

Hand Push Self-propelled Scrubber Instruction Manual



Please read this manual carefully before use

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Chapter one Precautions

This machine is suitable for industrial and commercial purposes. It is specially used for cleaning the hard floor in the room without other purposes. Please always use the recommended Baijie pads and brushes, as well as a commercially available floor cleaner for this machine.

The following is an explanation of the safety warning symbols and safety precautions used in this manual

Warning: Used to warn against the risk of serious injury or death or unsafe operations.

safety reasons: Point out the precautions that must be followed during the use of this machine to ensure safety

If the following warnings are not followed: May cause personal injury, electric shock, fire or explosion.

Warning: Fire or explosion danger

1. Do not use flammable liquids. Do not operate machines that are close to or located at places with flammable liquid, gases or flammable dust.

2. This machine is not equipped with an explosion-proof motor. If this machine is used in a place with flammable gases, liquids, or dust, the electric motor may generate sparks during startup and operation, which may lead to flash fire or explosion.

3. Do not pick up flammable materials or active metals.

4. The battery releases hydrogen gas. Please stay away from sparks or open sources of ignition, and ensure that the battery compartment is open during charging.

Warning: Electric shock danger, please disconnect the wire connection cable before repairing the machine.

Warning: When the rotary brush is running, do not approach it with both hands. Please turn off the power before repairing the machine.

The following information indicates situations that may pose potential hazards to operators or equipment:

For safety reasons:

1. Do not operate the machine:

①. Lifting flammable liquids or near flammable gases, otherwise it may cause explosion or flashing fire.

②. Unless trained, understand the operating manual.

2. Before starting the machine:

①. Please make sure that all security settings are located and operated correctly.

3. When using the machine:

① Please walk slowly when encountering slopes and slippery surfaces.

② wear non-slip shoes.

③ Please slow down when turning.

④ machine damage or malfunction should be reported immediately.

⑤ Do not let children play on the machine.

⑥ Follow the mixing ratio and handling instructions on the chemical container.

4. When leaving or servicing the machine:

①. Park the machine on a stable ground.

②. Turn off the power

5. When servicing the machine:

①. Avoid moving parts, and do not wear loose tops, shirts or sleeves.

②. Before operating the machine, please disconnect the battery wiring.

③. Please wear protective gloves and eye protection equipment when handling the battery or battery wiring.

④. Avoid contact with battery liquid acid.

⑤. Do not flush the machine with high-pressure spray or water pipe.

⑥. Use replacement parts provided or approved by the manufacturer.

⑦. All maintenance must be carried out by qualified maintenance personnel.

⑧. Do not modify the original design of the machine.

6. When moving the machine:

①. Please turn off the power.

②. Do not carry the machine when the battery is installed.

③, please move the machine with the assistance of others,

④ When loading and unloading the machine from a truck or trailer, please use the recommended loading and unloading leveler.

⑤. Use ropes to fix the machine on the truck or trailer.

⑥. Lower the brush head to the lowered position.

Chapter two Receiving Machine

Unpack the machine:

1: Check the list of goods, if there is anything missing, please contact the seller.

Cargo configuration:

- Two 12V batteries—standard configuration
- A 24V battery charger—standard configuration
- A set of battery cable—standard configuration
- A pair of water-absorbing adhesive strips—standard configuration
- One ground brush—standard configuration
- A dial—standard configuration
- Other accessories—purchased separately

2: To unpack the machine package, first remove the shipping fixtures and ropes that fix the machine on the warehouse. With assistance, carefully unload the machine from the warehouse.

Note: If the loading and unloading platform is not used, do not push the machine directly to avoid damage to the machine.

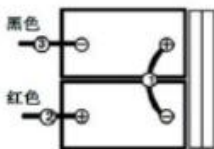
Note: To avoid damage to the machine, please remove the machine from the warehouse before installing the battery.

Install the battery:

WARNING: Fire or Explosion Hazard, Hydrogen Gas Released from Batteries. Keep away from sparks or open fire. The battery cap must be kept open while charging.

FOR SAFETY: When servicing the machine, wear protective gloves and eye protection when handling the battery and battery wiring. Avoid contact with battery fluid acid.

- Park the machine on a level surface and remove the key.
- Lift the recovery tank to expose the accessible battery compartment.
- Carefully install the battery in the battery compartment lock and connect the battery cables as shown in the diagram below.



Note: Do not throw the battery into the battery compartment to avoid damage to the battery and the machine.

4. Before connecting the battery, please make sure that the electrodes and terminals are clean. Use electrode cleaning solution and wire brushes as needed.

Note: Apply a thin layer of metal-free lubricant or protective spray to the connected wires to prevent battery corrosion.

After the battery is installed, please check the power scale of the battery meter and charge the battery if necessary.

Chapter three Machine cleaning method

Cleaning method: Manually control the water valve to adjust the amount of water that the cleaning fluid (water and detergent) flows to the ground. The brushes use a solution of detergent and water to clean the floor, and the squeegee sucks the dirty water from the floor into the recovery tank while the machine advances.

Chapter four Brushes and Pads Information

To ensure optimum performance, use the correct type of brush for the cleaning job. Recommended brushes and scouring pads are as follows:

1. Soft nylon brush (white)

Recommended for cleaning coated floors without damaging the floor, cleaning without leaving scratches.

2. White scouring pad polishing pad (also called polishing pad)

For maintaining highly glossy or polished floors.

3. Red scouring pad polishing pad (also called buffer pad)

For scrubbing light dirt without damaging the floor.

4. Black scouring pad polishing pad (also called gravity folding pad)

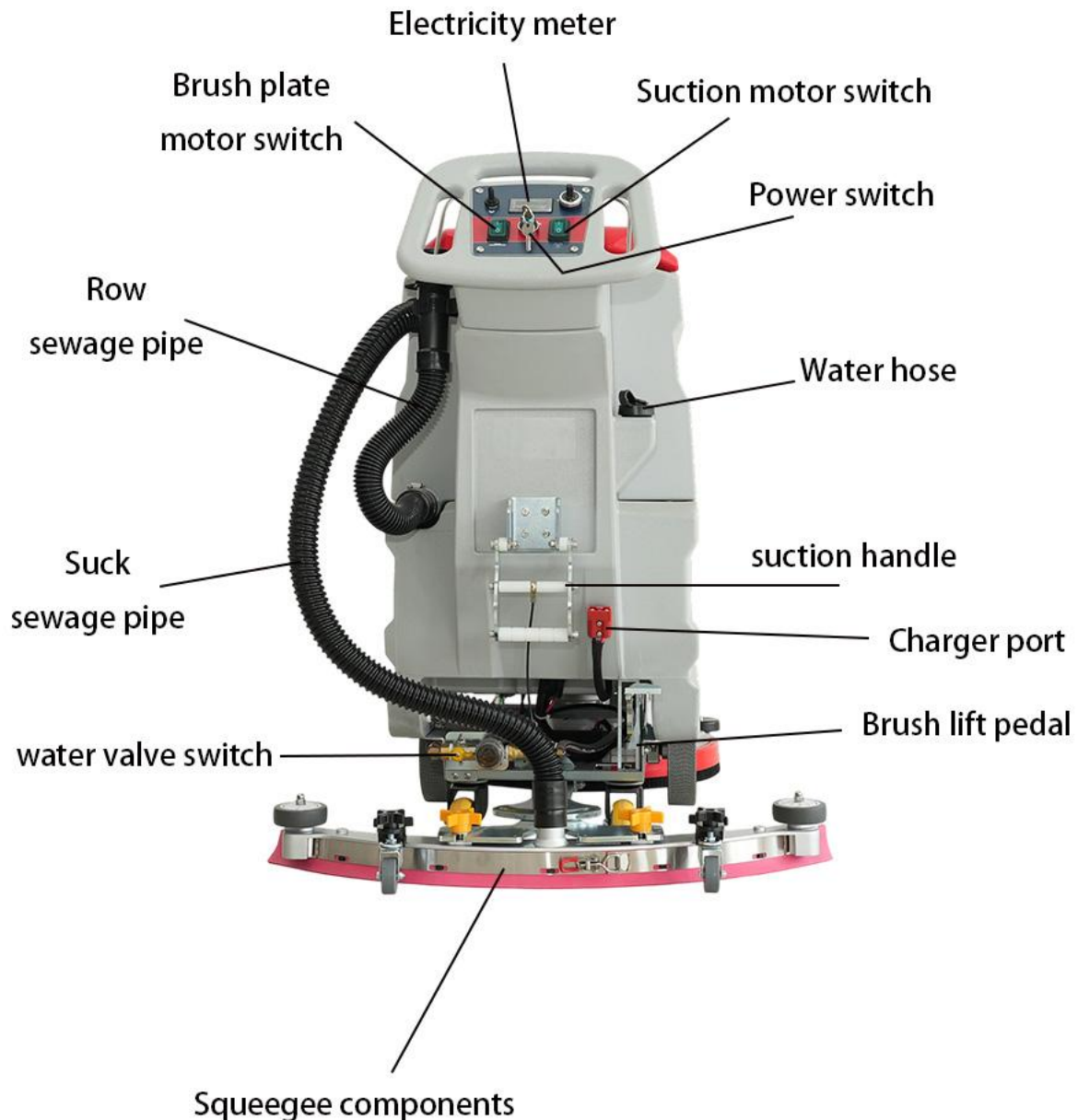
Use for heavy lifting of heavy coatings or substrates, or for extra-aggressive scrubbing.

Chapter five Machine Installation

- Attaching the squeegee assembly
- Park the machine on a level surface and remove the key.
- Lower the squeegee head lift lever to the down position.
- When installing the squeegee on the squeegee mounting bracket, be sure to fully place the fastening knob in the socket before tightening the knob.
- Connect the suction hose to the squeegee assembly.
- Check the squeegee blades and make appropriate adjustments.
- Install brushes/pads
illustrate:
 - Check with your local authorized dealer.
 - Park the machine on level ground and remove the key.
 - Press and hold the pad head lifting pedal to raise the pad head off the ground.
 - Align the dial/brush mounting stud with the buckle of the motor drive disc, and press the brush motor switch.
 - If you want to remove the dial and the brush, step on the brush head lifting pedal to lift the brush head off the ground, and press the brush motor switch.

Chapter six Description of machine parts





Chapter seven Machine Operation

FOR SAFETY: Do not operate machine until operator's manual has been read and understood.

WARNING: Risk of fire or explosion, do not operate the machine near or in places with flammable liquids, gases or flammable dust.

1. Check before operation

- Clean the dust on the ground.
- Check the charge scale on the battery charge gauge.
- Check the brush head skirt for wear, and the pad/brush for wear.
- Check the wear of the absorbent rubber strip and adjust the angle appropriately.

- Make sure the recovery tank is empty and has a clean floating filter installed.
2. Operate the machine
- Turn on the power switch of the machine
 - Step on the lifting pedal of the brush plate to lower the squeegee head to the ground
 - Pull down on the squeegee lift lever to lower the squeegee head assembly to the ground
 - Turn on the clean water control knob
 - Press the switch of the brush motor, then press the switch of the suction motor
 - Start driving the machine for cleaning
 - Note: It is recommended to use a cleaning speed of 45-60 meters per minute

3. During the operation of the machine

WARNING: Fire or explosion hazard, do not pick up flammable materials or reactive metals.

- Each cleaning path overlaps by 5 cm
- Make the machine continue to walk so as not to damage the ground
- Do not operate the machine on slopes with a slope exceeding 5%
- FOR SAFETY: When using machine, move slowly on slopes and slippery floors.
- If it is necessary to add detergent to cause too much foam, it is recommended to pour the defoamer solution into the sewage tank before use.

Note: Discharge the sewage in time every time you work, do not suck the foam into the suction port, so as not to damage the vacuum motor. Foam will render the float assembly ineffective.

- Use double cleaning to clean extremely soiled areas. First raise the squeegee head to clean, let the solution soak for 3-5 minutes, then lower the squeegee and clean again.
- Replace or rotate the pad as needed.
- Observe the power consumption of the battery.
- Observe the remaining liquid through the level gauge of the clean water tank. The traditional washing method uses 10 liters per 10 minutes.
- When the solution in the fresh water tank is used up, empty the dirty water tank first and then refill the solution.
- When the staff leaves the machine, please park the machine on a level ground and take out the key.
- After cleaning, perform daily maintenance procedures.

4. Battery meter

The battery charge gauge will display the battery level, and all the indicator lights will light up when the battery is fully charged. As the battery runs out, the lights will turn off in sequence from right to left. To prolong battery life, do not allow the light to go off to zero.

Note: In order to prolong the life of the battery, please charge the battery after the machine has been used for more than 30 minutes.

Chapter eight Water tank drainage

The recovery tank should be drained and cleaned after each use. The solution tank should be cleaned regularly to remove any corrosion. Move the machine to the drainage place, turn off the power, and follow the steps below:

1. Discharge sewage tank

- Unscrew the recovery tank drain cap by turning it counterclockwise and remove it.
- Open the recovery tank cover and flush the tank.
- Remove and rinse the floating filter located in the recovery tank.

2. Drain clean water tank

Note: Customers in the northern region need to empty the sewage tank in time when the machine is not in use in a cold environment, so as to prevent the water tank from freezing and affect the normal operation of the machine.

Chapter nine Battery Charging

Note: In order to prolong the life of the battery and ensure the best performance of the machine, the battery must be charged after the machine has been used for at least 30 minutes. Do not leave the battery uncharged for a long time. The charging instructions below are for the charger that came with this machine. Please be sure to use the charger with the following specifications to avoid damage to the battery.

Charger Specifications:

- Charger type—lead-acid battery charger
- Output voltage—24V
- Output current—15A
- Automatically disconnect the circuit after fully charged
- Suitable for deep cycle battery charging

Move the machine to a well-ventilated place for charging.

WARNING: Fire or Explosion Hazard. Hydrogen gas is released as the battery charges. Keep away from sparks or open fire. The battery compartment must be kept open while charging.

Park the machine on a level surface and turn the key to the off position.

For safety reasons: When servicing the machine, please wear protective gloves and eye protection when handling the battery and battery wiring to avoid contact with battery liquid acid.

When charging, please open the sewage tank to the side for ventilation.

Plug the charger's AC (alternating current) power cord into a properly grounded electrical outlet.

Plug the charger's DC (alternating current) power cord into a well-grounded battery charging outlet.

The charger will automatically start charging and will automatically shut off when fully charged.

WARNING: Do not open the battery compartment in case of fire or explosion.

Chapter ten Machine maintenance

1. To really abide by the daily, weekly and monthly maintenance procedures, the machine can be kept in the best working condition.

2. Regularly (monthly/weekly) clean the squeegee assembly, suction pipe/drainage pipe assembly, and machine water filter to keep all piping systems in optimal working condition at all times, and replace consumables regularly. .

3. Regularly clean the filter element of the suction motor at the floating ball port according to the working environment to prevent the garbage from clogging the filter and affecting the work of the suction motor if it is not cleaned for a long time. Install any components and close the float cap tightly.



Warning: Danger of electric shock, please disconnect the battery cable before maintaining the machine.

1. Daily maintenance (after each use)

- Drain and clean the recovery tank.
- Remove and rinse the floating filter located in the recovery tank.
- Drain the solution tank and wash it with hot water no higher than 60 degrees if necessary.
- Remove the scouring pad and brush for cleaning. Turn over or replace pads if worn.
- Wipe the water-absorbing rubber strip and raise the water-absorbing rubber strip to prevent the rubber strip from being damaged.
- Check the wear of the edge of the water-absorbing rubber strip. If there is any wear, reverse the two ends of the rubber strip.
- Wipe down the machine with an all-purpose cleaner and a damp cloth. For safety, when cleaning the machine, do not spray or hose down the machine with high pressure. In order not to cause electronic parts failure.
- Check brush head skirt for wear and replace if worn or damaged.
- Charge the battery. In order to prolong the life of the battery and ensure the best performance of the machine, the battery must be charged after the machine has been

used for at least 30 minutes.

2.Monthly maintenance

- Remove the solution tank filter from under the machine and clean the screen, making sure to empty the solution tank before removing the filter.
- Clean the top of the battery to prevent electrode corrosion.
- Check if the battery cable is loose.
- Check and clean the sealing strip of the waste water tank cover and replace if damaged.
- Spray silicone dry lube on all pivots and rollers, and cover with a water-resistant lube to keep the axles running smoothly.
- Check whether the nuts and bolts on the machine are loose.
- Check the machine for leaks.

3.Quarterly maintenance

- Check the drive motor, vacuum motor, and brush motor for wear every 250 hours. When the length of the carbon brush is worn within 10 mm, the carbon brush needs to be replaced. To send the machine in for repair, please contact an authorized service center.

WARNING: Risk of electric shock. Please disconnect the battery cable before servicing the machine.

Chapter eleven Handling Machine

- Be sure to follow the following lashing procedures when moving the machine on a truck or trailer
- Raise the brush head to the transport position.
- Use the recommended loading pad to load the machine.
- Place the front of the machine against the front of the truck or trailer. After the machine is in place, lower the brush head and turn off the power.
- Place a block behind each drive wheel to prevent the machine from sliding.
- Use a rope to secure the top of the machine to prevent tipping. You must mount brackets on the bed of the truck or trailer. **FOR SAFETY:** When moving machine, use the recommended dock to load and unload machine from truck or trailer and secure machine to bed with ropes.

Chapter twelve storage machine

- Please charge the battery before storage, and never store it when the battery is exhausted.
- Thoroughly drain and rinse the sink tank inside the sink.
- Store the machine in a dry place with the brush head in the raised position.

- Open the recovery tank cover to ventilate. Note: Do not expose the machine to rain, store it indoors.
- If the machine is stored in a cold environment, please make sure to drain all liquids inside the machine.

Chapter thirteen Storage Machine

Question	Reason	Solution
Machine not working	battery no power	Battery charging
	battery failure	Change battery
	battery connection is loose	Tighten the battery wires
	controller damage	Replace the controller
Brush motor not working	Brush head raised off the ground	Lower the brush plate
	Battery gauge locked and not activated	Battery charging
	Brush motor circuit breaker tripped	Reset brush circuit breaker button
	Motor carbon brush wear	Please contact the service center
vacuum motor not working	Squeegee raised off the ground	Lower the suction motor
	Vacuum motor fuse blown	replace fuse
	Vacuum motor or wiring failure	Please contact the service center
	Motor carbon brush wear	Please contact the service center
Little or no water outflow	Solution tank filter or solution line clogged	Clean the solution tank filter
	Flow control knob flow rate setting too low	Adjust the water flow control knob
	Loosen control knob screw	Lubricate the locking screw behind the knob
Low water absorption efficiency	Sewage tank full	Drain Sewage tank
	Absorbent tape wear	Replace the absorbent strip
	Suction pipe clogged	Eliminates clogging debris
	Damaged waste water tank	Replace the seal

	seal	
	Vacuum motor failure	Please contact the service center
short running time	battery is defective	Change Battery
	Battery charging failure	Repair or replace the charger

Chapter thirteen Technical parameters

Model		530
voltage	V/AH	24/100
Brush motor	W	500
Suction motor	W	400
cleaning width	mm	530
Squeegee width	mm	830
Theoretical Cleaning Efficiency	m2/h	2300
power	W	900
Ground speed	Rpm	195
Clean water tank capacity	L	50
Sewage tank capacity	L	55
Machine weight (including battery)	Kg	175
Overall size	mm	1400*830*1120mm

