



haaga 677 / 697 / 697 plus

- Original Bedienungsanleitung
- Original operating instructions
- Manuel d'utilisation original
- Manual de instrucciones original
- Manuale d'uso originale
- Original vejledning
- Oryginalna instrukcja obsługi

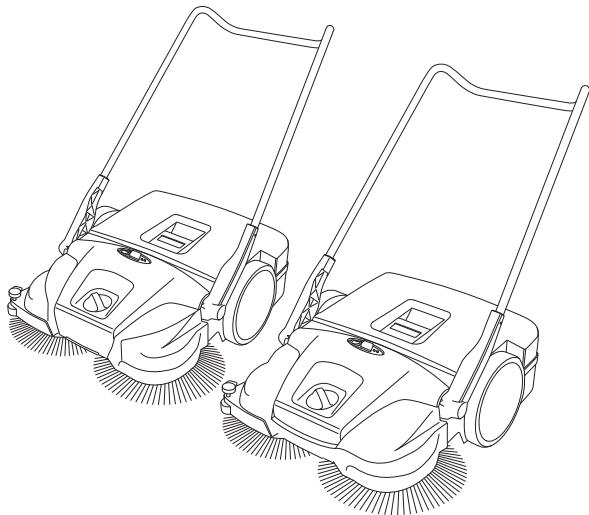


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1. General

This operating manual applies to the haaga 677 sweeping machine (year of manufacture: from 2019), the haaga 697 sweeping machine (year of manufacture: from 2019) and the haaga 697 plus sweeping machine (year of manufacture: from 2019) and is only valid for the named machines.

This operating manual provides important information for the safe and efficient use of the machine.

A requirement for safe operation of the machine is the adherence to all of the safety and operation instructions provided.

- Read the operating manual carefully before using the device.
- Read the safety instructions!
- Keep the operating manual safe and accessible during the lifespan of the device.
- Pass the operating manual onto any subsequent owner or user of the device.

1.1 Address

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1.2 Conventions

To be able to work optimally with the operating manual, please note the following explanations of the typographical conventions.

Numbering

- The texts shown are first level numbering points.

Work sequence

1. Step 1 of the work sequence
2. Step 2 of the work sequence
3. Step 3 of the work sequence

The sequence of the work steps must be observed.

Tip

- » Tips and notes (not machine damage) are shown like this.

1.3 Symbols and labels

All warnings and safety instructions must be complied with! Always take care during operation in order to avoid accidents, personal injury and damage to property.

Safety instructions



SIGNAL WORD

Type and source of hazard

Possible consequences

- Measures for avoiding danger

Risk level

Risk level	Probability of occurrence	Consequences in the event of noncompliance
DANGER	Direct	Death, serious injury
WARNING	Possible	Death, serious injury
CAUTION	Possible	Slight injury
NOTE	Possible	material damage

1.4 Limitation of Liability

Electrostar GmbH does not accept any liability for damage and consequential damage caused by the following points:

- Failure to observe the operating instructions
- Use of nonapproved replacement parts / wrong spare parts / spare parts that do not correspond to the manufacturer's specification
- Unauthorized changes, additions to and modifications to the device

1.5 Warranty

The provisions that are described in the general terms and conditions of Electrostar GmbH apply.

EN

1.6 Copyright

The operating manual is copyright protected for Electrostar GmbH.

The operating manual includes instructions and diagrams or diagram sections of a technical nature, which may not be reproduced in the entirety or in part, distributed or used for competition purposes or otherwise communicated.

Electrostar GmbH reserves all rights for the provision of permission for use for publication or distribution of copies or information from this operating manual to third parties.

In case of infringement the manufacture is entitled to make a claim for damages. Further claims are reserved.

1.7 Target group

This operating manual is intended for the use of this sweeping machine.

2. Safety

To avoid incorrect functioning, damage and health impairments, please observe the following instructions!

2.1 Intended use

The haaga 677 / 697 / 697 sweeping machines should only be used for the removal of road pollution such as foliage, grass, chippings, sand and similar impurities on flat and hard surfaces.

The device is suitable for commercial use, e.g. in hotels, schools, hospitals, factories, and offices.

2.2 Inappropriate use

Any uses other than those described in section "Intended use" are not considered to comply with the intended purpose. The operator of the device alone is liable for any resulting damage.

The sweeping machine may not be used for sweeping hazardous, flammable or glowing substances (cigarettes and matches) liquids, explosive or hazardous dusts (ex), acids or solvents.

The sweeping machine must not be used for sweeping water, concrete, mortar, cement and plaster dust.

The machine should also not be used for damp materials such as snow, manure, cow dung and sludge, e.g. sewage.

The sweeping machine may not be used in areas where there is a risk of explosion or as a means of transport.

2.3 Responsibility of the user

A user is any individual or legal entity, who uses the machine or has it used by third parties and is responsible during its use for the safety of the user or third parties.

- Supervise children who are in the working environment, to ensure that they do not play with it.
- Minors may not work with the device. Young people over the age of 16 years who are being trained under supervision are excluded.

- Persons, whose reaction times are influenced by, e.g. drugs, alcohol or medications, may not carry out any work with the device.
- Persons who are not allowed to do strenuous work due to their health status may not work with the sweeping machine.
- Replace any signs that have become illegible on the sweeping machine.

2.4 General safety instructions

- Keep the packaging material out of reach of children. There is a risk of suffocation!
- Do not wear long hair, ties, loose clothing or jewellery, including rings.
- When handling the machine, please note that there is a risk of injury from loose clothing or parts of the body being pulled into the machine.

2.5 General safety instructions for battery, charging socket, and charger.



DANGER

Danger to life due to electric shock!

If the charger is handled incorrectly there is a danger of a life-endangering electric shock.

- Never use a defective or damaged charger.
- Never open or dismantle the charger.
- Check the charger connection lead regularly for damage. Disconnect the plug immediately if the connection lead is damaged.



DANGER

Risk of death from explosion!

The charger and the sweeping machine can cause sparks, which may ignite dust or fumes. Sparks may be caused when switching the machine on and off.

- The charger and the sweeping machine must never be used in an environment in which there is a danger of explosion, for example in areas where there are inflammable liquids or fumes, gases or dust.



WARNING

Risk of injury or accident when handling the battery.

If the battery is handled incorrectly, it may cause a number of different hazards. The following points must be noted:

- Ensure that the battery is not exposed to direct sunlight, heat, open fire or electric sparks.
- Do not smoke in the immediate vicinity of the battery.
- Never expose the battery to microwaves or high pressure.
- Do not charge the battery at temperatures below 0°C.
- Never throw the battery into a fire.
- Never charge or use a defective, damaged or deformed battery.
- Never open, damage or drop the battery.
- Keep battery out of reach of children.



WARNING

Fluid leaks from the battery may cause danger of injury or accident.

Leaking battery fluid may cause irritation to skin, burns and chemical burns.

- In case of accidental contact, wash the affected body parts thoroughly with water and soap.
- If the fluid enters the eyes, do not rub, and wash the eyes with plenty of water for at least 15 minutes. Then seek medical assistance.
- Be careful to handle the battery with care.

**WARNING****Danger of injury and accident when handling the charger.**

If the charger is handled incorrectly, a number of different hazards may ensue. The following points must be noted:

- The electrical cable must only be plugged into an officially approved socket.
- The plug must be disconnected from mains supply after use of the charger.
- Fire hazard! Do not use on easily inflammable surfaces (e.g. paper, textiles), or in easily inflammable surroundings.
- Disconnect the plug immediately from mains supply if the charger catches fire or emits smoke.
- Do not cover the charger to allow it to cool without hindrance.
- Connection leads should be put away and labelled so to avoid damage and harm to persons - avoid trip hazards.

NOTE

If the battery, charger, and charging socket are handled incorrectly or inappropriately, they may cause damage to material or devices. The following points must be noted:

- The battery must only be used for the sweeping machine and the manufacturer's charger.
- Only use the geometrically suitable batteries for charging according to the values in Chapter "3. Technical data".
- Only connect the charger to the mains frequency and mains voltage indicated on the data plate.
- Do not remove the plug from the socket by pulling the connection lead; always remove by pulling the plug itself.
- Damaged connecting leads must be disconnected by a qualified electrician.

NOTE

- The charger must only be used in closed and dry spaces. Protect the charger from rain and moisture.
- Only use the charger and battery in the temperatures specified in Chapter "3. Technical data".
- Never connect the charger contacts to metallic objects such as nails, coins or jewellery as this can cause a short-circuit. The charger may be damaged by a short-circuit.
- Never connect the battery terminals or the contacts of the charging socket to metallic objects such as nails, coins or jewellery as this can cause a short-circuit. The battery or the electronics of the sweeping machine may be damaged by a short-circuit.
- Do not use metallic containers to transport the battery.
- Protect the battery from rain and moisture.
- When the battery is stored for 2 months or more without being recharged the blue battery connection lead should be disconnected in order to prevent the battery from deep discharging. Information regarding the storage and disconnection of the battery can be found in Chapter "10.3 Storage/ Safekeeping" and Chapter "10.2 Disconnect battery leads" of this operating manual.
- If the battery is to be stored for 6 months or more the battery must be fully charged in order to retain the performance of the battery. Information on the charging of the battery can be found in Chapter "6.3 Charging battery" of this operating manual.

2.6 Hazard notices on the device

The following pictograms are affixed to the sweeping machine or to the data plate:



CAUTION

When working on the machine, the safety instructions described in the operating manual must be observed.



Operating instructions

Read the operating manual carefully before using the device.



Risk of clothing or body parts being caught and jammed in the machine

When servicing, repairing, maintaining or cleaning the machine there is a risk that spinning parts may result in clothing or body parts being caught in the machine causing injury. The safety instructions described in the operating manual must be observed in these cases.



Charger and battery

Only use the charger approved by the manufacturer and delivered with the sweeping machine.

2.7 Personal Safety Equipment

Personal safety equipment must be worn when working to minimise health hazards. For that reason:

- Before starting all work put on each item of specified safety equipment properly and wear it during work.



Sturdy footwear

Wear sturdy footwear with well-gripping, non-slip soles.



Protective gloves

Wear protective gloves.



Dust protection mask

Wear a dust protection mask.

3. Technical data

Basic information on the sweeping machine

677 / 697 / 697 plus

EN

Technical data	677	697	697 plus
Sweeping width in millimetres [mm]	770	970	970
Sweeping capacity in square metres per hour [m²/h]	3600	4100	4100
Capacity of the sweeping container in litres [l]	50	50	50
Weight kilograms [kg]	21	22	22
Approx operating time* in minutes when fully charged.	90	90	120
Maximum operating temperature	10 °C to 40 °C	10 °C to 40 °C	10 °C to 40 °C

Noise and vibration information (measured according to EN 60335-2-72)	measured according to EN 60745-2-6		
	677	697	697 plus
Sound pressure level L_p (EN 60335-2-72)*	64 dB (A)	64 dB (A)	64 dB (A)
Sound power level L_w (EN 60335-2-72)*	80 dB (A)	80 dB (A)	80 dB (A)
Uncertainty for given sound level (2006/42/EG)	2.5 dB (A)	2.5 dB (A)	2.5 dB (A)

*Calculated at the highest notational rotation speed in an ambient temperature of 20 °C / depending on floor surface.

Vibration information (measured according to EN 60335-2-72)	677	697	697 plus
Left handle, a_h	< 2.5 m/s²	< 2.5 m/s²	< 2.5 m/s²
Right handle, a_h			
Uncertainty (K) (RL 2006/42/EG)	2.0 m/s²	2.0 m/s²	2.0 m/s²

Battery	677	697	697 plus	Charger	677 / 697 / 697 plus
Voltage [V]	12	12	12	Input voltage	230 VAC/50 Hz
Power [Ah]	12	12	15	Output voltage [V]	12
Weight kilogrammes [kg]	3.8	3.8	4.0	Charge cut-off voltage [V]	13.8
Maximum range of temperature				Charging current [mA]	2,500
Operation	from -10 °C to +50 °C			Weight in grams [g]	540
Charging	from 0 °C to +40 °C			Maximum range of temperature	
Storage	from -10 °C to +40 °C			Operation	from 0 °C to +25 °C
				Storage	from -25 °C to +70 °C

4. Construction and Function

EN

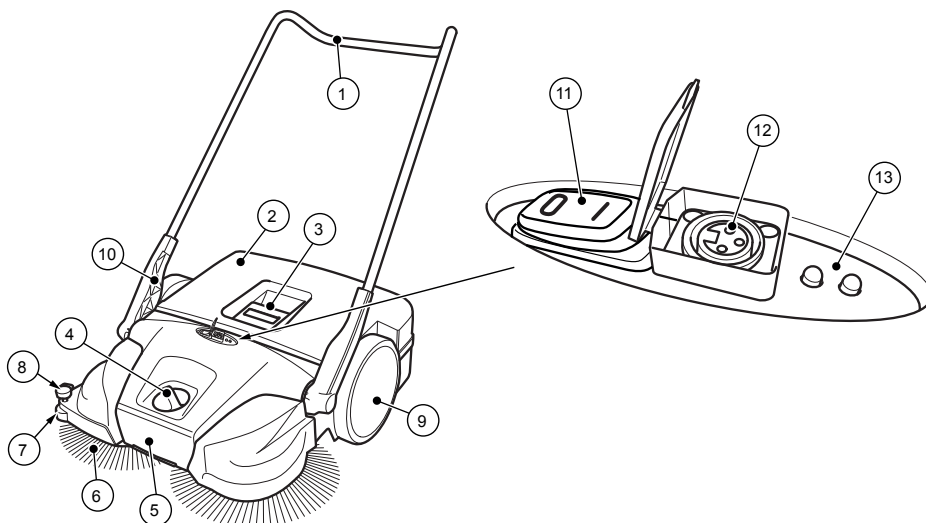


Fig. 1: Component overview 1

Item no.	Component
1	Push bar
2	Sweeping container
3	Container handle
4	Plate brooms – height adjustment
5	Carrying handle
6	Plate brooms
7	Lateral guide roller
8	Downholder
9	Impeller
10	Handle fitting
11	On/off switch
12	Charging socket
13	LED display

The battery-operated machine is started by switching the on/off switch (11) to the on position and pushing the machine forward with the push bar (1). This causes both plate brooms (6) to convey the sweepings in the direction of the sweeping container (2) with the aid of the sweeper lip (16).

The fine dirt sweeping roll (14) conveys the rest of the sweepings into the sweeping container (2). Power is provided by the battery (24) installed in the machine, which must be sufficiently charged for optimal performance.

» Information on the charging of the battery can be found in Chapter “6.3 Charging battery” of this operating manual.

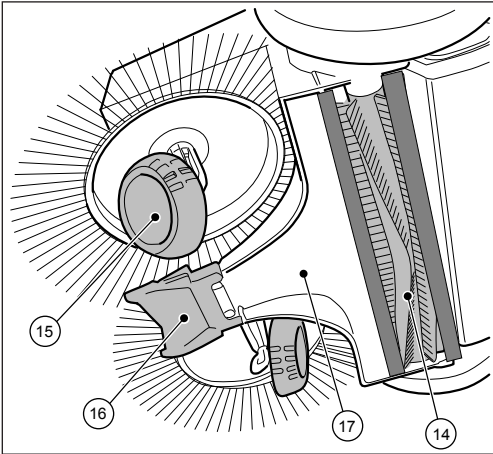
During battery operation the current operating status of the sweeping machine is shown on the LED display (13).

» Information on battery operation and the LED display can be found in Chapter “7.4 Battery operation and LED display” of this operating manual.

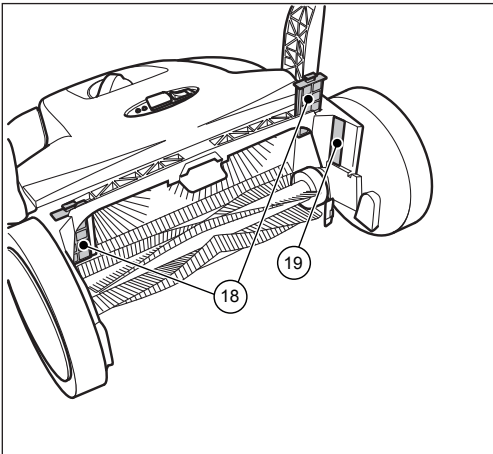
When the battery charge is low, the machine may also be operated temporarily without electric power.

» Information on manual operation can be found in Chapter “7.6 Manual operation” of this operating manual.

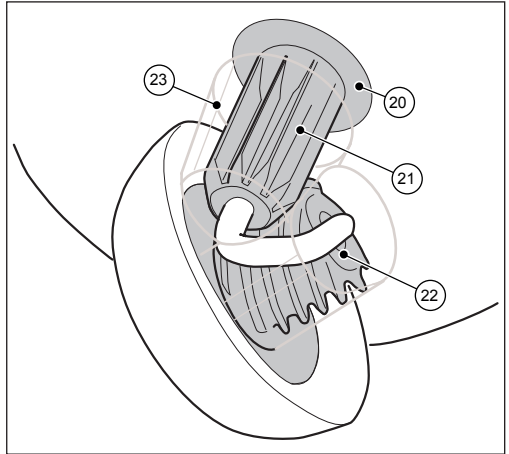
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**Fig. 2: Component overview 2**

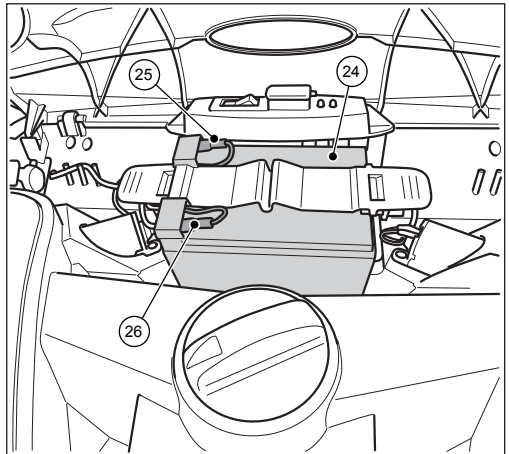
Item no.	Component
14	Fine sweeping roll
15	Helical gear
16	Sweeper lip
17	Sweeping plate

**Fig. 3: Component overview 3**

Item no.	Component
18	Dust filter
19	Type plate

**Fig. 4: Component overview 4**

Item no.	Component
20	Clutch housing
21	Toothed sleeve
22	Helical gear tooting
23	Drive protection

**Fig. 5: Component overview 5**

Item no.	Component
24	Battery
25	Battery connection lead (red +)
26	Battery connection lead (blue -)

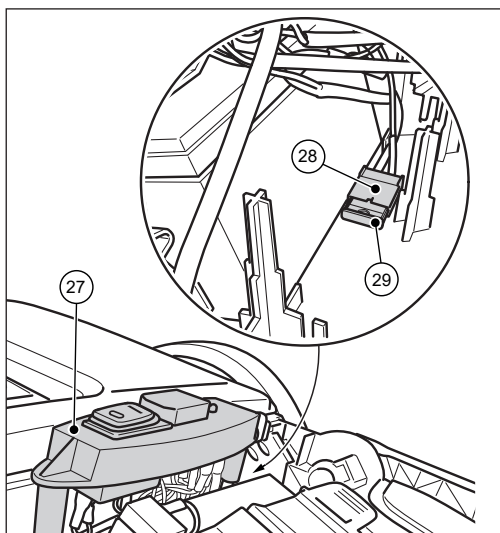


Fig. 6: Component overview 6

Item no.	Component
27	Switch plate
28	Fuse holder
29	Fuse F1

» The picture shows the components when the cover is open or removed.

5. Transport/transporting

5.1 Delivery

NOTE

Visible damage on the outer packing must be immediately confirmed on delivery by the parcel service driver. If transport damage is only noticed during unpacking, the parcel service must be notified in writing within 24 hours after delivery so that it can be liable for the damage.

EN

5.2 Scope of supply

- Device
- Push bar
- Two handle fittings (pre-mounted)
- Charger with mains plug.
- Operating instructions

5.3 Handling Packaging Materials

- Always dispose of packing in an environmentally responsible manner.
- Observe the local and regional legal provisions in force.

5.4 Storage of sweeping machine

NOTE

Damage can be caused by improper storage of the machine, e.g. in a damp environment, with the battery lead attached, or with an insufficiently charged battery. Information regarding the storage and safekeeping of the machine can be found in Chapter "10. Decommissioning for Storage/Safekeeping".

- » In order to save space, the push bar can be detached from the machine. Information on the removal of the push bar can be found in Chapter "10.1 Disassemble push bar" of this operating manual.

5.5 Carrying the device

CAUTION

Risk of injury through tipping over of the push bar!

Tipping over of the push bar may lead to slight injuries, such as jamming of the finger or bruising in users or other persons.

- When carrying the device, hold it so that the push bar cannot tip over.

5.6 Transporting the device in a vehicle

CAUTION

Risk of injury through improper transport of the sweeping machine!

Wandering, skidding or tipping of the device can result in injury to the driver or other persons.

- Secure the device with a strap to prevent it from slipping and moving around.

1. Place the device in a suitable location in the vehicle.
2. Secure the device with a strap.
- » In order to save space when transporting the device in a vehicle, the push bar can be removed. Information on the removal of the push bar can be found in Chapter "10.1 Disassemble push bar" of this operating manual.

NOTE

- Improper transport can result in damage to the sweeping machine.
- In order to protect the battery, do not leave the machine in a hot vehicle.
- Ensure that the device is not switched on by accident during transport. If necessary, disconnect the blue battery lead. Information on the disconnection of the battery can be found in Chapter "10.2 Disconnect battery leads" of this operating manual.

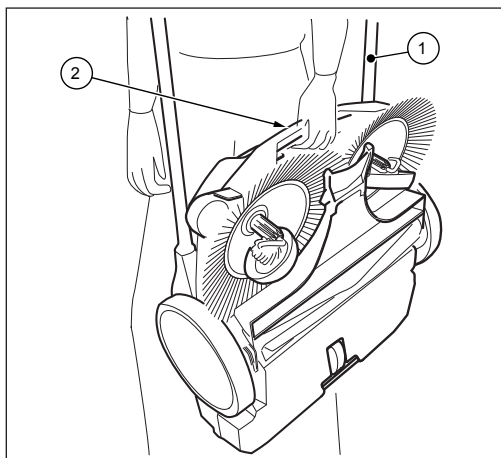


Fig. 7: Carrying the device

1. Swing the push bar (1) flat towards the front.
2. Grasp the device on the carrying handle (2).
3. Carry the device in such a manner that the plate brooms face away from the body.

6. Commissioning

6.1 Install push bar

⚠ CAUTION

Risk of injury through tipping over of the push bar!

Tipping over of the push bar may lead to slight injuries, such as jamming of the finger or bruising in users or other persons.

- When carrying the device, hold it so that the push bar cannot tip over.

The push bar can be adjusted to the height of the user in two levels (A) and (B).

- » (A): Lower level
- » (B): Upper level

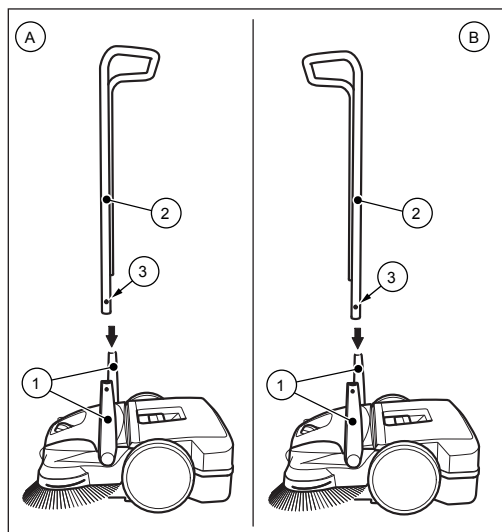


Fig. 8: Push bar assembly

1. Turn the handles (1) into the vertical position.
2. Press the locking springs (3) inwards on both sides of the push bar.

3. Push the push bar (2) into both handle fittings simultaneously.
- » To do so, the push bar must be pulled apart about 10 cm before insertion in the handle fittings.
4. Push the push bar (2) into the handle fittings until the locking springs lock in.

6.2 Connect battery leads

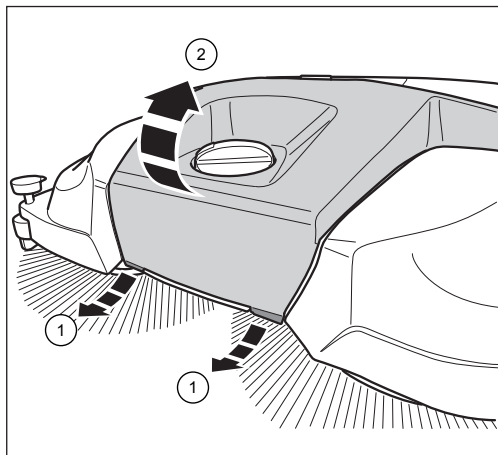


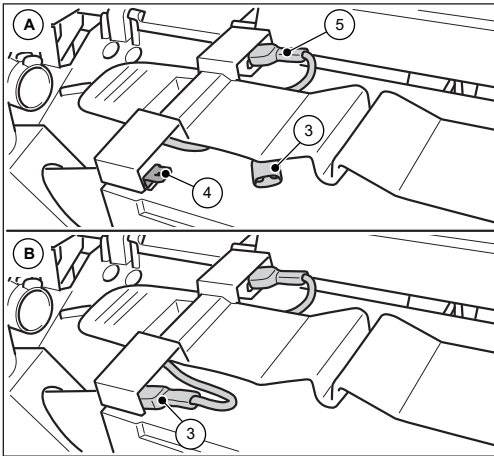
Fig. 9: Open the cover

⚠ CAUTION

Risk of injury from unintentional starting of the sweeping machine.

When the battery lead is connected there is a danger of items being pulled into the machine due to the unintentional starting of the sweeping machine.

- Before the battery is connected ensure that the position of the on/off switch is in 0 position.
- » Upon delivery and for storage times of 2 months or more, the blue battery lead should be removed from the insertion flap to prevent the battery losing its charge.
 1. Pull the two flaps (1) on the front underside of the cover (2) a short distance forwards.
 2. Lift the cover (2)

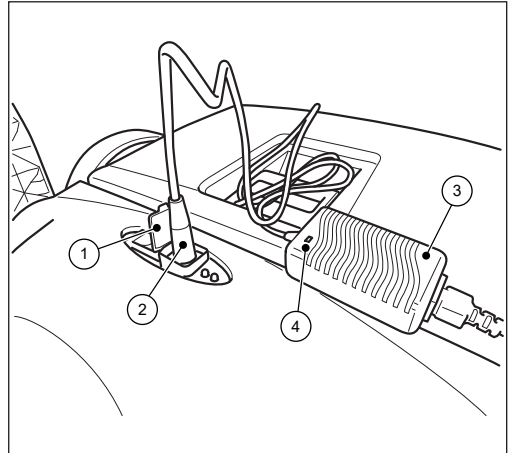
**Fig. 10: Connect battery leads**

3. Plug the blue battery lead (3) well into the insertion flap (4) of the battery.
- » (A): Battery lead not connected
- » (B): Battery lead connected
- » The red battery lead (5) is connected upon delivery.

NOTE

Also ensure that the red battery lead (5) is completely and correctly connected. An incorrect connection to the battery can cause damage to the device and result in the guarantee being deemed to be void.

4. Close the cover (2) and lock it over the flaps (1).

6.3 Charging battery**Fig. 11: Connecting the charger**

- » It is recommended to charge the battery fully before being operated for the first time.
- » The charger (3) has fully electronic voltage and current limitation. This enables a connected battery to be at optimal charge at all times. The battery is thus prevented from overcharging.
- » The battery leads must be correctly connected in order to charge the batteries. Information on the connection of the battery can be found in Chapter "6.2 Connect battery leads" of this operating manual.

NOTE

- The sweeping machine must not be switched on during charging. This may cause damage to the machine's electrical components.
- Before charging, check the charger plug and the connection socket on the sweeping machine for foreign bodies such as objects which may conduct electricity. Damage to the device from short-circuits and cable fire.

1. Open the protective cap (1) over the charging socket on the sweeping machine.

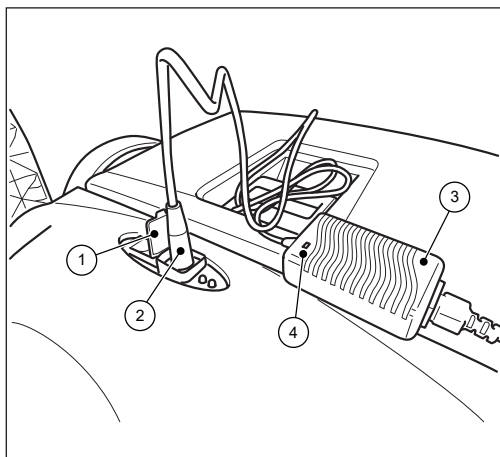


Fig. 12: Connecting the charger

2. Connect the plug (2) of the charger (3) to the charging socket of the sweeping machine.
3. Connect the mains lead of the charger (3) to a 230 V power supply.
- » During charging, the LED display (4) on the **charger** shows an orange light. When the battery has been completely charged, the LED display (4) on the **charger** changes to green.
- » Charging time depends mainly on the charge of the battery before charging. If the battery has not been charged for some time, the charge will have dropped and the charge time will be longer. A full charge can take up to 7 hours. Please also note the information on the outer packing or on the sticker fixed to the sweeping machine.

NOTE

In order to achieve optimal life and keep the aging process to a minimum, the battery should be charged for at least 10 hours every 2 months. A fully charged battery reduces the danger of deep discharge and irreparable damage to the battery cells. The battery can also be recharged after operation times of approx. 15 mins.

7. Operation



WARNING

Risk of cutting due to broken glass, metal or other sharp edged materials!

When emptying the sweeping container, cutting injuries may occur due to broken glass, metal or other sharp edged materials.

- Wear the prescribed personal protective equipment!



CAUTION

Health impairments caused by dust resulting from sweeping!

The inhalation of dusts can endanger the health.

- Wear the prescribed personal protective equipment!

7.1 Before starting work

- Check the device to make sure that it is functioning before starting work.
- Check the push bar to make sure that it is firmly fixed in the handle fittings.
- Check the sweeping container to make sure it is firmly fixed and in good condition.
- Check the plate brooms and the fine dust sweeping roller for bits of wood, rolled up threads and cords, and materials with long strands. Remove these if necessary.
- Check the plate brooms and the fine dust sweeping roller for jammed items or contamination.
- Check the handle for contamination and clean if necessary.
- Check whether the on/off switch can be easily moved to the 0 position at any time.
- Check the charging socket on the sweeping machine for foreign bodies.

NOTE

There must be no electrically conductive objects on or in the charging socket. Damage to the device from short-circuits and cable fire. Always keep the protective cap over the charging socket closed.

7.2 Height adjustment of the plate brooms

The height of the brooms is adjusted with a dial in the middle of the front part. The height adjustment sets the plate brooms to the surface to be swept. The levels are based on empirical values and must therefore be regarded as reference values. As a result, during sweeping, adaptations of the levels may need to be made depending on the surface.

- Level 1-2: for all level, hard surfaces
(e.g. asphalt, concrete, slabs...)
- Level 3-4: for damp leaves, sand, and uneven surfaces (e.g. washed concrete slabs)
- Level 5-7: for heavy soiling and severely uneven surfaces
- Level 8: only applicable for very serious wear and tear to plate brooms (e.g. if on Level 1 there is no contact between the plate brooms and the sweeping surface).

NOTE

Do not press the plate brooms too firmly on the ground. This leads to increased wear and tear and a reduction of the charge run time. It also increases push resistance and can have a negative effect on the cleaning result.

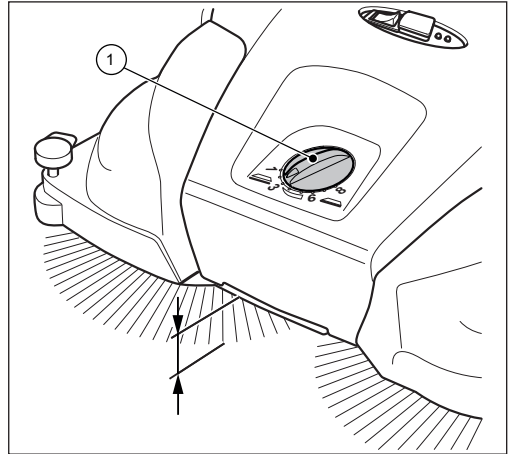


Fig. 13: Height adjustment of the plate brooms

- Set the required level:
- Turn the dial (1) to the left to lower the level.
- Turn the dial (1) to the right to increase the level.
- » Lift the machine slightly by the handle. This will make it easier to adjust the height.

7.3 Set hold-down device

With the hold-down device, the right plate broom is adjusted to the edge regions to be swept, for example on walls or curbs.

NOTE

An unsuitable setting of the hold-down device at lower edges can lead to excessive wear. The hold-down device must not scratch on the ground.

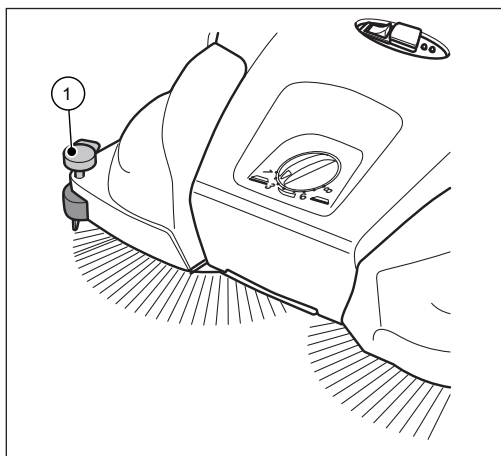


Fig. 14: Hold-down device setting

Sweeping out edges and corners

- Press down the handle (1) of the hold-down device.

Operation on surfaces

- Pull up the handle of the hold-down (1) device.

7.4 Battery operation and LED display

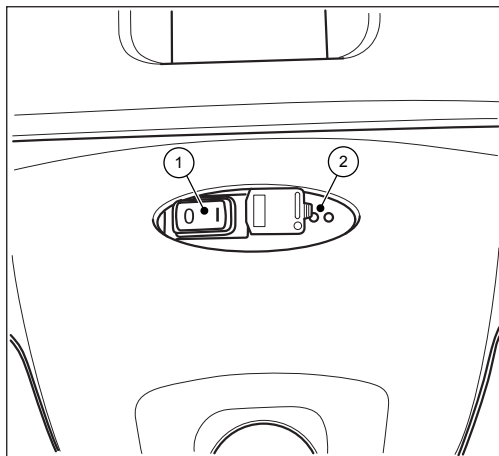


Fig. 15: Use and display

The LED display (2) communicates the operating state of the battery-operated sweeping machine.

- Place the sweeping machine on the surface to be swept.



CAUTION

Do not operate the on/off switch with your foot.

This may cause injury by causing you to fall or stumble when the plate brooms on the sweeping machine begin to move.

- Only switch the machine on by hand.
- Switch on the sweeping machine by switching the on/off switch (1) to position I.

The plate brooms and fine sweeping rolls begin to rotate. The LED display (2) will show green during battery operation provided there is sufficient charge.

- Use both hands to push the device with the push bar.
- Push the device forward at normal walking speed.
- Switch off the sweeping machine by moving the on/off switch (1) to position 0.
- Empty the sweeping container as needed. See Section “Empty sweeping container” in Chapter 7.7 of this operating manual.
- » Empty the sweeping container at regular intervals to achieve a satisfactory sweeping result.

NOTE

- If the plate brooms are revolving more slowly or if the red light on the LED display (2) shows during operation, this means that the battery charge is low. Switch off the machine and charge the battery.
- When the battery charge is too low, the machine will be switched off automatically by the electronic system installed. The red LED display light (2) will flash red. Switch off the machine and charge the battery. The guarantee is void if the battery is allowed to deep discharge.
- Clean the sweeping machine and dust filter after operation. See Section “Clean the device” in Chapter 9.5 of this operating manual.
- Fully charge the battery again as needed. See Section “Charging battery” in Chapter 6.3 of this operating manual.

7.5 Overload protection

In order to avoid damage from overload, the motors are fitted with overload protection. If the electronics of the sweeping machine switch themselves off after a short time, this means that the motors are being overloaded. Check the fine sweeping roll and the plate brooms are moving freely and remove any blockages, such as stones, rolls of thread and similar items.

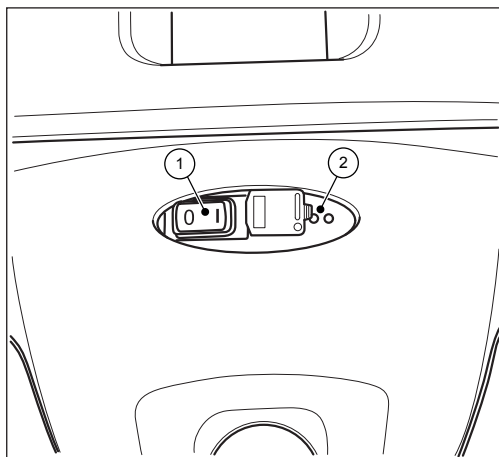


Fig. 16: Use and display

- Set the on/off switch (1) on the electronics of the machine to the 0 position after the overload protection has been triggered.



CAUTION

Risk of injury from unintentional starting of the sweeping machine.

When working on the sweeping machine there is a danger of items being pulled into the machine due to the unintentional starting of the sweeping machine.

- Ensure that the device is not switched on by accident when the blockage is being dealt with. If necessary, disconnect the blue battery lead. See Section “Disconnect battery leads” in Chapter 10.2 of this operating manual.

1. Locate and remove the blockage. See Section “Remove blockage” in Chapter 9.3 of this operating manual.
2. If necessary, connect the blue battery connecting lead again. See Section “Connect battery leads” in Chapter 6.2 of this operating manual.

3. Switch the sweeping machine on by switching the on/off switch to the I position.
4. Check whether the device is working again as usual.

7.6 Manual operation

When the battery is low, the sweeping machine can be used temporarily without a power supply. The sweeping mechanism is activated by pushing the machine forward.

- Use both hands to push the device with the push bar.
 - Push the device forward at normal walking speed.
 - Empty the sweeping container as needed. See Section "Empty sweeping container" in Chapter 7.7 of this operating manual.
 - Fully charge the battery again as needed. See Section "Charging battery" in Chapter 6.3 of this operating manual.
- » Only use manual operation temporarily. Results are better under battery operation and use a very small amount of power.

7.7 Empty sweeping container



WARNING

Risk of cutting due to broken glass, metal or other sharp edged materials!

When emptying the sweeping container, cutting injuries may occur due to broken glass, metal or other sharp edged materials.

- Wear the prescribed personal protective equipment!



CAUTION

Risk to health from dust from sweeping container!

There is a risk to health from dust collected when the sweeping container is emptied.

- Wear the prescribed personal protective equipment!

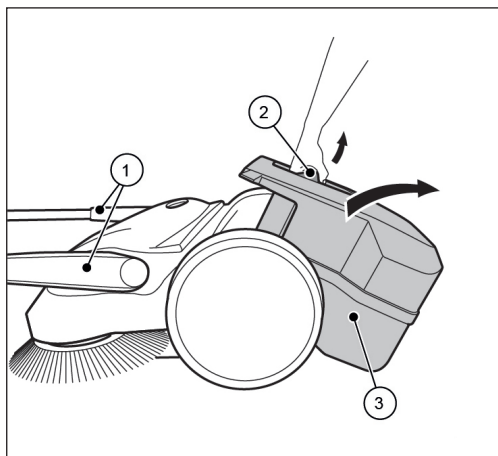


Fig. 17: Empty the sweeping container

- Empty the sweeping container after each use.
 - Empty the sweeping container at regular intervals to achieve a proper sweeping result.
1. Bring the push bar (1) to the forward position.
 2. Pull the sweeping container (3) upwards by the container handle (2).
 3. Empty the sweeping container (3) completely.
 - » Make sure that the enclosure sides are free of dirt.
 4. Insert the empty sweeping container (3) on the device.
 5. Press the container handle (2) back into the starting position.
 - » The sweeping container (3) must audibly lock into position.
 6. Bring the push bar (1) back into the operating position.

8. Troubleshooting



WARNING

Risk of cutting due to broken glass, metal or other sharp edged materials!

When emptying the sweeping container, cutting injuries may occur due to broken glass, metal or other sharp edged materials.

- Wear the prescribed personal protective equipment!



CAUTION

Health impairments caused by dust resulting from sweeping!

The inhalation of dusts can endanger the health.

- Wear the prescribed personal protective equipment!



CAUTION

Risk of injury through tipping over of the push bar!

Tipping over of the push bar may lead to slight injuries, such as jamming of the finger or bruising in users or other persons.

- When carrying the device, hold it so that the push bar cannot tip over.



CAUTION

Risk of injury from unintentional starting of the sweeping machine.

When working on the sweeping machine there is a danger of items being pulled into the machine due to the unintentional starting of the sweeping machine.

- Ensure that the device is not switched on by accident while the fault is being dealt with. If necessary, disconnect the blue battery lead. See Section "Disconnect battery leads" in Chapter 10.2 of this operating manual.

Faults may occur even if the prescribed maintenance work and checks of the device before use are complied with. Possible faults are listed in the tables 1 and 2 below, with specification of the cause and remedy.

8.1 Fault table Part 1

Fault	Cause	Remedy
Device is running with difficulty or roughly	Device is contaminated	Clean sweeping machine. See Chapter 9.5 Section "Clean the device"
	Broom blocked	Remove blockage, see Chapter 9.3 Section "Remove blockage"
	Contaminated broom drives	Clean broom drives. See Chapter 9.5 Section "Clean the device"
	Height adjustment set too low	Set height adjustment, See Chapter 7.2 in Section "Height adjustment of the plate brooms"
	Plate broom pressure too high	
	Battery charge too low. LED display on the sweeping machine shows red light	Charge battery. See Chapter 6.3 Section "Charging battery"
	Plate brooms do not rotate	Contact Service
	Fine sweeping roll does not rotate	
The device is switched off	Plate broom pressure too high	Set height adjustment. See Chapter 7.2 in Section "Height adjustment of the plate brooms"
	Broom blocked	Clean sweeping machine. See Chapter 9.5 Section "Clean the device"
	Overload protection active	Remove blockage, see Chapter 7.5 Section "Overload protection"
	Battery charge too low. LED display on the sweeping machine shows red light. Device switched off electronically	Charge battery. See Chapter 6.3 Section "Charging battery"
	F1 fuse is defective	Check F1 fuse and exchange. See Chapter 8.4 Section "Take out the F1 fuse and check"
Device can't be switched on	F1 fuse is defective	Check F1 fuse and exchange. See Chapter 8.4 Section "Take out the F1 fuse and check"
	Disconnected battery lead	Connect battery lead. See Chapter 6.2 Section "Connect battery leads"
	Deep discharge battery	Contact Service
Bristles are bent	Improper storage	Align the bristles, see Chapter 9.4 Section "Align bristles"

EN

8.2 Fault table Part 2

EN

Fault	Cause	Remedy
Sweeping result is insufficient	Sweeping lip is missing, loose or worn	Replace sweeping lip
	Plate broom pressure too high	Set height adjustment. See Chapter 7.2 in Section "Height adjustment of the plate brooms"
	Heavy wear and tear of plate brooms	
		Exchange plate brooms
	Sweeping container is full	Empty the sweeping container. See Chapter 7.7 Section "Empty sweeping container"
	Inappropriate use of sweeping machine according to information in Chapter 2.2 Section "Inappropriate use"	Use suitable cleaning device or cleaning agent.

8.3 Trouble-shooting procedure

CAUTION

Risk of injury from unintentional starting of the sweeping machine.

After correcting fault on the sweeping machine there is a danger of items being pulled into the machine due to the unintentional starting of the sweeping machine.

- Before the battery is connected ensure that the position of the on/off switch is in 0 position.

1. Set on/off switch on the device to position 0.
2. If necessary, disconnect the blue battery lead.
3. Correct the fault as described in the fault table.
4. If necessary, reconnect the blue battery connecting lead.
5. Switch the sweeping machine on by switching the on/off switch to the I position. Check whether the device is working again as usual.

8.4 Take out the F1 fuse and check

In order to protect the electrical components, the sweeping machine is fitted with a 15 amp safety fuse. In order to check and replace the F1 fuse proceed as follows:

CAUTION

Danger of injury or accident due to incorrect fuse strength.

Use of the incorrect fuse strength can lead to overload of the electrical components, the emission of smoke, or fire, whether the machine is switched off, being charged or in operation.

- Replace the fuse only with a new 15 amp fuse approved by the manufacturer.

CAUTION

Risk of injury from unintentional starting of the sweeping machine.

When working on the sweeping machine there is a danger of items being pulled into the machine due to the unintentional starting of the sweeping machine.

- Ensure that the device is not switched on by accident while the fuse is being taken out and checked. If necessary, disconnect the blue battery connecting lead.

NOTE

Serious damage to the device can be caused by use of a fuse with a higher or lower strength.

In order to avoid damage, replace a blown fuse only with a 15 amp fuse approved by the manufacturer. Only replace the fuse when the cause of the fault has been dealt with.

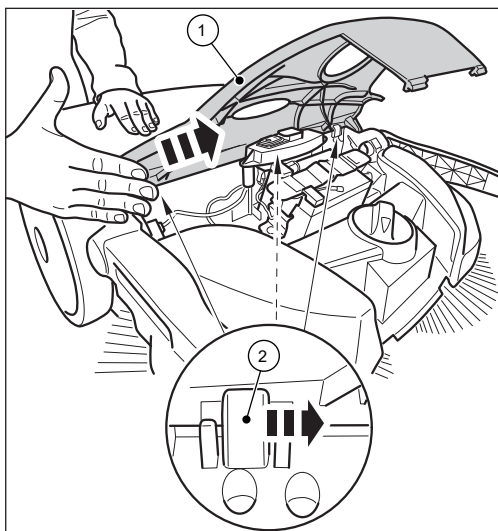


Fig. 18: Remove cover

1. Set on/off switch on the device to position 0.

EN

2. Move the push bar to the forward position. See Section "Empty sweeping container" in Chapter 7.7 of this operating manual.
3. Disconnect the blue battery connection lead from battery. See Section "Disconnect battery leads" in Chapter 10.2 of this operating manual.
4. Remove the cover (1) from the hinges (2) carefully by tapping gently with the palm of one's hand against the edge of the cover in the direction of the arrow.

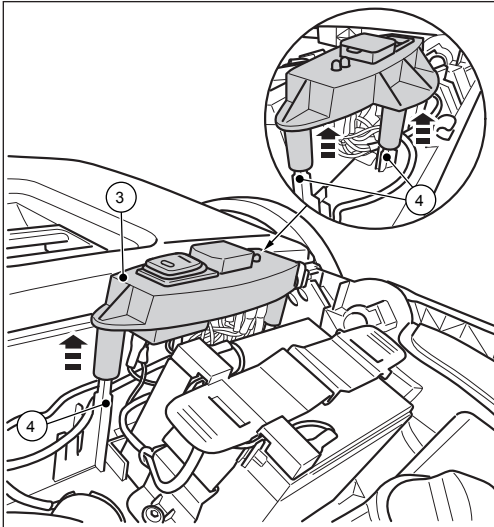


Fig. 19: Remove the switch plate

5. Pull the switch plate (3) carefully upwards from the pilot pins (4).
6. Place the switch plate (3) with the connected leads to one side.

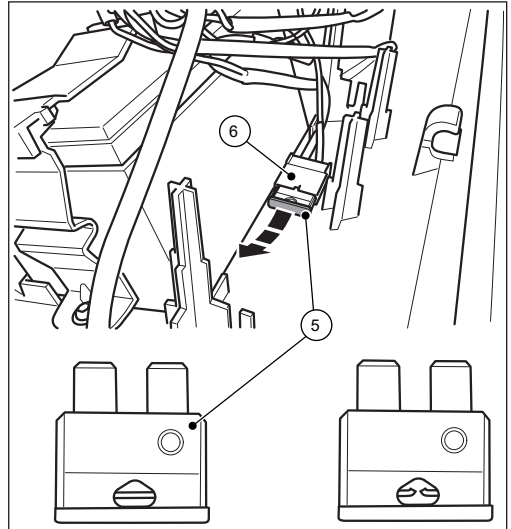


Fig. 20: Fuse F1

7. Remove the F1 fuse (5) from the fuse holder (6).
8. Check the fuse and, if necessary, replace.
 - » The picture to the right shows a blown fuse.
 - » Use only 15 amp fuses.
 - » Reassembly is carried out in reverse order.

The following must be taken into account:

1. Place the cover on top and then snap it into place by carefully pressing it in the hinges.
2. Plug the blue battery lead well into the insertion flap of the battery.
3. Switch the sweeping machine on by switching the on/off switch to the I position.
4. Check whether the device is working again as usual.

NOTE

If the fuse blows immediately after the sweeping machine has been switched on again, contact service department.

9. Maintenance and cleaning

WARNING

Risk of cutting due to broken glass, metal or other sharp edged materials!

When emptying the sweeping container, cutting injuries may occur due to broken glass, metal or other sharp edged materials.

- Wear the prescribed personal protective equipment!

CAUTION

Health impairments caused by dust resulting from sweeping!

The inhalation of dusts can endanger the health.

- Wear the prescribed personal protective equipment!

CAUTION

Risk of injury through tipping over of the push bar!

Tipping over of the push bar may lead to slight injuries, such as jamming of the finger or bruising in users or other persons.

- When carrying the device, hold it so that the push bar cannot tip over.

CAUTION

Hazard due to cleaning materials!

The agents can contain harmful ingredients and can thereby cause irritation of the respiratory tract and the skin.

- Observe the manufacturer's safety data sheet.
- Avoid spillage and the formation of fog.
- Do not eat, drink or smoke while working.
- Avoid contact with skin and eyes.

CAUTION

Risk of injury from unintentional starting of the sweeping machine.

When carrying out maintenance and cleaning the sweeping machine there is a danger of items being pulled into the machine due to the unintentional starting of the sweeping machine.

- The device should be switched off and disconnected from mains supply during all such work.
- Never do any work on the machine while the engine is running.
- The on/off switch must be in the 0 position.
- Ensure that the device is not switched on by accident while maintenance and cleaning work is being carried out. If necessary, disconnect the blue battery lead. See Section "Disconnect battery leads" in Chapter 10.2 of this operating manual.

NOTE

Improper maintenance can lead to damage or a shortening of the life of the sweeping machine.

In the following sections the maintenance and cleaning work required for optimal and fault-free operation is described.

The conduct of the specified work depends in some cases on time and/or charge. For the maintenance interval information shown both in deadlines and service hours, the one that occurs first applies.

In case of questions on the maintenance work and intervals contact the manufacturer.

9.1 Maintenance plan

Maintenance interval	Maintenance work
Before starting work	Check the device to make sure that it is functioning before starting work. If necessary, contact the Service
	Check the push bar to make sure that it is firmly fixed in the handle fittings.
	Check the sweeping container to make sure it is firmly fixed and in good condition.
	Check the plate brooms and the fine dust sweeping roller for rolled up threads and cords. Remove these if necessary.
	Check the plate brooms and the fine dust sweeping roller for jammed items or contamination
	Check the handle for contamination and clean if necessary.
	Check that the height is adjusted correctly
	Check the sweeping pressure setting. Adapt the sweeping pressure to the surface to be swept, if necessary
	Check whether the on/off switch can be easily moved to the 0 position at any time
	Check the charging socket on the sweeping machine for foreign bodies
After finishing work	Check the charge on the battery is sufficient for the sweeping work planned. Charge battery if necessary.
	Empty the sweeping container
	Clean the device
8 Bh	Clean dust filter
	Charge battery
2 months	Clean broom drives
2 months	Charge battery

9.2 Clean dust filter

1. Remove the sweeping container from the sweeping machine. See Section "Empty sweeping container" in Chapter 7.7 of this operating manual.

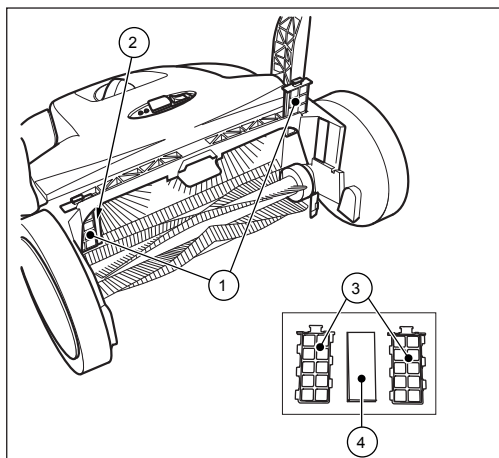


Fig. 21: Dust filter removal

2. Pull the dust filter (1) up from the guides (2).
3. Open the plastic housing (3) of the dust filter and remove the foam insert (4).
4. Pound out the foam insert (4) and clean it with water.
5. Place the dry foam insert back into the plastic housing.
6. Slide the dust filter back into the guides.
7. Insert the sweeping container into the sweeping machine.

9.3 Remove blockage

- Remove wound-up material (e.g. cords, threads, long-threaded fibres.) from the brooms and axles.
- Remove jammed material (e.g. stones, twigs, leaves etc.).

9.4 Align bristles



WARNING

Fire hazard due to improper handling of a fan or the use of an unsuitable fan!

When aligning the bristles, there is a risk of fire if they are heated to too high temperatures.

- Do not use open flames or furnace to heat the bristles!
- Do not use a hot air blower. If the air is too hot, the bristles may melt.

Bent bristles can be straightened out again with heating by means of a warm air fan (e.g. hairdryer).

- Point the switched-on warm air fan towards the bent bristles.
- » If the heating is sufficient, the bristles will straighten out again by themselves.

9.5 Clean the device

- Do not use a degreasing agent.
 - Do not use any aggressive cleaning agents.
 - Do not clean the device with a high-pressure cleaner or under running water. The device may not be immersed in water or cleaned with water.
 - Protect the bearings against moisture.
 - Do not clean the plate brooms and the fine dirt sweeping roll with compressed air.
 - » The strong air jet can damage the bristles.
1. Clean the plate brooms, the fine dirt sweeping roll and the drives with a wet cloth.
 2. Clean all plastic parts with a damp cloth.
 - » Keep the battery clean as a dirty battery can lead to battery leakage via the terminals over time.
 3. Clean the dust filter.

10. Decommissioning for Storage/ Safekeeping

10.1 Disassemble push bar



CAUTION

Risk of injury through tipping over of the push bar!

Tipping over of the push bar may lead to slight injuries, such as jamming of the finger or bruising in users or other persons.

- When carrying the device, hold it so that the push bar cannot tip over.

- » In order to save space, the push bar can be detached from the machine.

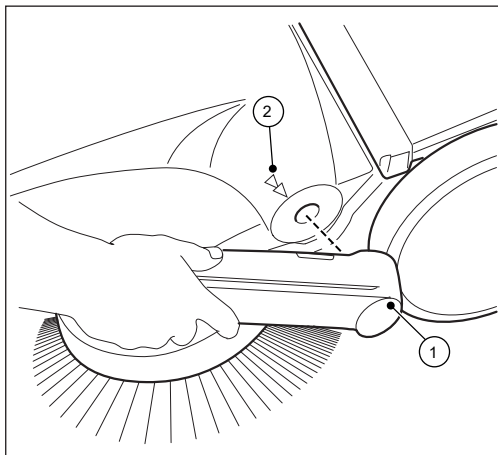


Fig. 22: Push bar disassembly

1. Align the respective arrows (2) on the housing with the bar of the handle fittings (1).
2. Position yourself between the push bar in front of the device.
3. Grip both handle fittings (1) with your hands and carefully push them out.
4. At the same time pull out the handle fittings from both receptacles of the device.

10.2 Disconnect battery leads

When the battery is stored for 2 months or more without being recharged the blue battery connection lead should be disconnected in order to prevent the battery from deep discharging.

EN In addition, if necessary, the battery should be disconnected during fault correction and removal of blockages. Protection from accidental starting of sweeping machine.

If the battery is to be stored for 6 months or more the battery must be fully charged in order to retain the performance of the battery. Information on the charging of the battery can be found in Chapter "6.3 Charging battery" of this operating manual.

- » Keep the battery clean as a dirty battery can lead to battery leakage via the terminals over time.

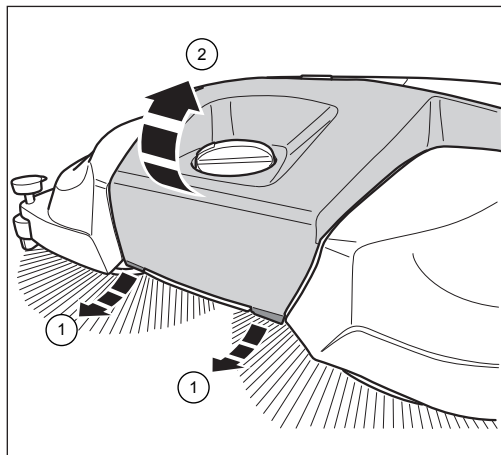


Fig. 23: Open the cover

1. Pull the two flaps (1) on the front underside of the cover (2) a short distance forwards.
2. Lift the cover (2)

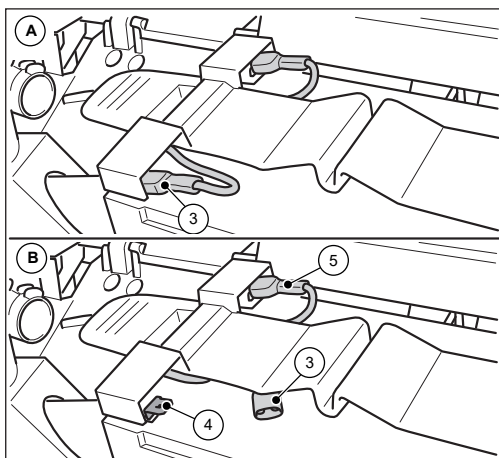


Fig. 24: Disconnect battery leads

3. Disconnect the blue battery lead (3) from the insertion flap (4) of the battery.
- » Ensure that external influences such as the movement of the device cannot cause the blue battery lead (3) to contact the insertion flap (4) (see Illustration 24 picture B).
- » The red battery lead (5) remains connected.
4. Close the cover (2) and lock it over the flaps (1).

10.3 Storage/Safekeeping

NOTE

Improper storage, e.g. storage of the device in a humid environment, can lead to damage to the sweeper.

- » Note the information contained in Chapter "10.2 Disconnect battery leads" of these operating instructions.
- Store the sweeping machine only in cleaned condition and with an emptied sweeping container.
- » Information on emptying the sweeping container can be found in Section "7.7 Empty sweeping container" and on cleaning in Section "9.5 Clean the device" of this operating manual.

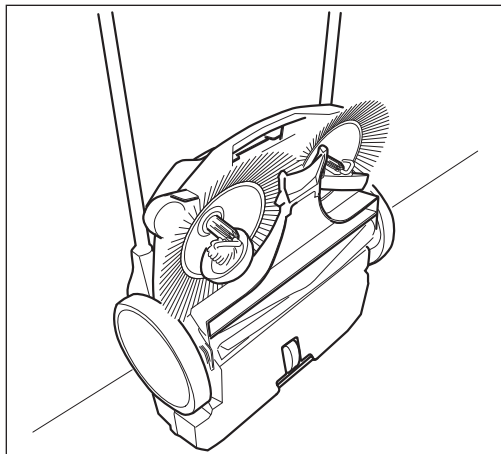


Fig. 25: Storage position

- Place the device in such a way that the bristles cannot be kinked or bent.
- Secure the device, including push bars, against tipping over, slipping and thus against damage.
- Do not store the device outdoors or in damp environments.

10.4 Disposal

- Dispose of the sweeping machine, the charger and the battery in an environmentally friendly manner in accordance with the applicable regional regulations.
- Dispose of the device and the battery separately.



11. REACH

REACH is the European Chemical Directive for the Registration, Evaluation, Authorisation and Restriction of Chemical substances.

Information regarding compliance with REACH directive (EU) Nr. 1907/2006 can be found at www.starmix.de

12. EU Declaration of Conformity

EU Declaration of Conformity in accordance with Machine Directive 2006/42/EC Annex II 1.A

Manufacturer:

Electrostar GmbH
Hans-Zinser-Str. 1-3
73061 Ebersbach/Fils
Germany

Authorised for the preparation of technical documents:

Electrostar GmbH
Hans-Zinser-Str. 1-3
73061 Ebersbach/Fils
Germany

Product:

Hand controlled, battery-operated sweeping machine haaga 677, haaga 697, haaga 697 plus

We hereby declare that the above-mentioned product complies with the provisions of machine directive 2006/42/EU. The above-mentioned product complies with the demands of the relevant directives:

- EMC Directive 2004/108/EU

The following harmonised standards were applied:

- EN ISO 12100:2010, Safety of machinery, general principles for design, risk assessment and risk reduction
- EN 60335-1:2012, Safety of electric devices for use at home and similar purposes - Part 1: General Requirements
- EN 60335-2-72:2014, Safety of electric devices for use at home and similar purposes - Part 2-72: Special requirements for floor treatment machines, with or without drive, for commercial use

- EN 55014-1:2006+A1:2009+A2:2011, Electromagnetic compatibility - Requirements for household appliances, electrical tools and similar apparatus - Part 1: Interference Emission (CISPR 14-1:2005 + A1: 2008 + Cor.: 2009 + A2:2011)
- EN 55014-2:1997+A1:2001+A2:2008, Electromagnetic compatibility - Requirements for household appliances, electrical tools and similar apparatus - Part 2: Immunity - Product family standard (IEC/CISPR 14-2:1997 + A1:2001 + A2:2008)
- EN 62233:2008-04, Measurement methods for electromagnetic fields of household appliances and similar apparatus with regard to human exposure.

Ebersbach, Datum 21.09.2020



Carsten Gresser
Head of Assurance