

**KEMPER**  
**Dusty**





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## 1. Application and Mode of Operation

The *KEMPER* Dusty is designed for the extraction of hazardous substances, which are produced by several electric welding works.

Basically the machine can be used for all operations where particles of hazardous substances, i.e. fumes and dusts will be discharged. No sparks (e.g. during grinding) may be absorbed into the filter device.

The released hazardous substances are collected by a funnel nozzle and are led into the filter unit with the extracted airflow. Here the particles of hazardous substances are intercepted at the surface of the installed filter cartridges.

The cleaned air will be extracted by the turbines and returned into the working area. Only tested and approved filter units may be used in this so-called air circulation process, during the extraction of welding smoke with carcinogenic particles (e.g. stainless steel), according to the legal regulations. The particles, which are collected at the filter cartridges, are discharged by automatic compressed-air impetus. They drop into a dust reservoir and can be taken out for disposal.

## 2. Safety Instructions

### **Caution:**

When using electrical equipment you have to take notice of basic safety instructions for the protection against electro shock, injury- and fire danger!

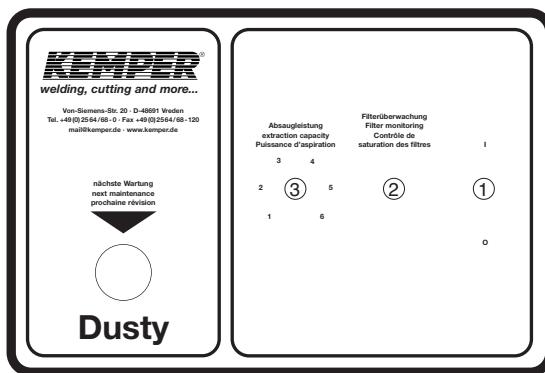
Please read through this manual before operating the unit and make sure that you have comprehended all information.

### **Please read through and take notice of the following instructions before operating the machine!**

- Keep the operation and maintenance manual handy.
- Protect the connecting cable against heat, oil and damages by sharp edges.
- The power line regularly has to be examined for indications of damages.
- The filter unit should not be used, if the status of the power line is not acceptable.
- Take care of the correct voltage supply.
- Pull the power plug before opening the filter unit.
- During the cleaning and maintenance of the filter device, replacement of parts or change-over to another function the filter unit has to be separated from the electricity network.
- Always read the specifications on the type plate.
- The machine always has to be installed safely and the brakes of the guide rollers tightened at standstill.
- Protect the machine against moistness and humidity.
- Check the filter unit regularly for any damages.
- Always use original spare parts.
- Please use exclusively dry and oil-free compressed air with an operating pressure of max. 3 bar for the manual cleaning.  
(For cleaning see chapter 6, page 6 „Cleaning of filter cartridge“)
- The filter unit should not be moved by the connected acquisition elements (exhaust hose) and connecting cables.
- Update the funnel nozzle, if possible by utilisation of the thermic qualified welding smoke movements.
- Don't use the filter unit, if one or more parts of the filter unit are faulty, not existing or damaged! In either case contact the *KEMPER* service department under tel. +49 (0) 2564 / 68-0.
- Don't put any item (e.g. welding rod) into the suction and insufflations slot.

- The free air outlet at the blow out grating should not be constrained by any item.
- Don't use the filter unit with closed suction opening or if the suction hoses are plugged.
- Never operate the machine without filter cartridges. Air contaminations lead to damages to s.o.'s health or destruction of the turbine!
- Dispose the filter cartridges according to the legal regulations.
- Don't use the unit to extract oil mist containing welding fumes, as well as during the WIG welding procedure of stainless steel.
- Don't use the unit for extracting easy flammable or explosive gases or dusts as e.g. aluminium dust and wood dust.
- Don't use the unit for the extraction of burning or glowing substances as e.g. cigarettes, matches, metallic dusts or rather splinters, sheets of paper, cleaning tissues, etc.
- Don't use the unit to extract sparks (e.g. of a grinding process).
- Don't use the unit to extract aggressive substances.
- Don't use the unit to extract any liquids.
- Don't use the unit to extract organic substances
- For extraction of carcinogenic welding dusts (e.g. materials containing nickel or chromates) you have to observe the regulations of TRGS 560 "Recirculation of air during working with carcinogenic hazardous substances".

### 3. Operation Elements and Function



**① ON/OFF – switch**

**② Monitor light for saturation of filter cartridges**

The saturation of the filter cartridges will be checked continuously during the operation of the unit. The cleaning of the filters is necessary as soon as the monitor light is activated. (For cleaning see chapter 6, page 6 „Cleaning of filter cartridge“)

**③ Adjusting knob for suction performance**

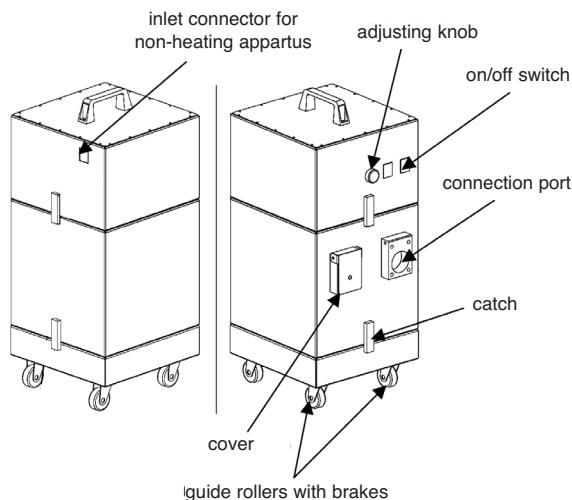
The suction performance can be adjusted to the individual application by using the adjusting knob.

↻ = higher suction performance

↺ = lower suction performance

#### 4. Placing into Operation

- Insert the stub of the suction hose (optional) to the connection port at the front of the filter unit. You can insert up to two suction hoses to the unit. Please keep the cover of the second connection port closed if you do not use it.
- Connect a funnel nozzle (optional) to the other end of the hose and bring the extraction funnel of the nozzle into position that the most effective extraction of the welding smoke is possible.
- Secure the filter unit by locking the brakes at the guide rollers.
- Please check if all catches at the unit are locked.
- Switch the filter unit off via the On/Off switch.
- Connect the filter unit to the power supply (230 V AC).
- Switch the filter unit on via the On/Off switch. You can adjust the suction performance to any demand via the adjusting knob.
- The filter unit is ready for operation now.



## 5. Emptying of the Dust Collection Container

You have to check the liquid level of the dust collection container regularly. The container has to be emptied if it is brimmed. The timeperiod between two emptying processes are depending on the type and the duration of the welding work. We recommend to check the liquid level inside the container before resp. after using of the filter unit. To avoid any contact with the welding smoke /dusts you should wear protection gloves and breathing masks during emptying of the container.

- Switch the filter unit off and disconnect it from the power supply.
- Open both catches at the lower side of the unit.
- Remove the upper part of the unit with the filter and the turbine inside the dust collection container.  
Make sure that you do not damage the sealing around the unit.
- Dispose the welding smoke / dust which is inside of the dust collection container according to legal regulations.
- Remount the cleaned collection container to the unit and connect the power supply to the unit.  
The unit is ready for operation now.

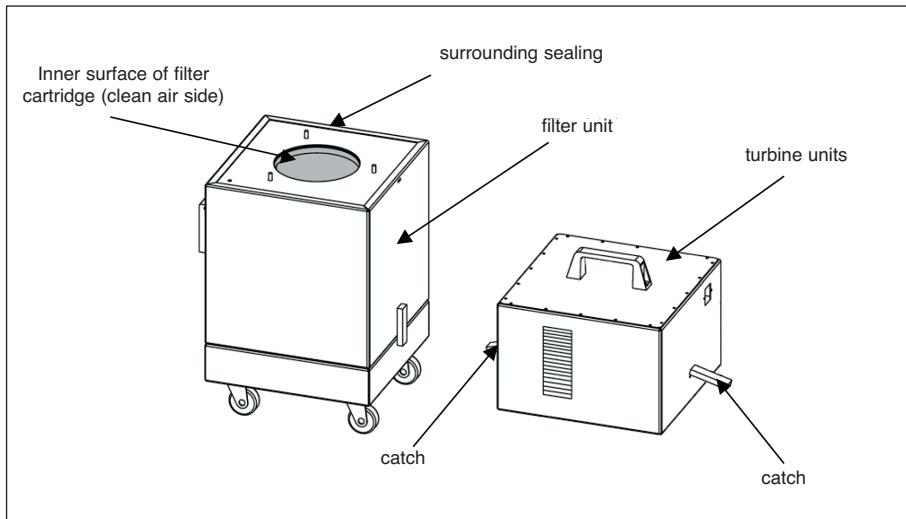
**Please keep in mind:** The welding smoke / dusts have to be stored and removed according to the regulations of the laws for recycling and wastes. Due to different compositions of the welding smoke/dusts you may have to ask for the storage and waste codes at your local recycling company.

## 6. Cleaning of the Filter Cartridge

The particles in the extracted air flow attach to the surface of the filter cartridge. The extraction capacity lowers by and by and the monitor light for filter saturation will be activated after falling under a certain extraction capacity. You have to clean the filters in this case.

- Switch the filter unit off and disconnect it from the power supply.
- Open both catches at the upper side of the unit.
- Remove the turbine from the filter unit.  
Make sure that you do not damage the sealing around the unit.
- Clean the accessible filter surface of the filter cartridge (clean air side) with a blower at a distance of approx. 5 cm. The dust layer on the outer side of the filter cartridge will fall down. You have to make sure that the complete surface of the filter cartridge is cleaned. The air stream should be blown onto the cartridge from top to bottom.
- Put the turbine back onto the filter unit and fasten it to the unit by closing the catches.
- Connect the power supply to the unit. The unit is ready for operation.  
You have to repeat cleaning of the filters if the monitor light for filter saturation is still activated.
- The saturated filter cartridge must not be cleaned by compressed air when the dust collection container has been removed or opened. The deviated particles can get back into the air and pollute it.

**Please keep in mind:** You need clean, dry and oilfree compressed air of max. 3 bar to clean the filter cartridge. The distance between filter material and blower pipe should not be less than 5 cm. Otherwise the filter material can be damaged.  
We recommend to wear protection gloves and breathing masks during cleaning of the filter cartridge.



## 7. Replacement of Carbon Brushes

The carbon brushes of a suction turbine in a motor with collector cel can wear.

The lifetime of the carbon brushes is approx. 600 working hours.

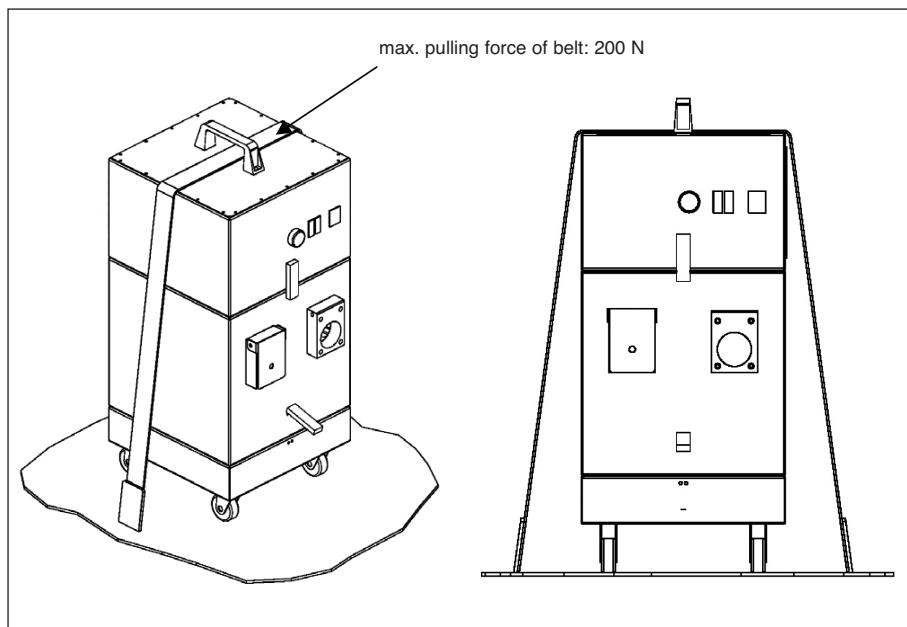
We recommend to replace the carbon brushes regularly to ensure a proper operation of the unit.

To replace the carbon brushes:

- Disconnect the power supply.
- Loosen the fastening screw from the cover and remove the cover.
- Remove the black plastic covers from the turbines.
- Unscrew the carbon brushes and loosen the cables.
- Insert new carbon brushes.
- Remount the unit by following the steps in reverse order.

## 8. Fastening of the Filter Unit

For any transportation the filter unit can be fastened with a belt, to secure against removing.  
The brakes of the castors have to be locked for transportation.



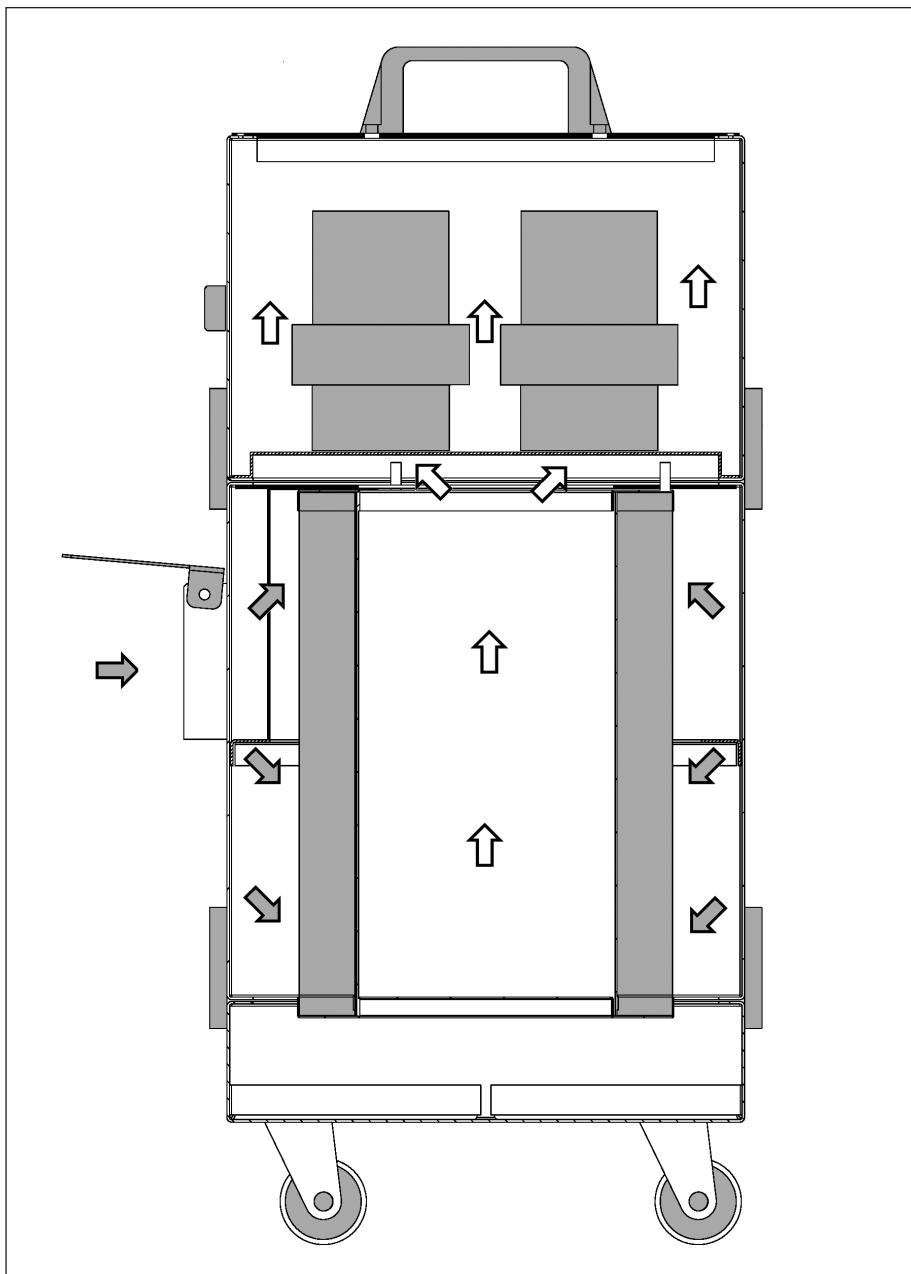


## 9. List of Spare Parts

Item	Description	Part No.
1	PTFE filter cartridge	109 0244
2	Set of carbon brushes	360 1194
3	On/Off switch	360 0580
4	Monitor switch for filter saturation, red / 230 V	360 1850
5	Monitor switch for filter saturation, red / 115 V	360 0018
6	Speed frequency control / 230 V	63 100 000 01
7	Speed frequency control / 115 V	63 100 000 02
8	Micro-fuse 10 A, time-lag	360 1984
9	Micro-fuse 20 A, time-lag	360 1998
10	Pressure differential switch	360 1370
11	Suction turbine 230 V/ AC	19 502 102
12	Suction turbine 115 V/ AC	19 515
13	Guide roller	146 0167
14	Guide roller, lockable	146 0168
15	Power cable, 230 V	124 0426

## 10. Technical Specification

	230 V/AC	115 V/AC
Capacity:	340 m <sup>3</sup> /h	340 m <sup>3</sup> /h
Pressure:	18.100 Pa	18.100 Pa
Power supply:	230 V / AC	115 V / AC
Amperage:	8,7 A	14,4 A
Motor performance:	1,6 kW	1,6 kW
Phases (Amperage):	1 ~	1 ~
Frequency:	50 Hz	50 Hz
Weight:	21 kg	21 kg





## ***European Community Declaration of Conformity***

according to European Community machine standard 89/392/EWG, appendix II A

The manufacturer: **KEMPER GmbH**  
*Von-Siemens-Str. 20  
D-48691 Vreden*

*confirms that the construction of the following machine (or system or part of machine, etc)*

Description, Name	<b>KEMPER Dusty</b> <i>with manual filter cleaning (Extraction unit, welding)</i>
Part-No.	63 100 for connection of two ports NW 45

*is confirm with the regulations of the machine standard 98/37/EG, also confirm all modifications  
and confirm with the following regulations of the European Community:*

89/392/EWG, 91/368/EWG and 96/44/EWG	European Community machine standard
89/336/EWG and 92/31/EWG	EMV standard version
87/404/EWG and 90/488/EWG	Regulation for compressed air reservoirs
73/23/EWG	Regulation for low voltage
93/68/EWG	Regulation for labelling

*Applicable harmonized standards, especially*

EN 292	part 1 and part 2	Security of machinery
EN 50081	part 1	Law referring to the electromagnetic Transmission of devices
EN 61000-6	part 2	Law to the electromagnetic consistency of devices

*Applicable national and technical specifications, especially*

VDE 0100	Construction of power plants with a nominal voltage of up to 1000V
VDE 0113	Electrical equipment of industrial machines
UVV VBG 1	General regulations

Confirmed in: D - VREDEN

Confirmed on: 04. Mai 2005

Signee: Dipl.-Ing. Manfred Könning  
(Chief Technical Engineer)

A handwritten signature in black ink, appearing to read "M. Könning". The signature is fluid and cursive, with a large, stylized initial "M" at the beginning.

### 13. Troubleshooting

Malfunction	Possible causation	Troubleshooting
Filter unit can not be switched on.	<ul style="list-style-type: none"> <li>- No power supply.</li> <li>- Power socket not connected correctly.</li> <li>- Motor protection faulty.</li> </ul>	<ul style="list-style-type: none"> <li>- Connect the filter unit to the power supply.</li> <li>- Check if the power cable has been plugged into the socket properly.</li> <li>- Replace power cable.</li> <li>- Replace fuse in the fuse carrier at the inlet connector for non-heating apparatus.</li> </ul>
Speed frequency can not be adjusted.	<ul style="list-style-type: none"> <li>- Adjusting knob has been loosened from the potentiometer.</li> </ul>	<ul style="list-style-type: none"> <li>- Remove the cover plate from the adjusting knob and refasten the fixing bout of the adjusting knob.</li> </ul>
Extraction capacity is too low.	<ul style="list-style-type: none"> <li>- Suction hose / capturing device is clogged.</li> <li>- Filter cartridge is saturated.</li> </ul>	<ul style="list-style-type: none"> <li>- Clean the suction hose / capturing device.</li> <li>- Clean the filter cartridge (see chapter 6, page 6).</li> </ul>
Welding smoke is escaping through the outlet opening.	<ul style="list-style-type: none"> <li>- Unappropriate sealing between filter cartridge and filter housing.</li> <li>- Holes in the filter cartridge.</li> </ul>	<ul style="list-style-type: none"> <li>- Refasten the mounting screws of the filter cartridge.</li> <li>- Replace the filter cartridge.</li> <li>- Contact <i>KEMPER</i> service department.</li> </ul>

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Von Siemensstraße 20 - 21 D-48691 Vreden Tel.: 0049(0)2564/68-0	Fax.: 0049(0)2564/68-120 http://www.kemper.de e-mail: mail@kemper.de																																						
<p>Kunde : [REDACTED]</p> <p>Anlagenbezeichnung: DUSTY</p> <p>Zeichnungsnr.: 05-E-7390-1-12/3</p> <p>Kommission :</p>																																							
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<p>Schaltschränke : INTEGRIERT</p> <p>Einspeisung : 1 x 230V/AC / 50Hz + PE</p> <p>Zuleitung : 3 x 1,5mm<sup>2</sup> / 8,7 A (I-Nenn)</p> <p>Steuerspannung : 230V/AC</p> <p>Baujahr : siehe Typenschild</p>																																							
<p>Fabrikat : -</p> <p>Type : 63100</p> <p>Installationsort : -</p> <p>Teilebesonderheit : -</p> <p>Sonderumwelt : -</p> <p>Standort : -</p> <p>Vorschrift : -</p> <p>Vorabsicherung : Vorabsicherung: 1 x 16 A (Kat. C)</p>																																							
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