



CENTIX 20

CENTIX 40

CENTIX 50 PREMIUM



Nilfisk ALTO

Why Compromise

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Das Symbol  auf dem Produkt oder seiner Verpackung weist darauf hin, dass dieses Produkt nicht als normaler Haushaltsabfall zu behandeln ist, sondern an einem Sammelpunkt für das Recycling von elektrischen und elektronischen Geräten abgegeben werden muss. Durch Ihren Beitrag zum korrekten Entsorgen dieses Produkts schützen Sie die Umwelt und die Gesundheit Ihrer Mitmenschen. Umwelt und Gesundheit werden durch falsches Entsorgen gefährdet. Weitere Informationen über das Recycling dieses Produkts erhalten Sie von Ihrem Rathaus, Ihrer Müllabfuhr oder dem Geschäft, in dem Sie das Produkt gekauft haben.

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The symbol  on the product or on its packaging indicates that this product may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Symbolen  på produkten eller emballaget anger att produkten inte får hanteras som hushållsavfall. Den skall i stället lämnas in på uppsamlingsplats för återvinning av el- och elektronikkomponenter. Genom att säkerställa att produkten hanteras på rätt sätt bidrar du till att förebygga eventuellt negativa miljö- och hälsoeffekter som kan uppstå om produkten kasseras som vanligt avfall. För ytterligare upplysningar om återvinning bör du kontakta lokala myndigheter eller sophämtningstjänst eller affären där du köpte varan.

Symbolet  på produktet eller på pakken angiver, at dette produkt ikke må behandles som husholdningsaffald. Det skal i stedet overgives til en affaldsstation for behandling af elektrisk og elektronisk udstyr.

Ved at sørge for at dette produkt bliver bortskaffet på den rette måde, hjælper du med til at forebygge eventuelle negative påvirkninger af miljøet og af personers helbred, der ellers kunne forårsages af forkert bortskaffelse af dette produkt.

Kontakt det lokale kommunekontor, affaldsselskab eller den forretning, hvor produkt er købt, for yderligere oplysninger om genanvendelse af dette produkt.

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Congratulations on your choice of central vacuum cleaner! If you use your vacuum cleaner in accordance with these operating instructions, your machine will be a pleasure to use and an essential worktool in your home for many years to come.

Our products are under constant development and we, therefore, reserve the right to make any necessary alterations to the design of the machine. We also make reservations concerning any misprints that may arise.

Legislation governing consumer compensation claims apply to this product under current terms of sale – on the assumption that the product has been used correctly (for household use) and maintained in accordance with the instructions contained in this user guide. Dust bags are consumables.

This product comes under the various countries' statutory requirements concerning the collection and safe treatment of electrical products and, when the time comes for its disposal, it should be handed over to a dealer or waste disposal site for recycling purposes.

Complaints caused by faulty or incorrect assembly should be made to the installation firm responsible. Entitlement to compensation may not apply through failure to use the machine correctly or gross negligence concerning the maintenance of the product.

1 Important safety precautions

To reduce the risk of fire, electric shock or injury, read all safety precautions and warning text carefully before using the machine.

- This central vacuum cleaner is solely intended for dry vacuuming indoors.
- Never vacuum without a filter installed.
- Do not vacuum up liquids. Do not use the machine in wet surroundings.
- Do not vacuum up embers or burning objects such as cigarettes, matchsticks, hot ash or flammable liquid or gas.
- Do not vacuum in areas where flammable liquids or gases may be present.
- Unplug the machine before changing the filter or bag and before doing any maintenance work.
- Always unplug the machine by pulling on the plug, not the power cord.
- The wall socket and plug must be positioned so that they are clearly visible.
- Do not vacuum up sharp objects such as broken glass or needles that could puncture the bag.
- Be particularly careful not to pick up objects that could block the hose/pipe system, such as pencils, toy bricks and small plastic bags.
- Follow the operating instructions carefully. Servicing and repairs should only be carried out by an authorised workshop. Use only original parts and accessories as recommended by the supplier. Never attempt to modify the machine yourself.
- Do not use the central vacuum cleaner if the power cord is damaged. The central vacuum cleaner is fitted with a special type of power cord that must be replaced with a cord of the same type if it is damaged. A power cord of this type can be obtained from a service contact. To avoid any risk, this power cord should be replaced by a qualified expert.
- The central vacuum cleaner must not be used as a toy.

The central vacuum cleaner must never be used to vacuum up contaminated dust or cement dust.

1.1 Technical data

	CENTIX 20	CENTIX 40	CENTIX 50
Height	427 mm	800 mm	800 mm
Width with handles	360 mm	440 mm	440 mm
Length with bracket	400 mm	400 mm	400 mm
Motor	1500 W	1700 W	1700 W
Fuse	10A	10 A	10 A
Weight	5.5 kg	6.5 kg	6.7 kg
Sound output	69 dB	70.5 dB	70.5 dB
Capacity of dust container	-	25 l	25 l
Capacity when using dust bag	10 l	14 l	14 l
Max. suction power	435 W	480 W	480 W
Max. air flow	52 l/s	55 l/s	55 l/s
Max. vacuum	24 kPa	25 kPa	25 kPa

These appliances conform with EU directives 89/336/EEC, 73/23/EEC, 93/68/EEC

2 Vacuum unit Centix 20 assembly instructions

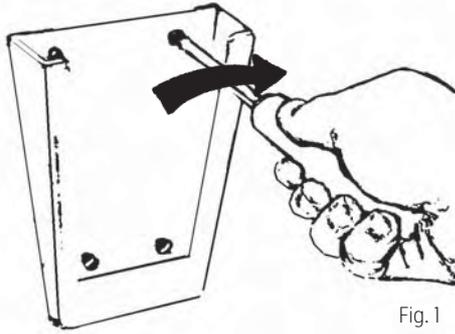


Fig. 1

2.1 Fitting the mounting bracket

Position the holder so that there is plenty of space above and below the place where the vacuum unit is to be located. Make sure there is a minimum of 500 mm free space above the Centix 20 container. Mark the positions for the four screw holes with a pen or similar. Then select appropriate screws and, if necessary, wall plugs for the type of wall surface to which the bracket is to be attached. Drill the four holes for the mounting bracket. The diameter of the screw holes in the holder is 5 mm. Fit the mounting bracket with the large opening pointing upwards, see Fig. 1. Tighten the screws so that the holder is held firmly in place (screws provided).

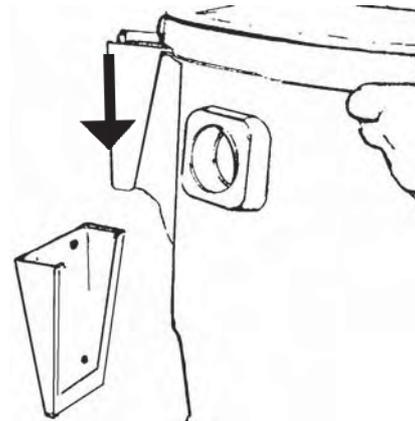


Fig. 2

2.2 Locating the vacuum cleaner on the mounting bracket

Position the vacuum unit so that the mounting bracket is directly above the wall bracket, see Fig. 2. Lower the machine down on to the mounting bracket. Make sure the corresponding bracket on the machine is held firmly in place by the wall bracket.

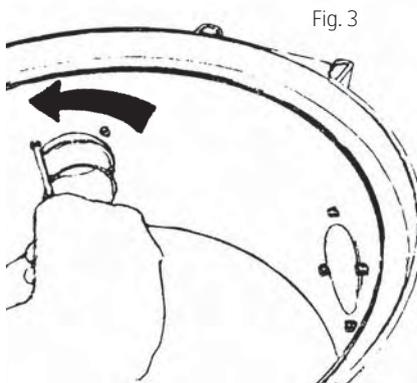


Fig. 3

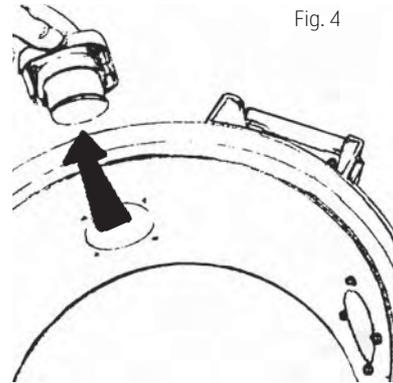


Fig. 4

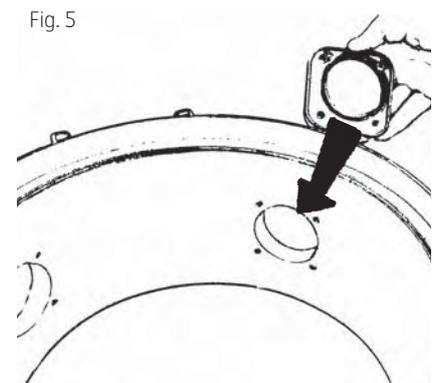


Fig. 5

2.3 Connecting the machine

The machine is connected with the suction pipe in the uppermost position and the exhaust pipe in the lower position.

This connection should not be glued but can be taped when the unit is serviced at a later date. The suction pipe socket can be fitted to two different points depending on the direction in which you would like to install the pipe system.

To relocate the suction pipe socket, you need to do the following:

1. Release the suction pipe socket by unscrewing the four combination Torx screws with a Torx T20 or an ordinary screwdriver, Fig. 3.
2. Pull the socket out of the machine, see Fig. 4.
3. Loosen the plug blanking off the outlet to which you intend moving the suction pipe socket. Unscrew the four combination Torx screws. Remove the blanking plug from the machine.
4. Adapt (move) the suction pipe socket to the new outlet. NB! The socket is marked "Up". Make sure the socket is fitted with "Up" uppermost. Fasten the socket by fitting and tightening the four screws, Fig. 5.
5. Fit the blanking plug to the outlet previously occupied by the suction pipe socket. Use the four screws to hold it in place. The exhaust pipe must be firmly attached to the wall to ensure its connection with the socket does not loosen. Remember that you will need to be able to turn the bent pipe in different directions to ensure a suitable pipe layout. Then connect up the exhaust pipe and muffler, Fig. 6. Fit the central vacuum cleaner so that the exhaust pipe is as short as possible, max. 10 metres. Take the surroundings into consideration when positioning the exhaust. For this reason, you should always fit a muffler.

For additional information concerning the assembly and installation of the pipe system and low-current lead, please refer to the separate assembly instructions supplied with the pipe package.

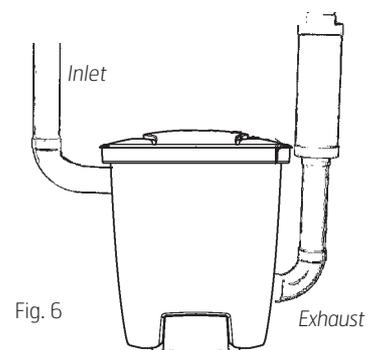


Fig. 6

3 Operating instructions Centix 20

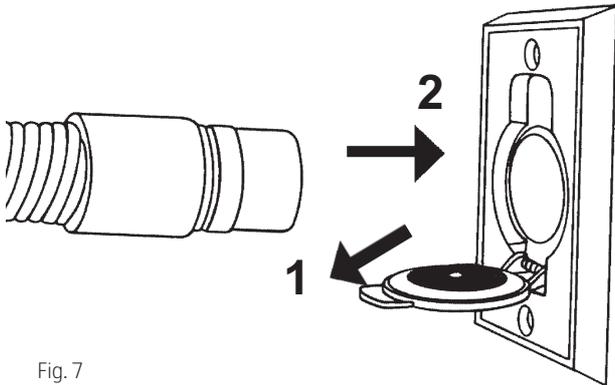


Fig. 7

3.1 Starting the machine

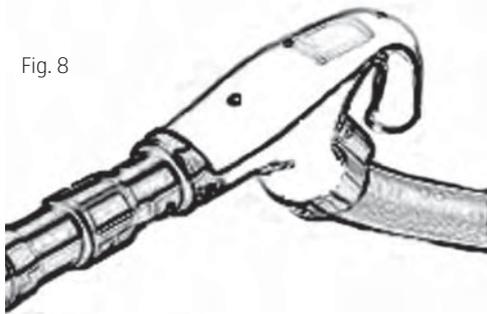
The control current outlet (low voltage) should be connected to a control current lead running the length of the pipes.

Both ends of the low-voltage lead should be connected to the connection panel on the vacuum cleaner. One lead to each outlet.

The central vacuum cleaner's power cable must be connected to a 230 volt mains socket. The appliance is double-insulated and does not need to be earthed.

The vacuum cleaner starts and stops automatically. When the vacuum hose is connected to a vacuum socket, a metal ring on the end of the hose closes the control circuit and the vacuum cleaner starts up. When the hose is removed from the vacuum socket, the vacuum cleaner stops. You should allow the hose to empty of dust and dirt before switching the vacuum cleaner off.

Fig. 8



If you use a hose with an on-off switch, you can start and stop the vacuum cleaner using the switch on the handle, Fig. 8.

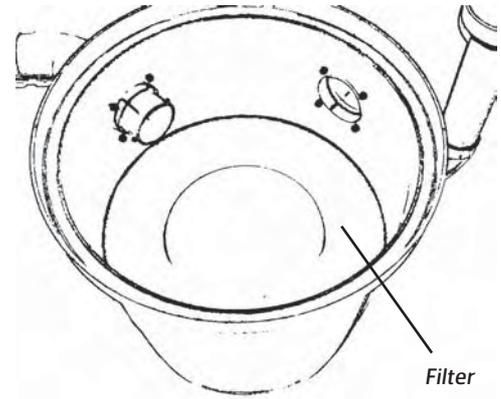


Fig. 9

3.2 Servicing

Always unplug the power cord before doing any service work!

If suction is poor, it indicates that the flow of air through the machine is restricted. This may be due to the following:

- **The dust bag is full and should be replaced.**
- **The filter is clogged and should be cleaned.**

The vacuum cleaner has a thermal cut-out that trips if the vacuum cleaner becomes overheated. If this happens - unplug the main power cord to reset the vacuum cleaner. Wait 5-10 minutes to allow the machine to cool down.

While you are waiting, check the hose, dust bag and filter to be sure that nothing is blocking the flow of air through the machine. The vacuum cleaner should now start again. If the cut-out trips again, you need to get a service firm to remedy the fault.

The Centix 20 should only be operated with a dust bag and filter installed.

4 Filter and dust bags - Centix 20

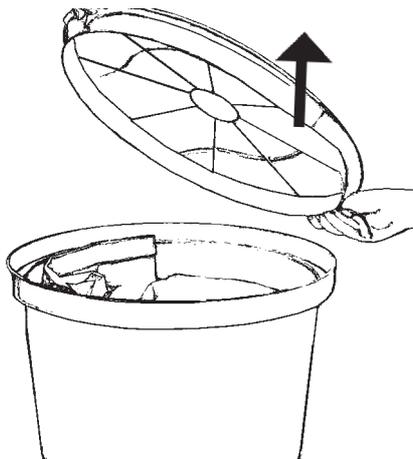


Fig. 10

4.1 Replacing the dust bag

The central vacuum cleaner is fitted with a paper dust bag as standard; **never vacuum without a dust bag installed.**

Grasp the edge of the lid and pull upwards to open it, Fig. 10.

Replacing the dust bag: Remove the old dust bag by turning the cardboard stiffener to the right or left so that the raised part of the inlet is in line with the opening in the card. Now slide the bag off the bag nozzle.

Fit the new dust bag as follows: Push the opening in the cardboard over the elevation on the inlet and pull on the new bag. Turn the cardboard to lock the bag in place. NB! Turn the edges of the dust bag down into the container. This is to avoid damaging the bag with the lid.



Fig. 11

The cardboard stiffener locks the bag in place when you twist it as shown in Fig. 11 above.

The opening in the card must line up and slide over the elevation on the inlet before you twist the cardboard stiffener to lock it.

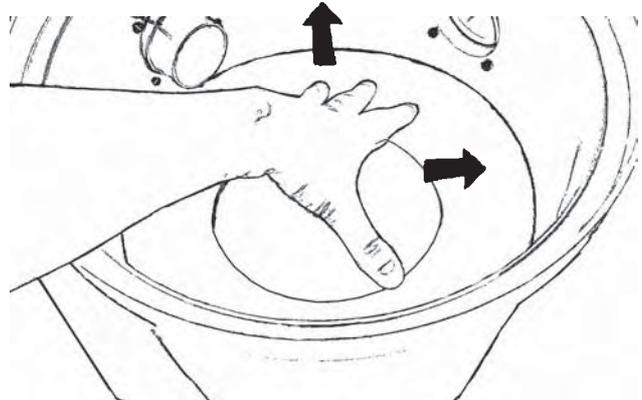


Fig. 12

4.2 Replacing / Cleaning the filter

Open the lid and take out the dust bag as described earlier. The filter sits at the bottom of the container around the motor housing. **Never use the central vacuum cleaner without a filter installed.**

Pull the filter out of the container, Fig. 12. The filter can be cleaned by shaking it or washing it in water.

If you wash the filter, you must let it dry completely before refitting it.

Take the cleaned filter and place it in the bottom of the container. Press the outer edge of the filter down against the sides of the container so that the filter bulges up slightly. Then push the filter down into place. Make sure the filter is packed in tightly against the motor housing, Fig. 13. Reinstall the dust bag and replace the lid. Check that the lid is firmly secured.

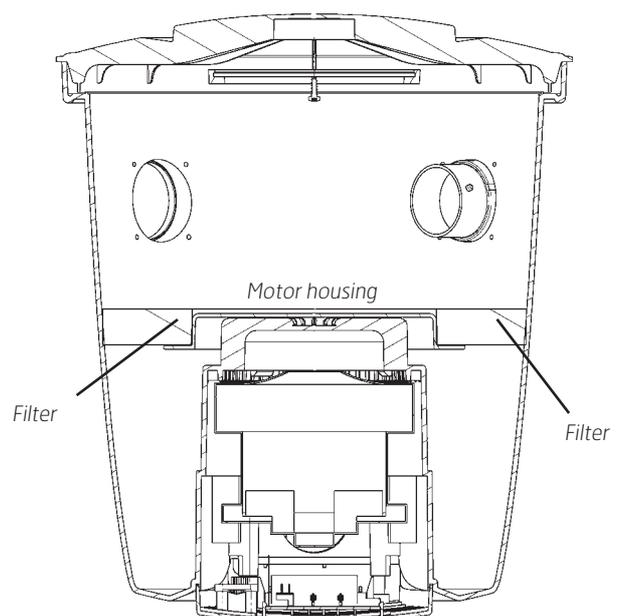


Fig. 13

5 Vacuum unit Centix 40 / Centix 50 Premium assembly instructions

5.1 Fitting the mounting bracket

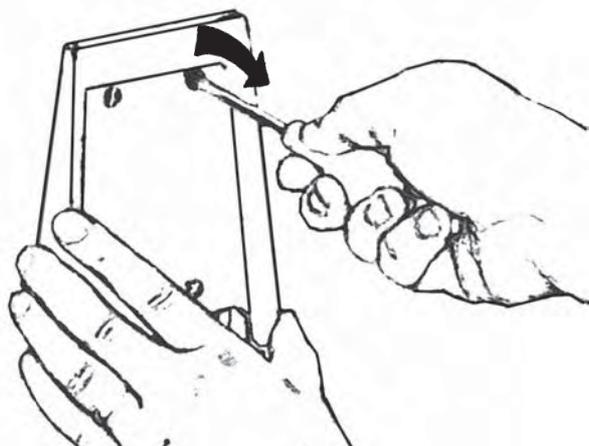


Fig. 14

Plan the positioning of the mounting bracket so that there is plenty of space above and below the area where the vacuum unit is to be located. Make sure there is a minimum of 400 mm free space below the dust container.

Mark the positions for all four screw holes with a pen or similar. The diameter of the holes in the holder is 5 mm. Select screws and, if necessary, wall plugs suitable for the type of wall concerned. Drill the four screw holes. Fit the mounting bracket with the large opening pointing downwards, see Fig. 14. Then screw the holder firmly into place.

5.2 Locating the vacuum cleaner on the mounting bracket

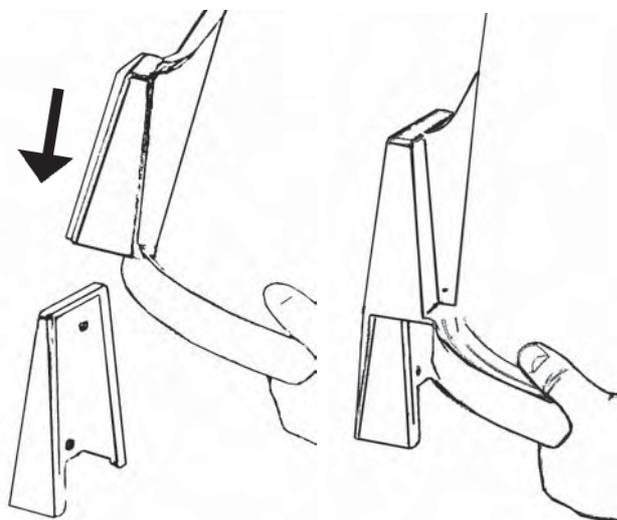


Fig. 15

To facilitate the procedure, first remove the dust container. Free the container by pulling both handles outwards. Then remove the container from the machine. Turn the vacuum unit until the mounting bracket is immediately below the bracket on the machine. Lower the machine down on to the mounting bracket, Fig. 15. Make sure the corresponding bracket on the machine is held firmly in place by the wall bracket.

5.3 Connecting the machine

The machine is connected with the flexible suction hose in the lower position and the exhaust pipe uppermost, Fig 16.

The flexible suction hose acts as an adapter connecting the vacuum unit with the pipe system. The accompanying rubber sleeve is used for tightening/loosening purposes between the pipe system and the flexible vacuum hose. Feed half the length of the sleeve into the vacuum hose and fold the other half over. Then feed 5-10 mm of the vacuum hose into the pipe system and fold the sleeve back so that it envelopes the tail pipe, holds the vacuum hose in place and tightens the adapter.

NB! This connection must not be glued in case the unit is serviced.

Position the central vacuum cleaner so that the exhaust pipe can be kept as short as possible, max. 10 metres. Take the surroundings into consideration when positioning the exhaust. For this reason, you should always fit a muffler.

For additional information concerning the assembly and installation of the pipe system and low-current lead, please refer to the separate assembly instructions supplied with the pipe package.

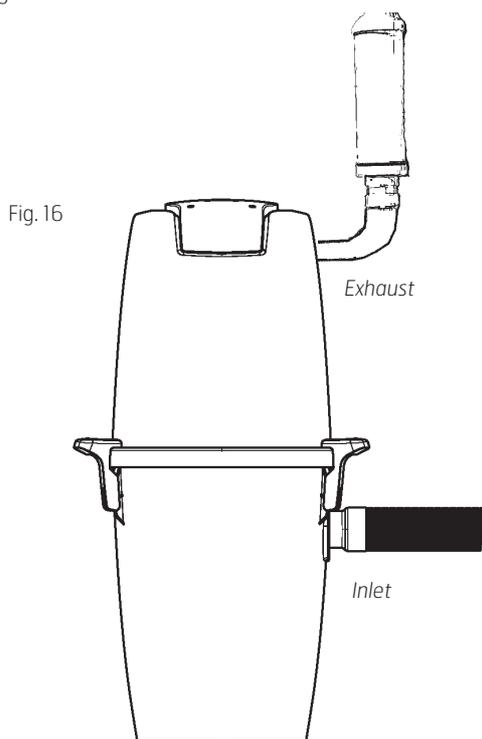


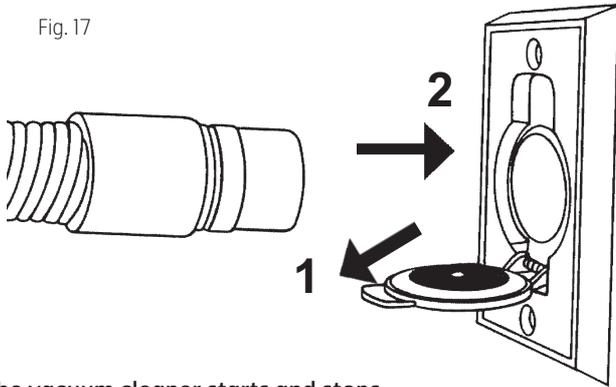
Fig. 16

6 Operating instructions Centix 40 / Centix 50 Premium

6.1 Starting the machine

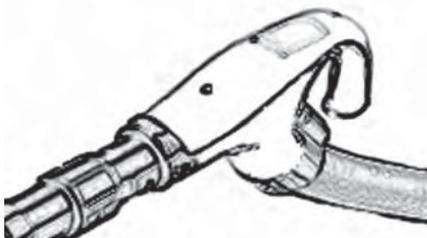
The control current outlet (low voltage) is connected to a control current lead running the length of the pipes. Both ends of the low-voltage lead should be connected to the connection panel on the vacuum unit. One lead to each outlet. The central vacuum cleaner's power cable must be connected to a 230 volt mains socket. The appliance is double-insulated and does not need to be earthed.

Fig. 17



The vacuum cleaner starts and stops automatically. When the vacuum hose is connected to a vacuum socket, (Fig. 17) a metal ring on the end of the hose closes the control circuit and the vacuum cleaner starts up. When the hose is removed from the vacuum socket, the vacuum cleaner stops. You should allow the hose to empty of dust and dirt before switching the vacuum cleaner off.

Fig. 18



If you use a hose with remote control, you can start and stop the vacuum cleaner using the switch on the handle, Fig. 18.

6.2 Servicing

Always unplug the power cable before doing any service work! If suction is poor, it indicates that the flow of air through the machine is restricted. This may be due to the following:

- The dust bag is full and should be replaced.
- The filter is clogged and should be cleaned of dust.

The vacuum cleaner has a thermal cut-out that trips if the vacuum cleaner becomes overheated. If this happens - unplug the main power cord to reset the vacuum cleaner. Wait 5-10 minutes to allow the machine to cool down. While you are waiting, check the hose, dust bag and filter to be sure that nothing is blocking the flow of air through the machine. The vacuum cleaner should now start again. If the cut-out trips again, you need to get a service firm to remedy the fault.

The Centix 40/Centix 50 Premium can be run with or without the installation of a dust bag - the choice is yours. These products must always be operated with a bag filter fitted.

6.3 Centix 50 Premium Display

The Centix 50 Premium model has a display giving information about the machine, Fig. 19. The display is illuminated and lights up on start-up. The display remains illuminated for 15 minutes after the machine has been switched off. This allows you to check the current status of the machine after it has been in operation.

Run: 301h 01m 11s

* **Run:** Shows the machine's total operating hours, ie, the period of time the motor has been in operation. The time is shown in hours, minutes and seconds. When the machine has been in operation for approximately 700 hours, it will stop. You must then make immediate contact with an authorised service workshop for a replacement motor to be installed. You can reset the machine temporarily and run the motor for an additional 100 hours (approximately) by unplugging the power cable and then reconnecting it to the mains socket. Once you reach the end of the 100 hours of operating time, the machine will stop again. It will now be necessary for an authorised service workshop to replace the motor and reset the clock.

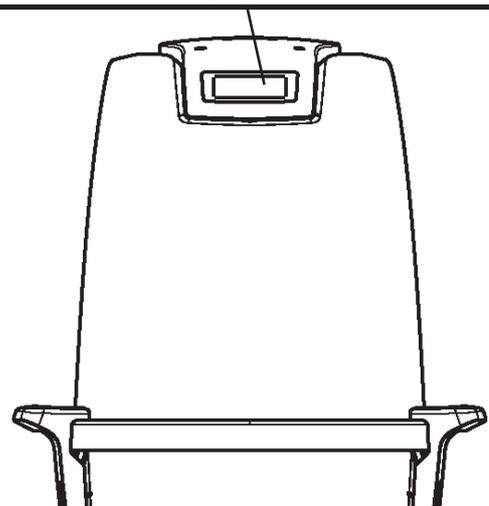
Filter / Bag: 80%

* **Filter/Bag:** Shows the remaining capacity of the dust bag and bag filter. The indication is shown as a percentage. 0% is displayed when the bag/bag filter is empty. Indication is then given in increments of 10% at a time. When 90% capacity has been reached, the display will warn you with the following flashing message: **Check filter**. You should then replace the dust bag and bag filter as soon as possible; see section on filter and dust bag. Once the dust bag has been replaced, reset the machine by starting it up again. The indication should then display 0% again.

The panel on the Centix 50 Premium displays relevant information about the machine.

Run: 301h 01m 11s
Filter / Bag: 80%

Fig. 19



7 Filter and dust bags - Centix 40 / Centix 50 Premium

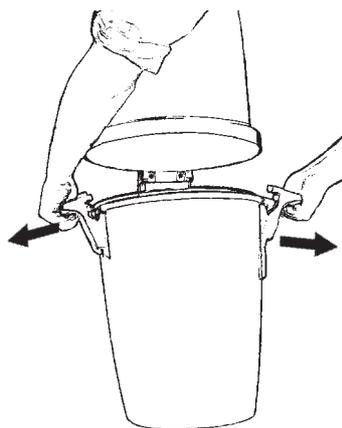


Fig. 20

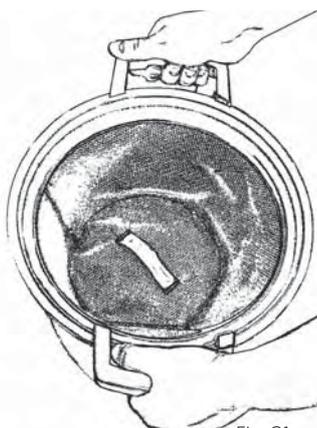


Fig. 21

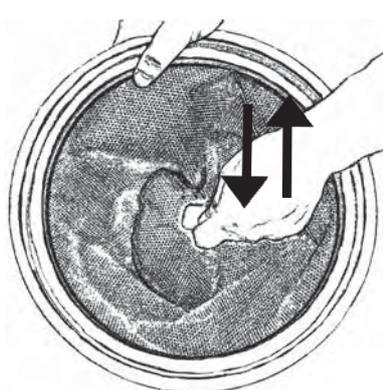


Fig. 22

7.1 Replacing the bag filter

A bag filter must always be installed in the dust container. Clean the filter in the following way:

1. Start by pulling the pipe socket out of the dust container.
2. Release the two handles clamping the dust container. Free them by pulling the handles outwards away from the container, Fig. 20.
3. Do not remove the filter from the container. Instead, give the filter a light shaking inside the container to loosen dust from the filter allowing it to fall into the container, Fig. 21.
4. Lift out the bag filter. If a dust bag is being used - remove the dust bag. Then empty the container of any remaining dust in a suitable place.

7.2 Fitting the bag filter

Replace the bag filter in the machine as follows:

1. Replace the cleaned/shaken bag filter in the container, Fig. 22. Make sure the filter support fits into the inner edge of the dust container properly. Check that the filter is fitted the right way up - the cloth handle on the filter should be visible.
2. Then replace the dust container with the bag filter in the cleaner's vacuum unit.
3. Close the container on the vacuum unit by applying inward pressure to the two handles to ensure the vacuum unit and dust container are fitted together properly.
4. Fit the inlet socket to the machine.

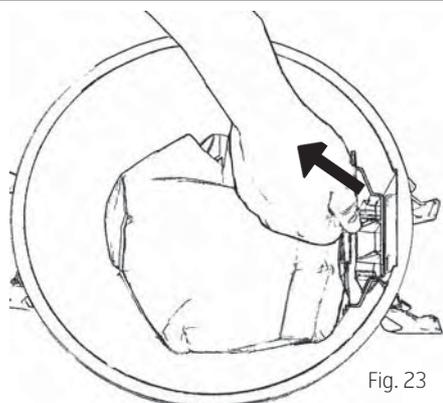


Fig. 23

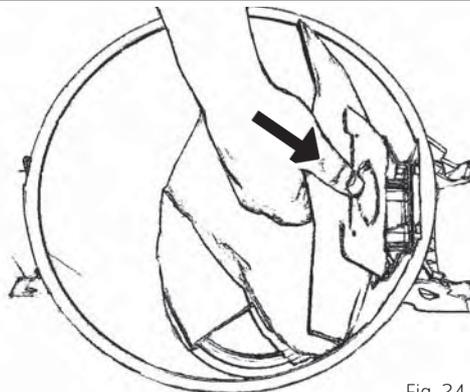


Fig. 24

7.3 Replacing the dust bag

The machine is supplied with a paper dust bag.

Replace the dust bag in the following way:

1. Pull the inlet socket out of the machine.
2. Release the two handles clamped on to the dust container. Free them by pulling the handles outwards away from the container.
3. Lift off the container.
4. Shake the dust from the bag filter. It may be advantageous for the filter to be installed in the container in such a way that dust in the filter can be shaken down into the dust container.
5. Lift out the bag filter.
6. Remove the dust bag by taking hold of the cardboard stiffener and carefully pulling out the card and bag from the container, Fig. 23.
7. Empty the container of dust.

7.4 Fitting the dust bag

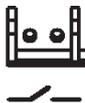
Replace the dust bag as follows:

1. Fit the dust bag's card with a hole into the bag holder, Fig. 24.
2. Replace the cleaned/shaken bag filter in the container. Make sure the filter support fits into the inner edge of the dust container properly. Check that the filter is fitted the right way up - the cloth handle on the filter should be visible, Fig. 22.
3. Replace the dust container on the vacuum unit. Close the container on the vacuum unit by applying inward pressure to the two handles to ensure the vacuum unit and dust container are fitted together properly.
4. Replace the inlet socket in the machine.

8 Electrical connection

On/Off

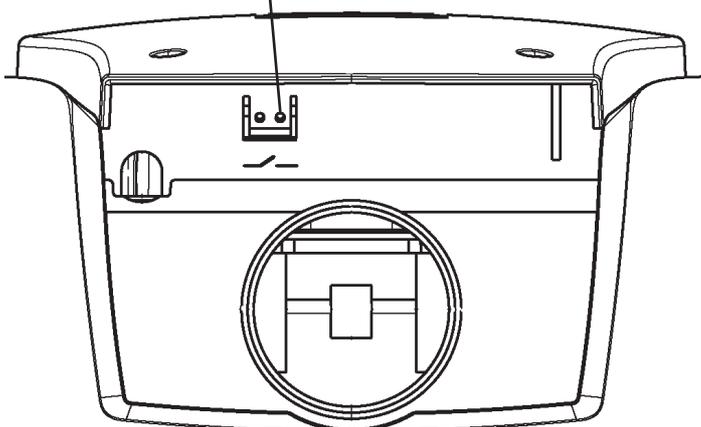
The control current outlet (low voltage) is connected to a control current lead running the length of the pipes. Both ends of the low-voltage lead are connected to the connection panel on the vacuum unit. One lead to each outlet. The low-voltage lead should be connected as illustrated below.



The central vacuum cleaner's 230 volt power cord must be connected to a 230 volt mains socket. The appliance is double-insulated and does not need to be earthed.

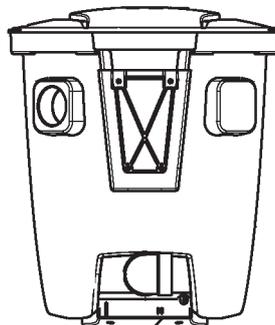


The low-voltage lead is connected to this outlet.



Outlet for the low-voltage leads:

Centix 20

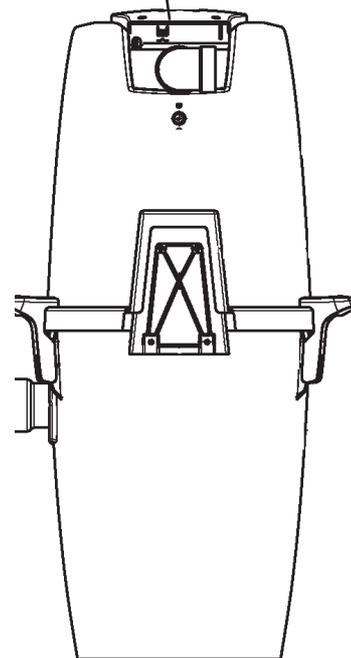


Centix 20

The connection panel is located in the bottom of the Centix 20 vacuum unit.

Centix 40 Centix 50 Premium

The connection panel is located in the top of the Centix 40 and Centix 50 Premium vacuum unit.

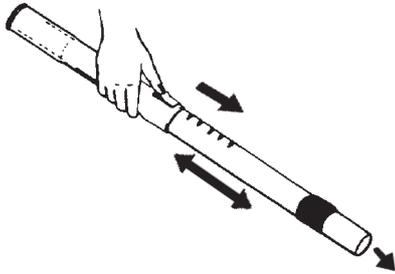


8 Accessories

Telescopic tube

Adjust the length of the telescopic tube by pressing the button and sliding it in or out. 25. (Maximum length 1000 mm and minimum length 600 mm). For cleaning stairs, we recommend reducing the length of the tube to the minimum.

Fig. 25



Standard floor nozzle

This is a universal, lightweight floor nozzle that can be used on most floor surfaces. You can switch from cleaning carpets to parquet or other flooring, Fig. 26/27.

Fig. 26

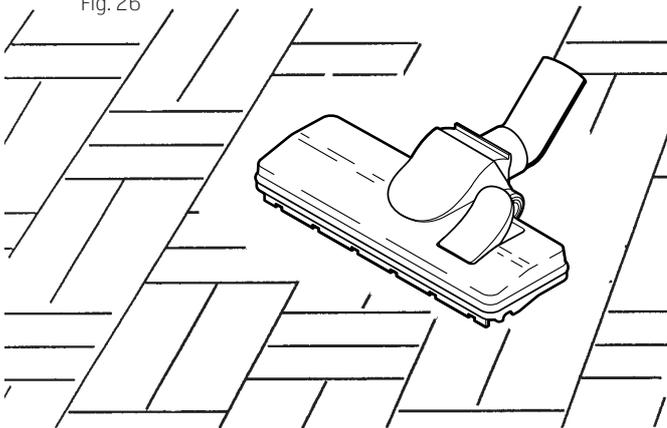
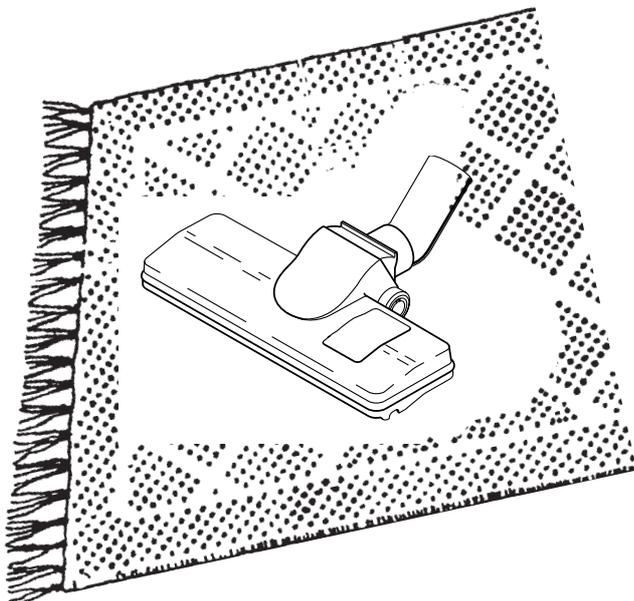


Fig. 27



Radiator/crevice nozzle

This nozzle is useful for hard-to-reach, restricted areas such as corners, crevices and radiators.

Fig. 28

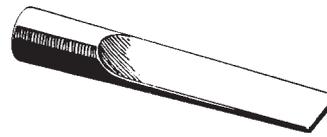
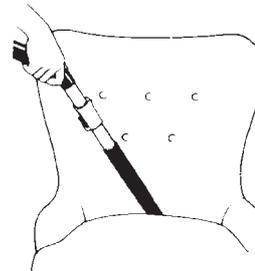


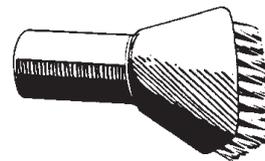
Fig. 29



Dusting brush

The dusting brush can be used on lamps, pictures, curtains and other textiles, Fig. 30.

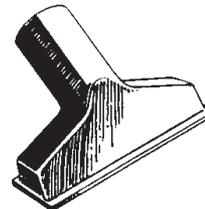
Fig. 30



Furniture nozzle

Small, practical nozzle for vacuuming furniture, cushions and textiles, Fig. 31.

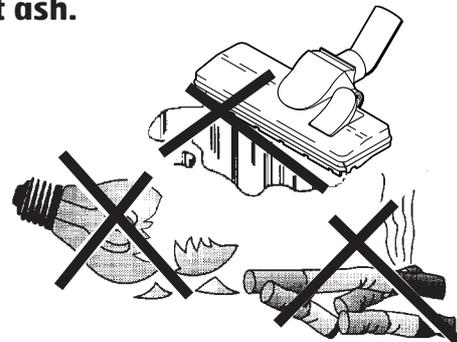
Fig. 31



Remember!

Never vacuum up liquids, broken glass or hot ash.

Fig. 32



10 Troubleshooting

All work involving the 240 volt mains electricity supply must be carried out by a qualified electrical contractor with full knowledge of the relevant safety regulations.

The vacuum cleaner will not start

The vacuum cleaner is fitted with a thermal cut-out that may have tripped. If this happens - unplug the main power cord from the wall socket. Wait five minutes to allow the machine to cool down. While you are waiting, check the filter and dust bag to be sure that nothing is blocking the flow of air through the machine. After five minutes, plug the power cord back into the wall socket. The vacuum cleaner should now start again. If the cut-out trips again, you need to get a service firm to remedy the fault.

- Are you using the correct hose?
Only the original hoses fit correctly.
- Does the vacuum cleaner start when you try a different vacuum socket? If so, there is a fault in the electrical connection to the first socket. Unscrew the socket and check the connection at the back.
- Is the power supply connected to the vacuum unit?
- Is there power at the socket?
- Is the low-voltage lead connected to the vacuum unit?

The vacuum cleaner will not stop

- Has a metal object become lodged in one of the vacuum sockets causing the pins to become fused?

Poor suction power

- Are all the vacuum sockets closed properly?
- Has something become jammed in one of the vacuum sockets?
- Is the container lid closed properly?
- Is the gasket between the container and the lid in place?
- Is it damaged?
- Is the pipe system blocked?
- Is the dust bag full or clogged? Model Centix 50 Premium issues a warning with a message on the panel.
- Is filter clogged? Model Centix 50 Premium issues a warning with a message on the panel.

Centix 50 Premium display

The Centix 50 Premium model has a display that shows relevant status. The display shows the machine's total operating hours (**Run**) It also shows the remaining capacity of the filter and dust bag (**Filter / Bag**).

* **Run:** Shows the machine's total operating hours, ie, the period of time the motor has been in operation. When the machine has been in operation for approximately 700 hours, it stops. You must then make immediate contact with an authorised service workshop for a replacement motor to be fitted. You can reset the machine temporarily and run the motor for an additional 100 hours (approximately) by unplugging the power cable and then reconnecting it to the mains socket. Once you reach the end of the 100 hours of operating time, the machine will stop again. It will now be necessary for an authorised service workshop to replace the motor and reset the clock.

* **Filter/Bag:** Shows the remaining capacity of the dust bag and bag filter. The indication is shown as a percentage. 0% is displayed when the bag/bag filter is empty. Indication is then given in increments of 10% at a time. When 90% capacity has been reached, the display will warn you with the following flashing message: **Check filter**. You should then check the filter and replace the dust bag and bag filter as soon as possible; see section on filter and dust bag. Once the dust bag has been replaced, reset the machine by starting it up again. The indication should then display 0% again.

Service and spare parts

If you need a service or spare parts, contact your local dealer. In such circumstances, it is always useful if you can give the technical data shown on the rating plate of the vacuum unit. The rating plate is adjacent to the lead intake. It's a good idea to copy this data here so that it is readily to hand.

Model:

Product no.:

Serial no.:

Date of purchase:
(please keep your receipt)

10.1 Service/maintenance guide – Centix 20

NB! Never vacuum without a filter and dust bag installed.

Product	How often?	Why?	How?
Dust bag	Should be replaced before it becomes completely full, depending on use but normally 2-4 times a year.	Poor suction and danger of creating a blockage in the pipe system.	Grasp the edge of the lid and open it by pulling upwards. Remove the old dust bag by turning the cardboard stiffener to the right or left so that the elevation on the nozzle penetrates the opening in the cardboard. Now slide the bag off the inlet. Push the opening in the cardboard over the elevation on the inlet and pull on the new bag. Twist the cardboard to lock the bag in place. NB! The opening in the card must be adjusted and pushed past the elevation on the inlet before the cardboard can be locked into place with a twisting action. NB! Never vacuum without a dust bag installed.
Filter in bottom	Should be checked when changing the bag.	Poor suction can result. Dust can find its way into the motor.	Remove the dust bag as described above. Remove the filter from the bottom. The filter can be cleaned by shaking it or washing it in water. NB! The filter must be completely dry before being reinstalled. Replace the cleaned filter in the machine. Press the outer edge of the filter down against the sides of the container so that the filter bulges up slightly. Refit the dust bag and replace the lid. Check that the lid is sitting firmly in place. NB! Never vacuum without a filter installed.

10.2 Service/maintenance guide – Centix 40 / Centix 50 Premium

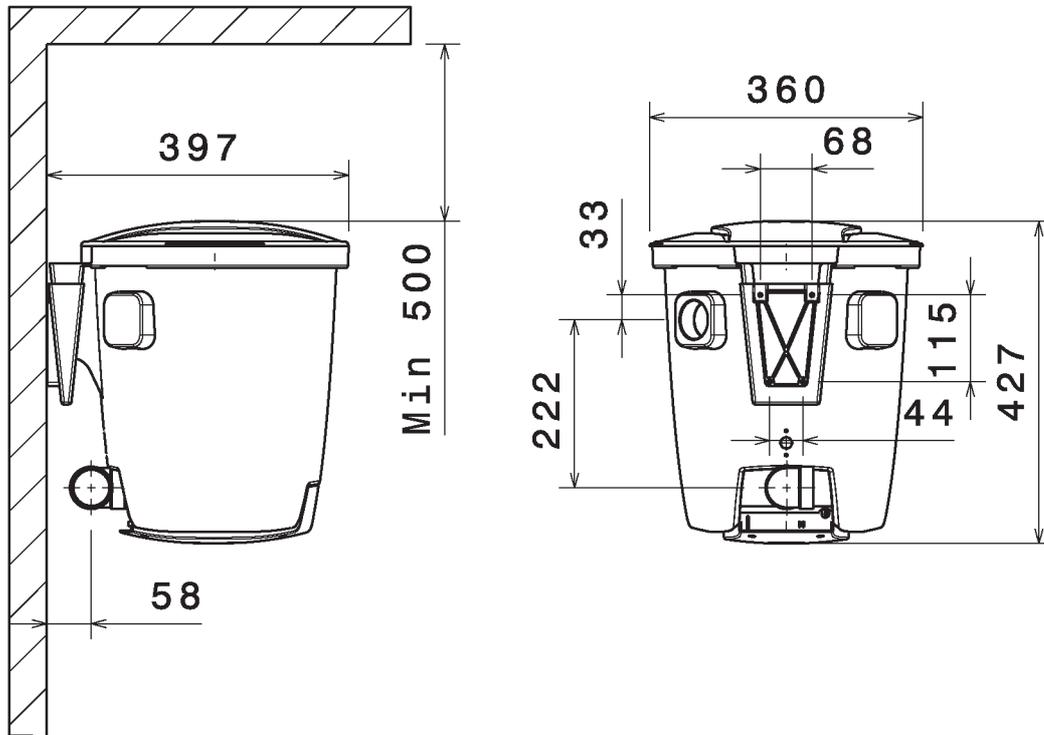
NB! Never vacuum without a filter installed.

Product	How often?	Why?	How?
Dust container	Should be emptied before the container is 3/4 full, depending on use but normally 2-4 times a year.	Danger of blockage in the pipe system.	Remove the hose from the machine. Then loosen the handles on the container (pull out from the machine) to free the container from the machine. Lift out the filter and dust bag – see additional information below. Empty the dust into a plastic bag and put in dustbin. Any remaining dust or fluff can be removed manually.
Dust bag	Should be replaced before it becomes completely full, depending on use but normally 2-4 times a year.	Poor suction and danger of creating a blockage in the pipe system.	Remove the hose from the machine. Then loosen the handles on the container (pull out from the machine) to free the container from the machine. Lift off the container. Lift out the filter. Then remove the dust bag by pulling the bag's cardboard stiffener off the nozzle. Replace in reverse order.
Filter	Should be shaken when the container is emptied. NB: Only use dry cleaning methods	To maintain good suction power.	Start by pulling the hose out of the dust container. Loosen the handles on the container by pulling the handles in an outward direction from the machine. Remove the container from the machine. Do not remove the filter from the container. Instead, give the filter a light shaking inside the container to loosen dust from the filter and allow it to fall into the container. Lift out the bag filter. If a dust bag is being used – remove it. Then empty the dust from the container in a suitable place.

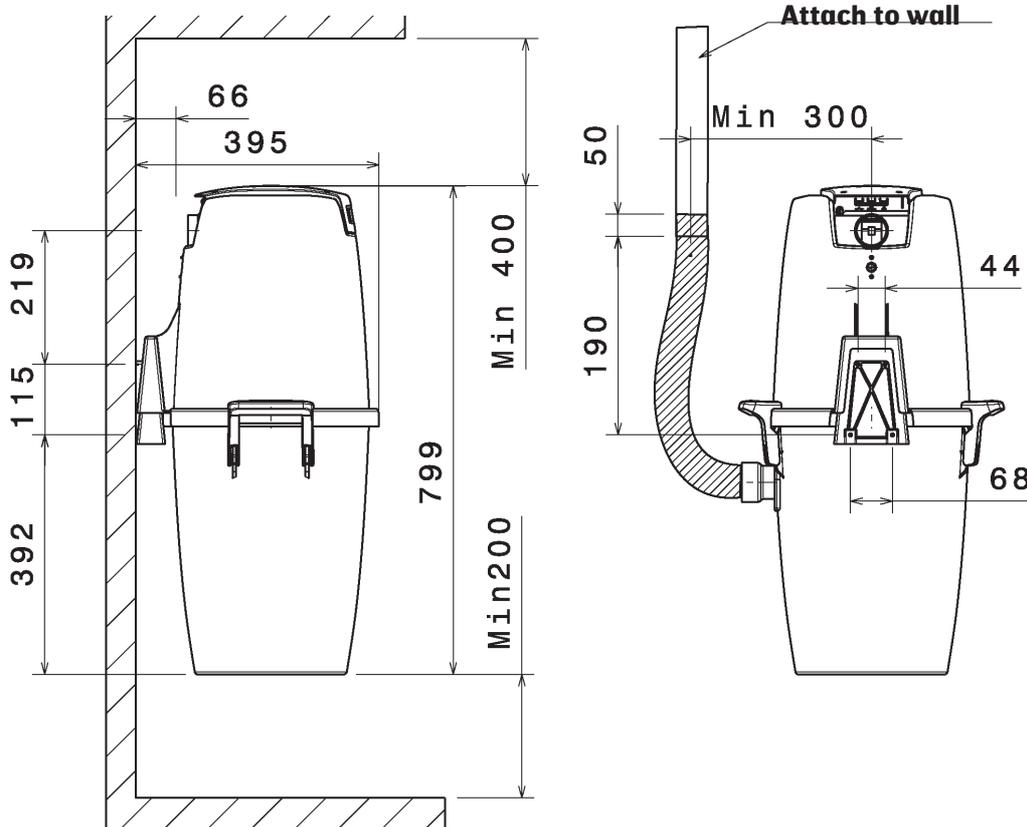
11 Dimensional drawings Centix 20 / Centix 40 / Centix 50 Premium

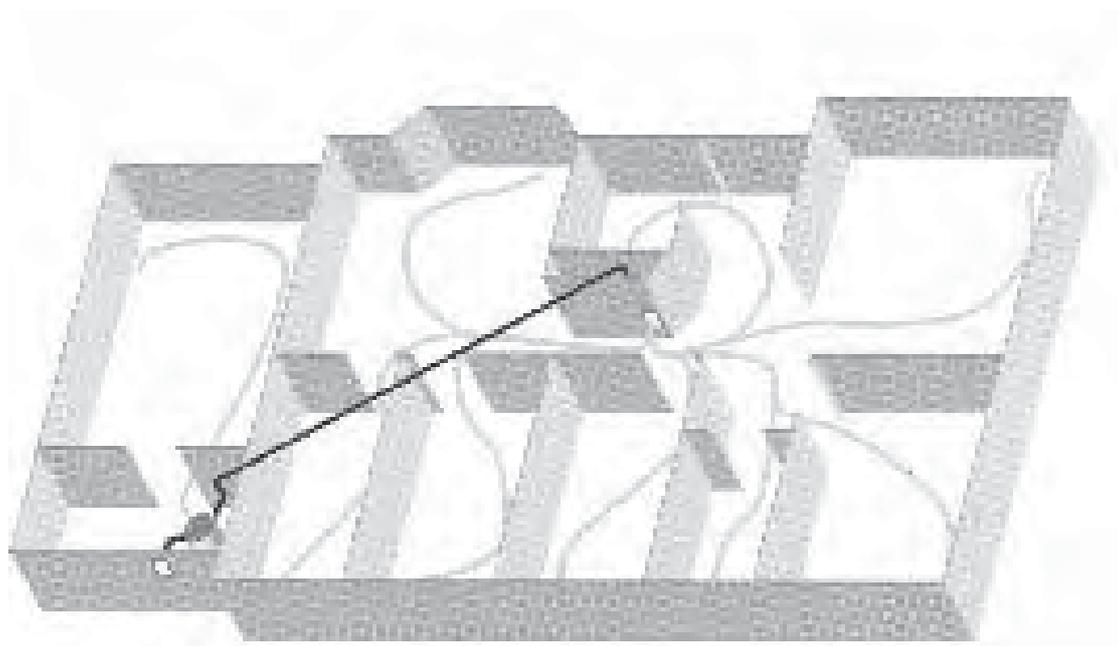
Dimensional drawings in mm.

Centix 20



Centix 40 / Centix 50 Premium







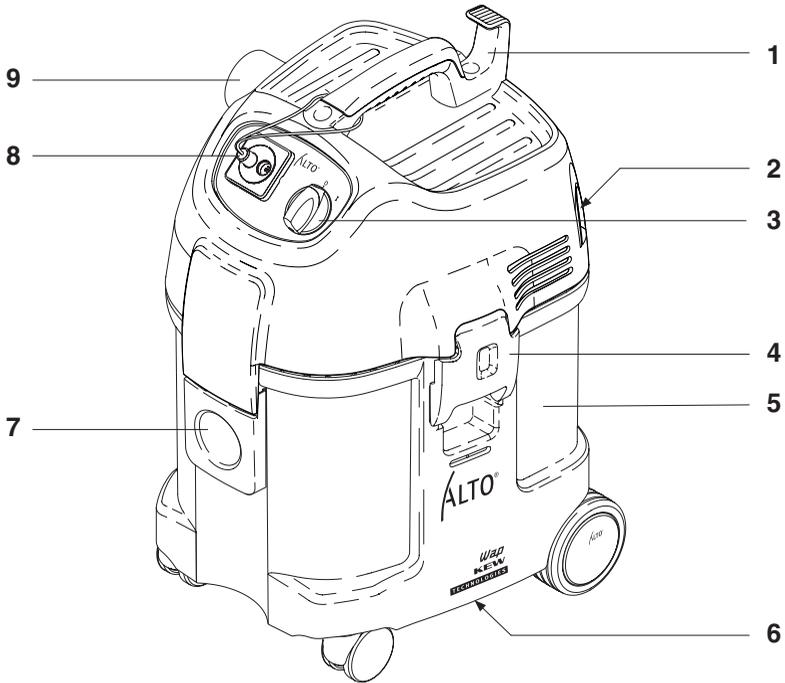
CENTIX 60 CENTIX 60 PREMIUM



ALTO[®]
Why
Compromise[™]

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CENTIX 60 CENTIX 60 PREMIUM



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1 Important safety instructions

Symbols used to mark instructions



Before using the vacuum cleaner, **always read the operating instructions** and keep them readily available.



This symbol is used to mark safety instructions that must be observed to prevent **damage to the vacuum cleaner and its performance**.



This symbol is used to mark safety instructions that must be observed to prevent **damage to persons**.



This symbol indicates tips and instructions **to simplify work and to ensure safe operation**.

For your own safety

Only allow the vacuum cleaner to be used by persons who have been trained in its use and who have been explicitly authorized to use it.

Despite its simple handling the vacuum cleaner is not suitable for children.

The use of the vacuum cleaner is subject to valid national regulations.

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

Do not use any unsafe work techniques.

Purpose and intended use

The cleaners described in these operating instructions are designed for use in dry conditions and should not be used or stored outside in wet conditions.

The following materials should not be picked up by the vacuum cleaner:

- hazardous dust
- hot materials (burning cigarettes, hot ash, etc.)
- flammable, explosive dust (e.g. magnesium or aluminium dust, etc.)
- liquids

Precautions and safety regulations when using the vacuum cleaner

Before start-up

Inspect power cord regularly to detect signs of damage, e.g. cracks or ageing.

If the power cord is damaged, it must be replaced by Alto-Service or an electrician to avoid danger before use of the vacuum cleaner is continued.

Use only the type of power cord specified in the operating manual. Do not damage the power cord (e.g. by moving over it or pulling or crushing it). Disconnect the power cord by pulling the plug only (do not pull or tug the power cord).

Inspect the vacuum cleaners to ensure that they are in proper condition. Plugs and couplings in power cords must at least have splash protection.

Never use the vacuum cleaner if the filter element is damaged.

Electrical components

Check the rated voltage of the vacuum cleaner before connecting it to the mains supply system. Ensure that the voltage shown on the rating plate corresponds to the voltage of the local mains power supply.

If you are using an extension cord, use only those specified by the manufacturer or higher quality ones (see section 9.4 „Technical data“).

It is recommended that the vacuum cleaner should be connected via a residual current circuit breaker. This stops the supply of electricity if the leakage current to earth exceeds 30 mA for 30 ms or it has an earth tester circuit.

Arrange the electrical parts (sockets, plugs and couplings) and lay down the extension lead so that the protection class is maintained.

Never spray water on to the upper section of the vacuum cleaner. Danger for persons, risk or short-circuiting.

Observe the latest edition of the IEC regulations.

Maintenance, cleaning and repair

Only carry out maintenance work described in the operating instructions.

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

Accessories and spare parts

Use only the brushes supplied with the vacuum cleaner or specified in the operating manual. The use of other brushes can adversely affect safety.

Use only original Alto accessories and spare parts (see section 9.5). The use of other parts can adversely affect safety.

2 Description

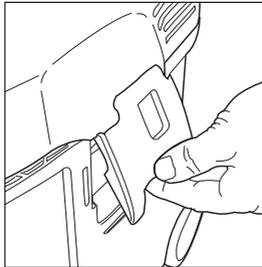
2.1 Operating elements

See fold-out page at the front of these operating instructions.

- 1 Handle with cable hook
- 2 Accessory holder
- 3 Cleaner switch
- 4 Retaining clamp
- 5 Dirt tank
- 6 Grip to empty tank
- 7 Inlet fitting
- 8 Plug for mobile operation
- 9 Waste air connection

3 Before start-up

3.1 Assembling the cleaner



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

3. Take the accessories out of the dirt tank and the packaging.

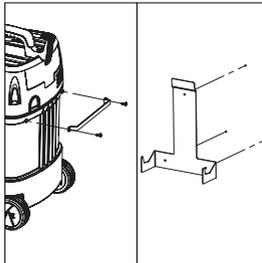
4. Place a filter bag into the tank as described in the instructions (printed on the filter bag).

IMPORTANT: Press the filter bag connection firmly on to the inlet fitting.

5. Fit the upper section of the cleaner and close the retaining clamps, taking care not to damage the filter bag.

NOTE: Ensure that the retaining clamps fit properly.

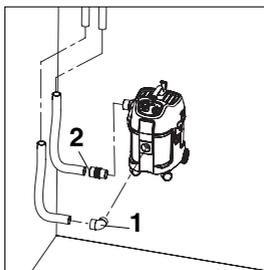
3.2 Fixing wall bracket



At the installation site:

1. Screw the holding bar on to the rear of the suction unit.
2. Fix the wall bracket on the wall.
3. Hang the cleaner on the wall bracket.

3.3 Fitting suction hose and waste air hose



1. Suction hose, 1 m:
Screw 90° bush (1) on to one end of the suction hose (left thread).
2. Waste air hose, 1 m:
Screw rotatable bush $\varnothing 50$ mm (2) on to one end of the suction hose.
3. Connect the hoses to the cleaner and the system as shown in the diagram.

4 Operation

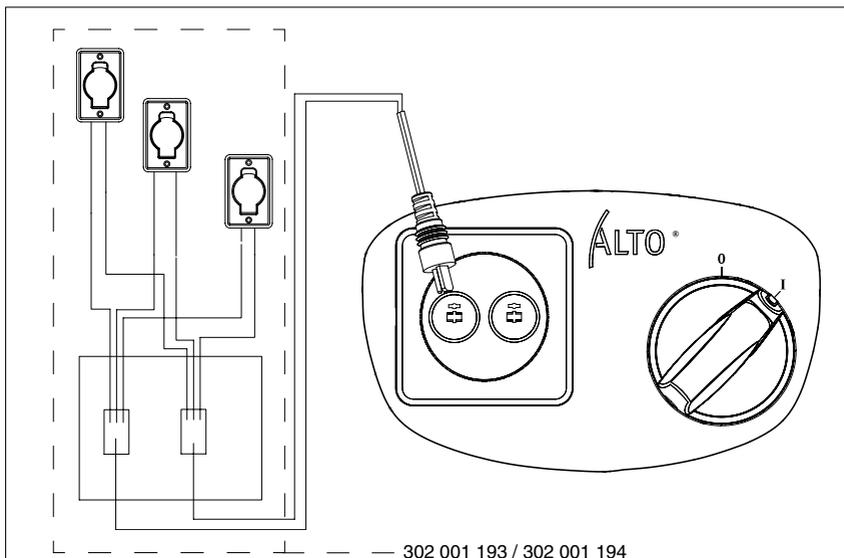
4.1 Connections

4.1.1 Electrical connection

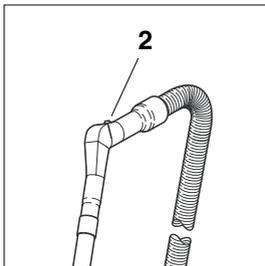
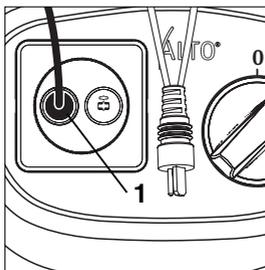
The operating voltage shown on the rating plate must correspond to the voltage of the mains power supply.

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

4.1.2 Connection diagram for central extraction system



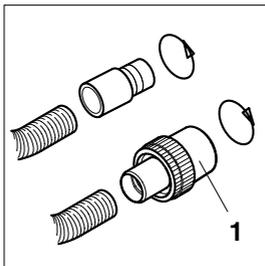
english **4.2 Operation on central extraction system**



Connect only plugs to the cleaner socket that have been approved by Alto.

1. Ensure that
 - the cleaner is switched off
 - the suction sockets are not activated.
2. Connect the plug of the central extraction system (1) to the control panel.
3. Turn the switch to position „I“.
4. Insert the suction hose in the suction socket.
CENTIX 60:
The vacuum cleaner motor starts.
5. CENTIX 60 PREMIUM:
Switch the suction motor on and off at the switch (2) on the suction pipe handle.

4.3 Mobile operation
4.3.1 Changing suction hose for mobile operation



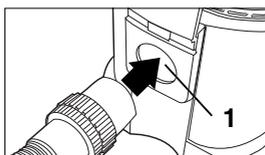
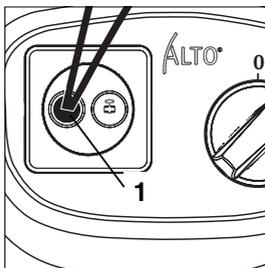
CENTIX 60:

1. Unscrew suction hose bush (\varnothing 32 mm) from the suction hose (left thread).
2. Screw \varnothing 32/50 mm bush (1) on to one end of the suction hose (left-handed thread).

CENTIX 60 PREMIUM:

1. Use the suction hose supplied for mobile operation.

4.3.2 Switching on cleaner



Connect only plugs to the cleaner socket that have been approved by Alto.

1. Ensure that the tool is switched off.
2. Insert the plug for mobile operation (1) into the cleaner socket.

3. Connect the suction hose to the inlet fitting (1).
4. Turn the switch to position „I“.

The vacuum cleaner motor starts.

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:

The following materials should not be picked up by the vacuum cleaner:

- hazardous dust
- hot materials (burning cigarettes, hot ash, etc.)
- flammable, explosive dust (e.g. magnesium or aluminium dust, etc.)
- liquids

Before picking up dry substances, always ensure that a filter bag is inserted in the tank (see section 9.5 „Accessories“ for order number). Disposal of the picked up material is then simple and hygienic.

6 After finishing work

6.1 Storing suction hose and accessories

CAUTION: Danger of tripping.

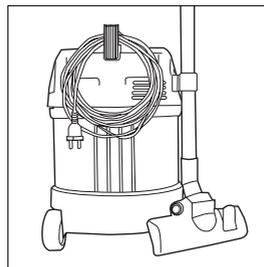
To prevent accidents:

1. Wind up the suction hose and hang it up on the wall

bracket supplied.

2. Store the suction pipe/nozzle and other accessories in a suitable place.

6.2 After mobile operation of the cleaner



1. Switch off the vacuum cleaner and pull the mains plug out of the socket.
 2. Empty the tank and clean the vacuum cleaner.
 3. Wind up the suction hose and store the suction pipe/nozzle and other accessories in a suitable place.
 4. Wind up the power cord and hang it on the handle.
- or
5. Reconnect the cleaner to the central extraction system.

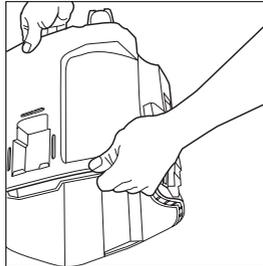
7 Maintenance

7.1 Maintenance plan

	As required
7.2.1 Emptying dirt tank	●
7.2.2 Replacing the filter bag	●
7.2.3 Replacing the filter element	●
7.2.4 Check that the hose of the level indicator and accessories are not blocked and clean them.	●

7.2 Maintenance work

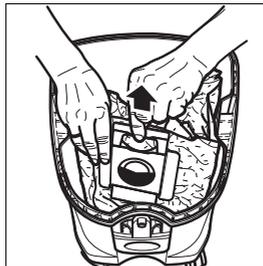
7.2.1 Emptying dirt tank



Empty the dirt tank if you use the vacuum cleaner without a filter bag:

1. Remove the upper section of cleaner from the dirt tank.
2. Using one hand, take hold of the dirt tank underneath and tip out the dirt.
3. Dispose of the dirt in accordance with legal regulations.
4. Clean the rim of the tank.
5. Attach the upper section of the cleaner.
6. Clean the inlet fitting and hose collar.
7. Re-insert the suction hose.

7.2.2 Replacing the filter bag

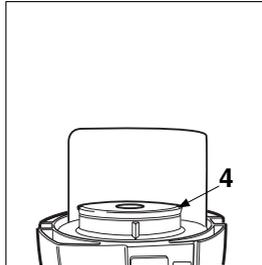
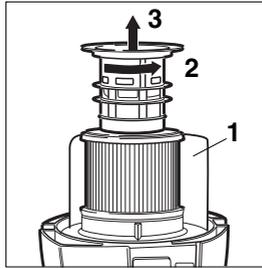


1. Remove the upper section of cleaner from the dirt tank.
2. Carefully remove the filter bag connection from the inlet fitting.
3. Close the filter bag connection with the slide.
4. Dispose of the filter bag in accordance with legal regulations.
5. Place a new filter bag into the cleaned tank as described in the instructions (printed on the filter bag).

IMPORTANT:

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

7.2.3 Replacing the filter element



1. Remove the upper section of the cleaner from the dirt tank and deposit it with the filter element facing upwards. Do not place the upper section of the cleaner on the guard (1).
2. Turn the filter holder anticlockwise (2) and remove it (3).
3. Carefully remove the filter element.
4. Clean the filter seal (4). Check it for damage and replace it if necessary.
5. Fit a new 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.

CAUTION:
Never use the vacuum cleaner without a filter.

8 Troubleshooting

Fault	Cause	Remedy
‡ Motor does not start.	<ul style="list-style-type: none"> > Fuse of the mains socket has blown > Plug not inserted for operation on the central extraction system/mobile operation > Overload protection switch has tripped 	<ul style="list-style-type: none"> • Reset the fuse • Insert the plug into the cleaner socket. See sections 4.1.3 and 4.1.4 • Switch off the vacuum cleaner and allow it to cool for approx. 5 minutes. If the cleaner cannot be started again, contact the Alto service department.
‡ Motor runs continuously	<ul style="list-style-type: none"> > Plugs for mobile operation and for central extraction system are both inserted 	<ul style="list-style-type: none"> • Insert only one of the two plugs into the cleaner socket
‡ Reduced suction power	<ul style="list-style-type: none"> > Clogged suction hose/nozzle > Seal/tank rim between the upper section of the cleaner and the dirt tank is dirty/defective > Filter bag is full > Filter element is clogged 	<ul style="list-style-type: none"> • Clean suction hose/nozzle • Clean/replace seal • See section 7.2.2 „Replacing filter bag“ • See section 7.2.3 „Replacing filter bag“

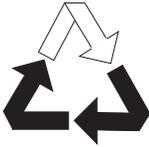
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Fault	Cause	Remedy
‡ Voltage fluctuations	> Impedance of power supply is too high	<ul style="list-style-type: none">• Use a suitable extension cord (see sections 1, „Safety instructions“, and 9.4, „Technical data“)• Connect the cleaner to another socket 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 vacuum cleaner



Make the old cleaner unusable immediately.

1. Unplug the cleaner and cut the power cord.

The cleaner contains valuable materials that should be recycled. Therefore, make use of your local waste disposal site.

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.

Subject to change as a result of technical advances.

9.3 Tests and approvals

The vacuum cleaners must be inspected regularly in accordance with national accident prevention regulations (in Germany as specified in VBG 4 and DIN VDE 0701 Part 1 and Part 3, at regular intervals and after repairs or modifications).

The vacuum cleaner has been approved in accordance with IEC/EN 60336-2-2.

9.4 Technical data

CENTIX 60 / CENTIX 60 PREMIUM		
		EU
Voltage	V	230
Mains frequency	Hz	50/60
Power consumption	W	1200
Fuse	A	16
Volume flow (air)	max. l/min	3600
Negative pressure	max. Pa	23000
Sound pressure level	dB(A)	62
Operating noise	dB(A)	59
Power cord length	m	7,5
Power cord type		H05VV-F 2 x 0,75
Protection class		II
Radio interference level		EN 50014-1
Tank volume	l	27
Width	mm	380
Depth	mm	390
Height	mm	570
Weight	kg	10

9.5 Accessories

Name	Order No.
Filter bag (5 pcs.)	302000449
Filter element	11753
Telescopic pipe	302001206
Floor nozzle	302000962
Suction brush	5146
Crevice nozzle, ø35 x 200 mm	29541
Universal nozzle	14295
Wall bracket	302001265
Hose bracket	302001210
Blow-out flap	302001242
Suction hose, ø32 x 1800 mm	60897
Suction hose, ø32 x 9000 Auto S/S	302001209
Waste air fitting ø50 mm	302001158
Suction hose, ø50 x 1,000 mm	302001005
Angle bush, ø50 mm	48731
Bush, ø50 mm, rotatable	15101
Bush, ø32/50 mm, rotatable	15103

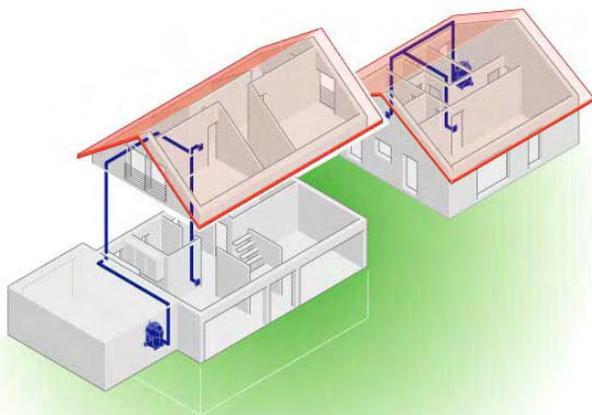
9.6 EC declaration of conformity

		EC declaration of conformity	
ALTO Deutschland GmbH Guido-Oberdorfer-Strasse 2-8 D-89287 Bellenberg			
Product:	Cleaner for dry conditions		
Model:	CENTIX 60 CENTIX 60 PREMIUM		
Description:	230 V, 50 Hz, 1200 W		
The design of the appliance corresponds to the following pertinent regulations:	EC Machine Directive	98/37/EC	
	EC Low Voltage Directive	73/23/EC	
	EC EMC Directive	89/336/EC	
Applied harmonized standards:	EN 292-1, EN 292-2		
	EN 60335-1		
	EN 60335-2-2		
	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		Bellenberg, 16.10.2003	



CENTIX 60 CENTIX 60 PREMIUM

ALTO[®]
Why
Compromise[™]



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Important safety instructions

Vacuum unit



Always read the operating instructions before starting up the CENTIX vacuum unit, and keep them readily available.

Do not cover vacuum unit motor air inlet (on rear of cover), otherwise motor may overheat and shut off.

Installing the vacuum unit

Fire protection

Do not place vacuum unit in rooms in which there is risk of fire!

When routing the tube system in fire lobbies, observe national building regulations and install suitable fire protection equipment if necessary.

Expansion joints

When the tube system is being routed through expansion joints, ensure that the tubes are 'slideable' by installing protective insulation at both sides of the expansion joint. Route control cable in a cable protection tube.

Gluing the tubes

Follow instructions on safe handling and use of adhesives (inscription on tube).

Installing the vacuum unit above vacuum sockets

Installing the vacuum unit above vacuum sockets may prevent heavy particles from being sucked up. Check interior of vacuum sockets for residue at regular intervals.

Operating the suction tube system

The following materials must not be sucked up, since they are a threat to persons or can damage the equipment:

- Liquids and wet dirt
- Dust that is hazardous to health
- Flammable, explosive dust (e.g. magnesium dust, aluminium dust etc.)
- Hot materials (glowing cigarettes, hot ash etc.)

The following items must not be sucked up because they may block the tube system:

- Long items
- Cleaning rags, cloths or the like.

1 Contents of installation kit

Picture	Item no.	Description	Inst. kit 2	Inst. kit 3
			302001193	302001194
			Quantity	Quantity
	1	PVC tubes, 1.2 m diam. 50.8	10	15
	2	90° elbow, long	4	9
	3	45° elbow	2	6
	4	Tube holder	4	6
	5	Tube connecting pieces	8	12
	6	90° elbow with 90° branch	1	2
	7	12V control cable	25	25
	8	Cable tie, 22.5 cm long	15	30
	9	Assembly frame cover for plastering	2	3
	10	Vacuum socket	2	3
	11	Installation frame	2	3
	12	90° elbow, short	2	3
	13	PVC adhesive, 125g	1	1
	14	Connector block	1	2
	15	Junction box 90x43x48 IP54 VDE grey	1	1
	16	12V connecting cable for CENTIX vacuum unit	1	1

2 Planning the installation

Before installing the system you should answer the following questions:

1. What condition is the property in?
 - In the planning phase
 - Carcass complete
 - Finished
2. How do you wish to install the suction tubes?
 - On the surface
 - Concealed
 - Are empty shafts available?
3. What material are the walls made of?
4. Where do you wish to locate the vacuum unit?
5. Where do you wish to locate the vacuum sockets?

Tips + Tricks:

Use the ground plan of your property as a planning basis if possible.

2.1 Selecting a location for the CENTIX vacuum unit

Location

Place the vacuum unit in your house in a location

- Where the sound of the motor causes the least disturbance
- That is central so that the tubes are as short as possible
- That is easy to access for emptying dirt containers

Do not install your vacuum unit in

- Rooms in which there is risk of fire
- Laundry rooms and store rooms

Recommended installation sites are:

- Cellars
- Garages
- Workshops

A socket with a voltage of 230 V/50 Hz is required to connect the vacuum unit.

Place the unit in a room with an external wall so that the turbine exhaust can be led to the outside (see section 3.4.3 Exhaust pipe installation).

2.2 Selecting a location for the vacuum sockets

The vacuum sockets should be located as follows:

- In easily accessible locations
- Near light switches or door frames
- Never behind a door
- At a height of approx. 30-40 cm
- At a height of approx. 90-100 cm
 - Beyond the reach of children
 - Similar height to sockets and light switches
- As a floor vacuum socket; ensure that the vacuum socket is located near the wall in order to minimise the risk of tripping

Take care not to damage electrical cables when drilling the holes that are required in the wall.

Additional vacuum sockets are always available from your ALTO dealer if required.

Measure action radius

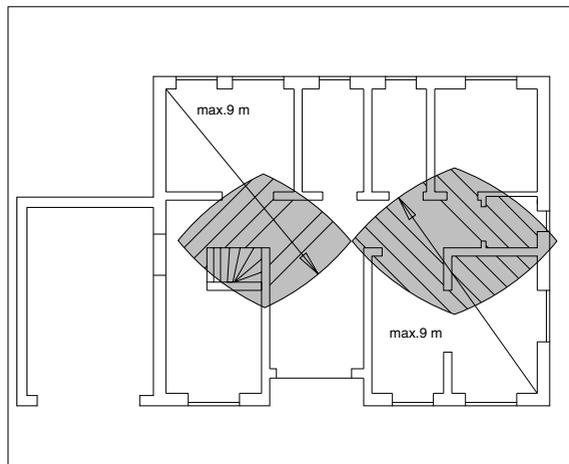
The suction hose and the telescopic tube are approximately 10m long when combined. Please assume a working distance of 9 m for safety.

1. Draw circles to scale on the ground plan of your property with a compass (radius of 9m), starting at the corners. Select a location for a vacuum socket in the wall or the floor within the area inside the arcs.
2. If you have a large property, divide the area of your ground plan into several sections and use the same method.

When selecting the locations of the vacuum sockets, consider the fact that furniture or other fixed installations may have a considerable influence on the distances that the hoses have to travel!

Tips + Tricks:

- In most cases it is advisable not to install vacuum sockets in isolated rooms. Instead, buy a suction hose extension from the ALTO accessory range, which will increase your working range considerably.
- To check your distances cut a length of thread to scale (hose length) and place on your plan. Check whether you can comfortably reach every corner, taking furniture positions into consideration.
- In existing buildings, cut a piece of string to the original length and simulate the hose when selecting vacuum socket positions.



3 Installation

The text figures in brackets relate to the table in section 1 “Contents of installation kit”.

3.1 Suction tube installation

3.1.1 General rules when installing suction tubes

Rule 1

The tubes (1) can be installed vertically or horizontally. If the tubes are installed horizontally, ensure that they slope downwards toward the vacuum unit.

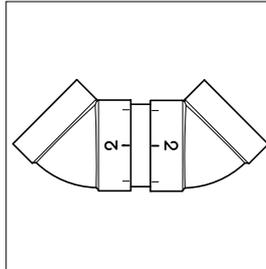
Rule 2

Always install a short 90° elbow (12) after the socket (10) and the installation frame (11). This prevents long items from being sucked in. Note: attach long limb to tube system, and short limb to installation frame.

Rule 3

Fit the tubes together without adhesive (13) first and check the distances and flow directions. If possible, route entire tube system, connect up and check. Start gluing the vacuum sockets when everything is correct.

Rule 4

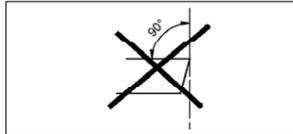


When checking as described in rule 3:

Mark the tube connecting positions

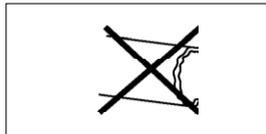
- At the end of each tube
- On tube elbows that are different relative angles. If the elbows are to be at a relative angle of exactly 45° or 90°, the marks that are stamped into the tube elbows can be used.

Rule 5



Always cut tubes at right angles. Use a tube cutter or a mitre.

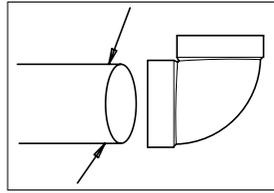
Rule 6



Trim sawn or cut edges. Use a burr-removing knife or sharp penknife.

Rule 7

Always apply adhesive to the tube, never put into the socket end.

**Rule 8**

The tubes must always slope downwards from the vacuum sockets to the vacuum unit.

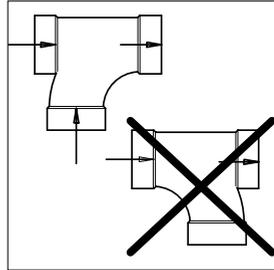
Rule 9

It is advisable to install the vacuum socket that is furthest away from the vacuum unit first.

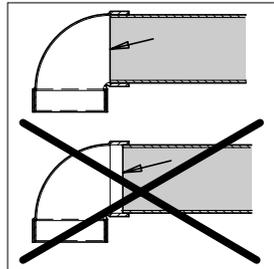
Rule 10

Tube branch-offs must be assembled in the airflow direction, which prevents

- Heavy dust particles from falling back
- Air turbulence, which leads to loss of suction power

**Rule 11**

Always insert tube into fitting as far as it will go.

**Rule 12**

If the tubes are being sealed in the ceiling of a new building, ensure that

- The tubes are prevented from slipping when sealing takes place
- The vacuum socket connecting pieces come out in the exact position where the wall will be later.

3.1.2 Installing the suction tubes

After the vacuum socket locations have been selected, the tube spider must be installed in the property.

The following tube routing options are available:

- 1) In new building
- 2) In existing buildings
 - a) Concealed
 - b) Surface mounted / wood construction type
 - c) Use of empty shafts or unused chimneys

english 1) **New buildings**

Tips + Tricks:

- Do not glue the vertical suction tube to the horizontal suction tubes in the ceiling immediately.
- When the piece of tube is being sealed into the ceiling it must be protected with a casing so that the tube can be replaced with a longer one after the ceiling has been cast if necessary.
- Create slits for the suction tubes in the finished wall. This makes the masonry work easier.

Special attention must be paid to planning in a new building. Changes cannot be made once the tubes have been sealed in.

Example: two-storey house with cellar.

As soon as cellar is ready in the carcass:

1. Decide where the ascending tube is going to enter the upper floors.
2. Route the suction tubes to the locations where the vacuum sockets are going to be installed in a spider pattern in the casing or on the finished ceiling.
3. Let suction tube sections protrude from where the ceiling is going to be. Ensure that the tube also protrudes from the ceiling in locations where a wall will subsequently be built.

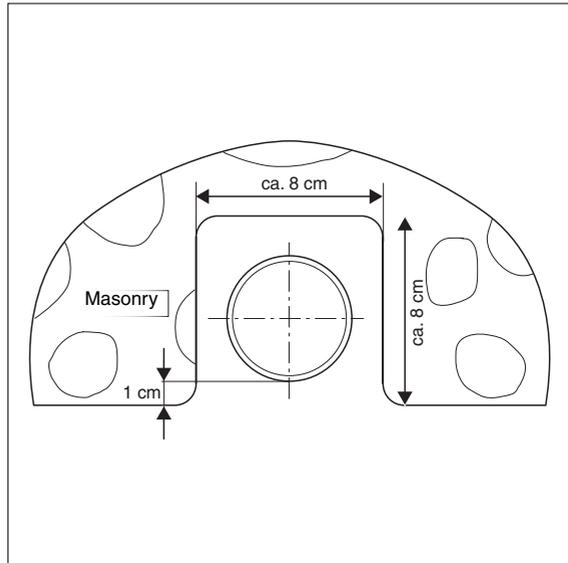
Before casting the entire ceiling:

4. Prevent suction tubes from slipping. Otherwise vacuum socket connection can move.
5. Build walls around the ascending tubes.

2a) **Existing houses, concealed routing**

In existing buildings the best method to use is not to conceal the tubes but install them beneath the plaster in the ceilings or walls like conventional sewage pipes. Breakthroughs and wall slits of approx. 8 cm x 8 cm are required to do this.

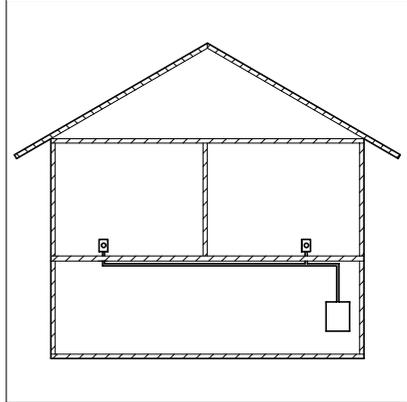
1. Knock a slit (dimensions: 8 cm x 8 cm) in the wall.
2. Insert suction tube into slit approx. 1 cm below edge.



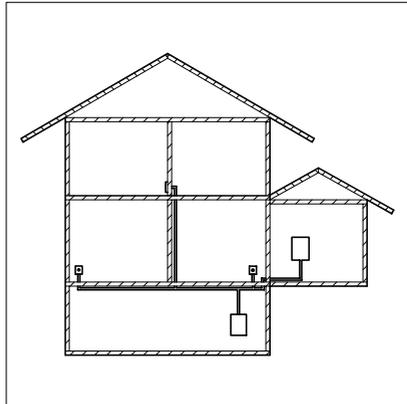
2b) Existing houses, surface installation

The suction tubes can also be surface mounted. Experience has shown the following to be advisable:

- I. Properties with cellar, single storey
 - II. Properties with cellar, multiple storeys
 - III. Properties without cellar
- I. Route tubes along cellar ceiling. Makes holes in the ceiling at the locations in which the vacuum sockets will subsequently be fitted. The vacuum sockets can be conveniently installed as floor vacuum sockets in the first storey.



- II. In properties with a cellar and multiple storeys you can proceed as described in section I. Route an ascending tube to the second floor. The ascending tube should be as central as possible so that the suction tubes can be routed from it in a spider pattern. If you only wish to use one vacuum socket in the second storey, this can be installed as floor vacuum socket. **Tips + Tricks** contains a few suggestions as to how tubes laid beneath plaster can be covered in an elegant way. If you have double-layer wooden walls, the ascending tube can be installed in the cavity between the wooden walls.

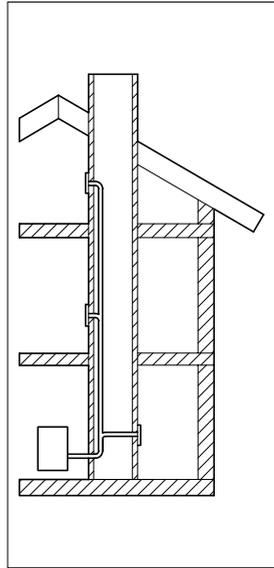


- III. In properties without a cellar the vacuum unit can be placed in a storage room and the tubes laid either on the surface or in double-layer wooden walls. If you wish to put the vacuum unit in the attic, the tubes can be routed downward in the required position either on the surface or in double-layer wooden walls.

english **2c) Use of empty shafts or unused chimneys**

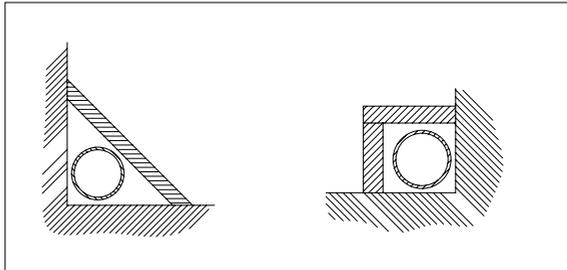
In a property with an unused chimney or empty shafts, the tubes can be vertically routed from the vacuum sockets to the vacuum unit inside the chimney through the floors.

1. Determine the positions of the vacuum sockets. Ensure that the vacuum sockets are not directly opposite each other but have a height difference of at least 17 cm.
2. Then draw a diagram showing the socket arrangement with exact distances and lengths.
3. The tubes can now be assembled without using adhesive.
4. If everything is correct, mark the tubes as described in 3.1.1 "General rules".
5. Glue the tubes to smaller elements so that they can be conveniently inserted into the chimney.
6. Now glue the elements to each other, paying attention to the marks and directions.
7. Secure the tubes and attach the vacuum socket connections to the tube system.



Tips + Tricks when installing in existing houses:

- Install suction tube along base of wall or in a corner.
- Install the suction tube system behind furniture. You can then make a vacuum socket breakthrough behind the furniture so that a vacuum socket can be installed in the adjacent room.
- Please note that floor vacuum sockets must always be located near the wall in order to minimise the risk of tripping.



3.2 Installing the control cable

You can route and connect the control cables yourself, since the control signals are transferred with a low voltage of 12V.

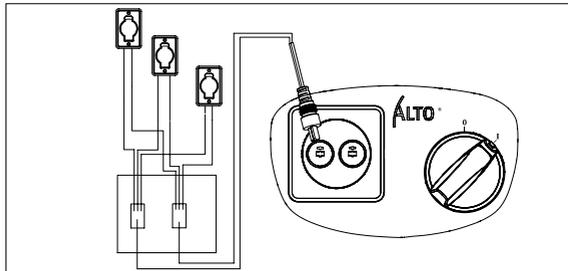
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1. The two-wire control cable (7) must be routed from each vacuum socket along the tubes to the vacuum unit. The control cable is attached to the tubes using the supplied cable ties (8).
2. The cable is connected to the branching point using a connector block (14). Please ensure that the connections are fitted with long-term protection from dirt and moisture. The branching socket can be surface mounted or concealed.
3. Gather all the cables in the junction box (15) and connect them to the control cable (16) with the aid of the connector block (14).
4. Check the continuity of the control cable before plastering.

The vacuum unit control cable is inserted into the vacuum unit socket during stationary operation. The right or left connection can be used (see also CENTIX operating instructions).

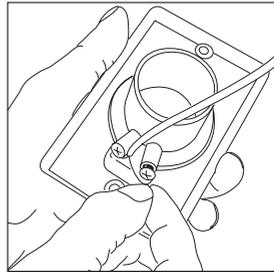
Tips + Tricks:

- The control cable can also be routed in empty tubes (diam. 13.5 mm). The branching point can be concealed in an empty socket/branch socket. This keeps the access to the contact points open after plastering.



Connecting control cable (7) to vacuum socket:

5. To connect vacuum socket: allow control cable (7) to protrude from wall by approx. 20 cm for problem-free vacuum socket (10) connection later. The polarity is unimportant when making the connection.



english **3.3 Installing the vacuum sockets**

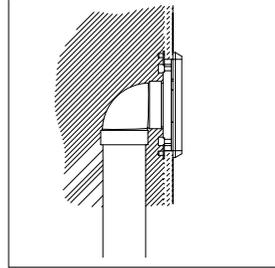
The vacuum sockets consist of the following components:

1. Vacuum socket (10)
2. Installation frame (11)
3. Short 90° elbow (12)

Vacuum socket installed beneath plaster

The installation frame (11) is installed flush with the plaster.

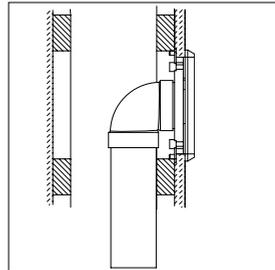
1. Before plastering: fit access cover (9) to installation frame so that installation frame is not damaged or soiled.
2. Remove access cover when wall covering is complete.
3. Slide connecting piece of vacuum socket (10) far enough into the O-ring seal to make a perfect seal.
4. Attach vacuum socket to control cable.
5. Screw vacuum socket (10) to installation frame (11) using special screws with coloured tops.



Vacuum socket installed in wooden walls

If you wish to install the suction tubes in double-layer wooden walls, proceed as follows:

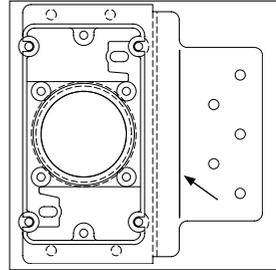
1. Saw a hole in the wooden wall with dimensions of 61 mm x 109 mm.
2. Break off the side part of the installation frame as described in Tips + Tricks.
3. Glue the 90° elbow (12) to the installation frame (11), paying attention to correct elbow position.
4. Now insert the installation frame through the hole in the wall.
5. Attach the 90° elbow to the prepared tube (1).
6. Screw the vacuum socket (10) to the installation frame (11).



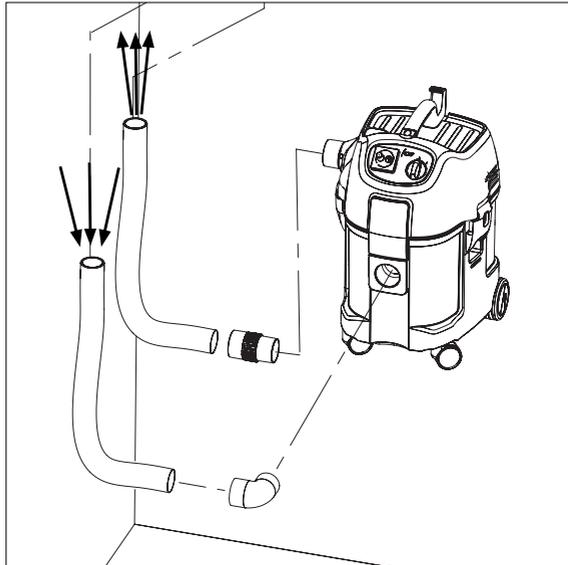
If you have access into the double-layer wooden walls, install the vacuum socket first and then slide the suction tube onto the 90° elbow.

Tips + Tricks:

- **IMPORTANT:** The socket will subsequently be in the same location as the installation frame. Please ensure that the frame is aligned in a perpendicular position.
- To prevent the tube system from being blocked by long objects:
 - Use short 90° elbow (12) immediately after vacuum socket.
 - Connect short limb to installation frame and long limb to vacuum socket.
 - If you cannot use a short 90° elbow (12), e.g. with surface installations, avoid sucking up long objects.
- If the tops of the screws on the rear of the installation frame interfere with flush fitting, simply saw them off carefully and slowly with a handsaw so that the frame does not disintegrate.
- The side section of the installation frame (11) can also be removed at the break-off point if it interferes because of the installation dimensions.
- For ease of installation, grease rubber seals of socket.



3.4 Installing the vacuum unit



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3.4.1 Assembling and positioning the vacuum cleaner wall mounting

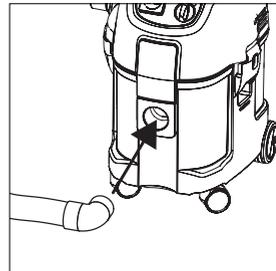
Tips + Tricks:

- Ensure that the top of the vacuum cleaner is easy to remove and that the filter bag can be disposed of without problems.

1. Position the vacuum at a maximum height of approx. 90 cm (see Tips + Tricks). Adapt the location to your requirements.
2. Notes on installing wall mount: see CENTIX 60 operating instructions.

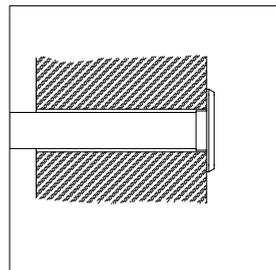
3.4.2 Installing the suction hose

1. Insert suction hose into inlet fitting with 90° sleeve.
2. Attach other end of suction hose to suction tube system. If suction hose is not long enough, lengthen the suction tube system.



3.4.3 Installing the exhaust pipe

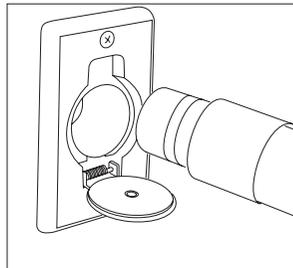
1. Install exhaust fitting to vacuum unit as described in installation guide provided with exhaust fitting.
2. Attach exhaust hose to exhaust fitting.
3. Attach other end to exhaust tube system. Route tube system to external wall taking the shortest route.
4. Drill hole on external wall (diameter 60 mm).
5. Affix blow-out valve to tube system.
6. Attach blow-out valve to outside of house with plugs through the provided holes.



3.4.4 Operation / start-up

Stationary operation:

1. Insert end of connecting tube (16) that is attached to the vacuum sockets into one of the two sockets of the CENTIX vacuum unit.
2. Move switch on CENTIX vacuum unit to position I. Vacuum unit must not start.
3. Insert suction hose (diam. 32 x 9m) into one of the installed vacuum sockets.
The vacuum unit starts up.
Removing the suction hose from the socket stops the vacuum unit.



Mobile operation:

See CENTIX vacuum unit operating instructions for description of mobile operation.

3.4.5 Assembling and positioning the hose holder

1. Position the hose holder in a location to which you have quick access, but where the suction hose does not interfere with your daily work.

4 Maintenance

4.1 Vacuum unit maintenance

See vacuum unit operating instructions.

4.2 Suction tube system maintenance

- Check vacuum sockets for residue and clean at regular intervals.
- If the safety instructions in this installation guide and the operating instructions of the CENTIX vacuum unit are followed, the system will not normally require any other maintenance.

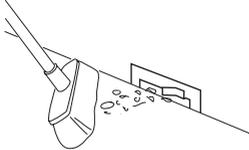
5 Troubleshooting

Faults that affect the vacuum unit and its accessories are described in the CENTIX vacuum unit operating instructions.

Fault	Cause	Remedy
‡ Motor will not start	<ul style="list-style-type: none"> > Control cable disconnected 	<ul style="list-style-type: none"> • Check control cable (7) connection to vacuum socket (10). • Check connection of 12V control cable (7) coming from vacuum sockets to connector blocks (14) with connecting cable (16) to the CENTIX vacuum unit.
‡ Motor starts, but system does not operate at original power	<ul style="list-style-type: none"> > Vacuum sockets not sealed > Tube system damaged > Glued connections to suction tubes not tight > Test vacuum unit in mobile operation. If full suction power is available the tube system is blocked. > Vacuum unit not providing full suction power 	<ul style="list-style-type: none"> • Check alignment of vacuum socket and seals • Replace damaged tubes or elbows • Re-glue the suction tubes • See CENTIX operating instructions • Contact Alto customer service

6 Accessories

6.1 List of optional accessories

Picture	Item number	Description
	302001288	9 m suction hose, auto S/S
	302001263	Vac Pan, white
	302001257	Vacuum socket, SET, white
	54118	Turbo Nozzle
	63990	Filter element
	30200449	Filter bag, pack of 5

6.2 Spare parts

Contact your friendly ALTO dealer or see spare part list at www.alto-online.com



INTERNET
<http://www.alto-online.com>

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