

OPERATOR'S MANUAL
E-MOTOR 300X SELF-PROPELLED
WALK BEHIND FLOOR SCRUBBER
AUTOMATIC SCRUBBER



Please always operate or use the machine with manual accordingly.

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1. MATTERS NEEDING ATTENTION


This machine is suitable for industrial and commercial purposes. It is specially used for cleaning indoor hard floors and not for other purposes. Please always use the recommended scouring pads and brushes, as well as commercially available floor cleaners suitable for this machine.

Please ensure that you have read this manual in its entirety before operating or repairing the machine.

This machine will provide excellent service. However, the best results will be obtained at minimum costs if:


- The machine is operated with reasonable care.
- The machine is maintained regularly - per the machine maintenance instructions provided.
- The machine is maintained with manufacturer supplied or equivalent parts.


The following describes the safety WARNING symbols and headings used in this manual for safety reasons:


 WARNING: To warn of hazards or unsafe practices that could result in severe personal injury or death.

FOR SAFETY: To identify actions that must be followed for safe operation of equipment.


The machine is NOT suitable for rain or underwater operations. Strictly prohibited!


 WARNING: Batteries emit hydrogen gas. Explosion or fire can result. Keep sparks and open flame away. Keep covers open when charging.

 WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s).

 WARNING: Flammable materials or reactive metals can cause an explosion or fire. Do not pick up.

The battery compartment must be opened when charging.

 WARNING: There is a risk of electric shock. Please disconnect the battery cable before servicing the machine.

 WARNING: The rotating brush runs, keep your hands away, and turn off the power before servicing the machine.

The following example information points to situations that may cause potential hazards to operators or equipment:

FOR SAFETY:

1.1: Do not operate the machine:

- ① Remove flammable liquid or close to flammable gas, otherwise it may cause explosion or flash fire.
- ② Unless trained, understand the operation manual.

1.2: Before starting the machine:

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

1.3: 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 The machine damage or operation failure 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.

1.4: When leaving or repairing the machine:

- ① Park the machine on a stable ground.
- ② Turn off the power.

1.5: When repairing the machine:

- ① Avoid moving parts, do not wear loose tops, shirts or sleeves.
- ② Please disconnect the battery wiring before operating the machine.
- ③ Wear protective gloves and eye protection equipment when handling the battery or battery wiring.
- ④ Avoid contact with battery liquid acid.
- ⑤ Do not use high-pressure spraying or water pipes to flush the machine.
- ⑥ Use replacement parts provided or approved by the manufacturer.
- ⑦ All maintenance must be carried out by qualified maintenance personnel.
- ⑧ Please do not modify the original design of the machine.

1.6: When moving the machine:

- ① Please turn off the power.
- ② Do not move 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, use the recommended loading and unloading level.
- ⑤ Use ropes to fix the machine on the truck or trailer.
- ⑥ Lower the brush head to the lowered position.

2. RECEIVED MACHINE:

Unpack the machine

Please check the following product information, if there is any missing, please contact the staff immediately

●1X Scrubber Machine

●1X 24V Charger

●1X Squeegee

●1X Poly Brush

NOTE:The poly brush is medium duty,not heavy duty. They are suitable for epoxy floor, mirror floor,cement floor, ceramic tile floor etc. **If you need heavy duty brush(steel wire brush), please contact us to exchange or buy a new one. Please check Emotor website: www.emotorscrubber.com**

2.1: Please disassemble the machine package, first remove the shipping fixtures and ropes that fix the machine. With the assistance of others, carefully unload the machine and put it on the horizontal ground.

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

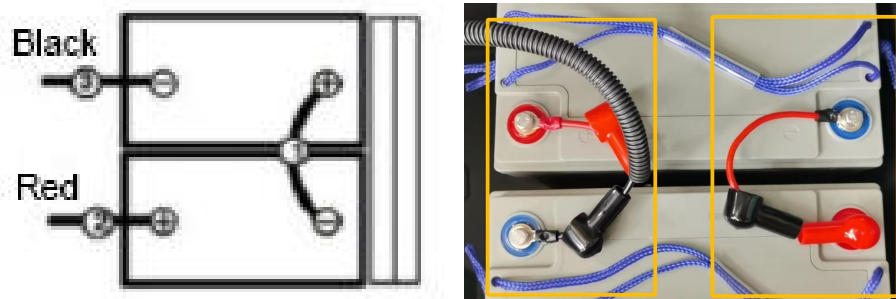
Note: To avoid damage to the machine, please unload the machine from the warehouse before installing the battery.

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

Park the machine on a horizontal ground and take out the key.

Raise the recovery tank to expose the battery compartment.

Please use M13 open end wrench or adjustable wrench to install the battery and connect the battery cable as shown in the figure below.



Note: For safety, gently place the battery into the battery compartment (Forceful throw can be dangerous).

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

Note: Apply a thin layer of non-metallic lubricating oil or protective spray to the connected wiring to prevent the battery from corroding.

After the battery is installed, please check the battery capacity scale of the battery gauge and charge the battery as needed.

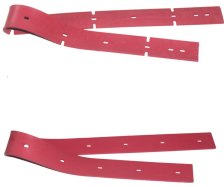


3. MACHINE CLEANING METHOD

Cleaning method: Manually control the water valve to adjust the amount of cleaning fluid (water and detergent) flowing to the ground. The brush uses a solution of detergent and water to clean the floor. While the machine is moving forward, the squeegee scrub and sucks the sewage on the floor into the sewage tank.

4. SQUEEGEES, BRUSHES AND PADS

Note: The following types of brushes and cleaning pads are not the standard configuration of the floor scrubber, you can purchase them according to your cleaning needs.

To ensure optimum performance, use different squeegees for cleaning sewage:

Name	Specification	Sort	Photo	Applicable ground
Squeegee	Front Rubber: 83cm/32.68" Rear Rubber: 85.5cm/33.66" Width: 5cm/2"	Red (Ordinary Rubber)		Epoxy Floor Tile Floor Cement Floor
		Brown (Beef Tendon)		Epoxy Floor, Tile Floor Cement Floor
		Blue (PU Oil Resistant)		Oily Floor Corrosive Floor

Notice:

- 1) The wear resistance and corrosion resistance of the brown strip are about 30% better than the ordinary rubber.
- 2) The blue strip is degreasing and anti-corrosion, but has poor tear resistance and wear resistance.
- 3) Squeegee wear depends on the material of the squeegee and the type and condition of the floor. Inspect the condition of your squeegee blades daily, and rotate or replace the blade when it is worn halfway through.





To ensure optimum performance, use different brushes for cleaning work on different floor surfaces:

Name	Specification	Sort	Photo	Applicable Ground
Brush	20 inches Brush Wire ϕ 0.3mm	Light Duty Brush		New Epoxy Floor, Mirror Tiles Floor, PVC Floor, Plastic Floor, Polished Terrazzo Floor etc.
	20 inches Brush Wire ϕ 0.5mm (The default brush in the package)	Medium Duty Brush		Epoxy Floor, Tile Floor, Marble Floor, PVC Floor, Plastic Floor, Terrazzo Floor etc.
	20 inches Brush Wire ϕ 0.7mm	Hard Duty Brush		Old Epoxy Floor, Cement Floor, Smike Vitrified Tile, Old Terrazzo Floor etc.
	20 inches Wire Brush	Wire Brush		HARD TO WEAR FLOORS Outside floor such as Concrete Floor, Asphalt-Road, Steel Floors With Heavy Oil or Heavy Stains etc.

Note:

- 1) The main brush motor takes a 5-minute break every 60 minutes of operation.
- 2) When using a wire brush, use an all-purpose detergent to reduce brush-to-ground wear, and the main brush motor takes a 5-minute break every 30 minutes of operation.
- 3) The lifetime of a brush is about 3-6 months, which differ from applicable floor and time of use. Please find more brushes or buy a new one on www.emotorscrubber.com

To ensure optimum performance, use different cleaning pads for cleaning on different surfaces:

Name	Specification	Photo	Applicable ground
Buffer Pad Holder	19 inches brush wire φ 1.0-1.2mm		Need to be used with a cleaning pad
Cleaning Pad <i>(the harder the finish, the more aggressive pad you might use)</i>	Soft 19 inches White Scrub Pad		Perfect for light duty scrubbing and/or buffing. Ideal for polishing marble and other smooth flooring surfaces.
	Standard 19 inches Red Scrub Pad		Works great for light-duty cleaning. Designed for general scrubbing. Suitable for Conventional epoxy floor, ordinary floor tiles
	Aggressive 19 inches Black Scrub Pad		Aggressive Cleaning. Suitable for hard surface, removal of wax surfaces, surface with heavy oil or stains

NOTE: Please make sure to properly sweep the area before using these pads to clean or buff an area. Average life of pad is between 8,000-12,000 square feet when used for commercial floor tiles. The aggressive pad may also be used to clean heavily soiled hard surface floors, such as concrete, when used with proper cleaning solutions.

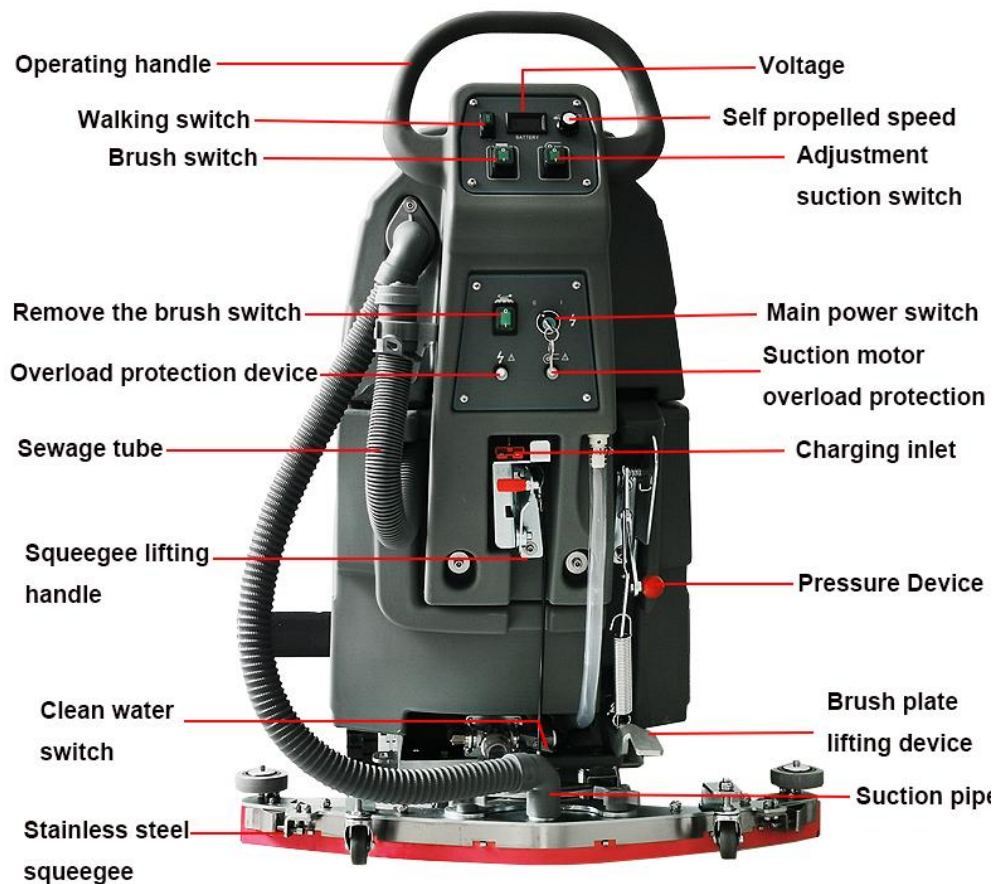
To prolong the life of the product it may be washed using a hose with a pressure spray nozzle to remove soil. To dissolve heavy soil or finish this pad may be soaked in detergent or diluted stripping solution prior to washing.

5. MACHINE INSTALLATION

- Park the machine on a level ground and take out the key.
- Install the squeegee, be sure to place the tightening knob completely in the socket before tightening the knob.
- Lower the squeegee head lift lever to the lower position.
- Connect the suction pipe to the squeegee assembly. Check the squeegee rubber strip and make appropriate adjustments.
- Depress the brush head lift pedal, lift the brush head off the ground, rotate clockwise to install, and turn counterclockwise to unload.

- f. Step on the lifter pedal to put down the brush on the ground. Lift up/down the squeegee.
- g. Align the needle plate/brush mounting pin with the motor drive plate buckle, and press the brush plate motor switch.
- h. Turn on the key , and then turn on the brush switch and water suction switch to start cleaning the floor.

6. MACHINE PARTS DESCRIPTION



7. TECHNICAL PARAMETERS

Technical Parameter	Unit	Emotor 300X
Self-Propelled Motor	W	24V 300W
Brush Motor	W	550
Water Suction Motor	W	500
Battery	AH	2pcs x12V 100AH
Cleaning Width	mm	500
Squeegee Width	mm	830
Theoretical Cleaning Efficiency	m ² /h	3200
Brush Pressure	KG	30-45
Brush Speed	Rpm	180
Clean Water Tank	L	50
Recovery Tank	L	55
Machine Weight (including battery)	Kg	160
Working Noise	DB	68db(A)
Overall Size	MM	1380*550*1120

8. MACHINE OPERATION

FOR SAFETY: Do not operate the machine before reading and understanding the operation manual. Do not try to repair the machine without professional knowledge.



WARNING: There is a danger of fire or explosion. Do not operate the machine near or in a place with flammable liquid, gas or flammable dust.

8.1. Check Before Operation

Clean the junk on the ground. The walk behind scrubber machine is dust remover rather than vacuum cleaner.

Check the power scale of the battery power meter. Please fully charge the battery before using.

Check the wear of the brush head skirt and the wear of the scouring pad/brush.

Check the abrasion of the absorbent rubber strip and adjust the angle appropriately.

Make sure that the recovery tank is empty and a clean floating filter has been installed.

8.2. Operate The Machine

Turn on the power switch of the machine.

Step on the pedal that lifts the brush plate to lower the squeegee head to the ground.

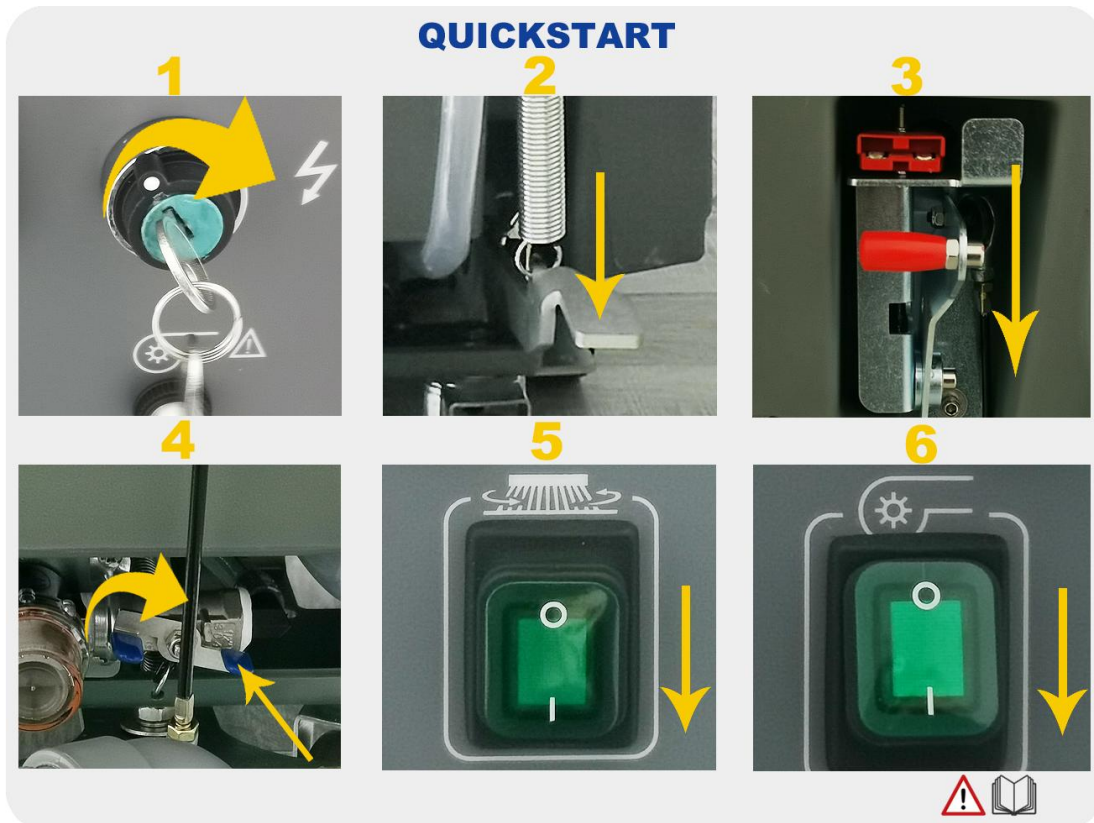
Pull down the lifting rod of the squeegee to lower the components of the squeegee head to the ground.

Turn on the clean water switch(water control knob), and adjust the volume of water outlet.

Turn on the brush motor switch, and then turn on the water suction motor switch

Begin to work, and you can adjust the self-propelled speed during working. It may take a few seconds for the machine take action.

Note: It is recommended to use a cleaning speed of 45-60 meters per minute



8.3. During the operation of the machine

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

Each cleaning path overlaps 5 cm

Keep the machine walking so as not to damage the ground

Do not operate the machine on an inclined surface with a slope of more than 5%

FOR SAFETY: When using the machine, please move slowly on slopes and slippery floors.

If there is too much foam, it is recommended to use a defoamer solution to pour it into the clean water tank.

Note: Do not put foam into the filter screen to avoid damage to the vacuum motor. Foam will prevent the filter switch from taking effect.

Use double cleaning to clean extremely dirty areas. Raise the squeegee head for cleaning, let the solution soak for 3-5 minutes, then lower the squeegee and clean it again.

Replace or rotate the pad as needed.

Observe the power consumption of the battery.

Observe the remaining liquid volume through the clear water tank level gauge. The traditional washing method uses 10 liters per 10 minutes.

When the solution in the clean water tank is used up, first empty the sewage tank 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, carry out daily maintenance procedures.

8.4. Battery power meter

The battery charge gauge will display the battery charge. When the battery is fully charged, all indicator lights will light up. As the battery runs out, the indicator lights will turn off from right to left.

The battery is maintenance-free. In order to keep batteries charged and running smoothly and prolong the life of the battery, please charge the battery timely (Do not allow the battery to drain by more than 80% before recharging it).

Note: Please be sure to charge the battery after the total usage time of the machine exceeds 30 minutes.

9. WATER TANK DRAINAGE

When cleaning is finished, or when the recovery tank full indicator comes on, the recovery tank should be drained and cleaned. The solution tank then can be filled again for additional cleaning.

1. Drive the machine to a solution disposal drain.
2. Turn the machine ON/OFF key switch off.

FOR SAFETY: Before leaving or servicing machine, stop on level surface, and turn off machine.

3. Remove the recovery tank drain hose. While holding the hose up, remove the plug, then slowly lower the drain hose to the floor drain or sink.

4. Lift the recovery tank cover. Flush the inside of the recovery tank with clean water.



WARNING: Flammable materials can cause an explosion or fire. Do not use flammable materials in tank(s).

5. DO NOT use steam to clean tanks. Excessive heat can damage tanks and components.

6. Replace the recovery tank drain hose cap and mount the drain hose back onto the mounting clip after the tank is drained.

10. BATTERY CHARGING

Note: In order to extend 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 following charging instructions apply to the charger that comes with this machine. Be sure to use the charger with the following specifications to avoid battery damage.

Charger specifications:

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



WARNING: Risk of fire or explosion. Hydrogen is released from battery charging. Keep away from sparks or open fire sources. The battery compartment must be kept open when charging.

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

FOR SAFETY: When servicing the machine, please wear protective gloves and eye protection equipment when handling the battery and battery wiring, and avoid contact with battery liquid acid.

When charging, please open the recovery tank side to facilitate ventilation.

Plug the AC (alternating current) power cord of the charger into a well-grounded power outlet.

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

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



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

11. MACHINE MAINTENANCE

Routine maintenance procedures are integral to prolonging machine life and helping you achieve a good return on your investment. Regular maintenance also reduces the likelihood of unplanned equipment downtime due to service or repair needs.

11.1. Check the Batteries

Check to make sure the battery is charged

Inspect the battery terminals to make sure they are free from corrosion

Confirm that there are no loose connections



11.2. Inspect Drain/Hose for Clogs or Leaks

Leftover debris should be removed from the drain and vacuum hose. To backflush the vacuum hose, find the port inside the tank and flush with clean water. This should dislodge any debris.

If there are noticeable cracks or leaks, the hose will need to be replaced.

11.3. Drain Solution and Recovery Tanks

There are two separate tanks on your auto floor scrubber; one for cleaning solution and one to collect the dirty solution that is removed from the floor.

It is imperative that both of these tanks are emptied at the end of every cleaning procedure.

Chemicals left in the solution tank for too long will become ineffective. Additionally, sometimes when chemicals are left they can gel up and block solution/water flow.

Please empty the clean water tank and waste water tank after each use of the scrubber.

To reduce the chance of mold, mildew, and unpleasant odors in your auto scrubber tanks, store the tanks with the lids open.

This allows air to circulate into the tanks, allowing them to fully dry.

11.4. Brush and Squeegee


After each use of the scrubber, please check whether there are entanglements in the scrubber brush; After each use of the scrubber, wipe the surface of the equipment with a wet towel;

Check the height of the scrubber brush from the ground every week (check the scrubber on a level ground).

The screws of the scrubber should be checked every month for looseness, to avoid excessive current in the circuit after loosening, and burn the circuit.

11.5. Maintenance every season

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

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

Inspection	Daily	Weekly	Monthly
Inspect electrical harnesses are not frayed or have exposed wires	<input checked="" type="checkbox"/>		
Check the anti-tip wheel for wear	<input checked="" type="checkbox"/>		
Check the brakes for functionality at lowest speed setting		<input checked="" type="checkbox"/>	
Remove and Clean Floor Pad or Brush	<input checked="" type="checkbox"/>		
Clean Squeegee Assembly		<input checked="" type="checkbox"/>	
Check recovery tank and store tank			<input checked="" type="checkbox"/>
Inspect batteries are free from corrosion		<input checked="" type="checkbox"/>	
Check electronic components is in good condition and well display			<input checked="" type="checkbox"/>

12. TRANSPORTING THE MACHINE

When using a truck or trailer to move the machine, be sure to follow the following bundling procedures

Raise the brush head to the carrying position.

Use the recommended loading dock to load the machine.

Place the front of the machine close to the front of the truck or trailer. After the machine is put in place, lower the brush head and turn off the power.

Place obstacles behind each drive wheel to prevent the machine from sliding.

Use ropes to secure the top of the machine to prevent tipping. You must install brackets on the deck of the truck or trailer. For safety reasons: When moving the machine, please

Use the recommended loading and unloading platform to load and unload the machine from the truck or trailer, and fix the machine on the vehicle plate with ropes.

13. STORAGE THE SCRUBBER

Please charge the battery before storing. Do not store when the battery is exhausted.

Drain and rinse the tank in the sink thoroughly.

Store the machine in a dry place and keep the brush head in a raised position.

Open the recovery tank cover for ventilation. Note: Do not expose the machine to rain, store it indoors.

If you store the machine in a cold environment, please make sure to drain all the liquid inside the machine. Do not store the machine under extreme environment.

14. TROUBLESHOOTING

Problem	Reason	Solution
Machine can't work	The battery is dead	Battery charging
	Battery failure	Replace the battery
	Loose battery wiring	Tighten the battery wiring
	Main fuse blown	Replace the fuse
The brush motor does not work	The brush head rises off the ground	Lower the brush plate
	The battery fuel gauge is locked and does not start	Battery charging
	Brush disk motor circuit breaker triggers a trip	Reset brush circuit breaker button
	Brush (up/down) switch failure	Please contact the service center
	Motor carbon brush wear	Please contact the service center
Vacuum motor does not work	The squeegee lifts off the ground	Lower the suction motor
	Vacuum motor fuse blown	Replace the 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	The filter of the clean water tank or the solution pipe is clogged	Clean the clean water tank filter
	The flow rate setting of the water flow control knob is too low	Adjust the water flow control knob
	Loosen the control knob screw	Tighten the screw after lubricating the knob
Inefficient water absorption	Recovery tank is full	Drain the sewage tank
	Absorbent tape wear	Replace absorbent tape
	Blocked suction pipe	Eliminate clogged debris
	Damaged recovery tank seal	Replace the sealing strip
	Vacuum motor failure	Please contact the service center
Short running time	The battery is defective	Replace the battery
	Battery charging failure	Repair or replace the charger

15. LIMITED WARRANTY

For the Scrubber, the manufacturer guarantee 12 months from the date of purchase for the parts or machine are to be defective in materials or workmanship. The warranties contained herein extend and apply only to the original purchaser. THE WARRANTY DO NOT INCLUDED THOSE DAMAGES CAUSED BY PEOPLE/ANIMALS ON PURPOSE OR BY ACCIDENT.

16. ACCESSORIES INSTRUCTIONS

Accessories Instructions		
Accessories	Quantity (piece)	Refer to Replace cycle
External Charger	1	/
Battery	2	/
Brush Dish	1	3-6 month
Squeegee	1	3-6 month
Cleaning Pad	1	1 month
Center locator	1	3-6 month
Electromagnetic valve	1	3-6 month
Clean water filter	1	3-6 month
Fuse (50A / 80A)	1	6-9 month
Floor buffer pad holder	1	3-6 month
Brush buckle	1	6-9 month
<p>Notice:</p> <p>1) The quick-wear parts of the equipment do not apply to the warranty policy .</p> <p>2) To ensure the best efficiency of the machine, please pay attention to replace the above accessories accordingly.</p>		



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