



CR21 Floor Scrubber Instruction Manual

Preface

This instruction manual contains all the information that you need to use and maintain the machine. Please read it carefully before getting started.

This instruction manual is an important part of the product and should be kept together with the machine.

In order to ensure your safety, the following instructions must be followed when operating the machine and performing maintenance:

-  Do NOT use the machine after drinking or taking medicine.
-  Turn off the machine before any maintenance or repair.
-  The machine can only be used by trained and competent personnel; children and disabled people are forbidden to use it.
-  Keep the batteries away from sparks, flame and smoke.
-  Do NOT use the machine in places with flammable or explosive liquids, gases and vapor.
-  When operating the machine, do NOT wear loose clothing, and keep your body away from the moving parts of the machine.
-  Do NOT smoke when charging the batteries.
-  In the event of a fire, use a powder extinguisher instead of water.
-  It is crucial to give due consideration to the machine's disposal process. If any hazardous substances fail to meet the required standards, they must be transported to a designated service center for appropriate treatment.

If you have any question, complaint or suggestion, please feel free to contact us and we will be at your service with all our knowledge and enthusiasm.

We wish you a pleasant experience with our product!

We aim to provide safer, higher-end and more user-friendly cleaning equipment with the help of the newest technology and innovative ideas.

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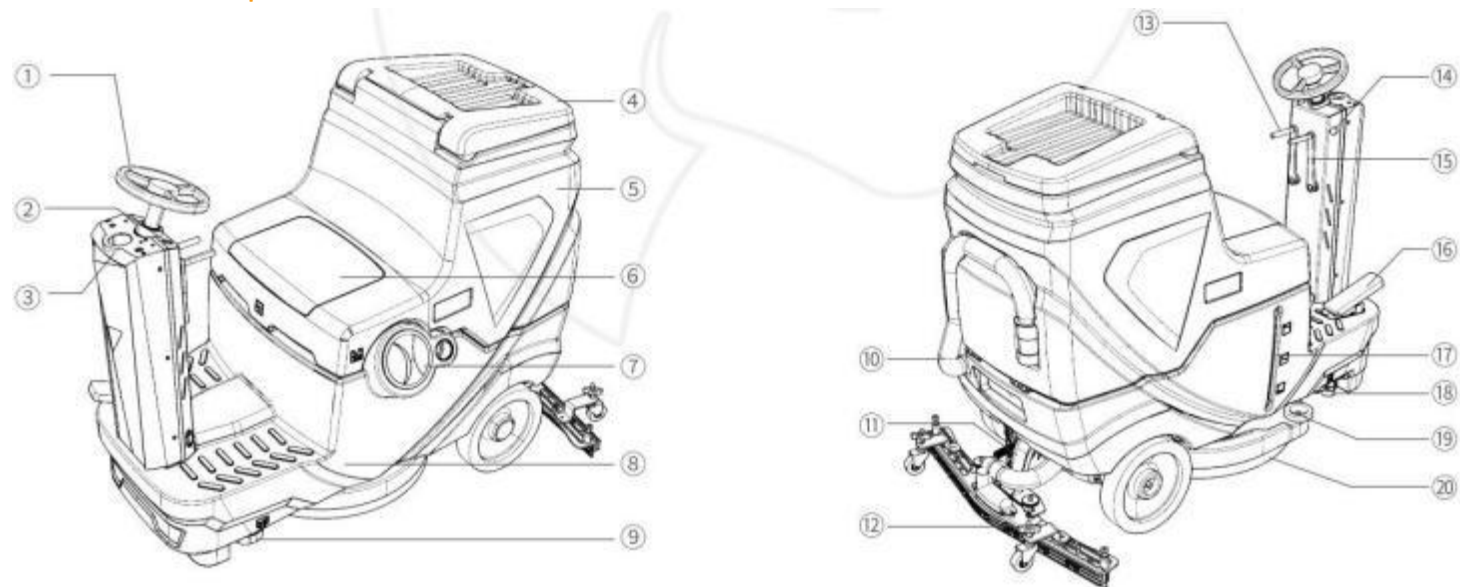
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Chapter 1 General description

1.1 Suitable scenes

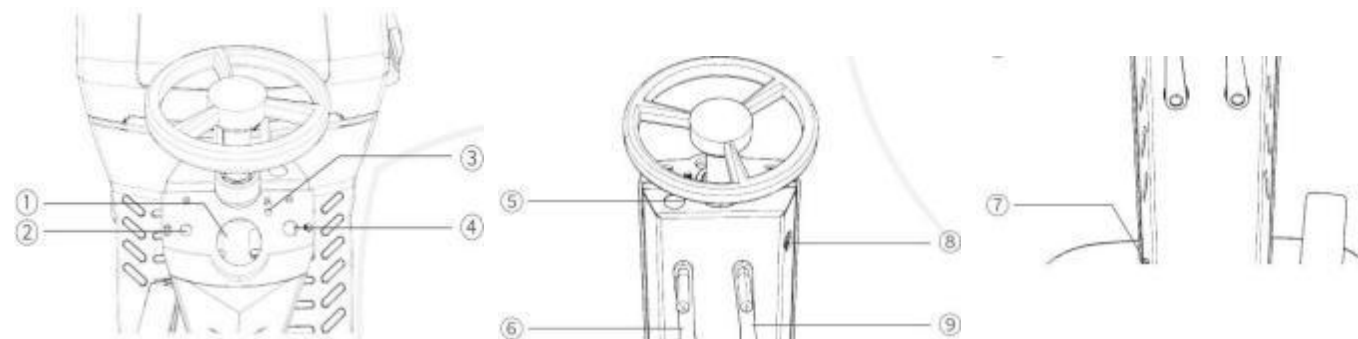
This product can be used in various locations, such as restaurants, schools, hospitals, factories, supermarkets, warehouses & office buildings, etc. It can clean various hard floors effectively, such as mirror tile floor, marble floor, epoxy floor, PVC floor, emery floor, terrazzo floor, concrete floor, ceramic tile, etc.

1.2 Overview of the product



1	Steering wheel	2	Emergency stop button	3	Controlling panel
4	Sewage tank cover	5	Sewage tank	6	Seat
7	Clean water inlet	8	Clean water tank	9	Clean water outlet
10	Sewage draining hose	11	Suction hose	12	Squeegee
13	Squeegee lifting handle	14	General switch	15	Brush plate lifting handle
16	Accelerating pedal	17	Clean water level gauge	18	Filter
19	Anti-collision wheel	20	Brush plate		

1.3 Control panel and keys



- | | | | | | |
|---|-------------------------|---|-------------------------|---|----------------------------|
| 1 | Power display screen | 4 | Horn | 7 | Charging port |
| 2 | Forward/backward button | 5 | Emergency stop button | 8 | General switch |
| 3 | Indicator light | 6 | Squeegee lifting handle | 9 | Brush plate lifting handle |

1.4 List of accessories

When you receive the product, check whether all of the following items are presented. Contact us if there is any part missing.

Item	Number	Item	Number	Item	Number
Brush	1	Squeegee	1	Instruction manual	1
External Charger	1	Wrenches	2	Battery set	1
Needle Holder	1	Spare fuses	2	Red Pad	1

1.5 Consumables and optional items

- ⌚ Consumables/Wearables refer to accessories that will wear out gradually and need to be replaced when they cannot perform.
- ⌚ You can purchase these wearable parts on our website:<https://www.crystalfloorscrubber.com/frequently-bought-accessories>

Consumables and optional items	
Heavy Duty Brush	White Pad
Rubber for Squeegee Assembly	Red Pad
Needle Holder	Black Pad

Chapter 2 Unloading and assembling the machine

2.1 Unloading the machine

- ⌚ Remove the packaging carefully and avoid damaging the machine.
- ⌚ We recommend that you keep the packaging of the product since it can be used to transport the machine.
- ⌚ Do NOT unload or unpack the machine violently.

2.2 Assembling the machine

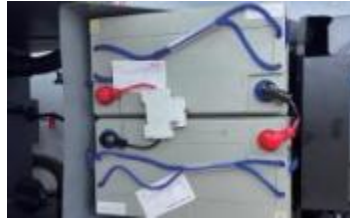
2.2.1 Installing the squeegee

- ⌚ Lower the squeegee handle to lower the part that you will be connecting to your squeegee assembly.
- ⌚ Connect the squeegee assembly with the machine and turn the two innermost knobs to keep it tightened.
- ⌚ Install the sewage draining hose to the squeegee assembly.



2.2.2 Connecting the battery cords

- ⚠ Drain the sewage tank if needed.
- ⚠ Carefully flip open the sewage tank and check whether all the cables on the batteries are connected and tightened.
- ⚠ Connect the battery poles. Pay attention to the positive and negative terminals.
- ⚠ Flip the sewage tank back to its original position.



Chapter 3 Checks and adjustments before using the machine

3.1 Check items

3.1.1 Checking the water volume in the clean water tank

- ⚠ Make sure that there is sufficient water in the clean water tank before work. Do NOT do the cleaning without enough water, or dust may be sucked into the suction motor leading to loud noise and low working efficiency.



3.1.2 Checking the water level in the sewage tank

- ⚠ Pay special attention to the water level in the sewage tank. When the floating balls are in the highest position, drain the sewage tank immediately or the suction motor will be burned.



3.1.3 Checking the voltage of the batteries

- ⚠ When the general switch is turned on, the current voltage of the batteries will be displayed on the voltmeter. If the last bar of the voltmeter is flashing, the power is insufficient and please charge the batteries immediately.
- ⚠ Note that deep discharging (e.g. frequently using the machine when the voltage is lower than 21 V) will reduce the service life of the batteries.



3.1.4 Checking the status of the brush plate

- ⌚ Check whether the brush plate is worn. If so, please replace it.



3.1.5 Checking the status of the rubber

- ⌚ The rubber needs to be replaced if it's worn out or cut
- ⌚ If the rubber cannot create an airtight situation when it's touching the floor the suction effect will not be satisfactory.



3.2 Adjustment items

3.2.1 Adjustment of the squeegee holder

- ⌚ Use the knobs on the universal wheels to adjust the squeegee angle.



3.2.2 Adjustment of the squeegee assembly

- ⌚ Put down the squeegee assembly to see whether the rubber touches the ground.
- ⌚ Push the machine gently to see whether the rubber is slightly bent and leaves no gap in between itself and the ground.
- ⌚ If there is any gap between the rubber and the ground or the rubber is pressed too tightly, turn the universal wheels on the squeegee assembly to adjust its position.



Chapter 4 Instructions on operating the machine

4.1 Moving the machine

- ① Turn on the general switch.
- ② Turn the forward/backward button to the forward gear and step on the accelerating pedal. Machine will move forward now.
- ③ Turn the forward/backward button to the backward gear and step on the accelerating pedal. Machine will back up now.
- ④ If you need to stop the machine, just release the accelerating pedal so that the electromagnetic brake will work automatically and the machine will be stopped.

Note: when the machine is moving backward or needs to be transported, make sure that the brush plate and the squeegee are lift up, or the brush plate will be worn and the squeegee rubber will be deformed.

4.2 Scrubbing the floor

- ① Put down the brush plate and the squeegee.
- ② Turn on the general switch.
- ③ Press the brush plate button and the suction motor button.
- ④ Turn the forward/backward button to the front gear, hold the steering wheel, step on the accelerating pedal and drive the machine smoothly.



Note:

When the brush plate motor is turned on, do NOT leave the machine in the same place for a long time, because this would leave unnecessary marks on the ground.

4.3 Discharging sewage

- ① Before draining the sewage tank, stop the machine and turn off the general switch.
- ② Put down the sewage draining hose, open the cap and discharge the sewage.
- ③ Rinse the sewage tank with clean water.

4.4 Stopping the machine

- ① When the work is finished, turn off the brush plate button and lift the brush plate.
- ② Turn off the suction motor and lift the squeegee.
- ③ Drain the sewage tank.
- ④ Move the machine to an appropriate storage place.
- ⑤ Turn off the general switch and remove the key.

Note: if the machine is not going to be used for a long period of time, please fully charge the batteries, & disconnect the battery cords/lines to avoid power loss. Batteries should be charged twice a month.



4.5 Charging the batteries

Note: the machine is powered by two 12 V maintenance-free lead-acid batteries and the total system voltage is 24 V.

- ⌚ The total voltage of the batteries will gradually decrease during the work. When the last bar of the voltmeter is flashing, meaning the machine is running out of power. Please charge the batteries immediately.
- ⌚ When dealing with the batteries, please wear gloves to avoid direct contact with acid substances.
- ⌚ Check whether the battery cords are worn and the connecting parts are loose, and replace them when necessary.
- ⌚ Keep the batteries dry and clean and make sure that there are no dust on them, since it is extremely harmful to the batteries and may even cause them to burn in severe cases. Do NOT put any object (especially metallic object) on the batteries either.
- ⌚ In order to extend the service life of the batteries, charge them immediately when the cleaning work is finished. Deep discharging is strictly forbidden for it will reduce their capacity and service life.
- ⌚ Please connect the external charger to the plug on the machine first (under the control panel, on the left hand side), before connecting the charger to the wall outlet.
- ⌚ If the machine is not going to be used within a long period of time, please fully charge the batteries and disconnect the battery cords.



Chapter 5 Cleaning and maintenance of the machine

Regular maintenance can extend the service life of your machine.

5.1 Cleaning of the machine

- ⌚ Check the wheels regularly and remove entanglements.
- ⌚ Clean the sewage tank and the sewage hose with clean water regularly.
- ⌚ Clean the filter of the water valve. If there are impurities in its transparent cover, unscrew the filter and wash the cover and the filter screen repeatedly.

Alert: do NOT wash the machine body with water directly since it is NOT really water-proof or the machine might be short-circuited or burned.



5.2 Maintenance of the machine

5.2.1 Replacement of the brush plate

- ⌚ Park the machine on the flat ground and put down the brush plate.
- ⌚ Turn the brush plate counterclockwise to remove the brush.
- ⌚ If stuck, grab the bristles to lift the brush plate slightly and shake it from side to side. The brush plate will be detached.

- ⌚ When installing the new brush plate, make sure that the flange plate is aligned with the holes on the brush plate, and rotate it clockwise to finish the installation.
- ⌚ Installation of the needle plate: add a scouring pad on the bottom of the needle plate, and install it following the instructions above. You can purchase needle plates and scouring pads from the original manufacturer.
- ⌚ Before cleaning more delicate floors, the scouring pad must be soaked in water for 10-15 minutes before use to soften it, or it might damage the ground.



5.2.2 Replacement of the squeegee rubber

- ⌚ Park the machine on the flat ground and make sure that it is powered-off.
- ⌚ Use the squeegee lifting handle to put down the squeegee and turn the two innermost knobs to remove the squeegee from the machine.



- ⌚ Remove all the fixing knobs of the squeegee holder, then remove the front and rear strips of the squeegee.
- ⌚ Install the new rubber strips.



Chapter 6 Storage and transportation of the machine

6.1 Storage of the machine

- ⌚ If you do not need to use the machine for a long time, please remove and wash the squeegee and the brush plate, and store them in a dry clean place. We recommend that you store them in an airtight plastic container.
- ⌚ Make sure that the water tanks are discharged and cleaned.
- ⌚ It's better to charge the battery fully before storing the machine. If you do not use the machine for a long time, charge the battery regularly (at least twice a month) to keep the batteries in good condition

6.2 Transportation of the machine

- ⌚ When lifting or lowering the machine, make sure that it is in a stable position to prevent it from tipping over or falling.
- ⌚ When the machine leaves the factory, it is fixed on a wooden pallet and carried on a transport vehicle with appropriate equipment; upon arrival at the destination, the same equipment must be used for loading and unloading.
- ⌚ Be careful while moving the machine with a forklift. Make sure the packaging was dealt properly to avoid tipping over and damaging the machine.

Chapter 7 Common problems and solutions

The batteries cannot be charged.	The charger fails.	Replace the charger.
	The charging port is oxidized.	
The suction motor does not work.	The fuse is blown.	Replace the fuse.
The brush plate motor does not work.	The fuse is blown.	Replace the fuse.
No water comes out	The clean water hose is blocked.	Clean the water hose.
	There are impurities in the filter cover.	Clean the filter cover.
	The water solenoid fails.	Check the water solenoid.
Loud noise is produced.	The squeegee is in the wrong position.	Adjust the height of the universal wheels of the squeegee.
	The suction motor is broken.	Replace the suction motor.
The brush plate	The brush plate drops often.	Re-install the brush properly.
	The brush plate buckle is worn.	Replace the buckle.
The water suction efficiency is low.	The floating ball is stuck.	Clean the debris near the floating ball and shake it a little to get the ball down.
	The suction hose is blocked.	Clean the suction hose.
	The rubber sealant of the sewage tank is cracked.	Replace the rubber sealant.
	The strip of the squeegee is cracked.	Replace the rubber strip.

Chapter 8 After-sale services

8.1 General description

 One-year warranty will be honored on the non-wearable parts. Users can easily purchase the wearable parts (brush, pad, needle plate/holder, squeegee rubber and etc.) on our website.

 The delivery receipt and purchase invoice are certificates for warranty and must be kept properly.

8.2 Cases not covered in the warranty

-  The operator fails to perform maintenance listed in this instruction manual.
-  The surface and/or the structure of the machine are obviously damaged due to improper operation.
-  Disassembly or modification not approved by the original manufacturer.
-  Damage due to weather or force majeure.
-  The warranty is expired or the machine has been used for more than 1,500 hours.

Technical parameters

Category	Parameter	Category	Parameter
Max effectiveness	39300 ft ² /h	Driving motor	0.6 HP
Brush diameter	21 In	Clean water tank	17.2 Gal
Squeegee width	29 In	Sewage tank	18.5 Gal
Cleaning width	21 In	Battery capacity	24 V/100 Ah
Max moving speed	4 mph	Packae size	63.39 * 34.65 * 51.18 In
Brush plate motor	0.74 HP	Total weight	385 lbs.
Suction motor	0.74 HP	Product size	57 *40 * 44 In

Warranty Card

Property of:		Tel:	
Address:			
Date of purchase:			
Model:		Delivery Date:	
Accessories to be replaced:			
Notes:			