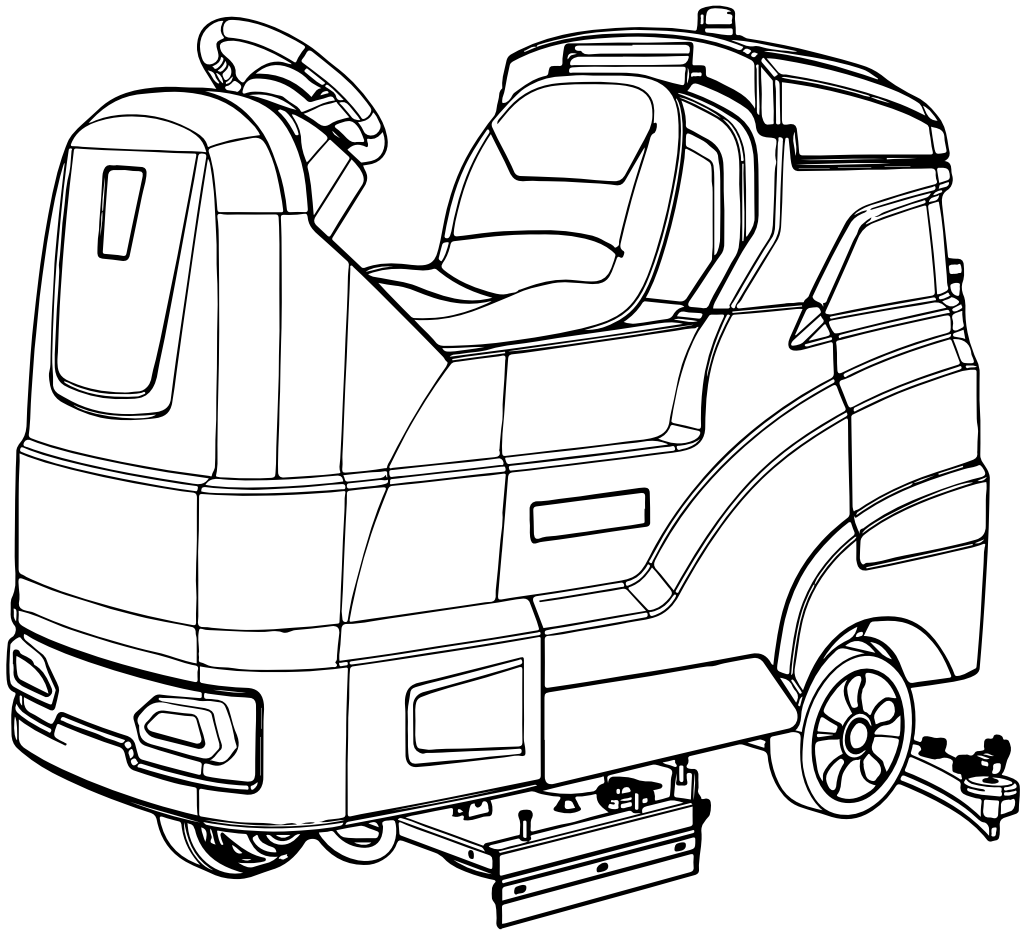
K90

Ride on Floor Scrubber

Operation Instructions



11/2023

Do not use this device without reading this manual.

Preface

Thank you for choosing our cleaning equipment. We are confident to provide you with this equipment, which is produced through the latest technology and strict quality control.

This manual is designed to help you understand the equipment operation and maintenance, so you can have a more comfortable and efficient product experience. Please read through this manual before using equipment.

Safety Precautions

To ensure the safety of you and your device, please follow these important usage rules!
Do not use this device under the influence of alcohol or medication.
Before any maintenance or repair, please turn off all switches.
This machine must be used by qualified and authorized personnel. Minors and disabled persons are not allowed to use it.
Keep sparks, flames, and smoke away from batteries.
Do not use it in places with dangerous, flammable, or explosive gases, liquids, or steam.
Dress appropriately and do not wear loose clothing or jewelry; keep clothing, gloves, and hair away from moving parts.
Please do not smoke while charging the battery.
In the event of a fire, remember to use a powder fire extinguisher rather than water.
Even when the machine is to be dismantled and scrapped, the process must be watched because some harmful substances (such as batteries, waste oil, etc.) meet the standards and should be sent to a specific center for processing.

Safe Use

1. Before using the equipment, please read this user manual carefully, which will ensure that you are familiar with the control and maintenance requirements of the equipment and help you use the equipment safely.
2. If the machine is used by other people, please be sure to hand over the instruction manual together and tell them to read this manual carefully before using it.
While reading this user manual
This manual covers all configurations of this series of products; therefore, you may find that some of the information does not apply to your device.
All information, specifications and illustrations in this manual will be effective once it is published. Our company reserves the right to change specifications or designs without prior notice.
In this manual, we use (⚠) symbol along with the word "Warning" to indicate the existence of a hazard that may result in death or serious personal injury; to avoid or reduce the hazard, the steps must be strictly followed.
In this manual, we use (⚠) symbol along with the word "Caution" to indicate the existence of hazards that may cause minor or moderate personal injury or equipment damage; to avoid or reduce the hazard, the steps must be strictly followed.
A mark similar to this (⬅ ➡) indicates that the arrow points in the direction of the equipment's forward direction.
An arrow similar to this ( )indicates movement or action.

Contents

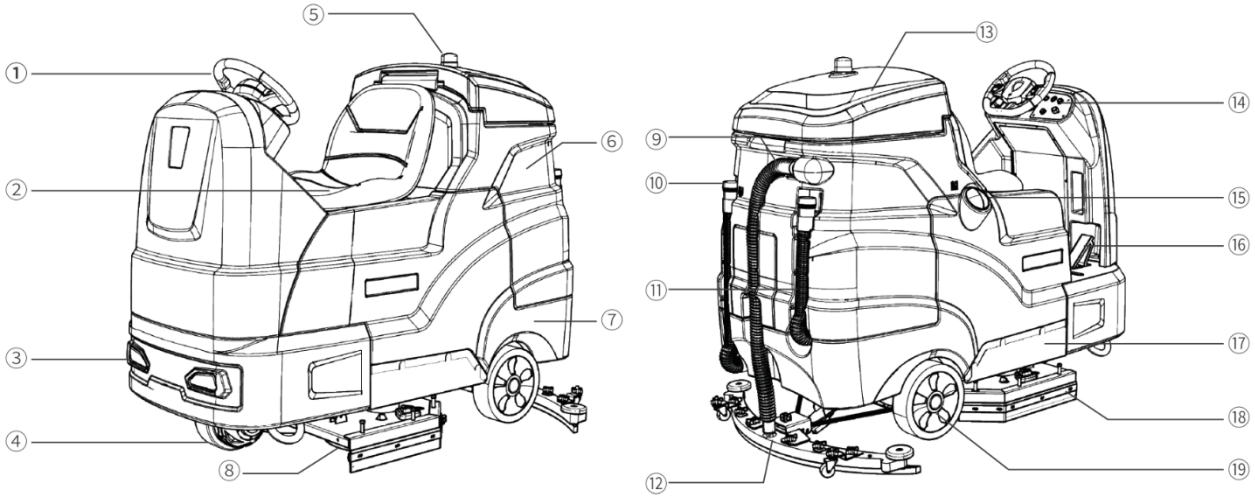
Chapter 1 Product Introduction 1
1.1 Applicable scenarios 1
1.2 Equipment Overview 1
1.3 Controlling panel/Buttons. 2
1.4 Accessories List 2
1.5 Consumables and Optional Accessories 3
Chapter 2 Unloading and assembling the machine. 3
2.1Installing the squeegee 3
2.2 Installation 3
2.2.1 Squeegee installation 3
2.2.2 Connecting the battery cables. 4
3.1 Check the battery. 4
3.2 Check clean water level 4
3.3 Check sewage level 4
3.4 Check the wear of the brush plate 4
3.5 Check the wear of the rubber strips. 5
Chapter 4 Operation instructions 5
4.1 Driving 5
4.2 Scrubbing 5
4.3 Discharging sewage 6
4.4 Shutting down. 6
4.5 Charging 6
Chapter 5 Cleaning and maintenance 7
5.1 Cleaning 7
5.2 Maintenance 7
5.2.1 Replacement and installation of brush plate 7
5.2.2 Replacement and installation of rubber strips 8
5.2.3 Adjustment of the rubber strips 9
Chapter 6 Transportation and Storage 9
6.1 Transportation 9
6.2 Storage 9
Chapter 7 Common Problems 10
Chapter 8 Technical parameters 11
Warranty Card 12

Chapter 1 Product Introduction

1.1 Applicable scenarios

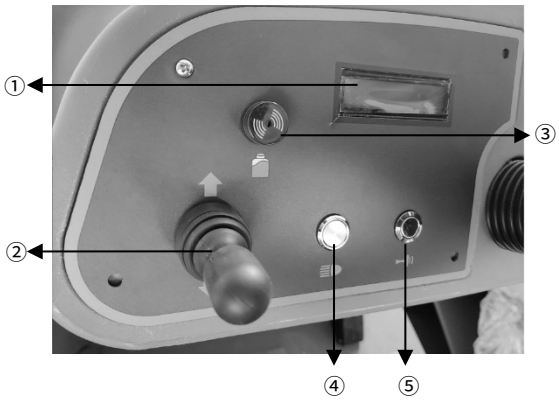
This equipment can be used in a variety of scenarios, including commercial and industrial places , such as hotels, schools, hospitals, industrial offices, supermarkets, office buildings, etc.; for epoxy floors, PVC floors, terrazzo, wear-resistant floors, tiles and cement floors , wooden floors, rubber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

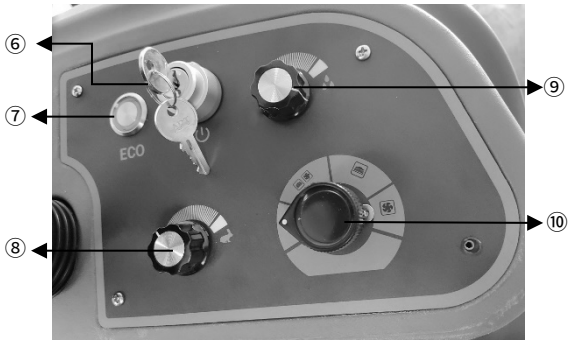
1.2 Equipment Overview



N0.	Name	Function
①	Steering wheel	Control driving direction
②	Seat	Driver's seat
③	Headlight	Lighting in dark environment
④	Driving front wheel	Machine's power driving wheel
⑤	Warning light	When driving, remind pedestrians to pay attention to the vehicle.
⑥	Recovery tank	Store recycled sewage
⑦	Solution tank	Store clean water
⑧	Brush plate	Clean the ground
⑨	Sewage suction tube	Suck ground sewage into the tank
⑩	Draining tube of solution tank	Discharge water from the solution tank
⑪	Sewage draining tube	Discharge sewage from the recovery tank
⑫	Squeegee	Collect and recycle ground sewage
⑬	Sewage tank cover	Check and clean the recovery tank
⑭	Control panel	Main function console
⑮	Clean water inlet port	For adding clean water
⑯	Accelerator	For machine acceleration and deceleration
⑰	Brush plate access panel	For lifting the brush plate during maintenance
⑱	Brush plate retaining strip	Prevent clean water from splashing during operation
⑲	Rear wheel	Keep machine walking

1.3 Controlling panel/Buttons.





N0.	Name	Function
①	Display panel	Display the current voltage and power of the machine, fault codes, operating status, etc.
②	Forward and backward switch	Control the machine to move forward/ backward
③	Sewage sensor	Alarm when the recovery tank is full
④	Headlight button	Headlight lighting
⑤	Horn button	For whistling
⑥	Key switch	For powering on and shutting down the machine
⑦	ECO button	Switch to economic mode
⑧	Speed knob	Adjust machine's operating speed
⑨	Water level adjustment knob	Adjust the water output at the brush plate
⑩	Mode selection switch	Switch the working status of the machine (floor scrubbing, sewage suction floor scrubbing + sewage suction)

1.4 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.

N0.	Name	Quantity
①	Host	1
②	Charging cable	1
③	Squeegee assembly	1
④	Tool kit	1
⑤	Operation instructions	1
⑥	Warranty card	1

1.5 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
Pad holder	Pad holder
Brush plate	Cleaning pad (red)
Rubber strip	Cleaning pad (white)
Cleaning pad (red)	Liquid-filled battery
Cleaning pad (white)	Lead-acid maintenance-free battery

Chapter 2 Unloading and assembling the machine.

2.1Installing the squeegee

⚠**Warning**

Please carefully disassemble the outer package to avoid damage to the machine shell.

It is recommended to keep the packaging boxes after receiving the goods so that the machine can be repackaged during later product transportation or return or exchange.

It is prohibited to violently unload the machine to avoid damaging the parts.

Remove the machine backwards from the pallet.

2.2 Installation

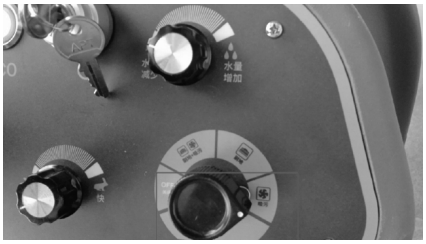
2.2.1 Squeegee installation

Step 1: Park the machine on a flat ground.

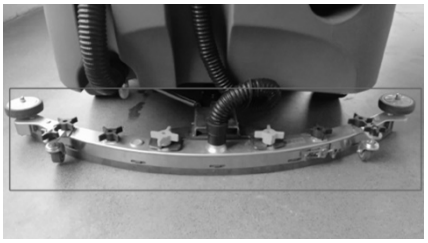
Step 2: Turn on the key switch, adjust the mode selection switch to the suction, lower the swing tail to the ground and then turn off the key switch.

Step 3: Align the squeegee with the hole and install it on the swing tail, then tighten the cross knobs of the squeegee.

Step 4: Insert the other end of the suction tube into the suction port of the squeegee to complete the installation.







2.2.2 Connecting the battery cables.



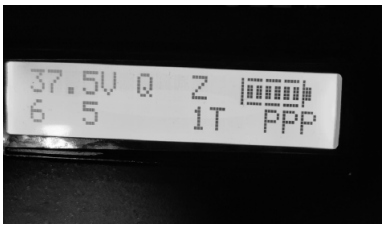
⚠**Caution**

Due to the different distances of logistics routes, to avoid battery loss during long journeys, the battery cables have been disconnected at the factory.

Step 1: Open the seat to 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 seat.

3.1 Check the battery.

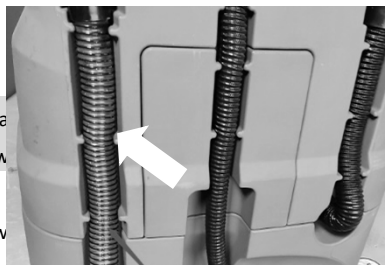


After turning on the power key switch, the battery meter will display the current voltage of the battery. When the voltage is about 32V, please charge it in time.

⚠**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 32V and is not charged in time.

3.2 Check clean water level



⚠**Caution**

Observe the water level through the draining tube of solution tank. Please ensure that there is sufficient wa there is no water. Otherwise, the motor may take in dust. In severe cases, the noise of the suction motor w be insufficient.3.3 Check sewage level.

Open the recovery tank to check the amount of sewage (the recovery tank of this machine is equipped w discharge standard, the suction motor will stop working).

⚠**Caution**

Please 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.

3.3 Check sewage level



When the sewage warning light on the panel alarms, please discharge the sewage immediately.

⚠**Caution**

Please pay attention to the sewage water level in the recovery tank. When the sewage warning light is on, please discharge the sewage in time. The recovery tank is equipped with a water level sensing device. So, when there's too much water, the suction motor will stop working.

3.4 Check the wear of the brush plate.

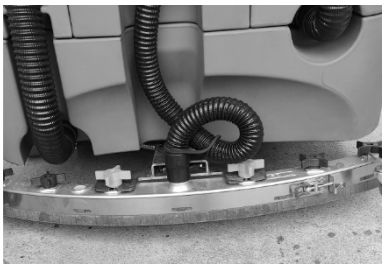


Put the brush plate on the ground. If the bristle length is close to 1.5cm, please replace the brush plate in time. For details, see [Chapter 5 5.2.1 Brush Disk Replacement and Installation]

⚠**Caution**

If the brush plate is not replaced in time after it is worn, it will cause the water retaining strip to wear, and in serious cases, it will cause damage to the motor.

3.5 Check the wear of the rubber strips.



Rubber strips: Check whether the strips are damaged, deformed, aged, or cracked. If so, please replace them in time. For details, see [Chapter 5, 5.2.2 Replacement and Installation of Rubber Strips].

⚠**Caution**

When the machine moves backward, you shall raise the squeegee to prevent deformation of the strips and squeegee sheet metal parts.

Chapter 4 Operation instructions

4.1 Driving

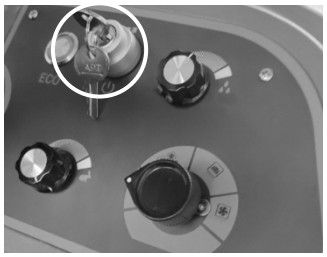
Step 1: Turn on the main power key switch of the machine.

Step 2: Turn the forward/backward switch as needed, and lightly press the accelerator pedal to move the machine forward and backward；

Step 3 When you need the machine to stop, release the accelerator pedal and the solenoid brake will work until the machine comes to a complete stop.

⚠**Caution**

When the machine needs to be moved backwards or changed places, the brush plate and squeegee should be raised off the ground to avoid wear of the brush plate and deformation of the rubber strips or squeegee sheet metal parts.



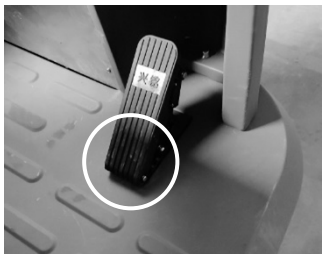
Turn on the key switch.



Forward gear



Backward gear



Lightly press the accelerator

4.2 Scrubbing

Step 1: Turn on the main power switch.

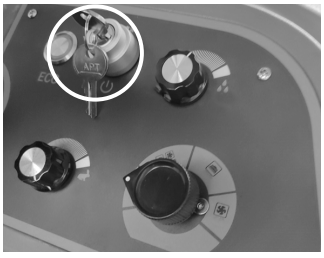
Step 2: Turn on the brush plate button, and the brush plate will be lowered to the ground.

Step 3: Turn on the suction start and stop button, and the squeegee will be lowered to the ground.

Step 4: Hold the steering wheel tightly, lightly press the accelerator pedal to keep the machine moving smoothly (Note: it is not advisable to go too fast during cleaning operation)

⚠**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.



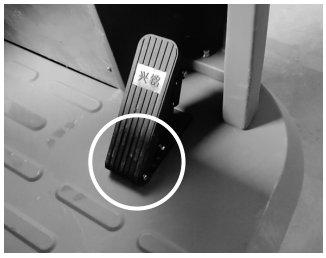
Turn on the key switch.



Forward gear



Turn the mode selector switch to the "floor scrubbing + sewage suction" position.



Lightly press the accelerator

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**

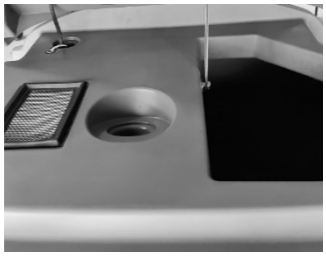
When flushing the recovery tank, do not splash water into the suction port to prevent the motor from burning out.



Turn off the power.



Draining sewage



Suction port

4.4 Shutting down.

Step 1: When the machine is not in use, pull up the handles of the squeegee and the brush plate to empty the water tanks.

Step 2: Drive the machine to the parking site.

Step 3: Turn off the main power switch and remove the key.



Empty the solution tank.



Empty the recovery tank.



Turn off the power.

4.5 Charging

The correct way to charge battery is to plug in the battery first, then the mains power; after charging, cut off the mains power first, and then the battery plug.

The power system of this floor scrubber is composed of 6 6V maintenance-free lead-acid batteries connected in series or a whole 36V lithium battery, and the system voltage is 36V.

When the machine has been operating for a period, the battery power will drop. When the last two bars of the power meter are red, or the voltage is lower than 32V, 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. 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. 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.

when the machine is not used for a long time, please fully charge the battery, and store the battery with the positive pole (+) disconnected.

When the machine is not used for more than 15 days, please fully charge the battery, and store the battery with the positive pole (+) disconnected.

⚠**Caution**

During 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 when the voltage is below 32V and is not charged in time. 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.

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

Check and clean the wheel set and remove entangled objects.

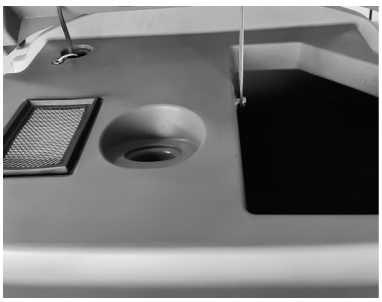
Clean the sewage tank and sewage tubes regularly and use water to flush the dirt in the tank and blockages in the tubes.

Clean the dirt under the rubber strips regularly and wipe the strips with a cotton rag.

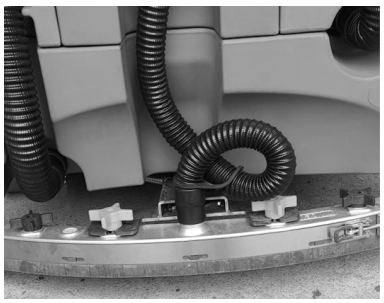
Check the water filter regularly. When there are impurities in the transparent cover, rotate and unscrew the cover, and rinse it and the filter screen repeatedly with clean water.

⚠**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.



Clean the recovery tank.



Clean the rubber strips.



Clean the filter.

5.2 Maintenance

5.2.1 Replacement and installation of brush plate

Step 1: Park the machine on a flat ground, keep the brush plate raised, turn off the key switch, and make sure that the machine is powered off.

Step 2: Press the brush plate down with your hand to remove it.

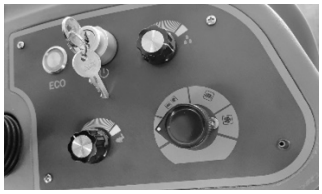
Step 3: When installing the brush plate, ensure that its inner diameter is aligned with the magnetic iron ring, and lift it upward to a certain distance. Then the magnetic iron ring will attract the brush plate to complete the installation.

⚠**Caution**

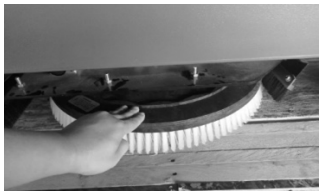
There are two types of cleaning pads with different hardness. Choose the more suitable one according to the site.

Replacing the pad holder: The pad holder can be purchased through our company's platform. The specific replacement is to place the cleaning pad at the bottom of the pad holder and make them fit firmly; The cleaning pad and the pad holder must fit neatly together, then install the pad holder on the machine. The steps are the same as that of the brush plate.

The cleaning pad must be soaked in clean water before using it for the first time for 10-15 minutes. A dry scouring pad will damage the floor.



Turn off the



Remove the brush plate.



Install the brush plate.



Install the pad holder and the cleaning pad.

5.2.2 Replacement and installation of rubber strips

Step 1: Park the machine on a flat ground.

Step 2: Adjust the mode selection switch to suction, lower the squeegee to the ground and turn off the power.

Step 3: Rotate the plastic knobs in the opposite direction and take out the squeegee assembly.

Step 4-1: Remove the rubber strips.

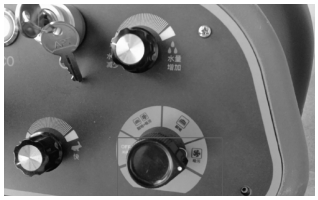
Step 4-2: Unscrew the squeegee knobs and remove the universal wheel.

Step 4-3: Pull up the clasp of the rubber strip pressure plate and remove the plate.

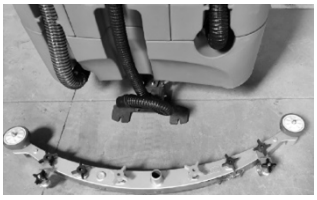
Step 4-4: Remove the bottom plate of the squeegee assembly and then remove the front and rear rubber strips.



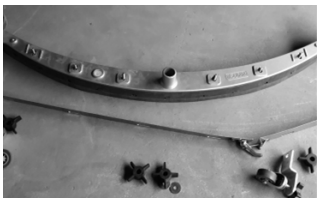
Step 1



Step 2



Step 3



Step 4-1



Step 4-2



Step 4-3



Step 4-4

Install the squeegee rubber strips.

Step 1: Align the holes of the front rubber strip with the protrusions of the plastic component of the squeegee.

Step 2: Fix the plastic bottom plate on that of the squeegee and install the two black screws.

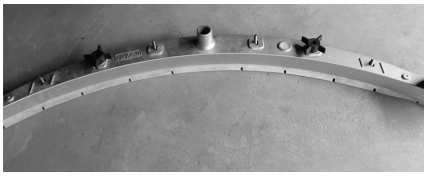
Step 3: Align the holes of the rear rubber strip with the protrusions of the plastic component of the squeegee.

Step 4: Install the rubber strip pressure plate and lock the clasp.

Step 5: Install the squeegee universal wheel.



Step 1



Step 2



Step 3



Step 4



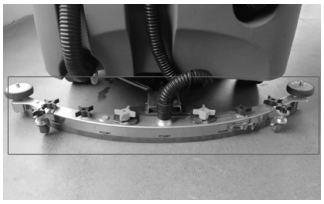
Step 5

5.2.3 Adjustment of the rubber strips

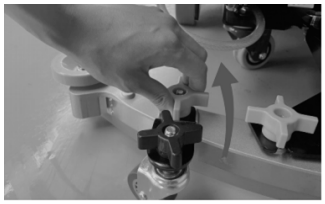
Step 1: Adjust the mode selection switch to suction, lower the squeegee to the ground and turn off the power and observe whether the strips can touch the ground.

Step 2: If there is a gap between the rubber strips and the ground, you can adjust the component upward through the squeegee universal wheel.

Step 3: If the rubber strips are too close to the ground, you can adjust the component downward through the universal wheel.



Step 1



Step 2



Step 3

Chapter 6 Transportation and Storage

6.1 Transportation

If the machine and corresponding accessories need to be lifted, it is recommended that you put them on a pallet and then lift them up with a forklift. Clean water and sewage must be drained when transporting the machine.

During transportation, to prevent various situations from slipping and damage caused by collisions, it is necessary to ensure that the binding is firm, the center of gravity is stable, and the driving safety is ensured. For the transportation vehicles that are in contact with the surface, the surface should be installed with soft pads or hard cardboard packaging. Load and unload lightly, and it is strictly prohibited to drop, hit, roll, press heavily, or put the machine upside down.

6.2 Storage

Before storing the machine, clean it. For details, see [**Chapter 5 5.1 Cleaning**].

For machines that will not work in a long time, anti-rust treatment should be done before storage, check the easily corroded parts of the machine, and apply butter.

If the machine will not be used within 15 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, first fully charge the device battery, disconnect the battery connector, and store it at room temperature above 0 degrees. Keep the battery and ask for replenishment once a month.

In areas with lower temperatures, clean water and sewage need to be drained to prevent the water tanks from cracking due to freezing of clean water or sewage.

Chapter 7 Common Problems

Problem	Phenomenon/Part	Troubleshooting method	Solution
Charging failure	Charging 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	Fuse	Check if the fuse is burnt	Replace the fuse
Brush plate motor not working	Fuse	Check if the fuse is burnt	Replace the fuse
Water not coming out	Clean water tube	Whether there is any scale in the transparent tube of the clean water tube	clean water tube
	Filter cover	Whether there is dirt on the filter cover	Clean filter cover
	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 water absorbing 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 universal wheel
	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
Brush plate	Frequent drop	Has the brush plate been lowered to the ground before turning on the switch?	This behavior is an incorrect operation and may easily cause the brush plate buckle to wear. Replace the buckle when necessary.
	Buckle wear	See the brush plate buckle for wear	Replace the brush plate buckle
The machine not sucking water properly	Floating ball cage clogged	Check whether there are two floating balls in the cage	Matters needing attention in daily use
	Tube blocked	Clean the water suction tube	Daily cleaning and maintenance
	Recovery tank sealing circle	Sealing circle aging	Replacement of accessories
	Water marks on the ground	1. Whether the strips are cracked, aged, or deformed 2. Whether the strips are wavy	Replacement of rubber strips
Machine not walking	Solenoid brake	Check whether the solenoid brake is on the downward gear when the machine is not powered on	Contact customer service center
	Accelerator	1. Short-circuit the accelerator connector. If the machine can move, there is something wrong with the accelerator pedal. 2. The fault lamp flashes 7 times.	
	Controller	Use a multimeter to measure whether the controller has input voltage	

Chapter 8 Technical parameters

Category	Parameter
Cleaning width	900mm
Squeegee width	1200mm
Continuous working time	4-5h
Theoretical working efficiency	7800 ㎡/h
Battery capacity	36V/200Ah
Suction motor power	600W
Brush plate motor power	650*2W
Driving motor power	800W
Clean water capacity	240L
Sewage capacity	260L
Total weight	555kg
Working size	1790*1200*1450mm

Warranty Card

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