



Clemas & Co Ltd

Industrial Cleaning Equipment
Sales - Hire - Service

VHC200 AIRPOWERED VACUUM CLEANER OPERATOR MANUAL



Clemas & Co. Unit 5 Ashchurch Business Centre, Alexandra Way, Tewkesbury,
Gloucestershire, GL20 8NB.

Tel: 01684 850777

Fax: 01684 850707

Email: info@clemas.co.uk

Web: www.clemas.co.uk

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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 device 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.

Improper Use



WARNING!

The following use of the device 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 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. 12.

[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*
- *etc.*

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:
Model Code, Technical Specifications (see table on page 7), Serial no. CE Marking, Year of manufacture
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. Pneumatic system connection fitting.

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 class H) 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 authorised genuine spare parts.

Accessories

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



WARNING!

Use only genuine accessories supplied and authorised by the manufacturer.

Packing and unpacking

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

Figure 2

Model	VHC200 (50 L)	VHC200 (100 L)
A (mm)	700	700
B (mm)	860	860
C (mm)	1350	1750
Weight with packing (kg)	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 pneumatic system

WARNING!

- *Make sure there is no evident sign of damage to the vacuum cleaner before starting work.*
- *Before connecting the vacuum cleaner to the pneumatic supply, make sure the network supplies condensate-free air at the pressure required (see technical data).*
- *Regularly check there are no signs of damage, excessive wear, cracks or ageing on the connecting hose.*

WARNING!

- When the vacuum cleaner is operating, do not:*
- *Crush, pull, damage or tread on the connecting hose.*
 - *Only replace the supply hose with one of the same type as the original.*

Wet and dry applications

[NOTE]

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

⚠ WARNING! ⚠

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

⚠ WARNING! ⚠

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.*

Maintenance and repairs

⚠ WARNING! ⚠

Disconnect the vacuum cleaner from its power source before cleaning, servicing, replacing parts or converting it to obtain another version/variant.

- *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		VHC200	
Parameter	Units	50 L	100 L
Air consumption ⁽³⁾	NL/min	2650	
Air pressure required	bar	6/9	
Max vacuum ⁽³⁾	hPa ⁽²⁾	380	
Maximum air flow rate (without hose and reductions) ⁽³⁾	L/min'	5600	
Maximum air flow rate (with hose, length: 3 m, diameter: 70 mm) ⁽³⁾	L/min'	5400	
Noise level (Lpf) (EN60335-2-69)	dB(A)	70	
Inlet (diameter)	mm	70	
Hoses allowed (diameter)	mm	70 / 50	
Capacity	L	50	100
Compressed air junction	inches	3/8	
Air supply pipe length	m	6	
Main filter surface	m ²	1.95	
Upstream absolute "H" filter surface	m ²	3.5	
Absolute filter efficiency (EN 1822)	%	99,995 (H14)	

Model	Units	VHC200	
Container capacity	L	50	100
Mass ⁽¹⁾	kg	67	70

Dimensions

Figure 3

Model	VHC200 (50 L)	VHC200 (100 L)
A (mm)	800	800
B (mm)	600	600
C (mm)	1300	1590

- (1) No packaging
(2) hPa = mbar
(3) With supply pressure of 6 bar

■ **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%

Inspections prior to starting

Figure 5

1. Inlet

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 device if the filter is faulty.

Starting and stopping

Figure 4



WARNING!

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

- Open tap "1" (Fig. 4) to start vacuuming.
- Close tap "1" to stop vacuuming.

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 a few seconds before restarting the vacuum cleaner, to allow the dust to settle.

Emptying the dust container



WARNING!

- **Turn the vacuum cleaner off before performing these operations.**
- **Check the class of the vacuum cleaner.**

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

- Standard version (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

- Stop the vacuum cleaner using tap (1 - Fig. 4) and disconnect the hose from the pneumatic system.
- 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 unauthorized 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 disconnected from the pneumatic system.

- 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 precautions to take include decontamination before disassembling the vacuum cleaner, filtered ventilation of the exhaust air from the room in which the vacuum cleaner is disassembled, cleaning the maintenance area and suitable protection for personnel.
- A check must be carried out by the manufacturer or the personnel of the same at least once a year. For example: check the filters to make sure there are no air leaks from the vacuum cleaner and the pneumatic system is operating 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 7

Before proceeding with these operations, turn the vacuum cleaner off and disconnect it from the pneumatic system.

- Release the stop (1), unscrew the filter shaker knob (2).
- Release the closing band (3).
- Lift cap (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.

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.

1. Figure 8
2. Cap
3. Closing band
4. Filter shaker stop
5. Filter shaker knob
6. Ringnut
7. Disc
8. Absolute filter
9. Filter plate

Before proceeding with these operations, turn the vacuum cleaner off and disconnect the pneumatic system.

Assembly

1. Release stop (3) and unscrew filter shaker knob (4), release closing band (2) and remove cap (1).
2. Insert absolute filter (7) and disc (6) on filter plate (8), then tighten ringnut (5). Replace cap (1), lock it with closing band (2) screw on filter shaker knob (4) and lock with stop (3).

Replacement

1. Proceed as indicated in step 1 of the assembling procedure.
2. Unscrew ringnut (5), and remove disc (6).
3. Change filter (7) and replace the cap by proceeding in the reverse order.

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. 9) 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. 9) from the outside and remove the deposited waste as indicated in the figure.

Filtering chamber tightness check

If gasket (1, Fig. 10) 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 11

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

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	Class M filter
	Star filter kit	40000338	40000699
	Filter ring gasket	Z8 17026	
	Filter chamber gasket	40000762	
	Filter clamp	Z8 18079	
	Absolute filter	Z8 17455	

Troubleshooting

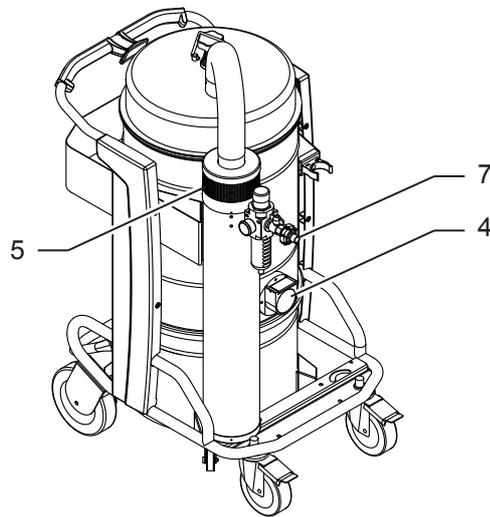
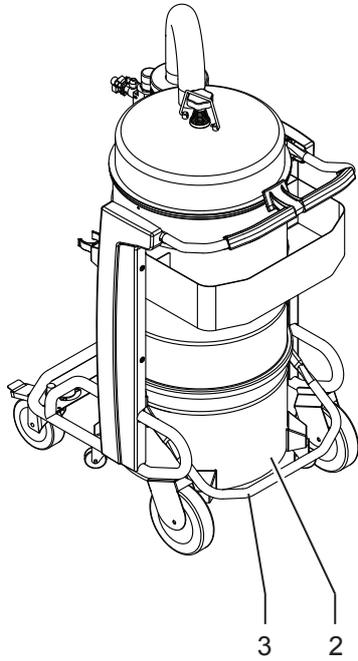
Problem	Cause	Remedy
The vacuum cleaner suddenly stops	Clogged primary filter	Shake the filter. Replace it if necessary
	Clogged vacuum hose	Check and clean the air intake
	Insufficient airflow	Increase air supply pressure. Check the pressure supplied by the pneumatic network is sufficient.
Dust leaks 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.
Electrostatic current on the vacuum cleaner	Non-existent or inefficient grounding	Check the ground. The vacuum hose must be antistatic.

1

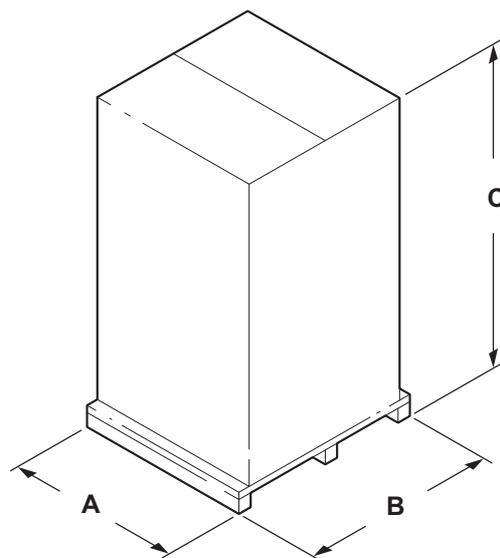


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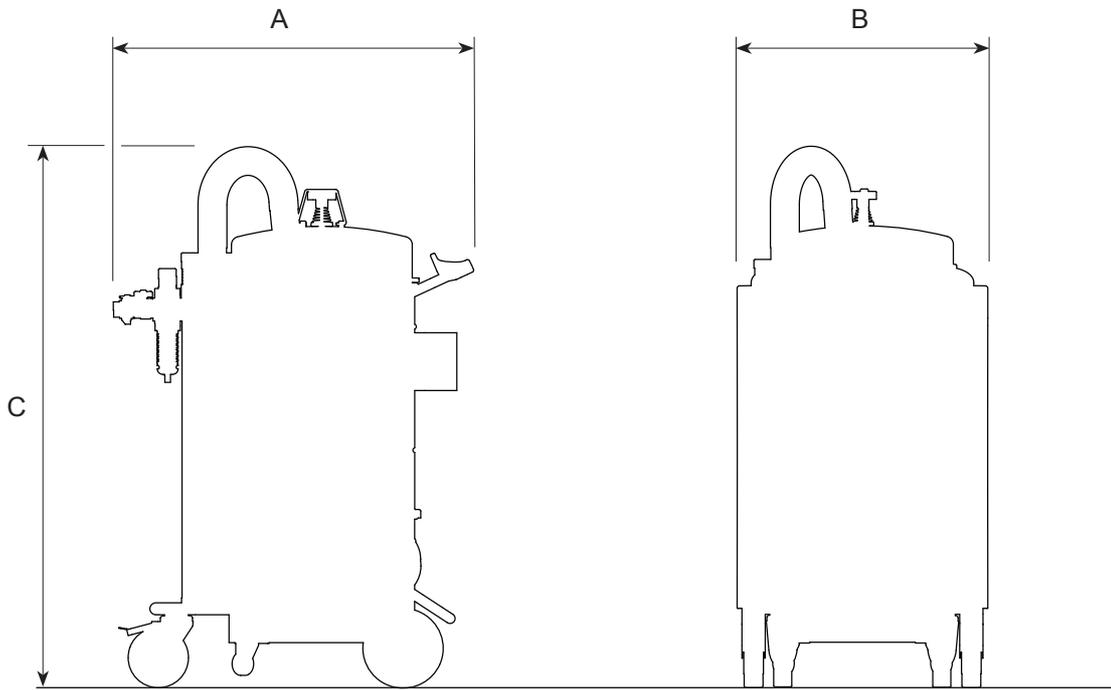
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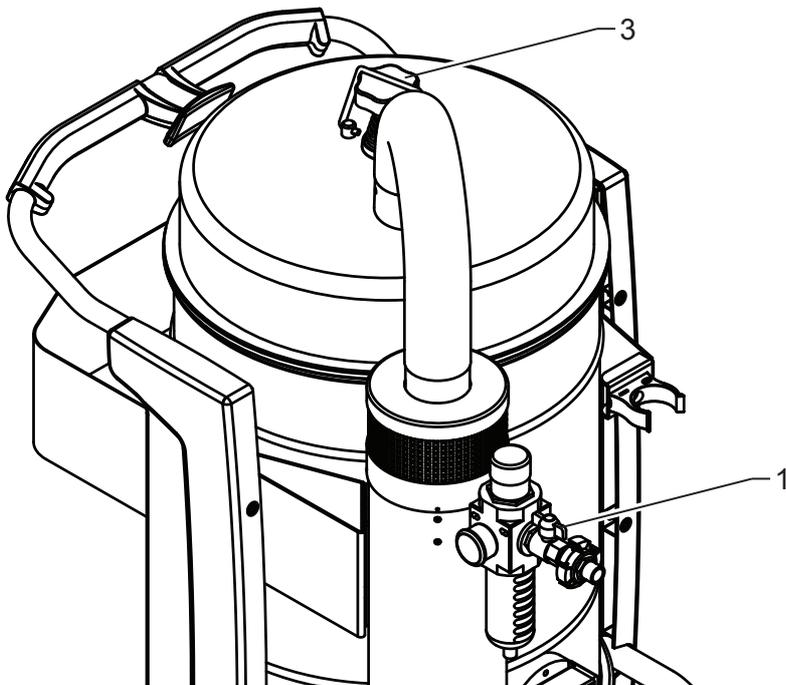
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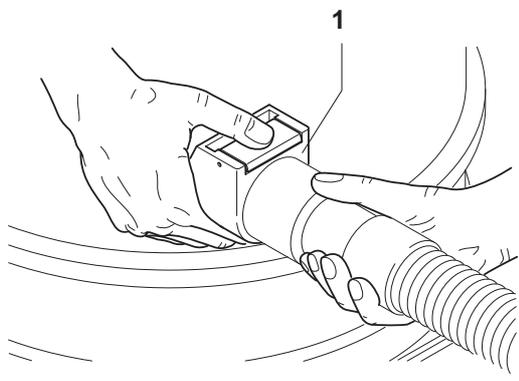
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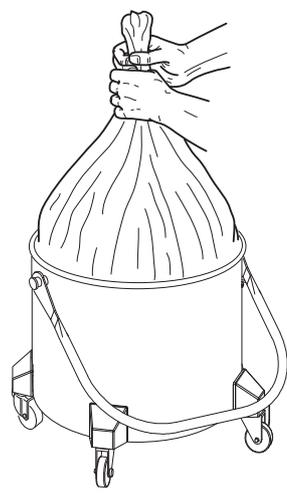
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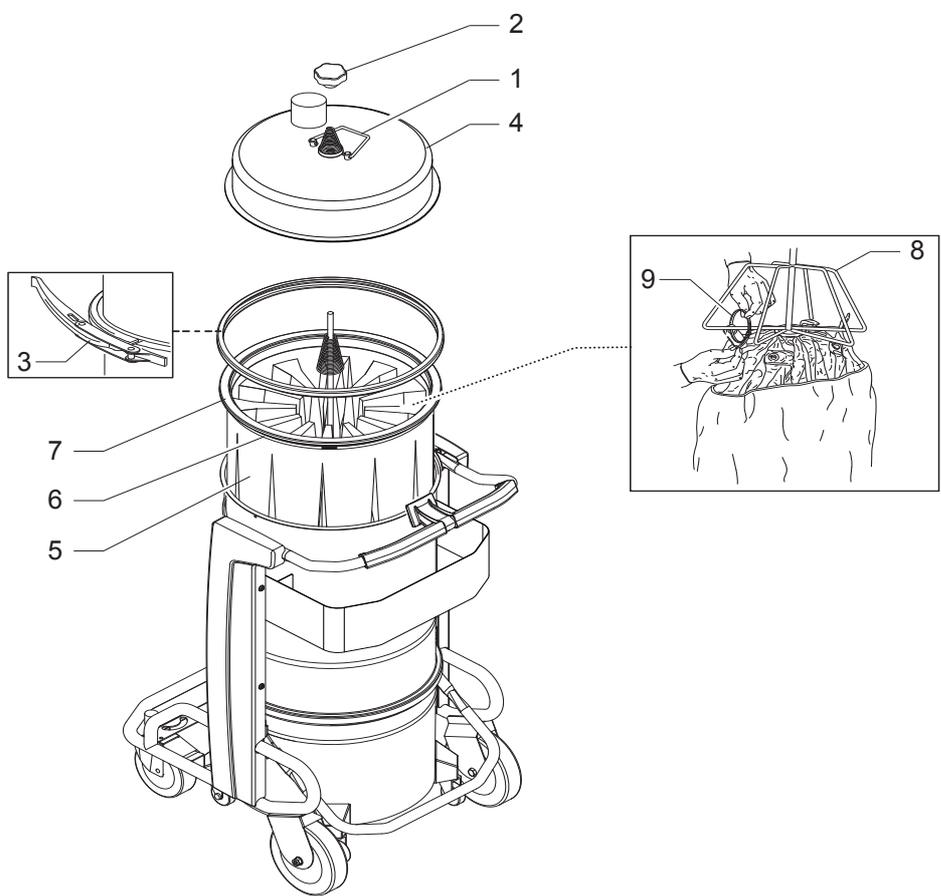
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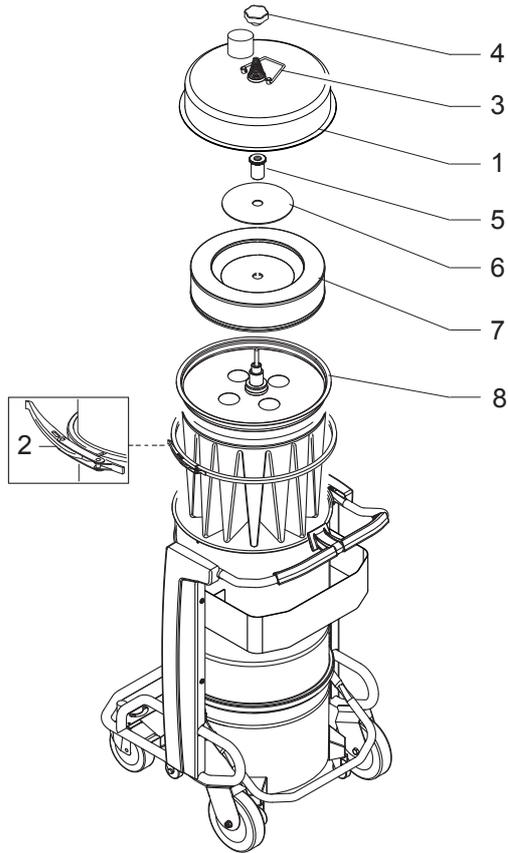
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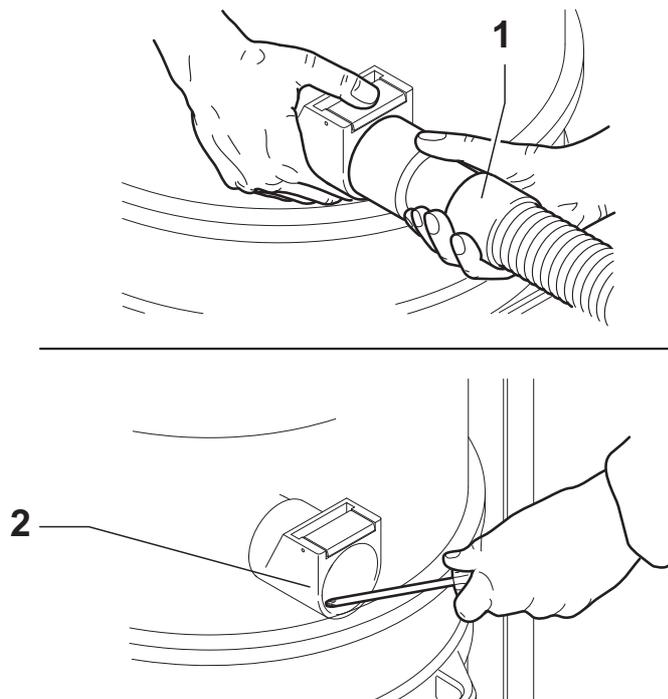
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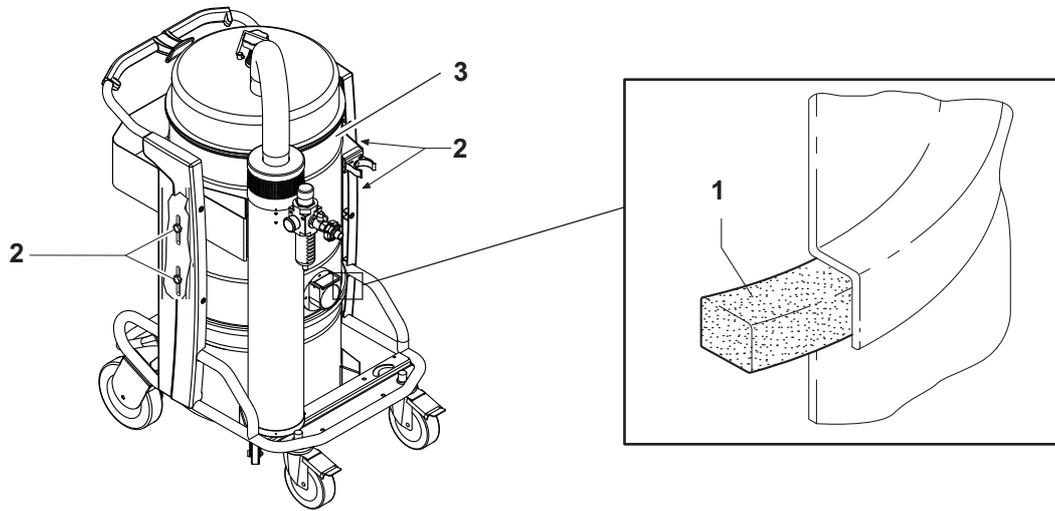
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9



10



11

