



Clemas & Co Ltd

Industrial Cleaning Equipment
Sales - Hire - Service

S2B WET & DRY VACUUM CLEANER OPERATOR MANUAL



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Instructions for use

Read the operating instructions and comply with the important safety recommendations identified by the word **WARNING!**

Operator's safety



WARNING!



Before starting the vacuum cleaner, it is absolutely essential to read these operating instructions and to keep them on hand for consultation.

The vacuum cleaner can only be used by people who are familiar with the way it works and who have been explicitly authorised and trained for the purpose. Before using the vacuum cleaner, the operators must be informed, instructed and trained on how to work it and for which substances its usage is permitted including the safe method for removing and disposing of the vacuumed material.



WARNING!

The use of vacuum cleaner by people (including children) with limited physical and mental capacities or lacking in experience and knowledge is strictly forbidden, unless they are supervised by a person who is experienced in the use and safe handling of the machine.

Children must be supervised to make sure they will not play with the vacuum cleaner.

General information for using the vacuum cleaner

Use the vacuum cleaner in accordance with the laws in force in the country where it is used.

Besides the operating instructions and the laws in force in the country where the vacuum cleaner is used, the technical regulations for ensuring safe and correct operation must also be observed (Legislation concerning environmental and labour safety, i.e. European Union Directive 89/391/EC and successive Directives).

Do not perform any operation that could jeopardize the safety of people, property and the environment.

Comply with the safety indications and prescriptions in this instruction manual.

Proper uses

This vacuum cleaner is suitable for commercial use, in hotels, schools, hospitals, factories, shops, offices and apartment hotels for example, for hire and in any case for purposes other than normal domestic use.

This vacuum cleaner is suitable for cleaning and vacuuming solid materials in indoor and outdoor environments.

- Always leave enough room around the vacuum cleaner to reach the controls easily.

The vacuum cleaner has been designed to be used by one operator only.

This vacuum cleaner consists of an automated vacuum unit, with a filter upstream and a container for collecting the vacuumed material.

Improper Use



WARNING!

The following use of the vacuum cleaner is strictly forbidden:

- *Outdoors in case of atmospheric precipitation.*
- *When not placed on horizontal levelled grounds.*
- *When the filtering unit is not installed.*
- *When the vacuum inlet and/or hose are turned to parts of the human body.*
- *Use without the cover on the vacuum unit.*
- *When the dust bag is not installed.*
- *Use without the guards, protective covers and safety systems installed by the manufacturer.*
- *When the cooling vents are partially or totally clogged.*
- *When the vacuum cleaner is covered with plastic or fabric sheets.*
- *Use with the air outlet partially or totally closed.*
- *When used in narrow areas where there is no fresh air.*
- *Vacuuming liquids with vacuum cleaners not equipped with specific original stopping systems.*
- *Vacuuming the following materials:*
 1. *Burning materials (embers, hot ashes, lit cigarettes, etc.).*
 2. *Naked flames.*
 3. *Combustible gas.*
 4. *Flammable liquids, aggressive fuels (gasoline, solvents, acids, alkaline solutions, etc.).*
 5. *Explosive dust/substances and/or ones liable to ignite in a spontaneous way (such as magnesium or aluminium dusts, etc.).*

IMPORTANT: *Fraudulent use is not admitted.*

Versions and variations

Versions

Optional

LIQUIDS

This vacuum cleaner can be equipped with liquids mechanical stop.

EC Declaration of conformity

Every vacuum cleaner comes with a EC Declaration of conformity. See fac-simile in fig. 13.

[NOTE]

The Declaration of conformity is an important document and should be kept in a safe place to be presented to the Authorities on request.

General recommendations



WARNING!

If an emergency situation occurs:

- *filter breakage*
- *fire outbreak*
- *short-circuit*
- *motor block*
- *electric shock*
- *etc.*

Turn the vacuum cleaner off, unplug it and request assistance from qualified personnel.



WARNING!

*The vacuum cleaners must not be used or stored outdoors, or in damp places.
Only versions with the level sensor can be used for liquids, if not, they can only be used to vacuum dry materials.*

Vacuum cleaner description

Vacuum Cleaner Parts and Labels

Figure 1

1. Identification plate which includes:
Code of the Model, Technical Specifications (see table on page 6), Serial No., EC Mark, Year of manufacture, Nominal network voltage.
2. Dust container
3. Dust container release lever
4. Inlet
5. Outlet
6. Attention plate
Draws the operator's attention to the fact that the filter must only be shaken when the vacuum cleaner is turned off (see also par. "Primary filter shaker").
7. Plug for connecting the vacuum cleaner to an electrical socket.

This vacuum cleaner creates a strong air flow which is drawn in through the inlet (4 - Fig. 1) and blown out through the outlet (5 - Fig. 1).

Before turning on the vacuum cleaner, fit the vacuum hose into the inlet and then fit the required tool on to the end part (refer to the manufacturer's accessory catalogue or Service Centre).

The diameters of the authorised hoses are given in the technical specifications table.

The vacuum cleaner is equipped with a primary filter which enables it to be used for the majority of applications.

Besides the primary filter, which retains the most common types of dust, the vacuum cleaner can be fitted with a secondary filter (absolute H class) with a higher filtering capacity for fine dusts and dusts that are hazardous to health.

Optional kits

Please contact the manufacturer's sales network for information on optionals.

Instructions for installing the optional are included in the conversion kit.



WARNING!

Use only supplied and authorized genuine spare parts.

Accessories

Various accessories are available; refer to the manufacturer's accessory catalogue.



WARNING!

Use only genuine accessories supplied and authorized by the manufacturer.

Packing and unpacking

Dispose of the packing materials in compliance with the laws in force.

Figure 2

Model	S2B (50 L)	S3B (50 L)	S3B (100 L)
A (mm)	700	700	700
B (mm)	860	860	860
C (mm)	1350	1750	1750
Weight with packing (kg)	80	86	89

Unpacking, moving, use and storage

Operate on flat, horizontal surfaces.

The load-bearing capacity of the surface the vacuum cleaner is placed on must be suitable for bearing its weight).

Setting to work - connection to the power supply



- *Make sure there is no evident sign of damage to the vacuum cleaner before starting work.*
- *Before plugging the vacuum cleaner into the electrical mains, make sure the voltage rating indicated on the data plate corresponds to that of the electrical mains.*
- *Plug the vacuum cleaner into a socket with a correctly installed ground contact/connection.*
- *Make sure that the vacuum cleaner is turned off.*
- *The plugs and connectors of the connection cables must be protected against splashes of water.*
- *Make sure that connections to the electrical mains and plug are correct.*
- *Use the vacuum cleaners only when the cables that connect to the electrical mains are in perfect condition (damaged cables could lead to electric shocks!).*
- *Regularly check there are no signs of damage, excessive wear, cracks or ageing on the electric cable.*



- When the vacuum cleaner is operating, do not:*
- *Crush, pull, damage or tread on the cable that connects to the electrical mains.*
 - *Only disconnect the cable from the electrical mains by removing the plug (do not pull the cable).*
 - *Only replace the electric power cable with one of the same type as the original: H07 RN - F. The same rule applies if an extension is used.*
 - *The cable must be replaced by the manufacturer's Service Centre staff or by equivalent qualified personnel.*

Extensions

If an extension cable is used, make sure it is suitable for the power input and protection degree of the vacuum cleaner.

Minimum section of extension cables: 2.5 mm²

Maximum length = 20 m

Cable = H07 RN - F



Sockets, plugs, connectors and installation of the extension cable must maintain the IP protection degree of the vacuum cleaner, as indicated on the data plate.



Never spray water on the vacuum cleaner: this could be dangerous for persons exposed and could short circuit the power supply.



The vacuum cleaner's power socket must be protected by a differential circuit-breaker with surge current limitation, that shuts off the power supply when the current discharged to the ground exceeds 30 mA for 30 msec. or an equivalent protection circuit.

Wet and dry applications

[NOTE]

The supplied filters and the bag (if applicable) must be installed correctly.



Comply with the safety regulations governing the materials for which the vacuum cleaner is used.



If the version for liquids is used:

- *Make sure the liquid level sensor is working correctly before vacuuming liquids.*
- *If foam forms, turn off the vacuum cleaner immediately and empty the container.*
- *Warning: Switch off the vacuum cleaner immediately if foam or liquid leaks out.*
- *Regularly clean the liquid level limiting device and check to make sure that there are no signs of damage.*
- *Warning: Dirty liquid vacuumed up by the vacuum cleaner must be considered conductive.*



*Vacuum cleaner for liquids.
When vacuuming a mix of water and air, take care to avoid overloading the motor of the vacuum unit.*

Maintenance and repairs



Disconnect the vacuum cleaner from its power source before cleaning, servicing, replacing parts or converting it to another version/variant, the plug must be disconnected from the socket.

- *Carry out only the maintenance operations described in this manual.*
- *Use only original spare parts.*
- *Do not modify the vacuum cleaner in any way.*

Failure to comply with these instructions could jeopardize your safety. Moreover, such action would immediately make the EC declaration of conformity issued with the vacuum cleaner void.

Technical specifications		EU		UK			
Parameter	Units	S2B	S3B	S2B		S3B	
Voltage (50 - 60 Hz)	V	230		110	230	110	230
Power rating	kW	2	3	2	2	3	3
Power rating (EN 60335-2-69)	kW	1.8	2.6	1.5	1.8	2.2	2.6
Max vacuum	hPa ⁽²⁾	211	211	165	211	165	211
Maximum air flow rate (without hose and reductions)	L/min'	5500	8100	4980	5500	7080	8100
Maximum air flow rate (with hose, length: 3 m, diameter: 70 mm)	L/min'	5200	7500	4700	5200	6550	7500
Noise level (Lpf) (EN60335-2-69)	dB(A)	74	75	74		75	
Protection	IP	43		43			
Insulation	Class	I		I			
Inlet (diameter)	mm	70		70			
Hoses allowed (diameter)	mm	70		70			
Main filter surface	m ²	1.95	1.95	1.95		1.95	
Upstream absolute "H" filter surface	m ²	2.4	2.4	2.4		2.4	
Absolute filter efficiency (EN 1822)	%	99.995 (H14)	99.995 (H14)	99.995 (H14)		99.995 (H14)	

Model	Units	S2B	S3B
Container capacity	L	50	50 100
Mass ⁽¹⁾	kg	64	67 70

Dimensions

Figure 3

Model	S2B (50 L)	S3B (50 L)	S3B (100 L)
A (mm)	795	795	795
B (mm)	600	600	600
C (mm)	1275	1275	1570

- (1) Net weight
(2) hPa = mbar

■ **Storage conditions:**

T : -10°C ÷ +40°C

Humidity: 85%

■ **Operating conditions:**

Maximum altitude: 800 m

(Up to 2,000 m with reduced performances)

T : -10°C ÷ +40°C

Humidity: 85%

Controls and indicators

Figure 4

1. Motor start/stop switch
2. Power indicator
3. Manual filter shaker knob

Figure 5

1. Inlet

Inspections prior to starting

Prior to starting, check that:

- the filters are installed;
- all the levers are locked in place;
- the vacuum hose and tools have been correctly fitted to the inlet (1 - Fig. 5);



WARNING!

Do not use the vacuum cleaner if the filter is faulty.

Starting and stopping

Figure 4



WARNING!

Lock the castor brakes (1) before starting the vacuum cleaner.

- Turn the switch "1" (Fig. 4) to "1" position to start the vacuum cleaner.
- Turn the switch to "0" position to turn the vacuum cleaner off.

Vacuum cleaner operation



WARNING!

The air speed in the suction tube must not be less than 20 m/s.



WARNING!

Consult the "Troubleshooting" chapter if faults occur.

Primary filter shaker

Depending on the quantity of dust cleaned up, shake the main filter by means of the knob "3" (Fig. 4).



WARNING!

Stop the vacuum cleaner before using the filter shaker. Do not shake the filter while the vacuum cleaner is on, as this could damage the filter.

Wait before restarting the vacuum cleaner, to allow the dust to settle.

Emergency stopping

Turn the switch "1" (Fig. 4) to "0" position.

Emptying the dust container



WARNING!

- **Before proceeding with these operations, turn the vacuum cleaner off and disconnect the plug from the power socket.**
- **Check the class of the vacuum cleaner.**

Before emptying the container it is advisable to clean the filter (see "Primary filter shaker").

- Standard version is not suitable for vacuuming hazardous dust
 - Release the dust container (2, Fig. 1) using lever (3, Fig. 1), then remove and empty it.
 - Make sure the seal is in perfect condition and correctly positioned.
 - Place the container back in position and secure it again.

Plastic bag

You can use the plastic bags supplied by our sales network (Fig. 6).

Liquids vacuuming



WARNING!

Check that the vacuum cleaner is equipped with liquids mechanical stop.

- The filter element will be wet after liquids have been vacuumed.

A wet filter element can quickly become clogged if the vacuum cleaner is then used to vacuum dry substances.

For this reason, make sure that the filter element is dry or replace it with another one before using the vacuum cleaner for dry materials.

At the end of a cleaning session

- Turn the vacuum cleaner off with switch (1 - Fig. 4) and disconnect the plug from the socket.
- Wind the connection cable up and hang it in the relevant compartment (Fig. 7).
- Empty the container as described in the "Emptying the container" paragraph.
- Clean the vacuum cleaner as described in the paragraph "Maintenance, cleaning and decontamination".
- Wash the container with clean water if aggressive substances have been vacuumed.
- Store the vacuum cleaner in a dry place, out of reach of unauthorised persons.

Maintenance, cleaning and decontamination



To guarantee the safety level of the vacuum cleaner, only original spare parts supplied by the manufacturer should be used.



The precautions described below must be taken during all maintenance operations, including cleaning and replacing the primary and absolute filters.



The maintenance, cleaning and decontamination operations must only be performed with the vacuum cleaner turned off and the plug disconnected from the power socket. It is absolutely forbidden to perform maintenance with the plug connected to the socket. Danger of electric shock!

- If the user is performing the maintenance operations, the vacuum cleaner must be disassembled, cleaned and overhauled as far as reasonably possible without hazards for the maintenance personnel or other people. The suitable precautions include decontamination before disassembling the vacuum cleaner, adequate filtered ventilation of the exhaust air from the room in which it is disassembled, cleaning the maintenance area and suitable personal protection.
- A check must be carried out by the manufacturer or the personnel of the same at least once a year. For example: check the air filters to find out whether the air-tightness of the vacuum cleaner has been impaired in any way and make sure the electric system operates correctly.

Primary and absolute filter disassembly and replacement



When the vacuum cleaner is used to vacuum hazardous substances, the filters become contaminated, therefore:

- **work with care and avoid spilling the vacuumed dust and/or material;**
- **place the disassembled and/or replaced filter in a sealed plastic bag;**
- **close the bag hermetically;**
- **dispose of the filter in accordance with the laws in force.**



Filter replacement is a serious matter. The filter must be replaced with one of identical characteristics, filtering surface and category. Otherwise the vacuum cleaner will not operate correctly.

Primary filter replacement

Figure 8

Before proceeding with these operations, turn off the vacuum cleaner and remove the plug from the power socket.

- Release the stop (1), unscrew the filter shaker knob (2).
- Release the closing band (3).
- Lift the motor head (4).
- Lift filter (5) and unscrew the filter clamp (6) on bearing ring (7).
- Unscrew cage (8) and overturn the filter, exposing coupling clamp (9).
- Release the clamps and detach the cage from the filter.
- Dispose of the filter according to the laws in force.
- Fit the new filter and secure it in the cage with special clamps. Assemble the components in the reverse order of disassembly.



Take care not to raise dust when this operation is carried out. Wear a P3 mask and other protective clothing plus protective gloves (DPI) suited to the hazardous nature of the dust collected, refer to the laws in force.



Reassemble with care to avoid trapping your hands between the vacuum unit and the container. Use gloves that provide protection against mechanical risks (EN 388) with a level of protection CAT. II.

If necessary contact the manufacturer's Service Centre.

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Absolute filter assembly or replacement



WARNING!

Do not use the absolute filter again after having removed it from the vacuum cleaner.

Figure 9

1. Vacuuming unit
2. Closing band
3. Filter shaker stop
4. Filter shaker knob
5. Washer
6. Ferrule
7. Absolute filter
8. Seal
9. Disc
10. Nut



WARNING!

Reassemble with care to avoid trapping your hands between the vacuum unit and the container. Use gloves that provide protection against mechanical risks (EN 388) with a level of protection CAT. II.

Before proceeding with these operations, turn the vacuum cleaner off and disconnect the plug from the power socket.

Assembly

1. Release the stop (3) and unscrew the filter shaker knob (4), release the closing band (2) and remove the head (1).
2. Unscrew the nut from the ferrule under the head (1), insert the washer (5), screw the ferrule (6), insert the filter (7), the gasket (8) and the disc (9), screw the nut (10), fit the head back in position and fix with the closing band (2), screw the knob (4) and lock it with the stop (3).

Replacement

1. Proceed as indicated in step 1 of the assembling procedure.
2. Unscrew the nut (10), remove the disc (9) and the gasket (8).
3. Replace the filter (7) and proceed in the reverse order to reassemble the head.

To dispose of the filter put it in a sealed plastic bag, close it hermetically and dispose of it in accordance with the laws in force.

Tightness inspection

Hoses check

Make sure the connecting hoses (Fig. 10) are in a good condition and correctly fixed.

If the hoses are damaged, broken or badly connected to the unions, they must be replaced.

When sticky materials are treated, check for possible clogging along the hose, in the inlet and on the baffle plate inside the filtering chamber.

Scrape inlet (2, Fig. 10) from the outside and remove the deposited waste as indicated in the figure.

Filtering chamber tightness check

If gasket (1, Fig. 11) between container (4) and filter chamber (3) fails to guarantee a good seal:

- Loosen the four screws (2) that lock the filtering chamber (3) against the vacuum cleaner structure.
- Allow the filtering chamber (3) to lower down and tighten the screws (2) once it has reached the tightness position.

If an optimal seal cannot be obtained and the gasket is torn or cracked, etc. it must be replaced.

Disposing of the vacuum cleaner

Figure 12

Dispose of the vacuum cleaner in compliance with the laws in force.

- **Proper disposal (electric and electronic waste). (Applicable in the European Union and in countries providing a separate collection system)**

The above symbol (Fig. 12), which is present on the product or in its documentation, indicates that the product cannot be disposed of together with other domestic waste at the end of its life cycle.

To prevent damage to the environment or health caused by improper waste disposal, please separate this product from other waste and recycle it responsibly in order to support the sustainable reutilisation of material resources.

This product can not be disposed of together with other commercial waste.

Recommended spare parts

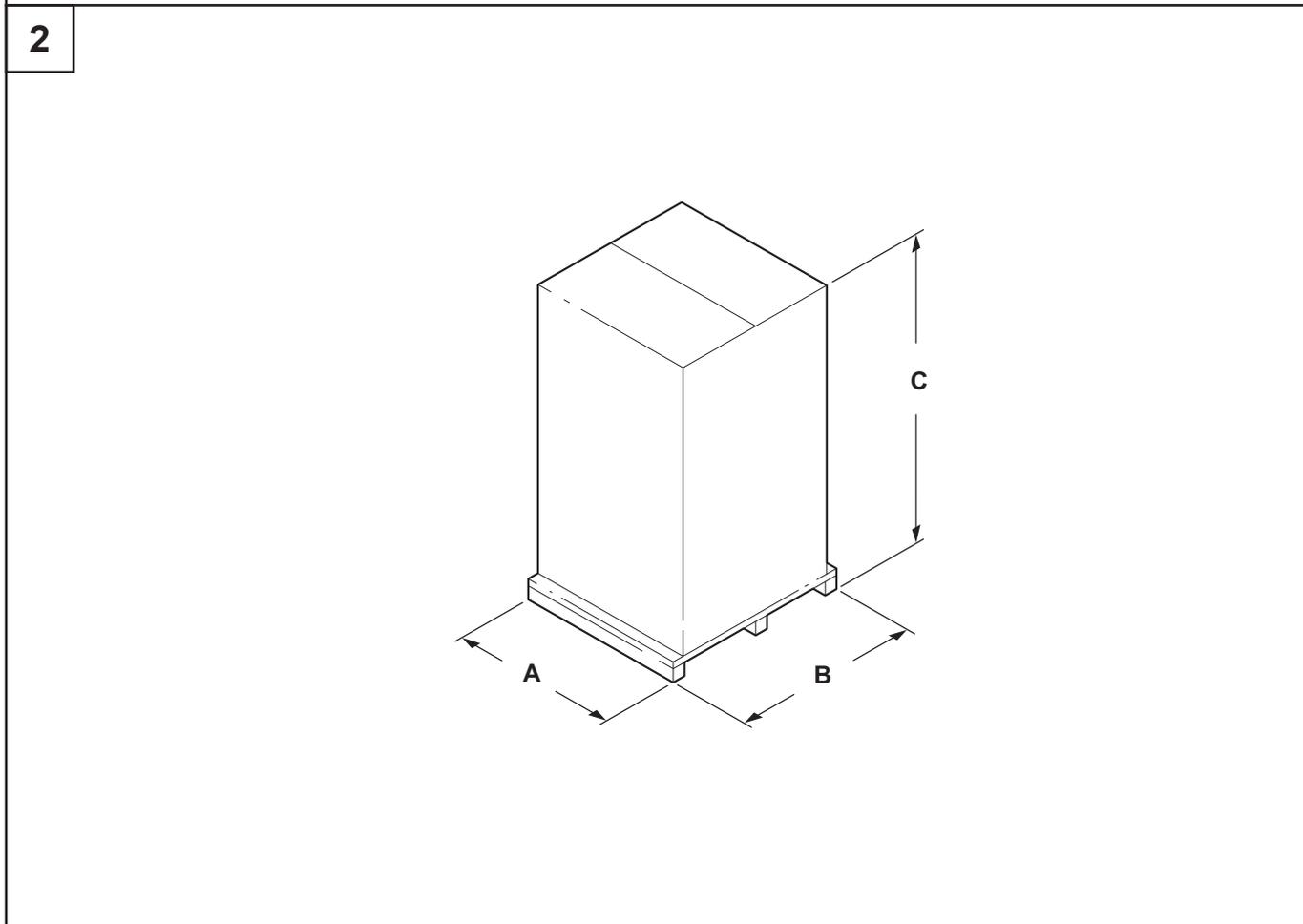
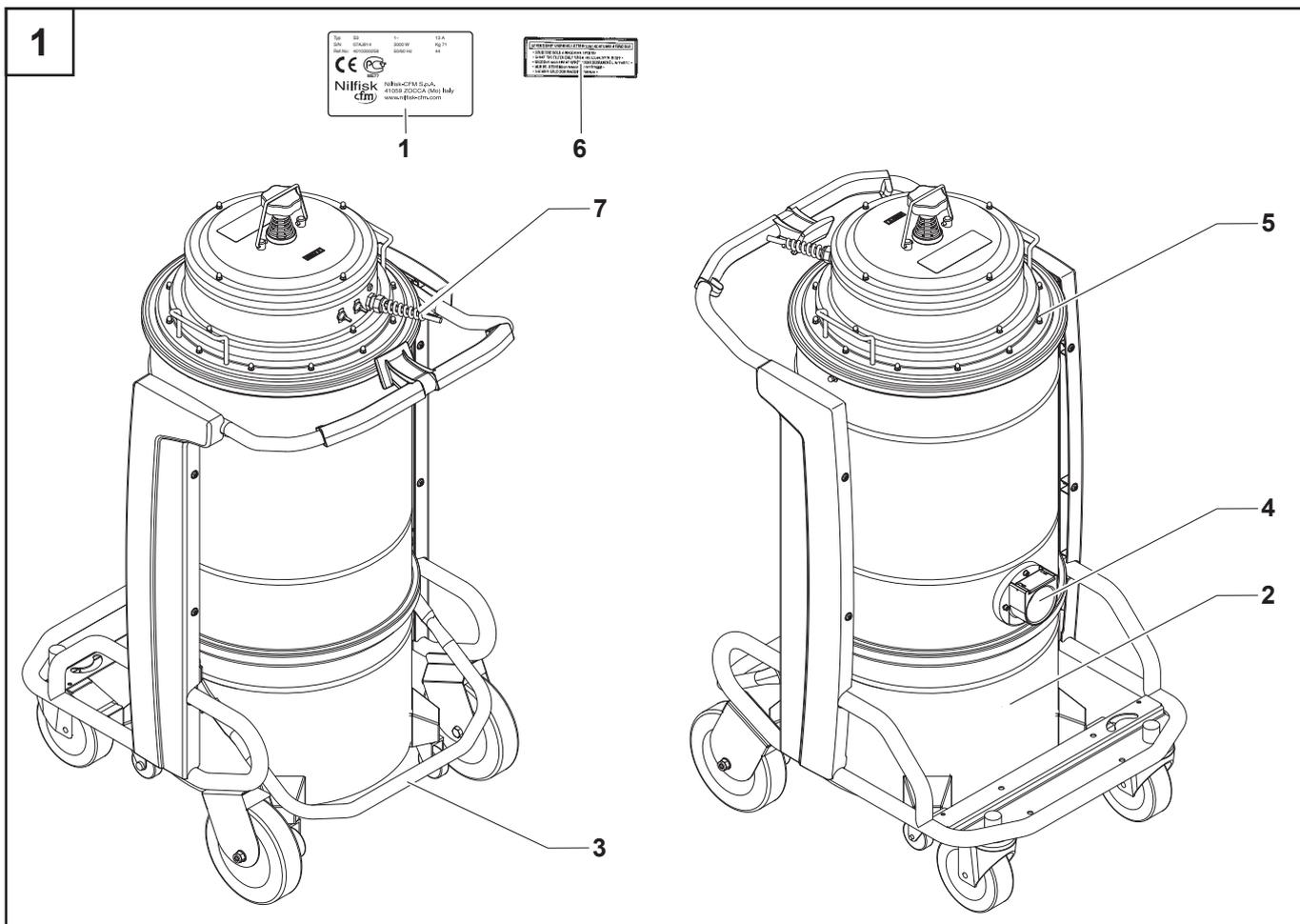
The following is a list of spare parts that should be kept ready at hand in order to speed up maintenance operations.

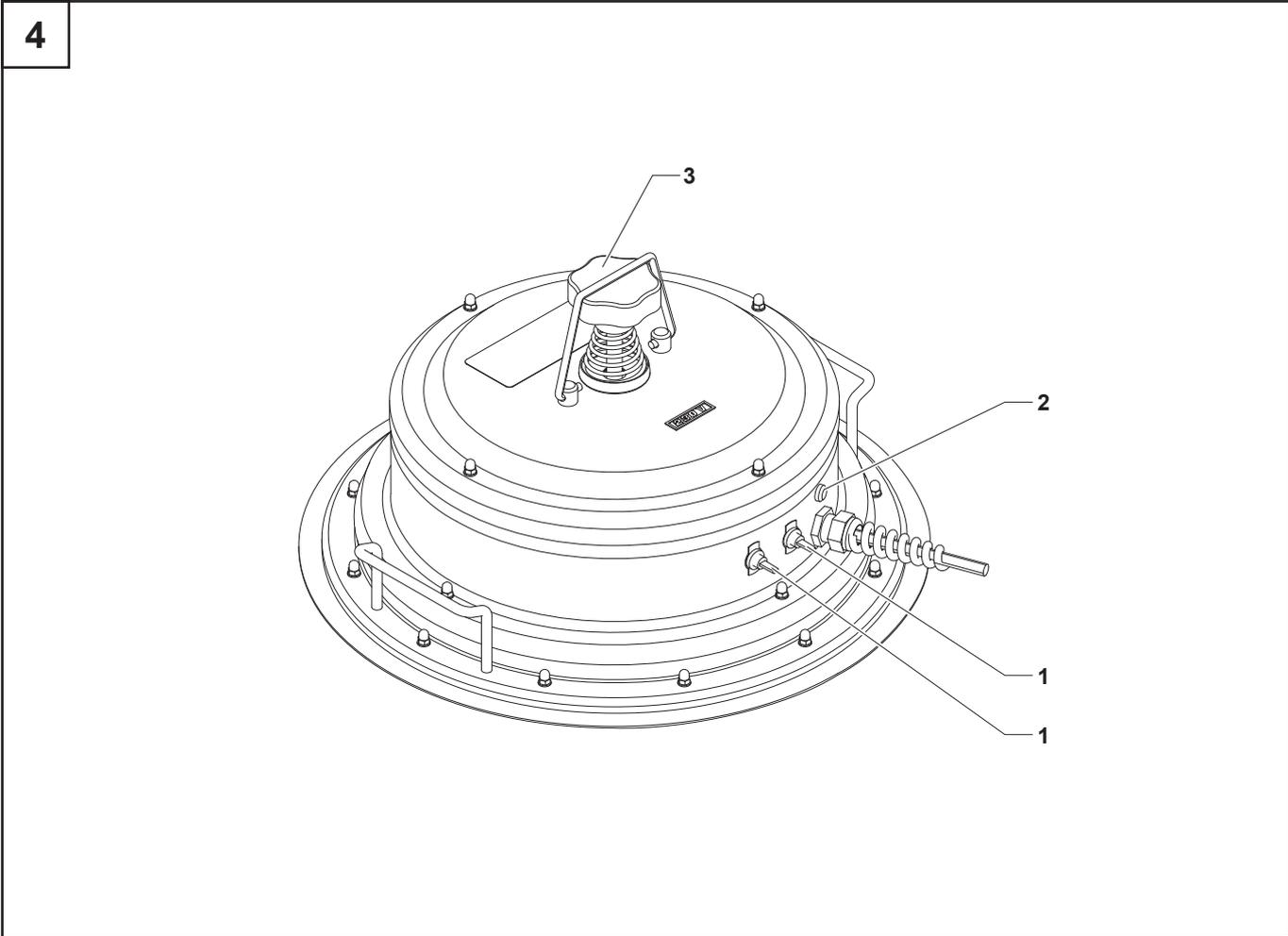
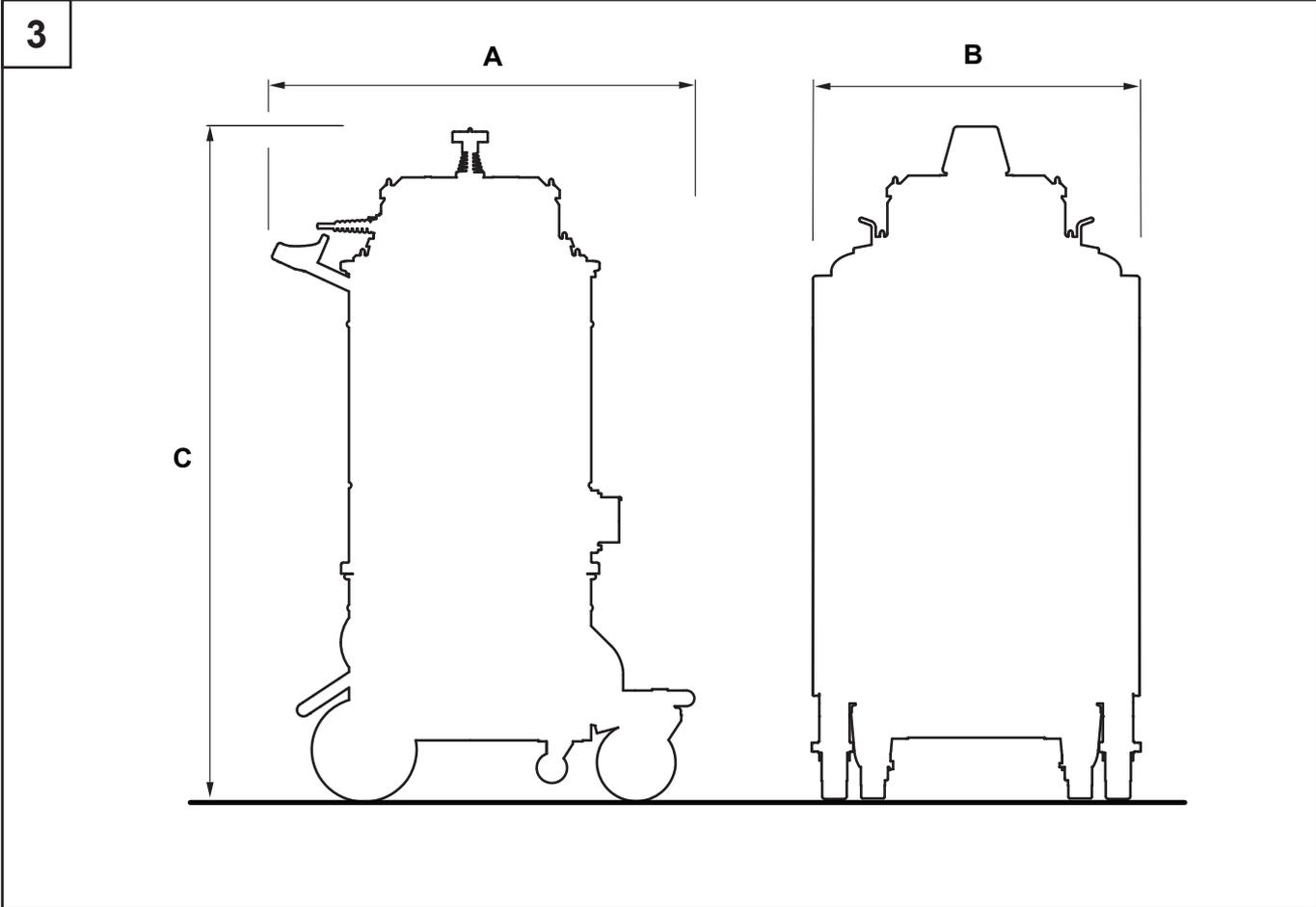
Refer to the manufacturer's spare parts catalogue when ordering spare parts.

	Description	Model	
		Standard	Filter "M"
	Star filter kit	40000338	40000699
	Filter ring seal	8 17026	
	Filter chamber gasket	40000762	
	Filter clamp	8 18079	
	Absolute filter	8 17455	
	230V 1000W Motor	40000903	
	110V 1000W Motor	40000904	
	Brushes (carbon) for 230V 1000W motors (2 brushes)	40000885	
	Brushes (carbon) for 120V 1000W motors (2 brushes)	40000886	

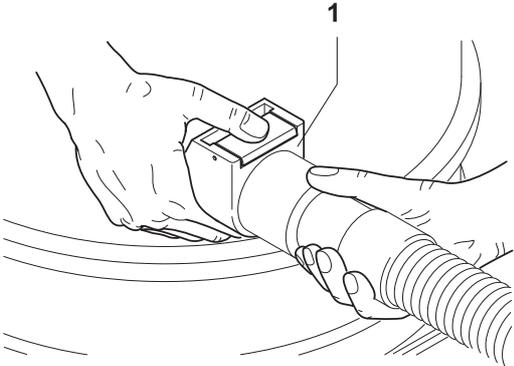
Troubleshooting

Problem	Cause	Remedy
The vacuum cleaner does not start	Lack of power supply	Check for power at the socket. Check the condition of the socket and the cable. Ask for assistance to be performed by a qualified manufacturer's technician.
The vacuum cleaner revolutions increase	Clogged primary filter	Use the filter shaker (models with manual filter shaker). Replace it if this is not sufficient.
	Clogged vacuum hose	Check the vacuum hose and clean it.
Dust leaks from the vacuum cleaner	The filter is torn	Replace it with another of identical type.
	Inadequate filter	Replace it with another of a suitable category and check.
Noisy motors	Motor brushes (carbon) worn or broken	Remove and replace the (carbon) motor brushes.
Electrostatic current on the vacuum cleaner	Non existent or inefficient grounding	Check all ground connections. In particular on the vacuum inlet fitting; replace the hose with an antistatic hose.

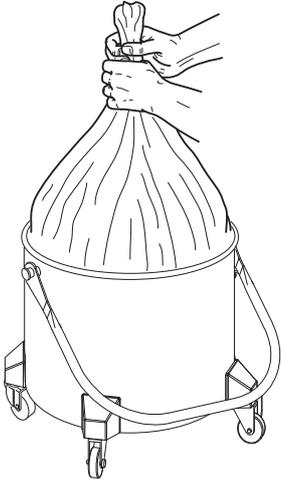




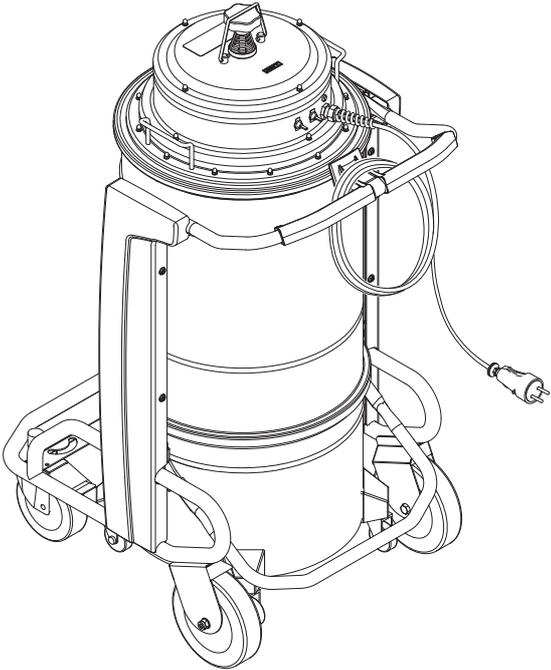
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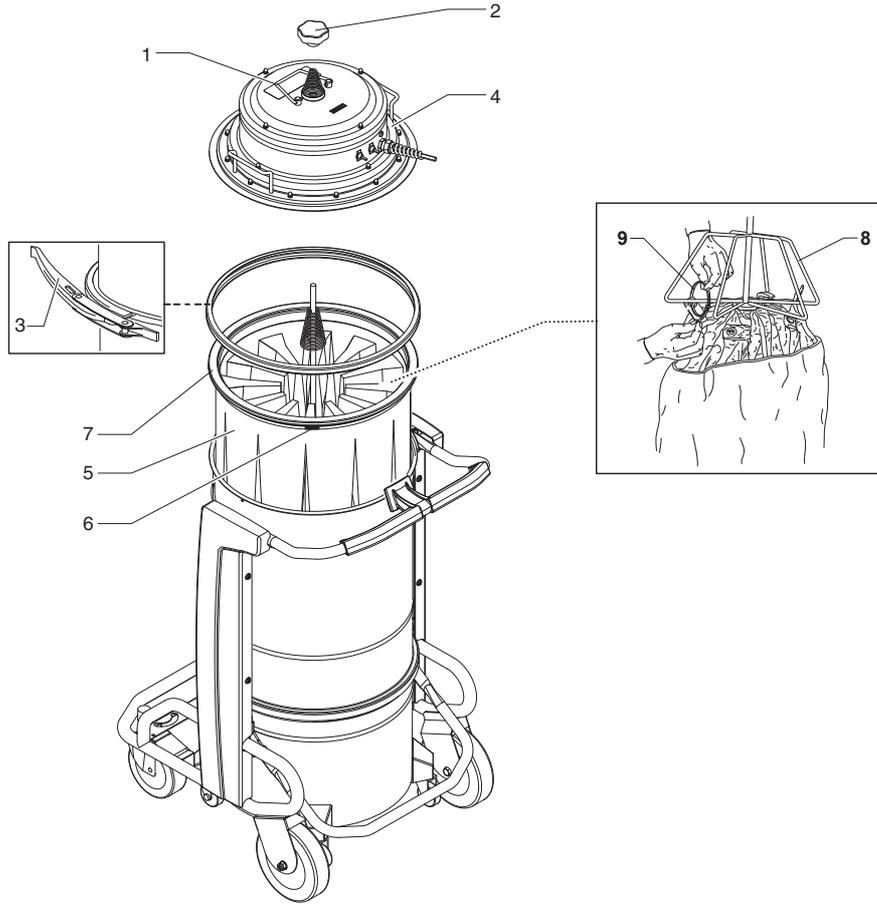
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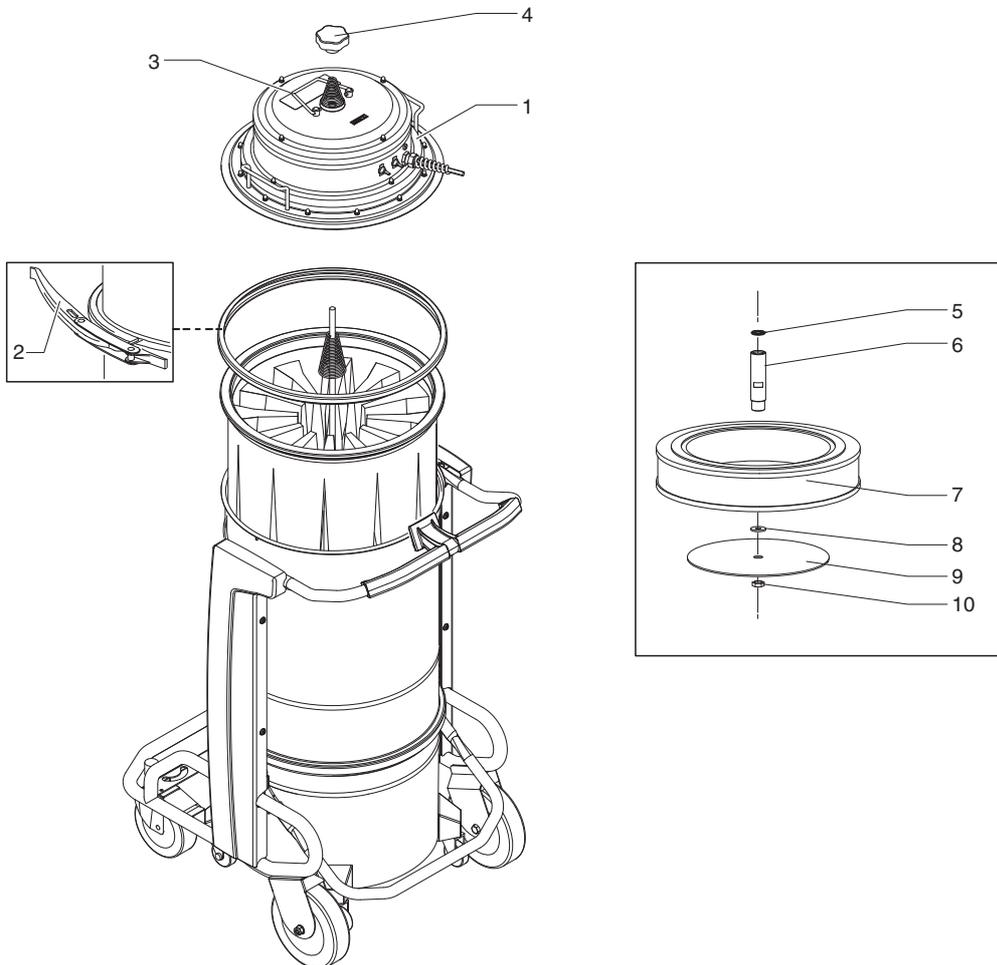
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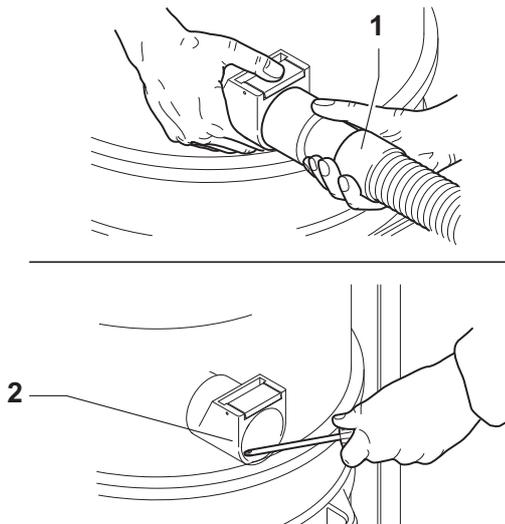
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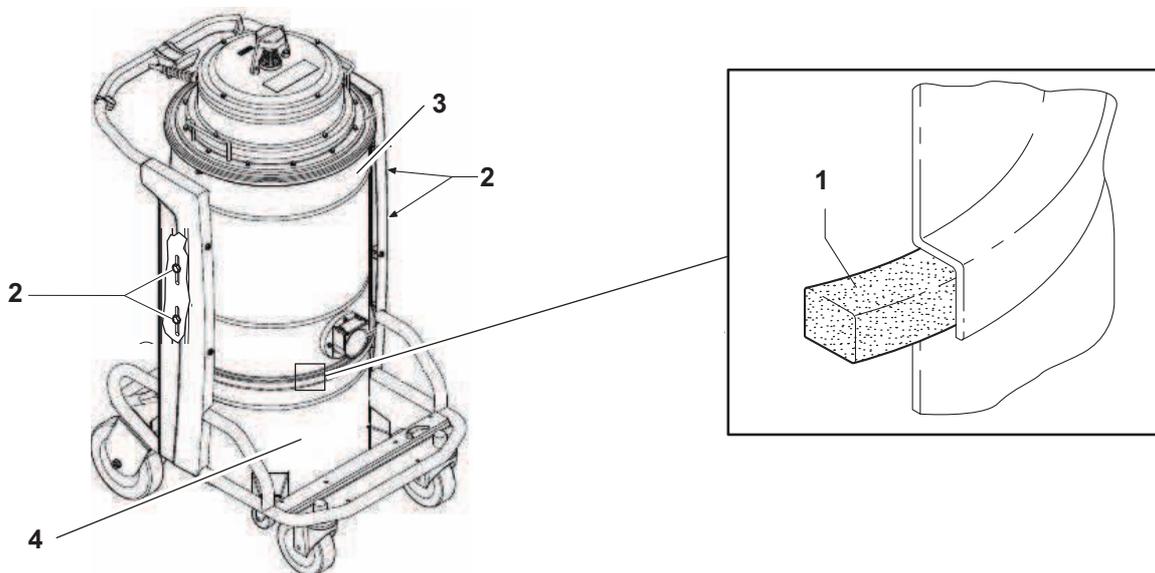
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10



11



12



14

