

***CORAL* 50**

**03 2024**

**EN**

**User and maintenance guide**  
(Translation of the original instructions)



Warning! Read the instructions before use.



## INTRODUCTION

Thank you for having chosen our machine. This floor-scrubbing machine is designed for commercial use and is used for industrial and civil cleaning operations on any type of floor or paving. During forward motion, the combined action of the brush and of the detergent solution removes dirt, which is then collected by the rear suction unit, leaving the surface perfectly dry.

The machine must only be used for this aim. It performs at its best when used correctly and kept in efficient working order. Please read this user and maintenance manual carefully and store it for reference.

If necessary, please contact our technical support service.

WARNING: this machine is built for indoor use only.

WARNING: this machine must be put away only in closed environments.

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## GENERAL SAFETY RULES

The rules specified below must be followed carefully to prevent harm to the operator and damages to the machine.

- Carefully read the labels on the machine, do not cover them for any reason and replace them immediately if they get damaged.
- **WARNING:** the machine must only be used by authorised personnel.
- **WARNING:** the operators must be adequately instructed on how to use these machines.
- **WARNING:** the appliance is not intended for being used by people, including children, with reduced physical, sensory or mental abilities, or who lack adequate knowledge or experience.
- **WARNING:** do not use the machine on surfaces with a greater inclination than that indicated on the machine.
- During the machine's operation, watch out for other people, especially children.
- Children must be supervised to ensure that they do not play with the appliance.
- Children cannot perform cleaning and maintenance operations reserved for the user.

### TRANSFER

- **WARNING:** do not use the machine in areas where the operator is likely to get struck by falling objects, because the appliance is not equipped with any protective structure against falling objects (FOPS).
- Do not bump against scaffolding or shelving where objects may fall.
- Remove the key from the machine when parking it.
- Do not use the machine as a means of transport.
- Adapt the speed of use to the grip conditions: in particular, slow down before taking tight bends.

### STORAGE AND DECOMMISSIONING

- Storage temperature: between 0°C and +55°C (32°F and 131°F).
- Optimal work temperature: between 0°C and +40°C (32°F and 104°F).
- The humidity must not exceed 95%.
- Dispose of consumables by strictly complying with the applicable laws.
- The batteries must be removed from the machine before it is scrapped.
- When your machine reaches the end of its life, appropriately dispose of the materials contained in it, especially oils, batteries and electronic components; bear in mind that the machine was built, as far as possible, using recyclable materials.

### CORRECT USE

- Do not use the machine on surfaces covered by flammable liquids or powders (for example hydrocarbons, ash or soot).
- In case of fire use suitable fire extinguishers. Do not use water.
- Do not use the machine in an explosive atmosphere.
- The machine must perform washing and drying operations simultaneously. Different operations must be carried out in zones with access forbidden to unauthorised people and the operator must wear adequate footwear.
- Signal damp zones of the floor using appropriate signs.
- Do not mix different types of detergents to avoid producing hazardous gases.
- Do not let the brush work with the machine stationary to avoid damaging the floor.

### MAINTENANCE

- When the machine evidences operating anomalies, make sure that these do not derive from lack of routine maintenance. If this is the case,

contact the authorised technical support centre.

- Before every cleaning and/or maintenance operation, disconnect the power supply from the machine.
- If any parts must be replaced, request ORIGINAL spare parts from a dealer and/or authorised retailer.
- Only use ORIGINAL brushes.
- Do not remove any protections that require the use of tools for being removed.
- Do not wash the machine with direct water jets or power washes, or with corrosive substances.
- Have the machine checked by an authorised technical support centre every 200 hours of operation.
- Before using the machine, verify that all the doors and covers have been positioned as shown in this user and maintenance manual.
- Restore all electrical connections after every maintenance intervention.

### TRANSPORTING THE MACHINE

**WARNING:** before transporting the machine on a lorry or open trailer, make sure that:

- All the tanks are empty.
- The cover of the recovery tank is firmly locked.
- The machine is firmly tied.
- The machine's electromagnetic brake is engaged (not released manually).

## GENERAL RULES FOR BATTERIES



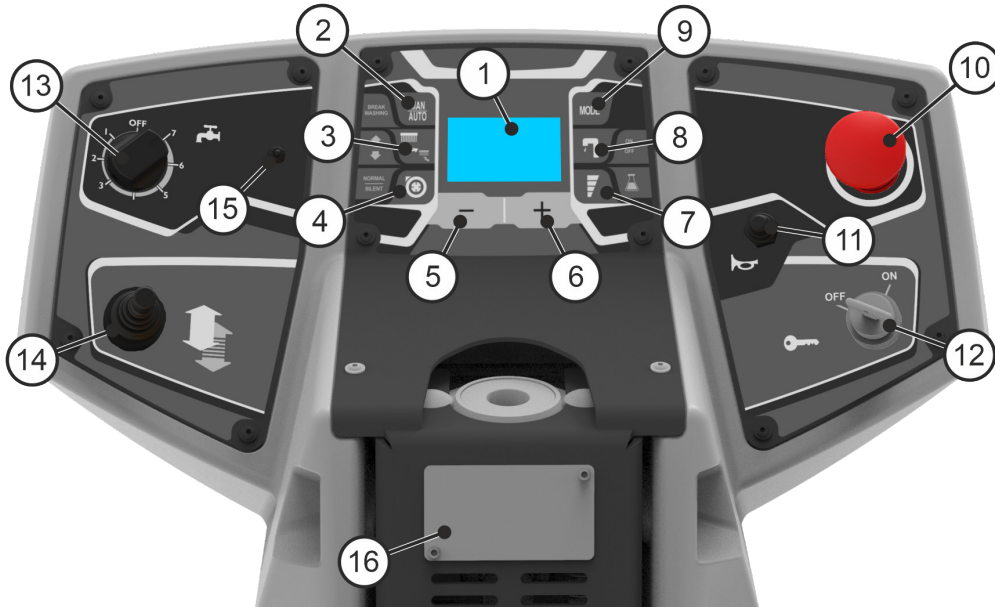
- Whenever you intervene on the batteries, wear gloves resistant to acids and safety glasses.
- Do not smoke and do not use open flames near the batteries.
- Verify whether there is a suitable fire extinguisher nearby.
- Be very careful in case of liquid leakages or spills, as the liquid is corrosive.
- Do not place metal tools on the batteries as this may trigger a short circuit!
- Worn-out batteries, which are classified as hazardous waste, must be delivered to an authorised body that complies with the waste disposal laws.

## TECHNICAL DESCRIPTION

Working width.....	mm	508
Squeegee width .....	mm	705
Cleaning capacity up to .....	m <sup>2</sup> /h	2032
Brush diameter .....	mm	508
Brush revolutions.....	rpm	140
Pressure on the brush.....	kg	30
Brush motor .....	W	380
Suction motor .....	W	490
Suction motor negative pressure .....	mbar	120
Drive motor.....	W	300
Type of drive .....		automatic
Maximum gradient .....	%	10
Solution tank capacity.....	l	70
Recovery tank capacity .....	l	75
Machine length.....	mm	1335
Machine height.....	mm	1215
Machine width (without squeegee).....	mm	691
Machine width (with squeegee).....	mm	705
Machine weight (no-load and without batteries).....	kg	154
Gross machine weight (in conformity to EN 60335-2-72 Art. 5.z102) .....	kg	374
Battery voltage.....	V	24
Battery capacity .....	Ah <sub>5</sub>	110
Battery compartment dimensions.....	mm	342 x 363 x 307
Sound pressure level (in conformity to EN 60335-2-72 Art. 60704-1) LpA.....	dB	/
Hand vibration level.....	m/s <sup>2</sup>	/
Uncertainty k.....	m/s <sup>2</sup>	/
Class .....		III
Protection rating .....	IP	X3
Weight of packed machine .....	kg	/
Packaging dimensions (WxDxH) .....	cm	148x75x149

## DISPLAY AND CONTROL PANEL LEGEND

1. DISPLAY
2. WASHING MODE SELECTION BUTTON:
  - AUTOMATIC
  - MANUAL
  - BREAK WASHING
3. BRUSH UP/DOWN AND BRUSH DETACH BUTTON
4. SUCTION MOTOR BUTTON
  - ON/OFF
  - SILENT MODE
5. MAXIMUM SPEED REDUCE BUTTON
6. MAXIMUM SPEED INCREASE BUTTON
7. LEVEL BUTTON (3S/3SD ONLY)
8. SOLENOID VALVE OPEN/CLOSE
9. WORK MODE SELECTION BUTTON
  - STANDARD
  - 3S
  - 3SD
  - Ozone
10. EMERGENCY BUTTON
11. HOOTER
12. OFF/ON KEY SWITCH
13. WATER LEVEL SELECTOR (ONLY WITH OPTIONAL 3S/3SD)
14. FORWARD/BACK MOTION JOYSTICK
15. OZONE LUMINOUS INDICATOR (ONLY WITH OZONE OPTIONAL FEATURE)
16. SERIAL NUMBER PLATE



## SERIAL NUMBER PLATE KEY

1. NAME OF MANUFACTURER
2. REGISTERED OFFICE OF MANUFACTURER
3. COUNTRY OF MANUFACTURE
4. CE MARKING
5. DISPOSAL REGULATION
6. MAXIMUM WEIGHT OF INSTALLABLE BATTERIES
7. GROSS WEIGHT OF THE MACHINE (IEC/EN 60335-2-72 CLAUSE 3.114)
8. INSTALLED POWER
9. ELECTRICAL SAFETY CLASS OF THE MACHINE
10. PROTECTION RATING OF THE MACHINE AGAINST WATER AND DUST PARTICLES
11. BATTERY VOLTAGE AND TYPE OF CIRCUIT
12. SERIAL NUMBER OF THE MACHINE
13. MACHINE MODEL
14. MAXIMUM GRADIENT

### UNDERSTANDING THE SERIAL NUMBER

Pos. 12

SN	2	0	x	x	z	z	z	z
----	---	---	---	---	---	---	---	---

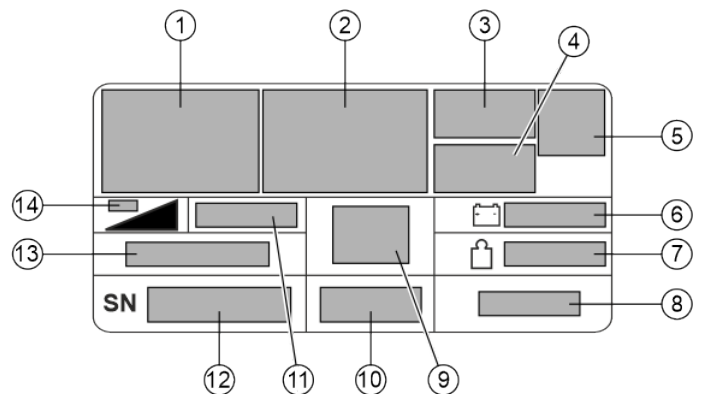
**20xx** = they refer to the **year of manufacture** of the machine (integrated into the Serial Number as per the CEI EN 60335-2-72 standard).  
**zzzzzz** = they refer to the progressive number of the machine produced in the year of manufacture.

### UNDERSTANDING THE MACHINE MODEL

Pos. 13

xxxx	z
------	---

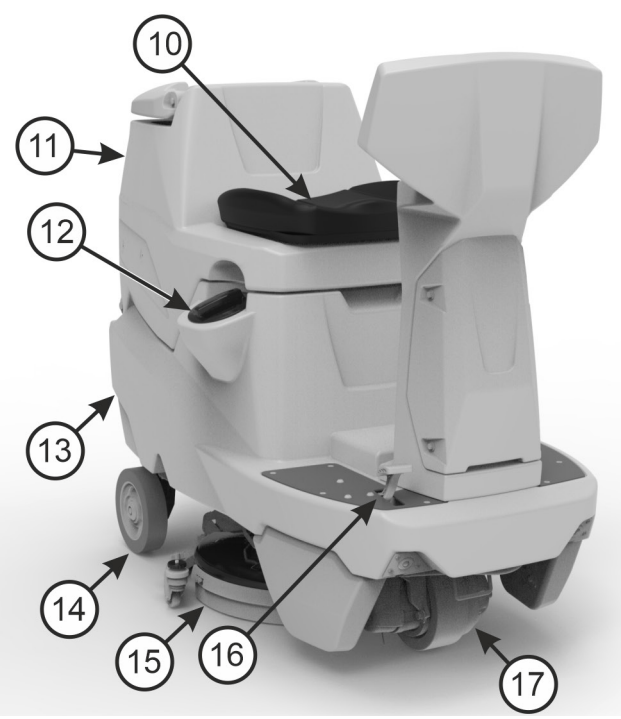
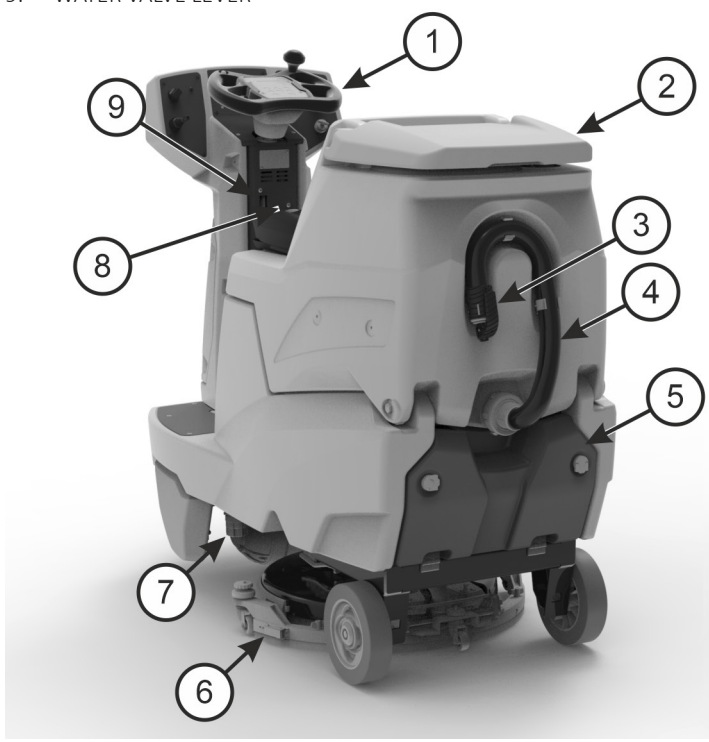
**xxxx** = name of the machine range  
**zz** = number identifying the model



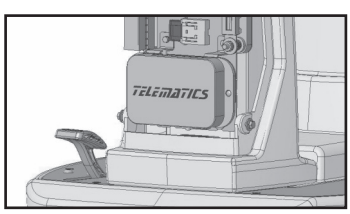
# MACHINE LEGEND

- 1. STEERING WHEEL
- 2. RECOVERY TANK COVER
- 3. DISCHARGE PIPE CAP
- 4. DISCHARGE PIPE
- 5. STORAGE COMPARTMENT FLAP
- 6. SQUEEGEE ASSEMBLY
- 7. DETERGENT SOLUTION FILTER
- 8. SQUEEGEE LEVER
- 9. WATER VALVE LEVER

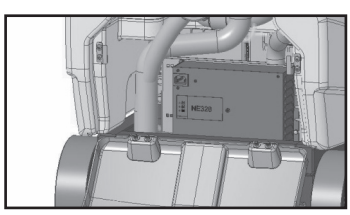
- 10. SEAT
- 11. RECOVERY TANK
- 12. SOLUTION LOADING CAP
- 13. SOLUTION TANK
- 14. REAR WHEELS
- 15. BASE ASSEMBLY
- 16. MOTION CONTROL PEDAL
- 17. DRIVE ASSEMBLY



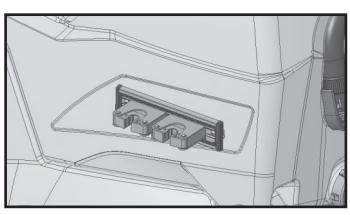
## OPTIONAL EQUIPMENT



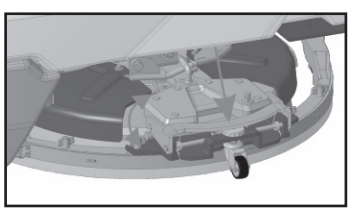
TELEMATICS



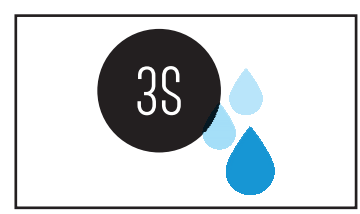
ON-BOARD BATTERY CHARGER



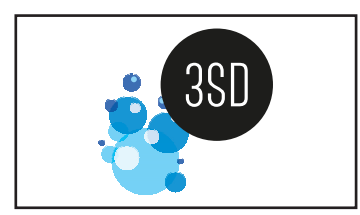
SIDE BROOM ATTACHMENTS



SQUEEGEE QUICK FIT/DETACH SYSTEM



3S SYSTEM



3SD SYSTEM



OZONE GENERATOR

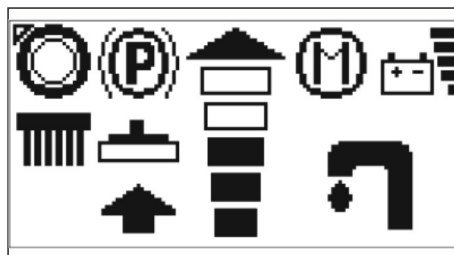
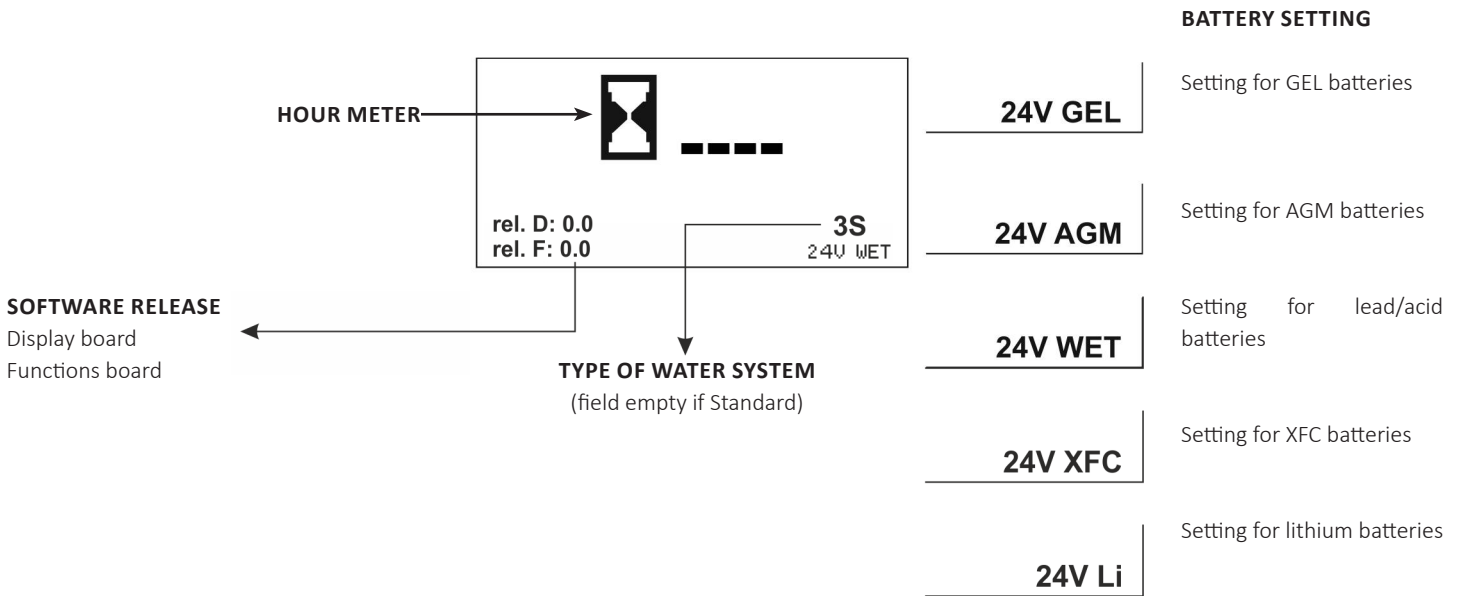
## DISPLAY READING

### VIEW UPON SWITCH-ON

When the machine is switched on, the display shows the following screen.

# CORAL 50

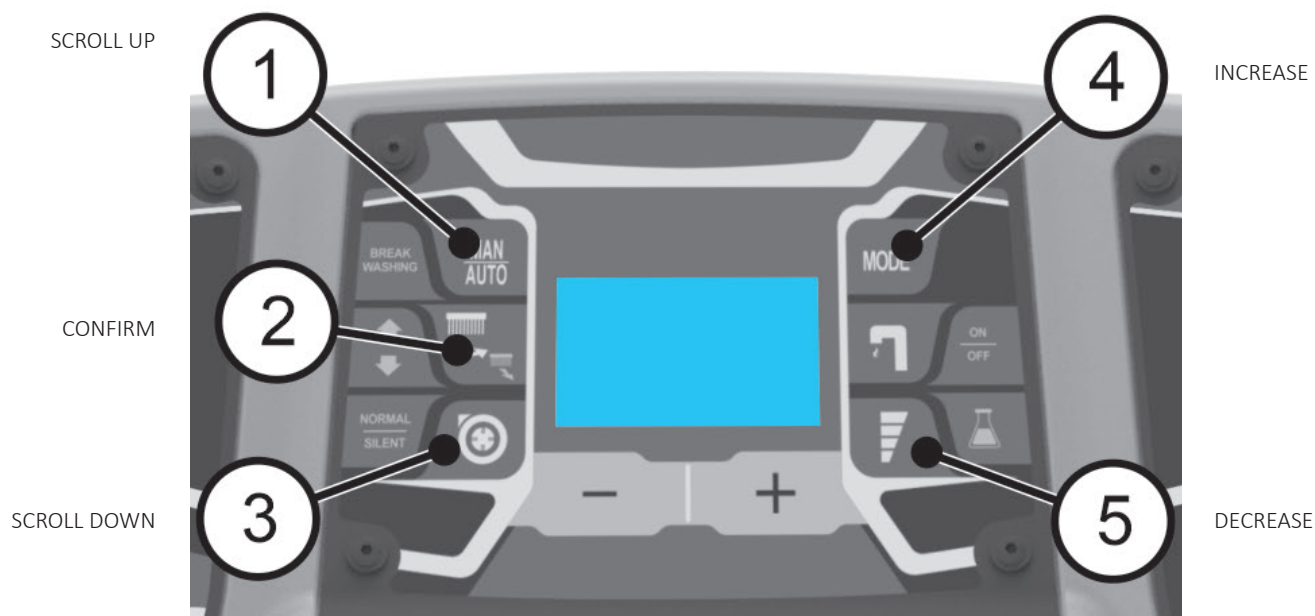
The next screen will appear as follows:



- |                          |  |                   |  |                         |  |                            |  |
|--------------------------|--|-------------------|--|-------------------------|--|----------------------------|--|
| Parking brake engaged    |  | Base up           |  | Maximum speed level set |  | Standard mode selection    |  |
| Automatic mode           |  | Base down         |  |                         |  | Solenoid valve activated   |  |
| Manual mode              |  | Brush in function |  |                         |  | Solenoid valve deactivated |  |
| Battery charge level     |  |                   |  |                         |  | 3S mode selection          |  |
| Aspirator off            |  |                   |  |                         |  | 3SD mode selection         |  |
| Aspirator on             |  | Squeegee high     |  |                         |  | Ozone mode selection       |  |
| Aspirator in silent mode |  | Squeegee low      |  |                         |  | Ozone + 3S mode selection  |  |
|                          |  |                   |  |                         |  |                            |  |



## NAVIGATION CONTROLS



### GENERAL SETTING

To access the settings menu, use the keypad on the dashboard and proceed as follows:

1. Simultaneously press and hold buttons (1) and (5).
2. Turn the ignition key.

After entering the GENERAL SETTING menu, it will be possible to change the following pre-defined settings by simply scrolling the menu with controls (1) and (3).

### LANGUAGE SELECTION (DISPLAY LANGUAGE SELECTION)

English is the default language, but it can be changed.

To select the language, scroll with buttons (1) and (3) until "Language" appears. Press buttons (4) and (5) to select the language. Press button (2) to confirm.

### DISPLAY TUNE

After accessing the General Setting menu, it is possible to modify the display's colour contrast. Scroll with buttons (1) and (3) until "Display Tune" appears. Press buttons (4) and (5) to select. Press button (2) to confirm.

### DISPLAY BRIGHTNESS

After accessing the General Setting menu, it is possible to modify the display's brightness.

Scroll with buttons (1) and (3) until "Display Brightness" appears. Press buttons (4) and (5) to select. Press button (2) to confirm.

## SYMBOLS IN THE MANUAL



Open-book symbol.  
Indicates to the operator to read the manual before using the machine.



Open-book symbol.  
For the efficient operation of the incorporated battery charger (optional), consult the user manual of the manufacturer.



Warning symbol.  
Carefully read the sections marked with this symbol, for the safety of the operator and of the machine.



Warning symbol.  
Risk of acid leakage from the batteries.



Symbol indicating that the system must be disconnected from the batteries by detaching the connector before any operation on the machine.



Obligation symbol that obliges the user to wear protective glasses.



Obligation symbol that obliges the user to wear protective gloves.



Symbol preceding information on correct use of the machine.



Symbol indicating operations to be performed only by qualified personnel.

## BEFORE USE

### HANDLING OF THE PACKED MACHINE

The machine is supplied with the packaging configured for its handling by means of a forklift truck.

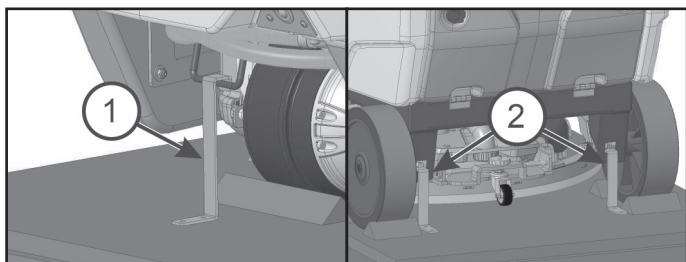
For the dimensions of the packaging, consult the "TECHNICAL DESCRIPTION" table.



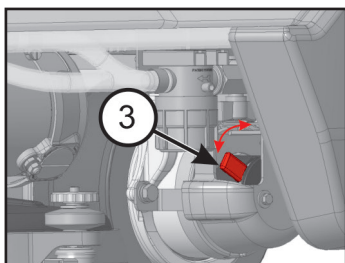
Do not stack more than two packaging boxes.

### UNPACKING AND MANUAL HANDLING OF THE MACHINE

1. Remove the outer packaging.
2. Loosen the brackets (1+2) fastening the machine to the platform.



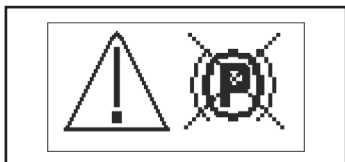
3. Before freeing the machine from the platform, it is necessary to release the parking brake locking the traction wheel. To do this, move the lever (3).



4. Free the machine from the platform by pulling it in reverse, taking care to protect the mechanical parts against heavy impacts.



5. Restore the electromagnetic brake by putting the lever back into the red position, as shown in point 3.

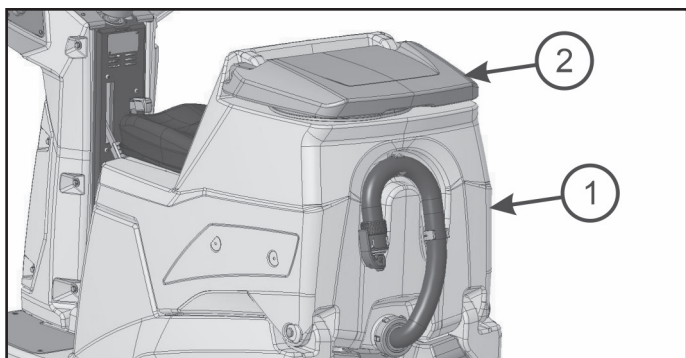


Store the platform and the brackets for any future transport operations. The inclined plane for lowering the machine is not supplied with the packaging.

### ACCESSING THE BATTERY COMPARTMENT

To access the battery compartment, first make sure that the recovery tank (1) is empty by lifting the cover (2).

Should it be full, proceed as indicated in the chapter "CLEANING THE RECOVERY TANK".



## INSTALLING THE BATTERIES

The machine includes several settings for the batteries.

To modify the settings, contact an authorised centre.

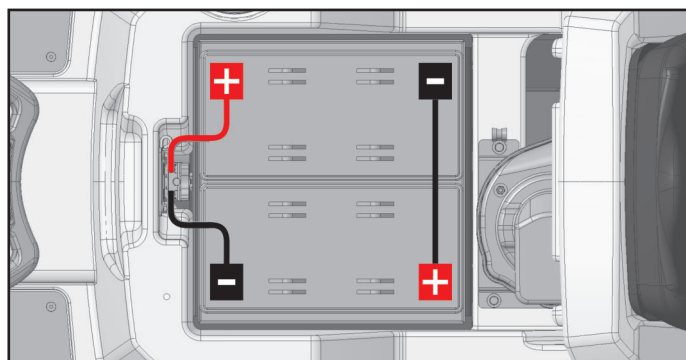
The machine requires the use of batteries connected in series and housed in the relevant compartment. They must be handled using suitable (in terms of the weight, to be assessed in relation to the chosen batteries, and the attachment system) lifting equipment. The batteries must fulfil the requirements specified in the CEI 21-5 standard.



For battery maintenance and charging, strictly observe the indications provided by the manufacturer or retailer. All installation and maintenance operations must be carried out by specialised personnel, using adequate protection devices.

To install the batteries it is necessary to access the battery compartment (see "ACCESSING THE BATTERY COMPARTMENT" chapter).

1. Place the batteries in their housing.
2. Connect the terminals, while observing the pole markings and taking care not to short-circuit the batteries with tools by covering the poles with the terminal caps.



## BATTERY CHARGER



Make sure that the battery charger is suitable for the installed batteries with regard to their capacity and type (lead/acid, GEL or NXS, AGM or lithium).

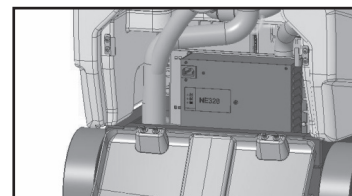
The bag containing the user and maintenance manual also includes the coupling connector for the battery charger. This connector must be mounted on the cables of your battery charger according to the relevant instructions given by the battery charger manufacturer.

### ON-BOARD BATTERY CHARGER (OPTIONAL)

If the machine is supplied with an incorporated battery charger (see "OPTIONAL EQUIPMENT"), please consult the manufacturer's instructions for this accessory for information on battery charging.

The battery charger is connected directly to the battery poles. During charging operations a device activates that does not allow the machine to work.

The battery charger's power cord is maximum two metres long and must be connected to a single-phase CEE 7/7 TYPE socket.



## BATTERY CHARGE INDICATOR



The battery charge indicator appears on the display with the relevant symbol (see "CONTROLS DISPLAY").

When the last charge segment starts flashing, it means that the battery is almost completely flat; the brush rotation function is disabled and the base rises.



When also the last charge segment switches off, the battery will start flashing. The machine can dry for a further 30 seconds then only the traction mechanism will remain active so the machine can be moved, while all the functions are disabled.



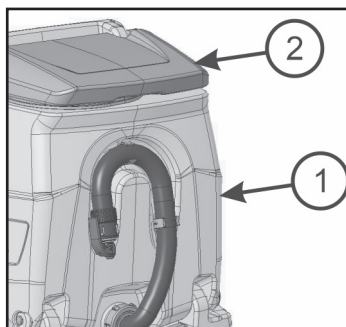
When the battery symbol, without any charge segments, stops flashing and remains steady lit, the battery is completely flat and all the functions are disabled.

## LIFTING THE RECOVERY TANK

For certain routine maintenance operations, such as the battery charging process, it may be necessary to lift the recovery tank.

To lift it, make sure that the recovery tank (1) is empty by lifting the cover (2).

If it is full, proceed as indicated in the chapter "CLEANING THE RECOVERY TANK".



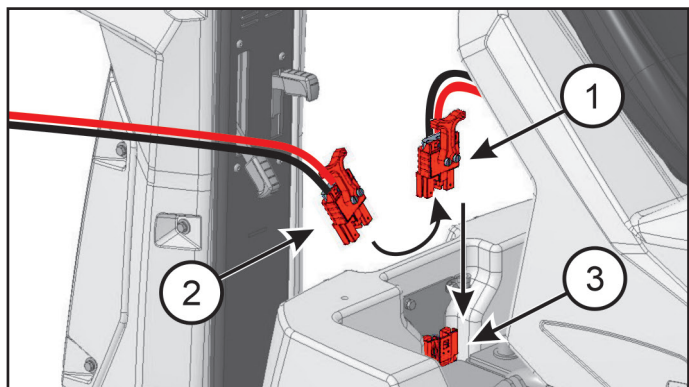
## CHARGING THE BATTERIES



1. Insert the battery charger connector (2) into the battery connector (1).
2. Charge the batteries while keeping the recovery tank raised.

Once the batteries have been charged:

1. Disconnect the battery charger connector (2) from the battery connector (1).
2. Connect the battery connector (1) to the machine connector (3).



## CHARGING THE BATTERIES WITH THE INCORPORATED BATTERY CHARGER (OPTIONAL)



Move the machine to a level surface near a mains power outlet.

1. Switch the machine off with the key switch.
2. Insert the plug into the mains power outlet.
3. Charge the batteries while keeping the recovery tank raised.
4. Do not unplug the charger until the end-of-charging indicator appears.

Unplug the charger once the batteries have been charged.

**Never charge a battery using an unsuitable battery charger. Strictly observe the instructions provided by the battery and battery charger manufacturers.**

NOTES: Never leave the batteries completely flat for long periods of time. If traditional batteries are used, every 20 charges check the level of electrolyte and top it up with distilled water if necessary.

If lead/acid batteries are used, there is a risk of gas leaks and corrosive liquid spills.

Risk of fire: do not approach the batteries with open flames.

## MANUAL MOUNTING OF THE BRUSH

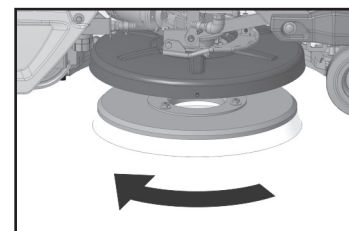
In order to mount the brush, the washing base must be in the raised position. Should it not be in this position, proceed as follows:

Without the operator on board, turning the key clockwise switches on the display then after 3 seconds all working assemblies are automatically switched off and raised from the floor.

Switch the machine off by turning the key anti-clockwise.



With the base in the raised position, turn it by 90° until you see the central screw then attach the brush by rotating it as shown in the figure.



Only use the brushes supplied with the machine or those specified in the "BRUSHES AND OPTIONAL ACCESSORIES" manual. The use of other brushes may deteriorate the washing results.

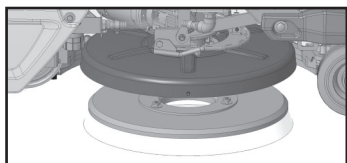


### AUTOMATIC MOUNTING OF THE BRUSH

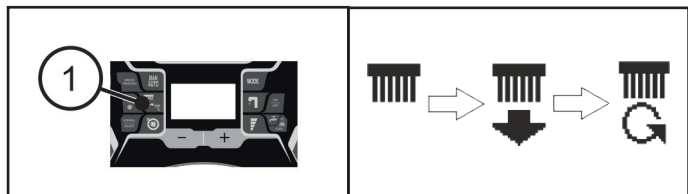
To mount the brush automatically, the washing base must be in the raised position. Should it not be in this position, proceed as follows:

Without the operator on board, turning the key clockwise switches on the display then after 3 seconds all working assemblies are automatically switched off and raised from the floor.

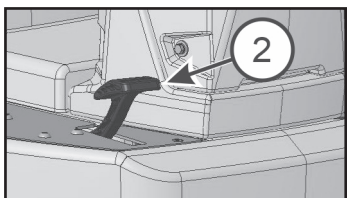
Position the brush in a centred position underneath the base.



From under the driver's seat, lower the base by pressing button (1).



Press the drive control pedal (2). The base will rotate and automatically attach the brush to itself.



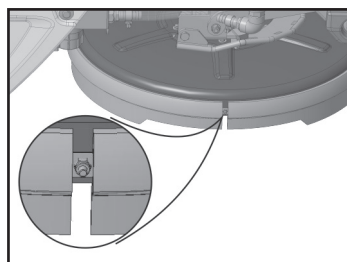
### ASSEMBLING AND DISMANTLING THE SPLASH GUARDS

The two splash guards must be mounted on the cover of the washing assembly.

1. With the base in the raised position, rotate it until you see the central screw on which to fasten the slats.

2. Insert the metal slats into the appropriate slots on the rubber element. Position the round hole on the flat end of the slat on the screw situated on the front of the cover. Fasten the slats with the nut, keeping it locked in place.

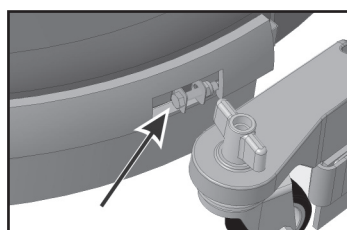
3. Insert the screws in the rear part of the cover, on the free end of the metal slats and attachments. The operation



must be carried out for both splash guard rubber elements.

With the brush assembled, the splash guard must barely touch the floor.

To dismantle the slats, repeat the same operations in reverse order.



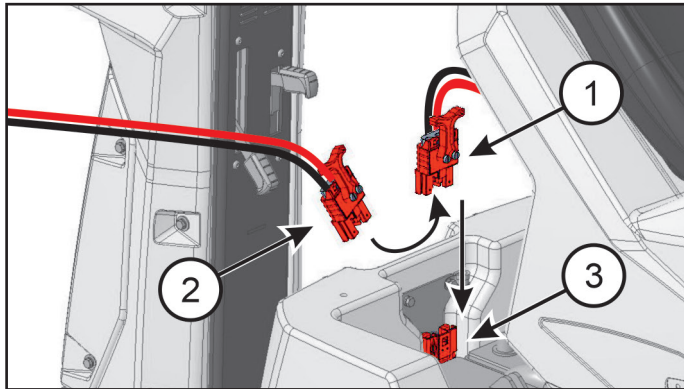
## FLOOR CLEANING

### CONNECTING THE BATTERIES AND SWITCHING THE MACHINE ON

Once the batteries have been charged:

Remove the battery charger connector (2) from the battery connector (1).

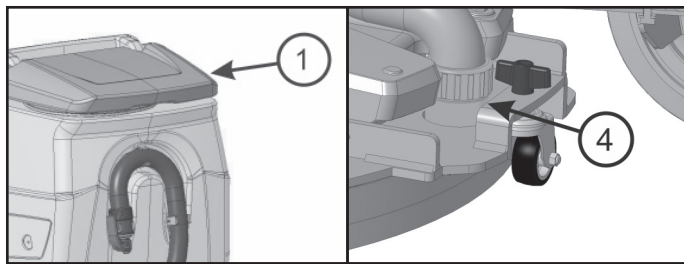
Connect the battery connector (1) to the machine connector (3).



### RECOVERY TANK

The recovery tank is equipped with a cover (1) that is locked thanks to the negative pressure created by the suction motor during use.

Check that the squeegee pipe is inserted in its housing (2).



### DETERGENT SOLUTION TANK

The capacity of the detergent solution tank is indicated in the technical sheet.

Open the screw cap located on the left side of the machine and fill the solution tank with clean water, at a temperature not exceeding 50°C. Add liquid detergent with the concentration and in the manner indicated by the manufacturer. To prevent excessive foam build-up, which could cause problems for the suction motor, use as less detergent as possible. Screw the cap onto the solution tank.



Always use detergent with retarded foam.

Protect yourself against accidental contacts or splashes by wearing the personal protective equipment specified by the manufacturer.

To safely avoid foam the production of foam, before starting work introduce a small amount of anti-foam liquid into the recovery tank.

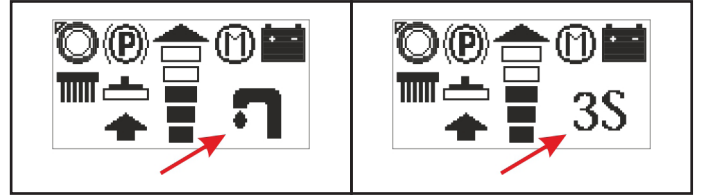
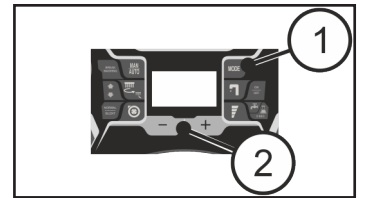
**Do not use pure acids.**

### 3S "SOLUTION SAVING SYSTEM" (OPTIONAL)

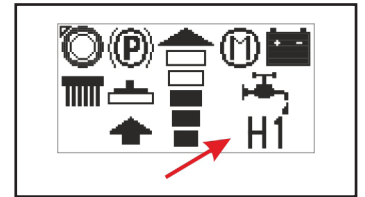
This system allows for controlled use of the detergent solution during work.

To activate it, press button (1) twice: the water symbol will flash on the display.

Select the 3S system using the navigation buttons (2).



When "3S" stops flashing, the system is selected.



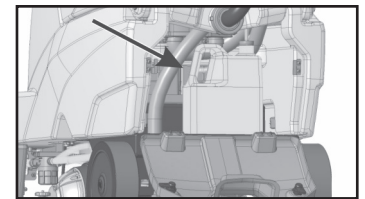
### INSTALLING THE DETERGENT TANK (3SD MODE)

To use the machine in 3SD mode, the detergent tank must be installed as follows:

Access the storage compartment.

Remove the tank cap and replace it with the adapter.

The pipe must touch the bottom of the tank.

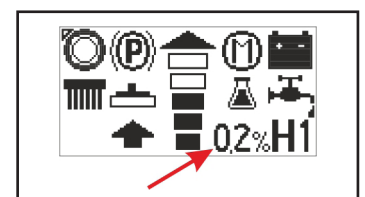
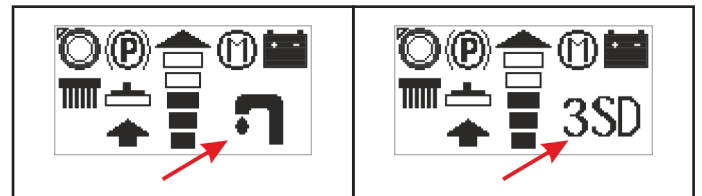
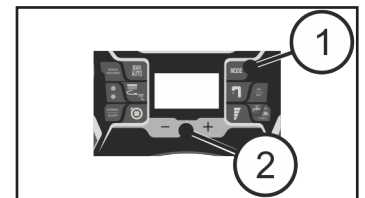


### 3SD "SOLUTION SAVING SYSTEM DISPENSER" (OPTIONAL)

To activate it, press button (1) twice: the water symbol will flash on the display.

Select the 3SD system using the navigation buttons (2).

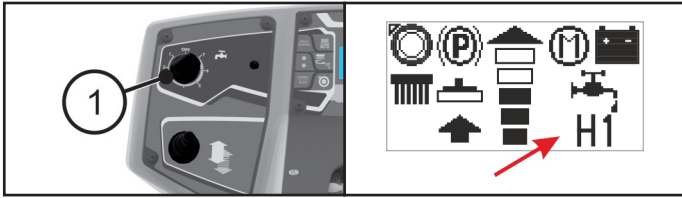
When "3SD" stops flashing, the system is selected.



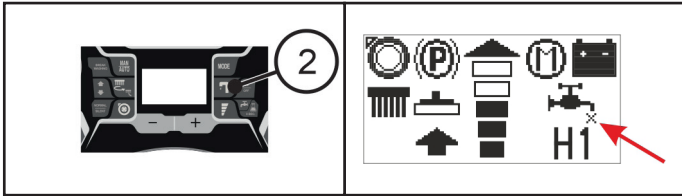


**SELECTING THE FLOW RATE LEVEL – 3S AND 3SD SYSTEMS**

To vary the solution’s flow rate, turn the relevant selector (1).



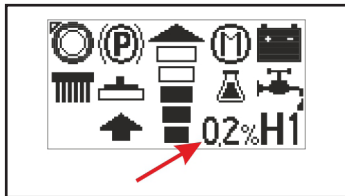
In Manual mode, if the detergent solution is disabled, the display will indicate the disabled solenoid valve.



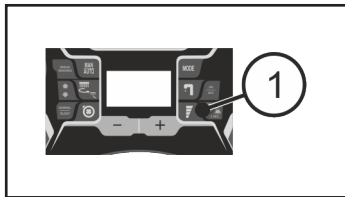
**SELECTING THE DETERGENT PERCENTAGE – 3SD SYSTEM**

A pump defines 6 fixed percentages of detergent: 0.0%, 0.3%, 0.6%, 1.2%, 2.4%, 4.5%.

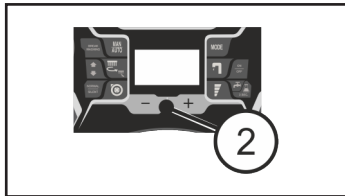
With 0.0% washing takes place with water only.



The various detergent percentages can be selected by pressing and holding the level button (1) for a few seconds, until the value appearing on the display flashes.



At this point, press the navigation button (2) to select the desired value. Wait for a few seconds and the indicated value will stop flashing.

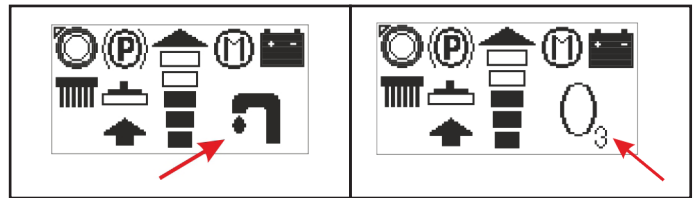
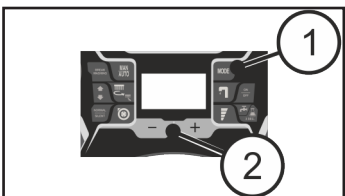


At this point, the selection will have been completed and pressing the button again will modify the water flow rate.

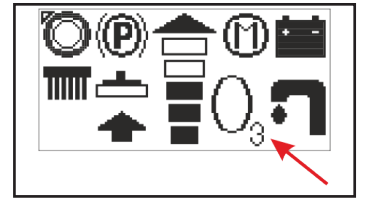
**OZONE SELECTION (OPTIONAL)**

The machine can produce water with a sufficiently high level of ozone to create a disinfectant action on treated surfaces.

To activate it, press button (1) and the water symbol will flash on the display. Select the Ozone system using the navigation buttons (2).



When “O3” stops flashing, the system has been selected.

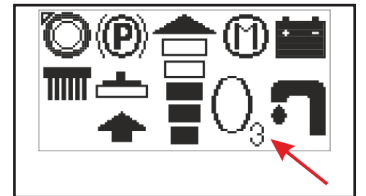


**WORK MODE WITH OZONE (OPTIONAL)**

To optimally use the ozone system, proceed as follows:

1. Make sure that the inside of the solution tank is clean and, if necessary, fill it at least twice and then rinse it out.
2. Fill the solution tank with tap water (do not add any detergent).
3. Select cleaning with ozone – consult the chapter “OZONE SELECTION”.
4. Start the job.

Ozone is produced instantly and only when water is dispensed. During work, the system’s symbol flashes during ozone production.



Ozone is a gas with a very pungent odour that can be an irritant.

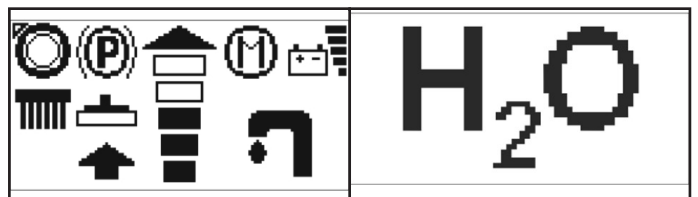
Ozone-enriched water is highly oxidising; therefore, in order to protect the machine’s metal parts against oxidation (rust), the entire lower part of the machine should be rinsed with water at least once a week.

The solution tank does not need to be emptied at the end of the job.

**DETERGENT SOLUTION RESERVE SIGNAL**

When “H<sub>2</sub>O” appears on the display, it means that the machine has entered the reserve mode for the detergent solution, which amounts to roughly 20 litres.

The signal alternates between a display screen and a full-display indication.

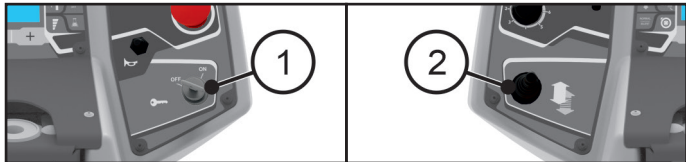


**WORK**

A safety device prevents the machine from moving if the operator is not seated correctly.

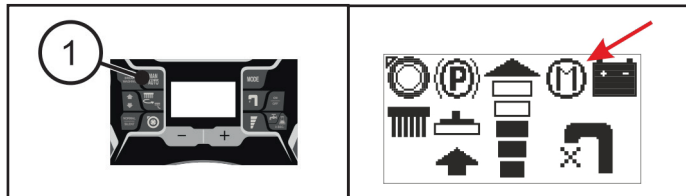
To start the machine:

1. Sit in the driver's seat.
2. Turn the ignition key (1) clockwise to switch the machine on.
3. Check the charge status of the batteries on the display.
4. The machine will automatically prepare for working in manual mode (MAN).
5. Select the direction by moving the joystick (2).

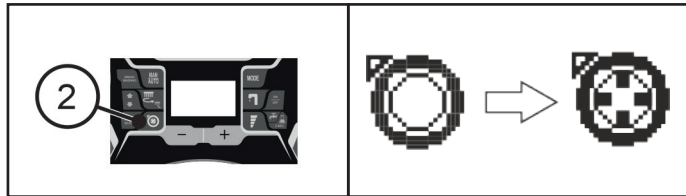


**MANUAL MODE**

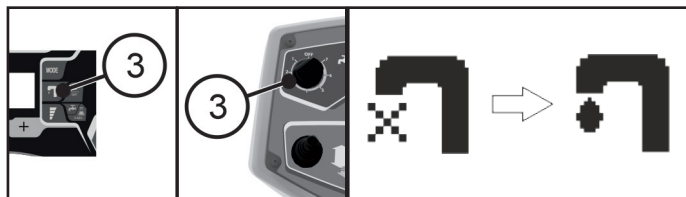
1. Check that the machine has been set to manual mode; if not, press button (1) and the corresponding symbol will appear on the display.



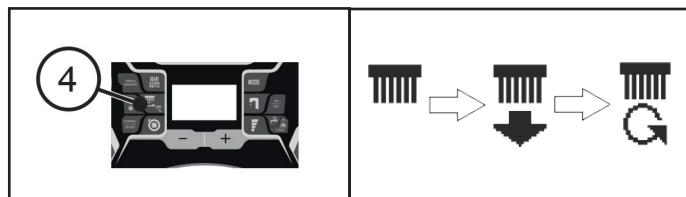
2. Press the suction motor button (2); the suction motor symbol will switch from off to on and the suction motor will start aspirating.



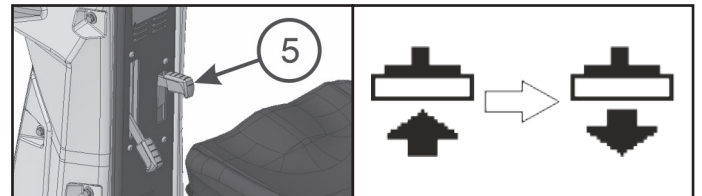
3. Press the solenoid valve button (3) and the solenoid valve symbol will switch from disabled to enabled; alternatively, turn the manual selector (3).



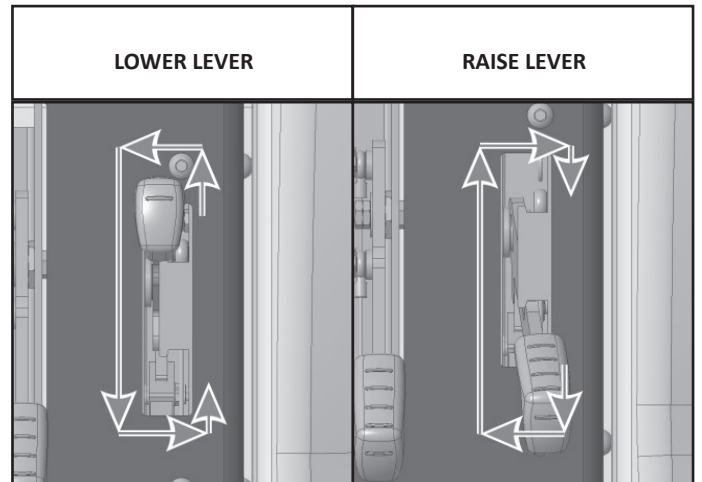
4. Lower the brush base to the floor by pressing button (4); the display will show the down symbol first and then the brush motor activation symbol.



5. Lower the squeegee by moving the lever (5).



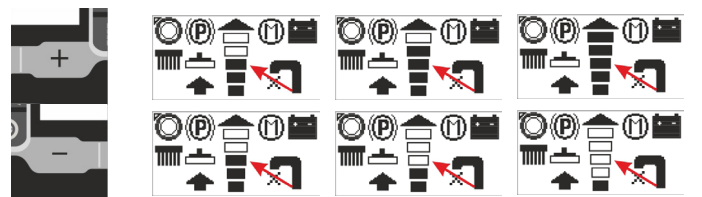
To lower or raise the squeegee, move the lever as shown in the following diagram.



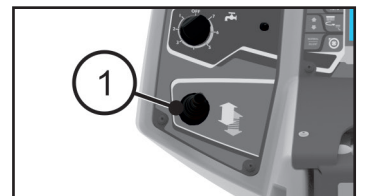
6. During the first few metres check that the squeegee adjustment guarantees perfect drying and that the detergent solution flow is adequately regulated. It must be sufficient for uniformly wetting the floor without having detergent leaking out of the splash guard. Bear in mind that the correct quantity of detergent solution always depends on the type of floor being treated, the entity of the dirt and the speed used.

**SPEED ADJUSTMENT, FORWARD AND REVERSE MOTION**

Before working with the machine, select the maximum desired speed level. Press the "+" and "-" buttons so that the speed level will appear on the display.

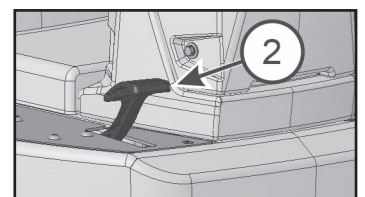


To move the machine, select the direction by moving the joystick (1) located on the dashboard panel.



Press the motion control pedal (2) to enable motion.

The speed will vary from the minimum to the maximum speed set previously and shown on the display.



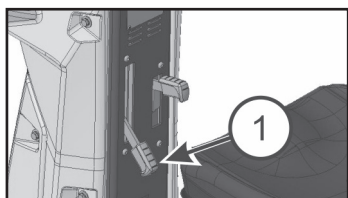
During the work phase, to move in reverse, raise the squeegee.



### ADJUSTING THE DETERGENT SOLUTION FLOW

1. Move the valve lever (1) to open and regulate the detergent solution flow.

2. On models equipped with the 3S (optional) system, the user will have to move the relevant selector to activate dispensing of the detergent solution by choosing between the traditional valve-based adjustment system or the fixed optimal dispensing system (see “3S Solution Saving System”).



In the Standard mode, the flow is regulated through the lever (1) in both the MAN and AUTO modes.

In the 3S and 3SD modes, the flow is adjusted as explained in the chapter “SELECTING THE FLOW RATE LEVEL – 3S AND 3SD SYSTEMS”, and depends on the instantaneous speed.

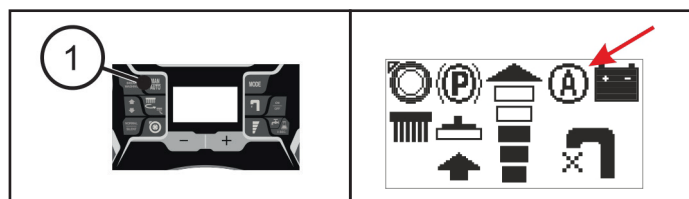
In 3S or 3SD mode, the valve lever (1) has no effect.

### WORK IN AUTOMATIC MODE

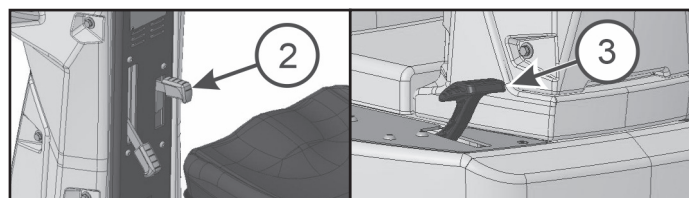
Working in automatic mode is useful for simplifying the operator’s task.

1. Check that the machine has been set to automatic mode; if not, press button (1) and the corresponding symbol will appear on the display.

2. Lower the squeegee lever (2).



3. Press the motion control pedal (3) positioned on the footrest. Once pressed, the machine will move forward, the base lowers together



with the squeegee and, when the solenoid valve is enabled, the brush starts turning and the aspirator switches on.

Before starting the machine, and thus before pressing the motion pedal, the following parameters can be set: maximum speed, water level and/or detergent level (versions 3S and 3SD).

The set values will instantly appear on the display.

To adjust the detergent flow, consult the chapter “ADJUSTING THE DETERGENT SOLUTION FLOW”.

When the motion control pedal is released: the brush motor stops and the solenoid valve closes.



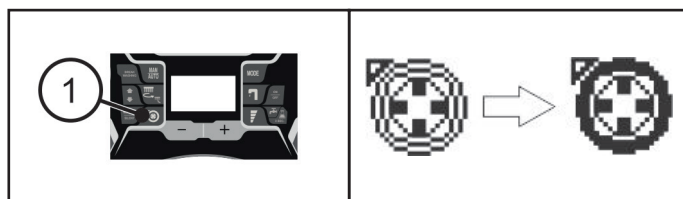
If during work in automatic mode:

- the base, solenoid valve or aspirator buttons are pressed, the machine switches to manual mode;
- the squeegee lever is raised, the aspirator switches off after a few seconds, and when it is lowered again, the aspirator switches on.

### ASPIRATOR IN SILENT MODE

The suction motor can be started in silent mode by pressing and holding the motor power-up button (1) for a few seconds.

Once the silent mode has started, the symbol on the display changes.

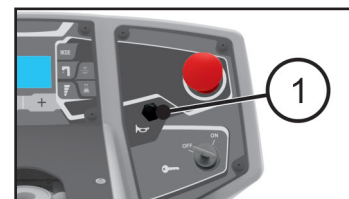


### STAND-BY MODE

After 5 minutes of inactivity, if the machine is on it will enter the stand-by mode: all the functions stop, the base rises and the machine switches off. To resume work, turn the key switch to switch the machine on again.

### HOOTER

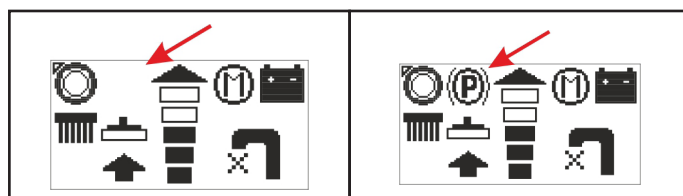
The machine is equipped with a hooter that can be activated by pressing button (1).



### PARKING BRAKE

The machine is equipped with a parking brake on the traction wheel, which intervenes when the pedal is fully released or when the machine is without batteries. In case of emergency or simply to stop the machine, it is sufficient to release the pedal. The brake will remain engaged until the pedal is pressed again. When the batteries are connected and when the key switch is positioned on “1”, the brake engaged indicator will appear on the display.

### BRUSH MOTOR OVERLOAD PROTECTION DEVICE



The machine is equipped with a brush motor overload protection device. This device stops the motor to preserve it and indicates the overload condition on the display with the message “AL\_46”.

If the problem persists, contact the technical assistance service.

### OVERFLOW DEVICE



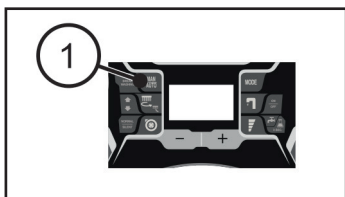
In order to avoid serious damage to the suction motor, the machine is equipped with an overload device that intervenes when the recovery tank is full. When this occurs, the recovery tank must be emptied. Grip the machine’s discharge pipe. Unscrew the cap and empty the recovery tank into the relevant containers, in accordance with the regulations in force concerning the disposal of liquids.

## STOPPING THE MACHINE AFTER CLEANING

### BREAK WASHING MODE

IN BOTH AUTOMATIC AND MANUAL WORK MODE:

1. At the end of the washing cycle, pressing and holding button (1) will select the BREAK WASHING mode.
2. When this mode is engaged, "BREAK WASHING" will appear on the display.



Consequently, the solenoid valve shuts, the base and squeegee both rise after a few seconds, and the aspirator switches off.

**NOTE: all these phases take place with the machine moving, so that the squeegee can dry the interested portion of the floor and the dirty liquid suction pipe can dry.**

**The BREAK WASHING procedure can be interrupted at any time by stopping the machine's motion.**

During the BREAK WASHING phase, when the motion pedal is released for more than three seconds, the machine is restored to manual mode (MAN).



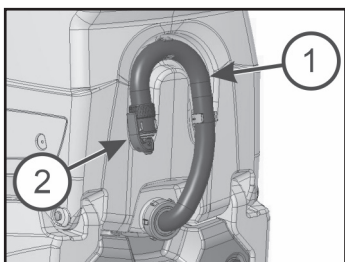
The BREAK WASHING mode is specifically used for transferring the machine at the end of cleaning operations.

## DAILY MAINTENANCE

### EMPTYING AND CLEANING THE RECOVERY TANK



1. Grip the discharge pipe (1) located on the rear part of the machine after having extracted it from its relevant support seat.
2. Unscrew the cap of the discharge pipe by moving the lever (2) on the pipe and empty the recovery tank into the relevant containers, in accordance with the regulations in force concerning the disposal of liquids.
3. Rinse out the tank with a water jet.



### EMPTYING AND CLEANING THE SOLUTION TANK



#### STANDARD WATER SYSTEM

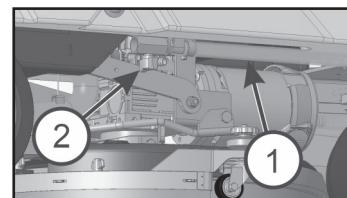
On machines with a standard water system:

1. Grip the discharge pipe (1) located on the right-hand side of the machine after having extracted it from its relevant support seat.
2. Open the valve (2) of the discharge pipe located on the latter and empty the solution tank into the relevant containers, in accordance

with the regulations in force concerning the disposal of liquids.

3. Rinse out the tank with a water jet.

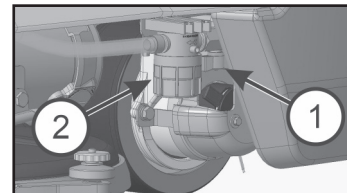
4. Once the tank has been completely emptied, close the valve (2).



#### OPTIONAL 3S- 3SD WATER SYSTEM

On machines with a 3S or 3SD water system:

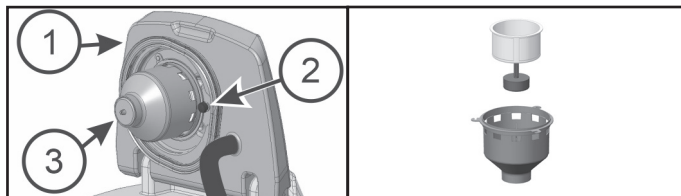
1. Close the valve (1).
2. Unscrew the filter (2), re-open the valve (1) and empty the solution tank into the relevant containers, in accordance with the regulations in force concerning the disposal of liquids.
3. Rinse out the tank with a water jet.
4. Once the tank has been completely emptied, screw the filter (2) back on.



### CLEANING THE SUCTION FILTER



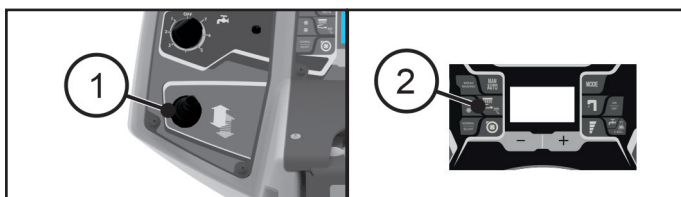
1. Open the cover (1) and unscrew the knob (2) to release the filter protection (3).
2. Turn the filter protection clockwise to release it.
3. Remove the filter and the relative protection.
4. Clean all components with a water jet, especially the walls and bottom of the filter.
5. Perform cleaning very carefully.
6. Reassemble all the components.



### AUTOMATIC DISMANTLING OF THE BRUSH



1. Position the motion direction joystick in the central position.
2. Switch the machine on by turning the key (1) clockwise.
3. Press and hold the button (2) for long to activate the detachment function.
4. Switch the machine off.



## CLEANING THE BRUSH



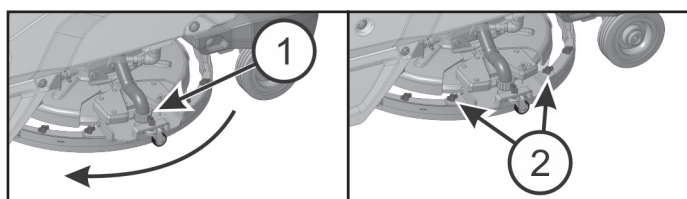
Dismantle the brush and clean it with a water jet (to dismantle the brush, consult the chapter "AUTOMATIC DISMANTLING OF THE BRUSH").

## CLEANING THE SQUEEGEE



Keeping the squeegee clean guarantees improved drying results.

1. With the base in the raised position, turn the squeegee outwards.
2. With the squeegee in this position, remove the sleeve (1) of the squeegee pipe.
3. Unscrew the wing nuts (2) completely to release the squeegee.
4. Thoroughly clean the inside of the fitting on the squeegee by eliminating any dirt deposits and thoroughly clean the squeegee's rubber elements.

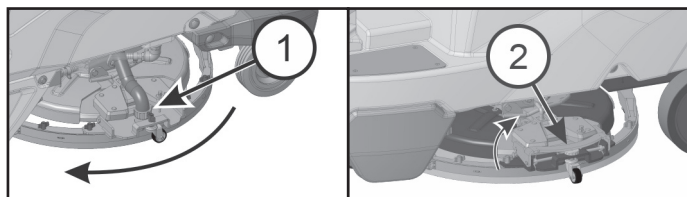


## CLEANING THE SQUEEGEE - OPTIONAL AUTOMATIC DISENGAGEMENT



Keeping the squeegee clean guarantees improved drying results.

1. With the base in the raised position, turn the squeegee outwards.
2. With the squeegee in this position, remove the sleeve (1) of the squeegee pipe.
3. Press the disengagement lever (2).
4. This will release the squeegee so that the inside of the fitting on the squeegee can be thoroughly cleaned to eliminate any dirt deposits, then thoroughly clean the squeegee's rubber elements.



## WEEKLY MAINTENANCE

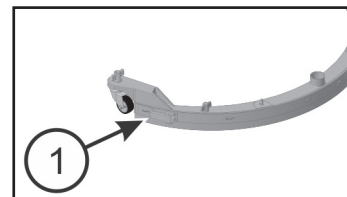
### CHECKING THE REAR SQUEEGEE RUBBER ELEMENT



Check the state of wear of the squeegee rubber element and, if necessary, turn it around or replace it.

To replace it:

1. Dismantle the squeegee (consult the chapter "CLEANING THE SQUEEGEE").
2. Detach the closure (1) of the rubber-holder blade.
3. Remove the rubber element to turn it or replace it.



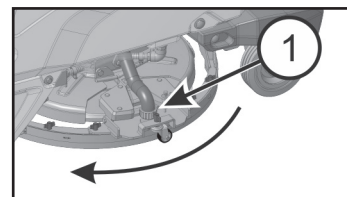
To reassemble the squeegee, repeat the above operations in reverse order.

### CLEANING THE SQUEEGEE PIPE



Every week, or in case of insufficient suction power, the squeegee pipe must be checked for possible obstructions. If it must be cleaned, proceed as follows:

1. With the base in the raised position, turn the squeegee outwards.
2. With the squeegee in this position, remove the sleeve (1) of the squeegee pipe.



**Do not wash the pipe connecting the aspirator to the recovery tank.**

### CLEANING THE SOLUTION TANK AND THE EXTERNAL FILTER

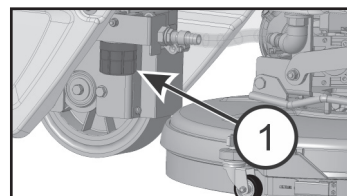
Move the machine to the place where the detergent solution will be discharged.



Unscrew the cap for filling the solution tank.

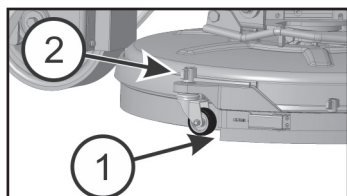
1. Unscrew the filter cap (1) and remove the filter.
2. Rinse the solution tank and the filter components under a water jet.

Once cleaning has been completed, close the valve and the tank cap then mount the filter back on.



## ADJUSTING THE SQUEEGEE HEIGHT

The height of the squeegee must be adjusted in relation to the wear of the rubber elements. To ensure perfect drying during use, the lower lip of the squeegee's rear rubber element (1) must be slightly bent backwards during use, in a uniform manner along its entire length.



To modify the curvature of the rubber element, proceed as follows:

Loosen the knob (2) for each wheel to be adjusted.

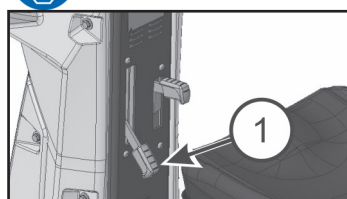
Turn the wheel's ring nut clockwise to decrease the rubber element's curvature or anti-clockwise to increase its curvature.

Lock the knob while holding the wheel's ring nut firmly.

## CLEANING THE FILTER (3S OR 3SD VERSION)



The machine equipped with a 3S or 3SD system has two filters: one for the standard system (refer to the chapter "CLEANING THE SOLUTION TANK AND EXTERNAL FILTER") and one for the 3S or 3SD



system. To clean this filter, proceed as follows:

1. Close the valve (1).
2. Unscrew the filter cap and remove the filter.
3. Rinse the filter's components under a water jet.

At the end of cleaning, mount the filter back on and open the valve fully.

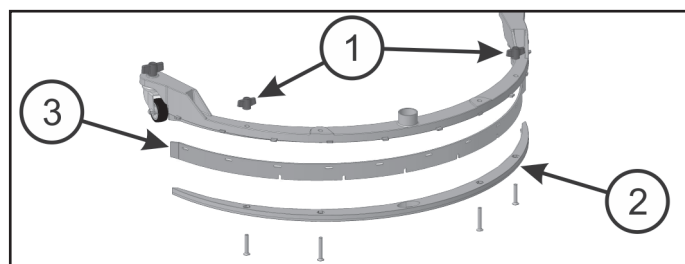
## BIMONTHLY MAINTENANCE



### INSPECTING THE FRONT SQUEEGEE RUBBER ELEMENT

Check the state of wear of the squeegee rubber element and, if necessary, replace it.

1. Dismantle the squeegee (consult the chapter "CLEANING THE SQUEEGEE").
2. Dismantle the rear part of the squeegee (consult the chapter "INSPECTING THE REAR SQUEEGEE RUBBER ELEMENT").
3. Unscrew the wing nuts (1) and remove the front rubber-holder blade (2).
4. Replace the front rubber element (3).
5. To reassemble the squeegee, repeat the above operations in reverse order.



## HALF-YEARLY MAINTENANCE

### INSPECTING THE SPLASH GUARD RUBBER ELEMENTS

With the brush assembled, the splash guards must barely touch the floor. If the rubber elements are worn, they must be replaced: refer to the chapter "ASSEMBLING AND DISMANTLING THE SPLASH GUARD". The operation must be carried out for both splash guard rubber elements.

## OPERATION CHECK



The inspection of the machine's operating condition is conducted by the authorised technical assistance centre.

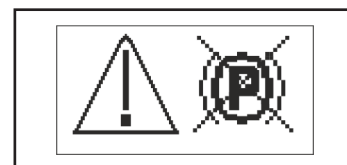
Never leave the batteries flat for long periods of time.

If alarm signals appear, contact the technical assistance centre.



If, with the ignition key inserted and turned clockwise to switch the machine on, the display and any other functions fail to activate, it is necessary to check whether the batteries are connected to the machine (see chapter "CONNECTING THE BATTERY CONNECTOR AND SWITCHING THE MACHINE ON"). If the fault persists, contact the authorised technical assistance centre.

If this screen appears on the display, it means that the parking brake is disengaged. In this case, all the machine's functions will be deactivated.



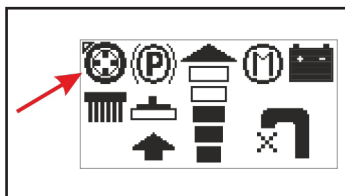
To reactivate the parking brake,

refer to the chapter "UNPACKING AND MANUAL HANDLING OF THE MACHINE" at point 5.



### THE SUCTION MOTOR IS NOT WORKING

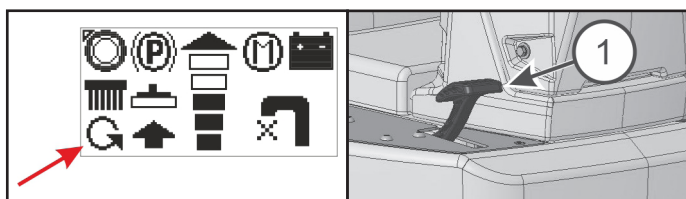
1. Check the charge status of the batteries on the display.
2. Check that the suction motor start signal activates on the display.
3. Verify the correct connection of the suction motor.



If the fault persists, contact the authorised technical assistance centre.

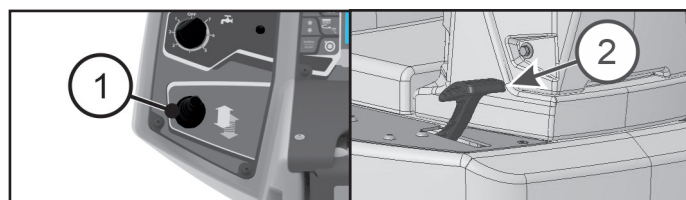
### THE BRUSH MOTOR IS NOT WORKING

1. Check the charge status of the batteries on the display.
  2. Check that the brush motor start signal is active on the display.
  3. Press the motion control pedal (1) to start the machine.
- If the fault persists, contact the authorised technical assistance centre.



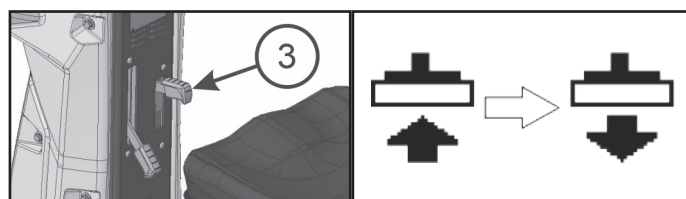
### THE DRIVE MOTOR IS NOT WORKING

1. Check the position of the joystick (1).
2. Check the charge status of the batteries on the display.
3. Press the motion control pedal (2) to start the machine.



4. Check the position of the squeegee: if it rests against the ground, the machine will not go in reverse. In this case, move the squeegee lever (3).

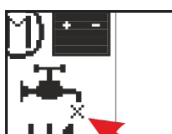
If the fault persists, contact the authorised technical assistance centre.



### THE SOLUTION DOES NOT DESCEND ONTO THE BRUSH

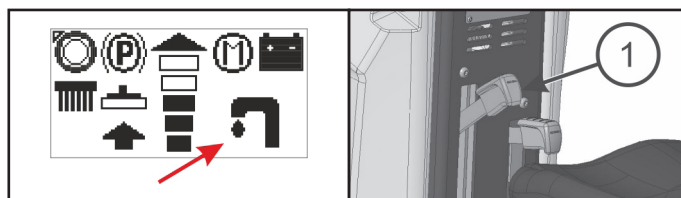
The machine is equipped with a solenoid valve, therefore the brush must turn for the detergent solution to descend onto it.

1. Check on the display that the solenoid valve is enabled.
2. Check that the valve lever (1) is open (Standard mode) or that the solenoid valve is active (3S or 3SD mode).
3. Check the level of liquid in the solution tank.



4. Check that the solution filter is clean (refer to the paragraph "CLEANING THE EXTERNAL FILTER").

If the fault persists, contact the authorised technical assistance centre.



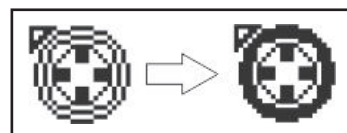
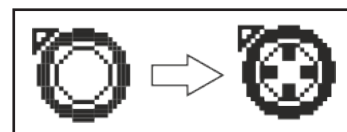
### THE MACHINE DOES NOT CLEAN PROPERLY

1. The brush does not have bristles of the right size: contact the authorised technical assistance centre.
2. The brush has worn bristles. Check the state of wear of the brush and replace it if necessary (the brush must be replaced when the bristles reach a height of around 15 mm).
3. To replace the brush, consult the chapters "AUTOMATIC DISMANTLING OF THE BRUSH" and "MOUNTING THE BRUSH".
4. The detergent solution is insufficient: open the valve more (consult the chapter "ADJUSTING THE DETERGENT SOLUTION FLOW").
5. Check that the detergent is in the recommended percentage.

Contact the authorised technical assistance centre for further advice.

### THE SQUEEGEE DOES NOT DRY

1. Check that the squeegee's rubber elements are clean.
  2. Check the adjustment of the squeegee height and inclination (see "ADJUSTING THE SQUEEGEE" under "BEFORE USE").
  3. Check that the suction pipe is correctly inserted in its housing on the recovery tank and on the squeegee or that it is not obstructed.
  4. Clean the suction filter.
  5. Replace the rubber elements if they are worn out.
  6. Check that the suction motor symbol is active on the display.
  7. If the motor is in silent mode, put it in standard mode.
  8. Check that the aspirator cover is closed.
  9. Check that the recovery tank is not full causing the overflow device to shut.
- If the fault persists, contact the authorised technical assistance centre.



### EXCESSIVE FOAM PRODUCTION

Check that detergent with retarded foam was used. If necessary, add a small amount of anti-foam liquid in the recovery tank.

Bear in mind that more foam is produced when the floor is not very dirty. In such case, dilute the detergent solution more.

## SCHEDULED MAINTENANCE

### ROUTINE PERIODIC MAINTENANCE TABLE

INTERVENTION	DAILY	PERIODIC
CLEANING OF THE RECOVERY TANK	•	
CLEANING OF THE SUCTION FILTER	•	
CLEANING OF THE SOLUTION FILTER		•
CLEANING OF THE BRUSH	•	
DISMANTLING AND CLEANING OF THE BRUSH	•	
CLEANING OF THE SQUEEGEE	•	
INSPECTION OF THE FRONT SQUEEGEE RUBBER ELEMENT		•
INSPECTION OF THE REAR SQUEEGEE RUBBER ELEMENT		•
INSPECTION OF THE SPLASH GUARD RUBBER ELEMENT		•
INSPECTION AND ADJUSTMENT OF THE SQUEEGEE		•
CLEANING OF THE SQUEEGEE PIPE		•
CLEANING OF THE SOLUTION TANK		•
INSPECTION OF THE BATTERY ELECTROLYTE		•