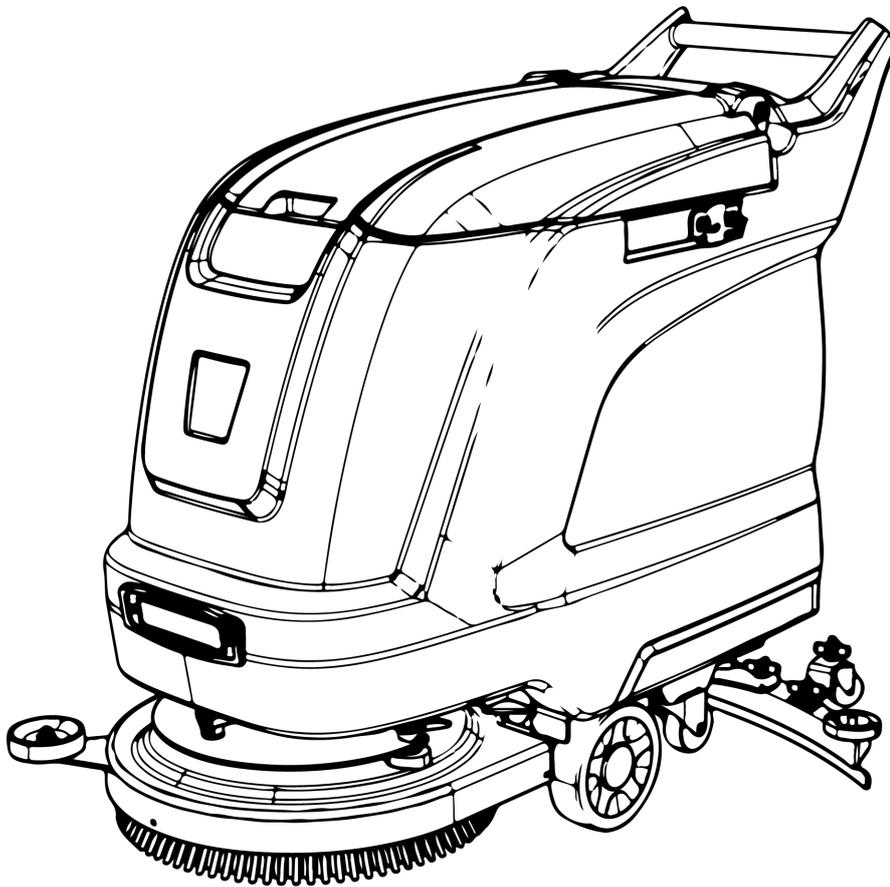


Ride-on Scrubber Operation Instruction

M50+



03/2024

Do not use this device without reading this manual.

Preface

Thank you for choosing our equipment. We are confident in providing you with this product which is manufactured using the latest technology and has undergone strict quality control. This manual is used to help you understand the operation and maintenance of the equipment so that you can use it more comfortably and efficiently, so please read this manual thoroughly before using.

Safety Precautions

To ensure safety, please follow the following important usage rules!

1. Do not use this device while under the influence of alcohol or medication.
2. Before any maintenance and repair, please turn the machine OFF, and please remove the key from the main power switch and keep it properly.
3. This machine must be used by qualified and authorized personnel. Minors and disabled persons are not allowed to use it.
4. Keep batteries away from sparks, flames and smoke.
5. It is prohibited to use the machine in places with dangerous, flammable or explosive gases, liquids and water vapors.
6. No loose clothing or accessories are allowed. Keep clothing, gloves and hair away from moving parts.
7. Do not smoke while the battery is charging.
8. In case of fire, please use dry powder fire extinguisher, instead of water to extinguish the fire.
9. When a machine is scrapped, accessories containing hazardous substances (such as batteries, waste oil, etc.) shall be sent to a specific center for disposal.

Safe use

1. Before using the equipment, please read this user manual carefully. This will ensure that you understand the control and maintenance requirements and help you use the equipment safely.
2. If the machine is handed over to other people, please be sure to hand over the instruction manual as well and tell them to read it carefully before use.

When reading this user manual,

1. This manual includes all configurations for this series of products, therefore, you may find that some of the information does not apply to your device.
2. All information, specifications and illustrations in this manual are effective when this manual is published. Our company reserves the right to change specifications or designs without prior notice.

In this manual, we use the symbol  with the word "**Warning**" to indicate the possibility of a hazard that may result in death or serious personal injury; in order to avoid or reduce the hazard, the relevant steps must be strictly followed.

In this manual, we use the symbol  with the word "**Caution**" indicates the possibility of dangers that may cause minor or moderate personal injury or equipment damage; in order to avoid or reduce the danger, the relevant steps must be strictly followed.

() A mark similar to this indicates that the direction to which the arrow points is forward.

() An arrow similar to this indicates movement or action.

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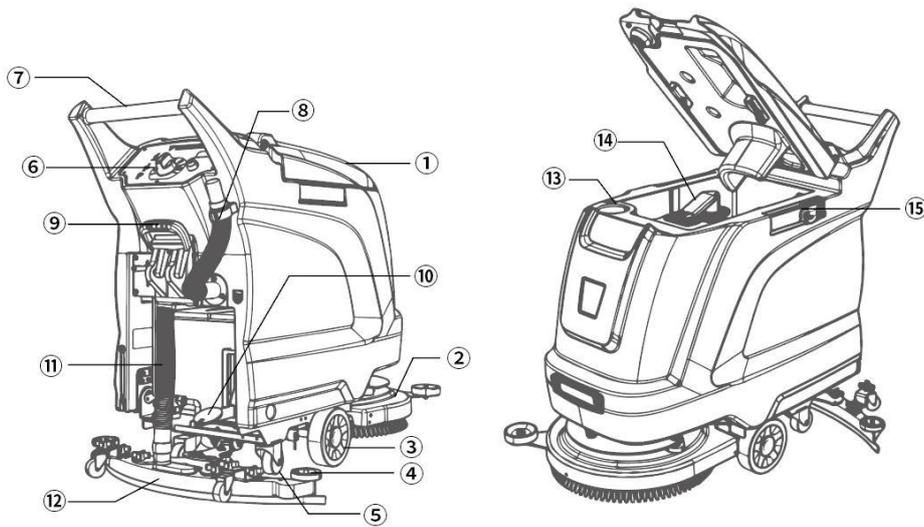
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Chapter 1 Product Introduction

1.1 Applicable Scenarios

This equipment can be used in a variety of scenarios, including commercial and industrial places , such as hotels, schools, hospitals, industrial offices, supermarkets, office buildings, etc.; for epoxy floors, PVC floors, terrazzo, wear-resistant floors, tiles and cement floors , wooden floors, rubber floors, different floors can be cleaned with brush plates made of different materials.

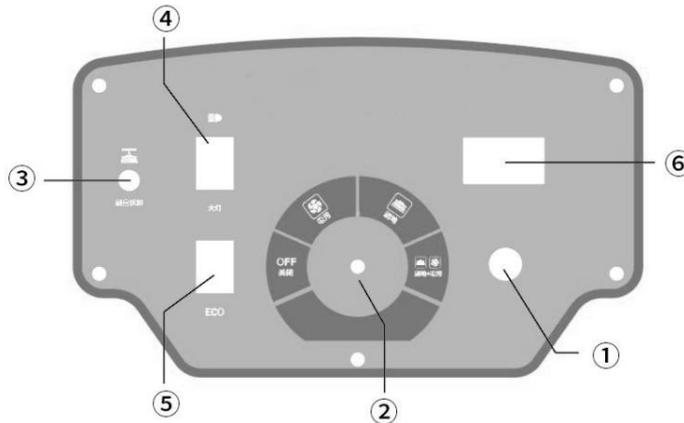
1.2 Equipment Overview



No.	Name	Function
①	Recovery tank	Control driving direction
②	brushed plate	clearing the floor
③	Tyre	Big wheels for walking
④	universal wheel	Machine guide wheel
⑤	fender wheel	Prevent machine damage when happened collision
⑥	Control panel	Machine control panel
⑦	handrail	Control machine direction
⑧	blow-off pipe	discharge of sewage
⑨	Pickling handle	Control the lift of absorbent scraper
⑩	Brush plate lift pedal	Control brush lift
⑪	Suction pipe	Responsible for drawing surface sewage into the sewage tank
⑫	scraper	collecting floor sewage
⑬	Clear water injection	Add clean water nozzle

⑭	Suction machine	Provide suction
⑮	Cleaning tools extension dock	Extendable hook for various cleaning tools

1.3 Control Panel/Buttons



No.	Name	Function
①	Power switch button	Turn on/off the machine
②	Multi-position switch	Regulating operation mode
③	Brush disassembly button	Automatic removal of brush tray
④	Headlight button	Adjust the pressure between rolling brush and the ground
⑤	ECO	Energy-saving mode
⑥	Coulombmeter	Display the current machine voltage

1.4 Technical parameters

Name	Value	Name	Value
Cleaning width (mm)	500	Brush motor power (W)	550
Squeegee width (mm)	825	Driving motor power (W)	/
Continuous running hour (h)	3	Clean water capacity (L)	60
Theoretical working efficiency (m ² /h)	2800	Sewage capacity (L)	55
Battery capacity (V/Ah)	24/103	Total weight (kg)	165
Suction motor power (W)	500	Working size (mm)	1265*825*1040

1.5 Accessories list

When you open the packaging box, you will find that it contains the following components. Please check the components listed in the table. If there are anything missing, please contact us in time.

No.	Name	Quantity
①	Host	1
②	Charger	1
③	Squeegee assembly	1
④	Tool kit	1
⑤	Operation instruction	1
⑥	Warranty card	1

1.6 Consumables and Optional Accessories

The consumables of this equipment are listed in the table below. When any of them is worn, you need to purchase or replace it;

This equipment can cope with different scenarios through different optional accessories, which you can purchase through suppliers or manufacturers.

Consumables	Optional Accessories
brushed dial, Absorbent rubber brushed dial, Absorbent rubber	Lithium battery, lead-acid maintenance-free battery

Chapter 2 Installation

2.1 Unloading

Caution:

Please remove the outer packaging carefully to avoid damaging the machine shell;

It is recommended to keep the packaging boxes of related products after receiving the goods, so that the machine can be repackaged later when the equipment is moved or returned or exchanged;

It is prohibited to violently unload the machine from the pallet to avoid damaging the parts;

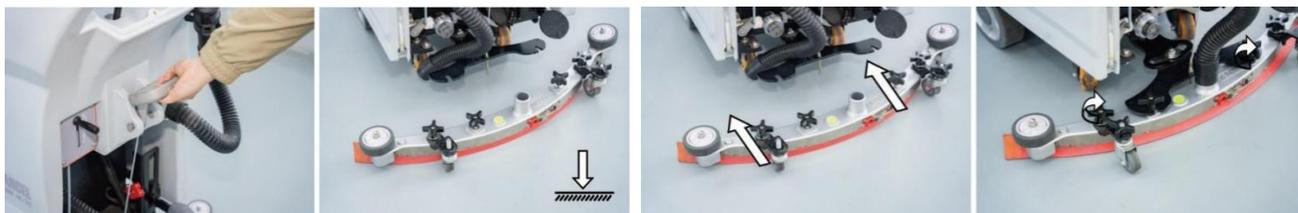
Place the unloading wooden pallet, remove the wooden blocks that fix the big wheels, and then move the machine backwards to unload the equipment from the pallet.

2.2 Installation

2.2.1 Squeegee installation

Step 1: Pull down the Squeegee lifting handle, and lowered the Squeegee tail to the ground;

Step 2: The Squeegee pick fixed screw through the Squeegee tail hole eye, use the plastic knob to tighten;



2.2.2 Connecting suction pipe

Step 1: Open the sewage tank and insert the suction pipe;

Step 2: insert the cone opening of the suction pipe , while the other side insert the suction port.



2.2.3 Connecting the battery cables

Step 1 : Lift the seat and check whether the wire harness on the battery is connected and tightened ;

Step 2 : Connect the disconnected battery poles in series. Note that the positive (+ port is red and the negative (-) port is black. After the connection is completed, put down the sewage tank.



Chapter 3 Inspection before use

3.1 Check

3.1.1 Check clean water level

⚠ Caution:

Please Observe water level in the solution tank through the clean water level tube.

ensure that there is sufficient water, and avoid using the suction motor when there is no water. Otherwise, the motor may take in dust. In severe cases, the noise of the suction motor will become louder or the suction power will be insufficient.



3.1.2 Check sewage level

⚠ Caution:

Please pay attention to the sewage water level. When it reaches the float position of the sensor, the suction motor will stop working. Please discharge the sewage in time.



3.1.3 Check the battery

After turning on the power key switch, the battery meter will display the current voltage of the battery. When the voltage is about 21V or there's one last bar, please charge it in time.



⚠ Caution:

During the use of the battery, deep discharge will cause the battery capacity to decrease and its life to be shortened. For example: the battery is often used below 21V and is not charged in time.

3.1.4 Check the wear of the rolling brush

Place the rolling brush on the ground. If the length of the bristles (root to ground) is less than 1.8cm, please replace the brush in time. For details.



3.1.5 Check the wear of the rubber strips

Check whether the strips are damaged, deformed, aged or cracked.
If so, please replace them in time.

⚠ Caution:

When the machine retreats, turn off the suction button and raise the squeegee to prevent deformation of the rubber strips and squeegee sheet metal parts.



3.2 Adjust

3.2.1 Adjust Squeegee

Adjust Squeegee: rotate squeegee universal wheel nut can rise and down squeegee , need to adjust the two sides of the wheels to the level of squeegee and the tape comprehensive normal touch the ground.



Chapter 4 Operation instructions

4.1 Driving

When it off, lift the-brushed dial and squeegee can be implemented.

Start the power switch, put down the brush dial and squeegee, start the brush dial and squeegee button, can be pushed forward.

4.2 Scrubbing

Step 1: step the brush dial and lift the foot rod, the brush dial down, until to the ground

Step 2: pull the squeegee handle, and put the squeegee to the ground

Step 3: open the key switch, Power on the whole machine;

Step 4: rotate the multigear switch to suction / brush / suction + brush , can enter the corresponding mode to start work.

⚠ Caution : Avoid stopping the machine in the same place for a long time with the brush plate working, as this will leave unnecessary marks on the ground.



4.3 Discharging sewage

Step 1 : Push the machine to a site that meets the sewage discharge standards,



stop the machine, and turn off the power;

Step 2: Remove the sewage tube from the clamp at the rear of the machine, place it downwards, open the tube cover, and discharge the water. The inner wall of the tank can be appropriately rinsed with clean water.

⚠ Caution: When flushing the recovery tank, do not splash water into the suction port to prevent the suction motor from burning out.

4.4 Shutting down

Step 1: Empty water in both tanks;

Step 2: Drive the machine to a flat ground;

Step 3: Turn off the power switch and remove the key;

Step 4: Lift the brush dial and squeegee.

⚠ Caution: If the machine will not be used for a long time, it needs to be fully charged in advance, and as shown in the figure below, you should cut off the connecting wires on the battery and wrap them with insulating tape to prevent the battery from losing power due to long-term non-use.

4.5 Charging

- The power system of this floor scrubber is composed of two 12V maintenance-free lead-acid batteries or one piece of 24V lithium battery connected in series, and the system voltage is 24V;
 - When the machine has been operating for a period of time, the battery power will drop. When the last two bars of the power meter are red, or the voltage is lower than 21V, it means that the power is insufficient and needs to be charged in time;
 - When maintaining the battery, please wear protective gloves to avoid contact with acidic substances of the battery;
 - Check whether the battery connection wire is worn and whether the contacts are loose, and replace it if necessary;
 - The battery terminals should be kept clean and dry, without debris and dust covering them, otherwise it will be extremely detrimental to the battery, and in serious cases, it will burn the battery;
 - In order to ensure that the battery has a long service life, it should be charged in time after the machine finishes working, but deep discharge is strictly prohibited;
- Correct charging method of lead-acid battery: first connect the machine charging port, and then connect the city power; when it full, disconnect the city power first, and then disconnect the machine charging port;
- When the machine is not used for 15 days, please fully charge the battery and store the battery with the positive pole (+) disconnected.

⚠ Caution: In addition to lead-acid maintenance-free battery, the brand battery is also divided into liquid and lithium; lithium battery



has undervoltage protection function, when the machine voltage is less than 21V, it will automatically cut off the power, and prohibit to use the equipment, then you need to charge in time, and continue to use.

Chapter 5 Cleaning and maintenance

Proper cleaning and maintenance will increase the service life of your machine, so please check and clean the machine regularly.

5.1 Cleaning

Step 1: Check and clean the wheel set and remove entangled objects;

Step 2: Clean the sewage tank and sewage tubes regularly, and use water to flush the dirt in the tank and blockages in the tubes;

Step 3: Clean the dirt under the rubber strips regularly, and wipe the strips with a cotton rag;

Step 4: Check the water filter regularly. When there are impurities in the transparent cover, rotate and unscrew the cover, and rinse it and the filter screen repeatedly with clean water.

 **Caution:**

The machine is not a tightly waterproof device. Do not flush the machine directly with water in that it may cause a short circuit in your machine or burn out the original electrical components.

5.2 Maintenance

5.2.1 Replacement and installation of brush plate

Step 1: Park the machine on a flat ground,, step brush plate and lift the pedal, and lift the brush plate to ensure that the brush plate will not fall;

Step 2: Turn on the key switch, press the discharge button, the brush plate will automatically fall off; when installing the brush plate, place the brush at the bottom of the brush plate motor, ensure that the brush plate at the flange, hands lift the brush upward, rotate it in any direction, release the hands to confirm that the brush is not fall, and complete the installation.



5.2.2 Replacement and installation of rubber strips

Step 1: Pull down the squeegee, handle down the suction scraper; Turn the four orange cross knobs counterclockwise, take out the absorbent assembly and remove the universal wheel;

Step 2: Unscrew the black cross screw on the left side of the squeegee counter clockwise, and remove the squeegee and the rear rubber strip successively; pull out the absorbent plastic inner teeth, and take out

The front rubber strip;

Step 3: Take out the new front rubber strip (pay attention to distinguish the front and rear rubber strip, the edge of the front rubber strip has a uniform distribution of water inlet grooves), and put it into the main card slot of the absorbent scraper.

Then insert the plastic inner teeth into the body of the suction strip, and pay attention to the inner teeth

Step 4: the outer edge of the convex and the middle hole of the rubber strip one by one; After removing the tape, Ensure that the holes of the rubber strip are aligned with the protruding of the plastic inner teeth, so that the rubber strip is attached to the plastic inner teeth;

Step 5: Take out the squeegee, align the hole of the strip and the plastic inner tooth protrusion, and stick into the body of the squeegee; turn the black cross screw clockwise,

Compacts absorbent strip and adhesive strip.

Step 6: Finally, tighten the four orange cross knobs on the squeegee clockwise, and fix the tight universal wheel and the swing tail of the squeegee, then complete the installation of the rubber strip.



Chapter 6 Transportation and Storage

6.1 Transportation

If the machine and the accessories need to be lifted, it is recommended that you put them on a pallet and lift them with a forklift. And water in both tanks must be emptied when transporting the machine;

In order to prevent slipping and damage caused by collisions during transportation, please ensure that the binding should be firm and the center of gravity should be stable to ensure safety. For transportation vehicles whose surfaces are in contact with the machine, both surfaces should be packed with soft pads or hard cardboard;

Lightly load and unload. Do not let the machine fall, roll, be pressed, etc. or turned upside down.

6.2 Storage

Before storing the machine, clean the machine, see [Chapter 5, 5.1 Cleaning] for details;

For machines that will not be used for a long time, anti-rust treatment should be done before storage. Check the easily corroded parts, and apply butter;

If the machine will not be used within 7 days, store the machine fully charged in a clean, dry and away from flammable places;

If the device is not used for a long time, fully charge the device battery, then disconnect the battery connector, and store the battery at room temperature above 0 degrees. It is required to charge it once a month;

In areas with lower temperatures, clean water and sewage need to be emptied to prevent the water tank from cracking due to water freezing.

Chapter 7 Common faults

Fault	Phenomenon/Part	Troubleshooting	Solution
Charging failure	Charger failure	If the charger is not connected to the machine, see whether the green light will be on. If the machine is plugged in, the red light is on, and the built-in fan of the charger does not run	Replace the charger
	Charging interface oxidation	Whether there is any obvious oxidation trace on the copper interface	Clean the charging interface oxide
Suction motor not working	Switch	Turn on the switch and check if the switch light is on	Replace the switch
	Connector	Check whether the connector is tightly inserted or has fallen off	Tighten the connector
	Controller	Check whether the controller screws and terminals are tight	Contact customer service center
	Suction motor	Use a multimeter to measure whether there is voltage at the input end of the suction motor	
Brush motor not working	Switch	Turn on the switch and check if the switch light is on	Replace the switch
	Connector	Check whether the connector is tightly inserted or has fallen off	Tighten the connector
	Controller	Check whether the controller screws and terminals are tight	Contact customer service center
	Brush motor	Use a multimeter to measure whether there is voltage at the input end of the brush motor	
Water not coming out	Clean water tube	Whether there is any scale in the transparent tube of the clean water tube	Clean clean water tube
	Filter	Whether there is dirt on the filter	Clean filter
	Solenoid valve	Measure whether the solenoid valve has input voltage	Check the input voltage of the solenoid valve. If it is normal, remove it and clean the blocked part. Replace the solenoid valve if necessary.
Loud noise	Resonance of rubber strips and sewage suction port	1. Is there any abnormal sound when the rubber strips are lifted? 2. Is there any obvious vibration in the water absorbing tube?	Adjust the height of the squeegee mecanum wheels
	Suction motor	1. Is there any abnormal sound when the rubber strips are lifted? 2. Is there still any abnormal sound after the water absorbing tube is pulled out?	Replace the suction motor
Adjust the height of the squeegee mecanum wheels	Adjust the height of the squeegee mecanum wheels	Adjust the height of the squeegee mecanum wheels	Adjust the height of the squeegee mecanum wheels

Replace the suction motor	Replace the suction motor	Replace the suction motor	Replace the suction motor
The machine not sucking water properly	Floating ball cage clogged	Check the floating balls in the cage	Need extra attention in daily use
	Tube blocked	Clean the water suction tube	Need daily cleaning and maintenance
	Recovery tank sealing circle	Sealing circle aging	Replace accessories
	Squeegee	1. Whether the strips are cracked, aged or deformed 2. Whether the strips are wavy	1. Adjust the angle of the squeegee and the height of the universal wheel of the squeegee; 2. Replace the rubber strips
Machine not walking	Solenoid brake	Check the solenoid brake gear when the machine is turned off to see if it is not the downward gear	Contact customer service center
	Accelerator pedal	1. Shortly connect the accelerator pedal connector plug. If the machine can move, there is something wrong with the accelerator pedal. 2. The fault light flashes 7 times.	
	Controller	Use a multimeter to measure whether there is input voltage to the controller	
	Driving axle	Use a multimeter to measure whether there is input voltage to the driving axle	

Warranty Card

Name		Tell	
Postal address		Bill No.	
Purchase time		Number	
Product model		Date	
Replace accessories			
Fault description			

