



ATTIX 30 H / M / PC / XC ATTIX 50 H / M / PC / XC

Operating Instructions



Nilfisk
ALTO
Why Compromise



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¹⁾ Optional accessories / Option depending on model

1 Important safety instructions

Symbols used to mark instructions



Prior to using the appliance for the first time, be sure to read this document through and keep it ready to hand.

	DANGER
	Danger that leads directly to serious or irreversible injuries, or even death.
	WARNING
	Danger that can lead to serious injuries or even death.
	CAUTION
	Danger that can lead to minor injuries and damage.

The appliance must

- only be used by persons, who have been instructed in its correct usage and explicitly commissioned with the task of operating it
- only be operated under supervision
- not be used by children
- not be used by mentally or physically disabled persons

Before starting work, the operating staff must be informed on and trained within:

- use of the vacuum cleaner
- risks associated with the material to be picked up
- safe disposal of the picked up material

1. Do not use any unsafe work techniques.
2. Never use the vacuum cleaner without a filter.
3. Switch off the appliance and disconnect the mains plug in the following situations:
 - Prior to cleaning and servicing
 - Prior to replacing components
 - Prior to changing over the appliance
 - If foam develops or liquid emerges

Besides the operating instructions and the binding accident prevention regulations valid in the country of use, observe recognised regulations for safety and proper use.

Purpose and intended use

Since 1997, there is a new division of hazardous dusts and their assigned vacuum machines. These are regulated by IEC 60335-2-69 (world wide) and by EN 60335-2-69 (European wide).

The safety label on the machine warns:

This appliance contains dust hazardous to health. Emptying and maintenance operations, including removal of the dust collecting means, must only be carried out by authorised personnel wearing suitable personal protection. Operate only after the full filtration system has been fitted and checked.



Dust Class H (high). The dusts which belong to this class are: dusts with OEL values¹⁾, all carcinogenic dusts and dusts which are mixed with pathogenic agents. Vacuums for Dust Class H are tested in their entirety and have a maximum degree of permeability of 0.005%. The disposal must be dust free.



Dust Class M (medium). The dusts which belong to this class are: dusts with OEL values¹⁾ $\geq 0.1 \text{ mg/m}^3$ as well as saw dust. The machine is tested in its entirety by vacuums for this dust class. The maximum degree of permeability is 0.1% and the disposal must be low dust.

The air flow in Safety Vacuum systems has to be strictly controlled to achieve a minimum flow rate of $V_{\min} = 20 \text{ m/s}$ in the suction hose.

The vacuum cleaners ATTIX 30-XH and ATTIX 50-XH are suitable to pick up

- dry, nonflammable dust, non flammable liquids, hazardous dusts with OEL values, carcinogenic dusts, dusts containing germs

The vacuum cleaners ATTIX 30-XH PC e ATTIX 50-XH PC are also approved for asbestos abatement (TRGS 519).

The vacuum cleaners ATTIX 30-XM and ATTIX 50-XM are suitable to pick up

- dry, nonflammable dust, non flammable liquids, sawdust and hazardous dusts with OEL values $\geq 0.1 \text{ mg/m}^3$

The vacuum cleaners are suitable for commercial use, such as e.g. in

- Hotels, Schools, Hospitals, Factories, Shops, Offices, Hire shops

Any other use is considered as improper use. The manufacturer accepts no liability for any damage resulting for such use. The risk for such use is borne solely by the user.

Proper use also includes proper operation, servicing and repairs as specified by the manufacturer.

Transport

1. Before transporting the dirt tank, close all the locks.
2. Do not tilt the cleaner if there is liquid in the dirt tank.
3. Do not use a crane hook to lift the cleaner.

Storage

1. Store the appliance in a dry place, protected from frost.

Electrical connection

1. It is recommended that the vacuum cleaner should be connected via a residual current circuit breaker.
2. Arrange the electrical parts (sockets, plugs and couplings) and lay down the extension lead so that the protection class is maintained.
3. Connectors and couplings of power supply cords and extension leads must be watertight.

Extension lead

1. As an extension lead, only use the version specified by the manufacturer or one of a higher quality. See operating instructions.
2. When using an extension lead, check the minimum cross-sections of the cable:

Cable length	Cross section	
	< 16 A	< 25 A
up to 20 m	1.5 mm ²	2.5 mm ²
20 to 50 m	2.5 mm ²	4.0 mm ²

Maintenance, cleaning and repair

During the following work, ensure that dust is not unnecessarily spread around. Wear a P2 breathing mask.

CAUTION: In the case of asbestos abatement wear additional single-use clothing.

Clean the water level limiting device regularly and check for signs of damage.

Only carry out maintenance work described in the operating instructions.

Always pull the out the mains plug before cleaning and maintenance of the vacuum cleaner.

During maintenance and cleaning, handle the vacuum cleaner in such a manner that there is no danger for maintenance staff or other persons.

In the maintenance area

1. Use filtered compulsory ventilation
2. Wear protective clothing
3. Clean the maintenance area so that no harmful substances get into the surroundings.

Before removing the vacuum cleaner from the area contaminated with harmful substances:

1. Clean the outside of the vacuum cleaner, wipe it clean or pack the vacuum cleaner in well sealed packaging
2. and avoid spreading deposited harmful dust.

After use, in asbestos contaminated areas, the machine must be cleaned by an authorised person according to TGRS 519.


During maintenance and repair work all contaminated parts that could not be cleaned satisfactorily must be:


1. packed in well sealed bags
2. disposed of in a manner that complies with valid regulations for such waste removal.


At least once a year, a Nilfisk-ALTO technician or an instructed person must perform a technical inspection including filters, air tightness and control mechanisms. According to AA.22.201.2 appliances in class H must have their filtration efficiency checked once a year. If the efficiency of the filter does not fulfil the requirements for dust class H, the filter must be replaced, and the new filter must be tested according to AA.22.201.2.


Risks

Electrical components


	DANGER
	<p>Electric shock due to faulty mains connecting lead.</p> <p>Touching a faulty mains connecting lead can result in serious or even fatal injuries.</p> <ol style="list-style-type: none"> 1. Do not damage the mains power lead (e.g. by driving over it, pulling or crushing it). 2. Regularly check whether the power cord is damaged or shows signs of ageing. 3. Have the faulty mains connecting lead replaced by your Nilfisk-Alto service representative or a qualified electrician prior to using the appliance again.

	DANGER
	<p>The upper section of the vacuum cleaner contains live components.</p> <p>Contact with live components leads to serious or even fatal injuries.</p> <ol style="list-style-type: none"> 1. Never spray water on to the upper section of the vacuum cleaner.

	CAUTION
	<p>Appliance socket^{*)}.</p> <p>The appliance socket is only designed for the purposes defined in the operating instructions. The connection of different appliances can result in damage.</p> <ol style="list-style-type: none"> 1. Prior to plugging in an appliance, always switch off the vacuum cleaner and the appliance that is to be connected. 2. Read the operating instructions to the appliance to be connected and observe the safety notes contained in these.


	CAUTION
	<p>Damage due to unsuitable mains voltage.</p> <p>The appliance can be damaged as a result of being connected to an unsuitable mains voltage.</p> <ol style="list-style-type: none"> 1. Ensure that the voltage shown on the rating plate corresponds to the voltage of the local mains power supply.

Picking up liquids


	CAUTION
	<p>Picking up liquids.</p> <p>Do not pick up flammable liquids.</p> <ol style="list-style-type: none"> 1. Before liquids are picked up, always remove the filter bag/waste bag and check that the float ^{*)} or the water level limit ^{*)} works properly. 2. The use of a separate filter element or filter screen is recommended. 3. If foam appears, stop work immediately and empty the tank.

^{*)} Optional accessories / Option depending on model


Hazardous materials

WARNING	
	<p>Hazardous materials.</p> <p>Vacuuming up hazardous materials can lead to serious or even fatal injuries</p> <ol style="list-style-type: none"> The following materials must not be picked up by the vacuum cleaner: <ul style="list-style-type: none"> hot materials (burning cigarettes, hot ash, etc.) flammable, explosive, aggressive liquids (e.g. petrol, solvents, acids, alkalis, etc.) flammable, explosive dust (e.g. magnesium or aluminium dust, etc.)


Using the vacuum cleaner for asbestos abatement work

WARNING	
	<p>To pick up materials containing asbestos:</p> <ol style="list-style-type: none"> ATTIX 30-XH and ATTIX 50-XH can be used for picking up asbestos. Use a suction hose with a diameter of 36 mm. <p>Use the closable plastic sack to ensure dust-free transport of the vacuum cleaner and contaminated parts (hose, hand pipe, nozzles, etc.). Once the asbestos vacuum cleaner has been used in an exclusion area as defined in TRGS 519, it should no longer be used in so-called "white" areas. Exceptions are only permitted if the asbestos cleaner has previously been completely decontaminated by a specialist as specified in TRGS 519 No. 2.7 (e.g. not only the outer case but also, for example, the cooling air rooms, the installation rooms for electrical supplies, the supplies themselves, etc.). A written report must be made by a specialist and signed by him.</p> <p>When picking up materials containing asbestos the exhaust air must not be returned into the room. Use the exhaust air socket and a hose with a length of maximum 4 m and a nominal diameter of minimum 50 mm.</p>

Spare parts and accessories

CAUTION	
	<p>Spare parts and accessories.</p> <p>The use of non-genuine spare parts and accessories can impair the safety of the appliance.</p> <ol style="list-style-type: none"> Only use spare parts and accessories from Nilfisk-Alto. Use only the brushes supplied with the vacuum cleaner or specified in the operating manual.

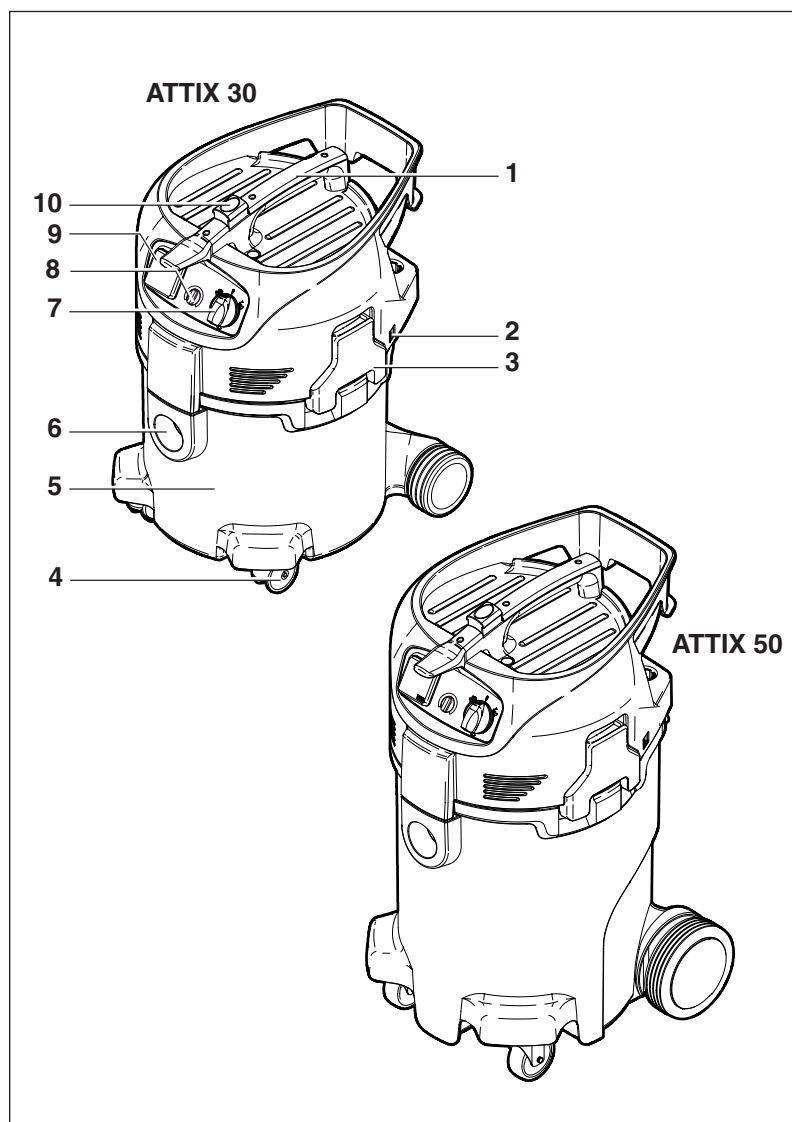
Emptying dirt tank

CAUTION	
	<p>Picking up environmentally hazardous materials.</p> <p>Materials picked up can present a hazard to the environment.</p> <ol style="list-style-type: none"> Dispose of the dirt in accordance with legal regulations.

2 Description

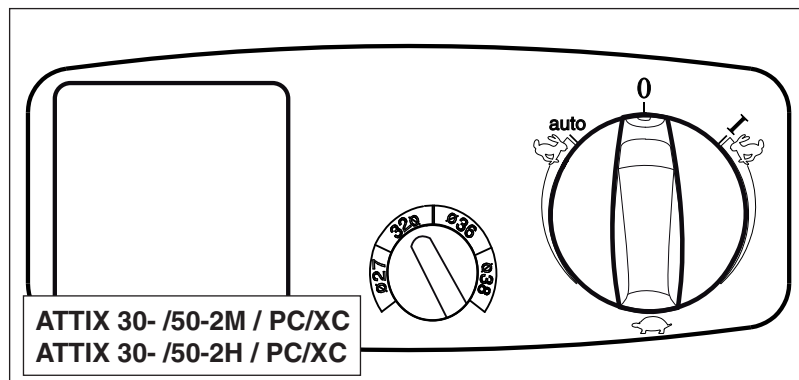
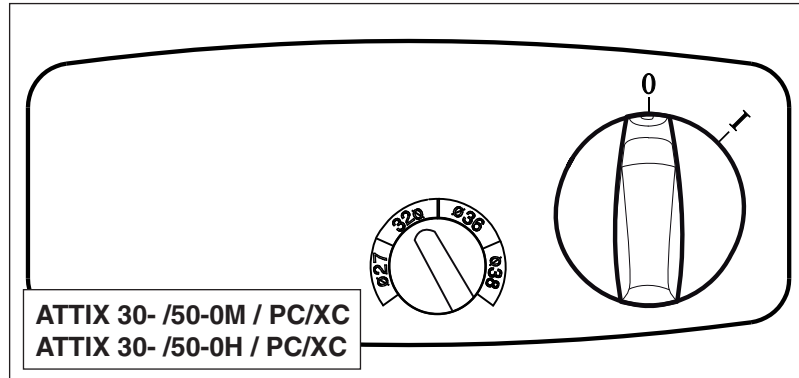
2.1 Operating elements

- 1 Handle with receptacle for electrical lead
- 2 Fixing point for suction pipe holder
- 3 Retaining clamp
- 4 Castor
- 5 Dirt tank
- 6 Inlet fitting
- 7 Appliance switch
- 8 Hose diameter setting
- 9 Appliance socket ^{*)}
- 10 Operating knob for filter cleaning ^{*)}



^{*)} Optional accessories / Option depending on model

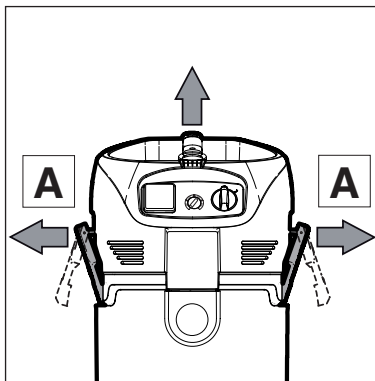
2.2 Operating panel



3 Before starting the cleaner

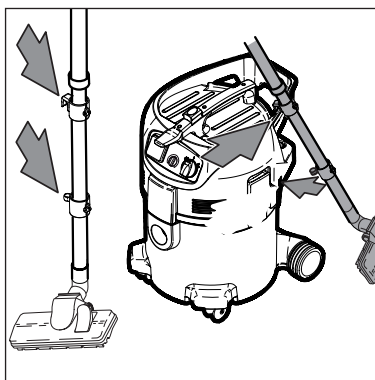
3.1 Assembling the vacuum cleaner

3.1.1 Taking accessories out of the packaging ¹⁾



1. Take vacuum cleaner and accessories out of the packaging.
2. The mains plug should not yet be inserted into a socket.
3. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.
4. Take the accessories ¹⁾ out of the dirt tank and the packaging.






3.1.2 Attaching the suction pipe holder to the suction pipe ¹⁾








1. Attach the suction pipe holder to the suction pipe.

3.2 Before starting the cleaner

Depending on how hazardous the dust is, the cleaner must be fitted with appropriate filters.

	
Type of dust	Filter bag/waste bag/filter element
<ul style="list-style-type: none"> • Dusts with OEL values¹⁾ (observe any additional national regulations) • Carcinogenic dusts • Dust with pathogenic agents 	 <p>Recommended for safe dust free disposal: Safety filter bag "H" Order No. ATTIX 30-XH: 107400233 ATTIX 50-XH: 107400236</p>
<ul style="list-style-type: none"> • Dusts with OEL values¹⁾ (observe any additional national regulations) • Carcinogenic dusts • Dust with pathogenic agents 	 <p>Filter bag Order No. ATTIX 30-XH: 302004000 ATTIX 50-XH: 302004004</p>
<ul style="list-style-type: none"> • Dusts with OEL values¹⁾ (observe any additional national regulations) • Carcinogenic dusts • Dust with pathogenic agents 	 <p>Filter element "H" Order No. 302000658</p>
	 <p>Flat filter element "H" Order No. 107400449</p>

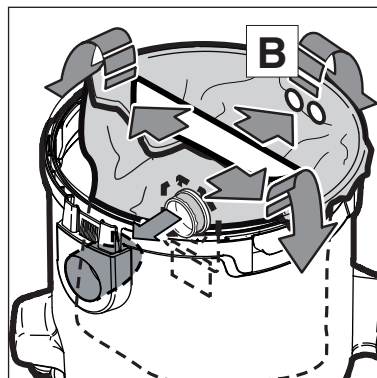
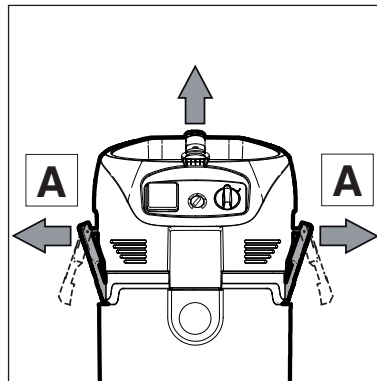
¹⁾ Optional accessories / Option depending on model

	
Type of dust	Filter bag/waste bag/filter element
<ul style="list-style-type: none"> • Dusts with OEL values $\geq 0.1 \text{ mg/m}^3$ (observe any additional national regulations) • Wood dusts & concrete dusts 	 Waste bag (5 pcs.) Order No. ATTIX 30-XM: 302000804 ATTIX 50-XM: 302000728
<ul style="list-style-type: none"> • Dusts with OEL values $\geq 0.1 \text{ mg/m}^3$ (observe any additional national regulations) • Wood dusts & concrete dusts 	 Filter bag Order No. ATTIX 30-XM: 302004000 ATTIX 50-XM: 302004004
<ul style="list-style-type: none"> • Dusts with OEL values $\geq 0.1 \text{ mg/m}^3$ (observe any additional national regulations) • Wood dusts & concrete dusts 	 Filter element "M" PC: Order No. 302000490
	 Flat filter element "M" XC: Order No. 302002842

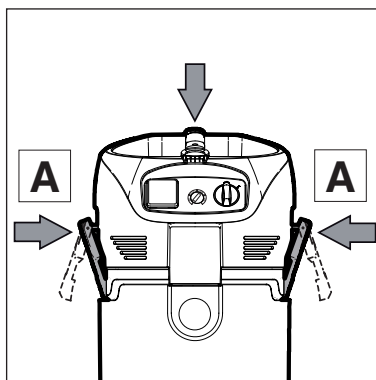
Before picking up dust with occupational exposure limit values:

1. Check that all the filters are present and properly fitted
2. The hose diameter and the setting for the suction hose diameter must be the same.
3. When the motor is running, hold the suction hose shut. For safety reasons, an acoustic warning sounds if the air speed in the suction hose drops to below 20 m/s.

3.3 Insert the safety filter bag "H"

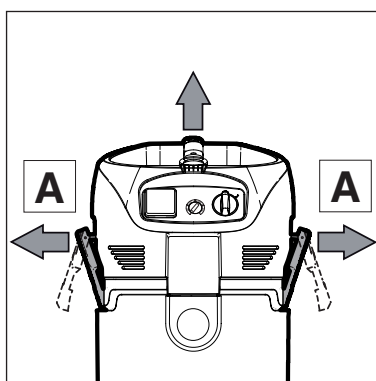


1. The mains plug should not yet be inserted into a socket.
2. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.
3. Insert the safety filter bag into the dirt tank.
4. Press the safety bag connection firmly into the inlet fitting.
5. Check that the ventilation holes (B) remain inside the dirt tank.
6. Fold the top edge of the disposal bag over the rim of the dirt tank.

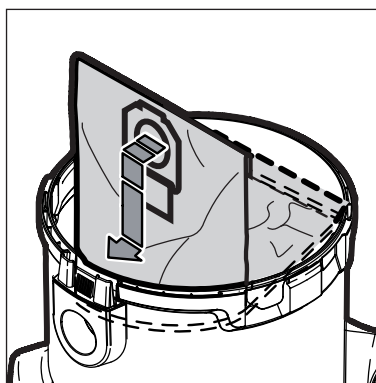


7. Attach the upper section of the vacuum cleaner.
8. Close the retaining clamps (A). Ensure that the retaining clamps fit properly.

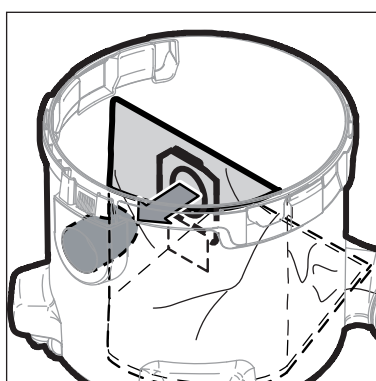
3.4 Inserting the filter bag "M"



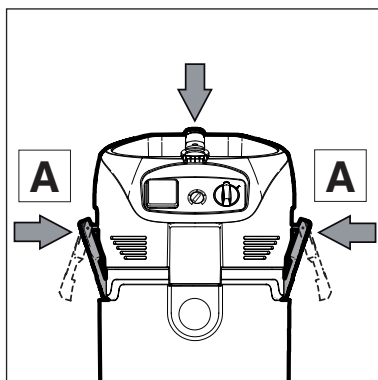
1. The mains plug should not yet be inserted into a socket.
2. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.



3. Insert the filter bag into the dirt tank.



4. Press the filter bag connection firmly on to the inlet fitting.

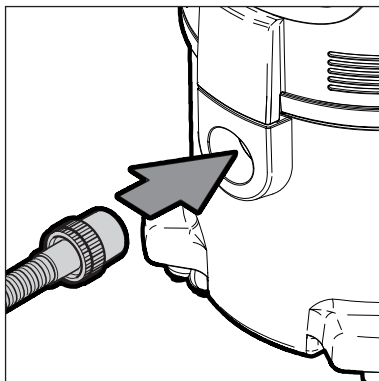


5. Attach the upper section of the vacuum cleaner.
6. Close the retaining clamps (A). Ensure that the retaining clamps fit properly.

4 Control / Operation

4.1 Connections

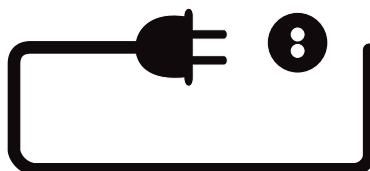
4.1.1 Connecting the suction hose



1. Connect the suction hose.

4.1.2 Electrical connection

The operating voltage shown on the rating plate must correspond to the voltage of the mains power supply.



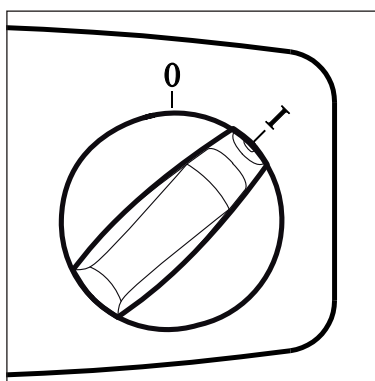
1. Ensure that the cleaner is switched off.
2. Insert the power cord into a properly installed and fused socket with earthing contact.

4.2 Switching on the vacuum cleaner

4.2.1 Switch „0-I“^{*)}

The hose diameter and the setting for suction hose diameter must be the same.

ø27	ø27
ø32	ø32
ø36	ø36
ø38	ø38

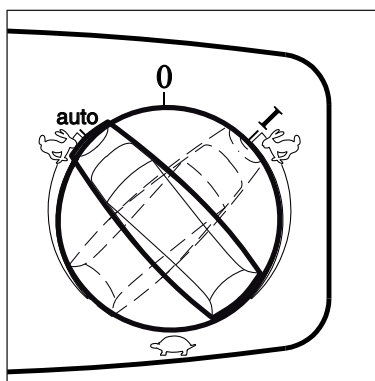


Switch position	Function
0	Off
I	On

4.2.2 Switch „, auto-0-I“^{*)}

The hose diameter and the setting for the suction hose diameter must be the same.

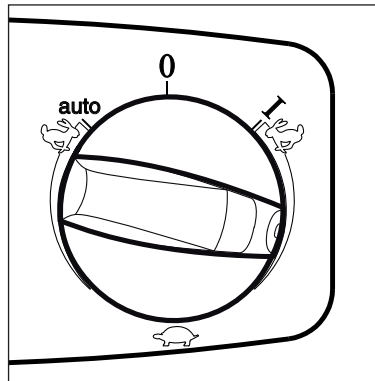
ø27	ø27
ø32	ø32
ø36	ø36
ø38	ø38




Switch position	Function
0	Off
auto	Auto On/Off
I	On / manual mode

^{*)} Optional accessories / Option depending on model

4.2.3 Suction power control ^{*)}



Switch position	Function
	The suction power control switch allows precise adaptation of the suction power for different cleaning tasks.

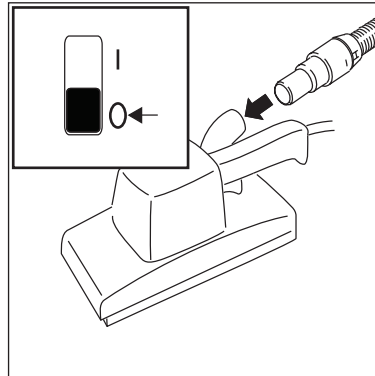
4.2.4 Auto-On/Off-Operation - "auto" switch position ^{*)}

The vacuum cleaner is switched on and off by the power tool connected. Dirt is picked up from the source of dust immediately.

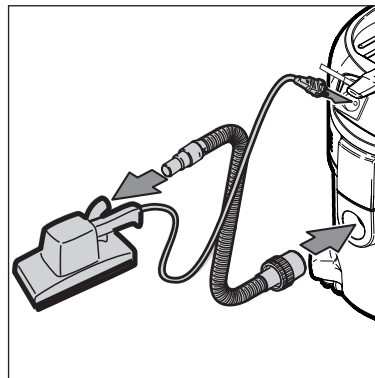
To comply with regulations, only approved dust producing tools should be connected.

The maximum power consumption of the connected electrical appliance is stated in section "Technical data".

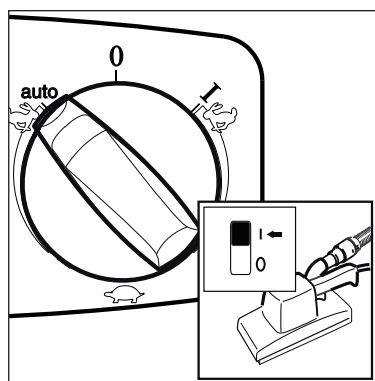
Before switching the switch to position „auto“, ensure that the tool connected to the appliance socket is switched off.



1. Switch off the vacuum cleaner.
2. Switch off the power tool.



3. Connect the power tool and the vacuum cleaner with a suction hose.
4. Insert the plug of the power tool into the tool socket on the operating panel of the vacuum cleaner.



5. Switch on the vacuum cleaner. Switch in "auto" position.
6. Switch on the power tool. The vacuum cleaner motor starts when the connected power tool is switched on. When the power tool is switched off, the vacuum cleaner continues to run for a short moment so that any dust in the suction hose is conveyed to the filter bag.

4.3 Cleaning the filter element

4.3.1 Cleaning the filter element " Push&Clean System " (ATTIX 30- / 50-xx PC)

Only for vacuum cleaning without a filter bag and without a cloth insert filter.



If suction performance drops:

1. Turn switch to position "I" (maximum suction power).
2. Close the nozzles or suction hose opening with the palm of your hand.
3. Press the button to start filter

cleaning three times. The resulting stream of air removes attached dust from the slats of the filter elements.

4.3.2 Cleaning the filter element " XtremeClean " (ATTIX 30- / 50-xx XC)

Only for vacuum cleaning without a cloth insert filter.

After picking up harmless dust using the waste bag.



To ensure that suction performance is always at its best, the filter element is automatically cleaned during operation. We recommend complete cleaning if the filter element becomes extremely dirty.

1. Switch off the vacuum cleaner.
2. Close the nozzles or suction hose opening with the palm of your hand.
3. Turn the switch to position „I“ and let the cleaner operate for approx. 10 seconds with the suction hose opening closed.

4.3.3 Check the volume flow monitor

Before picking up dust with maximum room concentration values:

1. Check that all the filters are present and properly fitted.
2. When the motor is running, hold the suction hose shut. An acoustic warning sounds after approx. 1 second.

4.3.4 Acoustic warning

For safety reasons, an acoustic warning sounds if the air speed in the suction hose drops to be-

low 20 m/s. See section "Troubleshooting"

5 Applications and techniques

5.1 Techniques

If used correctly, additional accessories, suction nozzles and suction hoses can enhance the cleaning action and reduce the cleaning effort.

Effective cleaning is achieved if you follow just a few guidelines in combination with your own practical experience in special fields.

Here are some basic tips.

5.1.1 Picking up dry substances

CAUTION!

Do not pick up flammable substances.

There must always be a safety filter bag in the tank before dry substances with maximum room concentration values are picked up. See section "Accessories" for ordering number.

To pick up harmless dust we recommend the use of a waste bag. See section "Accessories" for ordering number. Disposal of the picked up material is then simple and hygienic.

After picking up liquids the filter element is wet. A damp filter element clogs more quickly when dry substances are picked up. For this reason the filter element should be washed and dried or replaced by a dry element before dry substances are picked up.

5.1.2 Picking up liquids

CAUTION!

Do not pick up flammable liquids.

Before liquids are picked up, always remove the filter bag/disposal bag.

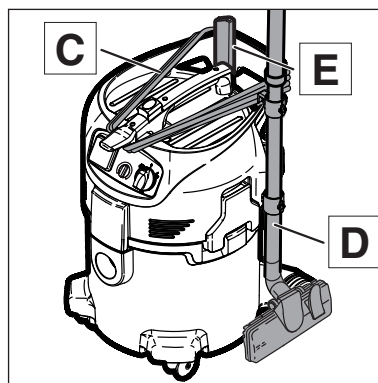
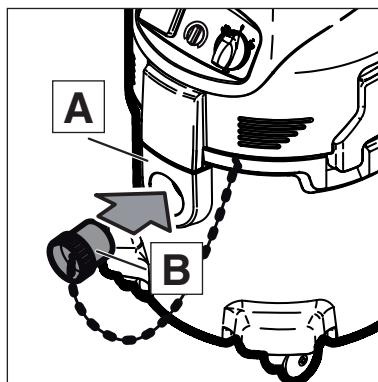
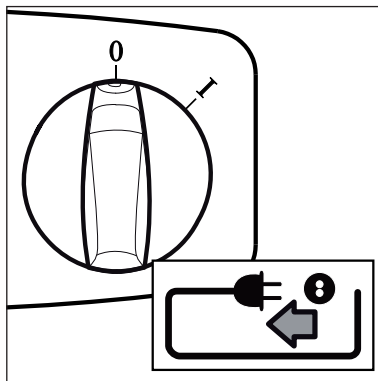
The use of a separate filter element or filter screen is recommended.

If foam appears, stop work immediately and empty the tank.

To reduce the amount of foam, use foam killer Nilfisk-ALTO Foam Stop (see section "Accessories" for order number).

6 After finishing work

6.1 Switching the vacuum cleaner off and storage



1. After picking up hazardous dust, vacuum clean the outside of the cleaner.
2. Switch off the cleaner and pull the mains plug out of the socket.
3. Remove the suction hose from the vacuum cleaner and close the inlet fitting (A) with the plug (B).
4. Wind up the power cord onto the handle (C). Begin winding up the cord at the cleaner end and not the plug end to prevent the power cord from tangling up.
5. Empty the dirt tank and clean the vacuum cleaner.
6. After picking up liquids: Store the upper section of the vacuum cleaner separately so that the filter element can dry.
7. Hang the suction hose with the floor nozzle (D) in the brackets and pack the accessories (E) away.
8. Store the cleaner in a dry room where it is protected from unauthorized use.

7 Maintenance

7.1 Maintenance plan

		After finishing work	When required
7.2.1	Emptying dirt tank	●	
7.2.2	Replacing the safety filter bag "H"		●
7.2.3	Replacing the filter bag "M"		●
7.2.4	Replacing the disposal bag "M"		●
7.2.5	Replacing filter element "H" (Push&Clean)		●
7.2.6	Replacing filter element "H" (XtremeClean)		●
7.2.7	Replacing filter element "M" (Push&Clean)		●
7.2.8	Replacing filter element "M" (XtremeClean)		●

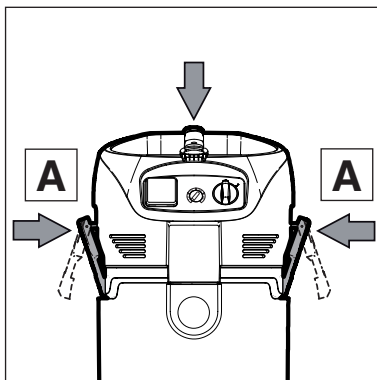
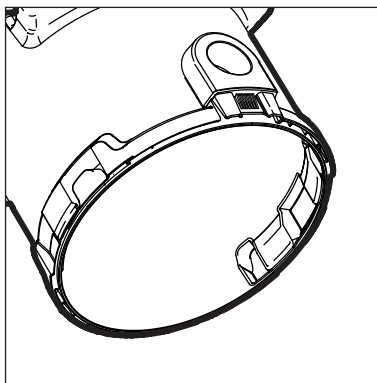
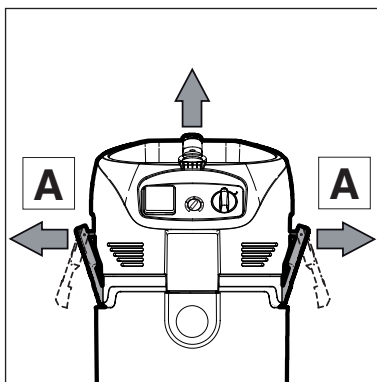
7.2 Maintenance work

7.2.1 Emptying the dirt tank

After emptying the tank: clean the rim of the tank and the seals in the intermediate ring and the upper section of cleaner before refitting them.

If the seal or groove is dirty or damaged, the suction performance will be reduced.

Before reinserting the suction hose: clean the inlet fitting and hose collar.



1. Switch off the vacuum cleaner and pull the mains plug out of the socket.
2. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.

4. Tip out the collected dirt.
5. Dispose of the dirt in accordance with legal regulations.

6. Attach the upper section of the vacuum cleaner.
7. Close the retaining clamps (A). Ensure that the retaining clamps fit properly.

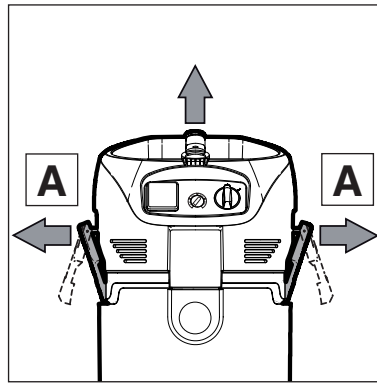
7.2.2 Replacing the safety filter bag "H"



During the following work, ensure that dust is not unnecessarily spread around. Wear a P2 breathing mask.

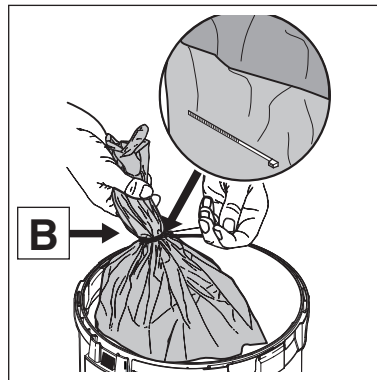
CAUTION! In the case of asbestos abatement wear additional single-use clothing.

Never use the vacuum cleaner without a filter.



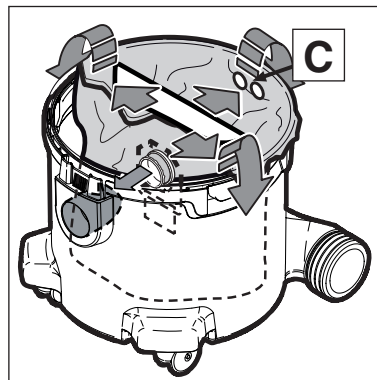
1. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.

english



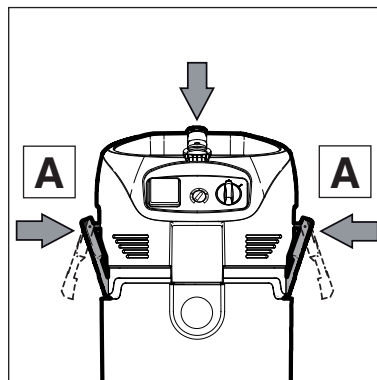
Removing the safety disposal bag

1. Close the disposal bag with the string (B).
2. Carefully remove the filter bag connection from the inlet fitting.
3. Close the disposal bag connection with the slider
4. Dispose of the disposal bag in accordance with legal regulations.



Inserting the safety disposal bag

5. Clean the dirt tank.
6. Insert the safety disposal bag into the dirt tank.
7. Check that the ventilation holes (C) remain inside the dirt tank.
8. Press the bush of the new filterbag firmly on to the inlet fitting.
9. Fold the top edge of the disposal bag over the rim of the dirt tank.



10. Attach the upper section of the vacuum cleaner.
11. Close the retaining clamps (A). Ensure that the retaining clamps fit properly.

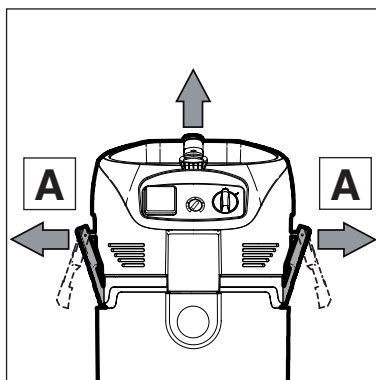
english

7.2.3 Replacing the filter bag "M"

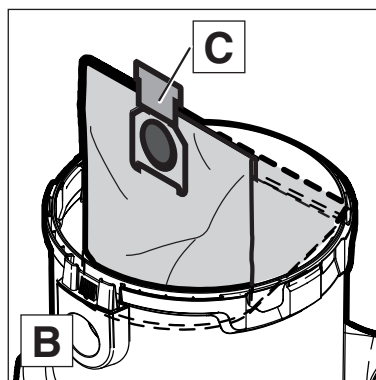


During the following work, ensure that dust is not unnecessarily spread around. Wear a P2 breathing mask.

Never use the vacuum cleaner without a filter.

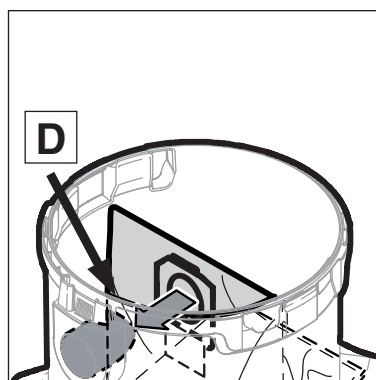


1. Switch off the vacuum cleaner and pull the mains plug out of the socket.
3. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.



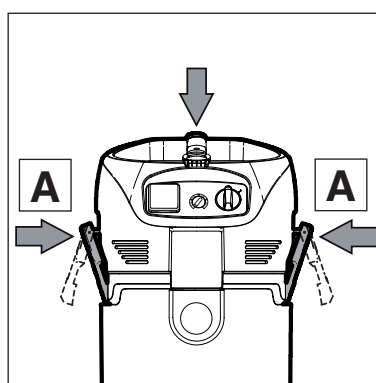
Removing the filter bag:

4. Carefully remove the filter bag connection from the inlet fitting (B).
5. Close the filter bag connection (C) with the slider.
6. Dispose of the filter bag in accordance with legal regulations.



Inserting the filter bag:

7. Clean the dirt tank.
8. Insert the filter bag in the dirt tank.
9. Press the bush of the new filter bag fitting (D) firmly on to the inlet fitting (D).



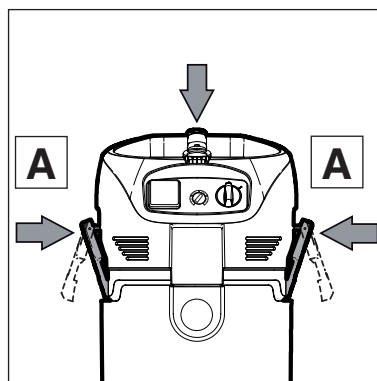
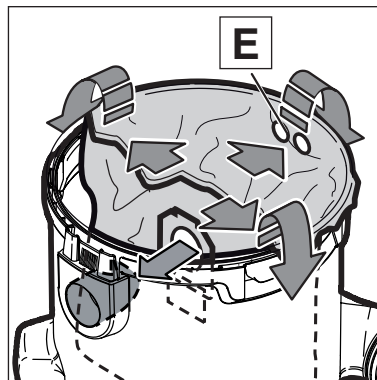
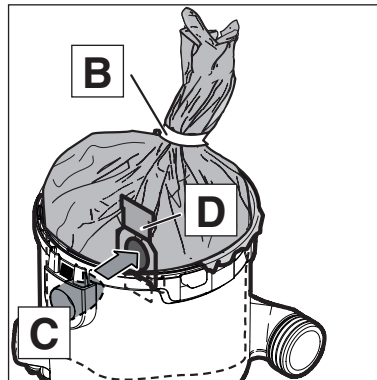
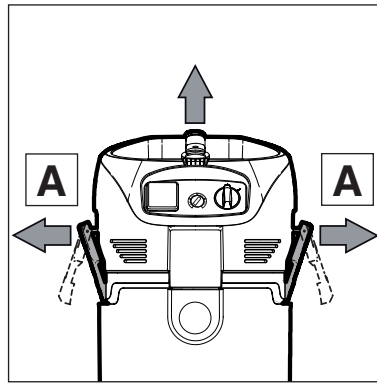
10. Attach the upper section of the vacuum cleaner.
11. Close the retaining clamps (A). Ensure that the retaining clamps fit properly.

7.2.4 Replacing the disposal bag "M"



During the following work, ensure that dust is not unnecessarily spread around. Wear a P2 breathing mask.

Never use the vacuum cleaner without a filter.



1. Switch off the vacuum cleaner and pull the mains plug out of the socket.
2. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.

Removing the disposal bag:

3. Close the disposal bag with string (B).
4. Carefully remove the filter bag connection from the inlet fitting (C).
5. Close the disposal bag connection (D) with the slider.
6. Dispose of the disposal bag in accordance with legal regulations.

Inserting the disposal bag:

7. Clean the dirt tank.
8. Insert the disposal bag into the dirt tank.
9. Check that the ventilation holes (E) remain inside the dirt tank.
10. Press the bush of the new filter bag firmly on to the inlet fitting.
11. Fold the top edge of the disposal bag over the rim of the dirt tank.
12. Attach the upper section of the vacuum cleaner.
13. Close the retaining clamps (A). Ensure that the retaining clamps fit properly.

english

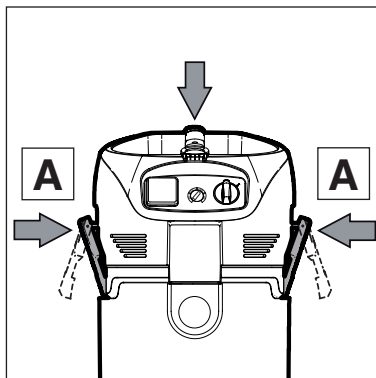
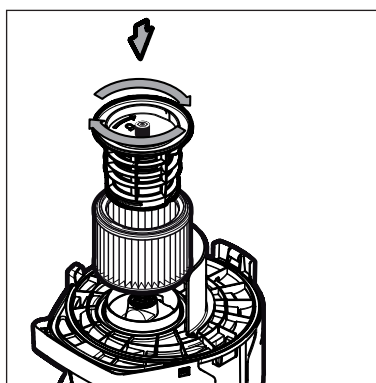
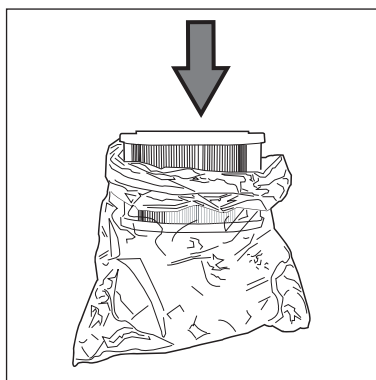
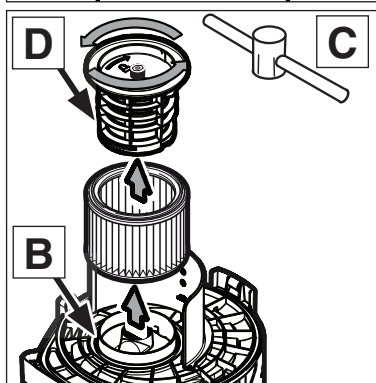
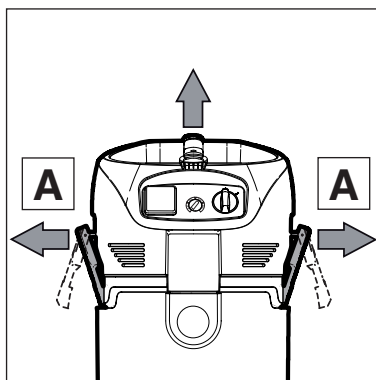
7.2.5 Replacing filter element "H" (Push & Clean System)



During the following work, ensure that dust is not unnecessarily spread around. Wear a P2 breathing mask.

CAUTION! In the case of asbestos abatement wear additional single-use clothing.

Never use the vacuum cleaner without a filter.



1. Switch off the vacuum cleaner and pull the mains plug out of the socket.
2. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.

Removing the filter element:

3. Using the enclosed tool (C), turn the filter holder (D) anti-clockwise and remove it.
4. Carefully remove the filter element.
5. Clean the filter seal (B). Check it for damage and replace it if necessary.
6. Place the protective filter bag over the filter element.
7. Carefully remove the filter element and close the protective filter bag with a knot.
8. Dispose of the used filter element in accordance with legal regulations.

Inserting the filter element:

9. Using the enclosed tool, attach the filter holder and turn it clockwise to lock it.
10. Attach the upper section of the vacuum cleaner.
11. Close the retaining clamps (A). Ensure that the retaining clamps fit properly.

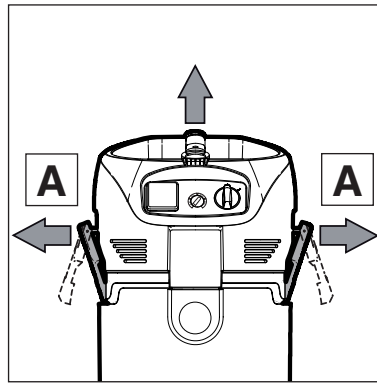
7.2.6 Replacing filter element "H" (Xtreme Clean System)



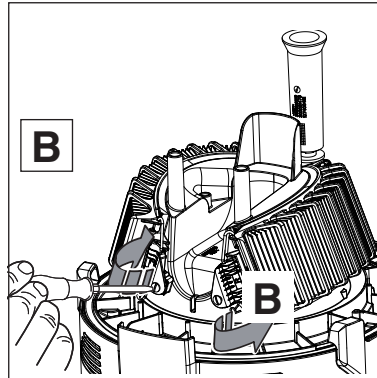
During the following work, ensure that dust is not unnecessarily spread around. Wear a P2 breathing mask.

CAUTION! In the case of asbestos abatement wear additional single-use clothing.

Never use the vacuum cleaner without a filter.

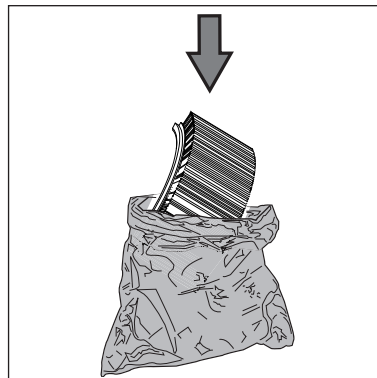


1. Switch off the vacuum cleaner and pull the mains plug out of the socket.
2. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.

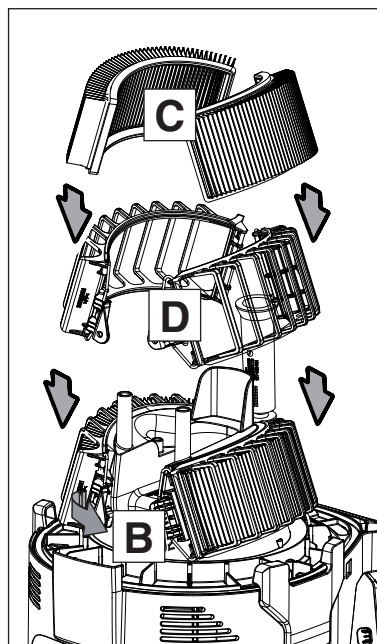


Removing the filter elements:

3. Unscrew the screw and open filter tension part (B).
4. Remove carefully the cassettes with filter elements.



5. Place the protective filter bag over the filter element.
6. Carefully remove the filter element and close the protective filter bag with a knot.
7. Dispose of the used filter element in accordance with legal regulations.



Inserting the filter elements:

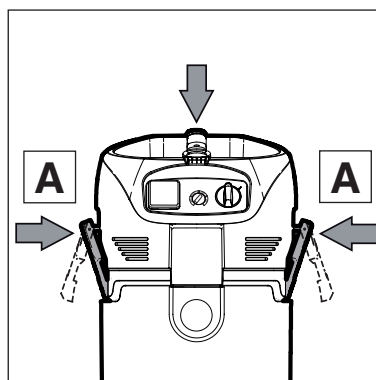
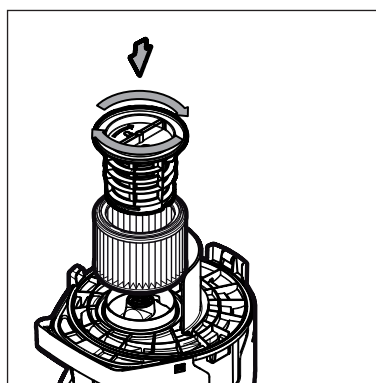
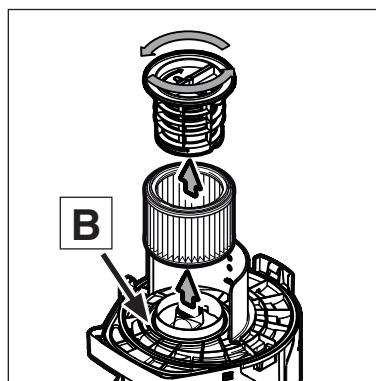
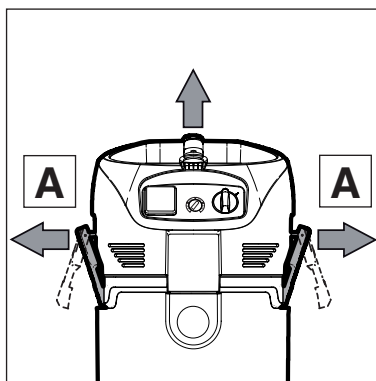
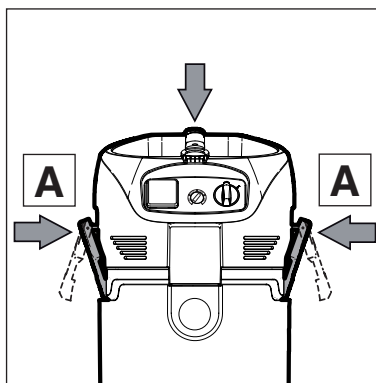
8. Insert new filter elements (C) into the cassettes (D).
9. Attach the cassettes with the filter elements onto the upper section of the vacuum cleaner.
10. Fix the filter tension part (B) and attach the screw.

7.2.7 Replacing filter element "M" (Push & Clean System)



During the following work, ensure that dust is not unnecessarily spread around. Wear a P2 breathing mask.

Never use the vacuum cleaner without a filter.



11. Attach the upper section of the vacuum cleaner.
12. Close the retaining clamps (A). Ensure that the retaining clamps fit properly.

1. Switch off the vacuum cleaner and pull the mains plug out of the socket.
2. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.

Removing the filter element:

3. Turn the filter holder anticlockwise and remove it.
4. Carefully remove the filter element.
5. Clean the filter seal (B). Check it for damage and replace it if necessary.

Inserting the filter element:

6. Fit the filter holder and turn it clockwise to secure it.
7. Dispose of the used filter element in accordance with legal regulations.

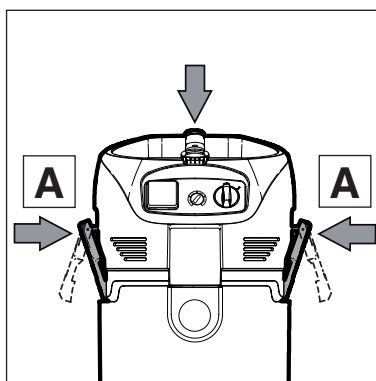
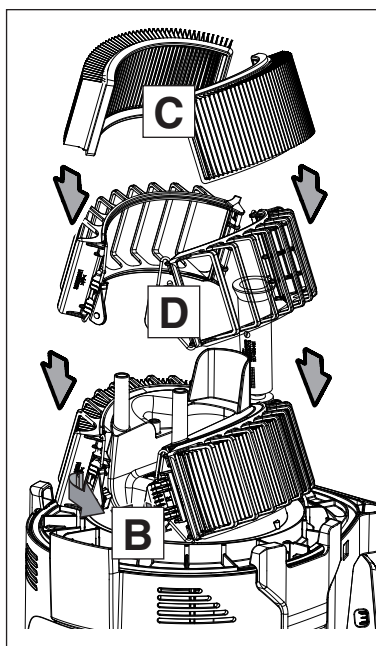
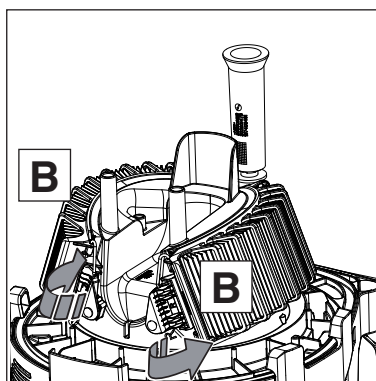
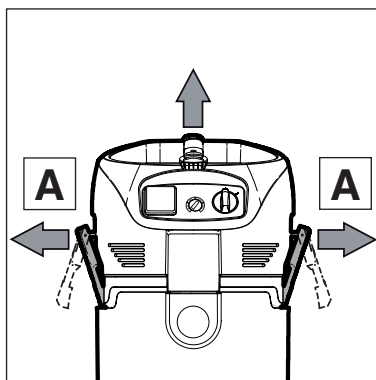
8. Attach the upper section of the vacuum cleaner.
9. Close the retaining clamps (A). Ensure that the retaining clamps fit properly.

7.2.8 Replacing filter element "M" (XtremeClean System)



During the following work, ensure that dust is not unnecessarily spread around. Wear a P2 breathing mask.

Never use the vacuum cleaner without a filter.



1. Switch off the vacuum cleaner and pull the mains plug out of the socket.
2. Open the retaining clamps (A) and remove the upper section of the vacuum cleaner.

Removing the filter elements:

3. Open filter tension part (B).
4. Remove carefully the cassettes with filter elements.

Inserting the filter elements:

5. Insert new filter elements (C) into the cassettes (D).
6. Attach the cassettes with the filter elements onto the upper section of the vacuum cleaner.
7. Fix the filter tension part (B).
8. Dispose of the used filter elements in accordance with legal regulations.

9. Attach the upper section of the vacuum cleaner.
10. Close the retaining clamps (A). Ensure that the retaining clamps fit properly.

8 Troubleshooting

Fault	Cause	Remedy
‡ Motor does not start	<ul style="list-style-type: none"> > Fuse of the mains socket has blown. > Overload protection switch has tripped. > Motor is faulty. 	<ul style="list-style-type: none"> • Connect mains fuse. • Switch off the vacuum cleaner and allow it to cool for approx. 5 minutes. If the cleaner cannot be started again, contact the Nilfisk-Alto service department. • Have motor changed by Nilfisk-Alto Service.
‡ Motor does not run in automatic mode ^{*)}	<ul style="list-style-type: none"> > Power tool/pneumatic tool is defective or not connected properly. > The power rating of the electrical tool is too low. 	<ul style="list-style-type: none"> • Check that the power tool works or that the plug is inserted correctly. • Note that minimum power rating is P>40W
‡ The acoustic warning sounds. (Reduced suction power)	<ul style="list-style-type: none"> > Suction power selected with suction power control^{*)} is too low. > Hose diameter does not correspond with switch position > Clogged suction hose/nozzle. > Tank, disposal bag or filter bag is full. > Filter element is clogged. > Seal between tank and upper section of vacuum cleaner is faulty or missing. > Cleaning mechanism is defective. 	<ul style="list-style-type: none"> • Set suction power in accordance with section „Setting suction power“. • Set correct switch position for hose diameter • Clean suction hose/nozzle • See "Emptying tank" or "Replacing disposal bag, filter bag" sections. • See section „Cleaning filter element“ and „Replacing filter element“. • Replace seal. • Contact Nilfisk-Alto Service.
‡ No suction power during wet cleaning	<ul style="list-style-type: none"> > Tank is full. 	<ul style="list-style-type: none"> • Switch off the cleaner. Empty the tank.
‡ Voltage fluctuations	<ul style="list-style-type: none"> > Impedance of power supply is too high. 	<ul style="list-style-type: none"> • Connect the cleaner to another socket closer to the fuse box. Voltage fluctuations over 7% should not occur if the impedance at the transfer point is $\leq 0.15 \Omega$.

9 Further information

9.1 Recycling the cleaner

Make the old cleaner unusable immediately.

1. Unplug the cleaner.
2. Cut the power cord.
3. Do not discard of electrical appliances with household waste.



As specified in European Directive 2002/96/EC on old electrical and electronic appliances, used electrical goods must be collected separately and recycled ecologically. Contact your local authorities or your nearest dealer for further information.

9.2 Guarantee

Our general conditions of business are applicable with regard to the guarantee.


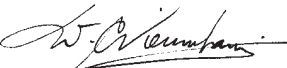
Unauthorised modifications to the appliance, the use of incorrect brushes in addition to using the appliance in a way other than for the intended purpose exempt the manufacturer from any liability for the resulting damage.

9.3 Tests and approvals

Electrical tests must be performed in accordance with the provisions of safety regulations (BVG A3) and to DIN VDE 0701 Part 1 and Part 3. In accordance with DIN VDE 0702 these tests must be performed at regular intervals and after repairs or modifications.

The vacuum cleaner has been approved in accordance with IEC/EN 60335-2-69.

9.4 EC declaration of conformity

	EC declaration of conformity
Nilfisk-Advance A/S Industrivej 1 DK-9560 Hadsund	
Product:	Vacuum cleaner for wet and dry operation
Model:	ATTIX 30 -/50 -/0H/0M/PC/XC ATTIX 30 -/50 -/2H/2M/PC/XC
Description:	110/230-240V 50Hz
The design of the appliance corresponds to the following pertinent regulations:	EC Machine Directive 2006/42/EC EC Low Voltage Directive 2006/95/EC EC EMC Directive 2004/108/EC
Applied harmonized standards:	EN ISO 12100-1, EN ISO 12100-2 EN 60335-2-69 EN 55014-1, EN 55014-2, EN 61000-3-2
Applied national standards and technical specifications:	DIN EN 60335-1 DIN EN 60335-2-69
 Dipl. Ing. Wolfgang Nieuwkamp Tests and approvals	Hadsund, 01.12.2008

9.5 Technical data

		ATTIX 30-50 Safety			
		EU	GB 230/240 V	GB 110 V	
Voltage	V	230	230/240	110	
Mains frequency	Hz	50			
Fuse	A	16	13	32	
Power consumption _{IEC}	W	1200			1000
		30-0H PC/XC 30-0M PC/XC	50 0H PC/XC 50-0M PC/XC	30-2H PC/XC 30-2M PC/XC	50-2H PC/XC 50-2M PC/XC
Connected load for appliance socket	W	–	–	2400 (EU) 1750 (GB 230/240) 1400 (GB 110V)	
Total connected load	W	1200 (EU, GB 230/240) 1000 (GB 110V)		3600 (EU) 2950 (GB 230/240) 2400 (GB 110V)	
Air flow rate	m ³ /h l/min	222 (EU, GB 230/240) / 192 (GB 110V) 3700 (EU, GB 230/240) / 3200 (GB 110V)			
Vacuum	hPa	250 (EU, GB 230/240) 230 (GB 110V)			
Sound pressure level at a distance of 1 m, EN 60704-1	dB(A)	62			
Working sound level	dB(A)	59			
Power cord: Length		7,5			
Power cord: Type		2) (GB 110 V) 4) (EU) 5) (GB 230/240)	1) (EU) 2) (GB 110 V) 5) (GB 230/240)	1) (EU) 3) (GB110V) 5) (GB 230/240)	
Protection class		I			
Type of protection		IP X4			
Radio interference level		EN 55014-1			
Tank volume	l	30	45	30	45
Width	mm	380			
Depth	mm	450			
Height	mm	595	750	595	750
Weight	kg	10	11	10 (PC) 12 (XC)	11 (PC) 12 (XC)
1) = H05RR-F 3G1,5	2) = H05BQ-F 3G1,0	3) = H07BQ-F 3G2,5	4) = H07RN-F 3G1,5	5) = H05RR-F 3G1,5	
CAUTION! Only use the cables mentioned					

9.6 Optional accessories

Description	Order No.
Safety filter bag "H" ATTIX 30 (5 pcs.)	107400233
Safety filter bag "H" ATTIX 50 (5 pcs.)	107400236
Fleece filter bag ATTIX 30 (5 pcs.)	302004000
Fleece filter bag ATTIX 50 (5 pcs.)	302004004
Zylindrical H-filter element PC	302000658
Zylindrical M-filter element PC	302000490
Flat H-filter element XC (2 pcs.)	107400449
Flat M-filter element XC (2 pcs.)	302002842
Motor Cooling air filter	302003721
Blowing adapter	302003717
Cloth insert filter ATTIX 30,50	302000525
Nilfisk-Alto-Foam-Stop (6x1l)	8469



Nilfisk ALTO

Why Compromise

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