



OPERATOR MANUAL

Please read this manual before operating the machine.

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1. IDENTIFYING THE MACHINE



Fig. 1



Fig. 2

- 1. Recovery tank
- 2. Solution tank
- 3. Seat
- 4. Steering wheel
- 5. Operated console
- 6. Driving wheel
- 7. Brush
- 8. Waterproof skirt
- 9. Big wheel
- 10. Squeegee assy
- 1. Key switch: open it, press foot pedal
- 2. Warning light: base on flicker number
- 3. Battery gauge: timing function
- 4. Horn button
- 5. Brush switch: on it, low down brush; off it, stop water, brushing and raise brush
- 6. Suction switch: on it, low down squeegee; off it, stop working and raise squeegee
- Forward&backward button: control forward and backward; when backward, squeegee . raised automatically
- 8. Speed button: adjust speed



Fig. 3

- 1. Foot brake
- 2. Hand brake
- 3. Drive pedal: press it, wash and dry at the same time



Fig. 4



1. Recharger connector: convenient machine recharging

2. Water knob: make sure the moderation of water volume

58 dB lower noise suitable for hospitals, schools, hotels etc.

Fig. 5



Fig. 6



Fig. 7

1. Squeegee knob

Drain tube
Water inlet

2. Nut: loose or tight it to make sure swivel wheel height

3. GENERAL INFORMATION

Read this manual carefully before carrying out any work on the machine

3.1. 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.

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.

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 th is manual are guaranteed.

4.1. 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. 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 (abrasive disks or rollers) from the wide range of accessories available, the machine can be adapted to a wide range of combinations of types of floor and dirt.

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 sqeegee connected to the drum collects the dirty water.

4.2. 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.

4.3. ACCESSARIES

- A. Nylon brushes: for washing delicate floors and polishing;
- B. Drive disks: enable the following disks to be used:
 - * White disks: for washing and polishing marble and similar surfaces;
 - * Red disks: for washing resistant floors:
 - * Black disks: for thorough washing ol resistant floors with stubborn dirt.

5. SAFETY INFORMATION

IMPORTANT!!!

I. Rigorously respect all instructions in the Manual (in patitlcular 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.

A- 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.

- B- The machine must not be used by minors.
- C- The machine must not be used for purpose other than those for which it was expressly designed. Scrupulously respect all safety standards and conditions applicable to the type of building in which the machine is to be operated (e.g.: pharmaceutical companies. hospitals, chemicals, etc).
- D- 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.
- E- The machine is designed for temperatures of between +4°C and +35°C when in use.
- F- The machine is designed to work in a humidity of between 30% and 95%.
- G- 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.
- H- Never pick up flaming or incandescent objects.
- I- 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 no reverse.
- J- 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.

II. Never park the machine on a slope

- A- 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.
- B- Always pay attention to other people, children in particular, present in the place where you are working.
- C- Never use the machina to transport people or things or to tow things. Do not tow the machine.
- D- Never rest objects of any weight on the machine for any reason.
- E- Never obstruct ventilation and heal dispersion slits.
- F- Never remove, modify or circumvent safety devices.

G- Numerous unpleasant experience~ have shown thnt a wido range of personal objects may cause serious accidents.Before beginning work, remove jewellery, watches, ties, etc.

- H- The operator must always use personal protection devices- protective apron or overalls, nonslip waterproof shoes, rubber gloves, protective goggles and ear protectors and mask to protect the respiratory tract.
- I- Keep the hands away from moving parts.
- J- 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. coMult a doctor immediately.
- K- Make sure the power sockets used for the models with cable or or battery charger are connected to a suitable earth system and protected by differential thermal solenoid switches.

III. Make sure the electrical characteristics of the machine (voltage, frequency, absorbed power) given on the rating plate (fig. I) are the same as those of the mains electricity supply.

A- 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.

- B- Never rest tools on the batteries as this could cause short circuit and explosion.
- C- When using battery acid, always follow the relative safety instructions scrupulously.
- D- In the presence of particularly strong magnetic fields. assess the possible effect on the control electronics.
- E- Never wash the machine with water jets.
- F- The fluids collected contain detergent, disinfectant, water and organic and inorganic material. They must be disposed off in accordance with current legislation.
- G- 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 authorised by the Manufacturer.
- H- All maintenance operations must be performed in an adequately lit place and only after disconnecting the machine from the power supply (in cable models by unplugging the machine from the socket, in battery models by disconnecting the batteries).
- I- 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.
- J- 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.
- K- 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.
- L- This machine has been designed and constructed to provide ten years' service from the fabrication date shown on the rating plate (fig. 1). 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.

IV. Special waste. Do not dispose! of with ordInnl'y 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.

6. HANDLING AND INSTALLATION

6.1. LIFTING AND TRANSPORTATION

••• 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 tho machine. Handle with care to avoid knocking or overturning the machine.

6.2. CHECKS ON DELLVERY

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.

6.3. 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 machiue as follows:

Cut and remove the plastic straps using scissors or nippers:

remove the cardboard;

remove the bags in the battery compartment (in the detergent tank) and check the contents:

- guarantee slip;
- use and maintenance manual;
- battery bridges with terminals (battery model only):
- 1 battery charger connector (battery models only);

remove the metal brackets or cut the plastic straps fixing the machine chassis to the pallet:

using a sloping ramp, push the machinc backwards of the pallet;

unpack the brushes and squeegee:

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 cuncnt legislation.

6.4. POWER SUPPLY BATTERIES

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

A- tubular leak-proof batteries: the electrolyte level must be checked regularly. When necessary, top up with distilled water until the plates arc covered. Do not overfill (5 mm max. above the plates).

B- 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.

6.4.1. 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: 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 necessay) top up with sulphuric acid solution;

closo 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.

6.4.2. Batteries: Installation and connection DANGER !

Check that all switches on the control panel are in the "0" (off) position.

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 two tanks are empty (if necessary, empty them. See the relevant paragraph).

2. Lift the dirty water tank and tilt it backwards by aboltt $90^\circ.$ This provides access to the battery compartment.

3. Place the batteries in the batteries box.

••• IMPORTANT •••

Mount the batteries on the machine using lifting means suitable for their weight. The positive and negative poles have different diameters.

4. Referring to the wiring layout shown in the above diagram, connect the battery cable and bridge terminals to the battery poles. Arrange the cables as shown in the diagram, tighten the terminals on the poles and cover with Vaseline.

5. Lower the dirty water tank into its work position and fasten it to the delcrgent tank;

6.4.3. Batteries: removal DANGER !

When removing the batteries, the operator must be equipped with suitable personal protection devices (gloves, goggles, overalls, safety shoes, etc) to reduce the risk of accidents. Make sure the switches on the control panel are in the "0" position (off) and the machine is turned off. Keep away from naked flames, do not short circuit the battery poles, do not cause sparks and do not smoke.

Proceed as follows:

disconnect the battery wiring and bridge terminals from the battery poles.

if necessary, remove the devices fixing the battery to the base of the machine.

lift the batteries from the compartment using suitable lifting equipment.

6.5. BATTERY CHARGER(BATTERY MODELS)

••• IMPORTANT •••

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

6.5.1. Choosing the battery charger

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

- tubular lead batteries: a 24 V- 20 A automatic charger is recommended. Consult the battery charger manufacturer and manual to confirm the choice.
- gel batteries: use a charger specific for this type of battery.

6.5.2. 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 (see paragraph "Unpacking" of this manual). 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.

6.6. LIFTING AND TRANSPORTING 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:

- A- empty the dirty water drum and detergent tank;
- B- remove the squeegee and brushes (drive disks or rollers);
- C- remove the batteries;
- D- place the machine on the pallet and fix it with plastic straps or metal brackets;
- E- lift the pallet (with the machine) using a fork lift truck and load it onto the means of transport;
- F- anchor the machine to the means of tansport with cables connected to the pallet and machine itself.

7. OPERATION GUIDES

7.1. THE SQUEEGEE MOUNTING AND ADJUSTING

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 oflhc squeegee lever;
- 2) insert the suction hose sleeve fully into the squeegee;
- 3) slacken the two knobs at the centre of the squeegee;
- 4) insert the two threaded pins into the slots on the support;
- 5) fix the squeegee by tightening the two knobs.

The squeegee blades scrape the film of water and detergent from the floor and prepare the way for perfect drying. With time, tbe 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 frequenlly.

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.

7.2. THE MACHINE MOVING WITHOUT 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) press the power button, operation the drive lever.

7.3. THE BRUSH MOUNTING AND ADJUSTING

••• IMPORTANT •••

Never work without the brushes, rollers and drive disks perfectly installed.

Fitting the brush (automatic brush attachment): place the disks under the head, making sure they rest against the stops to align them with the attachment device, then press the brush button. The machine performs the automatic attachment manoeuvre.

Removing the brush (automatic brush release): turn off all devices (brushes, suction motor), then hold the brush / microfibre release button down for at least 5 seconds. The machine performs the automntic brush release manoeuvre.

7.4. 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 wilh low-foam biodegradable detergents made specilically for scrubber driers.

For a complete and up-to-date list of the detergents and chemicals availabe, contact the Manufacturer.

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".

7.5. PREPARATION BEFORE WORKING

Before starting work, proceed as follows:

- 1. check the battery charge (recharge if necessary);
- 2. lower the head by means of the pedal;
- 3. make sure the dirty water tank is empty, if necessary, empty it;
- 4. via the opening at the front, fill the detergent tank with II suitable concentration of clean water and low-foam detergent.
- 5. mount the most suitable brushes, drive disks or rollers for the floor and work to be performed;
- 6. make sure the squeegee is firmly attached and connected to the suction hose. Make sure the back blade is not worn.

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:

- A- prepare the work area by removing all possible obstacles;
- B- begin working from the furthermost point to avoid walking on the area you have just cleaned;
- C- choose the straightest possible working routes;
- D-divide large floors into parallel rectangular sections;
- E- if necessary, finish off by passing a mop or rag rapidly over parts inaccessible to the scrubber drier.

7.6. WORKING

After setting up the machine, proceed as follows:

- 1) Put on power
- move the tap lever to the minimum detergent flow position. Unless a safety solenoid valve is fitted, the detergent solution starts flowing to the brush;
- 3) lower the squeegee by means of the corresponding lever;
- 4) press the brush switch;
- 5) press the suction switch to start the suction motor;
- 6) press the brush/drive lever and the machine is forward. Once release drive lever, the brush stops working.

••• IMPORTANT •••

Prohibit leaving the machine when it is working.

Suction motor will be automatically shut off once the dirty water tank is full. Empty the dirty water, and then start work.

Never leave the brush working on the same place.

7.7 AFTER-WORKING

- 1) place the tap lever in the "CLOSED" position;
- 2) release the brush/drive lever located under the handgrip. This turns the brush/drive motor off and the machine stops;
- 3) stop the brush;
- lift the lever to raise the squeegee rom the floor to prevent the continuous pressure from warping the blades;
- 5) let the suction motor run for at least 2 minutes to make sure it is completely dry, then press "0" ou the suction switch to switch off the suction motor;
- 6) remove the brushes (or drive disks) to prevent them from warping permanently;
- 7) cut off the power;
- 8) empty and clean the dirty water tank.

7.8. USEFUL CLEANING TIPS

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

7.8.1. Prewasfling

- 1) place the tap lever;
- 2) place the brush switch;
- 3) lower the head:
- 4) operate the drive level to rotate the brushes;
- 5) make sure the suction motor is off
- 6) the squeegee is raised;
- 7) begin washing.

Persist when washing particularly dirty points to give the detergent time to perform its mechanical action detaching and suspending the dirt and the brushes time to exert an effective mechanical action.

7.8.2. Drying

Lower the squeegee and with the suction motor on, pass over the same area washed previously. To wash and dry at the same time, operate the brush. water, squeegee and suction motor simultaneously.

7.9. DRAINGTHE DIRTY WATER DANGER !

Use suitable personal protection devices.

Drain the dirty water with the machine disconnected from the power supply.

The dirty water tank drain hose is at the back left side of the machine.

To empty the tank:

- 1) move the machine near a drain :
- 2) detach the drain hose from its seat by holding it near the fixing spring and pulling horizontally;
- 3) unscrew and remove the cap;
- 4) lower the hose end gradually, controlling the intensity of the flow of water by adjusting the height from the ground;
- 5) when the dirty water bas been totally drained, lower the dirty water tank and refasten to the detergent tank;
- 6) close the drain hose by replacing the cap, check that it is tightly closed and replace the hose in its housing.

••• IMPORTANT •••

When washing the dirty water tank, never remove the suction filter from its housing and never direct the jet of water against the filter itself.

7.10. DRAINGING THE CLEAR WATER DANGER !

Use suitable personal protection devices.

Drain the water with the machine disconnected from the power supply.

To empty the tank:

- 1) move the machine near a drain:
- 2) remove the cap;
- 3) when the detergent tank is completely empty, replace the cap.

8. 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.

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 constantry at maximum charge.

••• IMPORTANT •••

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

9. 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.

9.1. RECHARGING PROCEDURE

- 1) connect the battery charger connector to the battery wiring connector;
- 2) charge the batteries as described in the battery charger manual;
- 3) at the end of charging, disconnect the connectors;
- 4) reconnect the battery wiring connector to the machine connector.

10. MAINTENANCE INSTRUCTIONS

DANGER !

Never perform any maintenance operations without disconnecting the batteries.

Maintenance on the electrical circult 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.

10.1. 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:

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

10.2. ROUNTINE MAINTENANCE

10.2.1 Suction motor air filter and float switch cleaning

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

10.2.2 Basket filter: cleaning

- 1) remove the basket filter from the water fill hole at the front of the machine;
- 2) clean the filter with running water or the detergent solution used on the machine;
- 3) replace the filter back in its housing, making sure it is correctly positioned.

10.2.3 Detergent filter: cleaning

- 1) unscrew the screw located below the bottom tank:
- 2) unscrew the detergent filter;
- 3) clean the filter with running water or the detergent solution used on the machine;
- 4) replace the filter back in its housing, making sure il is correctly positioned and retighten the screw.

10.2.4 Sqeegee blades: replacing

The squeegee blade 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:

- A. lower the squeegee by means of the corresponding lever;
- B. remove the squeegee from its mount by completely unscrewing the two knobs;
- C. remove the suction hose sleeve from the squeegee;
- D. release the catch;
- E. remove the two blade retainers by first pushing them towards the body of the squeegee then extracting them;
- F. remove the blade; 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;
- G. 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;
- H. refasten the catch.

10.2.5 Fuses: replacement

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

• To replace the fuses:

- a. make sure the dirty water drum is empty and empty it if necessary;
- b. raise the dirty water tank;
- c. raise the fuse holder cover and remove the fuse by unscrewing the fixing screws;
- d. fit a new fuse and close the fuse holder cover;
- e. lower tho dirty water tank.

••• IMPORTANT •••

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.

10.3.1. Daily operations

After each day's work, proceed as follows :

- a. disconnect the machine from the power supply;
- b. empty the dirty water drum and clean if necessary.

11.1 How to resolve possible problems

B – Machine fonctionne à batterie / C – Machine fonctionne à l'électricité

Problème	Cause	Solution
	Les batteries sont débran- chées.	Brancher les batteries.
La machine ne fonctionne pas.	Les batteries sont à plat.	Rechargez les batteries.
	Le bouton d'urgence est déclenché.	Pressez le bouton d'ur- gence.
	L'interrupteur de la brosse est en position « I ».	Pressez l'interrupteur en position « I I »
Le moteur de la brosse ne	Le fusible du moteur de la brosse est grillé.	Vérifiez ce qui a engendré le problème, réglez-le et remplacez le fusible.
démarre pas.	Le réservoir de récupéra- tion est plein.	Videz le réservoir de récu- pération.
	Les batteries sont à plat.	Rechargez les batteries.
	Le moteur est défectueux.	Faites changer le moteur.
Le nettoyage n'est pas égal.	Le disque utilisé (brosse, tampon) est usé.	Remplacez la pièce usée.
	Le robinet est FERMÉ.	Ouvrez le robinet.
La solution ne s'écoule	Le réservoir de solution est vide.	Remplissez-le.
pas.	Le boyau est obstrué.	Dégagez l'obstruction.
	Le robinet est sale ou défectueux.	Nettoyez ou défaites les vis et remplacez le robinet.
La polution no posso do	Électrovanne défectueuse.	Vérifiez l'électrovanne.
s'écouler.	Filage de l'électrovanne endommagé.	Vérifiez le filage de l'élec- trovanne.
	L'interrupteur du moteur de succion est en position « I ».	Pressez l'interrupteur en position « I I »
Le moteur de succion ne démarre pas.	Le courant ne se rend pas au moteur de succion ; le moteur est défectueux.	Assurez-vous que le branchement est bien fait sinon, faites changer le moteur.
	Le fusible est grillé.	Remplacez le fusible.
	Le réservoir de récupéra- tion est plein.	Videz le réservoir de récu- pération.

	Le rebord de la lame du racloir en contact avec le sol est usé.	Remplacez la lame du racloir.
	Le racloir est endommagé ou le boyau est obstrué.	Dégagez l'obstruction, réparez le bris.
	L'interrupteur à flotteur s'est déclenché (à l'inté- rieur du réservoir de récu- pération), il est obstrué ou brisé.	Videz le réservoir de ré- cupération et réinitialisez l'interrupteur.
Le racloir ne nettoie pas adéquatement ou la suc- cion est inefficace.	Le boyau de succion est obstrué.	Dégagez l'obstruction.
	Le boyau de succion n'est pas branché au racloir ou il est endommagé.	Vérifiez le branchement, réparez le boyau.
	Le courant ne se rend pas au moteur de succion ; le moteur est défectueux.	Assurez-vous que le branchement est bien fait sinon, faites changer le moteur.
	Les batteries sont à plat.	Rechargez les batteries.
	Le bouton d'urgence est enclenché.	Pousser le bouton d'ur- gence.
La machine ne freine pas.	Les vis du volant, entraî- nant le dispositif de frei- nage électromagnétique, sont desserrées.	Resserrez les vis.
	Le dispositif de freinage électromagnétique est défectueux.	Remplacez-le dispositif.
	Les pôles et terminaux sont sales et oxydés.	Nettoyez et graissez les pôles et terminaux; rechar- gez les batteries.
Les batteries ne durent	Le niveau d'électrolyte est bas.	Ajoutez de l'eau distillée comme indiqué dans les instructions.
l'habitude	Le chargeur à batterie ne fonctionne pas ou ne convient pas.	Référez-vous aux instruc- tions du chargeur.
	Il y a de grandes diffé- rences d'intensité entre les éléments de la batterie.	Remplacez la batterie défectueuse.

	La batterie est neuve et ne performe pas encore à 100%.	La batterie nécessite un rodage de charge et dé- charge d'environ 20 à 30 fois avant d'atteindre sa pleine capacité.
La batterie se décharge trop rapidement pendant le travail. Même si un test avec hydromètre révèle que sa charge est pleine, sa charge n'est pas uni- forme.	La machine doit fonction- ner à pleine capacité pen- dant de longues périodes en continu et le temps de charge de la batterie n'est pas suffisant pour suffire à la demande.	Si possible, utilisez des batteries de plus grande capacité ou les remplacer plus souvent.
	Les électrolytes se sont évaporés et ne couvrent plus les plaques.	Ajouter de l'eau distillée jusqu'à ce qu'elle couvre les plaques ; rechargez la batterie.
La batterie se décharge trop rapidement pendant le travail. La recharge avec le chargeur de batterie élec- tronique est trop rapide et même si le voltage indiqué est correct, la charge n'est pas pleine lorsque testé avec un hydromètre.	La batterie fournie par le manufacturier, déjà remplie d'acide, a été entreposée trop longtemps avant d'être rechargée et utilisée pour la première fois.	Si recharger la batterie avec le chargeur standard n'est pas efficace, rechar- gez-la une autre fois. La recharger lentement, sur une période de dix heures. Chargez pendant cinq heures, laissez reposer pendant une heure.
	La batterie n'est pas bien insérée dans le chargeur et la connexion ne se fait pas.	Assurez-vous que la batte- rie est bien placée dans le chargeur.
À la fin de la recharge avec le chargeur de batterie électronique, la batterie n'affiche pas le niveau de voltage conforme et un test avec hydromètre	Le chargeur à batterie et la prise de courant dans lequel il est branché sont incompatibles.	Assurez-vous que les stan- dards requis en alimenta- tion électrique du chargeur à batterie correspondent au courant électrique dis- ponible.
revele que sa charge n'est pas uniforme	Le chargeur de batterie n'a pas été installé correcte- ment.	Respectez le voltage disponible de la prise de courant, assurez-vous que les branchements sont bien effectués.

12. MAIN TECHNICAL SPECIFICATIONS

Caractéristics	English measures	Metric measures
Power :	24 V DC – self-propelled	
Traction motor :	0,54 HP / 400 W	
Dimensions :	48,4" x 31" x 47"	123 cm x 80 cm x 120 cm
Weight with battery :	684 lb	310 kg
Tank construction :	polyethylen	
Solution tank :	18,5 gal	70 L
Recovery tank :	20 gal	75 L
Cleaning path :	28"	710 mm
Sqeegee width :	40"	1 016 mm
Brushes size :	2 x 14" brushes	2 x 355,6 mm brushes
Vacuum motor :	AMETEK 0,6 HP / 450 W	
Brush motor :	2 x 0,54 HP / 2 x 400 W	
Sound level :	58 dB	
Battery :	24 V DC, 105AH CHILWEE x 2 190 minutes non-stop work	
Productivity :	45 208 sq/ft	4 200sq/ft
Standard accessories :	-Two 14 inch Man ish brushes	
	-Two 14 inch Man ish pad holders	
	-Two 120AH CHILWEE maintenance-free batteries	
	-One Charger	

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