

# M60 Walk-behind Floor Cleaner

## OPERATION INSTRUCTION



**CAUTION!**

Read this manual carefully before using the device.

# Contents

Warning.....	2
Operation guide.....	3
Safety instructions.....	4
Operation process.....	5
Complete cleaning.....	6
Technical specifications.....	7
Diagram.....	8
Operation.....	9
Function.....	10
Core components.....	11
Consumables.....	12
Daily Maintenance.....	13
Changing Battery.....	13
Battery maintenance.....	14
Trouble shooting.....	15
Warranty.....	16

## **WARNING!!**

- 1、 Read all the installation instructions carefully before you first use your machine.
- 2、 This ground washing machine is only used as a hard ground cleaning equipment. If it is used for other purposes than the instructions in this manual, our company will not be liable for any losses caused thereby.
- 3、 The washing machine should avoid being involved in long fibers such as rope and silk, corrosive chemicals, high temperature sundries, etc., otherwise the brush may be damaged or cause other safety accidents.
- 4、 This ground washer mainly cleans dirty hard ground.
- 5、 Any form of modification may affect its performance, life, and even affect the use of safety and may violate laws and regulations. Damage caused by modification does not belong to the “warranty” .
- 6、 When the washing machine is turned on, it is not allowed to extend or bring any part of the body into the rotating parts to avoid the damage to the body caused by the rotation of the machine.
- 7、 The machine should be parked on the slope as far as possible, and must be parked on the flat ground.
- 8、 The power supply of the sweep must be disconnected first when opening the boot hood, installing accessories, or maintaining and repairing.
- 9、 Battery charging should be in a well-ventilated place, power shortage should be timely charging.
- 10、 When you finish the work, you should unplug the key in time and keep it properly to avoid unauthorized personnel.
- 11、 When stopping the machine, the washing machine should lift all the brushes and water-absorbing rakes, which can prolong the service life of consumable parts and maintain the machine.
- 12、 Do not use water gun or high pressure water gun to rinse the machine directly.

# OPERATION GUIDE

## Machine outer packing

Immediately after receiving the machine, check whether the received machine and accessories are consistent with those on the shipping bill, and check whether the machine is damaged during transportation. If the machine is damaged or missing, please contact us, so that we will send you the missing products as well as the damaged products in transit.

## Proper use

Hand-push floor washers are used for commercial purposes such as hotels, schools, hospitals, factories, shops, offices and rental businesses. You can scrub the hard floor of the indoor environment, such as concrete, asphalt, stone synthetic materials, etc. Do not use the machine on carpet surfaces. Use only recommended pads, scrubs, and commercially available floor cleaners. Do not perform any operation other than the operation manual.

## Working principle

This is a floor scrubbing and drying machine. in the traditional floor washing mode, a mixture of water and detergent is ejected from the cleaning tank onto the floor, where it is cleaned by a rotating cleaning brush/liner /. When the machine moves forward, the water scraper will suck the dirt on the ground into the sewage tank under the action of vacuum suction. To keep the ground clean and dry.

## Please check the machine according to the following steps before work

- 1) Turn on the key switch to check the battery power. If the battery is insufficient, please turn off the power immediately and then charge the battery.
- 2) Open the cover of the water tank to check the water quantity. If the water quantity is insufficient, an appropriate amount of water should be added before operation.
- 3) Step on the brush plate assembly and place the brush plate on the ground.
- 4) Put down the water scraper assembly on the ground.
- 5) Check whether the sewage tank is empty. If there is sewage, please drain it. The sub-operation and water - absorbing adhesive strip are in good condition.
- 6) Remove any obstacles during operation.

**CAUTION!** Do not use the machine without training

## SAFETY INSTRUCTIONS

- (1) Read the manual before operating the machine.
- (2) Do not mix different types of cleaners, otherwise harmful gas will be produced.
- (3) Do not use the machine in an explosive environment.
- (4) Do not use the machine to transport items.
- (5) Do not use acidic solutions that will damage the machine
- (6) Do not spray the machine with water or pressurized water directly, and do not use corrosive substances to clean the machine.
- (7) Do not use the machine near flammable liquid/vapor/liquid or flammable dust to reduce fire and injury.
- (8) The battery will emit hydrogen. Keep away from sparks and open flames when charging.
- (9) Do not use it outdoors. Indoor storage.
- (10) Do not touch the machine brush when it is spinning.
- (11) When the machine breaks down, please check whether the routine maintenance work can not be done properly. Please contact the service provider.
- (12) When the machine needs replacement parts, please contact the retailer in our service center.

CAUTION! This machine can only be used indoors and stored indoors.

## THE WORKING PRINCIPLE

### Traditional Cleaning

This is a floor scrubbing and drying machine. in the traditional floor washing mode, a mixture of water and detergent is ejected from the cleaning tank onto the floor, where it is cleaned by a rotating cleaning brush/liner /. when the machine moves forward, the water scraper will suck the dirt on the ground into the sewage tank under the action of vacuum suction. keep the ground clean and dry.

## OPERATION PROCESS

- 1、 Check whether the battery wiring contacts are good enough to prevent short circuit faults.
- 2、 Turn on the machine with a key, and check whether the battery is sufficient, if the battery is too low, don't continue using the machine, turn off the power immediately, and charge the battery.
- 3、 Check that the brush pan or needle holder is properly installed.
- 4、 Check whether the gripper is properly installed (The strip is installed).
- 5、 Check to see if the wheels are working properly
- 6、 Empty the waste water tank.
- 7、 Fill the fresh water reservoir with clear water.
- 8、 Check the amount of water in the water scale tube, if the amount of water is insufficient, add the right amount of water first before the operation;
- 9、 Check the top cover of the tank to make sure it is properly covered and creates a preliminary seal;
- 10、 Check the sewage pipe cap and place it inside the sewage pipe clamp.
- 11、 Check to lower the brush pan lifting handle, and lower the brush pan to the ground;
- 12、 Check the solenoid valve, open the water valve switch, and adjust to the right amount of water;
- 13、 Press the switch of the water absorption motor to start the water absorption motor, pay attention to whether there is abnormal or abnormal sound, if abnormal, immediately turn off the power
- 14、 Press the switch of the brush disk motor to start the brush disk motor, pay attention to whether there is abnormal or abnormal sound, if abnormal, immediately turn off the power.

**CAUTION!** In order to better maintain the machine and improve the service life of wearing parts, the total power supply must be turned off after the water absorption motor is completely stopped.

## OPERATION CAUTIONS

- 1、 When stopping cleaning work, please close the water valve first and keep the water scraper working until all the sewage is absorbed clean, turn off the suction motor, lift the brush plate and turn off the brush plate motor, and turn off the main power when the suction motor is completely stopped.
- 2、 When cleaning the ground, a large number of sewage stains suddenly appear behind, please drain the sewage tank in time, so as to carry out normal operation.
- 3、 Confirm that the machine does not make any abnormal noise when working. If there is any abnormal noise, it should stop immediately and check the reason.

- 4、 If any parts of the machine are removed, for whatever reason, they must be restored to their normal state before the machine is put to work;
- 5、 Touch the moving parts of the machine is dangerous and absolutely forbidden. Turn off the power and remove the key.
- 6、 At any time to stop for repair, maintenance or abnormal operations, it is necessary to ensure that the machine stops stable, can be overhauled.
  01. Report machine damage or malfunction immediately.
  02. Slow down when turning and go slow on slopes and smooth surfaces.
  03. Do not scrub on a 9% slope and do not transport on a slope with a slope of more than 21%
  04. Be careful and careful when reversing the machine.
  05. When leaving the machine, it is necessary to park smoothly on a level surface. Turn off the key switch and remove the key to save.

**CAUTION!** All maintenance, overhaul or repair work must be handled by our professional service personnel

In the boot cleaning work, must not stay in the same place rotation, stay in the same place for a long time, the ground will be washed and damaged.

### **Complete cleaning**

- 1、 Emptying the waste Water tank. If the waste water tank is full, the float closes the suction channel. The suction operation is interrupted. Rinse the waste water tank with clear water.
- 2、 Do not park the machine in a humid environment and do not store the machine in an extremely cold place
- 3、 Check the power before shutdown and charge it in time.

**CAUTION!** Raise the brush and the vacuum bar after complete cleaning. Don't park on the slope.

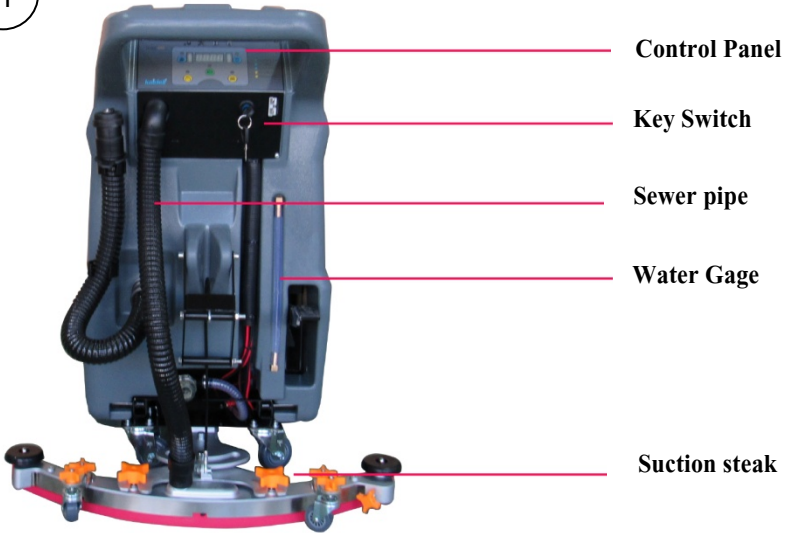
## TECHNICAL SPECIFICATIONS

Model	M60
Scrubbing width	21in
Squeegee width	34in
Brush size	20in
Cleaning efficiency	20990sqft/h
Cleaning time	3-4h
Brush speed	166rpm
Brush pressure	66LB
Absorbent power	0.67HP
Vacuum suction	135mbar
Brush motor power	0.67HP
Solution tank	14.6 gal
Recovery tank	15.9 gal
Battery capacity	24V/100AH
Total Weigh	339LB
Machine size	48*21*39in
Packing size	56*24*48in



## Diagram of the machine

1



2



3



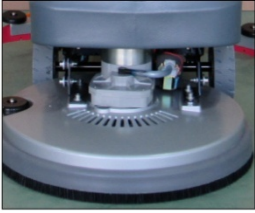
## Operation

1. Turn on the power key switch (located under the console)
2. Turning the key to the right will turn on the power supply of the vehicle, and turning it to the left will disconnect the power supply.
3. Press the Brush button- brush is switched off after approx,5seconds.
4. Red light - On status
5. The blue suction button is on the left side of the panel
6. Press the Suction button - suction is switched on/off approx.5 seconds.
7. Adjust the amount of water according to the situation
8. “ECO mode” turn on.
9. Press the “ECO” button-- The movement is slower, the noise is less.
10. When the indicator light is on, it means that the water in the water tank is about to be drained, and water needs to be added before the work can continue.

### CAUTION!

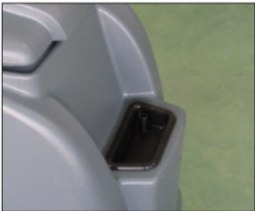
Please follow the instructions for the first use. Users need to be trained.

# Function



## Aluminum alloy brush cover

Aluminum alloy brush plate cover is mainly linked with the rotation of the brush plate motor to drive the rotation of the ground brush plate, the main role of the brush plate is to scrub the dirt on the ground, decontamination. It is equipped with water retaining ring to prevent the second pollution caused by sewage dumping water in the cleaning process.



## filling pipe end

Water tank, two calibers can also be filled with two hoses at the same time. Please inject clean water without impurities, and the water temperature shall not exceed 50 degrees Celsius. If the ground dirt is serious, low-bubble cleaner can be injected into the clean water tank.



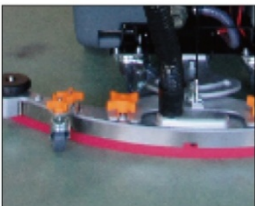
## Sewage pipe.

Remove the sewage pipe and open the cover of the sewage tank to drain the water. Large diameter sewage pipe design, can completely discharge dirt, drainage speed is fast, not easy to block, the length of sewage pipe is 1 m 1, convenient distance drainage position.



## Connection battery

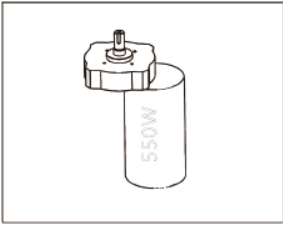
Two maintenance-free batteries of the brand are combined together, and the connecting line is connected with the charger line. The battery is installed in the battery compartment under the sewage tank.



## Suction steak and strip

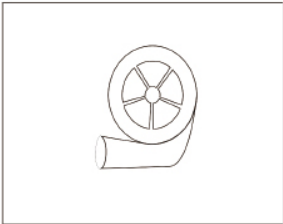
Suction steak made of aluminum alloy, good quality, can be used for a longer time. The shape of the arc can absorb water better. The rubber strip is easy to replace and easy to use.

## Core components



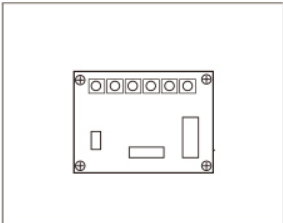
### **electric machine**

0.67hp/24V All copper wire. Low noise, low temperature, more energy saving



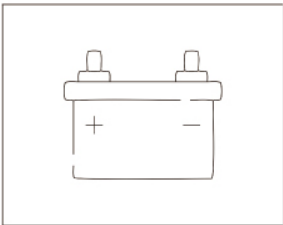
### **Suction motor**

Suction motor power:0.67hp/24v. Fast speed, strong function.



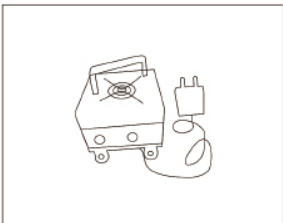
### **Control panel**

The control panel has all the operation buttons.



### **Battery**

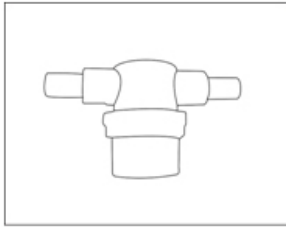
100AH maintenance-free battery, the charging process is generally 3-4 hours, the charger will turn green when fully charged.



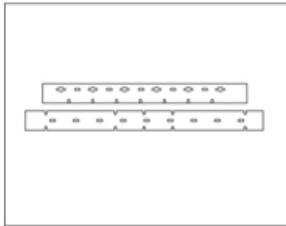
### **Charging station**

Intelligent charger, full load efficiency  $\geq 85\%$ , automatically charging after correct connection, built-in charging timeout protection device, to protect the battery.

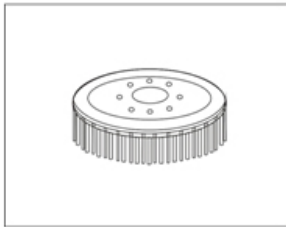
## Consumables



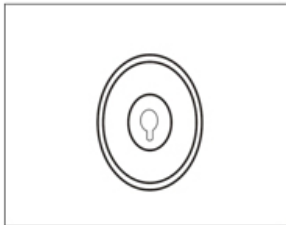
Filter screen



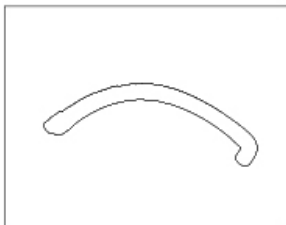
The rubber strip



Disc brush



Wheel



Suction sewage pipe

**CAUTION!** Do not expose the machine to rain, store it indoors.

## Daily Maintenance

- When the machine is not working, clean the brush tray to protect the bristles.
- When the machine is not working, lift the cleaning particles and other stains to protect the rubber strip from deformation.
- Check the scution lips after using.
- Every time you fill water or after use, please empty the sewage in the sewage tank, the floating ball clean effectively protect the motor
- When the machine operation time, the battery power will decline, when the power display table in the last grid flashing light, indicating insufficient electricity, need to charge in time.
- Charge the battery for about 4 hours after each use, do not over discharge the battery, the battery loss is serious. The battery should not be charged more than once everyday and the machine should only be running for at least 15 minutes Use the charger to fully charge the battery before using the machine again.

**CAUTION!** Replacement of battery must be operated by professional personnel to avoid danger of electric shock!

## Changing Battery

Battery Replacement Process

- 1、 Shut off power.
- 2、 Loosen the bolt to remove the old battery.
- 3、 Connect the new battery and tighten the bolts.

**CAUTION!** Check whether the battery connection is correct.

## Battery maintenance

- 1、 Please wear protective gloves to protect your hands when you work.
- 2、 The tip and electrode of the battery shall be treated with anti-corrosion treatment. Wipe repeatedly with a brush dipped in soda water, but do not pour the solution into the battery.
- 3、 Check whether the battery cable is worn and the contact parts are loose. Replace them if necessary.
- 4、 Keep the power supply dry and keep it clean to avoid damage

## Maintenance

Charge the battery before storing the machine to extend the service life of the battery. Charge the battery once every 3 months, empty and clean the water tank and sewage tank, store the machine in a dry area, lift the absorbant brush head and wash the floor to maintain the upward position, and open the sewage tank cover to promote air circulation.

**CAUTION!** The battery case must be left open while charging. Keep away from fire.

## ATTENTION

Maintenance must be done by professionals

Do not tilt the machine.

Do not modify the machine.

Use the matching battery charger.

**CAUTION!** Please do not use the machine in inflammable and explosive environment, and do not charge the machine unattended

## Trouble shooting

Symptom	Cause	Solution
The machine cannot power on	Power cables are not connected.	Reconnect the power cord to the machine.
	Oxidation of power line.	Check the power cable and reinstall the nut.
	The battery has run down.	Check whether the battery is charged.
The machine moves slowly	Low power	Recharged
	The machine overload	Reduce machine load
	There isn't enough water in the tank	Add fresh water again
Poor brush	Blockage of filter screen	Clean the filter
	Water is not enough	Fill the water
Poor suction	The suction pipe is blocked	Clean house
	The sewage pipe is not connected.	Reconnection.
	Battery power too low	Charge the battery fully
	Strip damage	Replace the strip
	There's a gap off the ground	Adjust the Angle
Scution motor noise	Blockage of suction vent.	The suction vent is blocked by a foreign object.
	Blockage of suction pipe.	There is garbage in the suction pipe.
	Motor fault	The motor inlet
Poor running time	Battery power too low	Please charge the battery fully.
	Batteries need maintenance	See “Maintenance battery”
	The battery needs repair.	Change the battery.
	Charger damage	Replace the charger



## Warranty

The company has a perfect after-sales service system, and customer satisfaction of the sales commitment.

1、 From the date of purchase, except wearing parts and consumables (rubber strip, brush plate, pipe, battery, etc.), the rest of the main parts are guaranteed for one year.

2、 When the user sends the product for repair, he/she must hold the valid purchase invoice and the warranty card of the product. The warranty period starts from the date of invoice issuance. The user should keep the warranty card and the purchase invoice properly.

3、 The warranty does not apply to following situations:

The product is damaged due to improper usage(including storage)and operation by the user.

No warranty card or valid purchase record

The product type or serial number noted on the invoice or warranty card is not conformity with the actual product.

Cause of force majeure

The warranty period has expired.

4、 Damage to the product caused by accident, abuse, negligence, or improper use of its parts is not covered by the warranty, and the Company is not responsible for any direct or indirect losses.

5、 We will also provide you with the service you need in time to exceed the above limits

### WARRANTY CARD

User Name		Tel	The dealer's stamp to prove
Product Name	Floor cleaner		
Product Model			
Product Code			
Purchase date			
Selling unit			