



C21SP Floor Scrubber Instruction Manual

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

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!

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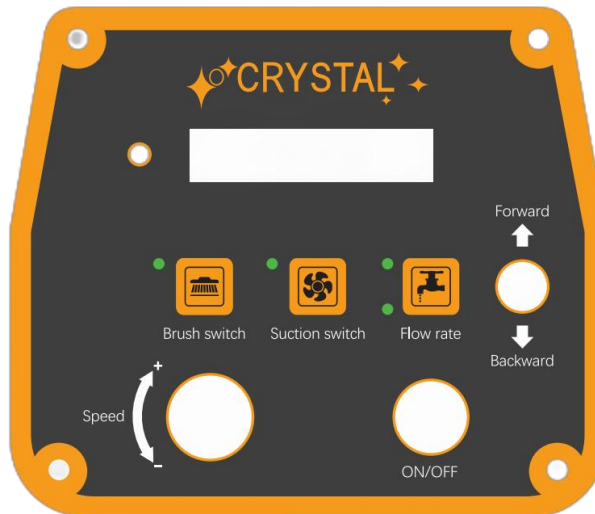
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Chapter 1 General description

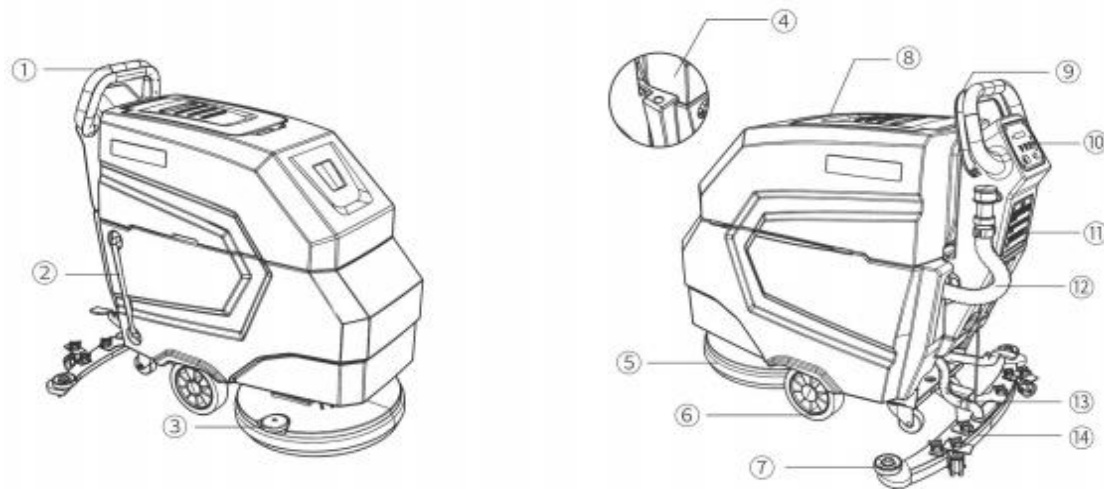
1.1 Suitable scenes

This product can be used in various locations, such as restaurants, schools, hospitals, factories, supermarkets, warehouses & office buildings, and 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, and etc.

1.2 Control panel and buttons



1.3 Overview of the product



No.	Name	No.	Name
1	Steering Handle	8	Sewage tank cover
2	Water level gauge	9	Self-propelled lever
3	Anti-collision wheel	10	Control panel A
4	Clean water inlet	11	Control panel B
5	Brush plate	12	Sewage drain hose
6	Wheel	13	Sewage Suction hose
7	Squeegee anti-collision wheel	14	Squeegee

1.4 List of accessories

Upon receiving the product, please verify the presence of the following items. If any items are missing, contact the seller immediately.

Item	Number	Item	Number	Item	Number
Brush	1	Squeegee	1	Instruction manual	1
External Charger	1	Wrench	1	Battery set	1
Needle Holder	1	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	
Brush Plate	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 rotate the two innermost knobs to keep it tightened.



2.2.2 Installing the sewage drain hose

- ⌚ Remove the cover of the sewage tank and insert the sewage suction hose.
- ⌚ Insert the conical mouth of the suction hose into the sewage tank, and the other end into the suction port of the squeegee.



2.2.3 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 power 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 of the squeegee

- ⌚ Turn the plastic knob on the universal wheels to adjust the height of the squeegee. It is ideal to have the rubber bent at a 45 degree angle while touching the floor to create an airtight situation for better suction effect.



Chapter 4 Instructions on operating the machine

4.1 Moving the machine

- ⌚ When the general switch is turned off, you can push the machine forward after the brush plate and the squeegee are lifted.
- ⌚ When the general switch is turned on, put the toggle in the forward position, gently pull the metal lever beneath the handle to move the machine around.
- ⌚ Lift up the brush and squeegee if you are not cleaning the floor, or if you want to move the machine backward to avoid unnecessary deform/wearout.



4.2 Scrubbing the floor

Step 1: Lower the brush.

Step 2: Lower the squeegee.

Step 3: Turn on the water valve for the machine to dispense water.

Step 4: Turn on the power with your key

Step 5: Turn on the suction motor button to suck up dirty water.

Step 6: Turn on the brush button and the brush will start turning.

Step 7: Set the speed dial to your preferable speed. Put the toggle in forward position & gently pull up the self-propelled lever beneath the handle. Machine will move forward now.

Note: when the brush plate motor is turned on, do NOT leave the machine in the same place for a long time to avoid leaving unnecessary marks on the ground.



Step1



Step2



Step3



Step4



Step5



Step6

4.3 Discharging sewage

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



4.4 Stopping the machine

- ⌚ When the work is finished, discharge the sewage tank.
- ⌚ Move the machine to an appropriate storage place.
- ⌚ Turn off all the buttons on the control panel.
- ⌚ Lift the brush plate and the squeegee.

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 and you will need to charge the batteries immediately.
- ⌚ When maintaining the batteries, please wear gloves to avoid 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.
- ⌚ The correct steps of charging the batteries: connect the external charger to the plug on the machine first, and then connect the charger to the wall outlet.

Note: if the machine will not 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 semi-monthly to avoid deep discharging which would result in battery failure.

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 draining 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 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.
- ⌚ Rotate the brush plate counterclockwise quickly to remove the brush.
- ⌚ If it gets stuck, grab the bristles to lift the brush plate slightly and shake it from side to side, and then the brush plate will be removed.
- ⌚ 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: put 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 on our website.



5.2.2 Replacement of the squeegee rubber

1. Pull up the handle to raise the squeegee assembly: turn the two innermost knobs and take out the squeegee assembly.
2. Take out the small wheel at the rear of the squeegee, unscrew the fixing screws and fixing clips of the squeegee pressure strip; remove the squeegee pressure strip, and take out the front and rear rubber strips of the squeegee.
3. Buckle the holes of the front rubber strip into the protrusions of the squeegee assembly in turn.
4. Apply the front pressure strip against the rubber strip and use 8*30 hexagonal socket screws to fix and tighten both ends; then use the fixing clamp to fix the pressure strip to ensure that the middle of the front strip does not bulge or deform after the two ends are squeezed.
5. Buckle the holes of the rear rubber strip into the bulge at the rear of the squeegee assembly.
6. Apply the rear pressure against the rubber strip and use 8*30 hexagon socket screws at both ends to tighten it.



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 drained 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, a similar setting needs to be arranged to load or unload the machine safely.
- ⌚ When using a forklift to move the machine, the forklift should move the entire box with the machine well-affixed inside it. Do NOT use a forklift to pick up the machine directly or it might damage the machine. Machine could also tip over or fall easily from the forklift and cause property damage or human injury.

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 electromagnetic valve fails.	Check or replace the electromagnetic valve.
Loud noise is produced while sucking up the water	The squeegee is in the wrong position.	Adjust the height of the wheels on 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 white floating balls are stuck.	Clean the debris near the floating balls and gently tap the net around the balls to get them 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, 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	Self-propelled type
Battery capacity (V/Ah)	2*12 / 2*100 Ah
Suction motor (Hp)	0.54
Brush plate motor (Hp)	0.74
Traction motor (Hp)	0.4
System voltage (V)	24
Brush plate width (In)	21
Squeegee width (In)	32.5
Theoretical working efficiency (ft ² /h)	40000
Working time (h)	2-5
Clean water tank capacity (Gal)	14.5
Sewage tank capacity (Gal)	17.2
Product size (In)	45 * 31.5 * 44

Warranty Card

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

