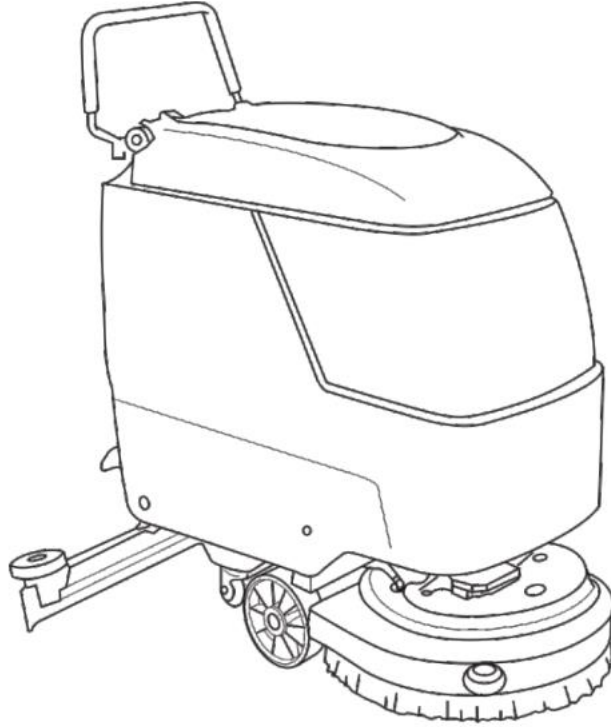


# **Automatic Floor Cleaning Machine**

## **Operation Manual**



Attention: The operator must carefully read this manual and can operate it after he fully understands and is trained.

## I. External appearance of cleaning machine

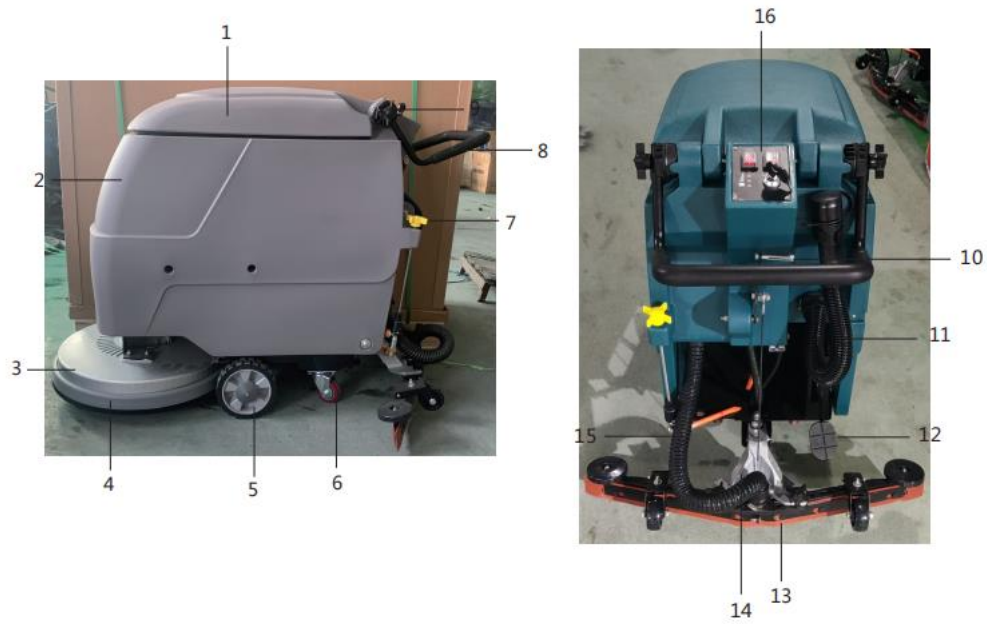


Figure 1. External structure

1. Sewage tank cover

2. Water tank

3. Floor brush cover

4. Watertight hem

5. Walking wheels

6. 3-inch universal wheel

7. Water-discharging switch

8. Push handle

9. Fixing knob of push handle

10. Lifting handle of water-absorbing grill

11. Sewer pipeline

12. Brush lifting pedals

13. Water-absorbing grill assembly

14. Connection bracket of Water-absorbing grills

15. Suction pipe

16. Control panel

## II. Internal structure

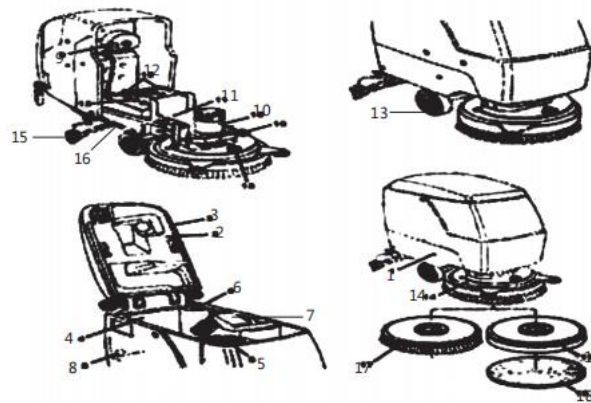


Figure 2. Internal structure

1. Machine opening pin
2. Top cover of sewage tank
3. Sealing strip of cover edge
4. Sewage tank
5. Outlet of clean water tank
6. Inlet of sewage suction
7. Vacuum port floating device
8. Outlet of sewage tank
9. Vacuum motor
10. Ground brush motor
11. Control box
12. Rechargeable battery
13. Walking wheels
14. Ground brush holder
15. Water-absorbing grill
16. Chassis
17. Floor brush
18. Wiping pad
19. Floor pad (must be applied to floor pad)

### III. Battery charging

1. You must be seriously careful in operating the battery. The sulfuric acid in the battery may corrode your skin and eyes. The hydrogen generated in the battery will explode when it contacts with a spark or flame. Do not touch the positive and negative poles of the battery with metals.
2. It takes about 8-10 hours to complete the full charge each time
3. Connect the charge connector of the battery to the automatic charger that will automatically start charging. When charging is finished, the auto-charger indicator will be on, indicating that the battery has been fully charged. Separate the connector from the charger and plug it back into the machine socket.
4. Place the machine in an air circulation area at time of charging
5. The machine must not be used at time of charging

### IV. Check the amount of battery liquid

1. Check the level of the battery liquid at least once a week
2. Check the level when the battery is fully charged
3. Open each water plug on the battery neck and check the level of the battery liquid in each battery grip. The level should exceed the lithium plate
4. If necessary, the distilled water should be poured into each part that exceeds lithium plate by 10 mm. Be careful not to overflow
5. Put back the white piston and lock it
6. Remove the acid solution on the top of the battery with a dry cloth
7. If the sulfuric acid solution falls on the floor, wipe it as soon as possible
8. Wear safety gloves when operating the above procedures

## V. Control panels



No. 1 is the switch of the ground brush motor

No. 2 is the switch of the suction motor

No.3 is the main power switch

No. 4 is the power indicator

Battery power capacity is  $\leq 100\%$  when 4 lights are on

Battery power capacity is  $\leq 75\%$  when 3 lights are on

Battery power capacity is  $\leq 50\%$  when 2 lights are on

Battery power capacity is  $\leq 25\%$  when 1 light is on

Battery voltage is lower than 22 when 4 indicator lights flash at the same time, please charge immediately. The above power is subject to actual time.

## VI. Operation of the cleaning machine

### 1. Note

- 1) Read the operation manual at random and maintenance section
- 2) Mind your hair and clothing that gets caught in the rotating machine.
- 3) No smoke when operating the equipment
- 4) Do not operate it on a sloping surface covered with serious dust (all dust must be cleared firstly)
- 5) Do not clean the equipment with high-pressured water gun.
- 6) The equipment should be stored in the working environment of the temperature at 0-40 °C. It can be used in that of the temperature at 0-40°C, humidity at 30%-95%
- 7) Exposure to the sun, rain or bad weather conditions should be avoided
- 8) Do not try to change any part of this equipment beyond its technical parameters and scope
- 9) The equipment shall not be used as a vehicle in any form or on public roads, and nothing shall be put into an open housing inside the equipment.
- 10) Do not intake any flammable or corrosive liquid and work in an environment full of flammable gas or explosive dust

### 2. Operation procedures of the floor cleaning machine

- 1) Firstly, ensure that the battery is charged, the battery connector is plugged back into that of machine body.
- 2) Pour the clean water into the clean water tank and add appropriate amount of detergent in proportion; Pour about 30ml defoamer into the sewage tank in order to reduce the foams;
- 3) Install the water-absorbing grill and check whether the strip is worn. If it's found to be damaged, it must be replaced; Install the floor brush;
- 4) Put down the floor brush first, and then the water-absorbing grill.
- 5) Press the brush switch on the control panel (start the brush); Then press the switch button for the suction vacuum motor (start the suction function) to adjust the valve of the clean outlet in an appropriate position (adjust according to the ground humidity)
- 6) Hold the handle tightly and push it forward, advance according to the cleaning route.
- 7) Note the absorption of water, and see if the wiping strip is stuck to the ground
- 8) After cleaning, firstly press the switch of the stop brush, and lift back it.
- 9) Absorb the stains of the remaining water back, and then press the stop button of the suction vacuum motor, lifting back and absorbing gripper.

### 3. Floor cleaning and water absorption

- 1) Lower the water-absorbing grill with the lifting handle.
- 2) Slightly push it right downward with the lifting pedal of the floor brush, so the floor brush lies down.

- 3) Adjust the lever of the clean water flow to the medium position
- 4) Start the ground brush switch and the button of the suction vacuum motor, respectively.
- 5) Hold the handle tightly and push the machine forward slightly according to the cleaning route, and walk slowly to achieve the best effect of cleaning and absorbing water
- 6) Adjust the rate of cleaning water flow to visible average thin film
- 7) When the sewage tank overflows, the automatic stop device will prevent the sewage from being absorbed. The operator can identify it by the sudden sound change of the vacuum motor and should discharge the sewage immediately.
- 8) When the sewage tank is full, turn off the brush button, the vacuum motor button, turn on the brush and the water-absorbing grill, and move the machine to the location where the sewage can be discharged.
- 9) Use a draining hose of the sewage tank to dump the sewage inside. **WARNING!**
- 1) Avoid excessive damage to the ground. When the machine stays in one position, press the stop button of the brush motor.
- 2) Press stop brush before lifting the brush back.

## VII. Installation of absorbent steak

- 1) Place the water-absorbing grill on the bracket and ensure the lock firm
- 2) Adjust the Nut a, b. When pushing the machine, the beam machine is bent to the ground by 30 degrees

When the nut is screwed upward, press the beam machine downward. When the nut is screwed downward, the beam machine is lifted upward)

- 3) The push handle can be adjustable according to the operator's height.

It's best to push the handle comfortably.

- 4) Dilute the cleaning solution to a sufficient amount, lift the top cover, and pour the diluted cleaning water into the cleaning solution tank



### WARNING!

It is advised to use a foam-free cleaning fluid and pour a small amount of defoamer into the sewage tank before operation, preventing foam from overflowing into the vacuum motor.



#### VIII. Install the floor brush

- 1) Select the floor brush according to the actual ground feature.
- 2) Lift the floor brush support with the foot pedal for the floor brush
- 3) Install the floor brush on the handle holder
- 4) Try the brush down for a few seconds
- 5) Make sure that the brush is properly installed before using again

#### IX. Daily maintenance after use

- 1) Turn off the ground brush button and the button of the suction vacuum motor
- 2) Lift the floor brush and the suction gripper separately and move the machine to the cleaning area.
- 3) Drain the clean water tank and the sewage in the sewage recollection tank, respectively. Clean the sewage tank with the clean water. After cleaning, remove the fastening bolts. Lift up the tank so that the sewage tank can be dumped out. Finally, check whether the sink of the soft wipe is worn.
- 4) Remove the water-absorbing grill and clean it with warm water and dry it in the ventilation place for next use

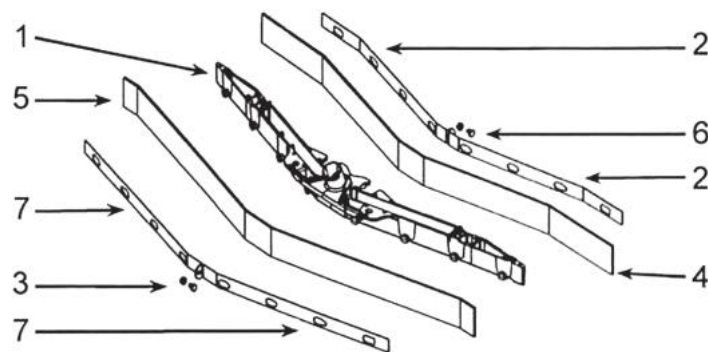
#### WARNING!

- 1) The machine should be recharged in time when it has been used for over three hours
- 2) Carbon brushes should be checked annually or after used for over 300 hours. Replace it if necessary.

## IX. Replacement of water-absorbing adhesive strip

The function of the water-absorbing adhesive strip is to collect the floor sewage to achieve the initial drying of the ground. After a long time, the edge of the rubber strip contacting with the ground will be worn round, and the water absorption will be weakened. It's time to replace another water-absorbing adhesive strip.

- 1) Pull out the sewage pipeline.
- 2) Loosen nuts with tools (No. 3 and 6).
- 3) Press the adhesive strip (No. 2, No. 7) to the water-absorbing grill (No. 1) and then pull it out.
- 4) Remove the water-absorbing adhesive strips (No. 4 and 5).
- 5) Four corners of the adhesive strip can wipe the water. Just flip the strip around to get a new corner. When all four corners are worn out, it's necessary to replace another strip. Install the new strip on the screw of the suction rack (No. 1).
- 6) Align the strips (No. 2 and No. 7) to the screws on the suction rack (No. 1) and push them inward.
- 7) Tighten nuts (No. 3 and 6).



### Warning

If you do not charge the battery regularly, this may cause the irreparable damage to the battery.

### Battery maintenance and charging hazards

Do not determine the battery polarity with the ignition method.

The battery may produce the flammable gas. Extinguish the flame before checking the battery or supplementing fluid to it. Perform the battery maintenance in a ventilated area.

In order to avoid damage to the battery, please do not discharge the battery excessively.

Remember to charge the battery immediately when the battery indicator is on.

### Important

If you are charging a gel battery, please use a special charger for the gel battery.

- With reference to the charger manual, charge the battery.
- After charging, disconnect the battery from the charger.

## Maintenance instructions

### Warning !

Please cut off the machine power before its maintenance (Cable machine: please unplug the AC power supply. Battery machine: please unplug the battery connector out of the machine socket.) All electrical maintenance and repairs must be carried out by the professional except those clearly stated in this manual.

### 9.1 General rules of maintenance

With reference to the manufacturer's guidelines, maintain the machine regularly to improve machine performance and prolong machine's life. When cleaning machine, the following points should be noted:

- Do not use a high-pressure water gun to prevent water from penetrating the circuit board or the motor from causing the short circuit.

### 9.2.5 Replacement of fuse (battery machine):

The fuse is in the body electrics. You must replace another fuse:

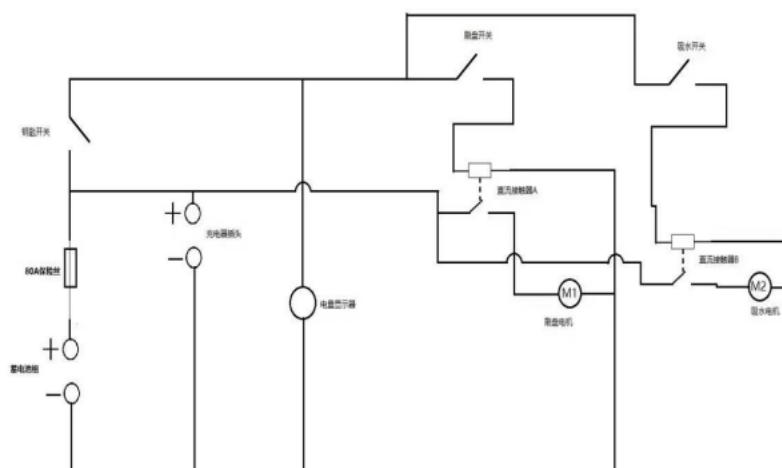
- Remove the housing and open the screws.
- Lift the tank.
- Open the electrical box, loosen the fixing screw and take out the fuse.
- Replace a new fuse and cover the electrical box.
- Place the sewage tank.

### Warning

Do not use fuses exceeding the specified current.

If the fuse is still broken after replaced, then the fault must be found in the board, circuit or motor. The inspection must be carried out by the special personnel.

### Schematic map of push floor cleaner circuit



原文	译文
刷盘开关	Brush switch
吸水开关	Suction switch
直流感触器	DC contactor
刷盘电机	Brush plate motor
电量显示器	Power indicator
充电器插头	Charger plug
吸水电机	Suction Motor
钥匙开关	Key switch
80A 保险丝	80A fuse
蓄电池组	Battery pack

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