

KÄRCHER

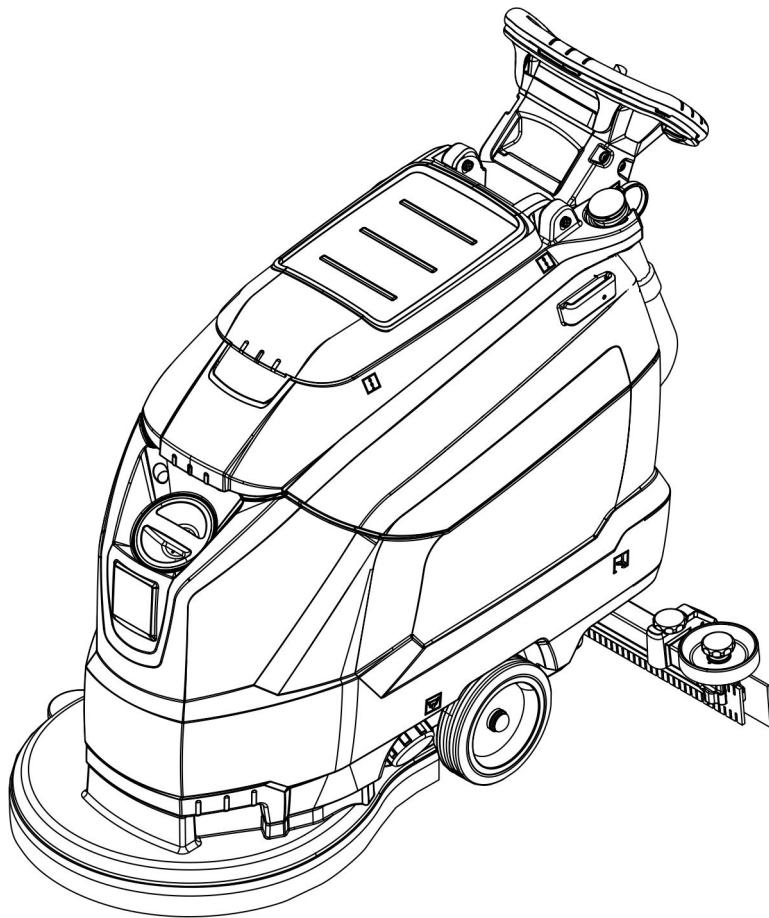
makes a difference

BD 50/50 Bp Classic

English
中文

3

11




Register and win!
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ERC



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 Please read and comply with these original instructions prior to the initial operation of your appliance and store them for later use or subsequent owners.

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Safety instructions

Before using the appliance for the first time, read and observe these operating instructions and the accompanying brochure: Safety information for brush cleaning units and spray-extraction units, No. 5.956-251.0.

The device may only be operated when the cover and all lids are closed.

The appliance must only be operated on surfaces that do not exceed the max. permitted incline (see "Technical Specifications").

WARNING

Do not use the appliance on inclines.

Safety Devices

Safety devices serve to protect the user and must not be rendered in operational or their functions bypassed.

Safety Switch

If the safety switch is released, the brush drive shuts off.

Danger or hazard levels

DANGER

For an immediate danger which can lead to severe injuries or death.

WARNING

For a possibly dangerous situation which could lead to severe injuries or death.

CAUTION

Pointer to a possibly dangerous situation, which can lead to minor injuries.

ATTENTION

Pointer to a possibly dangerous situation, which can lead to property damage.

Function

The scrubbing vacuum cleaner is used for the wet cleaning of level floors.

- The device can be easily adjusted to the respective cleaning task by adjusting the water volume and the detergent volume.

The detergent dosing unit can be adjusted via the addition in the tank.

- The device is equipped with a fresh water and a waste water tank (50 litres each). These allow an effective cleaning with a long usage life.

- A working distance of 500 mm will improve the efficiency when you are using the appliance for a long period.

- Propulsion is accomplished by manually pushing the appliance and is supported by the rotation of the brushes. The brush drive is powered by two batteries.

- The extendible transport chassis ensures easy transport runs.

- Batteries can be selected depending on the configuration (refer to Chapter "recommended batteries")

Note:

The appliance can be equipped with various accessories depending on the cleaning task.

Please request our catalogue or visit us on the Internet at www.kaercher.com.

Proper use

Use this appliance only as directed in these operating instructions.

- The appliance may only be used for the cleaning of hard surfaces that are not sensitive to moisture and polishing operations.

- The appliance is not suited for the cleaning of frozen grounds (e.g. in cold stores).

- The appliance may only be equipped with original accessories and spare parts.

- The appliance is not suited for the use in potentially explosive environments.

- The machine should not be used to suck in inflammable gases, undiluted acids or solvents.

This includes petrol, thinning agents or hot oil that can form an explosive mixture when it comes in contact with sucked air. Do not use acetone, undiluted acids and solvents as they are aggressive towards the materials from which the appliance is made.

- The machine has been approved for use on surfaces with max. gradients as listed under "Technical Specifications".

- This appliance is suited for the commercial use, e.g. in hotels, schools, hospitals, factories, shops, offices, and rental companies.

- The appliance was designed for the cleaning of floors inside or of covered surfaces.

Environmental protection



The packaging material can be recycled. Please do not throw the packaging material into household waste; please send it for recycling.



Old appliances contain valuable recyclable materials that should be recycled properly. Batteries, oil, and similar substances must not be released into the environment. Please dispose of your old appliances using appropriate collection systems.

Electrical and electronic devices often contain components which could potentially pose a danger to human health and the environment if handled or disposed of incorrectly. However, these components are necessary for the proper operation of the device. Devices marked with this symbol must not be disposed of with regular household rubbish.

Information on ingredients (REACH)

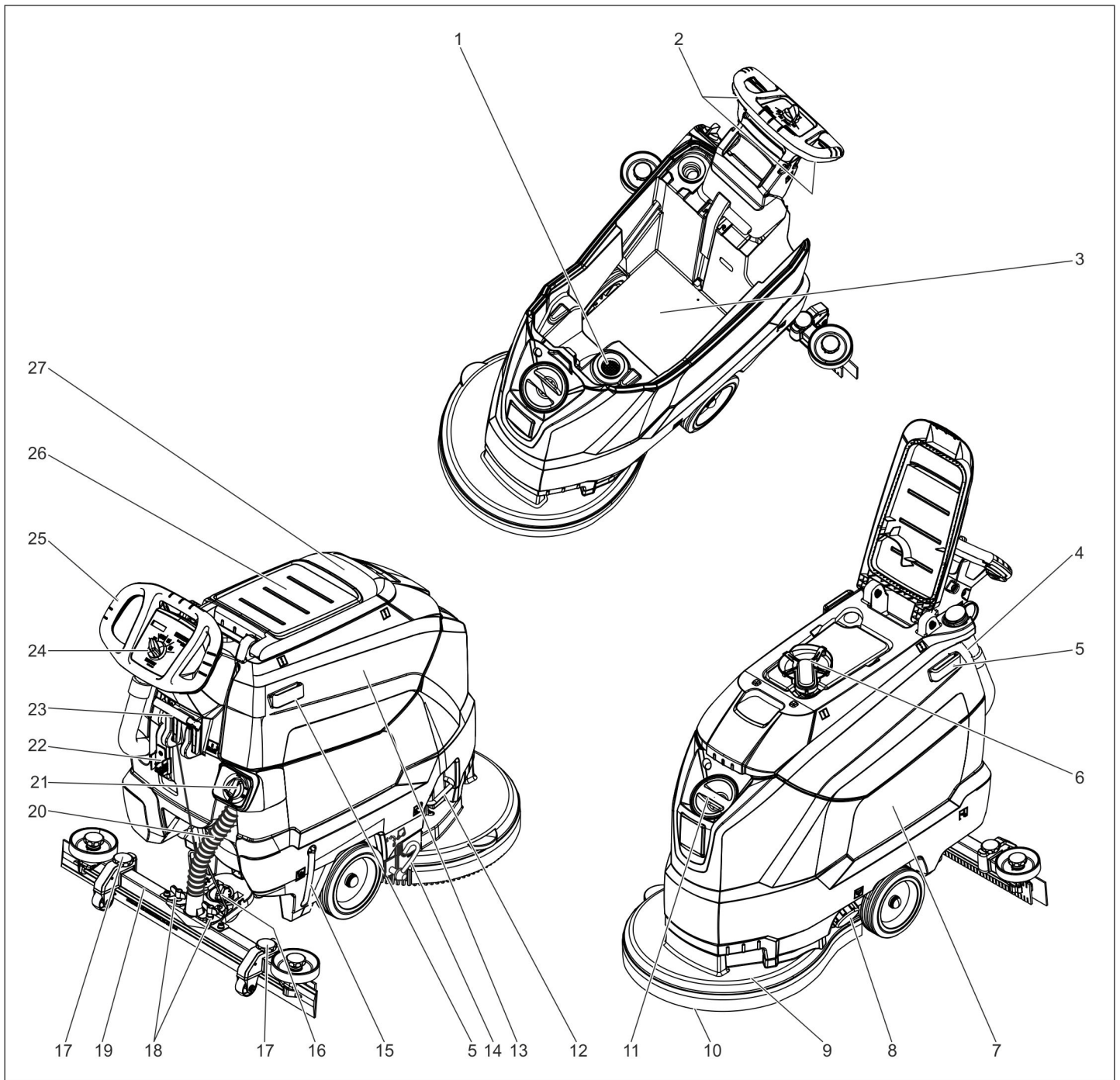
The latest information on ingredients can be found under:

www.kaercher.de/REACH

Warranty

The warranty terms published by our competent sales company are applicable in each country. We will repair potential failures of your accessory within the warranty period free of charge, provided that such failure is caused by faulty material or defects in fabrication. In the event of a warranty claim please contact your dealer or the nearest authorized Customer Service center. Please submit the proof of purchase.

Operating and Functional Elements



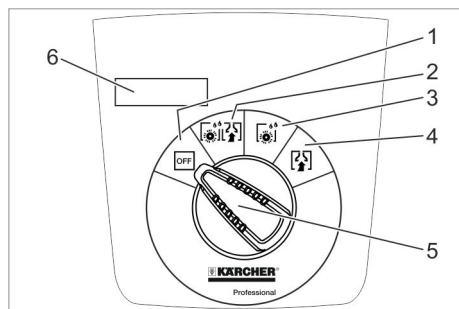
- | | |
|--|---|
| 1 Fluff filter | 20 Suction hose |
| 2 Safety button | 21 Water quantity regulator |
| 3 Battery * | 22 Battery socket |
| 4 Drain hose for wastewater with dosing unit | 23 Vacuum bar lowering lever |
| 5 Holding rail for home base | 24 Operator console |
| 6 Float | 25 Push handle |
| 7 Fresh water tank | 26 Storage surface for cleaning set "Home base box" |
| 8 Fresh water tank lock | 27 Cover waste water tank |
| 9 Cleaning head | |
| 10 Disc brush | |
| 11 Fresh water reservoir filler neck | |
| 12 Bow brush change | |
| 13 Waste water tank | |
| 14 Pedal transport chassis | |
| 15 Fresh water level display | |
| 16 Rotary handle to incline the vacuum bar | |
| 17 Height adjustment of suction bar * | |
| 18 Wing nuts for fastening the vacuum bar | |
| 19 Vacuum bar * | |

* not included in the delivery

Colour coding

- The operating elements for the cleaning process are yellow.
- The controls for the maintenance and service are light gray.

Operator console



- 1 OFF**
Device is switched off
- 2 Normal mode**
Wet clean the floor and vacuum up dirt water.
- 3 Intense mode**
Wet clean the floor and allow the detergent to react.
- 4 Vacuum mode**
Suck in the dirt fleet.
- 5 Program selection switch**
- 6 Display**

Symbols on the machine

	Battery socket
	Lashing point
	Mop holder **
	Filling level fresh water tank 25%
	Bow brush change
	Vacuum bar lowering lever
	Pedal transport chassis
	Drain outlet fresh water tank
	Dirt water discharge hose

** option

Before Startup

Unloading

- ➔ Unscrew the screws from the middle board of the pallet.
- ➔ Push down the device holding the push handle and pull out the middle board.

- ➔ Remove the chocks in front of and next to the wheels.
- ➔ Push down the device holding the push handle and push it forwards up to the edge of the pallet.
- ➔ Lift the device off the pallet and set it on the floor.

Install batteries

Install the batteries (see "Care and Maintenance/Install and connect batteries").

Using batteries made by other manufacturers

We recommend using our batteries as described in chapter "Care and Maintenance/Recommended batteries".

Charging battery

Note:

The device is equipped with a safety mechanism to prevent total discharge, i.e. when the permissible minimum capacity is reached, the brush motor and the turbine are switched off.

- ➔ Drive the machine directly to the charging station; avoid any steep gradients in the process.

⚠ DANGER

Danger of injury due to electric shock. Observe the mains voltage and fuse protection on the type plate of the device.

Charging process

Average charging time is approx. 10 -15 hours.

The appliance must not be used during the charging process.

⚠ DANGER

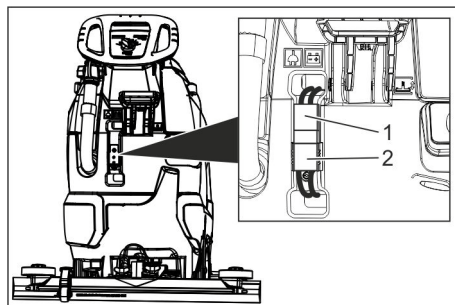
Danger of explosion

*Prior to **charging low-maintenance batteries***

Remove waste water tank (see Chapter "Maintenance and care/Maintenance tasks/Removing the waste water tank"). This prevents the accumulation of hazardous gases underneath the tank during the charging process.

ATTENTION

Risk of damage. Do not clean the device with water while the tank is removed.



- 1 Battery plug, appliance side
- 2 Battery plug, battery side

- ➔ Detach the battery plug on the unit side.

ATTENTION

Risk of damage!

- Do **not** connect the charger with the battery plug on the unit side.
- Only use a charger that is suitable for the installed battery type:

Battery type	Charger
6.654-141.0	6.654-333.0
6.654-093.0	6.654-329.0
6.654-290.0	6.654-332.0

Note: Please read the operating instructions of the charger manufacturer, especially the chapters on safety instructions!

- ➔ Connect the battery plug on the battery side with the charger.
- ➔ Plug the mains plug of the charger into a power outlet.
- ➔ Execute the charging process according to the information in the operating instructions of the charger.
- ➔ Connect the battery plug on the device side with the battery plug on the battery side.

Low maintenance batteries (wet batteries)

⚠ WARNING

Danger of causticization!

- Adding water to the battery in its discharged state can cause the acid to leak.
- Use safety glasses while handling battery acid and follow the safety instructions to avoid personal injury or damage to clothes.
- Should the acid spray on to the skin or clothes, rinse immediately with lots of water.

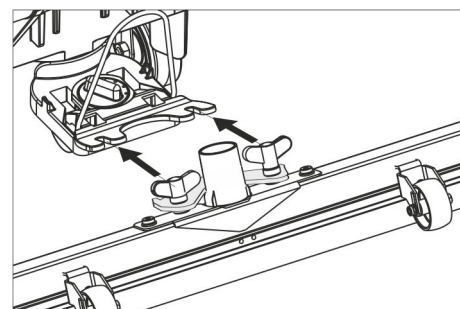
ATTENTION

Risk of damage!

- Use only distilled or desalinated water (EN 50272-T3) for filling the battery.
- Do not add any substances (so-called performance improving agents), else warranty claims will not be entertained.
- Replace batteries with the same battery type only.

Installing the Vacuum Bar

- ➔ Insert the vacuum bar into the vacuum bar suspension in such a manner that the profiled sheet is positioned above the suspension.
- ➔ Tighten the wing nuts.



- ➔ Insert the suction hose.

Operation

⚠ DANGER

Risk of injury!

In dangerous situations, release the safety switch/drive lever.

Filling in detergents

Fresh water

- Open the lock of the fresh water reservoir.
- Fill fresh water (maximum 60 °C) until the lower edge of the filling nozzle.
- Close the lock of the fresh water reservoir.

Detergent

⚠ WARNING

Risk of damage. Only use the recommended detergents. With other detergents, the operator bears the increased risk regarding the operational safety and danger of accident.

Only use detergents that are free from solvents, hydrochloric acid and hydrofluoric acid.

Follow the safety instructions for using detergents.

Note:

Do not use highly foaming detergents.

Recommended detergents:

Application	Detergent
Routine cleaning of all water resistant floors	RM 746 RM 780
Routine cleaning of glossy surfaces (e.g. granite)	RM 755 es
Routine cleaning and basic cleaning of industrial floors	RM 69 ASF
Routine cleaning and basic cleaning of fine stoneware tiles	RM 753
Routine cleaning of tiles in sanitary areas	RM 751
Cleaning and disinfection in sanitary areas	RM 732
Removal of coating from all alkali-resistant floors (e.g. PVC)	RM 752
Removal of coating from linoleum floors	RM 754

- Add the detergent to the fresh water reservoir.

Note:

If the fresh water tank is empty, the cleaning head continues working without liquid supply.

Setting the water quantity

- Adjust the water quantity using the regulating button according to the dirt on the floor covering.

Note:

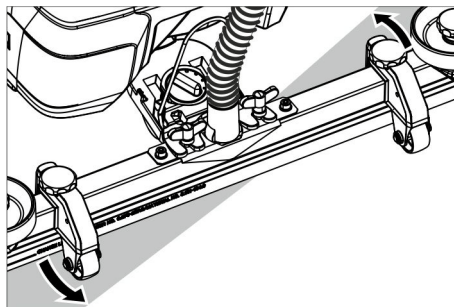
Carry out initial cleaning attempts with low water volume. Increase water volume step-by-step until the desired cleaning result is achieved.

Setting the Vacuum Bar

Oblique position

To improve the vacuuming result on tiled floors the vacuum bar can be turned to an oblique position of up to 5°.

- Loosen the wing nuts.
- Turn the vacuum bar.



- Tighten the wing screws.

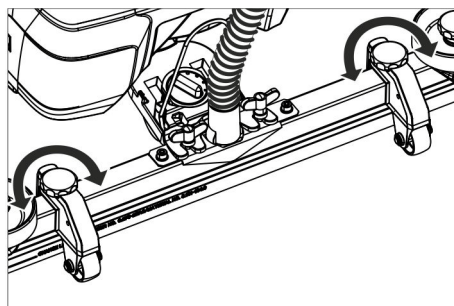
Inclination

If the vacuum result is unsatisfactory the inclination of the straight vacuum bar can be modified.

- Adjust the rotary handle to incline the suction bar.

Height

The bend of the suction lips upon contact with the floor is influenced with the height adjustment.

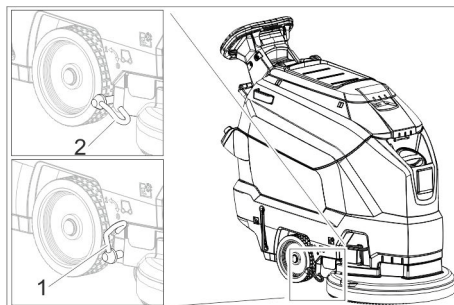


- Try adjusting the twist handles of the height adjustment until the best vacuuming result is achieved.

Transport chassis

The transport chassis lifts the cleaning head off the floor.

Transport runs are performed with the cleaning head raised or dirt is vacuumed up.



- 1 Transport chassis pedal in transport position
- 2 Transport chassis pedal in cleaning position

- Using your foot, move the transport chassis pedal to the required position.

Cleaning

ATTENTION

Risk of damage to the floor covering. Do not operate the appliance on the spot.

- Swivel the transport chassis to the cleaning position.
- Turn the program selection switch to the desired cleaning program.

Lower the vacuum bar

- Pull the lever out and press it down; the vacuum bar is lowered.

Note:

- For cleaning tiled floors, adjust the straight suction bar in such a way that cleaning is not done at an angle of 90 degrees to the joints.
- The inclined position and the inclination of the suction bar can be adjusted to achieve better suction results (see "Adjusting the suction bar").
- If the waste water tank is full, the float closes the suction opening and the suction turbine runs at an increased speed. If this is the case, shut the vacuum off and drive to empty the waste water tank.

Shutting Down the Appliance

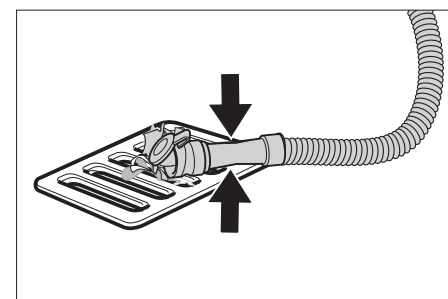
- Release the safety switch.
- Set the program selection switch to suction or vacuuming.
- Briefly drive forward and suck of the remaining water.
- Raise the vacuum bar.
- Swivel the transport chassis to the transport position.
- Charge battery, if required.

Drain off dirt water

⚠ WARNING

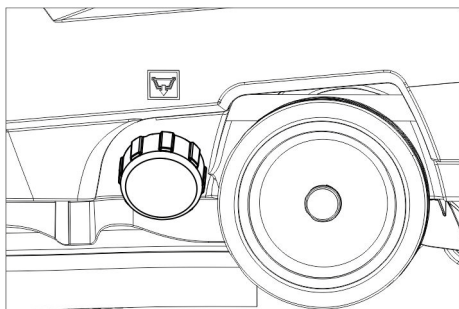
Please observe the local provisions regarding the wastewater treatment.

- Take the water discharge hose from the support and lower above a suited collection device.



- Crush or bend the dosing equipment.
- Open the lid of the dosing equipment.
- Drain off the dirt water - regulate the water quantity by pressing or bending.
- Rinse the waste water tank with clear water.

Drain off clean water



- Unscrew the lock of the fresh water reservoir.

Transport

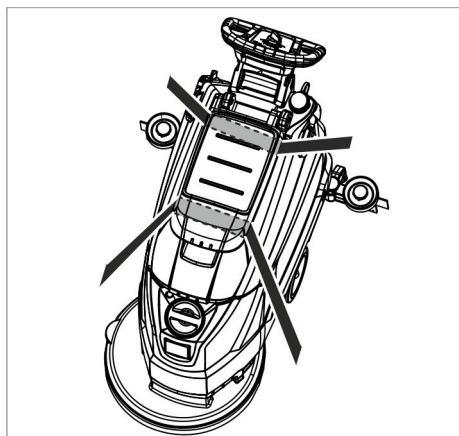
⚠ DANGER

Risk of injury! When loading or unloading the machine, it may only be operated on gradients up to the maximum value (see "Technical Specifications"). Drive slowly.

⚠ CAUTION

Risk of personal injury or damage! Mind the weight of the appliance during transport.

- Press down and push the device using the push handle.



- When transporting in vehicles, secure the appliance according to the guidelines from slipping and tipping over.

Storage

⚠ CAUTION

Risk of personal injury or damage! Consider the weight of the appliance when storing it.

This appliance must only be stored in interior rooms.

Care and maintenance

⚠ DANGER

Risk of injury! Set the programme selector switch to "OFF" and pull the mains plug of the charger prior to performing any work on the appliance.

Remove the battery plug from machine.

- Drain and dispose of the dirt water and the residual fresh water.

Maintenance schedule

After each operation

ATTENTION

Risk of damage. Do not sluice the appliance with water and do not use aggressive detergents.

- Drain off dirt water.
- Rinse the waste water tank with clear water.
- Clean the outside of the appliance with a damp cloth which has been soaked in mild detergent.
- Check the fluff filter, clean if required.
- Clean the vacuum lips and the wiping lips, check for wear and replace if required.
- Check the brush for wear and replace if required (see "Maintenance tasks").
- Charge the battery:
If the charging state of the battery is under 50%, charge the battery fully and without interruption.
If the charging state of the battery is over 50%, only recharge the battery if the entire operation duration will be required when next used.

Weekly

- When used regularly, charge the battery fully and without interruption at least once a week.

Monthly

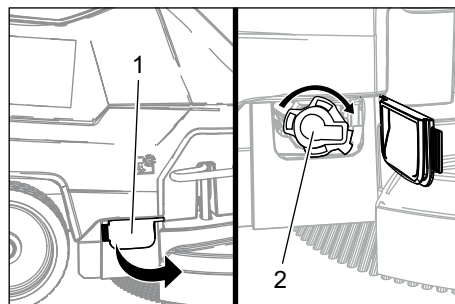
- Check battery poles for oxidation, brush off if necessary. Ensure that the connection cable sits firmly.
- Clean the seals between waste water tank and cover and check for tightness, replace if required.
- Clean sieve.
- Check the acid density of the cells if the batteries are not maintenance-free batteries.
- For long periods of disuse, only turn the device off when the battery is fully charged. Fully recharge the battery at least every month.

Yearly

- Have the prescribed inspection carried out by the customer service.

Maintenance Works

Cleaning the sieve

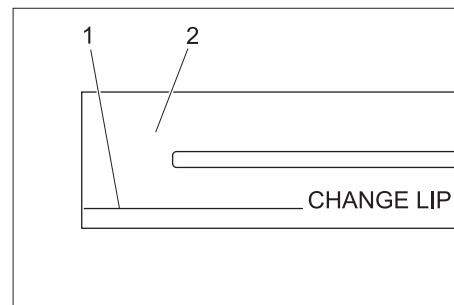


- 1 Cover
- 2 Cover

- Open the cover.
- Turn cover the clockwise and remove it.

- Remove and clean the sieve lying beneath it.
- Insert the sieve.
- Replace the cover and lock it by turning it anti-clockwise.
- Close cover.

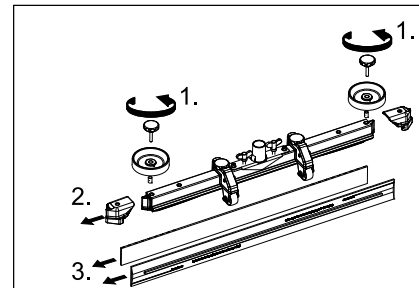
Replace or turn vacuum lips



- 1 Wear indicator
- 2 Vacuum lip

The vacuum lips must be replaced or reversed if they are worn down to the wear indicator.

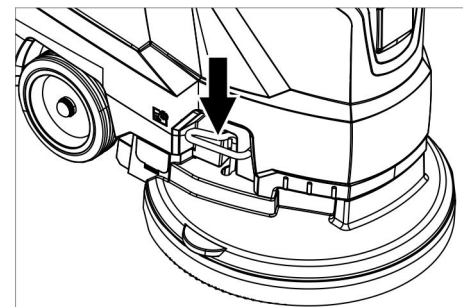
- Remove the vacuum bar.
- Unscrew the star grips.



- Remove the plastic parts.
- Remove the vacuum lips.
- Insert new or reversed vacuum lips.
- Insert the plastic parts.
- Screw in and tighten the star grips.

Replacing the disk brushes

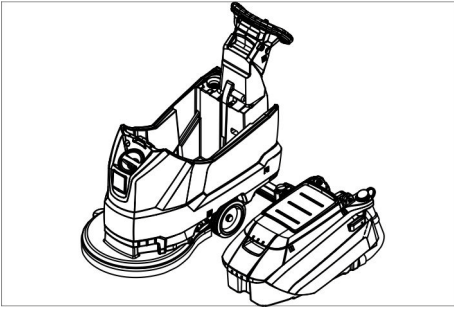
- Push down the device holding the push handle so that the cleaning head is raised.
- Press the pedal for changing the brushes downward beyond its resistance.



- Pull the device towards the back so that the disc brush becomes accessible.
- Place a new disc brush on the floor in front of the device.
- Drive the device with the raised cleaning head over the new disc brush and lower the cleaning head. The brush locks into the drive.

Removing the waste water tank

- Drain off dirt water.



- Lift up the waste water tank and put it aside.

Batteries

Please observe the following warning notes when handling batteries:

	Observe the directions on the battery, in the instructions for use and in the vehicle operating instructions
	Wear eye protection
	Keep children away from acid and batteries
	Danger of explosion
	Fire, sparks, naked flames and smoking must be strictly avoided
	Danger of chemical burns
	First aid
	Warning note
	Disposal
	Do not throw the battery into the regular waste

⚠ DANGER

Risk of explosion. Do not place tools or the like on the battery, i.e. on the terminal poles and cell connectors.

Risk of injury. Ensure that wounds never come into contact with lead. Always clean your hands after having worked with batteries.

Recommended batteries

	Order No.	Volume [m ³]*	Air flow [m ³ /h]**
105 Ah - maintenance-free	6.654-141.0 ¹⁾	2.64	1.06
76 Ah - maintenance-free	6.654-093.0 ²⁾	1.82	0.73
80 Ah, - low maintenance	6.654-290.0 ³⁾	6.60	2.64

* Minimum volume of the battery charging room

** Minimum air flow between the battery charging room and the surroundings

The device requires 2 batteries

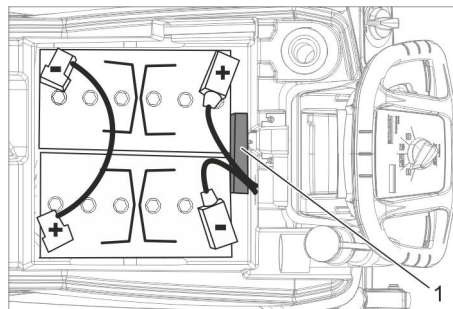
¹⁾ Complete set (24 V/105 Ah) incl. connecting cable, order no. 4.035-449.0

²⁾ Complete set (24 V/76 Ah) incl. connecting cable, order no. 4.035-447.0

³⁾ Complete set (24 V/80 Ah) incl. connecting cable, order no. 4.035-990.0

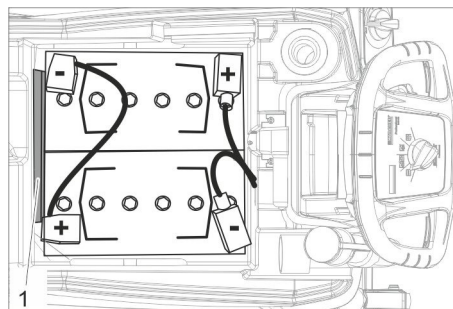
Insert batteries and connect

- Drain off dirt water.
- Lift up the waste water tank and put it aside.
- Pull out the battery plug.



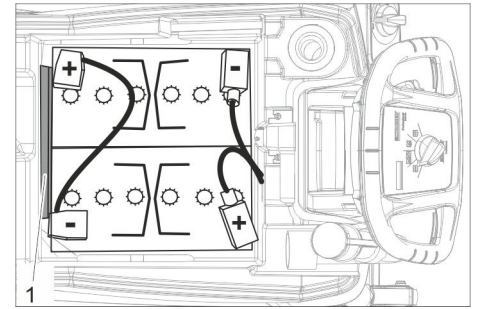
Battery 6.654-141.0

- 1 Spacer



Battery 6.654-093.0

- 1 Spacer



Battery 6.654-290.0

- 1 Spacer

- Insert the battery into the device as shown above.
- Insert the spacer between the battery and the device on the side indicated in the illustration.

⚠ CAUTION

When the batteries are installed and removed, the stability of the appliance can be compromised; ensure a safe stance.

- Connect pole using the enclosed connecting cable.
- Connect the connection cable to the free battery poles (+) and (-).

ATTENTION

If the polarity is reversed (positive and negative terminals), the control electronics are destroyed.

Pay attention to correct poles.

- Place the waste water tank on the appliance.

Note:

Charge the batteries before commissioning the appliance.

See also "Charging the batteries".

Removing the batteries

- Set the programme selector switch to "OFF".
- Pull out the battery plug.
- Lift up the waste water tank and put it aside.
- Clamp off the minus pole of the battery.
- Clamp off the remaining cables from the battery.
- Remove the support blocks or the foam pieces.

⚠ CAUTION

When the batteries are installed and removed, the stability of the appliance can be compromised; ensure a safe stance.

- Remove the batteries.
- Dispose of the used batteries according to the local provisions.

Maintenance contract

To ensure a reliable operation of the appliance maintenance contracts can be concluded with the competent Kärcher sales office.

Frost protection

In case of danger of frost:

- Empty the fresh and waste water tank.
- Store the appliance in a frost-protected room.

Faults

⚠ **DANGER**

Risk of injury! Set the programme selector switch to "OFF" and pull the mains plug of the charger prior to performing any work on the appliance.

Remove the battery plug from machine.

➔ Drain and dispose of the dirt water and the residual fresh water.

Faults with display

Display	Correction
ERR B	Check if foreign objects block the brush; remove foreign object if required.
ERR T	Clean the float, if necessary call customer service.
LOW BAT	Charging battery
ERR TEMP	Allow device to cool down.
HandsOff	Release the safety switch and wait until the operating hours or the battery status are displayed. Then operate the safety switch again.
ERR REL	Set the programme selector switch to "OFF", release the safety switch, wait for 3 seconds, restart. If the event recurs, call Customer Service.
ERR PWM	Call customer service.

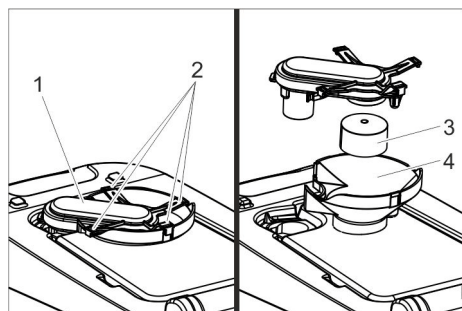
Faults without display on the console

Failure	Correction
Appliance cannot be started	Turn the program selection switch to the desired programme.
	Operate the safety switch.
	Insert battery plug.
	Check battery; charge it if required.
	Make sure that all battery terminals are connected.
Insufficient water quantity	Check fresh water level, refill tank if necessary.
	Increase the water volume on the regulating knob for water volume.
	Clean sieve.
Insufficient vacuum performance	Clean the seals between waste water tank and cover and check for tightness, replace if required.
	Wastewater reservoir is full; shut off the appliance and empty the wastewater reservoir
	Clean the fluff filter.
	Clean the vacuum lips on the vacuum bar, replace if required
	Check if the cover on the dirt water discharge hose is closed
	Check the setting of the vacuum bar.
	Check suction hose for blockages; clean if required.
Check the suction hose for tightness; replace if required.	
Insufficient cleaning result	Check the brushes for wear, replace if required.
Suction turbine is running rough	Clean the swimmer.
Brush does not turn	Check if foreign objects block the brush; remove foreign object if required.
	If over-current switch in the electronics system has been triggered, turn programme selection switch to "OFF". Afterwards, set it back to the desired programme.
Vibrations during cleaning	You might need to use a softer brush.

In case of faults that cannot be remedied using the table below please contact the customer service.

Cleaning the floater

➔ Open the cover of the waste water tank.



- 1 Swimmer casing
- 2 Lock hook
- 3 Float

4 Lower part

- ➔ Pull out the float casing towards the top.
- ➔ Detach locking hooks.
- ➔ Clean float and bottom part.
- ➔ Assemble the float casing and insert it into the device.

Accessories

Description	Part no.:	Description
Disk brush, red (medium, standard)	4.905-026.0	For the use with all common cleaning tasks.
Disk brush, natural (white)	4.905-027.0	Made of natural fibres for spot cleaning and polishing.
Disk brush, black (hard)	4.905-029.0	For heavy soiling and for deep cleaning. For robust floorings only.
Driver plate pad	4.762-534.0	For cleaning with pads. With quick change coupling and center lock.
Pad, red (medium soft)	6.369-079.0	For cleaning and cleaning of all floors.
Pad, green (medium hard)	6.369-078.0	For cleaning heavily soiled floors and for deep cleaning.
Pad, black (hard)	6.369-077.0	With stubborn soiling and for deep cleaning.
Pad, beige (light grain)	6.369-468.0	For polishing and refreshing of hard and flexible floorings.
Pad, beige (natural hair proportion)	6.371-146.0	
Suction bar, 850 mm, straight	4.777-086.0	
	4.777-401.0	
Suction bar, 850 mm, bent	4.777-411.0	
Set homebase box	4.035-406.0	

Technical specifications

Power		
Nominal voltage	V	24
Battery capacity	Ah (5h)	105/80/ 76
Average power consumption	W	1100
Rated power suction turbine	W	500
Rated power brush drive	W	600
Vacuuming		
Vacuum power, air volume (max.)	l/s	24
Vacuuming power, negative pressure (max.)	kPa (mbar)	120
Cleaning brushes		
Brush speed	1/min	155
Brush diameter	mm	510
Dimensions and weights		
Theoretical surface cleaning performance	m ² /h	2000
Max. working range incline	%	2
Fresh/waste water tank volume	l	50/50
Max. water temperature	°C	60
Ambient temperature	°C	5...40
Net weight (transport weight)	kg	139/ 118.8/ 117.5
Total weight (ready to operate)	kg	189/ 168.5/ 167
Dimensions of battery compartment	mm	350 x 350
Values determined as per EN 60335-2-72		
Total oscillation value	m/s ²	<2.5
Uncertainty K	m/s ²	0.2
Sound pressure level L _{pA}	dB(A)	66
Uncertainty K _{pA}	dB(A)	2
Sound power level L _{WA} + Uncertainty K _{WA}	dB(A)	81

Spare parts

Only use original accessories and spare parts, they ensure the safe and trouble-free operation of the device.

For information about accessories and spare parts, please visit www.kaercher.com.



在您第一次使用您的设备前，请先阅读并遵守本操作说明书原件，为日后使用或其他所有者使用方便请妥善保管本说明书。

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安全说明

请您在首次使用本设备前阅读并注意本操作说明书以及随附的针对刷式清洁设备和喷雾提取设备的安全提示手册（编号：5. 956-251.0），然后按其操作。

只有在保护罩和所有盖板均已关闭时，才能运行设备。

只能在斜度未超过允许最大斜度的平面上运行设备，参见段落“技术数据”。

警告

不得在斜面上使用设备。

安全装置

安全装置用于保护使用者，不得停止运行或不让其发挥功能。

安全开关

如果放开安全开关，则刷子驱动器关闭。

危险等级

危险

针对会导致人员重伤或死亡的直接威胁性危险。

警告

针对可能导致人员重伤或死亡的危险状况。

小心

提示可能导致轻度伤害的危险状况。

注意

提示可能产生财产损失的危险状况。

功能

本磨边清洗机用于对平整地面进行湿式清洁。

- 本设备可通过调节水量和清洁剂量轻松应对各种清洁任务。
可通过将清洁剂添加到储罐中对其进行计量。
- 本设备具有一个净水箱和一个污水箱（各 50 升）。这种设计可在较长的使用期限内确保有效的清洁。
- 500 mm 的工作宽度，可在较长的使用期限内确保一个较高的工作效率。
- 通过用手推动向前推进，在此期间，刷子的转动会起到辅助作用。利用两块电池为刷子驱动装置供电。
- 可伸出的运输行走机构可保证毫不费力地运输行驶。
- 根据配置情况，可选择不同的电池（在此参见章节“建议的电池”）

提示：

根据清洁任务的不同，设备可装配不同的附件。

请查阅我们的附件目录或访问我们的网站 www.kaercher.com。

合乎规定的使用

请只根据本操作说明书中的说明使用本设备。

- 本设备只能被用于清洁对湿度和摩擦不敏感的光滑地面。
- 本设备不适用于清洁冰冻地面（例如在冷冻房内）。
- 本设备只允许配置原配附件和备件。
- 本设备不适合用在有爆炸危险的环境中。
- 不能使用本设备吸收可燃性气体、未稀释的酸或溶剂。
其中包含汽油、颜料稀释剂或燃料油，因为在涡流的作用下，这些物质会与抽吸空气构成易爆的混合物。此外还包含丙酮、未稀释的酸和溶剂，因为它们会侵蚀设备中所使用的材料。
- 只允许在斜度未超过允许最大值的平面上运行本设备，在此请参见段落“技术数据”。
- 本设备适于在交易场所内使用，如饭店，学校，译员，工厂，商店，办公室和房屋出租处等。
- 该设备开发用于清洁室内无缝、非结构化地面及屋顶表面。

环境保护



包装材料可以回收利用。请不要把包装材料与普通垃圾放在一起处理，而应妥善安排回收。



旧的设备中含有宝贵的可再利用的材料，应加以利用。电池、油以及类似物质不得排放到环境中。请通过适当的收集系统清理旧设备。

电气和电子设备通常包含使用不当或错误处理时可能对人身健康和环境带来潜在危险的组成部分。然而这些组成部分是设备正常运行所必需的。使用该符号标记的设备不得与生活垃圾一起处理。

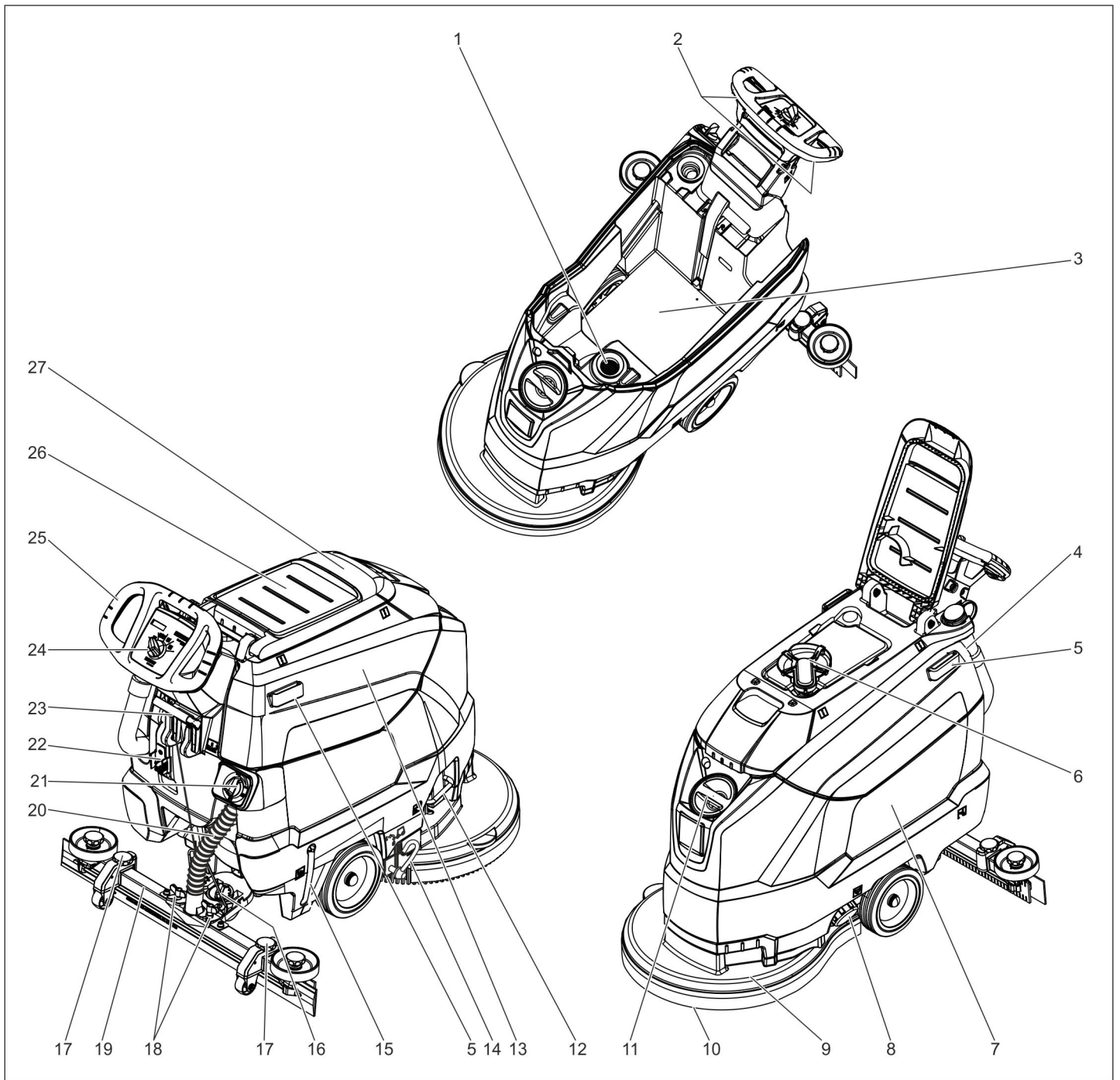
内部材料提示 (REACH)

最新的内部材料信息请您在如下链接中查找：

www.kaercher.de/REACH

质量保证

我们的主管销售公司所发布的质量保证条件每个国家均适用。在质量保证期内，您的附件一旦发生意外故障，只要是材料或制造缺陷，我们都将免费排除。如属质量保证情况，请凭发票联系贵方经销商或就近联系获得授权的客户服务点。



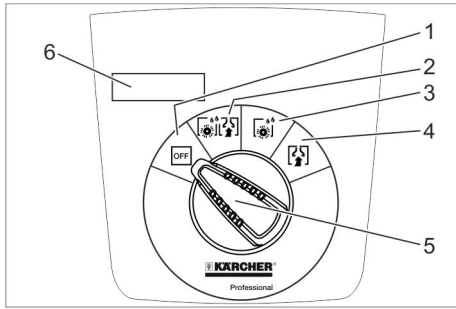
- | | |
|--------------------|-------------------------------|
| 1 毛绒过滤器 | 21 水量调节旋钮 |
| 2 安全开关 | 22 电池插头 |
| 3 电池 * | 23 吸尘架下降杆 |
| 4 带有计量装置的污水排放软管 | 24 操作台 |
| 5 用于 Homebase 的固定轨 | 25 推杆 |
| 6 浮子 | 26 用于清洁套装 “Homebase Box” 的放置面 |
| 7 新鲜水箱 | 27 污水箱盖子 |
| 8 净水箱的盖子 | |
| 9 清洁头 | |
| 10 盘刷 | |
| 11 净水箱加水口 | |
| 12 更换刷子用夹板 | |
| 13 污水箱 | |
| 14 运输行走机构脚踏 | |
| 15 新水液位指示 | |
| 16 用于倾斜吸尘架的转动手柄 | |
| 17 吸尘架高度调整机构 * | |
| 18 用于固定吸尘架的翼形螺母 | |
| 19 吸尘架 * | |
| 20 抽吸软管 | |

* 不属于供货范围

颜色标识

- 用于清洗过程的操作元件为黄色。
- 用于保养和服务的操作元件为浅灰色。

操作台



- 1 OFF
设备已关闭。
- 2 标准模式
在潮湿情况下清洁地板并吸走污水。
- 3 密集模式
在潮湿情况下清洁地板并使清洁剂发挥作用。
- 4 抽吸模式
吸走脏污液体。
- 5 程序选择开关
- 6 显示屏

设备上的符号

	电池插头
	捆绑点
	拖把固定架 **
	净水箱液位 25%
	更换刷子用夹板
	吸尘架下降杆
	运输行走机构脚踏
	净水箱排放口
	污水排水软管

** 选配

设备运作前

卸货

- 将螺栓从货架的中间板上旋出。
- 下压设备的推杆，并拔出中间板。
- 移除轮子前方和侧面的滑动块。
- 下压设备的推杆，并将其向前推动至货架的边缘。
- 将设备从托架上提起，然后放在地板上。

安装电池

安装电池（参见“保养和维护 / 电池的安裝和连接”）。

使用其他制造商的电池

我们建议使用我们在章节“保养和维护 / 建议的电池”中列出的电池。

电池充电

提示：

本设备具有一个深放电保护装置，也就是说，尚允许达到最低限度的电量，再关闭刷子电机和涡轮机。

→ 设备直接驶至充电站，同时避免坡度。

△ 危险

电击人身伤害危险。注意设备型号铭牌上的电源电压和保险丝说明。

充电过程

充电时间平均约为 10-15 小时。

充电期间，不可使用本设备。

△ 危险

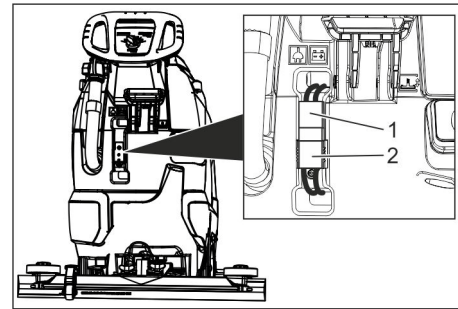
爆炸危险

易维护型电池充电之前

拆除污水箱（参见章节“维护和保养 / 维护工作 / 拆除污水箱”）。这样可以避免充电期间在水箱下方积聚危险气体。

注意

有损坏危险。拆除水箱时，不要用水清洁设备。



- 1 电池插头，设备侧
- 2 电池插头，电池侧

→ 拔出设备侧电池插头。

注意

有损坏危险！

→ 不要将充电器与设备侧的电池插头相连。

→ 只能使用与所安装电池型号相匹配的充电器：

电池型号	充电器
6. 654-141.0	6. 654-333.0
6. 654-093.0	6. 654-329.0
6. 654-290.0	6. 654-332.0

提示：阅读充电器制造商的操作说明书，并特别注意安全提示！

→ 将电池侧电池插头与充电器相连。

→ 将充电器的电源插头插在插座中。

→ 根据充电器操作说明书中的说明进行充电。

→ 将设备侧电池插头与电池侧电池插头相连。

低维护型电池（湿式电池）

△ 警告

侵蚀危险！

→ 如果在电池放电状态下补充加水，则可能会导致酸液泄漏。

→ 在处理电池酸液时戴上防护眼镜并注意各项规范，以免受伤和损坏衣服。

→ 一旦酸液溅到皮肤上，则立即用大量水冲洗掉。

注意

有损坏危险！

→ 在给电池补充加水时，只能使用蒸馏水或去离子水（EN 50272-T3）。

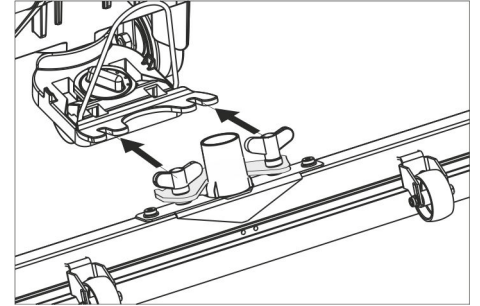
→ 不要使用外部添加剂（即所谓的改进剂），否则将取消各项质量保证。

→ 更换电池时，只能使用相同的型号。

装配吸尘架

→ 将吸尘架放到吸尘架悬挂装置中时，应使钢板位于悬挂装置上。

→ 拧紧翼形螺母。



→ 插上抽吸软管。

设备运作

△ 危险

存在受伤危险！

出现危险情况时松开安全开关 / 操纵杆。

加入工作材料

新鲜水

→ 打开净水箱的盖子。

→ 加注新鲜水（最大 60 °C）至加注套管的下边缘。

→ 关闭净水箱的盖子。

洗涤剂

△ 警告

有损坏危险。只使用建议的清洁剂。如使用其它清洁剂，设备所有人在工作安全和事故危险方面将承担更高的风险。

只使用不含溶剂、盐酸和氢氟酸的清洁剂。注意关于洗涤剂的安全提示。

提示：

不要使用产生大量泡沫的清洁剂。

推荐的清洁剂：

应用	洗涤剂
所有耐水地板的日常清洁	RM 746 RM 780
光亮表面（例如花岗岩）的日常清洁	RM 755 es
工业地面的保养清洁和初步清洁	RM 69 ASF
炻质砖的日常清洁和彻底清洁	RM 753
在卫生范围内瓷砖的保养清洁	RM 751
卫生领域内的清洁和消毒	RM 732
全部耐碱性地板去膜（例如：PVC）	RM 752
油毡地板去膜	RM 754

→ 将清洁剂添加到净水箱中。

提示：

净水箱变空时，清洁头会在没有液体供应的情况下继续工作。

调节水量

→ 根据地板铺层的污染程度，通过调节按钮调节水量。

提示：

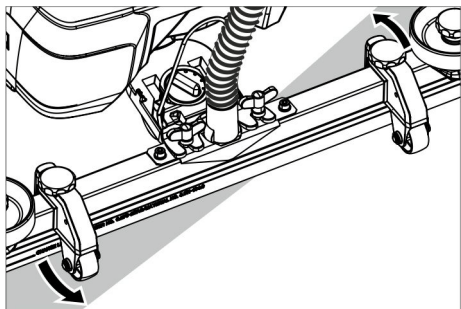
使用低水量尝试进行第一次清洁。逐步增加水量，直至达到所需的清洁效果。

调节吸尘架

倾斜位置

为了改进地砖地面的吸尘效果，最大可将吸尘架转动到 5° 的倾斜位置。

- 松开翼型螺栓。
- 转动吸尘架。



- 拧紧翼型螺栓。

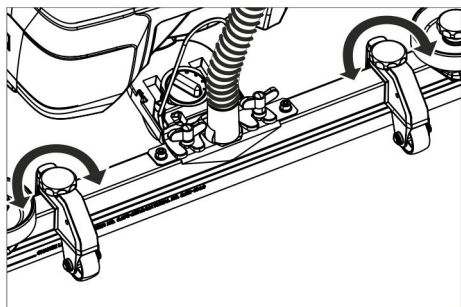
倾斜度

如果抽吸效果不够，则可以改变直吸尘架的倾斜度。

- 调整用于倾斜吸尘架的转动手柄。

高度

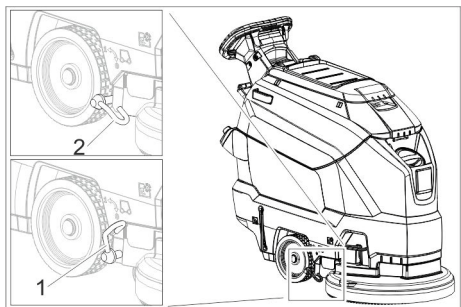
与地板相接触时，可利用高度调整机构影响吸嘴的弯度。



- 尝试性调整高度调整机构的转动手柄，直至达到最好的抽吸效果。

运输行走机构

运输行走机构从地面上取走清洁头。用提起的清洁头执行运输行驶或吸走脏污液体。



- 1 运输行走机构脚踏位于“运输”位置上
- 2 运输行走机构脚踏位于“清洁”位置上

- 用脚将运输行走机构脚踏蹬到所需的位置上。

清洁

注意

有损坏地面铺层的危险。不在此地点使用本设备。

- 将运输行走机构脚踏转到“清洁”位置上。
- 将程序选择开关旋转到所需的清洁程序上。

降下吸尘架

- 下压杠杆，然后朝下移动；吸尘架被降下。

提示：

- 清洁铺有瓷砖的地板时需要调整直型吸尘架，确保清洁过程不会垂直于接缝进行。
- 为了改进抽吸效果，可调节吸尘架的倾斜位置和斜度（参见“调节吸尘架”）。
- 污水箱变满时，浮子会关闭抽吸口，抽吸涡轮机会以较高的转速运行。这种情况下，需要停止抽吸，并排空污水箱。

停顿和停放

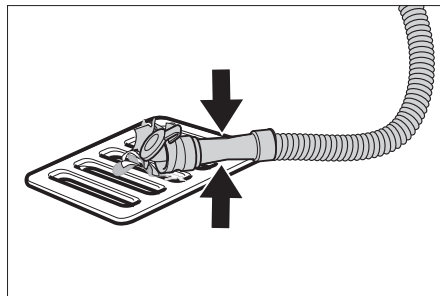
- 松开安全开关。
- 将程序选择开关调到“抽吸”位置上。
- 稍微向前移动，将剩余水量吸走。
- 提起吸尘架。
- 将运输行走机构脚踏转到“运输”位置上。
- 必要时，给电池充电。

排出污水

警告

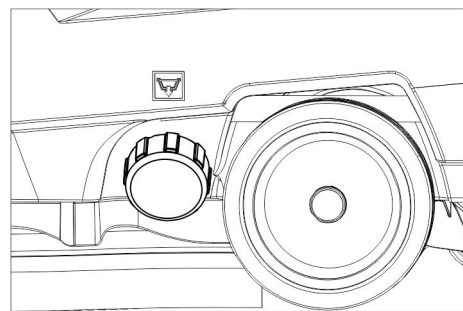
注意当地废水处理规范。

- 从支架上取下排放软管，然后将其降落到一个合适的集水装置上。



- 挤压或弯折计量装置。
- 打开计量装置的盖子。
- 排放污水 - 通过按压或弯折操作调节水量。
- 用清水冲洗污水箱。

排放新鲜水



- 拧下净水箱的盖子。

运输

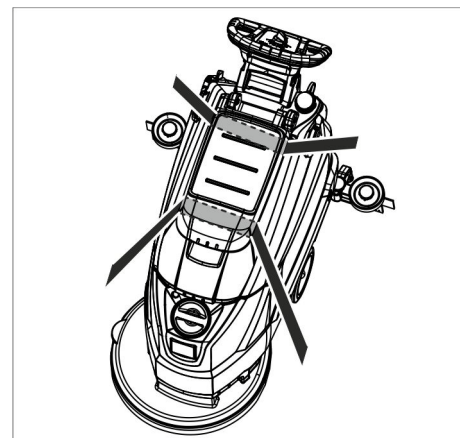
危险

存在受伤危险！装货和卸货时，只能将设备运行至允许的最大斜度上（参见“技术数据”）。缓慢移动。

小心

受伤和损坏危险！运输时要注意设备的重量。

- 下压设备的推杆，然后推动。



- 用车辆进行运输时，根据各适用准则确保设备不会滑倒和倾覆。

储存

小心

受伤和损坏危险！存放时要注意设备的重量。

该设备只能存放在室内。

保养与维护

危险

存在受伤危险！在设备上所有工作前，将程序选择开关置于“OFF”上，并拔下充电器的电源插头。

按下机器上的电池插头。

- 排放并清理污水和剩余的新鲜水。

保养计划

使用后

注意

有损坏危险。不要对设备喷水并且不要使用有侵蚀性的清洁剂。

- 排出污水。
- 用清水冲洗污水箱。
- 使用浸泡过柔和性洗衣肥皂水的湿抹布清洁设备外部。
- 检查毛绒过滤器，如有需要，即对其进行清洁。
- 清洁吸嘴和刮片，检查是否磨损，如有需要，即行更换。
- 检查刷子是否磨损，如有需要，即行更换（参见“保养工作”）。
- 给电池充电：
如果充电状态低于 50%，必须给电池完全充电并且没有间断。
如果充电状态高于 50%，只有当下次使用需要充足运行时间时，才能给电池再次充电。

每周的

- 定期使用时，至少每周给电池完全充电一次并且没有间断。

每月保养

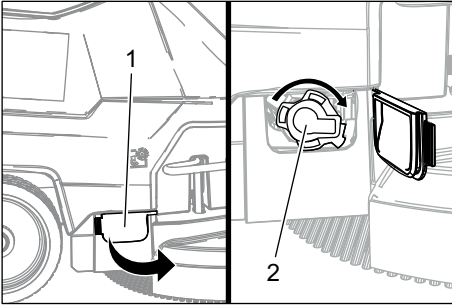
- 检查电池电极的氧化情况，必要时进行刷洗。注意连接电线是否固定定位。
- 清洁污水箱与盖子之间的密封件的状态并检查是否密封，如有需要，即行更换。
- 清洗滤网。
- 如系免保养型电池，则检查电池的酸液密度。
- 较长时间停机时，只有给电池完全充电后才能存储设备。至少每月一次给电池重新完全充电。

每年

- 让客户服务部门进行规定的检查。

保养工作

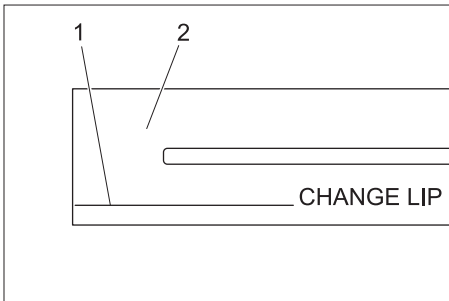
清洁滤网



- 1 盖
- 2 顶盖

- 打开盖板。
- 顺时针旋转盖子并将其取下。
- 取出并清洁下面的滤网。
- 装入滤网。
- 放上盖子并且通过逆时针旋转进行锁定
- 关闭盖板。

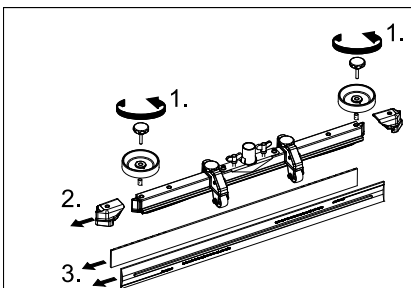
更换或翻转吸嘴



- 1 磨损标记
- 2 吸嘴

当吸嘴磨损至磨损标记处时，须更换或翻转吸嘴。

- 取下吸尘架。
- 拧出星形柄。

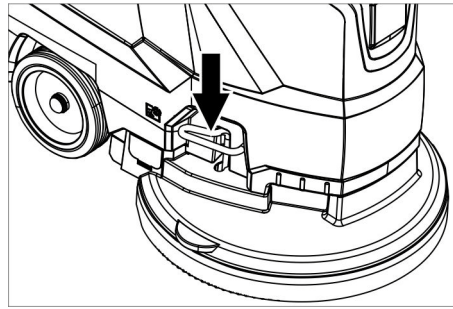


- 拔下塑料件。
- 拔下吸嘴。
- 插入新的或经翻转的吸嘴。
- 插上塑料件。

- 拧上并拧紧星形柄。

更换盘刷

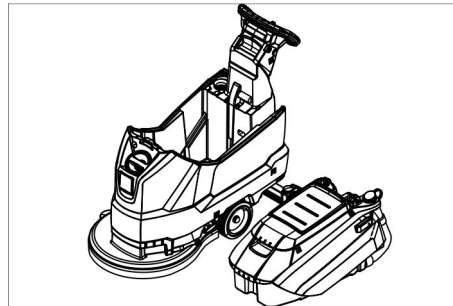
- 下压设备的推杆，以便抬起清洁头。
- 克服一定阻力，将刷子更换用踏板朝下压出。



- 朝后拉出设备，以便靠近盘刷。
- 将新的盘刷放在地板上设备的前方。
- 在抬起清洁头的情况下，利用新的圆盘运行设备，然后降下清洁头。刷子啮合在驱动装置中。

取下污水箱

- 排出污水。



- 抬起污水箱并置于一侧。

电池

一旦接触到电池，则务必请注意下列警示：

	注意电池上、使用说明书和汽车操作说明书中的提示
	戴上防护眼镜
	让儿童远离酸和电池
	爆炸危险
	禁止火焰、火花、明光和抽烟
	腐蚀危险
	急救
	警示
	清理
	不要将电池扔到垃圾桶内

△ 危险

爆炸危险。不要将工具或类似物品放到电池上，也就是说，不要放到终端极和电池连接件上。

受伤危险。切勿让伤口接触到铅。在电池上结束工作后始终要洗手。

推荐的电池

	设备订单编号	体积 [m³]	* **
105 Ah - 免维护	6.654-141.0 ¹⁾	2.64	1.06
76 Ah - 免维护	6.654-093.0 ²⁾	1.82	0.73
80 Ah - 易维护	6.654-290.0 ³⁾	6.60	2.64

* 电池充电腔的最小体积

** 电池充电腔与环境之间的最小气流

设备需要 2 块电池

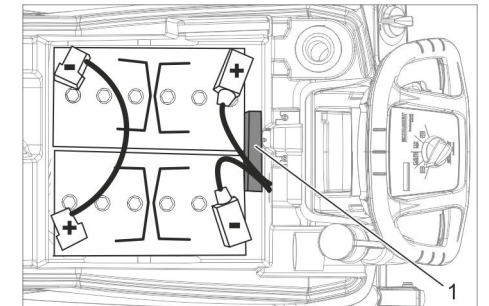
¹⁾ 完整套装 (24 V/105 Ah)，包含连接电缆，订货号为：4.035-449.0

²⁾ 完整套装 (24 V/76 Ah)，包含连接电缆，订货号为：4.035-447.0

³⁾ 完整套装 (24 V/80 Ah)，包含连接电缆，订货号为：4.035-990.0

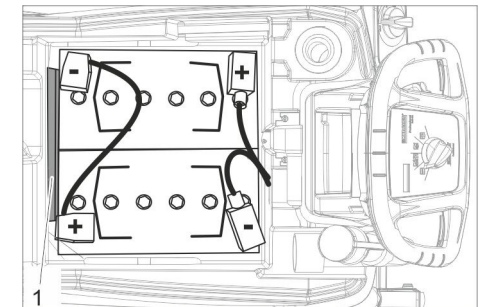
安放并连接好电池

- 排出污水。
- 抬起污水箱并置于一侧。
- 拔出电池插头。



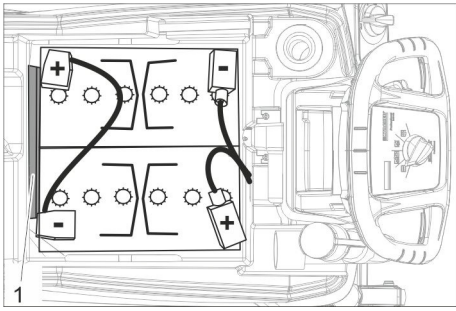
电池 6.654-141.0

1 间隔垫片



电池 6.654-093.0

1 间隔垫片



电池 6.654-290.0

1 间隔垫片

- 如上所示，将电池装入到设备中。
- 将间隔垫片插入到电池与设备之间如图所示的一侧中。

△ 小心

在拆卸和安装电池时，机器的位置可能不稳定，应当注意其位置稳固。

- 使用随机供货的连接电线连接电极。

- 将随机供货的连接电线卡到尚未接线的电池（+）和（-）电极上。

注意

混淆极性（正极和负极）时，会损坏电子控制设备。

注意正确的极性。

- 将污水箱装入设备。

提示：

在调试本设备前给电池充电。

在此请参见章节“电池充电”。

拆卸电池

- 将程序选择开关置于“OFF”位置上。
- 拔出电池插头。
- 抬起污水箱并置于一侧。
- 取下电池负极的电线。
- 取下电池的剩余电线。
- 拔出固定块或泡沫件。

△ 小心

在拆卸和安装电池时，机器的位置可能不稳定，应当注意其位置稳固。

- 取出电池。
- 根据所适用的规定清理废旧电池。

保养合同

为了保障设备可靠运行，可与 Kärcher 销售部门签订维护合同。

防霜冻

如存在霜冻危险：

- 将净水箱和污水箱排空。
- 将设备停放在防霜冻的房间内。

故障

△ 危险

存在受伤危险！在设备上所有工作前，将程序选择开关置于“OFF”上，并拔下充电器的电源插头。

拔下机器上的电池插头。

- 排放并清理污水和剩余的新鲜水。

显示屏上显示出的故障

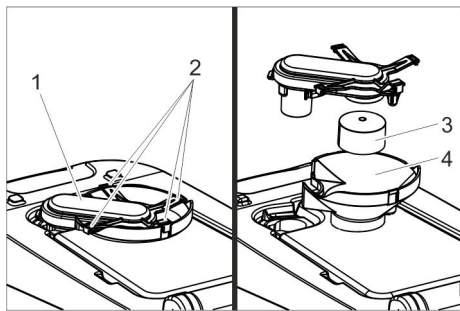
显示屏显示	排除故障
ERR B	检查刷子是否被异物卡住，必要时去除异物。
ERR T	清洁浮子，必要时联系客户服务人员。
LOW BAT	电池充电
ERR TEMP	让设备进行冷却。
HandsOff	松开安全开关并等待，直至显示运行小时或电池状态。接着重新操作安全开关。
ERR REL	将程序选择开关置于“OFF”位置上，松开安全开关，等待 3 秒钟，然后重新接通。如故障重复发生，即电告客户服务处
ERR PWM	电告客户服务处

故障——显示屏上无显示

故障	排除故障
不可以启动设备	将程序选择开关调节到所需的清洁程序上。 操作安全开关。 插入电池插头。 检查电池，必要时充电。 检查是否已连接电池电极。
水量不够	检查新水水位，如有需要，即给水箱加水。 通过水量调节按钮提高水量。 清洗滤网。
抽吸功率不够	清洁污水箱与盖子之间的密封件的状态并检查是否密封，如有需要，即行更换。 污水箱已满，关闭设备并排空污水箱 清洗细滤网。 清洁吸尘架上的吸嘴，必要时更换。 检查污水排水软管上的盖子是否关上。 检查吸尘架的调整。 检查吸入管是否有堵塞物，如需要进行清洁。 检查抽吸软管是否密封，如有需要，即行更换。
清洁效果不够	检查刷子是否磨损，必要时更换。
吸尘涡轮机偏心旋转	清洁浮子。
刷子不转动	检查刷子是否被异物卡住，必要时去除异物。 当触发电子设备中的过电流开关时，将程序选择开关旋转到“OFF”位置上，然后重新调节到所需的程序上。
清洁时振动	必要时使用软质刷子。
一旦发生通过本表不能排除的故障，即电告客户服务处。	

清洁浮子

→ 打开污水箱盖子。



- 1 浮子外壳
- 2 吊钩
- 3 浮子
- 4 底部

- 将浮子外壳向上拔出。
- 松开吊钩。
- 清洁浮子和底部。
- 组装浮子外壳并插入设备中。

配件

名称	零件号	描述
盘刷, 红色 (中等, 标准)	4. 905-026. 0	用于所有常见的清洁任务。
盘刷, 天然棕毛 (软质)	4. 905-027. 0	天然纤维材质, 用于清洁和抛光。
盘刷, 黑色 (硬质)	4. 905-029. 0	适用于严重脏污的情况, 用于彻底清洁。仅适用于不敏感的覆面。
软垫驱动圆盘	4. 762-534. 0	用于使用垫子进行清洁。带有快速更换联轴器和中控锁。
垫子, 红色 (中等偏软)	6. 369-079. 0	用于清洁或清洗所有地板。
垫子, 绿色 (中等偏硬)	6. 369-078. 0	用于清洁严重污染的地板和彻底清洁。
垫子, 黑色 (硬质)	6. 369-077. 0	适用于顽固污垢, 用于彻底清洁。
垫子, 米色 (轻微颗粒状)	6. 369-468. 0	对硬质和弹性覆面进行抛光和更新。
垫子, 米色 (天然发丝成分)	6. 371-146. 0	
吸尘架, 850 mm, 直型	4. 777-086. 0 4. 777-401. 0	
吸尘架, 850 mm, 弯曲型	4. 777-411. 0	
Homebase Box 套装	4. 035-406. 0	

产品规格 / 参数

功率		
额定电压	伏	24
电池容量	Ah (5 小时)	105/80/ 76
平均消耗功率	瓦	1100
抽吸涡轮机额定功率	瓦	500
刷子驱动装置额定功率	瓦	600
抽吸		
抽吸功率, 空气量 (最大)	升 / 秒	24
抽吸功率, 负压 (最大)	kPa (mbar)	120
清洁刷子		
刷子转速	1/ 分钟	155
刷子直径	mm	510
尺寸和重量		
理论上的清洁面积效率	m ² / h	2000
工作区域最大斜度	%	2
净水箱 / 污水箱容量	l	50/50
最大水温	° C	60
环境温度	° C	5... 40

空载重量 (运输重量)	千克	139/ 118. 8/ 117. 5
总重量 (运行准备就绪)	千克	189/ 168. 5/ 167
电池盒尺寸	mm	350 x 350
根据 EN 60335-2-72 确定的数值		
总振动值	m/s ²	<2. 5
不确定度 K	m/s ²	0. 2
声压等级 L _{pA}	A 级分贝	66
不安全性 K _{pA}	A 级分贝	2
声功率电平 L _{WA} + 不安全性 K _{WA}	A 级分贝	81

备件

只使用原厂配件和备件, 它们能保证设备的安全和无故障运行。
有关配件和备件的信息请登录
www.kaercher.com。



<http://www.kaercher.com/dealersearch>

