

# Operating instructions for hand-held floor cleaning machine **CLEAN-S**



Please read these instructions carefully before use and keep them in a safe place.



10/2024

# Foreword

All models are supplied with this manual. This manual contains important instructions for operating and maintaining the machine.

Please read this manual carefully before starting up or using this machine and familiarize yourself with it.

Each new model also comes with a complete parts manual, which should be used when replacing parts. To ensure timely delivery, please follow the instructions in the "Parts Ordering Procedure" section of the parts manual.

This machine can provide efficient service. By following these instructions, the machine can achieve the best results at the lowest cost:

- Operate the machine carefully.
- Maintain the machine regularly according to the maintenance instructions in the operating manual.
- Use parts manufactured by the original manufacturer or of equivalent quality for maintenance.

## Environmental protection

Please dispose of packaging materials, old machine components such as batteries, antifreeze, oil, and other toxic liquids in accordance with local waste disposal regulations, taking environmental safety into consideration.

Please ensure proper recycling.

## Machine data

Please fill in for future reference.

Model \_\_\_\_\_

Machine serial number \_\_\_\_\_

Machine option \_\_\_\_\_

Sales representative \_\_\_\_\_

Sales representative's phone number \_\_\_\_\_

Customer number \_\_\_\_\_

Installation date \_\_\_\_\_

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# 1. Safety instructions

This device is a commercial product. It is specifically designed for cleaning hard floors indoors and must not be used for any other purpose. Please be sure to use the scouring pads, brushes, and neutral cleaning agents recommended for this device.

The following safety instructions and the heading "Safety instructions" are used throughout this manual and have the following functions according to their description:

**Warning: Warns of serious injury or death or unsafe operating conditions.**

Safety Note: Information that must be observed for the safe use of the machine.

The following safety precautions indicate situations that may cause potential hazards to operators or equipment. All operators must read, understand, and follow the following safety precautions.

**Warning: Fire or explosion hazard.**

– Do not use flammable liquids; do not operate the machine near or in locations with flammable liquids, gases, or combustible dust.

This machine is not equipped with an explosion-proof motor. During start-up and operation, the electric motor of this machine generates sparks. If this machine is used in locations containing flammable gases, liquids, or combustible dust, it may cause a flash fire or explosion.

– Do not pick up flammable materials or reactive metals.

**Warning: Risk of electric shock.**

– Disconnect the battery cables and charging plug before repairing the machine.

– Do not use a damaged power cord to charge the battery. Do not modify the plug.

– If the charger's power cord is damaged or defective, it must be replaced by the manufacturer, its maintenance service, or similarly qualified personnel with the appropriate qualifications to avoid hazards.

**Warning: The rotating brush is in operation. Keep your hands away. Switch off the device before repairing it.**

**For safety reasons:**

1. Do not operate the device in the following cases:

– In contact with flammable liquids or in the vicinity of flammable gases, as this may result in an explosion or flash fire.

– Unless you are trained and authorized.

– Unless the operating instructions have been read and understood.

– Normal operating conditions are not present.

2. Before starting the machine:

- Ensure that all safety devices are in place and functioning properly.

3. When using the machine:

- Please walk slowly when the surface is sloping or slippery.
- Wear non-slip shoes.
- Please slow down when turning.
- Report immediately if the machine is damaged or not working properly.
- Do not allow children to play on or near the machine.
- Observe the mixing ratios and handling instructions on the chemical containers.
- Do not work on slopes with a gradient of more than 5% (3°).

4. Before leaving or repairing the machine:

- Park the machine on level ground.
- Switch off the machine.
- Remove the key.

5. When repairing the machine:

- Do not move any parts. Do not wear loose tops, shirts, or sleeves.
- Disconnect the battery cables before operating the machine.
- Wear protective gloves and goggles when handling the battery or battery cables.
- Do not rinse the machine with high-pressure cleaners or water pipes. This can cause the electrical system to fail.
- Use replacement parts provided or approved by the manufacturer.
- All maintenance work must be performed by qualified maintenance personnel.
- Do not modify the original design of the machine.

6. When using trucks or trailers to transport machines:

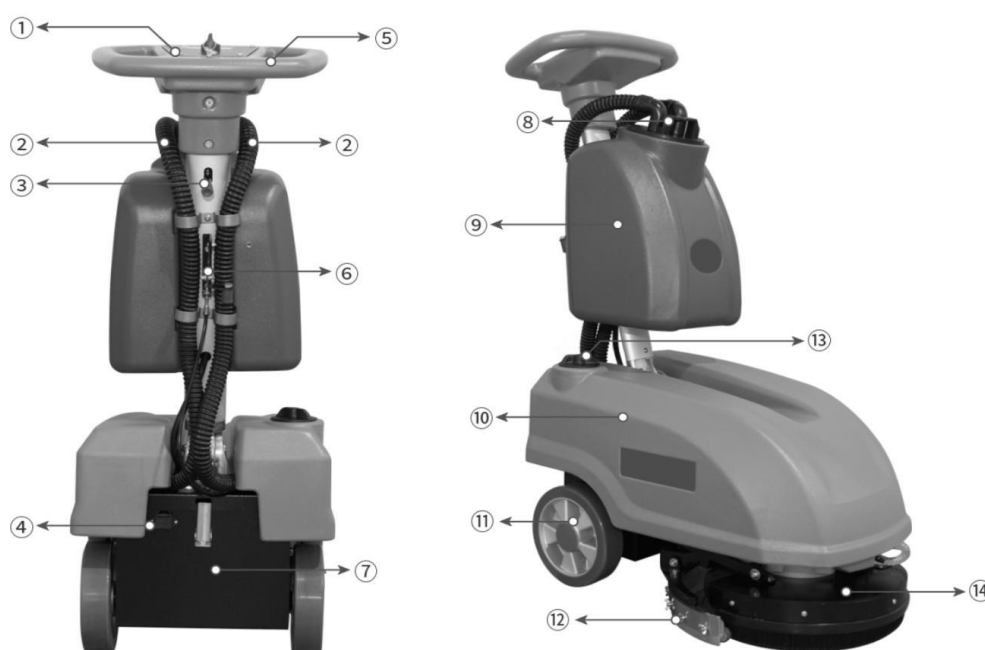
- Empty the water tank before transport.
- Use the recommended loading/unloading ramp to load and unload machines from trucks or trailers.
- Remove the battery before handling the machine.
- Please carry the machine with the help of other people.
- Switch off the machine.
- Lower the brush disc motor to the lower position.
- Secure the machine with ropes.

## 2. Components and technical parameters

### 2.1 Applicable scenarios

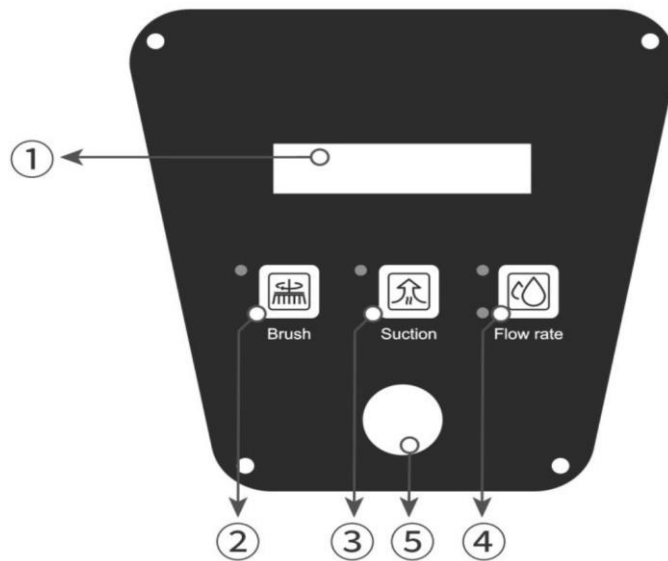
This device can be used in a variety of scenarios and is suitable for commercial and industrial use, e.g., in hotels, schools, hospitals, factories, supermarkets, office buildings, etc.; for epoxy floors, PVC floors, terrazzo, wear-resistant floors, tile cement floors, wood floors, etc. Floors, rubber floors, can be used to clean various floors according to the brushes made of different materials, and there are various options to choose from.

### 2.2 Device overview



No.	Name	No.	Name
①	Control panel	⑧	Cover of the collection container
②	Wastewater suction pipe	⑨	Collection tank
③	Angle of inclination adjustment	⑩	Solvent tank
④	Charging port	⑪	Main wheel
⑤	Handrail	⑫	Wiper component
⑥	Handle for scraper component	⑬	Water filling opening
⑦	Battery compartment	⑭	Brush cover

## 2.3 Machine buttons



No.	Name	Function
①	Voltage display	Display of battery level and real-time voltage of the device
②	Brush button	Press this button to rotate the brush plate for cleaning the floor.
③	Suction button	Turn this button on to start the suction motor.
④	Flow rate control	This button can be used to adjust the water flow rate.
⑤	Switch	Display of battery level and real-time voltage of the device

## 3. Unloading and reassembling the machine.

The user is required to read this manual carefully before using the machine. Detailed instructions for operating and maintaining the machine are included in this manual and must be strictly followed to prevent accidents. The original manufacturer is NOT liable for injuries and damage caused by improper operation by the user.

### 3.1 Precautions

- The operator must be well trained before using the machine, otherwise accidents and injuries or damage may occur.
- To prevent fire accidents, the machine must only be used for cleaning non-explosive floors.
- DO NOT use the machine if it is not properly assembled, as this may result in accidents, injury, or damage

. Before starting operation, check that the machine is completely and correctly assembled.

- All maintenance and repair work must be carried out by qualified personnel.
- Ensure that the power supply is disconnected before performing maintenance or repair work on the machine.

## 3.2 Operating instructions

- Before connecting the batteries, repeatedly check their polarity, as incorrect connection can cause damage to all electrical components of the device and must therefore be avoided at all costs.
- Use the chargers supplied with the batteries, as otherwise damage and even explosions may occur.
- Maintenance and repair of the device must be carried out by a professional technician, as failure to do so may result in accidents and economic losses.
- DO NOT expose the electrical components of the device to water or humid environments, as this may cause them to short-circuit and become inoperable.
- The charging area must be well ventilated. Use an E-Core power cord and a power supply with a grounding cable to charge the batteries. To minimize the risk of electric shock, please use a residual current device (RCD).
- It is strictly forbidden to place objects on top of the batteries.
- When cleaning the machine, make sure that NO water gets into the suction motor.
- Pay particular attention to the warning signs on the surface of the device.
- DO NOT use the machine on sloping terrain or uneven ground. DO NOT sit on the machine. Keep all parts of your body away from the moving parts of the machine.
- Be careful when the machine is moving along edges. Pay attention to the distance between the anti-collision wheels and the wall. Do NOT move the machine over small obstacles.

## 3.3 Safety instructions

- As the device is heavy and contains sensitive components, special care must be taken when transporting it. Before transporting, first remove the batteries and lift the device by the metal bracket on the underside. Do NOT place the weight on the housing.
- DO NOT store or operate the machine (or the batteries) in locations where flammable or explosive gases and liquids are present.

## 3.4 Safety requirements for the batteries

- The batteries must NOT be in a low voltage state; recharge the batteries as soon as possible if the voltage is below 21 V.
- To prevent current leakage, keep the batteries dry and clean.
- DO NOT place metal objects (e.g., tools) on the batteries to prevent short circuits and burns.
- The charging area should be well ventilated.
- If the key switch is in the "ON" position, the batteries must NOT be inserted or removed.
- Before installing or removing the batteries, first disconnect the negative cable (-) and then the positive cable (+). When connecting the cables, pay particular attention to the polarity of the batteries, as incorrect connection could damage electrical components.
- Avoid direct contact between the positive and negative electrodes, as this can lead to a strong short-circuit current, intense heat development, or even a fire.

## 4. Operation of the machine

### 4.1 Preparation

Select the appropriate cleaning agent and the most suitable concentration. Normally, two glasses of cleaning agent are sufficient (please reduce the amount of cleaning agent used to protect the environment). A defoamer should also be used to eliminate foam in the recovery tank and extend the service life of the suction motor.

First add detergent via the front water inlet, then add clean water.

If you need to use tap water, you can insert the tap water connection into the water inlet on the side of the machine. Pay attention to the water level to avoid overflowing.

### 4.2 Start the machine.

Before starting work, we recommend that you sweep the floor manually to remove large foreign objects and ensure that there are no clumps of earth, dust, stones, or paper debris. This will help increase your work efficiency and protect the machine.

Turn on the switch and the current battery voltage will be displayed. If the power is insufficient, charge the batteries immediately before using the machine.

### 3.3 During operation



**Warning: Charge the batteries immediately if the power is insufficient!**

**Step 1:** Turn the key switch to turn on the entire machine and the LCD screen.

**Step 2:** Turn on the floor cleaning switch, and [BRS ON] will be displayed on the screen. The indicator light at the top left of the button will light up and the solenoid valve will open automatically. The initial water amount is set to the maximum value [EMV: 2] and can be adjusted using the water amount adjustment button until it closes.

**Step 3:** Turn on the dirt suction switch. The screen will display [SUC ON] and the indicator light in the upper left corner of the button will light up.

**Note:**

- If the suction motor runs abnormally during operation or the scraper does not function normally, stop the machine immediately and perform the following checks.
- Check whether the collection tank is full. If so, empty the collection tank immediately. If the collection tank is not full, check whether the scraper connection part is clogged and remove the clog immediately if necessary.
- If there is a large amount of foam in the recovery tank, add a certain amount of defoamer to the recovery container.

### 3.4 Replacing the brush plate

Place the brush plate to be installed under the brush plate cover and make sure that its head is aligned with the bayonet. Press the motor button on the brush plate and the plate will be installed automatically by the rotation of the motor. The brush plate can also be installed manually.

For inexperienced personnel, it is recommended to install the brush plate manually.

### 3.5 Removing the batteries

Turn off all buttons.

Open the bayonet lock on the batteries, remove the battery cables, and take out the batteries.

### 3.6 Replacing and maintaining the scraper

The scraper is an important part of the machine and gradually wears out due to friction with the floor. If the water suction performance decreases, perform the following checks.

- Check whether there are any foreign objects in the plastic scraper.
- Check whether the connection between the squeegee and the hose is blocked.
- Check whether the angle between the scraper and the floor is appropriate (the angle can be adjusted using the scraper's universal heels).

- Check whether the squeegee is severely worn.  
Both sides of the scraper can be used to extract water. If both sides are severely worn, the scraper should be replaced.  
If the machine is used in a highly oily environment, please purchase the special oil-resistant squeegee.

### 3.7 After cleaning

Empty the collection tank and wipe the surface of the machine with a dry cloth. Lift the brush plate and squeegee.  
Store the machine in a dry place indoors, away from open flames, chemical substances, and flammable gases or liquids. **Warning: If the machine is not used for a long period of time, charge the batteries, disconnect the battery cable, and cover the machine with a cloth.**

## 4. Customer service

### 4.1 General description

Seven-day return policy, fifteen-day exchange policy, one-year warranty on the entire device, six-month warranty on damaged parts, and no warranty on consumables (calculated from the day after receipt of the device).  
The delivery note and purchase invoice serve as warranty certificates and must be kept in a safe place.

### 4.2 Contents of the warranty

Category	Contents	Warranty period
The entire machine		1 year
Damaged parts	Fuses, universal wheels, solenoid valve, flange fasteners, filter	6 months
Consumables	Brush plate, scouring pad, needle plate, sealing strip	No warranty

### 4.3 Cases not covered by the warranty.

The operator does not perform maintenance in accordance with the operating instructions, resulting in damage or failure.

- The surface and/or structure of the machine are obviously damaged due to improper operation.
- Disassembly or modification not approved by the original manufacturer.
- Damage due to weather conditions or force majeure.
- The warranty has expired or the machine has been operated for more than 1,500 hours.

## 5. Common problems

Problem	Phenomenon/Part	Troubleshooting method	Solution
Loading error	Charging error	If the charger is not connected to the device, check whether the green light is on. When the device is connected, the red light is on and the built-in fan of the charger will not be lit.	Replace the charger
	Oxidation of the charging interface	Check whether the copper surface of the interface shows signs of oxidation	Clean the oxidation from the charging interface
Suction motor Not working	Fuse	Check whether the fuse has blown	Replace the fuse
Brush plate motor not working Works	Fuse	Check whether the fuse has blown	Replace fuse
No water	Clean the water connection	Check whether there are limescale deposits in the transparent hose of the clean water hose	Pure water pipe
	Filter cover	Is there dirt on the filter cover?	Clean the filter cover
	Solenoid valve	Check whether the solenoid valve has input voltage	Check the input voltage of the solenoid valve. If it is normal, remove it and clean the clogged part. Replace the solenoid valve if necessary.
Loud noises	Resonance from water-absorbing rubber strips and wastewater suction Connection	<ol style="list-style-type: none"> <li>1. Are there any unusual noises when the rubber strips are lifted?</li> <li>2. Are there any obvious vibrations in the water-absorbing pipe?</li> </ol>	Adjust the height of the squeegee universal wheel
	Suction motor	<ol style="list-style-type: none"> <li>1. Are there any unusual noises when the rubber strips are lifted?</li> <li>2. Is there still an unusual noise after pulling out the water intake pipe? the water intake tube has been pulled out?</li> </ol>	Replace the suction motor
Brush plate	Frequent falls	Was the brush plate lowered to the floor before switching on?	This is incorrect operation and can easily lead to wear on the brush plate lock. Replace the buckle if necessary.
	Wear on the buckle	Check the brush plate buckle for wear	Replace the brush plate
The machine does not suck up water properly	Floating ball cage clogged	Check that there are two floats Balls in the cage	Matters to be considered in daily use
	Clogged pipe	Clean the water suction hose	Daily cleaning and maintenance
	Collection container Sealing ring	Aging of the sealing ring	Replacement of Accessories
	Water stains on the floor	<ol style="list-style-type: none"> <li>1. Whether the strips are cracked, aged, or deformed;</li> <li>2. Whether the strips are wavy</li> </ol>	Replacement of rubber strips
Machine does not run	Magnetic brake	Check whether the magnetic brake is in the down position when the machine is not switched on	Contact customer service
	Accelerator pedal	<ol style="list-style-type: none"> <li>1. Short-circuit the accelerator connector. If the machine can be moved, there is a fault with the accelerator pedal.</li> <li>2. The fault light flashes 7 times.</li> </ol>	
	Control unit	Use a multimeter to measure whether the controller has input voltage.	

## 6. Technical parameters

Category	Parameter
Cleaning width (brush size in inches)	330 mm
Squeegee width	430
Capacity of solvent tank	13
Capacity of the collection container	15 l
Battery	24 V/32 Ah
Drive motor	/
Vacuum motor	400 W
Brush motor	360 W
Continuous operating time	1.5~2 h
Weight (including battery)	63 kg
Max. area coverage per hour	1520 m <sup>2</sup> /h
Product dimensions	700 × 450 × 1050 mm