

GENIE MAGIC 2 Auto-Scrubber



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1.Index.....	3
2. GENERAL INFORMATION.....	3
2.1.Scope of the manual.....	3
2.2.Identifying the machine.....	4
2.3.Documentation provided with the machine.....	4
3.TECHNICAL INFORMATION.....	4
3.1.General description.....	4
3.2. Legend.....	5
3.3. Danger zones.....	6
4.SAFETY INFORMATION.....	6
4.1.Safety regulations.....	6
5.HANDLING AND INSTALLATION.....	9
5.1.Lifting and transporting the packaged machine.....	9
5.2.Checks on delivery.....	9
5.3. Unpacking.....	9
5.4 Power supply batteries (battery models).....	10
5.4.1Batteries: preparation.....	10
5.4.2 Batteries: installation and connection.....	10
5.5 Battery charger (battery models).....	12
5.5.1. Choosing the battery charger.....	12
5.5.2 Preparing the battery charger.....	12
5.6 Lifting and transporting the machine.....	12
6.PRACTICAL GUIDE FOR THE OPERATOR.....	13
6.1.Controls - Description.....	13
6.2.Mounting and adjusting the squeegee.....	14
6.3.Moving the machine when not in operation.....	15
6.4.Mounting and changing the brush/drive disks.....	15
6.5.Detergents - Instructions.....	16
6.6. Preparing the machine for work.....	16
6.7 start working.....	17
6.8.Some useful tips to get the most from your scrubber drier.....	19
6-9 Pre-wash.....	19
6.9.1 Drying.....	19
6.9.2Draining the dirty water.....	19
6.10 empty water tank.....	20
7. PERIODS OF INACTIVITY.....	20
8.BATTERY MAINTENANCE AND CHARGING.....	21
8.1 Charging.....	21
8.1.Recharging procedure.....	21
9.MAINTENANCE INSTRUCTIONS.....	21
9.1.Maintenance - General rules.....	22
9.2.Routine maintenance.....	22
9.2.1Suction motor air filter and float switch: cleaning.....	22
9.3Detergent filter: cleaning.....	22
9.4Squeegee blades: replacing.....	22
9.5Fuses: replacement.....	24
9.6.Routine maintenance.....	24
9.6.1 Daily operations.....	24
9.6.2 Weekly.....	25
9.6.3. Six monthly operations.....	25
10.Trouble solution.....	25
10.1 How to resolve possible problem.....	25



1. Index

2. GENERAL INFORMATION

Read this manual carefully before carrying out any work on the machine¹.

2.1. Scope of the manual

This manual has been written by the Manufacturer and is an integral part of the machine.

It defines the purpose for which the machine has been designed and constructed and contains all the information required by operators.

In addition to this manual containing all user information, other publications are available providing specific information for maintenance personnel.

Constant respect for the instructions guarantees the safety of the operator and the machine, low running costs and high quality results and extends the working life of the machine.

Failure to respect the instructions may lead to damage to the operator, machine, floor being washed and environment.

To find the topic that interests you more rapidly, consult the list of contents at the beginning of the manual.

Parts of the text requiring special attention are highlighted in bold and preceded by the symbols illustrated and described here.

! DANGER

Indicates the need for attention in order to avoid a series of consequences which could cause death or damage to the health of the operator.

IMPORTANT

Indicates the need for attention in order to avoid a series of consequences which could cause damage to the machine or work environment or financial loss.

INFORMATION

Particularly important instructions.

In line with the company's policy of constant product development and updating, the manufacturer reserves the right to make modifications without warning.

Although your machine may differ appreciably from the illustrations in this document, safety and the information contained in this manual are guaranteed.

2.2. Identifying the machine

The rating plate located at the rear of the machine provides the following information:

- model code;
- model;
- power supply;
- total nominal power;
- serial number;
- year of fabrication;
- net weight;
- weight fully loaded;
- maximum slope;
- barcode with serial number;
- manufacturer's identification

2.3. Documentation provided with the machine

- User manual;
- Adhesive slips for ordering spare parts;

3. TECHNICAL INFORMATION

3.1. General description

This machine is a scrubber drier for sweeping, washing and drying flat, horizontal, smooth or moderately rough, even and obstacle free floors in civil and industrial premises. It is available in both battery and cable versions to meet all running time and weight requirements.

The scrubber drier spreads a solution of water and detergent in the correct concentration on the floor and then scrubs it to remove the dirt. By carefully choosing the detergent and brushes (or abrasive disks) from the wide range of accessories available, the machine can be adapted to a wide range of combinations of types of floor and dirt.

The main parts of the machine are as follows :

A suction system incorporated in the machine dries the floor after washing by means of the low pressure generated in the dirty water drum by the suction motor. The squeegee

connected to the drum collects the dirty water.

The machine is moved forward by:

MODEL MB mechanical drive: the scrubber drier is provided with a special mechanical drive device which exploits the friction between the brush and the floor to generate a forward movement (for further details, see paragraph 6.7).

3.2. Legend

- the detergent tank: contains and transports the mixture of clean water and detergent(ref. pic 1);



detergent tank
pic (1)

- the recovery tank : collects the dirty water picked up from the floor after washing(ref. pic 2);



recovery tank
pic (2)

- control panel (ref pic 3):



control panel
pic (3)

- head assembly : the main element is the brushes (ref pic 4 and 5) which distribute the detergent solution on the floor and remove the dirt



MB55 head assembly
Pic (4)



MB70 head assembly
Pic (5)

- squeegee assembly: wipes and dries the floor by collecting the water, (ref pic 6 and 7) ;



MB55 squeegee assembly
pic (6)



MB70 squeegee assembly
pic (7)

3.3. Danger zones

A -**Tank assembly**: when using certain detergents, danger of irritation for eyes, skin, mucous, membranes and respiratory tract and of asphyxia

Danger represented by the dirt collected from the environment (germs and chemical substances). Danger of crushing between the two tanks when the dirty water drum is replaced on the detergent tank.

B -**Control panel**: danger of short circuit.

C -**Bottom of washing head**: danger due to brush rotation.

D -**Rear wheels**: danger of crushing between the wheel and chassis.

E -**Battery compartment** (in the detergent tank): danger of short circuit between the battery poles and presence of hydrogen during charging..

4. SAFETY INFORMATION

4.1. Safety regulations



**performing maintenance or any other work on the machine
Read the "User Manual" carefully before start-up and use or before**

IMPORTANT

Rigorously respect all instructions in the Manual (in particular those relating to danger and important information) and on the safety plates fitted to the machine. The Manufacturer declines all liability for damage to people or things resulting from failure to observe the instructions.

The appliance must be used exclusively by persons trained in its use and/or who have demonstrated their ability and have been expressly instructed to use the appliance.

The machine must not be used by minors.

The machine must not be used for purposes other than those for which it was expressly designed.

Do not use the machine in places with inadequate lighting or explosive atmospheres, on public roads, in the presence of dirt hazardous to health (dust, gas, etc) and in unsuitable environments.

The machine is designed for temperatures of between +4°C and +35°C when in use and between +0°C and +50°C when not in use.

The machine is designed to work in a humidity of between 30% and 95%.

Never use or pick up flammable liquids or explosives (e.g. petrol, fuel oil, etc), flammable gases, dry dusts, acids and solvents (e.g. paint solvents, acetone etc) even if diluted. Never pick up flaming or incandescent objects.

Never use the machine on slopes or ramps of more than 2%. In the case of slight slopes, do not use the machine transversally, always manoeuvre with care and do not reverse. When transporting the machine on steeper ramps or slopes, take the utmost care to avoid tipping up and/or uncontrolled acceleration. Move the machine on ramps and/or steps only with the brush head and squeegee raised.

Never park the machine on a slope.

The machine must never be left unattended with the motor or engine on. Before leaving it, turn the motor or engine off, make sure it cannot move accidentally.

Always pay attention to other people, children in particular, present in the place where you are working.

Never use the machine to transport people or things or to tow things. Do not tow the machine.

Never rest objects of any weight on the machine for any reason.

Never obstruct ventilation and heat dispersion slits.

Never remove, modify or circumvent safety devices.

Numerous unpleasant experiences have shown that a wide range of personal objects may cause serious accidents. Before beginning work, remove jewellery, watches, ties, etc.

The operator must always use personal protection devices - protective apron or overalls, non-slip waterproof shoes, rubber gloves, protective goggles and ear protectors and mask to protect the respiratory tract.

Keep the hands away from moving parts.

Never use detergents other than those specified. Follow the instructions on the relative safety sheet. Detergents should be kept out of reach of children. In the event of contact with the eyes, wash immediately with abundant water. If swallowed, consult a doctor immediately.

Make sure the power sockets used for the models with cable or battery charger are connected to a suitable earth system and protected by differential thermal solenoid switches.

Make sure the electrical characteristics of the machine (voltage, frequency, absorbed power) given on the rating plate are the same as those of the mains electricity supply. The machine with cable has a three-wire cable and a three pin earthed plug for use in an appropriate earthed socket. The earth wire is yellow and green. Never connect this wire to anything other than the earth contact of the socket.

It is indispensable to respect the battery manufacturer's instructions and current legislation. The batteries should always be kept clean and dry to avoid surface leakage current. Protect the batteries from impurities such as metal dust.

Never rest tools on the batteries as this could cause short circuit and explosion.

When using battery acid, always follow the relative safety instructions scrupulously.

When using cable models, take care not to crush or pull the power supply cable. Check this cable periodically for damage. If damaged, the machine must not be used.

In the presence of particularly strong magnetic fields, assess the possible effect on the control

electronics.

Never wash the machine with water jets.

The fluids collected contain detergent, disinfectant, water and organic and inorganic material.

They must be disposed off in accordance with current legislation.

In the case of malfunction and/or faulty operation, turn the machine off immediately (Disconnecting it from the mains power supply or batteries) and do not tamper. Contact a service centre authorized by the Manufacturer.

All maintenance operations must be performed in an adequately lit place and only after disconnecting the machine from the power supply (in cable model by unplugging the machine from the socket, in battery models by disconnecting the battery connector).

All work on the electrical system and all maintenance and repair operations other than those explicitly described in this manual must be performed by specialised personnel expert in the sector only.

If the power cable, plug or terminals require replacing, make sure the electrical connections and cable grip inside the control panel are tightly fastened to guarantee the resistance of the cable if pulled. Then replace the panel carefully to guarantee the safety of the operator.

Only original accessories and spare parts supplied by the Manufacturer may be used in order to guarantee safe problem-free operation of the machine. Never use parts removed from other machines or from other kits.

This machine has been designed and constructed to provide ten years' service from the fabrication date shown on the rating plate. After this time, whether the machine has been used or not, it should be disposed of according to current legislation in the country in which it is used:

- the machine must be disconnected from the power supply, emptied of liquids and cleaned;
- the product is classified as WEEE type special waste and is covered by the requisites of the new environmental protection regulations (2002/96/EC WEEE). It must be disposed of separately from ordinary waste in compliance with current legislation and standards



Special waste. Do not dispose of with ordinary waste.

Alternatively the machine must be returned to the Manufacturer for a complete overhaul.

If you decide to stop using the machine, you are recommended to remove the batteries and dispose of them at an authorised collection centre.

You should also make sure that all parts of the appliance which could represent a hazard, particularly to children, are made safe.

5. HANDLING AND INSTALLATION

5.1. Lifting and transporting the packaged machine

IMPORTANT

During all lifting operations, make sure the packaged machine is firmly anchored to avoid it tipping up or being accidentally dropped. Always load/unload lorries in adequately lit areas.

The machine, packaged on a wooden pallet by the Manufacturer, must be loaded using suitable equipment onto the transporting vehicle. At destination, it must be unloaded using similar means. A fork lift truck must always be used to lift the packaged body of the machine. Handle with care to avoid knocking or overturning the machine.

5.2. Checks on delivery

When the carrier delivers the machine, make sure the packaging and machine are both whole and undamaged. If the machine is damaged, make sure the carrier is aware of the damage and before accepting the goods, reserve the right (in writing) to request compensation for the damage.

5.3. Unpacking

IMPORTANT

When unpacking the machine, the operator must be provided with the necessary personal protection devices (gloves, goggles, etc) to limit the risk of accident.

Unpack the machine as follows:

- cut and remove the plastic straps using scissors or nippers;
- remove the cardboard;
- remove the bag which contains warranty card, parts list in the battery tank
- using a sloping ramp, push the machine backwards off the pallet;
- unpack the brushes and squeegee (ref pic 8 and 9):



pic (8)



pic (9)

- clean the outside of the machine in respect of safety regulations;
- after unpacking the machine, install the batteries (battery models)

The packaging may be kept as it can be reused to protect the machine if it is moved to another site or to a repair workshop.

Otherwise it must be disposed off in compliance with current legislation.

5.4 Power supply batteries (battery models)

Two different types of battery may be installed on these machines:

- **tubular leak-proof batteries:** the electrolyte level must be checked regularly. When necessary, top up with distilled water until the plates are covered. Do not overfill (5 mm max. above the plates).
- **gel batteries:** this type of battery requires no maintenance.

The technical characteristics must correspond to those indicated in the paragraph on the technical specification of the machine. The use of heavier batteries could seriously jeopardise manoeuvrability and lead to the brush motor overheating. Batteries with a lower capacity and weight will require recharging more frequently.

They must be kept charged, dry and clean and the connections must be tight.

5.4.1 Batteries: preparation

! DANGER

While installing or performing maintenance on the batteries, the operator must be provided with the necessary personal protection devices (gloves, goggles, overalls, etc) to limit the risk of accident. Keep away from naked flames, avoid short circuiting the battery poles, avoid sparks and do not smoke.

The batteries are normally supplied filled with acid and ready for use.

If the batteries are dry, before mounting them on the machine, proceed as follows:

- remove the caps and fill all elements with specific sulphuric acid solution until the plates are entirely covered (this requires at least a couple of passes for each element);
- leave for 4-5 hours to allow the air bubbles to come to the surface and the plates to absorb the electrolyte;
- make sure the level of electrolyte is still above the plates and if necessary top up with sulphuric acid solution;
- close the caps;
- mount the batteries on the machine (following the procedure described below).

Before starting up the machine for the first time, charge the batteries. Follow the instructions in the relevant section.

5.4.2 Batteries: installation and connection

! DANGER

push  ensure stopping machine

Make sure you connect the terminals marked with a "+" to the positive poles of the battery.

Do not check the battery charge by sparking.

Follow the instructions given below meticulously as short circuiting the batteries could cause them to explode.

- 1) Make sure the recovery tanks is empty.
- 2) Release the recovery tank from the detergent tank by pulling the catch(ref pic 10).



pic (10)

- 3) Lift the dirty water drum and tilt it backwards by about 90°. This provides access to the battery compartment (in the detergent tank) from above. .
- 4) Place the batteries in the compartment in the direction shown in the drawing printed inside the compartment on the detergent tank.

IMPORTANT

Mount the batteries on the machine using lifting means suitable for their weight.

The positive and negative poles have different diameters.

- 4) connect the battery cable and bridge terminals to the battery poles (ref pic 11) and tighten the terminals on the poles



pic (11)

5) Lower the dirty water drum into its work position and fasten it to the detergent tank.

6) When using the machine, follow the instructions below

5.5 Battery charger (battery models)

IMPORTANT

Never allow the batteries to become excessively flat as this could damage them irreparably.

5.5.1. Choosing the battery charger

Make sure the battery charger is compatible with the batteries to be charged:

- **tubular lead batteries:** a 24V - 15 A automatic charger is recommended.
- **free maintain battery:** use a 24V-15A charger specific for this type of battery

Consult the battery charger manufacturer and manual to confirm the choice.

5.5.2 Preparing the battery charger

If you wish to use a battery charger not provided with the machine, you must fit it with the connector supplied with the machine.

To install the connector, proceed as follows:

- remove about 13 mm of protective sheath from the red and black wires of the battery charger;
- insert the wires into the connector contacts and squeeze them forcefully with suitable pliers;
- respect the polarity (red wire + black wire -) when inserting the wires into the connector.

5.6 Lifting and transporting the machine

IMPORTANT

All phases must be performed in an adequately lit room and adopting the safety measures most appropriate to the situation. The operator must always use personal protection devices.

To load the machine onto a means of transport, proceed as follows:


- empty the dirty water drum and detergent tank;
- remove the squeegee and brushes (or drive disks);
- remove the batteries (in battery models);

- place the machine on the pallet and fix it with plastic straps or metal brackets;
- lift the pallet (with the machine) using a fork lift truck and load it onto the means of transport;
- anchor the machine to the means of transport with cables connected to the pallet and machine itself

6. PRACTICAL GUIDE FOR THE OPERATOR




6.1. Controls - Description

With reference to fig. 6, the machine has the following controls and indicator lights:

- **Battery power indicator**  :3 locations and 3 LED lights Total 9 classes show battery power, high medium,less, each battery indicator has three states, green light means power is good, yellow means medium, red means less.

Low location yellow LED lights: without electricity, need to be recharged;

Low location Red LED lights: completely discharged, brush plate will stop in few seconds and brush motor light will be off, It means that the battery is over discharged, It will cause irreparable damage to Circuit board.

- **Power off**  :Turn on or off all functions of the machine . It is a safety device. To stop the machine, press the button.
- Brush motor button  (with light brush plate switch):run or stop brush motor.
- Suction motor button  (with light water suction switch):run or stop suction motor.
- The light will be on When the suction motor is powered.
- Water drain valve (Picture 12): adjust the water yield to clean ground depends on the floor situation.adjust water yield by rotate water drain valve. Increase by clockwise,decrease by unclockwise.



Picture (12)

- Operate handle.(Picutre (13) , control the operation direction.



Picture (13)

- **Squeegee lever:** raises (when lifted) or lowers (when pushed down) the squeegee.



Picture (14)

Step to the end, shift left ; brush plate will down.

Step to the end, shift downward ; brush plate upgrade.

- **Detergent tank level indicator:** 

the LED comes on to indicate insufficient water in the detergent tank.

- **Dirty water drum level indicator:** 

when the dirty water drum is full the LED comes on and after a few seconds the suction motor shuts down.

6.2. Mounting and adjusting the squeegee

The squeegee is responsible for the first phase of drying. To mount the squeegee on the machine, proceed as follows:

- 1) check that the squeegee mount is raised, otherwise lift it by means of the squeegee lever;
- 2) Tighten the two knobs on the squeegee, as shown in Picture (16) below.



Picture (16)

- 3) slacken the two knobs at the centre of the squeegee;
- 4) insert the two threaded pins into the slots on the support;
- 5) insert the suction hose sleeve fully into the squeegee;

The squeegee blades scrape the film of water and detergent from the floor and prepare the way for perfect drying. With time, the constant rubbing makes the edge of the blade in contact with the floor rounded and cracked, reducing the drying efficiency and requiring it to be replaced. The state of wear should be checked frequently.

For perfect drying, the squeegee must be adjusted in such a way that the edge of the rear blade bends during operation by about 45° with respect to the floor at every point. Adjust the angle of the blade during operation by regulating the height of the two wheels positioned behind the squeegee.

Tighten the middle nut, will add the angle of squeegee support, make the squeegee closer to ground. Loosen middle nut will make squeegee away from ground. As the picture 18 (show)



Picture (18)

Loosen the nut on the squeegee wheel, will make squeegee wheel away from ground, then squeegee is closer to ground. Tighten the nut, will compress squeegee wheel to ground, then squeegee is further away from ground. Generally, adjusting nut to make two squeegee wheels just touch ground is ok.

6.3. Moving the machine when not in operation

To move the machine, proceed as follows:

- 1) raise the squeegee;
- 2) push the head pedal down then to the right to raise the head;
- 3) move the machine by pulling or pushing
- 4) once you have reached your destination, lower the head by pressing the release pedal down and to the left, then release it.

IMPORTANT

Do not leave the machine unattended or parked with the head lifted or the key inserted in the emergency button.

6.4. Mounting and changing the brush/drive disks

IMPORTANT

Never work without the brushes and drive disks perfectly installed.

Fitting the brush (one brush version):

Put the brush plate down the brush plate cover, Pick up the brush plate with both hands symmetrically. Rotate clockwise to Make 3 columns fast on the brush motor buckle, rotate stable is ok. (if the machine shakes when running, it means installation not good, please redo), As the picture (19) shown.



Picture (19)

Use Cleaning pad: stick cleaning pad onto pad driver first, then install pad driver to scrubber as the way install brush.

Uninstall brush plate (or pad driver):

Step brush plate footboard then shift right, up the brush plate, then touch and start brush motor. brush plate or pad driver will be loosen automatically and drop to ground.

6.5. Detergents - Instructions

IMPORTANT

Always dilute the detergent according to the manufacturer's instructions. Do not use sodium hypochlorite (bleach) or other oxidants, particularly in strong concentrations. Do not use solvents or hydrocarbons. The temperature of the water and detergent must not exceed the maximum indicated in the technical specification. They must be free of sand and/or other impurities.

The machine has been designed for use with low-foam biodegradable detergents made specifically for scrubber driers.

For a complete and up-to-date list of the detergents and chemicals available, contact the Manufacturer: You will be sent the documentation with the "Complete Cleaning System" manual.

Use products suitable for the floor and dirt to be removed only.

Follow the safety regulations on use of detergents given in the section "Safety regulations".

6.6. Preparing the machine for work

IMPORTANT

Before starting work, wear overalls, ear protectors, non-slip waterproof shoes, mask to protect the respiratory tract, gloves and all other personal protection devices recommended by the supplier of the detergent used or necessitated by the work environment.

Before starting work, proceed as follows:

Check batter power(please charge first if the power is not enough)

- Step brush plate footboard to release the font brush plate.
- Fill with water to the water tank (make sure the recovery tank is empty) before fill water,please must pay attention to make the solution tank net.
- Make sure the water drain valve is off.
- Pick up pad driver with colored cleaning pad or pick frequently-used brush plate depending on the floor situation.
- Make sure the squeegee is fast and equipped with suction pipe.make sure the back squeegee rubber is workable.

INFORMATION

If you are using the machine for the first time, we recommend trying it on a large obstacle-free surface first to acquire the necessary familiarity.

Always empty the dirty water drum before filling the detergent tank again.

For effective cleaning and to extend the working life of the machine, follow a few simple rules:

- prepare the work area by removing all possible obstacles;
- begin working from the furthest point to avoid walking on the area you have just cleaned;
- choose the straightest possible working routes;
- divide large floors into parallel rectangular sections.

If necessary, finish off by passing a mop or rag rapidly over parts inaccessible to the scrubber drier.

6.7 start working

after installaton, please do as follows:

*connect machine power

*insert battery connection plug to machine body socket.

*low draw bar of squeegee to low squeegee.

*put footboard of front brush plate,make front brush palte completely touch ground.

*Take out ID cards (as the pictuere (2))shown), stop for 3 seconds on the control panel,when batter power light is on,put ID card back.



Picture (20)

*touch water suction button and brush motor button successively, start working right now.

*control operation handle to go forward to clean ground.

*After brush motor button pressed, the motor start drive brush plate, machine go forward.

Machine go forward with the force that generated between brush plate and ground.

when touch the brush motor button again, It will stop working, touch suction motor switch again, suction will stop working.

when forward direction is away straight line, adjust with direction adjustment button.

when machine deflect right, adjust by clockwise rotating; or else adjust by unclockwise rotating. (as picture(22) shown).

- Regularly check whether water in water tank with water flowing to the brush plate. Add water when water tank is empty. When water in water tank of water is not enough, LED light on water tank level indicator will light up to alert the operator. At this time, stop the machine and empty the solution tank and add water to solution tank.
- During cleaning, check the cleaning effect. Rotate the drain valve to adjust water yield depending requirement.
- adjust working pressure by adjusting Knob. Uncover the water tank, you can see this knob. Rotate clockwise to increase pressure, counterclockwise rotation can reduce stress.

IMPORTANT

Empty the dirty water drum each time you fill the detergent tank. Never leave the suction motor on and detergent tap open when parked.

- when the dirty water drum is full, the level indicator comes on and after a few seconds the suction motor shuts off. You must stop working and empty the tank. To restart the suction motor, turn the suction switch off and then on again.
- When the yellow LED light starts blink, it means the battery power is almost exhausted. Should immediately turn off the brush motor and dry ground as soon as possible. later close suction motor to avoid excessive battery discharge. Please charge the battery immediately.

The final cleaning:

- Close water drain valve.
- Let suction motor continues to work for 2 seconds to dry sewage inside squeegee. Then touch suction motor button to stop suction motor.
- Close brush motor and suction motor switch, and touch Stop button to close them all.
- Lift the squeegee lever to lift the squeegee, to avoid squeegee pressure to the ground cause strip deformation.

- Uninstall brush plate or pad driver from scrubber to avoid distortion.
- AC machines: Please unplug the AC power plug. Battery machines: Please remove the battery connector plug from the body socket.
- Empty and clean the recovery tank.

6.8. Some useful tips to get the most from your scrubber drier

In the event of particularly stubborn dirt on the floor, washing and drying can be performed in two separate operations.

6-9 Pre-wash

- Turn on water drain valve.
- Step footboard to low brush plate.
- Lightly touch the brush motor button to start brush motor.
- Ensure that the suction motor not work and the squeegee is on the lift position.
- Start cleaning.

Water flow rate must be proportional with the forward speed. slower speed, water needed less.

In some particularly dirty place, you can stay the machine properly there in order to have more time to separate dirt for cleaner to get better cleaning effect.

6.9.1 Drying

Lower the squeegee and with the suction motor on, pass over the same area washed previously. The result is equivalent to in-depth washing and subsequent ordinary maintenance will take less time.

To wash and dry at the same time, operate the brush, water, squeegee and suction motor simultaneously.

6.9.2 Draining the dirty water

! DANGER

Use suitable personal protection devices. Drain the dirty water with the machine disconnected from the power supply.

The dirty water drum drain hose is at the back left side of the machine. To empty the drum:

Push scrubber to gutter, please do as below process ;

Fold the sewage pipe, as picture (22) show;

Open lid of wastewater pipe, slowly release sewage pipes, as picture in (23), picture (24) shown;

For a quick release of sewage, pull sewage pipes completely straight, as picture (25) shown.



Picture (22)



Picture (23)



Picture (24)



Picture (25)

- Check the amount of water inside the water tank, clean water tank if necessary. To make cleaning easier, and completely empty the water inside, we recommend that you loose and lift the sewage tank.
- when empty water tank, low water tank and tightly lock on the solution tank top.
- Cover back and tighten the sewage pipe plug, put the sewage pipe plug back to pipe holder.

!WARNING

When Clean water tank, please do not take filter net out, either do not use water jet to the filter net.

At this time,you can restart cleaning work.

6.10 empty water tank

! DANGER

Please wear appropriate personal protective equipment.Disconnect the machine power before Empty the water tank,

7. PERIODS OF INACTIVITY

If the machine is not used for some time, remove the squeegee and brushes (or drive disks), wash them and put them away in a dry place (preferably in a bag or wrapped in plastic film) away from dust. Park the machine with the head lowered.

Make sure the tanks are completely empty and perfectly clean.

Disconnect the machine from the power supply (depending on the model, unplug from the mains or disconnect the ANDERSON connector from the battery wiring).

Battery models: Completely recharge the batteries before storing them. During long periods of inactivity, you should charge the batteries regularly (at least once every two months) to keep them constantly at maximum charge.

Warning

If you do not charge the batteries regularly, they may be irrevocably damaged.

8. BATTERY MAINTENANCE AND CHARGING

Danger

Do not check the battery by sparking. The batteries give off flammable fumes. Put out all fires and hot embers before checking or topping up the batteries. Perform the operations described above in a ventilated room.

To avoid permanent damage to the batteries, do not run them down completely. Remember that when the corresponding red LED

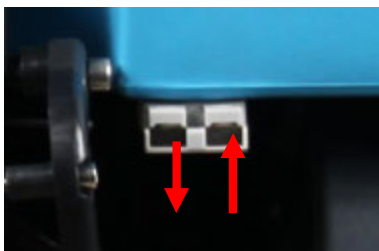
Flashes on the control panel, you must charge the batteries.

8.1 Charging

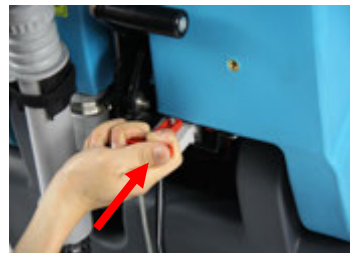
8.1.1 Recharging procedure

- Disconnect the connector on the battery wiring from the connector on the main wiring;
- connect the battery charger connector to the battery wiring connector;

Picture (26)、 picture (27);



Picture (26)



picture (27)

Important

Do NOT connect the battery charger to the main wiring connector of the scrubber drier. In the case of gel batteries, use a charger specific for gel batteries only.

- Charge the batteries as described in the battery charger manual;
- at the end of charging, disconnect the connectors;
- reconnect the battery wiring connector to the machine connector.

9. MAINTENANCE INSTRUCTIONS

Danger

Never perform any maintenance operations without first unplugging the machine from the mains (cable version) or disconnecting the machine connector from the battery connector. Maintenance on the electrical circuit and all other operations not explicitly described in this manual must be performed by specialised personnel only, in compliance

with current safety legislation and as described in the maintenance manual.

9.1. Maintenance - General rules

Performing regular maintenance according to the Manufacturer's instructions improves performance and extends the working life of the machine.

When cleaning the machine, respect the following:

- avoid the use of high pressure washers. Water could penetrate the electrical compartment or motors leading to damage or the risk of short circuit;
- do not use steam to avoid the heat warping plastic parts;
- do not use hydrocarbons or solvents as they could damage the cowling and rubber parts.

9.2. Routine maintenance

9.2.1 Suction motor air filter and float switch: cleaning

- Unscrew and remove the tank cap from the dirty water drum;
- make sure the dirty water drum is empty;
- clean the float switch at the back of the dirty water drum, taking care not to direct the water jet directly against the float switch;
- remove the suction motor air filter from the float switch support in side the dirty water drum at the top;
- clean the filter with running water or the detergent solution used on the machine;
- dry the filter thoroughly before replacing it in the support. Make sure the filter is correctly located in its housing;
- screw the cap back on the dirty water drum.



Pic (28)



Pic (29)



Pic (30)

9.3 Detergent filter: cleaning

- Unscrew the screw located below the bottom tank;
- unscrew the detergent filter;
- clean the filter with running water or the detergent solution used on the machine;
- replace the filter back in its housing, making sure it is correctly positioned and retighten the screw.

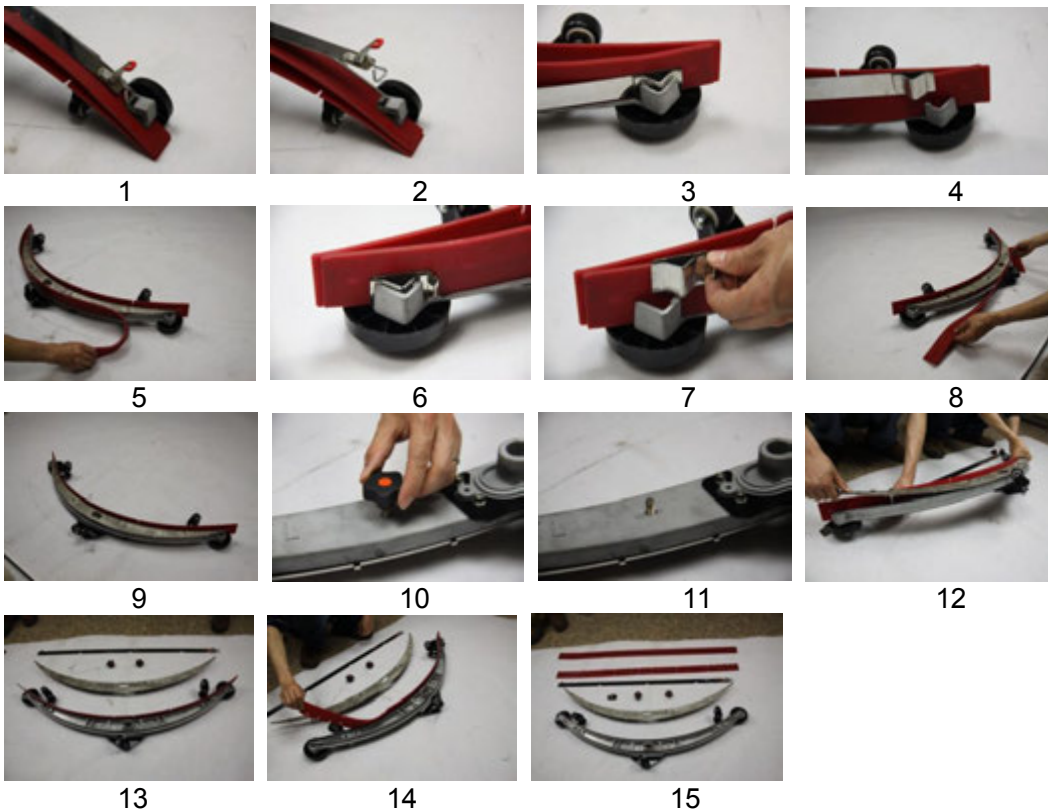
9.4 Squeegee blades: replacing

The squeegee blades collect the film of water and detergent from the floor and prepare the way for perfect drying. With time, the constant rubbing leaves the edge of the blade in contact with the floor rounded and cracked, reducing the drying efficiency and requiring it to be replaced.

Turning or replacing the blades:

- lower the squeegee by means of the corresponding lever; picture 31
- remove the squeegee from its mount by completely unscrewing the two knobs
- remove the suction hose sleeve from the squeegee;
- release the catch;
- remove the two blade retainers by first pushing them towards the body of the squeegee then extracting them;
- remove the blade; picture 32
- reuse the same blade by reversing the edge in contact with the floor until all four edges are worn out, or replace with a new blade, fitting it onto the screws on the body of the squeegee;
- reposition the two blade retainers by centring the widest part of the slots over the fixing screws on the squeegee body, then pushing the blade retainers inwards;
- refasten the catch.

Replace the squeegee in its support following the instructions in paragraph



Picture 32

9.5 Fuses: replacement

The fuses protecting the brush and suction motors are located in the fuse holder attached to the dirty water drum above the machine battery compartment.

To replace the fuses:

- make sure the dirty water drum is empty and empty if necessary;

- raise the dirty water drum;

- raise the fuse holder cover and remove the fuse by unscrewing the fixing screws; picture

33

- fit a new fuse and close the fuse holder cover;

- lower the dirty water drum.

Fuse table: For the complete fuse table, see the spare parts catalogue.



Picture (33)

Warning

Never use a fuse with a higher amperage than specified.

If a fuse continues to blow, the fault in the wiring, boards (if present) or motors must be identified and repaired. Have the machine checked by qualified personnel.

9.6. Routine maintenance

9.6.1 Daily operations

After each day's work, proceed as follows:

- disconnect the machine from the power supply;
- empty the dirty water drum and clean if necessary;
- clean the squeegee blades and check for wear. If necessary, replace.
- check that the suction hole in the squeegee is not blocked. If necessary remove encrusted dirt;
- recharge the batteries according to the procedure described.

9.6.2 Weekly

- Clean the dirty water drum float switch and make sure it is working correctly;
- clean the suction air filter and make sure it is undamaged. If necessary, replace.
- clean the detergent filter at the front opening of the detergent tank and check that it is not damaged (replace if necessary);
- clean the suction hose;
- clean the dirty water and detergent tanks;
- Battery model:** check the level of battery electrolyte and top up with distilled water if necessary.

9.6.3. Six monthly operations

10.Trouble solution

10.1 How to resolve possible problem

problem	cause	remedy	
The machine does not function	Batteries disconnected	connect the batteries to the machine.	
	Batteries are flat.	Recharge the batteries.	
Brushes do not work	Brush motor does not turn on.	Start the motor switch	
	the motor thermal cutout has tripped; the motor is overheated	release the brush lever, turn off the brush switch, leave the machine to cool down for at least 4 minutes	
	the power supply of motor thermal cutout connectors are disconnected	Reconnect the power supply or connect motor thermal cutout	
	the brush motor fuse has blown	check and eliminate the causes responsible for blown fuse, then replace	
	Batteries are flat	Recharge the batteries	
	the reduction unit is faulty	Replace the reduction unit or replaced	
	the motor is faulty	Replace the motor	
The machine does not clean evenly	the brush or disks are worn	Replace them	
	install the brushes	Install the brushes	

	improperly	properly	
No detergent is delivered	The tap lever is in the closed position	Mover the lever to Open position	
	there is no water	Fill in it	
	the hose delivering the detergent to the brush is blocked	Cleaning the hose.	
	Strainer is plugged	Cleaning the strainer	
	the tap is dirty or faulty	Unscrew , cleaning it or replace it	
The detergent flow does not stop	the tap stays open because it is damaged or very dirty	have the tap cleaned or replaced	
The suction motor does not work	the suction switch is turned off	Turn on the switch	
	there is no power to the suction motor or the motor is faulty	Connect the power cord or replace the motor	
	the fuse has blown	replace the fuse	
The squeegee does not clean or suction is ineffective	the edge of the rubber blades in contact with the floor is worn	replace the rubber blade	
	the squeegee or hose is blocked or damaged	Cleaning it and repair	
	Suction hose is blocked	Cleaning the hose	
	the suction hose is not connected to the squeegee or damaged	Connect it or repair it	
	there is no power to the suction motor or the motor is faulty	check the motor power connector correctly connected to the main wiring and the fuse not blown; in the second case have the motor replaced	
The machine does not move	there is no power to the brush/drive motor or it	in the first case, start the brush switch and press	

	faulty	the brush/drive lever; the second case checkthe brush/driv motor is correct connected to the ma wiring; in the thir case replace the motor	
	the reduction unit is broke (therefore the brush doe not move)	Replace it	
	the brush motor therm cutout has tripped cause th motor is overheated	Top the machine,turn it d and leave it to cool at lea 45 minutes	
The machine tends to pull to one side	the direction adjustme knob must be adjuste appropriately for the floor	regulate the direction o movement by adjusting th direction adjustment knob	

MB 70 智能洗地机

MB 70 INTELLIGENT SCRUBBER



工作宽度 (mm)	吸水杆宽度 (mm)	最大工作容量 (升/分钟)	洗地刷直径 (mm)	洗地刷压力 (kg)	洗地刷转速 (转/分钟)	洗地刷出达 (mm)	吸水马达 (升/分钟)
770	1020	3150	2*300	50	200	24400*2	24480
清水箱容量 (L)	污水箱容量 (L)	机身净重 (kg)	尺寸(长*宽*高) (mm)	工作速度 (m/min)	爬坡度 (%)	电池 (V)	
50	55	92	1280*720*970	0-4.5	8%	24V(12*2)	

MB 70 智能洗地机

MB 70 INTELLIGENT SCRUBBER



智能一体化控制面板实现以下功能：无钥匙身份识别卡刷卡开机；9级电量显示提示；吸水电机自动延时关机避免地面残留污水；清水箱缺水污水箱水满自动提示后吸水电机自动关闭。



排污管穿孔固定带确保污水箱泵起时，排污管不晃动。



锁扣式结构确保清水箱与污水箱精确定位确保两者紧密固定和整机优秀的外观。



独有双电机双刷盘结构便于维护保养，降低后期维护成本。



由不锈钢钢丝绳连接的掀臂式水箱使电瓶的装卸等维修保养更为轻松，同时便于水箱的清洗。



前治的前刷盘电机外壳便于设备的后期保养和维护
通过刷板可以轻易提起刷盘，更便于设备以转移及刷盘维护。



特强防泡沫沫系统确保吸水电机免受损坏
美国阿美德格 (Americk) 吸水电机确保吸水能力强劲。



工业级刷盘和针盘卡扣结构



宽幅进水口保证方便和快速补充清水。



变工具装卸式吸水机头能够让操作人员能够在数分钟内拆装并更换好胶条。

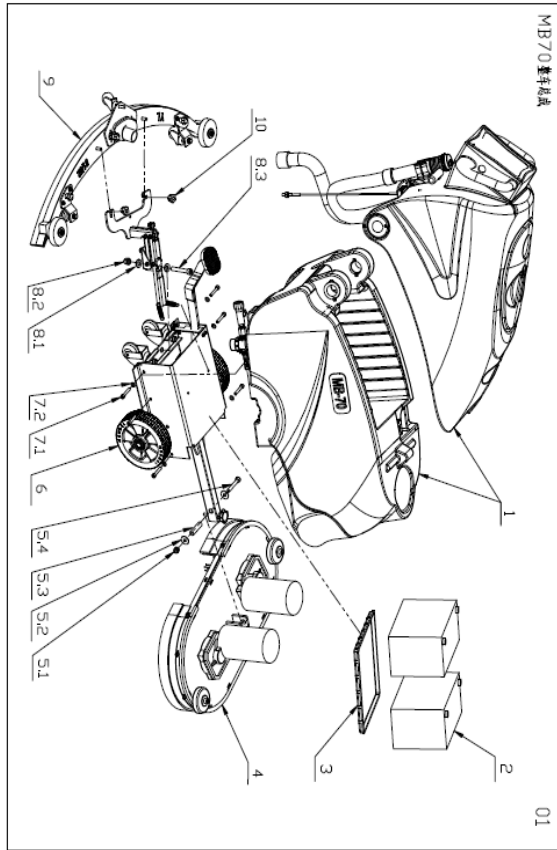


巧妙的污水箱盖设计，取下后可方便挂在进水管口边缘。



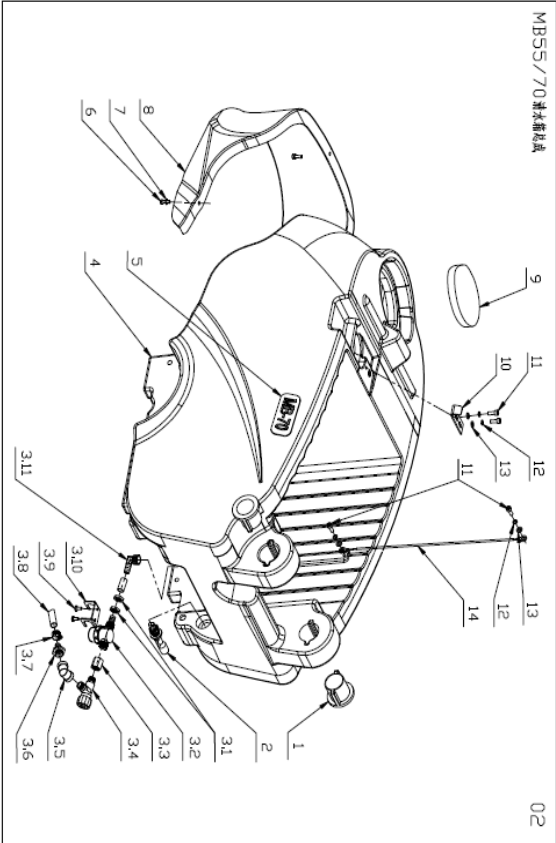
美国马利希 (Maish) 防静电精美实用。

*为标配配置，可选配。



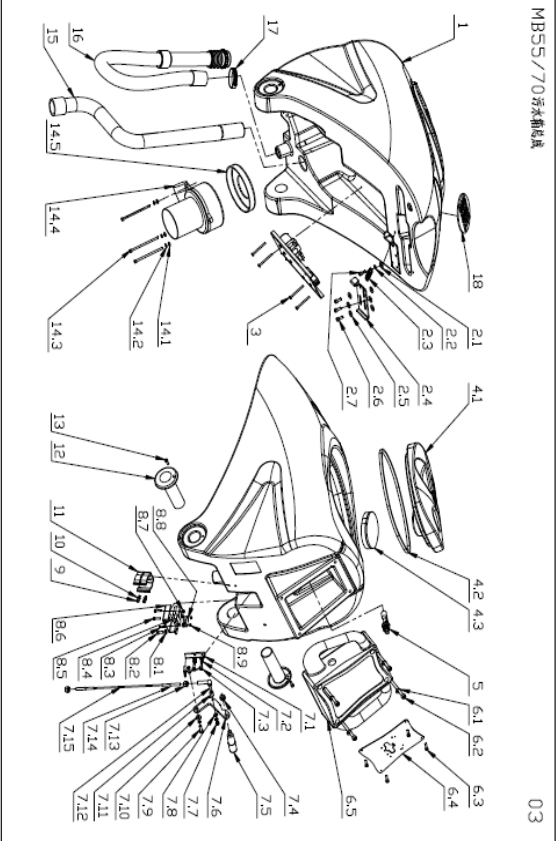
MB70 Full machine**01**

S. No	Part No	Description	Specification	Quantity	UOM
1		MB55/70 solution tank assembly		1	set
2		MB70detergent tank assembly		1	set
3	C40901900001	battery	12V,120Ah	2	pc
4	C30200400300118	battery tray	MB55.103005	1	pc
5		MB70 brush assemdbly		1	set
6		accessories bag 1	for brush plate connection	1	set
6.1	C40100200400020	locknut (stainless stell)	M10	1	pc
6.2	C40100400100033	Soket Head Cap Screw (stainless stell)	Φ10	2	pc
6.3	C30200400300104	big flat wahser (stainless stell)	MB55.106017	1	pc
6.4	C401001001170	shaft sleeve	M10×60	1	pc
7		MB70 pedestal assembly		1	set
8		accessory bag 2	for water tank connection	1	set
8.1	C401001001182	soket head cap screw (stainless stell)	M8×45	6	pc
8.2	C40100400100028	flat washer (stainless stell)	Φ8	6	pc
9		Accessory bag 3	for squeegee connection	1	set
9.1	C40100400100030	flat washer (stainless stell)	Φ12	2	pc
9.2	C40100200400021	locknut (stainless stell)	M12	1	pc
9.3	C401001001173	Socket head cap screw (stainless stell)	M12×80	1	pc
10		MB70 squeegee assembly		1	set
11		MB55/70 squeegee connector assembly		1	set



MB70 DETERGENT TANK Assembly**02**

S. No	Part No	Description	Specification	Quantity	UOM
1	C30200400300009	adapter sleeve	MB55.102002	2	pcs
2	C40900700011	liquid level switch (detergent tank)	NPT1/2	1	pcs
3	C30200400300007	filter module	MB55/70	1	set
3.1	C41001300004	copper fight mother	1/2"	2	pcs
3.2	C41000300006	filter	SP-VF82168A	1	pcs
3.3	C41001300018	two-headed inner thread copper connector	1/2"	1	pcs
3.4	C41000300004	throttle	1/2口径 10-4	1	pcs
3.5	C41001300005	copper bend (two head is 1/2"inner thread)	1/2"	1	pcs
3.6	C41001300007	pagoda outer thread	1/2" 插10	1	pcs
3.7	C40100100400070	Cross pan head screws (stainless steel)	M6×12	2	pcs
3.8	C30200400300109	installation board for filter	MB55.106018	1	pcs
3.9	C41001300016	right angle pagoda	1/2" 插12	1	pcs
4	C41001100002	hoop	OOO 10-16mm	1	pcs
5		water pipe	外径17	0.9	m
6	C30200400300003	detergent tank	MB55.100001-02	1	pcs
7	C40100400100019	flat washer (stainless stell)	Φ5	3	pcs
8	C40100100100141	Soket Head Cap Screw (stainless steel)	M5×16	3	pcs
9	C30200400300108	cover (Double brush)		1	pcs
10	C60700700007	lable MB70 (aluminum)	1792-2	2	pcs
11	C30200400300049	filter spongia (detergent tank)	MB55.103009	1	pcs
12	C50900100116	buckle board A	MB55.102007	1	pcs
13	C40100100100146	soket head cap screw (stainless stell)	M6×16	4	pcs
14	C40100400300018	spring washer (stainless steel)	Φ6	6	pcs
15	C40100400100027	flat washer (stainless steel)	Φ6	6	pcs
16	C30200400300050	pull rope for water tank		1	pcs

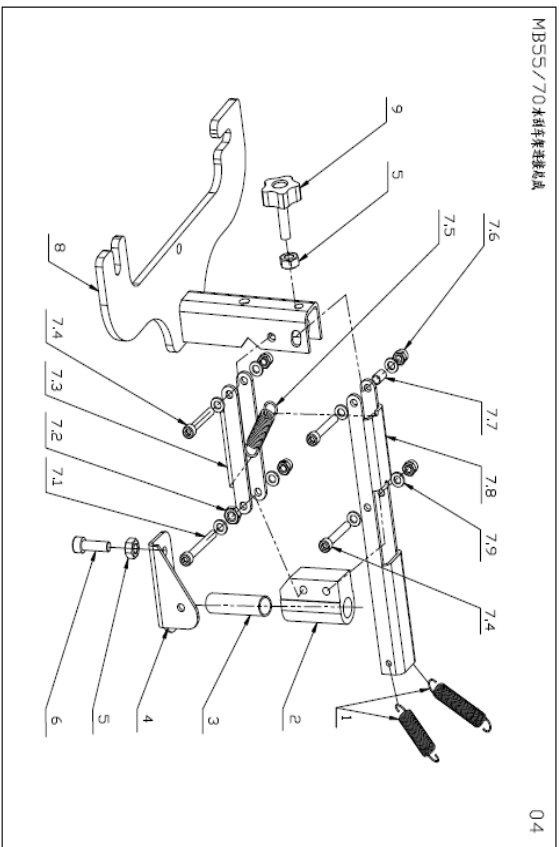


MB55/70 Recovery tank assembly
03

S. No	Part No	Description	Specification	Quantity	UOM
1	C30200400300002	Recovery tank	MB55.100001-01	1	pcs
2		subassembly of buckle plate B		1	set
2.1	C40100400100027	Flat washer(stainless)	Φ6	1	pcs
2.2	C40100400300018	spring washer(stainless)	Φ6	1	pcs
2.3	C40400400002	extension spring	MB55.102012	1	pcs
2.4	C50900100117	buckle plate B	MB55.102008	1	pcs
2.5	C40100400100031	Big flat washer(stainless)	Φ6	6	pcs
2.6	C40100100800003	Hex pan head screw (stainless)	M6×25	3	pcs
2.7	C40100100100146	Inner Hex screw (stainless)	M6×16	1	pcs
3		subassembly of reply plate		1	set
4		subassembly of tank cover		1	set
4.1	C30200400300004	tank cover	MB55.100001-03	1	pcs
4.2	C40300300002	seal of tank cover	MB55.102011	1	pcs
4.3	C30200400300020	filter sponge (recovery tank)	MB55.103006	1	pcs
5	C40900700012	level switch (recovery tank)	M16	1	pcs
6		subassembly of handle box		1	set
6.1	C40100400300019	spring washer(stainless)	Φ8	4	pcs
6.2	C401001001167	Inner Hex screw	M8×80	4	pcs
6.3	C40100100400062	cross pan head screw	M4×20	4	pcs
6.4	C30200400300001	pannel switch of MB55		1	pcs
6.5	C30200400300005	switch box	MB55.100001-04	1	pcs
7		subassembly of handle		1	set
7.1	C30200400300016	handle underplate	MB55.103004	1	pcs
7.2	C40100400300018	spring washer(stainless)	Φ6	4	pcs
7.3	C40100100100146	inner Hex screw (stainless)	M6×16	2	pcs
7.4	C40100200400020	locknut (stainless)	M10	1	pcs
7.5	C41001000001	handle	M10	1	pcs
7.6	C30200400300110	handle board	MB55.103003C	1	pcs
7.7	C40100200400018	locknut (stainless)	M6	1	pcs
7.8	C40100400100027	Flat washer(stainless)	Φ6	3	pcs
7.9	C401001001159	Inner hex screw (stainless)	M6×20	1	pcs
7.10	C40100400100031	Flat washer(stainless)	Φ6	1	pcs
7.11	C30200400300006	shaft sleeve	MB55.103005-03	1	pcs
7.12	C30200400300018	stay cord joint	MB55.103005-01	1	pcs
7.13	C40100200100018	Hex nut (stainless)	M8	2	pcs
7.14	C40100200100019	stay cord joint	MB55.103005-02	2	pcs
7.15	C41000100001	steel wire	4mm	1	pcs

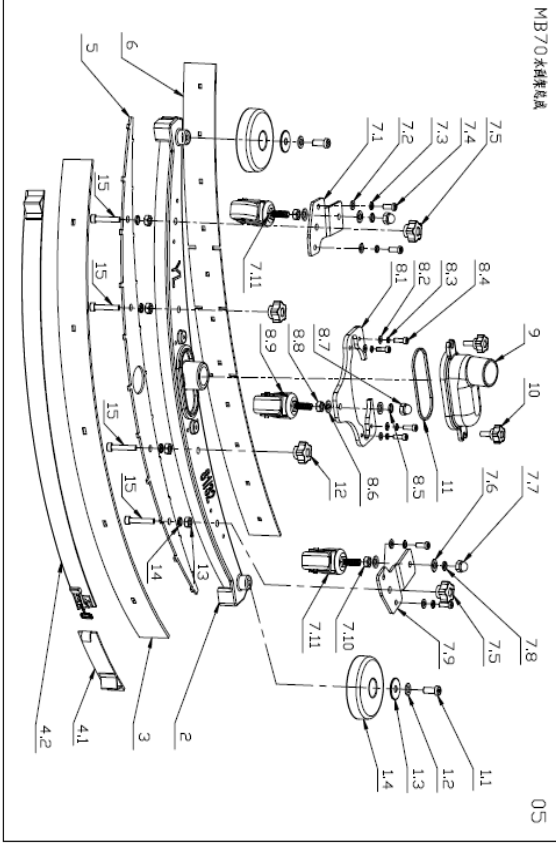
MB55/70 Recovery tank assembly**03**

S. No	Part No	Description	Specification	Quantity	UOM
8		subassembly of recharge socket		1	set
8.1	C40100400100027	Flat washer(stainless)	Φ6	4	pc
8.2	C40100400300018	spring washer(stainless)	Φ6	4	pc
8.3	C40100100100146	spring washer(stainless)	M6×16	2	pc
8.4	C40900300013	recharge socket		1	pc
8.5	C40100100100143	Inner Hex screw (stainless)	M6×30	2	pc
8.6	C50900100115	dead plate of recharge socket	MB55.102004	1	pc
8.7	C30200100100009	microswitch		1	pc
8.8	C40100100400067	cross pan head screw	M3×16	2	pc
9	C40100100100141	Inner Hex screw (stainless)	M5×16	2	pc
10	C40100400100019	Flat washer(stainless)	Φ5	2	pc
11	C30200400300010	water pipe clip	MB55.102003	1	pc
12	C30200400300008	joint pin	MB55.102001	2	pc
13	C40100100100141	Inner Hex screw (stainless)	M5×16	2	pc
14		subassembly of vacuum motor		1	set
14.1	C40100600005	lew screw (stainless)	M6×95	3	pc
14.2	C40100400100027	Flat washer(stainless)	Φ6	6	pc
14.3	C40100200400018	locknut (stainless)	M6	3	pc
14.4	C30600200001	vacuum motor	24V/2	1	unit
14.5	C40300200022	seal of suction motor	MB55.102010	1	pc
14.6	C40100400300018	spring washer(stainless)	Φ6	6	pc
14.7	C40100200100017	Hex Nut (stainless)	M6	3	pc
15	C41000900004	pick-up pipe		1	pc
16	C41000900005	blow off pipe		1	pc
17	C41001100001	hoop	2A 35-51mm	1	pc
18	C60700700006	label aluminum made logo	1787-1	1	pc
19	C40100100400058	cross pan head screw	M4×60	4	pc



MB55/70 squeegee frame connection assembly**04**

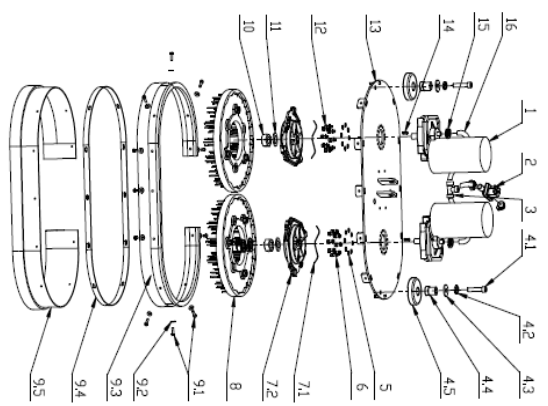
S. No	Part No	Description	Specification	Quantity	UOM
1	C40400100006	tension spring	MB55.103002-18	2	pc
2	C30200400300012	connection socket made by aluminum	MB55.103002-12	1	pc
3	C30200400300013	shaft sleeve (big)	MB55.103002-14	1	pc
4	C50900100100	connector	MB55.103002-03	1	pc
5	C40100200100018	Hex nut (stainless)	M8	2	pc
6	C401001001177	Inner hex screw (stainless)	M8×25	1	pc
7		subassembly of connection frame		1	set
7.1	C401001001180	Inner hex screw (stainless)	M6×50	1	pc
7.2	C40100200100018	Hex nut (stainless)	M8	1	pc
7.3	C50900100099	connection frame	MB55.103002-02	1	pc
7.4	C401001001161	Inner Hex screw (stainless)	M6×40	3	pc
7.5	C40400100003	tension spring	MB55.103002-13	1	pc
7.6	C40100200400018	locknut (stainless)	M6	4	pc
7.7	C30200400300014	shaft sleeve (small)	MB55.103002-16	1	pc
7.8	C30200400300011	connection frame	MB55.103002-17	1	pc
7.9	C40100400100027	Flat washer(stainless)	Φ6	8	pc
8	C50900100096	connection frame base	MB55.103002-01	1	pc
9	C40100700100002	petaling knob screw	M8×40	1	pc



MB70 squeegee assembly

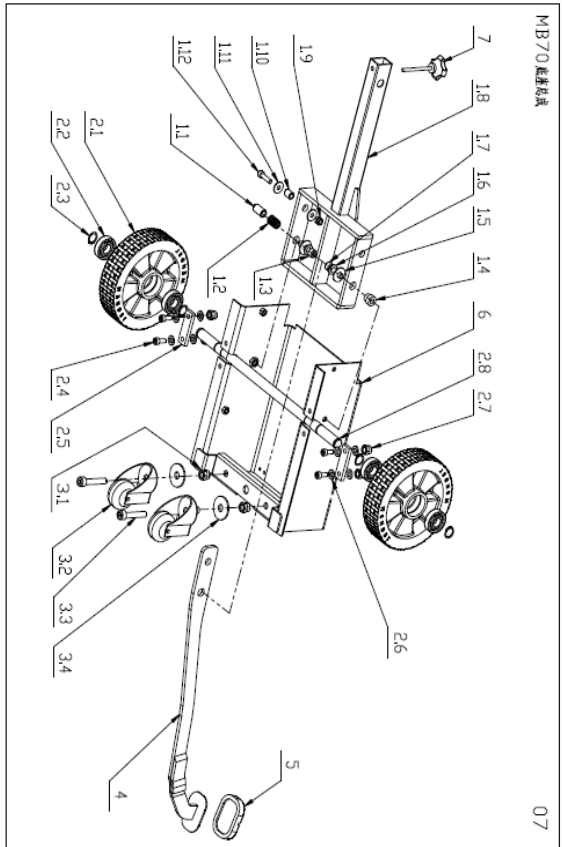
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S. No	Part No	Description	Specification	Quantity	UOM
1		fender wheel module		2	Set
1.1	C401001001178	socket head cap screw (stainless stell)	M10×25	1	Pcs
1.2	C40100400300020	spring washer (stainless stell)	Φ10	1	Pcs
1.3	C40100400100033	big flat washer (stainless stell)	Φ10	1	Pcs
1.4	C30200400300024	fender wheel	MB55.104004	1	Pcs
2	C30200400300076	squeegee main body frame	MBD810.103003	1	Pcs
3	C30200400300078	water suction back rubber (red)	MBD810.103007	1	Pcs
4		squeegee layering mouldle		1	set
4.1	C30200400300112	short layering	MBD810.103009-06	1	pcs
4.2	C41000800001	fast clip		1	pcs
4.3	C30200400300115	long layering(MB70)	MBD810.103009-01	1	pcs
5	C30200400300077	inner plate for squeegee(MB70)	MBD810.103006	1	pcs
6	C30200400300079	font water suction rubber (red)	MBD810.103008	1	pcs
7		left right universal wheel mouldle		2	set
7.1	C30200400300027	left right universal wheel frame	MB55.104009	1	pcs
7.2	C40100400100027	flat washer (stainless stell)	Φ6	2	pcs
7.3	C40100400300018	spring washer (stainless stell)	Φ6	2	pcs
7.4	C40100100100146	socket head cap screw (stainless stell)	M6×16	2	pcs
7.5	C40100700200004	flower type knob nut	M8	1	pcs
7.6	C40100400100028	flat washer (stainless stell)	Φ8	2	pcs
7.7	C40100200200002	cap nut	M8	1	pcs
7.8	C40100400300019	spring washer (stainless stell)	Φ8	2	pcs
7.9	C41001400006	universal wheel	1.5Inch	1	pcs
7.10	C40100200100018	hex nut (stainless stell)	M8	2	pcs
7.11	C401001001181	socket head cap screw (stainless stell)	M8×45	2	pcs
8		back universal wheel frame module		1	set
8.1	C30200400300026	back universal wheel frame	MB55.104006	1	pcs
8.2	C40100400100027	flat washer (stainless stell)	Φ6	4	pcs
8.3	C40100400300018	spring washer (stainless stell)	Φ6	4	pcs
8.4	C40100100100146	socket head cap screw (stainless stell)	M6×16	4	pcs
8.5	C40100400300019	spring washer (stainless stell)	Φ8	1	pcs
8.6	C40100400100028	flat washer (stainless stell)	Φ8	2	pcs
8.7	C40100200200002	cap nut	M8	1	pcs
8.8	C40100200100018	hex nut (stainless stell)	M8	1	pcs
8.9	C41001400006	Universal wheel	1.5Inch	1	pcs
9	C30200400300023	water collection stand	MB55.104003	1	pcs
10	C40100700100005	flower type knob nut	M6×20	2	pcs
11	C40300200007	"O" type rubber seal ring	φ77.5×3.35	1	pcs
12	C40100700200004	flower type knob nut	M8	2	pcs
13	C40100400300019	spring washer (stainless stell)	Φ8	2	pcs
14	C40100200100018	hex nut (stainless stell)	M8	2	pcs
15	C401001001181	socket head cap screw (stainless stell)	M8×45	2	pcs



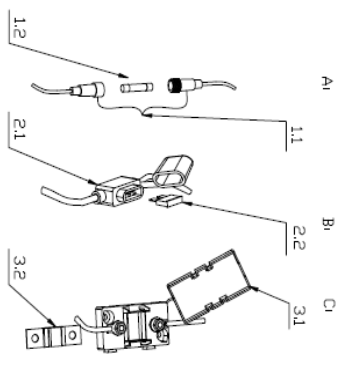
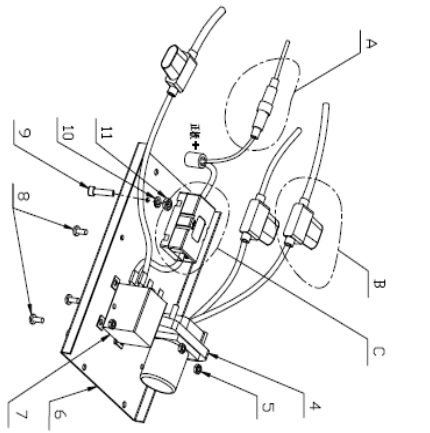
MB70 Brush assembly**06**

S. No	Part No	Description	Specification	Quantity	UOM
1	C30500200004	brush motor	24V MC200C	2	unit
2	C41000300005	solenoid valve	1/2, DC-24V	1	pcs
3	C41001300014	connector	∅ 12mm	1	pcs
4		caster assembly		2	set
4.1	C401001001186	blot	M12×45	1	pcs
4.2	C40100400300021	washer	Φ12	1	pcs
4.3	C40100400100034	washer	Φ12	1	pcs
4.4	C30200400300105	wheel shaft sleeve (Dual Brush)	MB55.104007	1	pcs
4.5	C30200400300024	caster	MB55.104004	1	pcs
5	C40100400100027	washer	Φ6	16	pcs
6	C40100400300018	washer	Φ6	16	pcs
7	C30200400300029	fixing plate	MB55.105008	2	set
7.1	C30200400300030	fixing plate	MB55.105008-01	1	pcs
7.2	C30200400300031	spring	MB55.105008-02	1	pcs
8	C41000200005	brush	13Inch	2	pcs
9		Brush sheild assembly		1	set
9.1	C401001001160	blot	M6×25	11	pcs
9.2	C40100400100031	washer	Φ6	11	pcs
9.3	C30200400300106	sheild	MB55.105004	1	M
9.4	C50900100294	hoop	MB55.106008-04	1	pcs
9.5	C41000200004	bumper		1	pcs
10		nut	M20	2	pcs
11	C40100400100009	washer	Φ20	2	pcs
12	C40100100100146	blot	M6×16	16	pcs
13	C30200400300103	brush fixing plate	MB55.106008	1	pcs
14		key	6×20	2	pcs
15	C41001100002	clip	OOO 10-16mm	4	pcs
16	C41000900003	pipe	Diameter17	1	M



MB70 chassis assembly**07**

S. No	Part No	Description	Specification	Quantity	UOM
1		supporting frame assembly		1	set
1.1	C30200400300042	shaft sleeve	Φ16×28 MB55.106015	1	pcs
1.2	C40400200015	washer	Φ2.5mm×Φ25mm×45mm×7n	1	pcs
1.3	C401001001185	bolt	M10×45	1	pcs
1.4	C30200400300041	shaft sleeve	MB55.106014	1	pcs
1.5	C40100400100033	washer	Φ10	2	pcs
1.6	C40100400300020	washer	Φ10	2	pcs
1.7	C401001001168	bolt	M10×35	1	pcs
1.8	C30200400300102	supporting frame	MB55.107001	1	pcs
1.9	C40100200400019	nut	M8	1	pcs
1.10	C30200400300043	shaft sleeve	Φ14×17 MB55.106016	1	pcs
1.11	C40100400100032	washer	Φ8×24	2	pcs
1.12	C401001001164	bolt	M8×30	1	pcs
2		axle assembly		1	set
2.1	C41001400003	wheel	MB55.106001-04	2	pcs
2.2	C40200300017	bearing	6204	4	pcs
2.3	C40100500200011	washer	Φ20	4	pcs
2.4	C401001001183	bolt	M8×20	4	pcs
2.5	C30200400300033	block	MB55.106001-02	2	pcs
2.6	C40100400100028	washer	Φ8	8	pcs
2.7	C40100200400019	nut	M8	4	pcs
2.8	C50900200040	axle	MB55.106001-01	1	pcs
3		Swivel Casters assembly		2	set
3.1	C40100200400021	nut	M12	1	pcs
3.2	C41001400004	Swivel Casters	3"	1	pcs
3.3	C401001001179	bolt	M12×35	1	pcs
3.4	C40100400100034	washer	Φ12	1	pcs
4	C30200400300038	pedal	MB55.106004	1	pcs
5	C30200400300039	pedal cover	MB55.106004-04	1	pcs
6	C30200400300035	base	MB55.106002	1	pcs
7	C40100700100004	bolt	M8×70	1	pcs



MB70 relay holder assembly**08**

S. No	Part No	Description	Specification	Quantity	UOM
1		fuse holder assembly		1	set
1.1	C40902100006	fuse holder		1	pcs
1.2	C40902100005	fuse	10A	1	pcs
2		fuse holder assembly		3	set
2.1	C40902100003	fuse holder		1	pcs
2.2	C40902100004	fuse	40A (1450mm*4mm ²)	1	pcs
3		fuse holder assembly		1	set
3.1	C40902100001	fuse holder	52*30*25	1	pcs
3.2	C40902100002	fuse	60A	1	pcs
4	C40900100004	contactor	150A	1	pcs
5	C40100200100001	nut	M4	6	pcs
6	C30200400300046	relay holder	MB55.101002	1	pcs
7	C40900100003	relay	30A	1	pcs
8	C40100100400004	bolt	M4×10	6	pcs
9	C401001001160	bolt	M6×25	1	pcs
10	C40100400300018	washer	Φ6	1	pcs
11	C40100200100017	nut	M6	1	pcs