface of the machine, max. airflow volume.	dB(A)	72	

10 Parts list

Designation:	Article no.
Pre-filter tray (Pos. 12)	10452
10x Pre-filter mat (Pos.13)	10032
Particle filter F9 (Pos.14)	10029
Particle filter H 13 (Pos.14)	10030



11 Declaration of conformity TEKA-CAREMASTER



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We hereby declare under our sole responsibility that the product mentioned above, from the serial number A12000010011001 resp. the production number P25000010011001 on, conforms to the following directives:

Directives on machine building: 2006/42/EC
Electromagnetic compatibility: 2014/30/EU
Directives on printing device: 97/23/EC
Directives on low voltage: 2006/95/EC

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 be 'Rainer K...'. The signature is written in a cursive style.

Velen, the 29th of december 2015