

SMB 2300/830

Maintenance-free Battery-Powered Manual of Hand Push Automatic Scrubber

Operating Manual



■ Please read this manual carefully before use

Overview



Note: Please read this manual carefully before operating SMB 2300/830 Battery-Powered scrubber

■ Introduction

SMB 2300/830 scrubber is a kind of cleaning machine which adopts the brush driven by brush plate motor to clean the ground. It is suitable for cleaning the hard ground, as well as drying the sewage. It will take the sewage away from the site, with the advantages of being environmentally-friendly, energy saving and high efficient. Under the action of cleaning liquid / agent, the cleaning effect will be better.

■ Use

The machine is named as Hand Push Automatic Ground Washing and Drying Machine. It is suitable for office buildings, hotels, hospitals, shopping malls, restaurants, factory workshops and other places with broad and hard ground. With mechanical operation instead of manpower, the cleaning operation becomes more efficient and faster.

The equipment is not suitable for being used in rain or under the water gun. Don't use the equipment to collect dangerous dust or flammable liquid in flammable and explosive environment. In addition, the equipment is not suitable for transportation.

Description of Safety Items



Note: The operator should read this manual carefully

- Before starting any work, please understand all the design, control methods and functions of the scrubber.
- When using the scrubber for the first time, the operator should put it in an open area to get the hang of its functions.
- Before starting any operation, check the scrubber and its parts under the general and operating conditions.
- If the scrubber is in the abnormal working state, please stop using it.
- The operator must operate the scrubber in the proper application area (clean the hard ground).
- When operating, please note the obstacles in the workplace, such as stairs and shelves and the people around, especially the children.
- Please apply the appropriate cleaning agent (when applying the cleaning agent for the scrubber, please follow the cleaning agent manufacturer's instructions about the appropriate dosage and limitation requirements.
- Only the properly trained personnel can use appropriate tools to maintain and repair the scrubber.
- Switch off the power or remove the battery when cleaning or maintaining the scrubber.
- Don't use high-pressure water or steam equipment to clean the scrubber.
- Don't drop any water in the electrical components.



Note: it is forbidden to use the scrubber to clean up the flammable liquid, solvent, fuel, active metal, water vapor or combustible dust.

Technical Parameters

Items	Parameters
Rated voltage	DC24V
Work Efficiency	1500-2300 m ² /h
Diameter of Brush Plate	560mm
Absorbent Width	830mm
Capacity of Clean Water Tank	50L
Capacity of Sewage Tank	55L
Brush Motor	500W
Brush Motor Speed	150rpm
Brush Pressure	28kg
Vacuum Motor	500W
Vacuum	180mbar
Noise Level	68dB
Turning Radius	620mm
Battery Pack	2*DC12V 100Ah
Battery Weight	70 kg
Machine Weight (no battery)	80kg
Machine Size (L * W * H)	1240*600*960mm

Machine Packaging and Disassembly

- **Packaging** - the equipment is packaged in a specific way with wooden pallets for forklift loading and unloading. The package size is as follows: Length 1,270 mm, Width 670 mm wide and Height 1,130 mm.

- **Disassembly** - (1) Remove the winding film (2) Cut off the packing tape (3) Remove the packing paperboard (4) Take out the accessories (5) Slide the machine down from the wooden pallet with the slope.

Assembly Instructions

Installation of Water Suction Grill

- Lift up the handle of the lifting handle (01).
- Twist off the two knobs (03) of the suction grill (02).
- Fix the suction grill on the fixed palm (04), and then tighten the two knobs.
- Connect the end port of the suction hose (05) to the suction grill.



Installation of Brush Plate, Cleaning Pad and Wafer

- Step down the pedal (06) and lean on the left positioning position, and the front nose will lift up.
- Place the brush plate (07) or the cleaning pad and wafer under the center of the nose cover (08).
- Then step on the pedal (06) to move out of the positioning position again, it will automatically lift up when loosening the foot, and the machine nose will automatically lower and press on the brush plate.
- Unlock the power lock of the panel. When the indicator light of the power is always on, press the start button (09) of the brush motor, and the brush plate will be installed automatically.

Operation Preparation

■ Selection of Accessories

- Nylon brush: suitable for cleaning the rough, irregular or smooth ground.
- Cleaning pad and wafer: suitable for flat polished ground.

■ Fill the Water into Clean Water Tank

There is an inlet(15) on the front end of the clean water tank (10) of scrubber, which can fill the water directly.

- Fill the clean water and proper amount of detergent into the clean water tank according to the dirt on the ground.



Please add proper cleaning detergent in clean water tank if necessary and also do add anti-foam detergent in sewage tank, or it may cause damage to vacuum motor.

Operation Instructions

Instructions for Correct Operation Steps of Startup

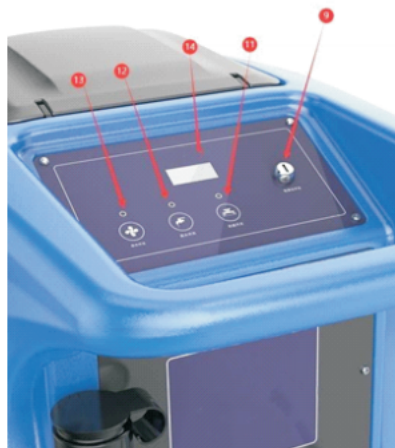
- Put down the lifting handle and pedal of the water suction grill to lower the water suction grill and brush plate to the ground.

- Unlock the power lock (09) with the key. The power indicator is on (11).

- After observation and confirmation, press the brush plate motor switch (11), water draining switch (12) and water suction motor switch (13), and then the button "Press" means closed.

- Press the button switch (11), (12) and (13) respectively, and the machine will startup normally.

- Adjust the valve according to the actual water volume.



Description of Indicator Light on Control Panel

- The power indicator light (14) on the top of TC-55 panel shows the battery power (from left to right, from weak to strong). When the right indicator light is on, the battery power is sufficient. When the left indicator light is on, it warns the battery is insufficient, and the machine must be stopped immediately and fully charged in time.

- Tips: to prolong the service life, the battery must be fully charged in time after using the machine. Overcharge or discharge will cause damage to the performance of the battery, please adopt a special matching charger

■ Warning and Operation Instructions for Full Sewage Tank

- When the sewage water level in the sewage tank is close to the maximum limit water level, the floating ball will raise and block the air outlet (16), and the vacuum motor fails to work normally and makes different noises (At that moment, the suction grill will fail to dry the water on the ground.)

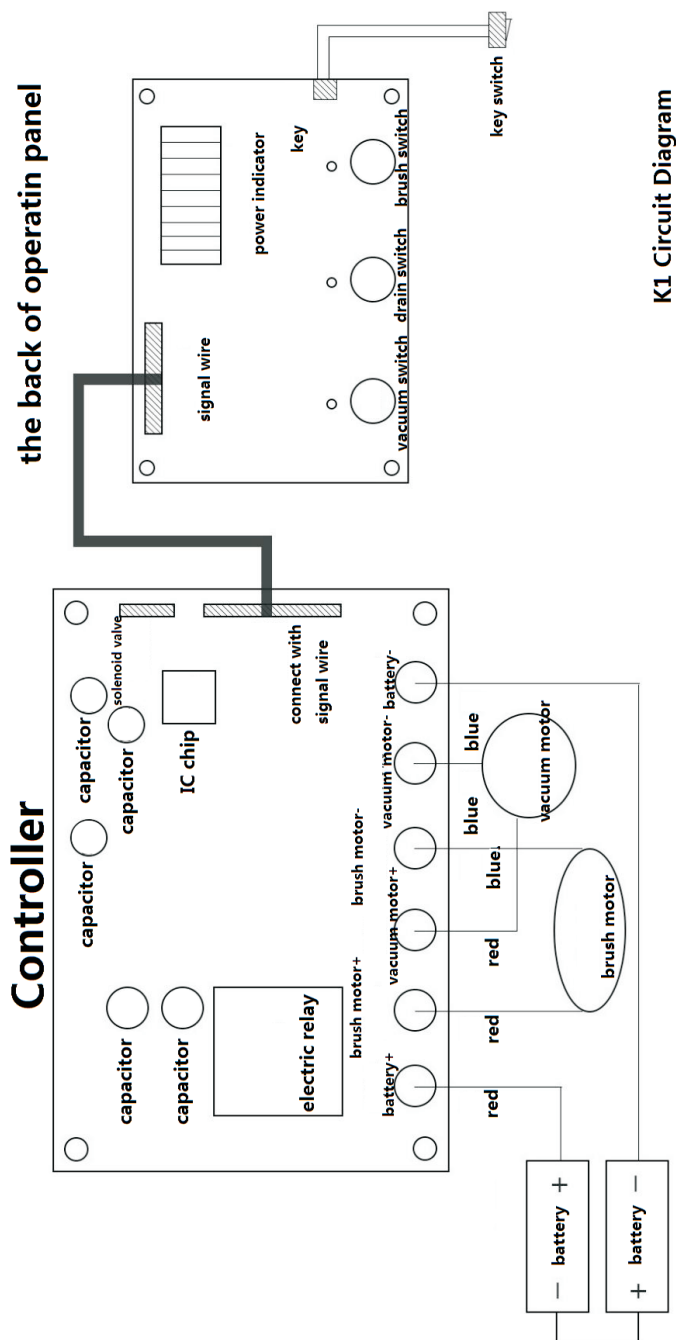
- Switch off the suction motor and brush motor immediately
- Raise the brush plate and the suction grill
- Move the machine to the place where the sewage is discharged and remove the sewage hose (17) from the bracket clamp, pull out the pipe cover towards the ditch to drain the sewage.



Common Failures and Solutions

Failure	Reason	Solution
Machine fails to run	The switch of the power key is damaged	Replace the key switch
	Low battery	Recharge
	Damaged battery	Replace the battery
	The battery wiring is loose or aging	Tighten the wiring or replace the wiring
	Motherboard is damaged	Contact the manufacturer
	Wiring failure	Contact the manufacturer
The brush motor fails to run	Failure of brush plate motor switch	Replace the button panel
	The brush motor is damaged or its wiring is damaged	Contact the manufacturer
	Severe wear of the carbon brushes of the brush plate motor	Contact the manufacturer
	The motherboard is damaged or the contact is loose	Contact the manufacturer
The suction motor fails to run	The suction motor switch fails	Replace the button panel
	The suction motor or its circuit is damaged	Contact the manufacturer
	The carbon brush of the water suction motor is severely worn	Contact the manufacturer
	The motherboard is damaged and the connection is loose	Contact the manufacturer
Little or no cleaning water	The opening of water valve is too small or closed	Adjust the water valve switch
	The outlet pipe of the brush plate is blocked	Unblock the outlet with the thin iron wire
	The water outlet hose or filter is blocked	Rinse the water pipe or filter screen with clean water
	The draining electromagnetic valve is blocked	Take apart the water draining electromagnetic valve for cleaning
Fail to absorb the water or thoroughly	Sewage tank is full	Empty the sewage tank
	The plug of the sewage pipe is loose	Tighten the plug of the sewage pipe
	The wiper assembly is blocked	Clean the wiper assembly
	Wiper blade is worn	Reverse or replace it
	The wrong position of the wiper blade	Adjust the height between the scraper and the ground
	The suction hose fails to connect to the wiper assembly	Connect the suction pipe
	Suction pipe is blocked	Clear the blockage
	Suction pipe is damaged	Replace the suction pipe
	The tank cover is not closed properly	Cover up
	The sealing strip of the sewage tank cover is damaged	Replace the sealing strip
	The suction motor is damaged	Contact the manufacturer
Short running time	Low battery	Recharge
	The battery is damaged	Replace the battery
	Use the battery correctly	See the battery maintenance
	The battery charger is damaged	Repair or replace the charger

Circuit Diagram



Maintenance

■ Daily Maintenance

(1) Remove the wafer/brush plate and clean it with a specific cleaning agent.

(2) Drain the water in the sewage tank and rinse it with clean water. Check for debris in the sewage tank, if any, clean it immediately. In addition, the solvent left in the clean water tank should also be drained thoroughly.

【turn on the clean water filter (18) to drain】

(3) Lift the wiper assembly off the ground, and clean the wiper blade with a wet towel.

(4) Remove the vacuum suction filter device and rinse with clean water.

(5) Wipe the machine clean with a specific cleaning agent.

(6) Charge the battery. 【Charging port(19)】

(7) Check whether the wiper blade is sharp, if it is damaged, please reverse or replace it.



■ Monthly Maintenance

(1) Check whether the top of the battery is clean to avoid corrosion.

(2) Check whether the battery wiring is loose or corroded.

(3) Check the sealing strip of the sewage tank cover and replace it, if it is damaged.

(4) Lubricate all lubricated parts and shafts with specific lubricating oil.

(5) Check whether the machine fasteners are connected.

(6) Check whether the water tank is leaking.

■ Maintenance of the Motor

(1) The maintenance of the motor should be regularly dust-removed and lubricated, and the wiring should be checked for connection and insulation protection.

(2) After every 250 hours of use, check the motor carbon brushes. If the carbon brushes are severely worn, please contact the manufacturer.

■ Battery Maintenance

(1) Please follow the instruction of the battery charging chapter in the manual of each manufacturer for maintenance.

(2) The top of the battery and the electrodes must be corrosion-resistant. Soda water can be applied to avoid corrosion. But don't drop any soda into the battery.

(3) Use a brush moistened with soda to wipe the battery and the battery wiring parts.

(4) Regularly check whether the battery wiring is worn or connected, replace it if necessary.

■ Machine Storage

(1) Store indoors and in a dry place.

(2) Store upright.

(3) Lift the brush plate away from the ground.

(4) Lift the wiper assembly away from the ground.

(5) If stored in the extremely cold place, keep the machine completely dry before storing it to avoid any damage caused by the low temperature.