

Translation of the Original Operating Manual ID 30/30 Afc, ID 50/40 Afc





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# 1 Safety Instructions

#### 1.1 Terms

### 1.1.1 Operation

includes installation, initiation (placing at disposal for usage), operation (handling, connection, disconnection, etc.)

#### 1.1.2 Maintenance

includes control and attendance (inspections, revisions), maintenance and repair (detection of errors and their elimination).

#### 1.1.3 Qualified Staff

are employees authorised by the person responsible for the security of the installation to carry out the operations required in each case and who are able to recognise and avoid possible dangers by reason of their training, experience and instructions as well as their knowledge of relevant norms, prescriptions, accident-prevention rules and working conditions.

#### 1.2 Symbols

#### **NOTICE**

Denotes information that does not relate to personal injuries. This information contains additional directions or general hints.



#### CAUTION

Dangerous situation, which could result in minor to moderate injury if it is not avoided. This information must be regarded strictly to avoid damages to the installation or environment!



#### WARNING

Dangerous situation, which could result in serious injury or death if it is not avoided.



#### **DANGER**

Dangerous situation, which will definitely result in serious injury or death if it is not avoided.



#### Significance of the Operating Manual

This Operating Manual is part of the supplied product.

The Operating Manual remains valid throughout the product's lifetime, provided that no technical changes are made.

If the product is sold, the Operating Manual must be handed over to the next owner or user.



This information must be read before first commissioning.



WARNING - Read the instructions before using the machine



#### **CE** marking

The CE marking means "Communautés Européennes". It is the external symbol which states



that a product fulfils the requirements imposed on the manufacturer by the European Community. Only use with safety shoes (acc. to EN ISO 20345) Only use with work gloves Respiratory protection (EN 149:2001) Use protective clothing (acc. to EN 13982-1) Use protective glasses (acc. to DIN EN 166 1349-BT) Before starting work remove the plug from the wall socket! Disconnect before starting work While operating electrical machines, certain parts of them are inevitable alive dangerously or under mechanical stress. Hand injury warning sign! **Recycling symbol** This information must be observed in order to preserve the environment!



#### 1.3 General safety information



#### **WARNING**



While operating electrical machines, certain parts of them are inevitable alive dangerously or under mechanical stress.

- Due to their electrical and mechanical functional properties, machines can cause severe injuries and damage to property. This particularly applies in the event of incorrect use, operation or maintenance, or in the event of unauthorized interventions!
- All electrical work must be performed by a qualified electrician. All mechanical work must be carried
  out according to instructions (see Maintenance / Repair). The device may be operated only by
  qualified personnel who have read and understood the operating instructions.
- The operator must be provided with information, instructions and training on the materials to be absorbed, including a secure procedure for removal of the absorbed material, before use.
- All notes and data on the machines must be observed!
- Faultless and safe use of this machine includes correct transport and storage, as well as operation in accordance with regulations and careful maintenance!
- This device is not intended for being used by persons (including) with limited physical, sensory or mental skills or lack of experience and/or lack of knowledge except if they are supervised by a person responsible for their safety or were instructed in how to use the device by this person. Children should be supervised to ensure that they do not play with the device.
- Operation of the device is only permitted on underground sloping no more than 10° and with sufficient load-bearing capacity.



#### **CAUTION**



Only use with safety shoes (acc. to EN ISO 20345)

- Do not place any limbs between parts to be joined during assembly of the machine parts. When moving the parts, pull limbs from tightening spaces in time.
- Make sure that the power supply cord is not damaged by being run over, crushed, tugged etc.. Stop the industrial vacuum cleaner immediately if necessary!
- The power supply cord must be regularly inspected for signs of damage or ageing!
- Connectors of power supply cords must at least be splash-proof!
- Starting without a filter or with a damaged filter is not allowed
- The suction device must not be operated if wear is detected on fasteners or mounting brackets. Please arrange for a service immediately, or send the industrial vacuum cleaner for repair to:

Kärcher Industrial Vacuuming GmbH

Abt. Service Robert-Bosch-Straße 4-8 73550 Waldstetten

Tel: +49(0)7171-94888-523



# 2 Delivery, internal transportation, unpacking

#### 2.1 Delivery

Unload the scope of delivery on level ground with sufficiently sized industrial trucks.

#### 2.2 Internal transport

Transport scope of supply to the site of setup secured against movement or tipping with a sufficiently sized industrial truck.

The rotary current drive unit can be taken up at the attached ring screw for internal transport with a crane (observe carrying capacity of the lifting gear!).

Transport of the entire device by the ring screw is forbidden!

When removing the entire device after use of the machine, a protective clothing has to be worn.

Use the provided handles!



# 2.2.1 Dimensions and weight

		Packaging	
	Туре	D 3,0 kW	D 4,0kW
	L (mm)	1300	1300
	B (mm)	900	900
I	H (mm)	2300	2200
	Weight with packaging	approx 199	approx 218
B	(kg)		

## 2.3 Unpacking

Make sure that no components are left in the packaging.

Scope of delivery:

-Suction device

-Technical Manual

## 2.4 Packaging material

The packaging materials must be disposed of in accordance with the valid legal requirements.

Correct disposal of this product (electrical waste) (applicable in the countries of the European Union and other European countries with a separate collection system)

The identification on the product and on the associated literature states that it must not be disposed of along with normal domestic waste at the end of its service life. Please dispose of this device separately from other waste, in order to prevent damage to the environment or to human health through uncontrolled waste disposal. Please recycle this device, in order to promote sustainable reuse of material resources. Private users should contact the dealer from whom they purchased the product or the competent authorities, in order to find out how they can recycle the device in an environmentally-

friendly manner. Commercial users should contact their supplier. This product must not be disposed of along with other commercial waste.





# **Recycling symbol**

This information must be observed in order to preserve the environment!

#### 2.5 Storage conditions

## 2.5.1 Information for storage

Should the industrial exhauster not be operated for a longer period of time, so it has to be stored in dry, dust and vibrationless rooms. Temperature T: -10...+40°C

Humidity: max. 85%



# 3 Appliance description

#### 3.1 Intended Use

#### NOTICE

- This device, which has been delivered ready for operation, is designed as a dry vacuum cleaner for commercial and industrial applications e.g. in hotels, schools, hospitals, factories, shops, offices and rent transactions. It is particularly suitable for vacuuming up dust.
- Dedusting units are suitable for connection to dust-generating machines.
- Caution! This device is only meant for dry application and must not be used or stored outdoors under wet conditions!
- The machine may only be operated when all filters installed correctly and undamaged.



## **WARNING**

#### 3.1.1 Dust class "M"



Observe warning sign on the device!

- Dust class "M" contains dust class "L".
- The device is suitable for dusts hazardous to health and not flammable with workplace limit
   ≥0.1mg/m³ according to dust class M (max. permeability <0.1%) according to DIN EN
   60335-2-69 Annex AA:2010.</li>

#### 3.2 Non-Intended Use

#### **NOTICE**

- For all personal injuries and material damages, which are caused by a not -asdirecteduse, the operator and not the manufacturer of the machine is responsible for!
- May not be used outdoors!



#### WARNING

- This device is not suitable for taking up and extracting combustible dusts.
- This device is not suitable for taking up and extracting flammable liquids (flammable, highly flammable, highly flammable hazardous substances according to Directive 67/548/EEC)
   (Flash Point under 55°C) as well as mixtures of combustible dusts with flammable liquids.
- The vacuum cleaner is not approved for operation in potentially explosive areas!



#### DANGER

With improper use may cause explosion and fire!

## 3.2.1 Dust class "M"



Observe warning sign on the device!

- The device is not suitable for dust class H.
- The device is not suitable for carcinogenic hazardous substances purs. to GefStoffV §10, TRGS 905 or TRGS 906.
- The device is **not suitable** for **asbestos** pursuant to **TRGS 519**.

#### **NOTICE**

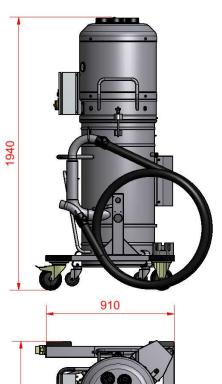
A device of build 22 is needed to extract flammable dust!



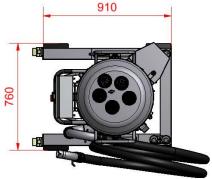
# 4 Layout and function

Kärcher industrial vacuum cleaners and mobile dust collectors are delivered in operational condition

# 4.1 Main dimensions







9900957-Z\_B

# 4.2 Technical Data

Weight	/30	/40
Manual vibrators	approx 145Kg	approx 164kg
Electric vibrators	approx 165Kg	approx 184Kg
Sound pressure level LpA Determined to EN 60335-2-69	65dB(A)	70dB(A)
Uncertainty KpA	2dB(A)	
Protective class	I	
ambient temperature	-15°C to +40°C	
intake temperature medium	max. +40°C	
Installation altitude	max. 1000m above sea level	



# 4.3 Technical Data /30 IE2

Power	3,0kW	3,45kW
Frequency	50Hz	60Hz
Hedging	16A	16A
Voltage/	200-260V / 11,4A Δ	230-290V / 10,8A Δ
power consumption	350-450V / 6,5A Y	400-500V / 6,2A Y
Pressure	-260 / +270mbar	-240 / +230mbar
Blower Output	315m³/h	375m³/h
Degree of protection	IP 55	
of efficiency	IE2-85,5	cosф 0,82

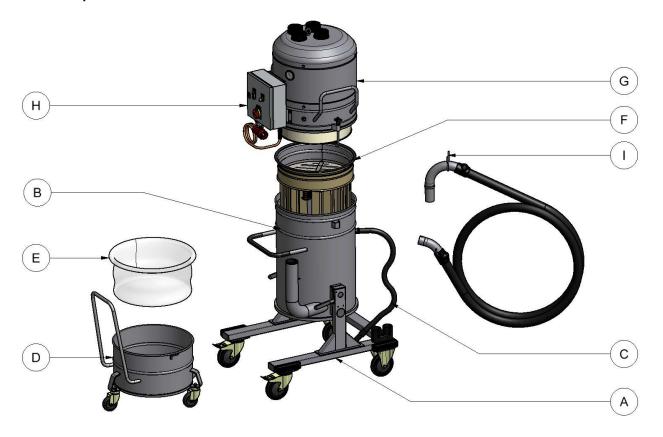
# 4.4 Technical Data /40 IE2

Output	4,0kW	4,6kW
Frequenz	50Hz	60Hz
Hedging	20A	20A
Voltage/	350-450V / 8,4A Δ	400-500V / 8,2A Δ
Power intake	610-725V / 4,8A Y	690-725V / 4,7A Y
Pressure	-140 / +130mbar	-80 / +80mbar
Air displacement volume	495m³/h	595m³/h
Protection type	IP	55
Efficiency	IE2-85,8	соѕф 0,88



# 5 Main components

## 5.1 Components



Α	Chassis
В	Filter container
С	Pressure equalization tube
D	Collecting container
Е	Round Bottom bag
F	Pocket Filter
G	Drive Unit
Н	Control cabinet
I	Suction unit

## 5.2 Function Description Industrial Extractor/deduster

The industrial extractor/deduster is a mobile device. A turbine in the drive unit generates a vacuum. The raw air is sucked in through the nozzle and the suction hose. Heavy particles drop directly down at the input into the collection container because of gravity. Smaller particles and dust are separated at the surface of the filter material when passing through the area filter. The pure air that was cleaned in this manner is blown back into the working room through the suction turbines and the muffler exhaust hose.

The cooling air for the suction turbines is sucked in at the aid inlets at the hood and flows along the motor. This heated air then escapes again into the working room at various air gaps at the hood.



#### 6 Initiation



Only use with safety shoes (acc. to EN ISO 20345)



#### **CAUTION**

#### 6.1 Connection to the electric mains

- · Check that the industrial vacuum cleaner is in correct condition before commissioning.
- Before connecting the industrial vacuum cleaner to the mains, make sure that the voltage specified on the typeplate matches the supply voltage.
- The industrial vacuum cleaner is set to clockwise rotating field at delivery.
- Connect the device cable plug to a socket installed with correct earthing. The industrial vacuum cleaner must be switched off!
- · Check correct connection between plug and socket.
- Only use industrial vacuum cleaners with mains cables in perfect condition (damaged cables can cause electric shocks!).
- Regularly check the mains lead for damage, cracks or cable wear.
- Always use the plug to remove the mains lead from the socket (do not use the cable itself).
- When replacing the mains lead, always replace it with a type that matches the original lead.
- The mains lead may only be replaced by the manufacturer or its customer service department, or a similarly qualified person.



#### WARNING

## 6.2 Before switching on, check:

- that all filters are correctly adjusted;
- that the collecting tank is correctly positioned beneath the filter unit and locked.
- that the suction tube and accessories are correctly connected;
- that the PE round bottom bag is inserted in the collecting tank.
- Do not use with defective or absent filtration system!

## 6.3 Switching the suction system on and off at the control cabinet

In manual mode, the suction system is switched on and off via the ON/OFF button. In automatic mode this is accomplished via a machine contact.

If the suction system does not function after it has been switched on, or runs in the wrong direction, it must be switched off, the plug must be removed from the socket and the technical specialist staff must be alerted.

### 6.4 Incorrect rotational direction

If the rotational direction is incorrect, drives with side-channel compressor convey the suction air in the inverse direction, i.e. an air current is discharged from the raw air suction nozzle of the suction system. The rotation monitoring prevents the wrong direction, the power is turned on. This is important if the unit does inserted mains can not be operated. If this is the case, the suction system must be switched off immediately, the mains plug removed from the mains socket and the technical personnel informed, so that the phase conductors in the mains lead can be reversed.



# 6.5 Potential equalization conductors

Before commissioning, always check that the potential equalization conductors (earthing conductors) are connected!



• Differential pressure switches are preset depending on the pipe / hose ø and length.



# 7 Operation

## 7.1 Operation



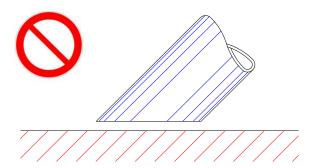
# **CAUTION**

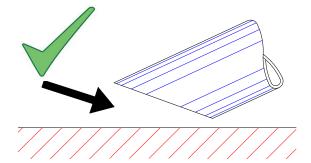
- Only operate the device with the parking brakes activated.
- Only move the device at walking speed. Act with care. In case of sloping paths, bring in a second person to help.

# 7.2 Suction process

#### **NOTICE**

- When vacuuming up dust only immerse halfway, so that sufficient air is absorbed
- Insert desired suction nozzle into the plug-in cone on the handle of the suction tube.





Do not **immerse** the entire area of the nozzle!

Hold the nozzle **diagonally** to the suction surface, so that both air and **liquid** are absorbed

## 7.3 Function description Kärcher control cabinets

TO STITLE OF THE	Main/emergency off switch	Switch to interrupt power supply, connection to the power supply for individually secured systems.
OFFICIAL TO MAY ARTICLE CONTROL OF THE CONTROL OF T	Main switch	Disconnects the system from power supply by switching to OFF.
NOT-AUS	Emergency off switch	Interrupts the power supply in emergency when pushed, until the switch is unlocked again.





# Selection switch Manual / Auto

Switch between manual mode and automatic mode.

#### Manual operation:

The plant functions can be started manually via buttons (e.g. start of turbine or filter cleaning)

#### Automatic operation:

All buttons are non-functional. The system is started remotely by a switching signal via a potential-free contact. Filter cleaning takes place programme-controlled.

#### 7.4 Button for manual mode



#### On/off switch turbine

In *manual mode*, the turbine may be manually started with the green button. The white lamp is now active. The turbine is stopped with the red button.

The switch has no function in automatic mode.



# Button "emptying flap hand"

In devices with electro-pneumatically actuated emptying flap, this can be opened and emptied with the button in *manual mode*.

The button has no function in automatic mode.



# **Button "Filter cleaning"**

Manual operation: Manual start of filter cleaning.

See chapter "Electrical filter cleaning".

Automatic operation: Button has no function.



# Button "Acknowledge fault"

After correcting a fault, the key must "Acknowledge fault" are pressed around the plant to operate again



# Button "Cell-wheel lock hand"

In devices with cell wheel lock, this can be turned with this button in *manual mode*.

The button has no function in automatic mode.



# 7.5 Indicator lamps

Steuerung Ein	Indicator lamp control voltage	The lamp indicates whether the control voltage of 24V is applied.
Indicator lamp		General display if something is wrong with the system (e.g. motor protection tripped, container missing). See chapter on troubleshooting.
Differenzdruck zu hoch	Indicator lamp "differential pressure too high"	Indicator lamp "differential pressure" lights up:  Version filter clogged:  If the pressure is too high, the indicator lamp lights up and the filter is clogged and needs to be cleaned or replaced.  Version pipe clogged:  The pipe or nozzle is clogged and must be cleared.  Version plant running:  No vacuum can be built (e.g. defective turbine, missing tank)
Turbi e Ein	Indicator lamp turbine ON	The lamp shows if the turbine is running
Zellradochleuse Ein	Indicator lamp cell- wheel lock ON	The lamp shows if the cell-wheel-lock is running



#### 7.5.1 Electrical filter cleaning

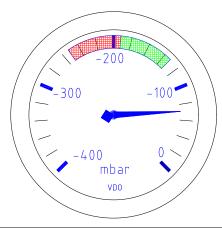


#### **CAUTION**

- · After disconnecting the turbine, the cleaning of the filter will be set off by the control system.
- Because of the slowing-down time of the turbine, the vibration process must only be started 1-2min after turn off.
- Wait approx. 30sec. for the dust to settle, before restarting the device.

#### 7.6 Minimum volume flow

The cleaner must be cleaned before the date specified in the table, depending on the suction hose cross-section.



Power	Tube-ø	Red-Green-transition
D1,5 kW	Ø DN 50	90mbar / 9kPA
D3,0 kW	Ø DN 50	80mbar / 8kPA
D4,0 kW	Ø DN 50	70mbar / 7kPA

#### 7.7 Time of dedusting

Cleaning must take place before the specified red/green transition in order to maintain adequate suction power. If the value is exceeded the air speed in the suction hose drops to below 20 m/sec. If the value cannot be significantly reduced the filter must be changed, or there may be a blockage in the hose or the pipeline!

# 7.8 Differential pressure switch (0040088) (optional)

Checks, if the differential pressure is too high due to the filter. In this case the pressure switch puts out a switch signal. If the filters are soiled too heavily, the differential pressure increases (bad suction power)! The switch signal is used for starting a dedusting cycle.

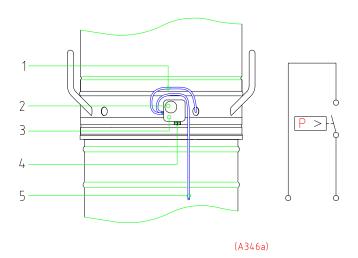




## Recommended adjustment:

ID-series	30-40 mbar
IVR-/ID-series	max. 100 mbar

- 1: testing wire 2 pure air side
- 2: setting wheel
- 3: pressure switch
- 4: electr. signal
- 5: testing wire 1 raw air side



# 7.9 Operation monitoring of the device with differential pressure switch (0040089) (Optional)

The differential pressure switch (2.5-50 mbar) checks if the system / device is in operation. The vacuum pressure in the interior of the vacuum cleaner which is created by operation is detected by the differential pressure switch and indicates that the system / device is in operation.



## Recommended settings:

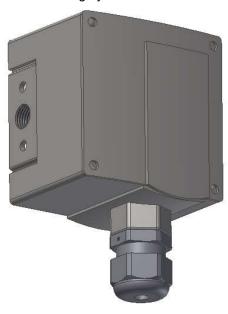
ID-series	2,5 mbar
IVR-/ID series	2,5 mbar



# 7.10 Filter monitoring differential pressure switch (0041130)(optional)

Checks if the differential pressure through the filters is too high and issues a switching signal in this case.

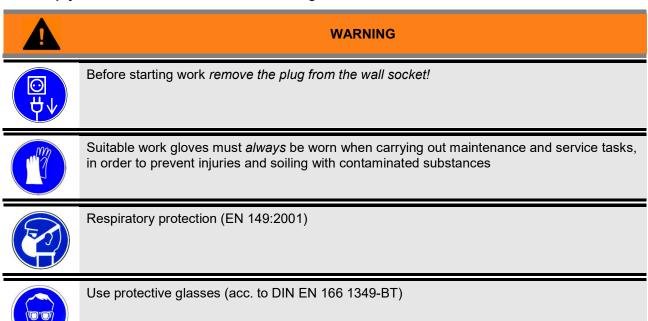
If the filters are too badly contaminated, the differential pressure will rise (bad suction performance!). The switching signal is used to start a cleaning cycle.



## Recommended settings:

RI-series	80 mbar
RA-series	80 mbar

## 7.11 Empty collection container with PE dust bag







Use protective clothing (acc. to EN 13982-1)

These work processes may only be carried out in compliance with the valid legal requirements and by trained specialized personnel with appropriate protective gear. Make sure that no dust is raised during these work processes. Wear protective mask P3. The disposal of the PE dust bag may only be carried out by trained personnel, in accordance with the valid regulations.



Before emptying the dust container, switch off the device and wait for the motor to stop. Additionally, the pocket filter "1" should be shaken off. Then wait for about 60 s until the dust has deposited in the collection container.

- Lower the dust container "3" with the lifting device "2" and pull it out.
- Activate suction system again to prevent dust from escaping from the filter container by vibration.
- Carefully pull the PE dust bag over the bead at the collection tank and close it tightly with cable ties "7" (not included).
- Remove PE dust bag "8" from the collection container.
- If required, clean the collection container and insert a new PE dust bag (see wear parts list); carefully push the edge over the bead at the collection container to avoid damage to the PE dust bag.
- Check the condition of the seal "5" at the filter container.
- Switch off the suction system, then place the collection container "3" under the filter container, while ensuring that you do not clamp in the pressure balancing hose "6", and lift with the lifting device "2".



# 8 Troubleshooting and fault elimination

## 8.1 Safety instructions



## **WARNING**



Before starting work remove the plug from the wall socket!

- Before work for troubleshooting is started, the parking brakes at the undercarriage must be activated.
- If harmful substances escape due to a defect (eg filter defect), the machinery must be switched off immediately and the room has to be aired or leave!
- Before starting any work on the industrial vacuum cleaner, but particularly before opening covers of live or moving parts, the industrial vacuum cleaner or system must be correctly disconnected from the mains and the drive unit must have stopped
- The measures specified below may only be withdrawn when the industrial vacuum cleaner is completely reassembled and the maintenance is concluded.
- The usual safety regulations are, for example, in accordance with VDE 0105:
  - Disconnect from mains
  - Provide a safeguard to prevent unintentional restarting
  - Check that the equipment is not live
  - Cover or shield adjacent live parts.

### 8.2 Initial fault elimination measures

All the errors mentioned in the table below may be eliminated by yourself. In case of major problems or other failures please contact the customer service

of Kärcher Industrial Vacuuming GmbH immediately. Tel. +49(0)7171-94888-0

Perform maintenance tasks in accordance with the description in the Maintenance/Servicing chapter

Interference	Possible cause	Remedy
Reduced suction power	<ul> <li>Extraction hose or nozzle clogged</li> <li>Extraction hose leaking</li> <li>Extraction hose not fitted correctly in extraction socket</li> <li>Collection container full</li> <li>Area filter/pocket filter contaminated</li> <li>Seal between drive unit and collection container defective</li> <li>Extraction turbine defective</li> </ul>	<ul> <li>Remove clogging</li> <li>Replace hose</li> <li>Insert hose correctly</li> <li>Empty collective container</li> <li>Clean or replace filter</li> <li>Clean or replace seal</li> <li>Replace suction turbine by electrician</li> </ul>
Device not running	Rotary field monitoring reports motor was turning in the wrong direction	Inspection by electrician/phase run
Extraction motor is not running correctly	<ul><li> 2 phase run</li><li> Motor protection switch has triggered</li><li> Fuse triggered</li></ul>	Inspection by electrician
Fuses trigger	<ul><li>Fuse too low</li><li>Defective switch</li><li>Defective motor</li></ul>	Inspection by electrician





Motor runs too hot	<ul> <li>Cooling air volume too low, cooling air paths clogged</li> <li>Mains voltage deviates from the rated motor voltage by more than 5%</li> <li>Motor switched to triangle instead of star</li> </ul>	<ul> <li>Ensure uninhibited supply and exit of cooling air</li> <li>Inspection by electrician</li> </ul>
Warning signal sounds	Flow speed dropped under 20m/s     Differential pressure too high	<ul><li>Clean pocket filter</li><li>Pipe/hose clogged</li><li>Pipe cross-section too large</li></ul>



# 9 Maintenance/Repair

## 9.1 Maintenance regulations

#### NOTICE



Suitable work gloves must *always* be worn when carrying out maintenance and service tasks, in order to prevent injuries and soiling with contaminated substances



Before starting work remove the plug from the wall socket!



Respiratory protection (EN 149:2001)



Use protective glasses (acc. to DIN EN 166 1349-BT)



Use protective clothing (acc. to EN 13982-1)



Only use with safety shoes (acc. to EN ISO 20345)

- Careful and periodical inspections and maintenance works are necessary to enable an early detection and elimination of possible errors before they cause bigger problems and damages.
- Kärcher Industrial Vacuuming GmbH assumes liability and guarantee only in case of proper use and compliance with the following maintenance instructions.
- The operational reliability of the industrial vacuum cleaner can only be maintained if original or approved spare parts are used exclusively for all maintenance and repairs.
- For maintenance by the user the device must be disassembled, cleaned and maintained, as far as
  practicable, without causing danger for the maintenance personnel or other people. Appropriate
  precautions include cleaning before disassembly, providing for filtered forced venting in the location
  where the device is disassembled, cleaning the maintenance area and wearing suitable personal
  protective equipment.
- The manufacturer or a trained person must carry out a technical inspection at least once a year, which comprises, for example, inspection of the filters for damage, checking the machine for leaks and checking correct functioning of the control device.
- When performing maintenance or repair work, all contaminated objects which cannot be satisfactorily
  cleaned must be disposed of. Such objects must be disposed of in impervious bags, in compliance
  with the valid regulations for the elimination of such waste. All machine parts must be considered
  contaminated when removed from the hazardous area, and appropriate measures must be taken to
  avoid dust distribution.
- For machines in category "H" and "M" the outside of the machine should be vacuumed and wiped clean or treated with sealants, before being removed from the hazardous area.
- · When replacing or repairs the facility all earth conductors are connected again!







#### **WARNING**

- These works may only be carried out by an electrician.
- Before starting any work on the industrial vacuum cleaner, but particularly before opening covers of live or moving parts, the industrial vacuum cleaner or system must be correctly disconnected from the mains and the drive unit must have stopped
- The usual **safety regulations** are, for example, in accordance with **VDE 0105**:
  - Disconnect from mains
  - Provide a safeguard to prevent unintentional restarting
  - Check that the equipment is not live
  - Cover or shield adjacent live parts.

#### 9.2 Maintenance intervals table

Interval (for 1-shift operation)	Check	Maintenance work
daily	Pocket filter	Manually shake off by shaker device
	Collection container	empty
weekly	Pressure balancing hose tightness/clogging (see List of wear parts)	replace/clean
	Seal between drive unit and collection container (see List of wear parts)	clean/replace
monthly	Suction hoses (see List of wear parts)	visual inspection
annually	Suction turbine: Bearing noise	Replace bearings if neccessary
	Drive unit Bag filters (see List of wear parts) Filter foam	BGV A3 inspection clean/replace replace

#### **NOTICE**

#### 9.3 Cleaning

Dust on the appliance must be avoided and must be removed by regularly cleaning.

Before cleaning the device, be sure to switch off the motor protection switch and unplug the device from the power supply. Cleaning can take place with a damp cloth or a suitable industrial vacuum cleaner. Do not use solvents such as thinner, alcohol or benzene. Never immerse the device in water.



## 9.4 Disassembly of the suction turbine

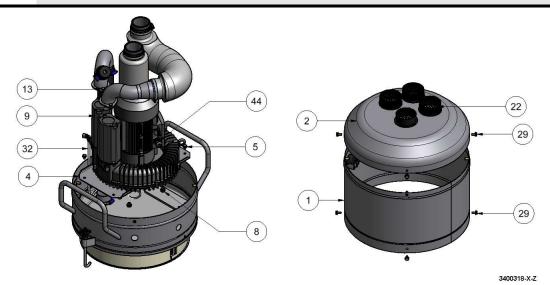


#### **WARNING**

- These works may only be carried out by an electrician.
- Before any work near or at the extraction turbine, let its surface cool down to below 50°C or wear safety gloves and work protection clothing that isolate against the arising temperatures.



Before starting work remove the plug from the wall socket!



### **Preparations:**

- Set down drive unit on suitable surface in the position displayed.
- Screw off threaded nuts (22).
- Loosen hexagon screws (29) and remove hood (2).
- Remove pneumatic hose (32).
- Loosen hexagon screws (29) and remove interim washer (1).

#### **Turbine removal:**

- Disconnect electrical connections (44).
- Remove flange-connected hoses by hexagon screw (13).
- Loosen hexagon screws (5).
- Lift out turbine (9) with bracket (4).
- · Loosen hexagon screws (8).
- Assembly occurs in the inverse order.



## 9.5 Disassembly of the bag-type filter

#### **NOTICE**



Before starting work remove the plug from the wall socket!



Suitable work gloves must *always* be worn when carrying out maintenance and service tasks, in order to prevent injuries and soiling with contaminated substances



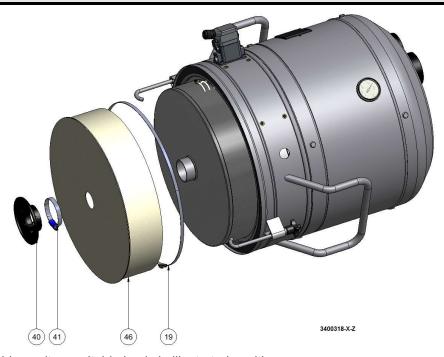
Respiratory protection (EN 149:2001)



Use protective glasses (acc. to DIN EN 166 1349-BT)



Use protective clothing (acc. to EN 13982-1)



- · Place drive unit on suitable basis in illustrated position,
- Loosen clamping belt (41) and remove with the small baffle plate (40).
- Take off clamping belt (19), observe correct seat during assembly.
- Surface filters (46) remove and seal it in a bin liner.
- · Accumulated dirt on the clean air side with a damp cloth to remove
- Install new filter surface (46) (see wear parts list).
- · Assembly occurs in the inverse order.



## 9.6 Changing the filter cloth for the bag-type filter



#### **WARNING**



Before starting work remove the plug from the wall socket!



Suitable work gloves must *always* be worn when carrying out maintenance and service tasks, in order to prevent injuries and soiling with contaminated substances



Respiratory protection (EN 149:2001)



Use protective glasses (acc. to DIN EN 166 1349-BT)



Use protective clothing (acc. to EN 13982-1)

- At the work it is absolutely necessary to wear personal protection equipment (single-way suits, protecting mask and protective goggles)!
- The contaminated filter must be disposed of in closed plastic bags in compliance with the valid regulations for the elimination of such waste.
- · Do not raise any dust during these work processes!
- · While carrying out this work, an endangering of other persons must be ruled out!
- Replacing the filter is an important procedure. It must be replaced with another filter which has the same attributes, the same fineness, the same filter area, and which belongs to the same category.



#### 9.6.1 Work steps for pocket filter change

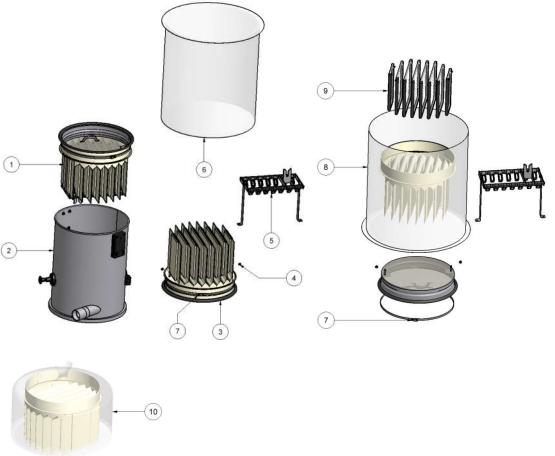
• (1) Remove bag-type filter insert complete from (2) filter case.

# Removing the filter cloth:

- (3) Place on a suitable flat surface with perforated plate side down,
- (4) Loosen hexagon nuts, (5) Remove spacer grille with leaf springs,
- (6) Put impervious plastic bag over soiled filter cloth,
- (7) Loosen retaining band,
- (8) Raise filter cloth together with plastic bag 200mm, rotate by 180° and place on a flat surface,
- (9) Remove spacer frame from individual pockets of filter cloth,
- (10) Seal plastic bag with filter cloth inside tightly and ensure correct disposal.
- Replace filter foam
- Clean remaining parts for re-use.

#### Fitting the filter cloth:

- Insert spacer frame into new filter cloth (see wear parts list)
- Insert new filter foam
- Rotate filter cloth with spacer frame by 180° and position on filter insert,
- Fix retaining band over the filter cloth in the area of the bead,
- Mount spacer grille with leaf spring, align pockets of filter cloth with holes on spacer grille.





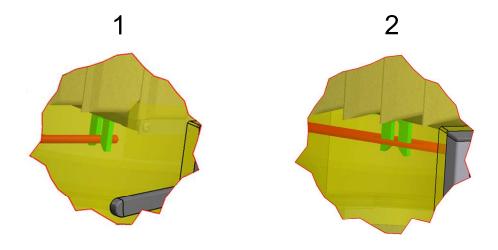
• At installation, in particular correct position of the fine dust pocket filter in the pre-separator container must be observed!

# At manual filter shaker:(1)

The tab at the filter insert must be inserted into the shaft.

# At electric filter shaker:(2)

The tab at the filter insert must be inserted into the recess





## 9.7 Circuit diagram for systems with control unit

Please note separate circuit diagram! The respective documents are located in the switch cabinet

## 9.8 Warnings on the suction device

## 9.8.1 Warning sign for devices in class "M"

Attention: This device contains harmful dust. Emptying and maintenance procedures, including the disposal of dust collectors, may only be performed by expert personnel wearing the appropriate protective equipment. Do not operate without the complete filtration system.



#### 9.8.2 Identification: Dust collectors of type 22



No suck in glowing dust or other ignition sources

### 9.8.3 Rotational direction identification





# 9.9 Wear parts list

Figure	Designation	Order number
	Seal 30x6	0450018 9.980-354.0
	Filter cloth for pocket filter 3,2 m² category "M" antistatic	2350116
	Pressure compensation tube type A ø25, 1300mm	2630267
	Round-floor bag PE 50 litres	1631021
	Area filter 0.45m², category "L", antistatic	0350107

<sup>\*</sup>specify length when ordering



# 10 Decommissioning, storage



#### **WARNING**

- · Switch the device off and remove the mains plug from the mains socket.
- Roll up the connection cable.
- Empty the collecting tank, in accordance with the instructions in the chapter "Operation, Control".
- Cleaning of the device as specified in the chapter "Maintenance, Repair".
- When vacuuming up aggressive substances, rinse out the tank with clean water.
- Store the device in a dry place and out of reach of unauthorized personnel.
- "ATTENTION" This product should be kept indoors only!



# 11 Disposal



### **WARNING**

- · Note preceding chapter "Decommissioning, Storage"!
- The filter inserts must be disposed of separately in accordance with environmental standards, depending on the medium vacuumed up.

Dispose of the device in accordance with the valid legal regulations.



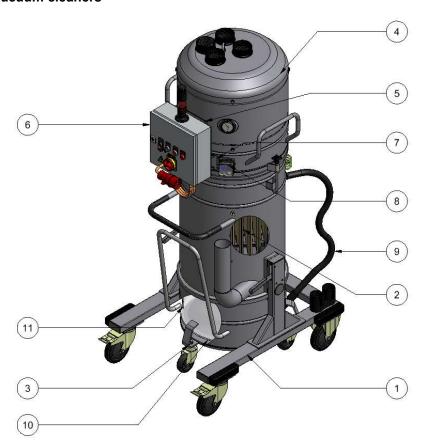
Correct disposal of this product (electrical waste) (applicable in the countries of the European Union and other European countries with a separate collection system)

The identification on the product and on the associated literature states that it must not be disposed of along with normal domestic waste at the end of its service life. Please dispose of this device separately from other waste, in order to prevent damage to the environment or to human health through uncontrolled waste disposal. This product must not be disposed of along with other commercial waste.



# 12 Spare Parts List

#### 12.1 Industrial vacuum cleaners

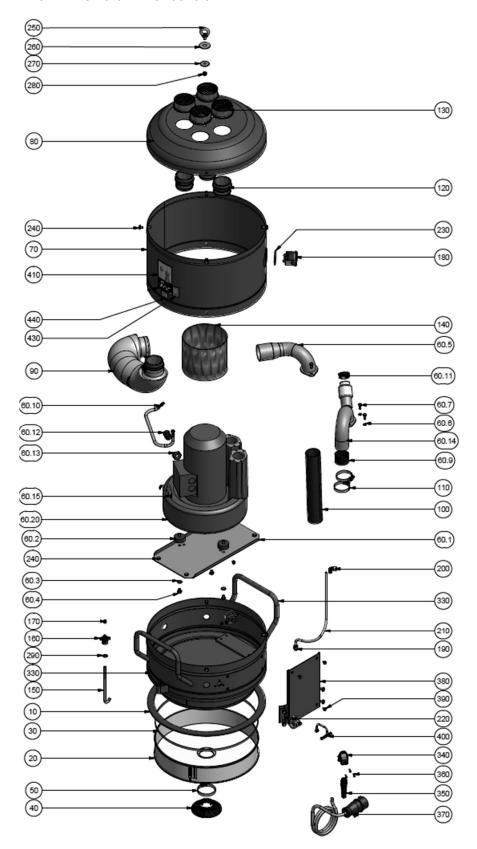


## 12.2 Industrial vacuum cleaners

Item	Qty.	Unit	Component number	Version	DESIGNATION
1	1	piece	2201096		Chassis 910 mm with FB 750mm, f. 50 Liter SB (RI 334), without Drive Unit, and pocket filter
2	1	piece	2351013	В	Pocket Filter 3,2 m², cat. "M" (C) as, PTFE
3	1	piece	2100119	В	Collecting Tank 50 Liter, mobile, for chassisl Typ III (RI 331)
4	1	piece	3401059		Drive unit 1,5 kW IE2 with console for control
5	1	piece	1210268	D	Adapter plate 300 x 300 mm for console ArtNo. 1210223
6	1	piece	2981249		Control cabinet 300x300x120
7	1	piece	0211082	А	Console screwable, for differential pressure switch
8	1 1	piece piece	0040088 0040089	A A	Differential pressure switch 30-150 mbar Differential pressure switch 2.5-50 mbar
9	1	piece	2630267	С	Pressure equalization tube for RI devices, Typ "A", ø25
10	1	piece	1631021		Round-bottom bag PE, 50 Liter
11	1	piece	0250208	В	Downholder for 50 ltr. Round bottom sack



## 12.3 Drive Part IE2 for control





#### 12.4 Drive Part IE2 for control

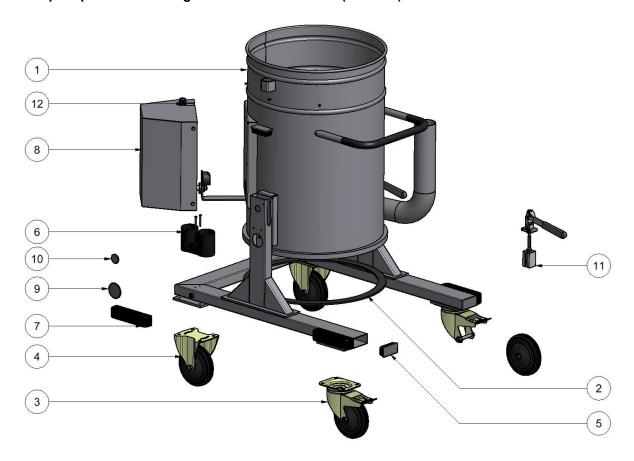
Item	Qty.	Unit	Component number	Version DESIGNATION	
10	1	Piece	0450018		Seal 30 x 6
20	1	Piece	0350107		Area filter 0.45m², cat. "L", antistatic
30	1	Piece	0050036		Hose clamp with look ø60 - 540 mm
40	1	Piece	0700206		Small baffle plate, ø137 mm, plastic, conductive
50	1	Piece	0050006		Hose clamp ABA ø60-80 mm
60.1	1	Piece	1211112		console drive unit D 1,5 - 4 kW, lacquered
60.2	3	Piece	0450031		Rubber metal buffer type B, ø50, h=20 mm, M10x15
60.3	3	Piece	0010723		spring washer ø10 DIN127 Form A, zinc-plated
60.4	3	Piece	0010181		Hexagon screw M10x12 DIN 933-8.8 zinc-plated
60.5	1	Piece	1490035	Α	Pipe bend D3.0 with oval flange for rotary current drive part
60.6	4	Piece	0010720		spring washer ø8 DIN127 Form A, zinc-plated
60.7	4	Piece	0010124		Hexagon screw M8x20 DIN 933-8.8 zinc-plated
60.8	1	Piece	1330113	D	Pressure limitation valve 1¼ " 220 mbar AAC01125
60.9	1	Piece	0450045		Hose piece C - hose
60.10	1	Piece	0040303	Α	Cable with ring eyelets size 4, 4x2.5 meas. 1.5m long
60.11	1	Piece	1091001		Round pipe cap with bore ø16
60.12	1	Piece	0040350		Cable screws Skintop St, M25x1.5, black
60.13	1	Piece	0040351		Reduction piece 32/25, Skindicht KU-M
60.14	1	Piece	1490106	E Pipe bend 180° with oval flange	
60.15	1	Piece	1040595		Earthing cable 6², green yellow, 600mm long, complete with ring cable lug 2x
60.20	1	Piece	0401017		Side channel condenser IE2; 1,5kW; 400V, 50Hz, VSC0210-1MP151-6
	1	Piece	0401015		Side channel condenser IE2; 3kW; 400V, 50Hz, VSC0315-1MP301-6
	1	Piece	0401031		Side channel condenser IE2; 4kW; 400V, 50Hz, VSC0495-2PP401-7
70	1	Piece	1461037		Interim ring D1,5-3kW with print a. bore mm for manometer laquered
80	1	Piece	1441128		Hood 1,5/3,0 kW for rotary-current drive laquered
	1	Piece	1441129		Hood 4,0 kW for rotary-current drive laquered
90	1	Piece	2600289		Muffler blow-out hose ø 76 x 800 mm, grey
100	1	Piece	0601019		Wyrem hose ø63mm for 1.5kW / 3.0kW drive part, 400mm
110	2	Piece	0050001		Hose clamp ABA ø50-70mm
120	3	Piece	0120108	В	Threaded piece 2 3/4" for blow-out, conductive
130	4	Piece	1120107	В	Threaded nut 2 3/4" with screen
140	1	Piece	0441135		Cooling air suction plastic only for 1,5kW
	1	Piece	0601018		Cooling air suction muffler, 280mm long, only for 3kW und 4kW
150	2	Piece	0240203	D	Retention rod for closure 2240207
160	2	Piece	0090094	В	Cross-handle nut of PA with threaded insert M10
170	2	Piece	0090032		Plastic slider f. pipe outer ø8 mm
180	1	Piece	2330108	С	Vacuum meter 0 - 400 mbar
190	1	Piece	058_186099		Plug-in screw connection 1/4", QS-G1/4-8, straight



200	1	Piece	058_153277		L-plug-in screw connection QSLF 1/4-8
210	0,600	Meter	058_197378		Pneumatic hose PUN-8x1,25-NT
220	3	Piece	1040595		Earthing cable 6², green yellow, 600mm long, complete with ring cable lug 2x
230	1	Piece	0450102		O-Ring ø53x3
240	16	Piece	0010213		Rib screw M8x12 DIN 267
250	1	Piece	0010031		Ring screw DIN 580-M10, zinc-plated
260	1	Piece	0010738		Disc DIN 9021 - 17 x 50 x 3 zinc-plated
270	1	Piece	0010713		Mudguard, ø40 x 10.5 x 2 mm zinc-plated
280	1	Piece	0010411	А	Safety nut M10, DIN985 zinc-plated, with polyamide insert
290	2	Piece	0010704	Α	U-Disc ø10,5 DIN125 B, zinc-plated
330	1	Piece	1421009	А	Blower bottom 1,5 - 4 kW kpl. with handles, lacquered
340	1	Piece	0041219		Helu HSSV-KF folding-flat bolt M20x1,5 with seal
350	1	Piece	0040414		cable gland with Guard spiral, BS-M20 x 1,5 black
360	3	Piece	0010286		cylinder screw ISO 4762 - M4x16
370	1	Piece	0040133		8,2m cable H07BQ-F 4x2.5² orange, with 16A Cekon plug, for 1,5kW and 3kW
	1	Piece	2041040		8,2m cable H07BQ-F 4x2.5² orange, with 32A Cekon plug, for 4kW
380	1	Piece	1210223	Н	Console for control cabinet, Maße: 200 x 300 mm
390	4	Piece	0010216		Ribbed screw M6x10 DIN 267
400	1	Piece	2040327		ground wire 6 <sup>2</sup> , green yellow, 150mm long complete with nuts und discs
410	1	Piece	0430144		shield safety note crane transport, language- neutral
420	1	Piece	0431006		type plate, silver, dimensions: 88x53 mm (empty Formular)
430	1	Piece	0430174		Sticker "Next inspection" CE-sign dimensions 36x53
440	1	Piece	0430164		Sticker "Service Hot Line" dimensions 40x30



# 12.5 Spare parts list/drawing chassis with filter tank (2201096)



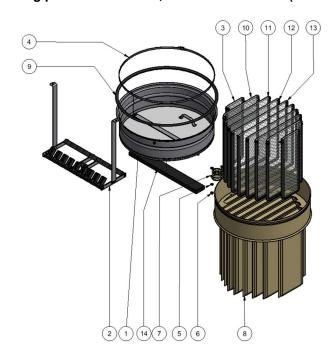
## 12.5.1 Spare parts list/drawing chassis with filter tank (2201096)

Item	Qty.	Unit	Component number	Version	DESIGNATION
*1	1	Piece	1201095		Chassis 910 mm with filter tank 750mm, f. 50 litres SB
2	1	Piece	0450018		Seal 30 x 6
3	2	Piece	2220001	В	Caster ø160 mm with stop, black
4	2	Piece	2220002	В	Block roll ø160 mm, full-rubber propeller black
5	4	Piece	0090016		Plastic glider 80x40
6	2	Piece	0211033		Nozzle holder DN40/50
7	4	Piece	0250118	В	Skirting board for chassis
8	1	Piece	2380187		Electrical filter cleaning, no switching cabinet
9	2	Piece	0090040		Cover for bore ø53 (GPN 910/715)
10	2	Piece	0090100		Cover for bore ø27 (GPN 910/3043)
11	2	Piece	2240135	Α	Lifting device
12	1	Piece	0040376		Cable screw connection Skintop St, M20x1.5, black

<sup>\*</sup>not purchasable



# 12.6 Spare parts list/drawing pocket filter 3.2m², Kat. "L" as / "L" as (2350202/2350115)

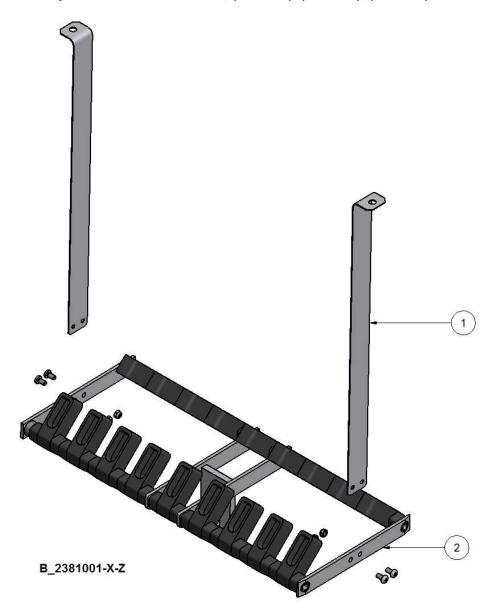


## 12.7 Spare parts list/drawing pocket filter 3.2m², Kat. "L" as / "L" as (2350202/2350115)

Item	Qty.	Unit	Order number	Component number	Version	DESIGNATION
1	1	Pc	9.980-843.0	0700104	E	Pocket filter insert 1.75m² /3.2 m² /5,2m²
2	1	Pc	9.978-051.0	2381001		Spacer rake for 3.2m² pocket filter
3	2	Pc	9.980-240.0	0350334		Spacer mat 130 x 390 mm
4	1	Pc	9.979-980.0	0050036		Clamping belt with lock ø60 - 540 mm
5	3	Pc	9.979-803.0	0010702		U-washer ø8.4 DIN 125 B, zinc- plated
6	2	Pc	9.979-797.0	0010406		Retention nut M8, DIN985 zinc- plated, with polyamide insert
7	1	Pc	9.980-919.0	1040595		Earthing cable 6², green-yellow, 600mm long, complete with cable lug 2x
8a	1	Pc	9.981-693.0	2350199	Α	Filter cloth 3.2 m², cat. "L" as
8b	1	Pc	9.981-684.0	2350116	Α	Filter cloth 3.2 m², cat. "M" as
9	1	Pc	9.982-986.0	0451079-05		U-profile sealing ring, oil resistant, for pocket filter and float system ø517mm
10	2	Pc	9.980-241.0	0350335		Spacer mat 260 x 390 mm
11	2	Pc	9.980-242.0	0350336		Spacer mat 335 x 390mm
12	2	Pc	9.980-243.0	0350337		Spacer mat 375 x 390mm
13	2	Pc	9.980-244.0	0350338		Spacer mat 410 x 390mm
14	1	Pc	9.988-447.0	0471079		Filter foam for pocket filter, quality PPI 10



## 12.8 Spacer rake for pocket filter 1.75/3.2/5.2m², (2381000), (2381001), (2381002)



## 12.9 Spacer rake for pocket filter 1.75/3.2/5.2m², (2381000), (2381001), (2381002)

Item	Qty.	Unit	Order number	Component number	Version	DESIGNATION
1	2	Piece	9.980- 321.0	0410106	А	Leaf spring for 1.75 m² filter, bronzed surface
	2	Piece	9.980- 320.0	0410105	Α	Leaf spring for 3.2 m² filter, bronzed surface
	2	Piece	9.975- 841.0	0410124	Α	Leaf spring for 5.2 m² filter, bronzed surface
2	1	Piece	9.981- 712.0	2380107	Α	Spacer rake for 1.75m <sup>2</sup> / 3.2m <sup>2</sup> / 5.2m <sup>2</sup> pocket filter



# 12.10 Spare Parts List/Drawing Collection Container (2100119)



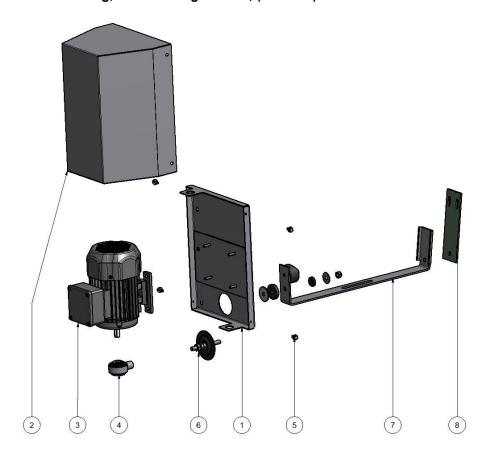
12.10.1 Spare Parts List/Drawing Collection Container (2100119)

Item	Qty.	Unit	Component number	Version	DESIGNATION
*1	1	Piece	1100303	С	Collection container 50 litres with socket ø25
2	3	Piece	2220024	В	Caster ø100 mm without stop
3	3	Piece	0010704	Α	U-washer ø10.5 DIN 125 B, zinc-plated
4	3	Piece	0010430		Cap nut M10 DIN 1587, zinc-plated
5	3	Piece	0010134		Hexagon screw M10x25 DIN 933-8.8, zinc-plated
6	1	Piece	0090083	Α	Plastic slider f. pipe outer ø 25mm, black

<sup>\*</sup>not purchasable



# 12.11 Electrical filter cleaning, no switching cabinet, (2380187)

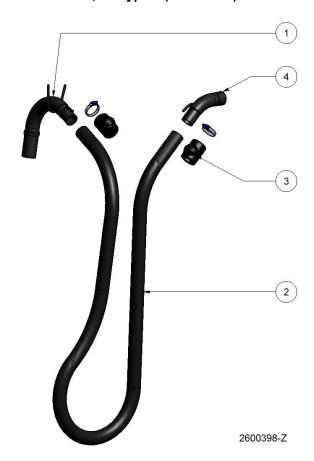


## 12.12 Electrical filter cleaning, no switching cabinet, (2380187)

Item	Qty.	Unit	Order number	Component number	Version	DESIGNATION
1	1	Piece	9.980-344.0	0440155	С	Base plate for shakers
2	1	Piece	9.980-339.0	0440131	С	Cover hood for shaker
3	1	Piece	9.980-294.0	0400147	Α	Shaker motor 0.18 kW, build B3
4	1	Piece	9.981-696.0	2350235	С	Excenter with eye, short stroke 6 mm
5	4	Piece	9.974-143.0	0010183		Rib screw M6x12, DIN 267
6	1	Piece	9.981-686.0	2350146	С	Shaker guide with rubber plate and threaded rod,
7	1	Piece	9.981-054.0	1380166	F	Shaker bracket with rubber metal buffer
8	1	Piece	9.980-190.0	0350145	В	Rubber tissue tape 190 x 60 x 4 mm,



## 12.13 Spare Parts List Suction hose DN 50, all Types (2600398-Z)



12.13.1 Spare Parts List Suction hose DN 50, all Types (2600398-Z)

Item	Qty.	Unit	Component number	Version	DESIGNATION	
1	1	piece	0490098	G	Push-in connection bow 115° DN50 black	
2	1	piece	1600118		Spare hose DN50 Type "A", 3m	
			1600119		Spare hose DN50 Type "A", 5m	
			1600109		Spare hose DN50 Type "C", 3m	
			1600110		Spare hose DN50 Type "C", 5m	
			1600112		Spare hose DN50 Type "D", 3m	
			1600113		Spare hose DN50 Type "D", 5m	
			1600474		Spare hose DN50 Type "E", 3m	
			1600258		Spare hose DN50 Type "E", 5m	
			0600454		Spare hose DN50 Type "F as", 3m	
			0600455		Spare hose DN50 Type "F as", 5m	
			0600281		Spare hose DN50 Type "G", 3m	
			0600282		Spare hose DN50 Type "G", 5m	
3	1	piece	2050039		Mounting set for hose connection DN50 ( DBP )	
4	1	piece	0490099	С	Handle 45° with hose connection piece DN 50, black	

if necessary the use of the reducing 0480276 from DN 70 to DN 50/40 is necessary.





# 12.13.2 Spare Parts List Suction hose DN 70, all Types



12.13.3 Spare Parts List Suction hose DN 70, all Types

Item	Qty.	Unit	Component number	Version	DESIGNATION
1	1	Piece	1490040	В	Insertion bend 90°, DN 70 black
2	1	Piece	1480447	Α	Hose connection piece with outer cone DN 70
3	1	Piece	1480446	Α	Hose connection piece with inner cone DN 70
4	1	Piece	1600440		Hose DN70 type "A", 3m long
			1600441		Hose DN70 type "A", 5m long
			1600124		Hose DN70 type "C", 3m long
			1600125		Hose DN70 type "C", 5m long
			1600260		Hose DN70 type "D", 3m long
			1600261		Hose DN70 type "D", 5m long
			1600128		Hose DN70 type "E", 5m long
5	1	Piece	2050048	Assembly kit hose connection DN70 ( DBF	
6	1	Piece	0490101	В	Handle DN 70, bent 45° black
7	1	Piece	0090008	В	Star handle E40 x M8



#### **12.14 Accessories List**

Image	Designation	Connection size (order)
		DN 40 (1610115)
	Elastic nozzle	DN 50 (1610116)
		DN 70 (1610117) *
The same of the sa		DN 40 (1610118)
The state of the s	Flexible nozzle	DN 50 (1610119)
		DN 70 (1610120) *
	Flexible grooves nozzle	DN 40 (1610121)
	13mm	DN 50 (1610123)
		DN 40 (2610456)
	Extension tube	DN 50 (2610150)
		DN 70 (2610151) *
	Floor nozzle 370mm	DN 40 (2610106)
	FIOOT HOZZIE 3/UHIM	DN 50 (2610108)

Additional accessories can be found on the website of the company Kärcher Industrial Vaccuming GmbH or in the accessories catalog.

<sup>\*</sup> Accessories size not available for all devices



### 13 EEC-Declaration of Conformity

# EC Declaration of Conformity in accordance with the Machinery Directive 2006/42/EC Appendix II 1A

The product described below:

This declaration shall cease to be valid if the machine is modified without our prior approval.

Designation: Deduster

Type: ID 30/30 Afc, ID 50/40 Afc

Serial number: 998xxxxxxxxxx Year of build: 09.2024

produced by:	Kärcher Indus Robert-Bosch D 73550 Wald		Person authorized for the compilation of technical documents
	Tel: Fax: e-mail:	+49(0)7171-94888-0 +49(0)7171-94888-28 info.iv@de.kaercher.com	Alexander Haag Dept.: Design/Construction Robert-Bosch-Straße 4-8 D 73550 Waldstetten

complies with the following EC directives:

EC Directive (2006/42/EC) Low-Voltage Directive (2014/35/EU)

EMC Directive (2014/30/EU)

The following harmonized standards were applied:

DIN EN ISO 13857 Safety of machinery; Safety distances to prevent upper and lower

limbs coming into contact with danger points

DIN EN ISO 13854:2020-01 Safety of machinery; Minimum distances to avoid crushing of body

parts.

DIN EN 60335-2-69 Special requirements for vacuum cleaners and water suction

devices for industrial and commercial purposes.

A. Haag

Director R&D

Waldstetten, 19.09.2024

T. Wahl Managing Director