



# **Mini Marvel AF2225**

User Manual



**MICRO RIDE-ON FLOOR SCRUBBER**

Instructions for operation and maintenance

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**List****Standard Packing List**

| order | name                 | unit       | quantity |
|-------|----------------------|------------|----------|
| 1     | Machine              | set        | 1        |
| 2     | Lithium battery      | set        | 1        |
| 3     | Battery charger      | set        | 1        |
| 4     | floor scrubber brush | set        | 1        |
| 5     | Rubber Strip         | Kit (2pcs) | 1        |
| 6     | Squeegee assembly    | set        | 1        |
| 7     | Suction pipe         | piece      | 1        |
| 8     | Manual               | piece      | 1        |

**Replacement Cycle and Warranty Specification for Easily Wounded and Consumption Parts**

| name                        | Recommended replacement cycle | warranty statement |
|-----------------------------|-------------------------------|--------------------|
| Lithium battery             | 5000 charge-discharge cycles  | 5 years            |
| front squeegee blade rubber | 300 hour                      | No warranty        |
| rear squeegee blade rubber  | 500 hour                      | No warranty        |
| brush                       | 700 hour                      | No warranty        |
| suction motor               | 1200 hour                     | 24 months          |
| Brush motor                 | 4000 hour                     | 24 months          |
| Suction hose                | 1000 hour                     | No warranty        |
| exhaust pipe                | 1000 hour                     | No warranty        |

**EXCEPTION CLAUSE**

1. Read and check the power supply size indicated on the nameplate before use , And confirm that the current power supply meets the requirements of this product. In case of product damage or personal injury caused by incorrect use of power supply ,our company is not liable.
2. Do not use it beyond its rated load. If this causes damage to the parts , our company is not liable.
3. Do not use in ultra-extreme environments (acidic, alkaline, too low or too high ambient temperature) , If any damage, accident or injury is caused by it, etc , our company is not liable.
4. Our company is not liable for failure and damage caused by failure to use, maintain, keep or put foreign bodies in.
5. Our company is not liable for damage or injury caused by unauthorized refitting of washing trucks ,etc.

## ATTENTION

To avoid harm to the operator and damage to the machine, please read the contents marked this symbol  carefully.

ATTENTION: Danger of exhalation of gas  and leakage of corrosive liquids. 



ATTENTION: danger of fire: do not go near with free flames.

## ON CONSIGNMENT OF THE MACHINE

When the machine is consigned to the customer, an immediate check must be performed to ensure all the material mentioned in the shipping documents has been received, and also to check the machine has not suffered damage during transportation. If this is the case, the carrier must ascertain the extent of the damage at once, informing our customer service office. It is only by prompt action of this type that the missing material can be obtained, and compensation for damage successfully claimed.

## INTRODUCTORY COMMENT

Floor scrubber-dryer, via the mechanical action of the rotating brush and the chemical action of a water/detergent solution, can clean any type of flooring. As it advances, it also collects the dirt removed and the detergent solution not absorbed by the floor. Even the best machines will only work well if used correctly and kept in good working order. We therefore suggest you read this instruction booklet carefully and read it again whenever difficulties arise while using the machine. If necessary, remember that our assistance service (organized in collaboration with our dealers) is always available for advice or direct intervention.

## INTENDED USE

The scrubbing machine is designed exclusively for the professional cleaning of surfaces and floors in industrial, commercial and public environments. The machine is only suitable for use in closed - or at least covered - locations.

The machine is not suitable for use in the rain, or under water jets. It is FORBIDDEN to use the machine for picking up dangerous dusts or inflammable liquids within places with a potentially explosive atmosphere. In addition, it is not suitable as a means of transport for people or objects.

**TECHNICAL DESCRIPTION**

|                            |        |                |
|----------------------------|--------|----------------|
| Clean width                | Inch   | 22             |
| Squeegee width             | Inch   | 33             |
| Max. Forward Speed         | mi/h   | 4.03           |
| Max. Capacities            | sqft/h | 39000          |
| Brush Pressure             | lb     | 88             |
| Disc brush rotations       | RPM    | 155            |
| Brush motor                | V/W    | 24V/550W       |
| Suction Motor              | V/W    | 24V/500W       |
| Drive Motor                | V/W    | 24V/500W       |
| Full Charging Time         | H      | 4              |
| Minimum Turning Radius     | Inch   | 48             |
| Maximum gradient with full | %      | 18             |
| Solution tank              | Gal    | 23             |
| Recovery tank              | Gal    | 25             |
| Dimensions LWH             | Inch   | 53"D×26"W×43"H |
| Battery                    | V/AH   | 25.6V/100AH    |
| Battery weight             | lb     | 50             |
| Net weight                 | lb     | 287            |

## SYMBOLS USED IN THE MANUAL



Attention



Manual



Watch Your Hand



Warning injure hand



No open flames



Caution Danger of exhalation of gas



Recycle



Information



Warning corrosion



Caution shock



Dangerous waste



Lifting means

## GENERAL SAFETY REGULATIONS

The regulations below must be carefully followed in order to avoid harm to the operator and damage to the machine.

- ◆ Read the labels on the machine carefully. Do not cover them for any reason and replace them immediately if they become damaged.
- ◆ The machine must be used exclusively by authorized, trained personnel.
- ◆ During the working of the machine, pay attention to other people and especially to children.
- ◆ Do not mix different types of detergent as this may produce harmful gases.
- ◆ Do not pack the machine when there is residual liquid in it.
- ◆ The storage temperature must be between -25°C and +55°C.
- ◆ Conditions of use: room temperature between 0 ° C and 40 ° C with relative humidity between 30 and 95%.
- ◆ Do not use the machine in an explosive atmosphere.
- ◆ Do not use the machine as a means of transport.
- ◆ Do not use acid solutions, which may damage the machine or harm the operator.
- ◆ Avoid working with the brushes when the machine is standing still, so as not to damage the floor.
- ◆ Do not vacuum inflammable liquids
- ◆ Do not use the device to collect dangerous powders.
- ◆ In the event of a fire, use a powder extinguisher. Do not use water.
- ◆ Do not knock against shelving or scaffolding, where there is a danger of falling objects.
- ◆ Select the operating speed according to the traction status.
- ◆ Do not use the machine on surfaces with an inclination greater than the one shown on the plate.
- ◆ When not in use, remove the keys and place the machine in a proper way to keep still.
- ◆ The machine is designed to carry out the washing and drying operations simultaneously. Different operations should only be carried out in areas where the passage of unauthorized persons is prohibited. Signal the presence of damp floors with suitable signs.
- ◆ If the machine does not work properly, check this is not caused by failure to carry out routine maintenance. Otherwise, request the intervention of your dealer After-sale Service Centre.
- ◆ If you need to replace any components, request the ORIGINAL spare parts from a dealer or Authorized Retailer.
- ◆ Only use the brushes supplied with the device, or those specified in the Use and Maintenance Manual.

- ◆ Pull down the emergency brake immediately when there is an operation risk.
- ◆ Before carrying out any maintenance work, switch off the machine and disconnect the battery connector.
- ◆ Make sure the whole electrical connection is recovered after maintenance.
- ◆ Do not remove any protection devices which require the use of special tools.
- ◆ Do not wash the machine with corrosive substances or with pressurized water.
- ◆ Send the machine to a Service Center nearby for servicing after 200 hours of use.
- ◆ To prevent the formation of scale in the solution tank filter, do not fill the tank with detergent solution many hours before using the machine.
- ◆ Before using the machine, check that all the hatches and covers are positioned as shown in this Manual.
- ◆ Before moving the recovery tank, empty the water.
- ◆ When disposing of consumption materials, observe the laws and regulations in force.
- ◆ When your machine has reached the end of its long working life, dispose of the materials it contains in an appropriate manner (e.g. oil, batteries and electric parts), and bearing in mind that the machine itself was constructed using 100% recyclable materials.

## I . MACHINE PREPARATION

### HANDLING THE PACKED MACHINE

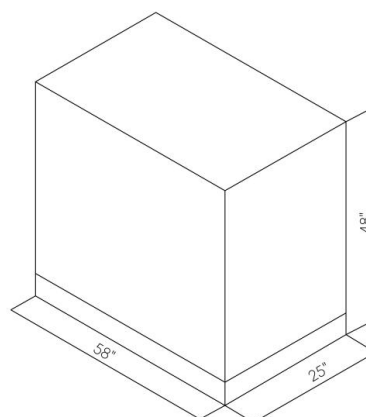
The machine is fixed to a pallet, which is specially designed for forklift handling.

Overall dimensions of the package:

L: 58"

W: 25"

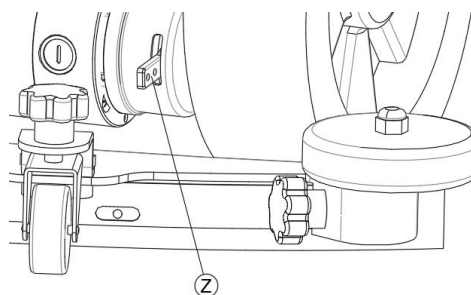
H: 48"



It is not possible to place more than two packages on top of each other.

### HOW TO UNPACK THE MACHINE

1. Remove the outer packaging ( as figure )
2. The machine is fixed to the pallet with wedges and belts which block the wheel.
3. Remove these belts.
4. Disengage the electronic brake, Pull the operating lever (Z) to the upper position (On the drive wheels)
5. Get the machine down from the pallet.







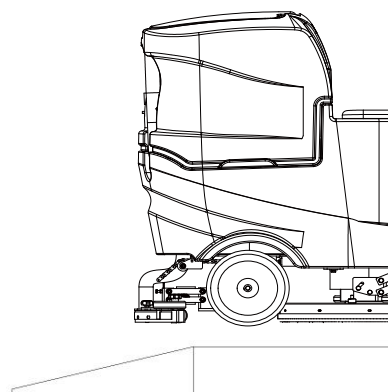
Keep the pallet for any future transport needs.



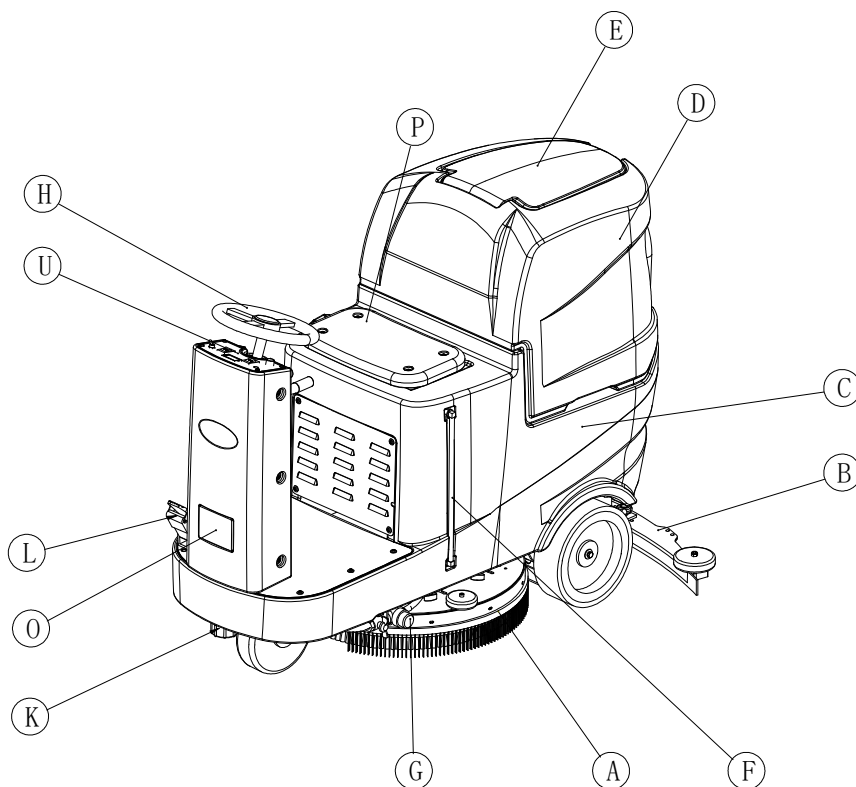
Handle the packed product with suitable lifting means that comply with the legal requirements.

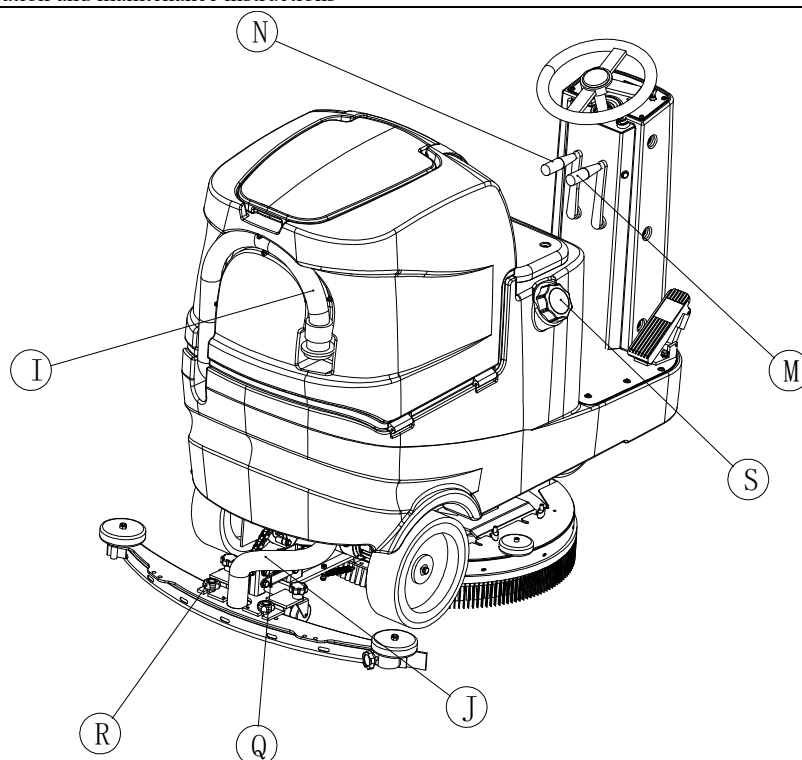


During this operation, ensure that there are no people or objects near the machine.



## OVERALL INTRODUCTION





|                                      |                           |                         |                     |
|--------------------------------------|---------------------------|-------------------------|---------------------|
| A: Brushing System                   | B: Squeegee assembly      | C: Solution tank        | D: Recovery tank    |
| E: Recovery tank cover               | F: Water level indicator  | G: Filter               | H: Steering wheel   |
| I: Sewage pipe                       | J: Suction pipe           | K: Outfall              | L: Drive pedal      |
| M: Brush head lifting lever          | N: Squeegee lifting lever | O: Light                | P: Driver's seat    |
| Q: Squeegee support                  | R: Rotate handwheel       | S: Water filling port   | U: Instrument panel |
| V: Level indicator for battery meter | X: Key switch             | Y: Speed-control switch |                     |

### Control panel

V: Level indicator for battery meter

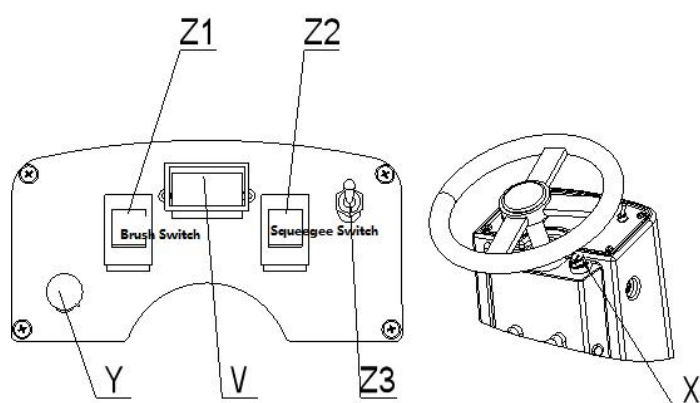
X : Key switch

Y : Speed-control switch

Z1 : Brush switch

Z2 : Squeegee switch

Z3 : Forward back switch



## SAFETY PRECAUTIONS

Lithium Iron Phosphate (LiFePO<sub>4</sub>) batteries are an inherently safe chemistry. However, as with any electronics, safety measures should always be taken.

1. Always wear protective gear when handling batteries.
2. Use proper tools, such as a wrench with a rubber-coated handle, to avoid short-circuits.
3. Keep batteries away from metallic surfaces and flammable materials.
4. Ensure all cable connections are secure and corrosion-free.
5. Store and transport batteries using the provided lifting handles.
6. Warm Tips for Battery Application: This 24V 100Ah lithium battery is not suitable for operating golf carts, engines, or any equipment that generates a high current during startup.

## INSERTING THE BATTERY ( apply to AF2225 )

The battery should be correctly placed in the battery box below the recovery tank. Inserting the battery as follows:

1. Make sure the sewage tank is empty, and then lift it up.
2. Put the battery on the pallet in place.
3. Connect all cables.
4. Do not connect batteries in series or parallel without proper guidance.
5. The front and the top of this 24V100Ah batteries can not be upside down.

## BATTERY STORAGE

1. Store batteries at temperatures between 32°F to 95°F (0°C to 35°C) for short-term and 32°F to 77°F (0°C to 25°C) for long-term storage.
2. Maintain a state of charge above 50% and cycle batteries every 6 months during extended storage.

## BATTERY DISCHARGING

1. LiFePO<sub>4</sub> batteries are safe to operate between -4°F to 140°F (-20°C to 60°C).
2. LiFePO<sub>4</sub> batteries are designed to allow for complete discharge down to zero percent, but it is generally recommended to begin charging when the battery level drops to 20% to maintain the health of the battery and extend its lifespan.

## BATTERY CHARGING



For charging safety, please ensure that the machine's power is turned off or the forward/back switch is set to the neutral position during the charging process.

1. Please use the charger provided with the AF2225 Scrubber-Dryer, which is specifically designed for the lithium-ion battery. This charger ensures that the charging parameters, including voltage and current, are correctly matched to the battery's specifications.
2. LiFePO<sub>4</sub> batteries do not require charging after each use and can be safely stored at partial states of charge.
3. The recommended charging temperature range is 32 °F to 131 °F (0 °C to 55 °C). For temperatures below 32 °F (0 °C), use batteries equipped with a heating module.
4. In the event that the lithium battery is unable to charge due to an extended period without power, utilize the emergency charging port to perform a forced charge and reactivate the battery cells.

## **BMS OPERATION**

1. The internal BMS protects against under-voltage, over-voltage, over-current, over-temperature, and short-circuit conditions.
2. If the BMS disconnects the battery due to any regulatory restrictions, please follow the instructions provided in "Troubleshooting" to restore normal operation.

## **TROUBLESHOOTING**

1. In case of operational issues, check the charger model and functionality. Replace if necessary.
2. Overcurrent Protection: If the battery activates its protection due to a high current, promptly disconnect it from the charger or any electronic load it's connected to. The battery should automatically resume normal operation after a short period.
3. Short Circuit Protection: Should your battery experience a short circuit, immediately remove any objects causing the short. Following this, use a suitable charger to replenish the battery at the standard current rate, which will assist in the battery's recovery from the short circuit condition.
4. Persistent Issues: If the aforementioned steps fail to address the problem, please reach out to a qualified service technician without delay. Avoid opening the battery casing yourself to prevent further damage or safety hazards.

## **BATTERY RECYCLING**

Dispose of batteries at an authorized lithium recycling facility. Cover terminals with a protective cap or non-conductive tape before disposal.

## VOLTMETER



The battery gauge of your floor scrubber provides crucial information regarding the status of the battery and the remaining operational time. Below is a detailed description of each section of the battery gauge:

1. Remaining Battery Percentage: Displays the remaining battery charge as a percentage. For instance, when it shows "80%", it means that the battery has 80% of its charge left.

Warm Reminder: When powering on, the battery percentage may temporarily show as 0%.

This is a normal phenomenon as the system initializes communication with the battery. Please wait for a moment, and the actual battery percentage will be displayed accurately. Thank you for your patience.

2. Battery Status Indicator: The battery gauge of the floor scrubber provides real-time information about the battery's status, which includes the following six modes:

**Standby:** Indicates that the battery is not currently charging or discharging, and the floor scrubber is in a standby state.

**Chg (Charging):** Indicates that the battery is currently being charged.

**Disch (Discharging):** Indicates that the battery is discharging, meaning the floor scrubber is operating on battery power.

**Eoc (Error: Over-current):** Indicates an over-current fault with the battery, which may be due to excessive current flow.

**Etemp (Error: Over-temperature):** Indicates an over-temperature fault with the battery, which may be due to the battery temperature exceeding safe levels.

**Evol (Error: Over-voltage):** Indicates an over-voltage fault with the battery, which may occur if the battery voltage goes beyond the safe range.

3. Remaining Working Time: Displays the time that the floor scrubber can continue to work with the current remaining battery charge. The time is formatted in hours (h) and minutes (m).



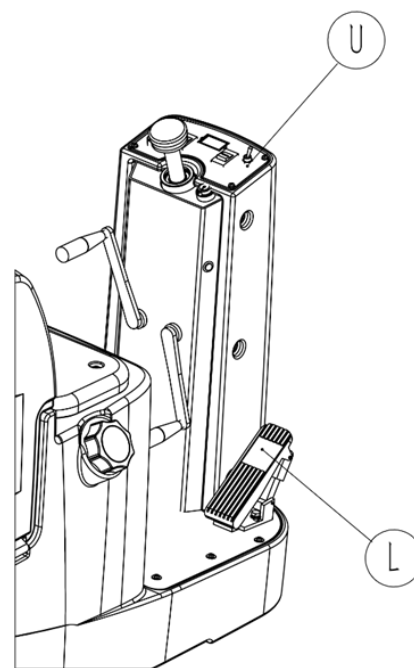
To ensure the performance of the floor scrubber and the lifespan of the battery, please regularly check the battery gauge and charge or replace the battery as needed. If a fault indicator appears, please stop using the machine immediately and contact a professional technician for inspection and repair.

## HOW IT WORKS

Turn the key clockwise to activate the main switch and the power indicator (V) will light up immediately.

Machine walks forward when select the button (Z3) forward and push down the drive pedal (L). The adjustment of the speed will be carried out by varying the pressure on the pedal (L).

Machine walks backward when select the button (Z3) back and push down the drive pedal (L). Adjust the speed by varying the pressure on the pedal (L)



## Brush Drive

Brush works when select the button (Z3) forward and drop the brush head and push down the drive pedal (L). It will not work if the brush head is raised or release the drive pedal (L).

## Suction Drive

Squeegee works when select the button (X) forward and drop the squeegee. It will stop working if raise the squeegee.



The reverse speed is lower than the forward speed to comply with current health and safety standards.

When making even brief reverse movements, make sure the squeegee is raised.

## FAILURE AND PROTECTION

When battery is low, all operation prohibited.

## FILLING THE SOLUTION TANK

Before filling the solution tank :

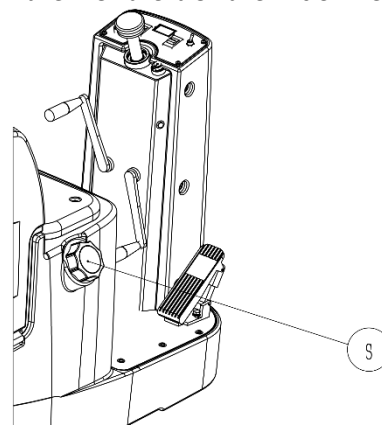
1. Remove the filler plug on the left of the machine and check that the solution filter is installed properly;
2. Check that the solution filter cap (K), under the solution tank in the front left of the machine is properly closed.



The recovery tank must be completely empty each time the solution tank is filled.

The solution tank can be filled as below:

Removing the inlet cap (S) and filling it using a rubber tube, left side of the machine. Fill with clean water at a temperature not exceeding 50°C.



The amount present in the tank can be seen through the level pipe on the front-right of the seat.

The solution tank has a maximum capacity of about 23 gallons. Add the liquid detergent to the tank in the concentration and manner indicated on the detergent manufacturer's label.

To prevent the formation of excess foam that could damage the suction motor, use only the minimum amount of detergent that is necessary.



Always use detergents whose manufacturer's label indicates their suitability for scrubbing machines. Do not use acid or alkaline products or solvents without this indication. Acid or alkaline maintenance detergents can be used, as long as they have PH values between four and ten, and do not contain oxidizing agents, chlorine or bromine, formaldehyde, mineral solvents.



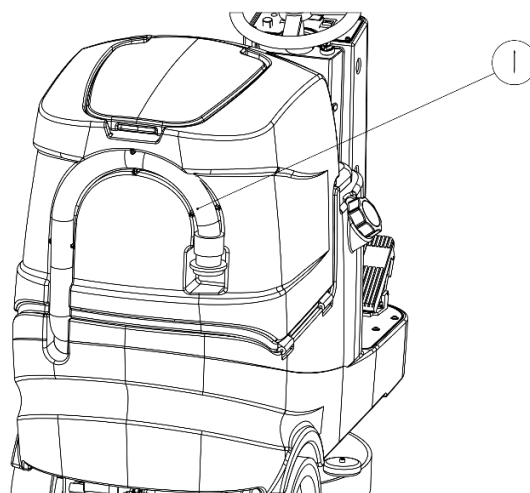
Protective gloves should always be worn before handling detergents or acidic or alkaline solutions to avoid serious injury to hands.



Always use low foam detergent. To avoid the production of foam, before starting to clean, put a minimum quantity of antifoam liquid into the recovery tank. Do not use pure acids.

## RECOVERY TANK

Make sure the recovery tank is empty, otherwise empty it completely. Check the cap of the drainage tube (I) (on the rear of the machine) is correctly closed.



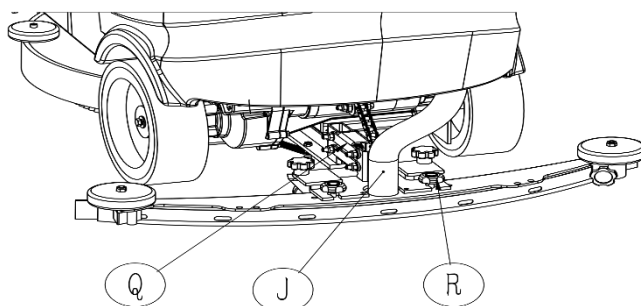
## ASSEMBLING THE SQUEEGEE

The squeegee, that for reasons of packaging comes disassembled from the machine, must be assembled while assembling the machine. Proceed as follows for assembly:

1. Lift the squeegee (Q), turning the left-hand lever (N) to move it clockwise.
2. Rotate the switch counterclockwise to turn off the machine.
3. Remove the key from the instrument panel.
4. Loosen the knobs (R) in the squeegee pre-assembly.
5. Insert the left-hand squeegee pin in the left-hand slit of the squeegee connection.
6. Insert the right-hand squeegee pin in the right-hand slit of the squeegee connection, then tighten the knob (R), making sure the washer and spring adhere in the upper part of the squeegee support.
7. Insert the suction hose (J) in the squeegee sleeve.



These operations must be carried out using protective gloves to avoid any possible contact with the edges or tips of metal objects.



### ADJUSTING THE SQUEEGEE HEIGHT

The height of the squeegee must be adjusted on the basis of the state of wear and tear of the rubber. Carry out the following operations for adjustment:

1. unscrew the locking nut;
2. Rotating wheels, adjusting its height;
3. Block it by tightening the locking nut once the required height is reached.

### ASSEMBLING THE BRUSH

1. To assemble the brushes of the brush head body, proceed as follows:
2. Ensure that the main switch is in the 'OFF' position.
3. Lift the brush head by turning the right lever (M) to move the brush head anticlockwise.
4. With the brush head in a high position put the brushes in the housing of the plate under the brush head, turning them until the three buttons go into the niches of the plate itself; turn the brush clockwise until the pin is pushed towards the coupling spring and is locked into place.

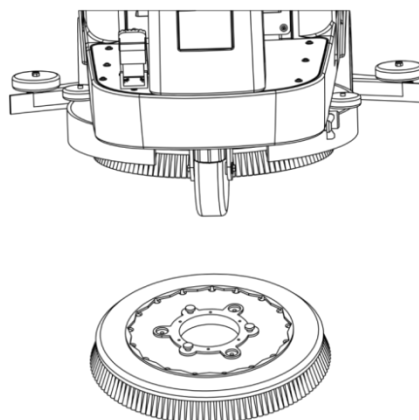


You are always advised to wear protective gloves, to avoid the risk of serious injury to your hands. Cut down all electric current in order to protect your hands.



During this operation, ensure that there are no people or objects near the brush.

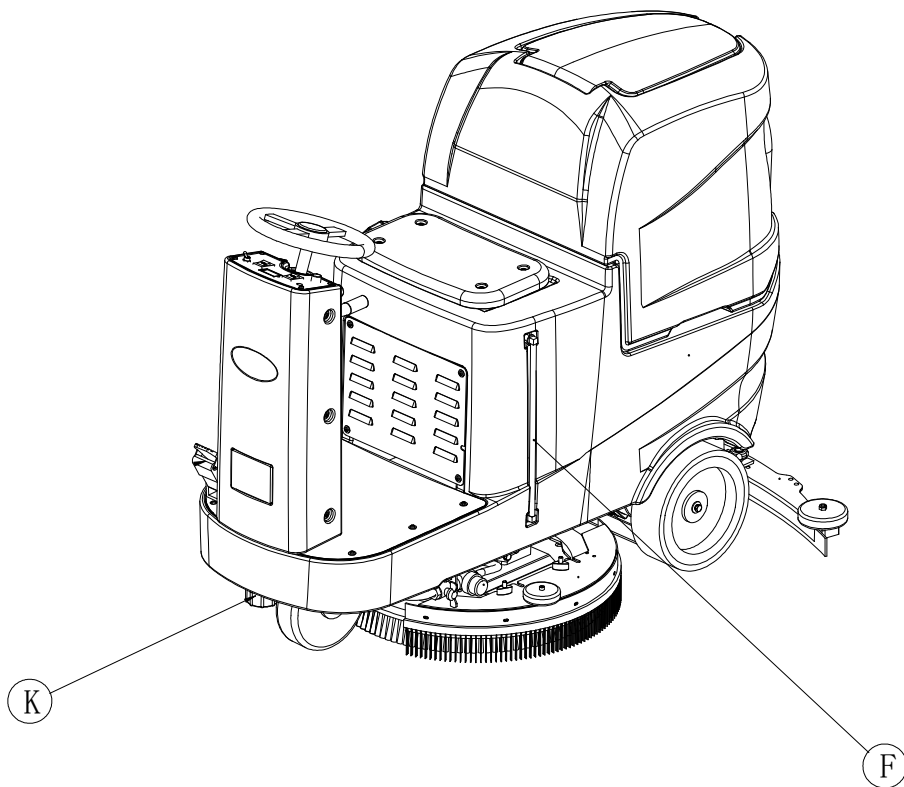
**ATTENTION:** Check the brush is correctly inserted. If this is not the case, the machine could move in an irregular, sudden manner.





## EMPTY SOLUTION TANK DEVICE

1. To check the quantity of water in the solution tank there is a suitable level indicator tube (F) placed on the right of the driver seat.
2. Push machine to the effluent discharge point, unscrew the water drain-pipe (K), the water discharged into the sewer, until the solution tank is empty.
3. Tightened the Solution tank drain pipe (K) cap, and then put it back to its position.

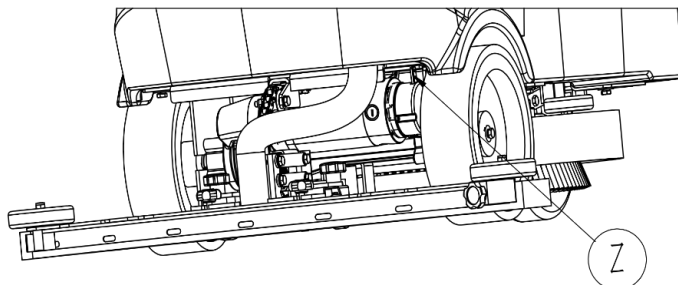


## II.WORK

### PREPARATION



1. Make sure the recovery tank is empty, otherwise empty it completely;
2. Ensure the machine key switch is in the "OFF" position; if not, turn the key of the main switch "OFF".
3. Connect the battery connector to the electric system connector.
4. Check the electronic brake.
5. Sit on the driver's seat.
6. Turn the key of the main switch a quarter of a rotation clockwise, The display on the instrument panel (V) will immediately come on. Please don't have any operation within 5 seconds after boot, the machine should be self-checking.
7. Lower the brush head by turning the right lever clockwise, then lower the squeegee turning the left lever Anticlockwise.



As soon as the forward movement pedal is activated with the brush head in its work position, the solenoid valve will start working and will begin dispensing detergent solution. As soon as the squeegee is in its work position, the vacuum motor will switch on and being working

8. Elect the forward gear, and to do this use the switch on the steering column.
9. Press the accelerator pedal (L) to start moving the machine.
10. To go backwards, stop the machine and select the desired direction, and to do this use the switch (X) on the steering column and afterwards press down on the pedal (L).



Check that there is sufficient solution and that the squeegee dries well during the initial operation. The machine will operate efficiently until the battery is depleted or the detergent solution is used up.

## OVERFLOW DEVICE

Recovery tank is full, shuts off the air to the suction motor intake to protect it  
Then proceed with emptying the recovery tank through a special drainage pipe.

## AT THE END OF WORK

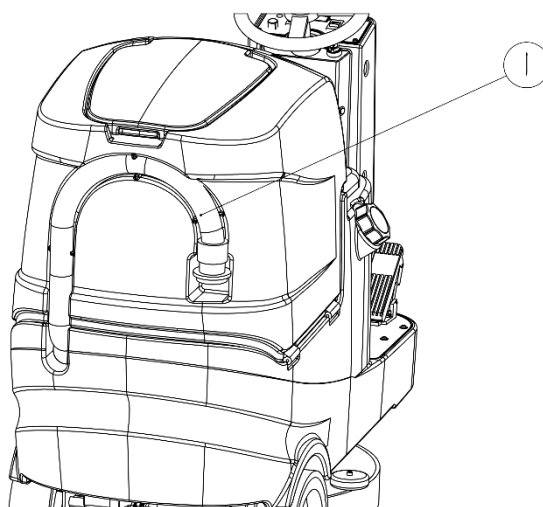
At the end of the work, and before carrying out any type of maintenance, perform the following operations :

1. Lifting the brush head by turning the right lever anticlockwise, then lifting the squeegee turning the left lever clockwise;
2. Move the machine to the designated drainage area.



Before performing any maintenance, remove the keys from the panel and disconnect the battery connector of the machine

3. To turn off the machine, rotate the key counterclockwise and then remove it from the control panel.
4. Disconnect the tube (I) from its seat, unscrew the drainage cap (H) and empty the recovery tank.
5. Screw the drainage cap and replace the tube (I) back to the seat.



Be sure to remove the key as well as tighten auxiliary brake on the drive wheel when the operator leaves the seat, and parked machine for a long time.

### III . DAILY MAINTENANCE

#### CLEANING THE RECOVERY TANK

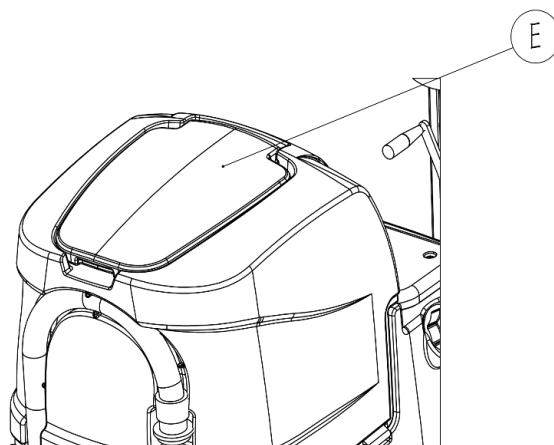
1. Bring the machine to the place provided for draining the water;
2. Disconnect the tube (I) from its seat, unscrew the drainage cap (H) and empty the recovery tank;



Before performing any maintenance, remove the keys from the panel and disconnect the battery connector of the machine.



This operation must be carried out using gloves to protect against contact with dangerous solutions.



3. Lift the recovery tank (E);
4. Clean and rinse the recovery tank;
5. Reassemble all the elements.

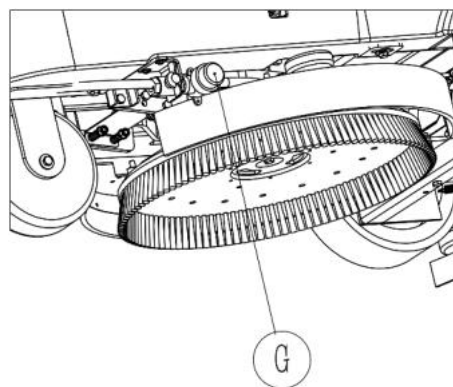


6. Be careful not to hit the recovery tank float directly, as this would enable water to enter the vacuum motor
7. connected to it.

#### CLEANING THE SOLUTION TANK FILTER

Careful cleaning of the detergent/water solution filter ensures a better working capacity. Proceed as follows for cleaning.

1. Check the main switch is on "OFF";
2. Loosen the filter (G) cap on the front of the machine;
3. Remove the internal filter cartridge and rinse everything thoroughly with running water;
4. Reassemble all the elements.





Before performing any maintenance, remove the keys from the panel and disconnect the battery connector.



These operations must be carried out using gloves to protect against contact with dangerous solutions.

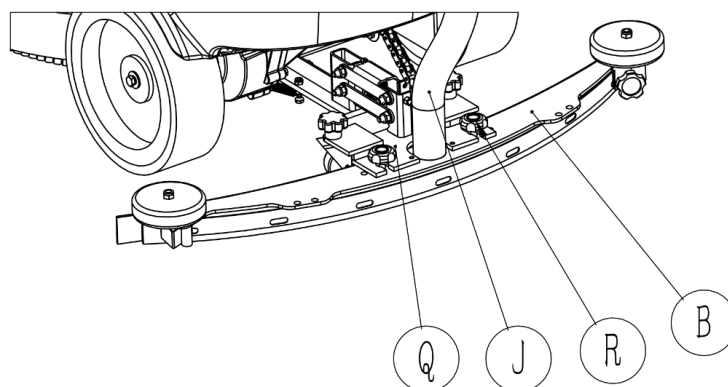
## CLEANING THE SQUEEGEE

The careful cleaning of the whole vacuum unit ensures better drying and cleaning of the floor as well as greater duration of the suction motor.

1. Remove the tube (J) from the squeegee.
2. Release the Squeegee (Q) fixed nut (R), then take down the squeegee (B).
3. Carefully clean the inside of the squeegee and rubbers.
4. Every week, or whenever suction seems to be unsatisfactory, check the squeegee tube is not obstructed. To clean it.
5. Reassemble all the elements again.



This operation must be carried out using gloves to protect against contact with dangerous solutions.



## CLEANING

### THE BATTERY COMPARTMENT



Empty the battery compartment each time you remove the batteries, check there is no fluids.

This operation must be carried out using gloves to protect against contact with dangerous solutions.



Danger of fire: do not go near with free flames.



Danger of exhalation of gas and leakage of corrosive liquids.

## IV. WEEKLY MAINTENANCE

### CLEANING THE BRUSH

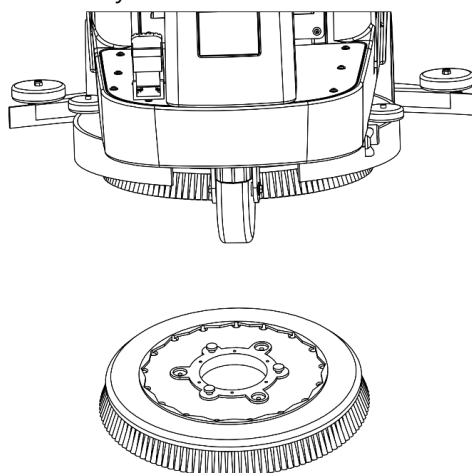
Thorough cleaning of the brush will guarantee a better working capacity. Proceed as follows for cleaning:

1. Check the main switch is on "OFF" (turn it to this position if necessary).
2. Raise the brush head by turning the right-hand lever (M) anticlockwise.
3. Turn down the brush.



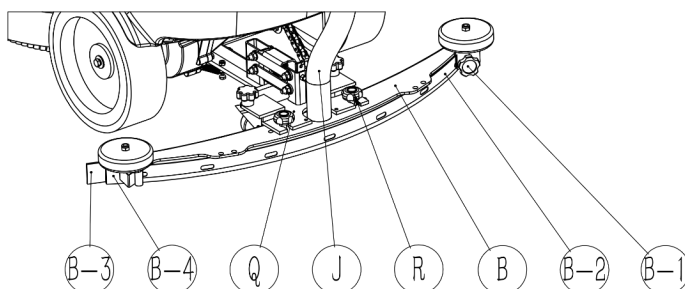
During this operation, ensure that there are no people or objects near the brush.

4. Take the brush and clean it under a flowing jet of water.
5. Reassemble it on the brush head body.



### Replacing the squeegee rubbers

1. Remove the tube (J) from the sleeve on the squeegee.
2. Rotate the nut (R) the squeegee.
3. Unthread the squeegee (B)
4. Loosen the screw that block the rubber-pressing blade and take down the plate stainless steel.
5. Reassemble the rubber.
6. Then reassemble all the elements.



## V. TROUBLE SHOOTING

Before you take it to repair or call our customer service to help, you should check out those problems.

| Phenomena                                       | Reason                                                                                                                                                                                          | Method                                                                                                                                                                                                                       |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brush motor can't work                          | 1.Check out whether electricity is good;<br>2.Check out whether motor switch is on;<br>3.Check out whether the voltage is good.                                                                 | 1.Plug in the power and make sure the fuses are normal work;<br>2.Turn on the switch of motor;<br>3.The battery are fully charged.                                                                                           |
| Water can't come out from the brush or slightly | 1.Filter or joint is clogged;<br>2.Clean the drier ground at first ,so the water can't catch up with it;<br>3.The solenoid valve is clogged or rejected.                                        | 1.Take down the filter and joint ,then wash them;<br>2.If the ground is drier,you must spray it extra;<br>3.Take down the solenoid valve,then wash it.                                                                       |
| Suction abate                                   | 1.The cover of recovery tank is not sealed;<br>2.Hose clamp loose;<br>3.Suction Motor loose or defection;<br>4.The suction hose is not completely blocked;<br>5.Battery low.                    | 1.Check the seal rubber of cover and make sure the cover will be sealed;<br>2.Check out and lock the hose clamp;<br>3.Make sure the motor install well and tighten the screw;<br>4.Dredge the pipe;<br>5.Charge the battery. |
| Water absorption is not clean                   | 1.Suction motor do not work;<br>2.Suction hose is blocked;<br>3.The squeegee is blocked with something;<br>4.The squeegee is totally worn-out;<br>5.The height of the squeegee is not suitable. | 1.Check out the motor ( according to above ) ;<br>2.Clean them;<br>3.Clean them;<br>4.Change squeegee blade rubbers;<br>5.Adjust the height of the squeegee.                                                                 |
| The brush do not clean well                     | 1.The motor of the brush can not work;<br>2.Dirt is too stubborn;<br>3.Brush is serious abrasion;<br>4.Something twine round the brush.                                                         | 1.Check out the motor;<br>2.Use appropriate cleaning fluid;<br>3.Change the brush;<br>4.Clean them.                                                                                                                          |

## **VI. CHOOSING AND USING THE BRUSHES**

### **POLYPROPYLENE BRUSH ( PPL )**

Used on all types of floors. Good resistance to wear and tear, and hot water (no greater than 60°C). The Polypropylene brush is non-hygroscopic and therefore retains its characteristics even when working in wet conditions.

### **NYLON BRUSH**

Used on all types of floors. Good resistance to wear and tear, and hot water (no greater than 60°C). The Nylon brush is hygroscopic and easy-extended; as a result it cannot retain its characteristics when working in wet conditions.

### **ABRASIVE BRUSH**

The bristles of this type of brush are extremely hard. It is used to clean very dirty floors. To avoid floor damage, work only with the pressure strictly necessary.

### **STEEL BRUSH**

It is made up of steel wire and artificial fiber blends and used to clean rough roads, floors with big joints or dirt which is difficult to clean up.

### **THICKNESS OF THE BRISTLES**

Thicker bristles are more rigid and are therefore used on smooth floors or floors with small joints.

On uneven floors or those with deep joints, it is advisable to use softer bristles which can enter the gaps more easily.



Remember that when the bristles are worn and therefore too short, they will become rigid and are no longer able to penetrate and clean deep down. In this case, like with over-large bristles, the brush tends to jump.



Where Aiolith Blows, Cleanliness Follows

THANK YOU FOR CHOOSING US

Aiolith Inc.