



X60 Self-propelled Floor Cleaning Machine

User Manual

Before use, please carefully read this instruction manual / Please keep this document safe.

Explain

Each new model comes with this manual, which contains all necessary operating and maintenance instructions. Before operating or using this machine, please read and fully understand this manual.

This machine offers excellent performance. However, optimal results can only be achieved at the lowest cost under the following conditions:

1. This manual uses the **X60** model as an example.
2. Please operate the machine with care and precision.
3. Perform regular machine maintenance according to the maintenance instructions provided in the operating manual.
4. Maintain the machine using parts provided by the manufacturer or equivalent parts.

protect the environment against pollution

 Please dispose of packaging materials in accordance with your local waste disposal regulations, while ensuring environmental safety.

Old machine components such as batteries, as well as toxic liquids including antifreeze and engine oil.

 Please be sure to properly dispose of recyclables.



Safety precautions

This machine is a commercial product. It is specifically designed for cleaning hard floors indoors and should not be used for any other purposes. Please ensure that you use the recommended scouring pads, brushes, and commercially available floor cleaners compatible with this machine.

The safety warning symbols and the "For Safety Purposes" heading are consistently used throughout this manual; according to their descriptions, their purpose is as follows:

 Warning: Used to warn against operations that may pose a risk of serious personal injury or death, or that are unsafe. For Safety Purposes: Used to highlight the precautions that must be observed when using the machine safely.

The following safety warning symbols indicate situations where potential hazards may arise for operators or equipment. All operators must read, understand, and follow the safety precautions listed below.

 Warning: Fire or explosion hazard

1. Do not use flammable liquids; do not operate the machine near or in locations where flammable liquids, gases, or combustible dust are present.
2. This machine is not equipped with an explosion-proof motor. During startup and operation, the electric motor of this machine may generate sparks; if this machine is used in environments containing flammable gases, liquids, or combustible dust, it may lead to a flash fire.
Fire or explosion.
3. Do not pick up flammable materials or reactive metals.

 Warning: Electric shock hazard

1. Before repairing the machine, disconnect the battery cable and the charger plug.
2. Do not use damaged power cords to charge the battery. Do not modify the plugs.
3. If the charger's power cord is damaged or broken, it must be replaced by the manufacturer, its authorized service representative, or any other qualified professional to avoid potential hazards.

 Warning: Do not bring either hand near the rotating brush while it is operating; before performing maintenance on the machine, please turn off the power supply.

For safety reasons:

1. If any of the following conditions apply, do not operate the machine:

When handling flammable liquids or working in close proximity to flammable gases, do not proceed; otherwise, this may lead to an explosion or flash fire.

Unless trained and authorized.

Unless you have read and understood the operating manual.

Normal operating conditions are not met.

2. Before starting the machine:

- Ensure that all safety devices are properly installed and functioning correctly.

3. When operating the machine:

When encountering slopes or slippery surfaces, please walk slowly and carefully.

- Wear non-slip shoes.

When turning, please slow down.

In the event of machine damage or malfunction, report immediately.

- Never allow children to play on or near the machine.

Adhere to the mixing ratios and handling instructions specified on the chemical containers.

Do not operate on slopes with a gradient exceeding 5% (3°).

4. Before leaving or performing maintenance on the machine:

Place the machine on a level surface.

Turn off the machine.

Remove the keys.

5. When maintaining the machine:

- Do not move any parts. Do not wear loose tops, shirts, or sleeve covers.

Before operating the machine, please disconnect the battery cables first.

When handling batteries or battery wiring, please wear protective gloves and eye protection.

Do not spray this machine with high-pressure water or rinse it with a hose, as this may cause electrical system failure.

Use replacement parts provided by or approved by the manufacturer.

All maintenance operations must be performed by qualified maintenance personnel.

Do not modify the machine's original design.

6. When using a truck or trailer to transport the machine:

Drain the coolant from the radiator before shipping.

When loading or unloading cargo from trucks or trailers, please use the recommended loading/unloading area.

Before moving the machine, the battery must first be removed.

Please use assistance from others when moving the machine.

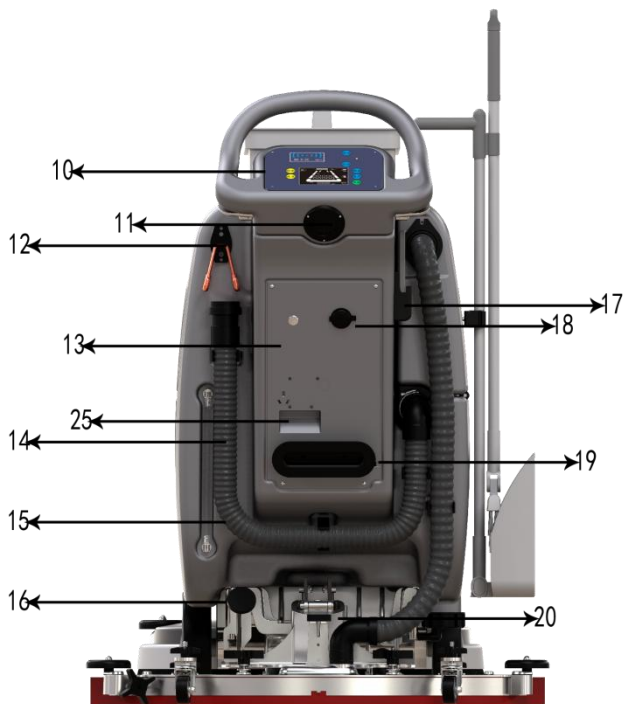
Turn off the machine.

Lower the brush plate motor to the lowering position.

Use ropes to secure the machine.

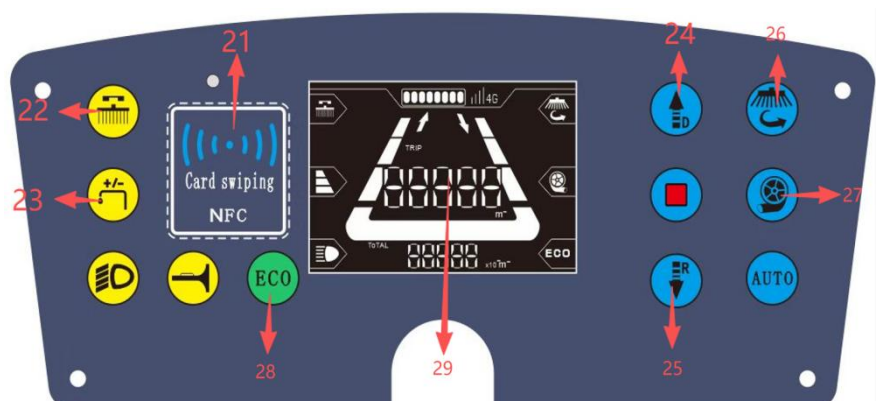
Machine Components

1. Sewage tank cover
2. Clear water inlet
3. Brush drive motor
4. Disk Drive Cover
5. Water-resistant hemline
6. Armrests
7. Water tank side handle



8. Rubber wheels
9. Storage Box + Sweeper Set (Optional)
10. Control Panel
11. Speaker
12. Parabolic support (optional)
13. Built-in charging and control circuit assembly
14. Waste discharge pipe
15. Water level sight tube
16. Pedal (for controlling the brush plate cover)
17. Smartphone Holder (Optional)

18. USB charging (Optional)
19. Charging port
20. Foot-operated bracket (for controlling the water-absorbing claw)
21. Use card swipe to turn on the power
22. Transaction Discharge Button
23. Water Release Button (controls the water discharge rate)
24. Forward Button
25. Back Button
26. Clear All Buttons
27. Air suction button
28. Energy-saving button
29. Screen Display



Machine Acceptance

Open the machine packaging

1. Carefully inspect the machine packaging box for any damage. If any damage is found, please report it to the carrier immediately.

2. Before opening the machine packaging, please first remove the metal fasteners on the large casters. With the assistance of another person, carefully unload the machine from the shelf.

Note: If no loading/unloading area is available, do not push the machine directly to avoid causing damage to the equipment.

Machine Setup

Connects to the water-absorbing bracket assembly

1. Park the machine on a level surface, turn off all power switches, and remove the key.

2. Raise the water suction claw lifting pedal to the upper position, then install the water suction claw assembly onto the water suction claw mounting bracket (Figure 3). Ensure that the fastening knob is fully inserted into the slot before tightening the knob.



graph 3

3. Connect the sewer suction pipe to the water suction probe assembly. As shown in Figure 4.



graph 4

4. Inspect the water-absorbent adhesive strip and make appropriate adjustments.

Install the brush plate

For safety reasons: Before installing the brush plate, please park the machine on a level surface, turn off all power switches, and remove the key.

1. Park the machine on a level surface, turn off all power supplies, and remove the key.
2. Press the brush disk lifting pedal and move it slightly to the left (as indicated by the arrow) to raise the brush disk motor (Figure 5).



graph 5

3. Installation method: First, align the brush plate with the brush mount of the brush plate motor; rotate clockwise to install the brush plate; conversely, rotate counterclockwise to remove the brush plate.

Pour the cleaning solution into the clean water tank.

At the front of the machine, there is a water bucket filling port for injecting cleaning solution into the clean water tank (Figure 6).



Regarding floor cleaning method: Use warm water (up to 60°C). According to the mixing ratio instructions on the container, pour the recommended cleaning agent into the water tank and mix.

Note: If you are using a bucket to transfer the solution into the clean water tank, please ensure that the bucket is clean. Do not use the same bucket to both transfer the solution and discharge the wastewater.

Note: For floor cleaning procedures, please strictly use only the recommended commercial cleaning products. If machine damage occurs due to improper use of cleaning products (please be sure not to use granular cleaning agents such as laundry detergent), the manufacturer shall not be liable for any warranty claims.

Warning: Be aware of fire or explosion hazards; do not use flammable liquids.

For safety reasons: when using the machine, please follow the mixing ratio and handling instructions on the chemical container.

hardware operation

For safety reasons: Do not operate the machine until you have read and understood the operating manual.

Warning: Be aware of fire or explosion hazards. Do not operate the machine near or at locations where flammable liquids, gases, or combustible dust are present.

Pre-operation inspection:

1. Sweep away dust from the floor.
2. Check the battery voltage scale of the battery voltmeter (refer to "Battery Voltmeter").
3. Check the wear condition of the brush.
4. Check the wear condition of the suction adhesive strip and adjust the angle accordingly.
5. Ensure that the sewage tank is empty, and that the sewage filter screen is installed and clean.

Start the machine

1. Turn the main power switch to the left.



2. Press the brush motor and water suction motor buttons.



3. Press the water suction claw lifting pedal to lower the water suction claw assembly to the ground.



4. Press the brush disk motor pedal and move it slightly to the right (as indicated by the arrow) to lower the brush disk onto the ground.



5. Turn the rotary hand valve and adjust the water flow rate according to your requirements (for different floor cleaning needs, you can adjust the setting using the panel switch).



6. To stop cleaning, first turn off the brush plate switch, then turn off the suction bar motor switch and the main power supply; ensure that all wastewater on the floor has been thoroughly cleaned; finally, lift the brush plate and the suction bar.

During machine operation

Warning: To avoid fire or explosion hazards, do not handle flammable materials or reactive metals.

For safety reasons: when operating the machine on slopes or slippery surfaces, please proceed slowly and wear non-slip shoes.

1. Each cleaning path shall overlap by 5 cm.
2. Ensure the machine continues to move continuously to avoid damaging the ground.
3. Clean the cleaning area in advance to avoid leaving drag marks. If drag marks remain on the floor after using the suction pad, wipe the rubber strip with a cloth to remove the debris.
4. Do not operate the machine on slopes with a gradient exceeding 5% (3°).
5. If there is excessive foam, pour the recommended commercial defoaming agent into the wastewater tank.

Note: Do not allow foam to enter the sewage filter mesh in the sewage tank, to avoid damaging the water suction motor.

6. For extremely dirty areas, please use a dual-washing method: first, raise the absorbent pad for cleaning; let the solution soak for 3–5 minutes; then, lower the absorbent pad and clean again.

7. When staff leave the machine, please raise the suction claw and brush plate, turn off all power switches, and remove the keys.

Battery Voltage Gauge

The battery gauge displays the remaining battery charge level. When the battery is fully charged, all indicator lights will illuminate. As the battery charge depletes, the indicator lights will sequentially turn off from right to left.

Note: To extend the battery's lifespan, please ensure that you charge the battery promptly after completing use of the machine.

If only one indicator light on the electricity consumption meter is lit, please stop cleaning and charge the battery. If you continue operating the machine while only one indicator light is lit, the cleaning function will automatically shut off once the last indicator light begins to flash; this prevents the battery from being completely drained. Please immediately push the machine to the charging area to charge the battery.



Water tank drain

After each use, the sewage tank should be drained and cleaned.

For safety reasons: Before leaving or performing maintenance on the machine, please park the machine on a level surface, then turn off the machine and remove the key.

Wastewater discharge tank

1. Move the machine to the drainage area and turn off the power switch.

2. Hold the drainage pipe with your mouth facing upward; remove the pipe cap, then drain the water.

Note: After all wastewater has been drained, be sure to tightly close the sewage pipe cover to prevent air leakage that could affect the fan's water suction capability.



Note: When using a bucket to collect wastewater discharged from the wastewater tank, do not use the same bucket to pour the solution into the clear water tank.

3. When cleaning the sewage tank, be sure not to flush clean water into the sewage tank's water level limiter.



Clear water discharge tank

To drain the remaining water from the clean water tank, please unscrew the drain port cover.



Battery Charging

The following charging instructions apply to the charger included with this device.

Note: To extend the battery's lifespan, please ensure you charge the battery promptly after completing use of the machine to prevent long-term undercharging, which could damage the battery.

Battery Charger Specifications

1. Charger Type: Fully automatic intelligent charger
2. 24V battery
3. Output voltage: $\sim 24V$
4. Output current: $\sim 15\text{ Ah}$

Use a battery charger

For operating instructions for the battery charger, please refer to the battery charger manual that comes with the charger.

1. Move the machine to a well-ventilated area.

Warning: Be aware of fire or explosion hazards. For safe use, keep away from sparks or open flames.

2. Park the machine on a level, dry surface; lift the suction probe and brush plate; turn off all power switches; and remove the key.
3. During charging, please open the sewage tank cover to facilitate ventilation.
4. Insert the charger's AC (alternating current) power cord into a properly grounded power socket.
5. Insert the charger's DC (direct current) cable into the battery charging socket located at the rear of the device (Figure 16). Note: Once the battery charger is connected, the device will no longer function.

Note: During charging, do not disconnect the charger's DC cable from the socket on the device to avoid arc discharge. If you need to pause the charging process, first unplug the AC power cord.

Machine Maintenance

To keep the machine in optimal working condition, it is essential to strictly adhere to the daily, weekly, and monthly maintenance procedures. Warning: Be aware of the risk of electric shock. Before performing maintenance on the machine, please disconnect the battery cables.

Daily maintenance (after each use)

1. Drain and clean the sewage tank (Figure 17).



graph 17

2. Drain the clean water tank, remove the clean water filter, clean it, and reinstall it (Figure 18).



3. Lift the waterproof hem edge to inspect the brush plate for wear; if the brush plate is severely worn, please replace it promptly (Figure 19).



4. Check for wear at the edges of the water-absorbing adhesive strip (Figure 20). If wear is detected, interchange the two ends of the adhesive strip; if none of the four sides are functional, replace it immediately. (Refer to "Replacement of the water-absorbing adhesive strip")



graph 20

Machine Specifications



Device dimensions	1300*570*1070mm	work efficiency	2500m²/h	operate time	3.5-6h
Clear water tank	60L	Wastewater Tank	65L	Water-absorbing motor	500w
Walking Motor	300W	Disk Brush Motor	550w	Ramp slope	15 degrees
Drive type	Self-propelled	charging interval	6-7H	scope of application	Cement floors / epoxy flooring / terrazzo flooring / small square tiles / underground parking lots / industrial workshops

Product Warranty Card (Main Card)

(This warranty card serves as the primary document for warranty service; please keep it in a safe place.)

Warranty Regulations:

During the warranty period, any malfunctions arising from normal use of the machine in accordance with the user manual shall be repaired free of charge. Please take the faulty machine, this warranty card, and the invoice to the place of purchase for free repair.

During the warranty period, if any of the following circumstances occurs, you will not be eligible for free repair services; we appreciate your understanding.

1. You are unable to provide the original copy of this warranty card or a valid invoice.
2. Malfunctions or damage resulting from incorrect use, or from unauthorized repair or modification.
3. Malfunctions or damage resulting from transportation, handling, or accidental drop after purchase.
4. Faults or damage caused by using a power supply other than the specified one (e.g., voltage, frequency, etc.) or by abnormal voltage conditions.
5. Machine exterior, dust barriers, filter elements, electrical wiring, hoses, steel pipes, and other accessories.