

Portable, Mobile & Compact Extractions Units Industrial Vacuum Cleaners

E Series



Original user manual

Declaration of Conformity

EN English

Declaration of Conformity

We, AB Ph. Nederman & Co., declare under our sole responsibility that the Nederman product:

E - Vacuum Cleaners (Part No. **, and stated versions of **) to which this declaration relates, is in conformity with all the relevant provisions of the following directives and standards:

Directives

2006/42/EC, 2014/30/EU, 2014/35/EU, 2011/65/EU.

Standards

EN 12100: 2010, EN 60335-2-69: 2012, EN60335-1: 2012, EN55014-1: 2011, EN55014-2: 2008, EN61000-3-2:2006, EN61000-3-3:2013, EN ISO 20607:2019.

The name and signature at the end of this document is the person responsible for both the declaration of conformity and the technical file.

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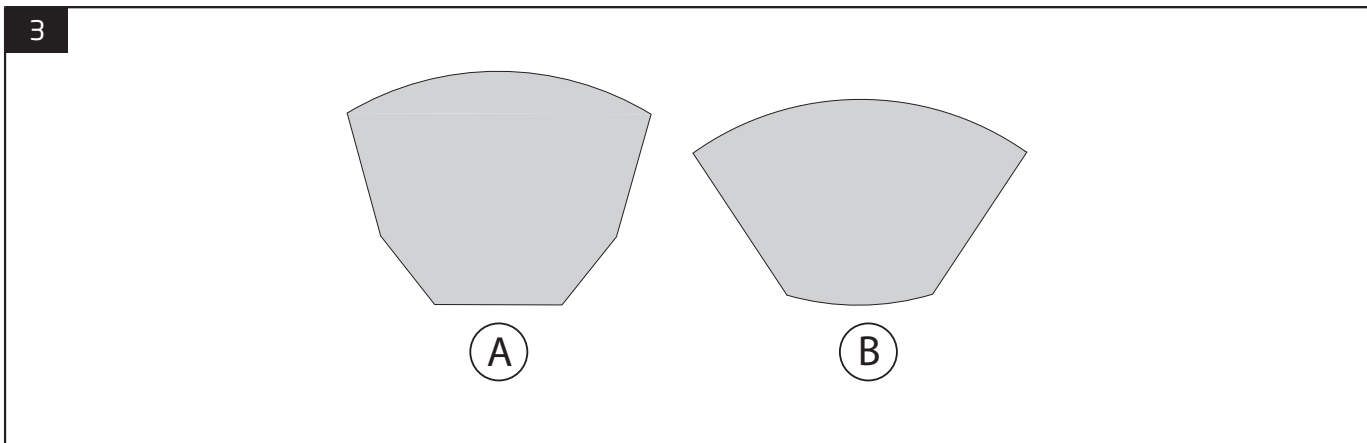
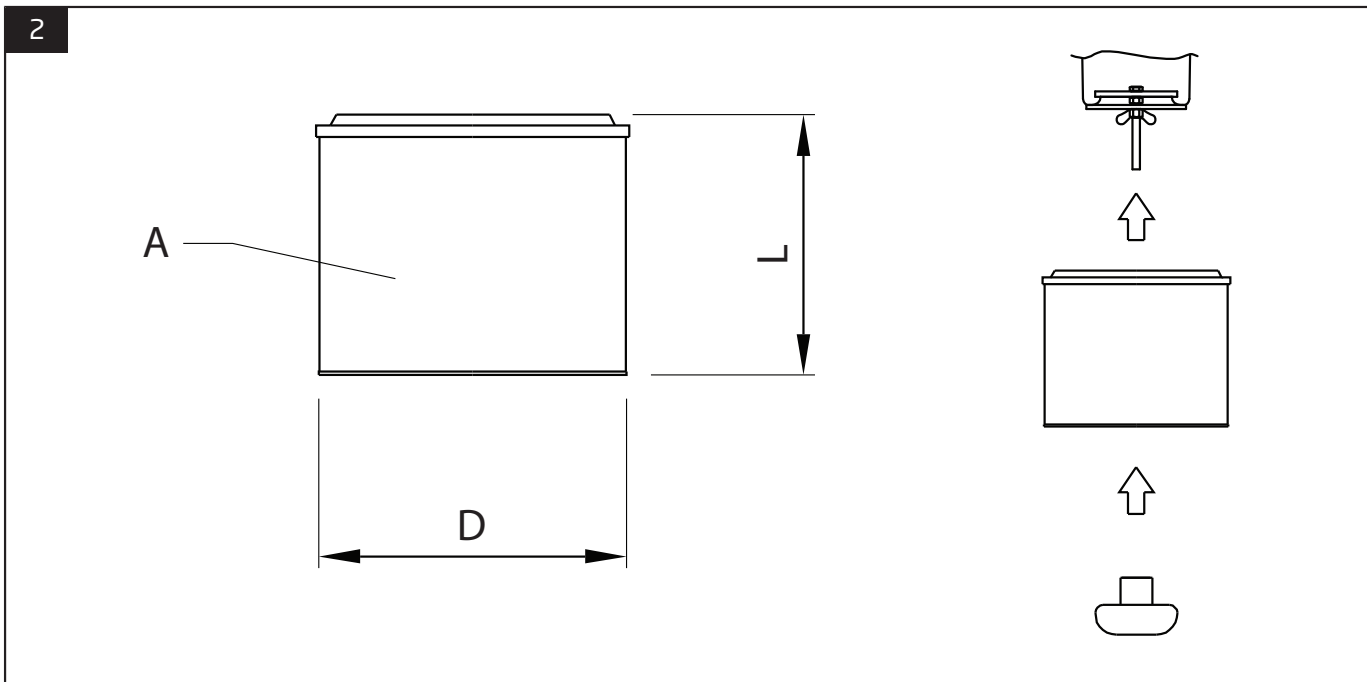
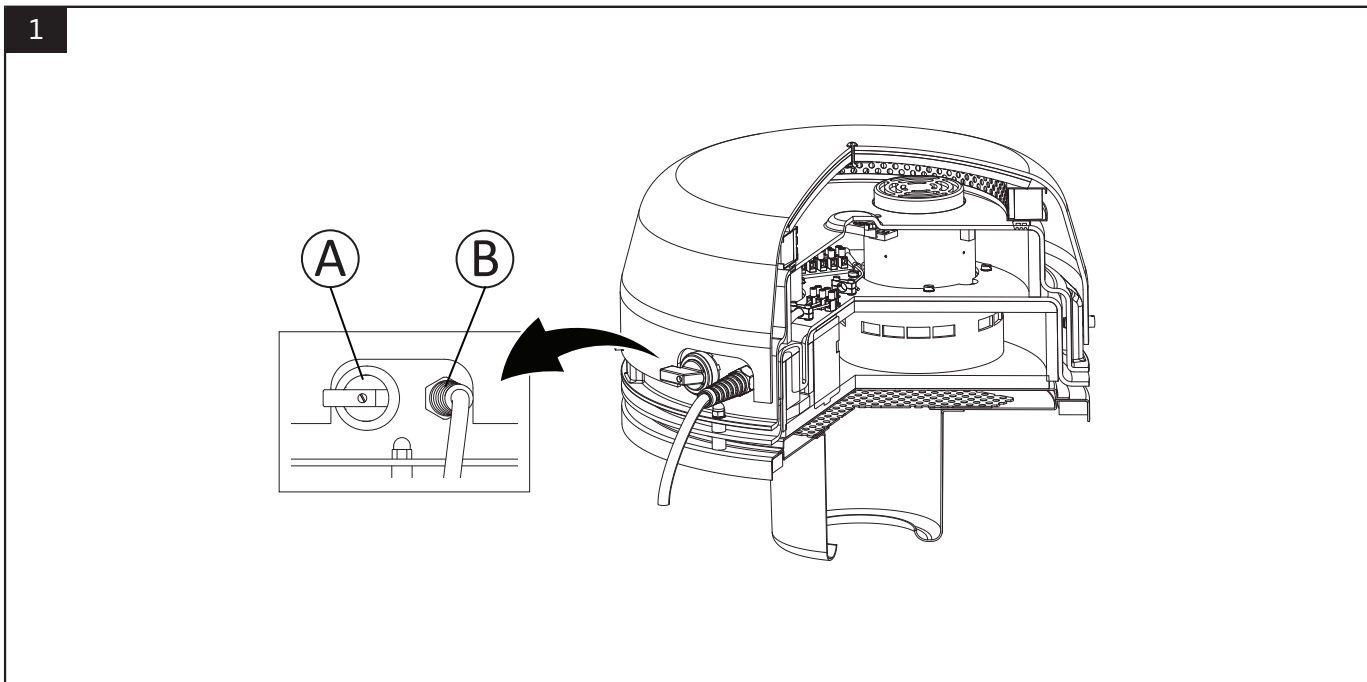


AB Ph. Nederman & Co.
P.O. Box 602
SE-251 06 Helsingborg
Sweden

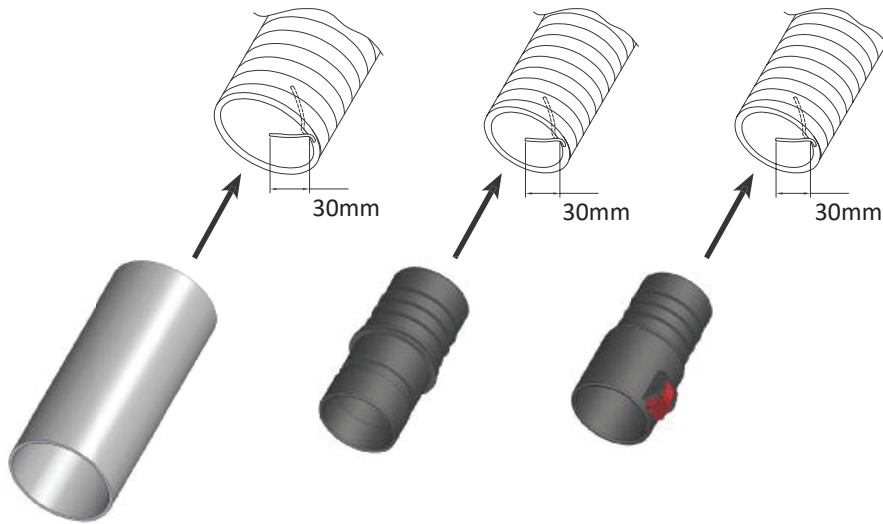
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Product Center Manager
Technical Product Management
2024-05-29



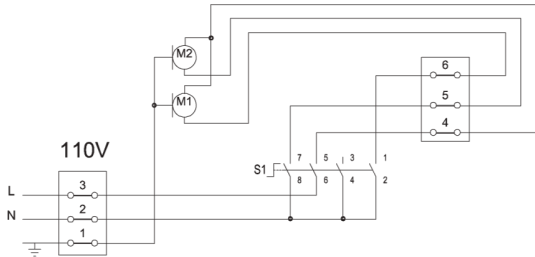
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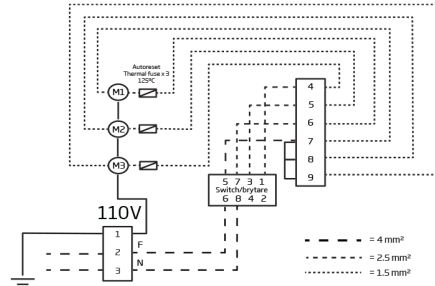
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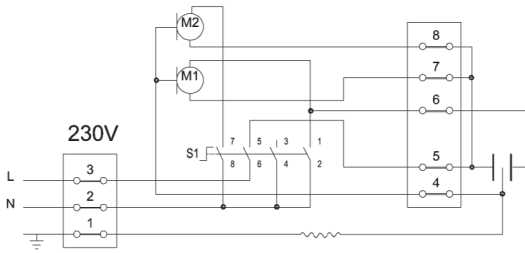
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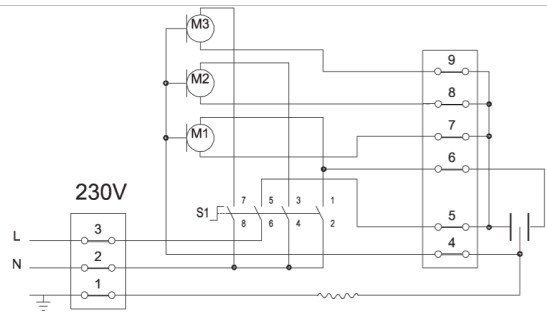
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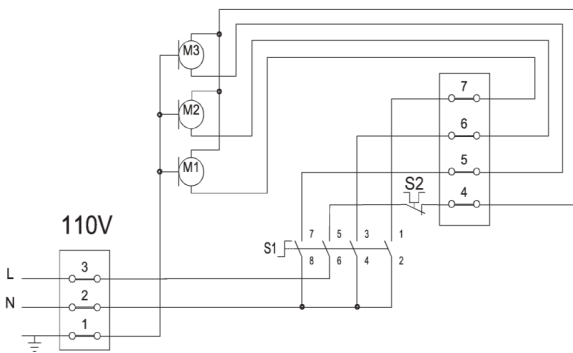
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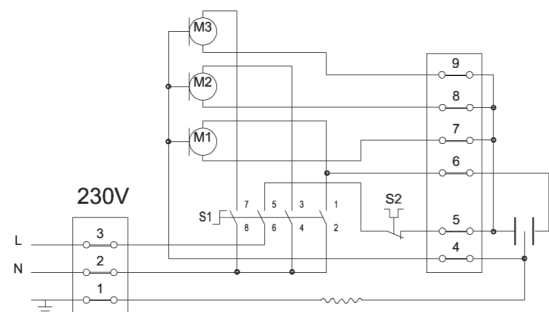
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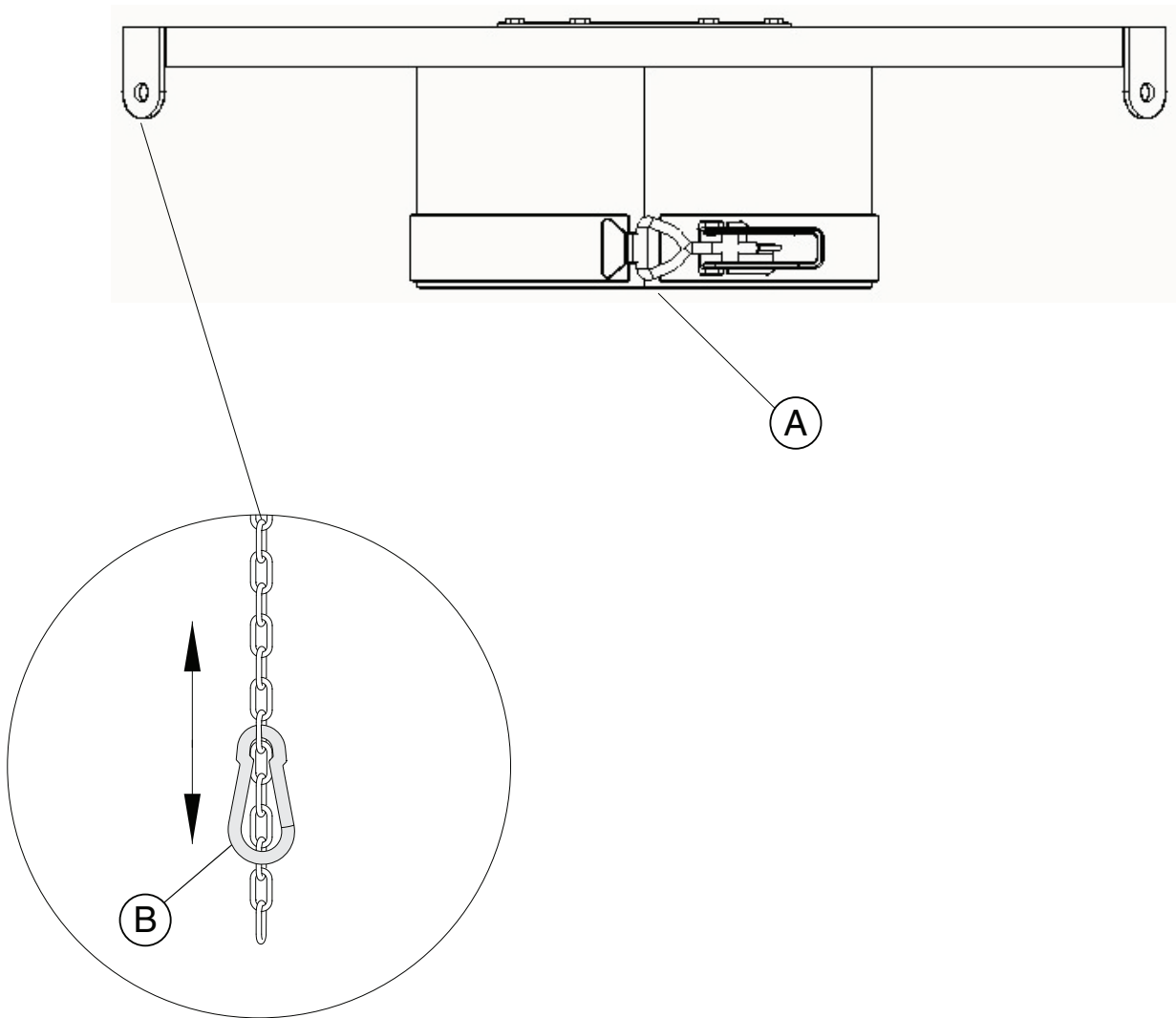
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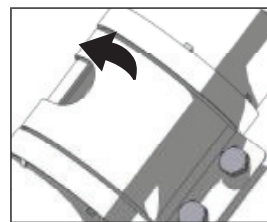
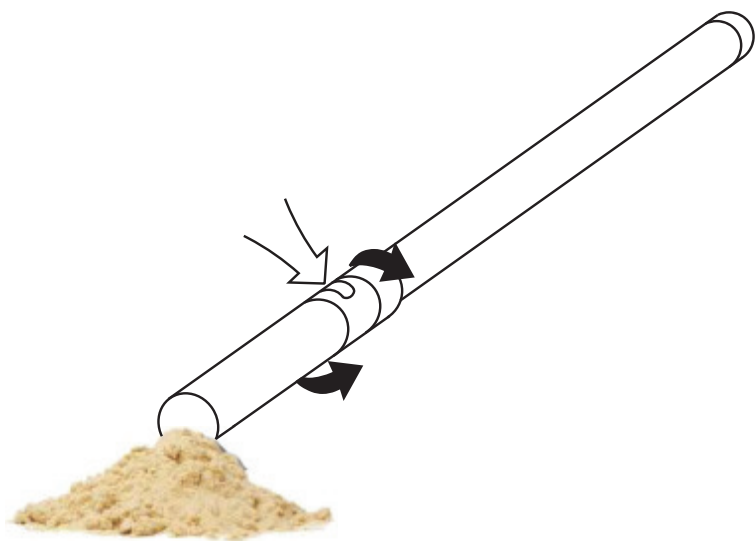
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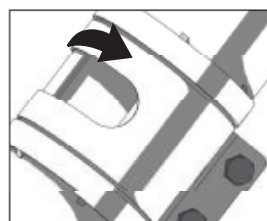
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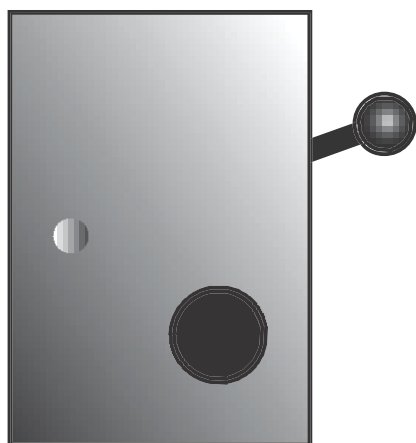
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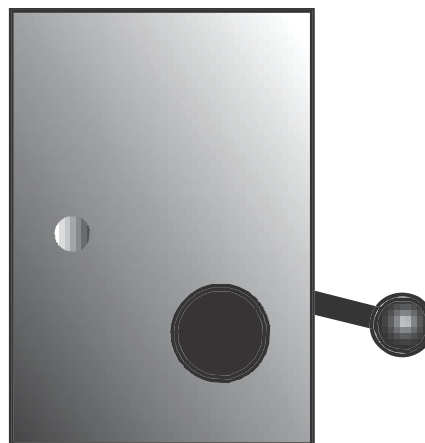
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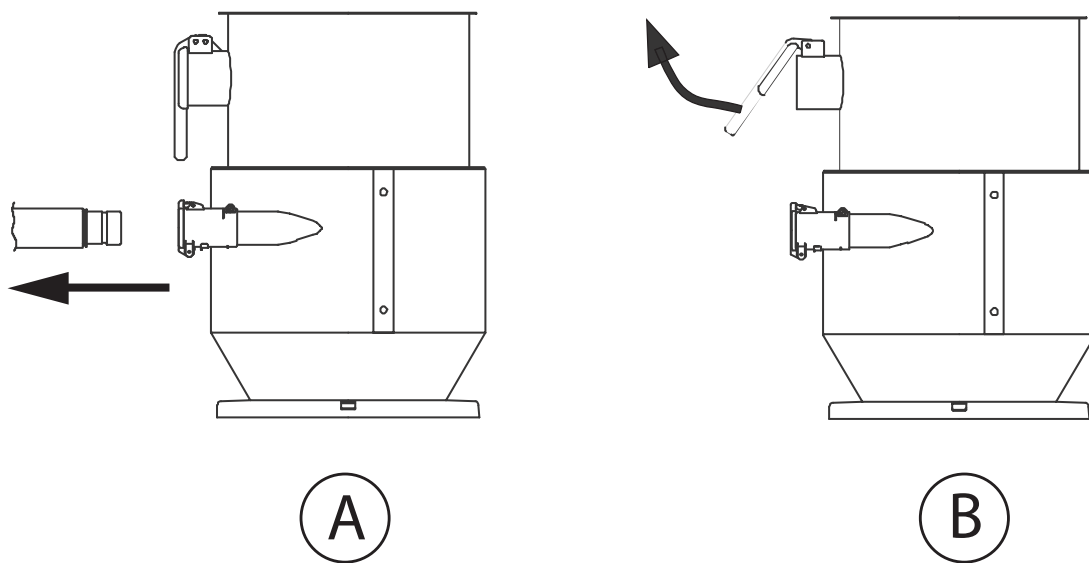


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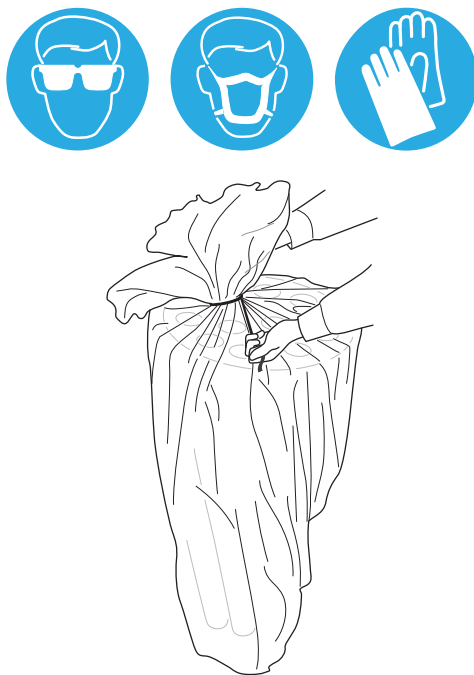


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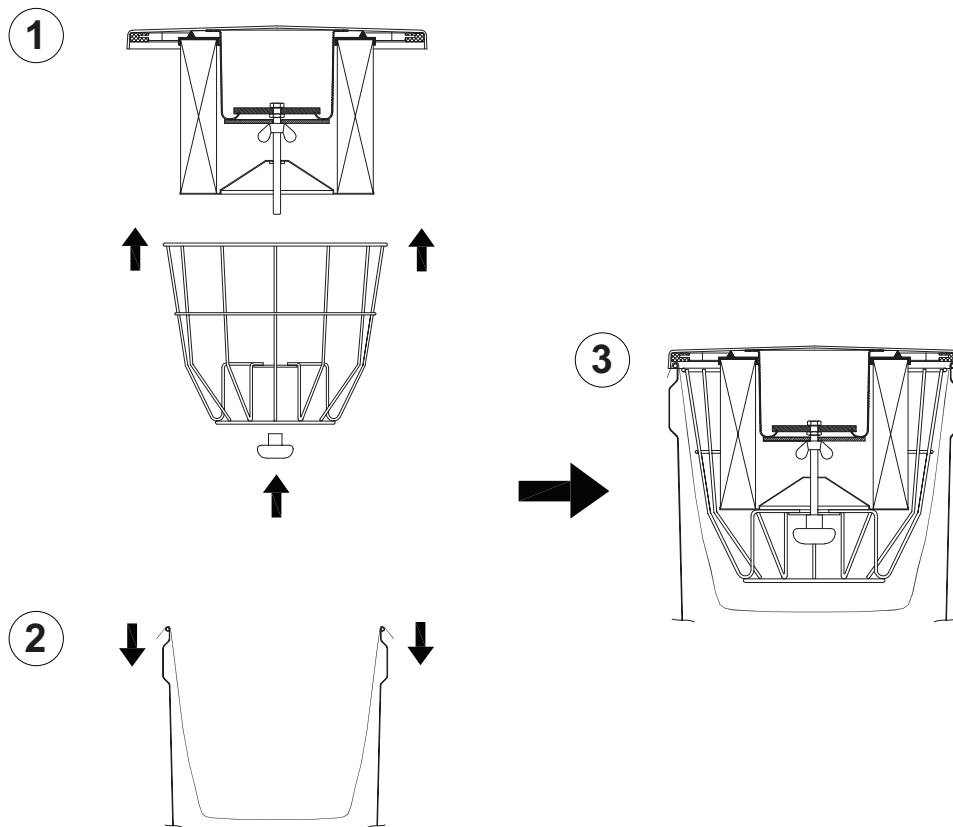
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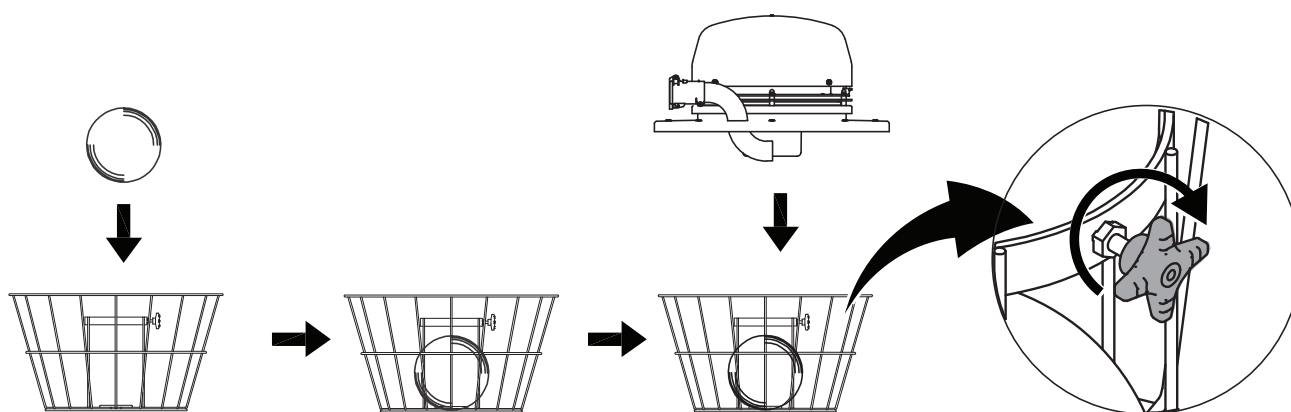
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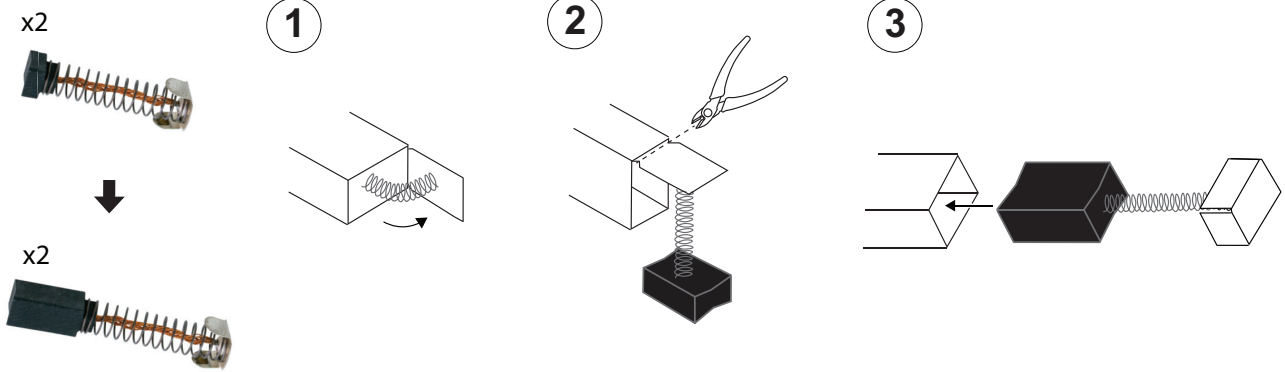
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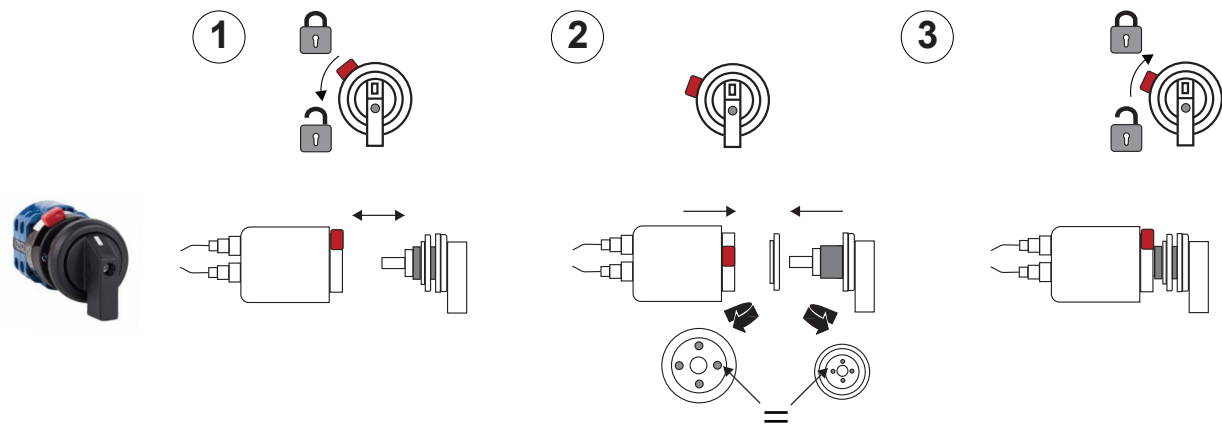
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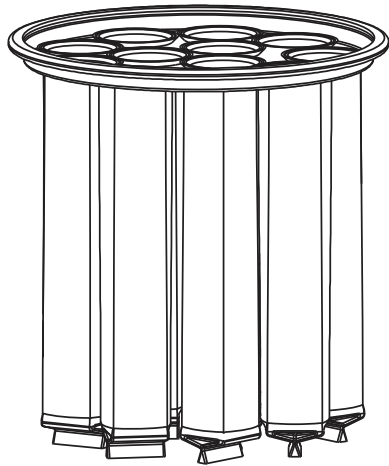
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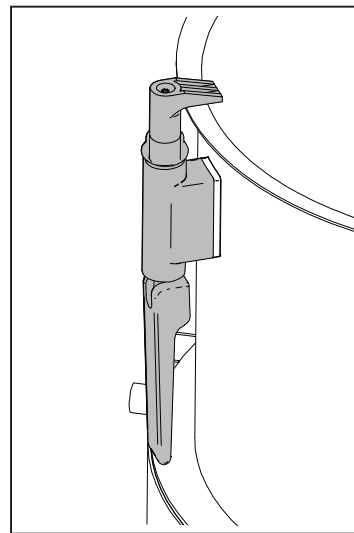
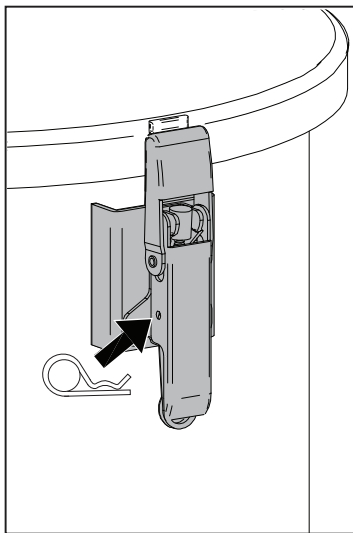
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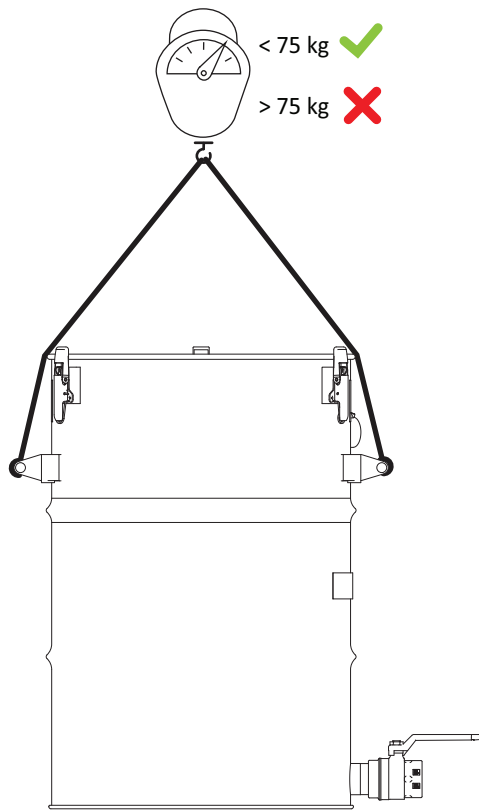


Table of Contents

Figures	4
1 Preface	15
2 Safety	15
2.1 General safety instructions	16
3 Description	17
3.1 Intended use	17
3.2 Technical data	17
3.2.1 Electric vacuum unit data	17
3.2.2 Cartridge filter data	17
3.2.3 Filter bags	19
4 Installation	19
4.1 Bulk-bags and holders	19
5 Use	20
6 Maintenance	20
6.1 Clean the cartridge filter/filter bag	21
6.1.1 Manual reverse air cleaning	21
6.2 Replace the cartridge filter	21
6.3 Replace the filter bag	21
6.4 Replace dust bags	21
6.5 Clean the float ball	21
6.6 Replace the filter package	21
6.7 Routine inspection and service	22
7 Troubleshooting	24
8 Spare Parts	25
8.1 Ordering spare parts	25
9 Recycling	25
10 Appendix A: Service form	26

1 Preface

Thank you for using a Nederman product!

The Nederman Group is a world-leading supplier and developer of products and solutions for the environmental technology sector. Our innovative products will filter, clean and recycle in the most demanding of environments. Nederman's products and solutions will help you improve your productivity, reduce costs and also reduce the impact on the environment from industrial processes.

Read all product documentation and the product identification plate carefully before installation, use, and service of this product. Replace documentation immediately if lost. Nederman reserves the right, without previous notice, to modify and improve its products including documentation.

This product is designed to meet the requirements of relevant EC directives. To maintain this status, all installation, maintenance, and repair is to be done by qualified personnel using only Nederman original spare parts and accessories. Contact the nearest authorized distributor or Nederman for advice on tech-

nical service and obtaining spare parts. If there are any damaged or missing parts when the product is delivered, notify the carrier and the local Nederman representative immediately.

2 Safety

This document contains important information that is presented either as a warning, caution or note, according to the following examples:



WARNING! Risk of personal injury

Warnings indicate a potential hazard to the health and safety of personnel, and how that hazard may be avoided.



CAUTION! Risk of equipment damage

Cautions indicate a potential hazard to the product but not to personnel, and how that hazard may be avoided.



NOTE!















Notes contain other information that is important for personnel.

2.1 General safety instructions



WARNING! Explosion risk

- Do not collect items that may cause ignition or blocking. It is strictly prohibited to collect material that can undergo dangerous chemical or thermal reactions and/or self-ignite.
- If this unit is used to collect hazardous material or is located where such material is present, contact your nearest authorized distributor or Nederman for technical advice.
- Do not use the vacuum cleaner to collect material that is caustic, hot, explosive, highly flammable, chemically unstable, spontaneously ignitable, or which can release sparks.

Sign	Description	Sign	Description
	Pressure, max 8 bar.		Ambient temperature, max 40°C.
	Alternating current.		Moving pneumatic cylinder.
	High noise level. Use hearing protection.		Crush risk.
	Easily tipping over.		Use a cotter pin.
	Do not vacuum hazardous material.		Do not place on an uneven surface.
	Do not vacuum explosive material.		Do not use a crane.
	Do not vacuum caustics.		Do not weld.

3 Description

3.1 Intended use

This vacuum cleaner is designed for the collection of dust and granulated material. It can also be configured for the collection of wet material. For use with wet material, the vacuum cleaner is delivered with a float ball.

The float ball can be removed when collecting dry material. See [Figure 12](#).



NOTE!

The figures above are only basic design schematics for vacuum cleaners. Individual parts of the different models may vary.

3.2 Technical data

See also the attached Spare Parts Manual for descriptions and article numbers of spare parts.

Vacuum cleaner	
Material description	Powder-coated steel
Material recycling (approximate weight)	95%
Ambient temperature	-10°C to +40°C
Process air (dry) temperature	0 to 60°C

3.2.1 Electric vacuum unit data

See also [Figure 1](#).

Vacuum producer	IP class	Power	Voltage	Frequency	Max. vacuum	Pressure	Max. air flow	Noise level*
		[kW]	[V]	[Hz]	[mmWc]	[-kPa]	[Nm ³ /h]	dB(A)
NEL2R	IP 44	1.7/1.6	230	50/60	2150	21,5	312	78,7
NEL3R	IP 44	2.5/2.4	230	50/60	2150	21,5	460	79,7
NEL3RT	IP 44	2.5/2.4	230	50/60	2150	21,5	460	79,7
NEL2	IP 44	1.6/1.7	110	50/60	2000	20	312	78,7
NEL3	IP 44	2.4/2.6	110	50/60	2000	20	460	79,7
NEL3T	IP 44	2.4/2.6	110	50/60	2000	20	460	79,7

* Noise level - distance: 1,1 m - height: 1,6 m

3.2.2 Cartridge filter data

See also [Figure 2](#).

Part no	Area (A)	Diameter (D)	Length (L)	Material	Filter class**	Max. temp	Washable***
	[m ²]	[mm]	[mm]			[°C]	
43120100	2,38	264	220	Cellulose/Glassfiber/ Cellulose 3 layers	M	70	No
43120101	2,38	264	220	Cellulose	M	70	No

E - Vacuum Cleaners

Part no	Area (A)	Dia-meter (D)	Length (L)	Material	Filter class **	Max.temp	Wash-able ***
	[m ²]	[mm]	[mm]			[°C]	
43120200	1,56	264	220	Cellulose	H13	70	No
43120201	1,00	150	230	Cellulose/Glassfiber 2 layers	H13	70	No
43120300	2,38	264	220	Polyester	M	110	OK
43120302	2,38	264	220	Antistatic Polyester	M	120	OK
43120303	10,00	264	870	Antistatic Polyester	M	120	OK
43120304	2,38	264	220	Polyester	M	110	OK
43120400	0,70	338	42	Cellulose	M	70	No
43130001	2,38	264	220	Cellulose	M	70	No
43130100	2,38	264	220	Cellulose	M	70	No
43130200	5,40	264	470	Cellulose	M	70	No
43130201	5,40	264	470	Cellulose	M	70	No
43130300	6,90	264	600	Cellulose	M	70	No
43130301	6,90	264	600	Cellulose	M	70	No
43130400	10,00	264	870	Cellulose	M	70	No
43130401	10,00	264	870	Cellulose	M	70	No
43130500	1,56	264	220	Cellulose/Fiberglass	H13	70	No
43130700	3,50	264	470	Cellulose/Glassfiber/ Cellulose 3 layers	H13	70	No
43130702	3,50	264	470	Cellulose/Glassfiber/ Cellulose 3 layers	H13	70	No
43130800	4,50	264	600	Cellulose/Glassfiber/ Cellulose 3 layers	H13	70	No
43130801	4,50	264	600	Cellulose/Glassfiber/ Cellulose 3 layers	H13	70	No
43130900	6,50	264	870	Cellulose/Glassfiber/ Cellulose 3 layers	H13	70	No
43130901	6,50	264	870	Cellulose/Glassfiber/ Cellulose 3 layers	H13	70	No

** According to EN 60335-2-69/EN 1822

*** Replace the cartridge filter after it has been washed twice.

3.2.3 Filter bags

See also [Figure 3](#).

Part number *	Area (A)	Material	Filter class **	Max.temp.
	[m ²]			[°C]
43110001	0,50	Polypropylene	M	70
43110100	0,35	Polyester	M	120
43110200	0,35	Antistatic Polyester	M	120
43110300	0,59	Polyester	M	120
43110400	0,59	Antistatic Polyester	M M	120

* See the label on the filter for the part number.

** According to EN 60335-2-69

4 Installation



WARNING! Risk of personal injury

- Bolt non-mobile vacuum cleaners firmly to a hard flat surface.
- Do not place the vacuum cleaner on an uneven or sloping surface.
- Always use proper lifting equipment and protective gear when assembling your configured product.
- Always use proper lifting equipment when using lifting lugs to lift vacuum cleaners.
- Use a forklift to transport vacuum cleaners with a stand or trolley, unless the vacuum cleaner is equipped with eye bolts.
- Always use proper lifting equipment when using lifting lugs to lift vacuum cleaners.
- Use a forklift to transport vacuum cleaners with a stand or trolley, unless the vacuum cleaner is equipped with eye bolts.



CAUTION! Risk of equipment damage

- Do not load the handles with more than 75 kg. See [Figure 16](#).
- Do not hang bulk bags by their corner straps. Straps are only intended to keep the bag from collapsing. The weight of the collected dust/material must be supported by the pallet.
- If wet material is to be vacuumed, use a float ball and filter designed for that purpose.
- Use the correct filter for collecting wet material.
- Turn off the vacuum cleaner if liquid or foam escapes from it.



NOTE!

- Follow local rules and regulations for all steps in the installation process.
- For electrical connections, see [Figure 5](#).

4.1 Bulk-bags and holders



WARNING! Risk of personal injury

- Always use approved bulk bags.
- Connect the upper and lower ground wires to the bag.



CAUTION! Risk of equipment damage

Do not hang bulk bags by their corner straps. Straps are only intended to keep the bag from collapsing. The weight of the collected dust/material must be supported by the pallet.

Certain A products are equipped with bulk-bag holders for collecting material. Other collection methods may be used if the system risk analysis finds them to be safe.

Place a bulk bag on a pallet and position it under the bulk-bag holder. The buckle on the bulk-bag holder secures the bulk bag opening to the holder, see [Figure 13 A\(A\)](#).

Connect the bulk-bag corner straps to the chains on the bulk-bag holder. Adjust the tension by moving the quick link up or down the chain, see [Figure 13 B\(B\)](#).

5 Use



WARNING! Risk of personal injury

- Vacuuming activities can result in static electricity. Consult local authorities or your supplier for suitable measures to avoid any risks.
- Only properly trained personnel are allowed to use this vacuum cleaner.
- Do not use the power cable to pull the vacuum cleaner.
- Make sure all modules, hoses, and cables are securely fastened before use.
- Do not use if the ambient temperature exceeds 40°C.
- Do not expose the body to vacuum inlets when operating the unit.
- Always use proper protective equipment such as safety shoes and hearing protection.
- Always use proper protective equipment where there is a risk for exposure to dust. See [Figure 10](#).
- Watch out for overhead obstacles to avoid being stuck by or walking into.



CAUTION! Risk of equipment damage

- The float ball can be removed when collecting dry material.
- Use the correct filter for collecting wet material.
- Turn off the vacuum cleaner if liquid or foam escapes from it.
- If wet material is to be vacuumed, use a float ball and filter designed for that purpose.
- Make sure to correctly assemble the filter bag when changing from wet to dry collection.
- Make sure the manual discharge valve is closed before starting the vacuum cleaner. It cannot be accessed during operation.
- Do not load the handles with more than 75 kg. See [Figure 16](#).
- Do not use the vacuum cleaner if there is restricted or no airflow. The fan motor can become overheated.
- 110V units can affect other electrical equipment.



NOTE!

- The float ball can be removed when collecting dry material. See [Figure 12](#).
- Clean the filter after each use.
- If the suction power is reduced, the filter may be clogged. See [Chapter 6 Maintenance](#).
- When the container is full, the suction flow is shut off by the float ball for vacuuming wet material. Turn off the vacuum cleaner before emptying the container.
- For best results, adjust the gulper head depending on the type and weight of material to be vacuumed. See [Figure 7](#).

Turn on the vacuum cleaner as follows:

- 1 Connect the power supply.
- 2 Turn on the switch to start the vacuum cleaner. See [Figure 1\(A\)](#).

6 Maintenance



WARNING! Risk of personal injury

- Always disable the control system before disconnecting power to the vacuum cleaner.
- Disconnect the vacuum cleaner from the electrical supply before any type of service or transportation. See [Figure 1\(B\)](#).
- Always make sure the ball valve is closed before checking the vacuum cleaner. See [Figure 1\(B\)](#).
- Always use proper lifting equipment when using lifting lugs to lift vacuum cleaners.
- Do not place the vacuum cleaner on an uneven or sloping surface.
- Use a forklift to transport vacuum cleaners with a stand or trolley, unless the vacuum cleaner is equipped with eye bolts.
- Lock the vacuum cleaner's wheels before service.
- For adjustable frames, do not make any height adjustments when the silo is filled with material.
- Always use proper protective equipment where there is a risk for exposure to dust, and do not spread dust when cleaning or replacing filters. See [Figure 10](#).
- Empty dust into a container or dust bag. See [Figure 10](#).
- Watch out for overhead obstacles to avoid being stuck by or walking into.

**CAUTION! Risk of equipment damage**

- Use only Nederman original spare parts and accessories.
- Store the vacuum cleaner in a standing position.

6.1 Clean the cartridge filter/filter bag**NOTE!**

- Clean the filter after each use.
- If using a washable filter, it can be washed with water and detergent. Let it air dry.
- Replace the cartridge filter after it has been washed twice.
- If the cartridge filter is placed into a dust bag for disposal, tie off the dust bag. See [Figure 10](#).

- 1 Turn off the vacuum cleaner.
- 2 Empty dust from the filter into a container or dust bag.
- 3 Clean the cartridge filter by tapping it lightly on a hard surface.
- 4 Shake the filter bag.

6.1.1 Manual reverse air cleaning

Depending on the model, the vacuum cleaner uses one of two methods for manual reverse air cleaning of filters, see [Figure 8](#) and [Figure 9](#).

Method 1

- 1 Turn on the vacuum cleaner.
- 2 Handle position during vacuuming [Figure 8\(A\)](#).
- 3 Move handle to position [Figure 8\(B\)](#) for filter cleaning.
- 4 Repeat three times.

Method 2

- 1 Turn on the vacuum cleaner.
- 2 Disconnect hose [Figure 9\(A\)](#).
- 3 Open and close lid [Figure 9\(B\)](#).
- 4 Repeat three times.

6.2 Replace the cartridge filter**NOTE!**

- If the filter is placed into a dust bag for disposal, tie off the dust bag. See [Figure 10](#).
- When using a cartridge filter and filter bag. See [Figure 11](#).

- 1 Turn off the vacuum cleaner.
- 2 Remove the filter and place it into a box or dust bag for disposal.
- 3 Put in the new filter.

6.3 Replace the filter bag**NOTE!**

If the filter bag is placed into a dust bag for disposal, tie off the dust bag, see [Figure 10](#).

- 1 Turn off the vacuum cleaner.
- 2 Empty pre-separator, if one is used.
- 3 Remove the filter basket and filter bag.
- 4 Replace the filter bag.

6.4 Replace dust bags

Replace dust bags when they are filled. How often this occurs varies for each installation. Regular checks are recommended.

Replace dust bags as follows:

- 1 Turn the vacuum cleaner off.
- 2 Remove (and close) bag opening from bag holder. Pay special attention to avoid unnecessary spillage/leakage of dust and accidental discharge of static electricity.
- 3 For bulk-bags:
 - Remove the two earth clamps from the earth tags on the bag.
 - Tie off and replace bulk-bag, see [Figure 6](#).
 - Refit the two earth clamps onto the earth tags.
- 4 Attach the bag opening to the bag holder. For bulk bags, see [Figure 6](#).
- 5 Turn on the vacuum cleaner.

6.5 Clean the float ball**NOTE!**

To put back the float ball after cleaning, see [Figure 12](#).

If the vacuum cleaner is used for wet material, clean the float ball once a month.




6.6 Replace the filter package

See [Figure 2](#). The particles collect on the outside of the filter. Cleaning is carried out every other hour or when the vacuum performance decreases. Replacing the entire filter package is recommended. When only changing the socks, the filter ring should also be replaced.

6.7 Inspection and service

Follow the list below to routinely inspect, and repair or replace worn and damaged parts on the inside and outside of the vacuum cleaner. See also [Chapter 10 Appendix A: Service form](#). Contact your nearest authorized distributor or Nederman for advice on technical service or if you require help with spare parts.

Items to inspect	What to look for	Service
VACUUM OFF		
Suction hoses, couplings	Leaking suction hoses and couplings.	Replace. For grounding guide, see Figure 4 .
Gaskets	Worn out, aged and leaking gaskets.	Replace.
Cartridge filter	Worn out filters.	Replace.
Filter bag	Full or torn filter bag.	Clean or replace a full filter bag. Replace a torn filter bag.
Silencer material	Damaged silencing material.	Replace.
Float ball	Dirty float ball.	Clean the float ball at least once a month.
Ejector nozzle	Dirty ejector nozzle.	Clean.
Wear plate, silo	Damaged or frayed rubber pad on the wear plate.	Replace the wear plate.
Wear plate, grit and dust separator		
Radio noise suppression card	Wiring on the card is burned.	Replace the card.
VACUUM ON		
Main switch	The motors do not start using the main switch.	Replace the main switch. See Figure 13 B .
If specified vacuum is not reached	See Chapter 7 Troubleshooting .	
Abnormal noise level.		

Items to inspect	What to look for	Service
VACUUM ON (TOP COVER REMOVED)		
 WARNING! Risk of personal injury Do not touch the motor with any tool during this operation.		
Motors	Check that the motors are running clockwise as seen from above.	See Chapter 7 Troubleshooting .
Thermal function	Control the thermal function by blocking the cooling air inlets with sheets of paper. The motors should be switched off by the thermal function when the temperature exceeds approximately 75°C/167°F.	
VACUUM OFF (TOP AND SECONDARY COVERS REMOVED)		
 WARNING! Risk of personal injury Unplug the power cable before removing the covers.		
Cable connections and screws	Loose cable connections and screws.	Secure cable connections, and tighten screws.
Carbon brushes	Worn-out carbon brushes.	Replace. <div data-bbox="948 1021 1465 1137" style="border: 1px solid black; padding: 5px; margin-top: 10px;">  NOTE! Brushes shall be replaced after 900 hours of use. See Figure 13 A. </div>
Commutator	Contaminated commutator	Clean the commutator.
Motor	Resistance in the bearings.	Replace the motor.

7 Troubleshooting

Problem	Fault	Solution
Motor will not start	Electrical supply not connected.	Connect the electrical supply.
	Thermo switch not reset or defect (T-mod).	Dismantle top cover and clean or exchange cooling air filter. Reset the thermo switch. If the thermo switch is defective, please contact the distributor.
	Power switch or cable defect.	Contact the distributor.
	Radio noise suppression card defect.	Contact the distributor.
No or low suction capacity.	Motor not connected correctly.	Check connection and wiring.
	The switch is not completely turned on.	Turn the switch on.
	Clogged suction hose or inlet.	Disconnect the suction hose. Turn and suck in the opposite direction. If still clogged, unplug it with a rod.
	One or two motors defect.	Dismantle the top cover, check the brushes and commutators. Replace the brushes if they are worn out. Contact the distributor if the commutators are burnt.
	Clogged filter.	See Chapter 6 Maintenance .
	Leaking suction hose.	Replace the suction hose.
	Leaking gaskets.	Remove and replace damaged neoprene gaskets. Use suitable two-component glue.
	Discharge valve open.	Close valve.
Dust in exhaust air.	Filter missing, defect or wrongly installed.	Check the filter and replace it if necessary.
Water in the exhaust air.	Filter basket or float ball wrongly or not installed.	Reattach filter basket or float ball.
	Filter basket or float ball defect.	Replace.
Abnormal noise level.	Leaking gaskets.	Remove and replace damaged neoprene gaskets. Use suitable two-component glue.
	Sound absorbing material defect.	Dismantle the top cover and remove dirt. Replace damaged silencing material, if necessary.
The vacuum unit is overheated.	Defect thermo switch (T-mod).	Dismantle the top cover and clean or exchange the cooling air filter. Reset the thermo switch. If the thermo switch is defective, please contact the distributor.

8 Spare Parts



CAUTION! Risk of equipment damage

Use only Nederman original spare parts and accessories.

Contact your nearest authorized distributor or Nederman for advice on technical service or if you require help with spare parts. See also www.nederman.com.

8.1 Ordering spare parts

When ordering spare parts always state the following:

- The part number and control number (see the product identification plate).
- Detail number and name of the spare part (see www.nederman.com/en/service/spare-part-search).
- Quantity of the parts required.

9 Recycling

The product has been designed for component materials to be recycled. Different material types must be handled according to relevant local regulations. Contact the distributor or Nederman if uncertainties arise when scrapping the product at the end of its service life.

10 Appendix A: Service form



NOTE!

If an inspection result (for example, a measured value) differs significantly from a previous result, find the cause for the difference.

Copy the maintenance checklist, fill it in and save it as a service record.

For values, note the value in the result column, otherwise, a tick will suffice if the item has been performed or considered.

Customer	
Vacuum Type/Model	
Service date	
Serviced by	

Items to inspect	Result	Repaired	Replaced	Replaced part number
VACUUM OFF				
Silencer				
Container				
Trolley				
Suction hoses, couplings				
Pre separator/cyclone				
Accessories				
Gasket				
Lid, vacuum head				
Container				
Filter(s)				
Silencer material				
Filter bag				
Float ball				
Wear plate, silo				
Wear plate, grit and dust separator				
VACUUM ON (TOP COVER ATTACHED)				
On/Off function				
Vacuum				

E - Vacuum Cleaners

Items to inspect	Result	Repaired	Replaced	Replaced part number
Noise level				
VACUUM ON (TOP COVER REMOVED)				
Rotation motors				
Thermo switch function				
VACUUM OFF (TOP AND SECONDARY COVERS REMOVED)				
Electric cable connections				
Carbon brushes				
Commutator wear				
Motor wear				
Radio disturbance compression card				
OTHER ITEMS (SPECIFY)				

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