adiatek®
Design and innovation

opal 66
opal 80

06 2026

EN

Use and maintenance



Warning! Please read the instructions before use.

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INTRODUCTORY COMMENT

Thank you for having chosen our machine. This floor cleaning machine is used for the industrial and civil cleaning and is able to clean any type of floor. During its advance movement, the combined action of the brushes and the detergent solution removes the dirt which is aspirated through the rear suction assembly, giving a perfectly dry surface.
The machine must be used only for such purpose. It gives the best performance if it is used correctly and maintained in perfect efficiency. We therefore ask you to read this instruction booklet carefully whenever difficulties arise in the course of the machine's use. In case of need, we ask you to contact our service department for all advice and servicing as may prove necessary.

GENERAL RULES OF SAFETY

- The rules below have to be followed carefully in order to avoid injury to the operator and damage to the machine.
- Read the labels carefully on the machine. Do not cover them for any reason and replace them immediately if damaged.
- **ATTENTION:** The machine must be used exclusively by authorized staff that have been instructed on its correct and proper use.
- **ATTENTION:** Do not use the machine on areas having a higher gradient than the one stated on the number plate.
- **ATTENTION:** The machine is not to be used by persons, children included, with reduced physical, sensorial or mental capabilities, or with lack of experience or knowledge, unless they could benefit, through the intermediation of a responsible person for their safety, by a supervision or instructions concerning to its use.
- WARNING: do not use the machine on surfaces with a greater inclination than that indicated on the machine.
- During the operation of the machine, pay attention to other people and especially to the children.
- Children shall not play with the machine.
- Children cannot carry out cleaning and maintenance of the machine.
- This floor cleaning machine is intended for commercial use, for example in hotels, schools, hospitals, factories, shops, offices and rental businesses.
- To prevent unauthorized use of the machine, switch off the power supply at the end of use and prevent accidental start-up by unauthorized personnel. For models equipped with a key, remove the key from the control panel.
- CAUTION This machine shall be stored indoors only.

TRANSFER

- Do not strike shelvings or scaffoldings where there is danger of falling objects.
- Do not use the machine as a means of transport.
- Adapt the working speed to the adhesion conditions: particularly, slow down before narrow curves have to be facedWhen leaving the machine unattended, stop it on level surfaces, switch off the power supply and ensure that it is protected against unintended movements.

STORAGE AND DISPOSAL

- Storage temperature: between 0°C and +55°C (32°F and 131°F).
- Perfect operating temperature: between 0°C and +40°C (32°F and 104°F).
- The humidity should not exceed 95%.
- Provide for the scrapping of the material of normal wear following strictly the respective rules.
- When your machine has to stop activity, provide for the appropriate waste disposal of its materials, especially oils, batteries and electronic components, and considering that the machine itself has been, where possible, constructed using recyclable materials.

CORRECT USE

- This machine is for indoor use only.
- Do not use the machine on surfaces covered with inflammable liquids or dusts (for example hydrocarbons, ashes or soot).
- In case of fire, use a powder based fire-extinguisher. Do not use water.
- Do not use the machine in explosive atmosphere.
- The machine has to carry out simultaneously the operations of washing and drying. Different operations must be carried out in restricted areas prohibited to non-authorized personnel and the operator has to wear suitable shoes.
- Signal the areas of moist floors with suitable signs.
- Do not mix different detergents, avoiding harmful odours.
- Use only detergents or other liquids suitable for the intended use of the machine, with a pH between 4 and 10. When using detergents, wear appropriate personal protective equipment, as indicated in the safety data sheet of the products used.



- Avoid brush operation when the machine is standing still in order to prevent floor damages.
- Before lifting the recovery tank, make sure that it is empty.

MAINTENANCE

- If the machine does not work properly, check by conducting simple maintenance procedures. Otherwise, as for technical advice from an authorized assistance centre.
- For any cleaning and/or maintenance operation take off the power supply from the machine.
- Where parts are required, ask for ORIGINAL spare parts from the distributor and/or from an authorized dealer.
- Do not take off the protections which require the use of tools for their removal.
- Do not wash the machine with direct water, jets or with high water pressure nor with corrosive material.
- Every 200 working hours have a machine check by an authorized service department.
- Before using the machine, check that all panels and coverings are in their position as indicated in this use and maintenance catalogue.
- Restore all electrical connections after any maintenance operation.

GENERAL RULES OF THE BATTERIES



- At any intervention on the batteries, use suitable acid-proof gloves and glasses.
- Do not smoke near the batteries and do not approach them with free flames.
- Check that a fire-extinguisher is available on site.
- Be very careful in case of leakages or liquid outlets because corrosive.
- Do not place any metallic tools onto the batteries. Risk of short circuit!
- It is compulsory to hand over exhaust batteries, classified as dangerous waste, to an authorized institution according to the current laws.

TECHNICAL DESCRIPTION	U/M	OPAL 66	OPAL 80
Cleaning width	mm in	685 27	785 31
Squeegee width	mm in	860 34	990 39
Working capacity, up to	m^2/h sqft/h	2740 29494	3140 33800
Brushes diameter	mm in	355 14	405 16
Brushes rpm	(rpm)	160	160
Pressure on the brushes	kg lbs.	50 110	50 110
Brushes motor	W A	750 29	700 29
Traction motor	W A	300 12	300 12
Suction motor	W A	570 23	570 23
Suction vacuum	mbar water lift	160 64	160 64
Type of drive		Automatic	Automatic
Movement speed	km/h mph	4 2.5	4 2.5
Maximum gradient	%	10	10
Detergent solution tank (3S)	l gal	75 20	75 20
Recovery tank	l gal	85 22.5	85 22.5
Machine length	mm in	1490 59	1525 60
Machine height	mm in	1045 41	1045 41
Machine width (without squeegee)	mm in	760 30	855 34
Weight of the machine (empty and without batteries)	kg lbs.	145 320	150 331
Gross weight of the machine (in conformity with EN 60335-2-72 art. 5.z102)	kg lbs.	363 800	368 811
Tension of the batteries	Ah_5	215	215
Capacity of the batteries	V	24	24
Weight of the batteries	kg lbs.	135 298	135 298
Compartment of the batteries	mm in	385x500x290 15x20x11	385x500x290 15x20x11
Acoustic pressure level (in conformity with EN 60704-1) Lpa	dB (A)	< 70	< 70
Measure uncertainty Kpa	dB (A)	/	/
Sound power level Lwa	dB (A)	< 70	< 70
Measure uncertainty Kwa	dB (A)	/	/
Vibration to the system hand-arm	m/s2 ft/ s2	< 2.5 < 8.2	< 2.5 < 8.2/
Measure uncertainty		/	/
Class		⟨III⟩	⟨III⟩
Protection level	IP	23	23
Weight packed machine	kg lbs.	185 408	195 430
Packing dimensions (LxDxH)	cm in	161x93x122 63x37x48	161x93x122 63x37x48

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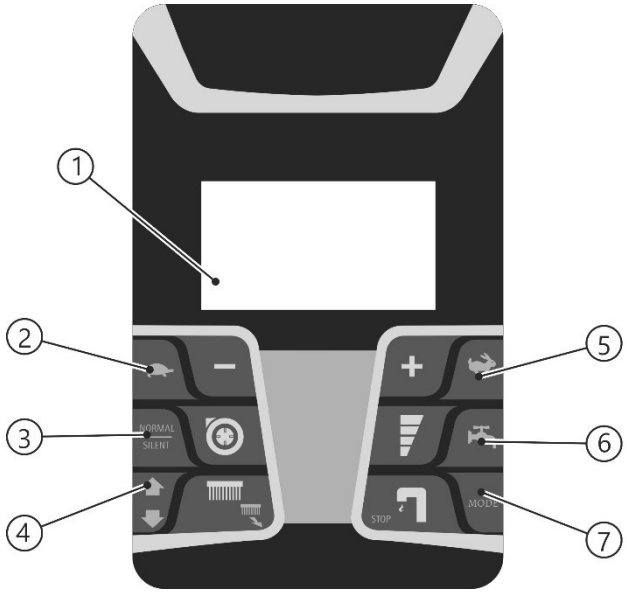
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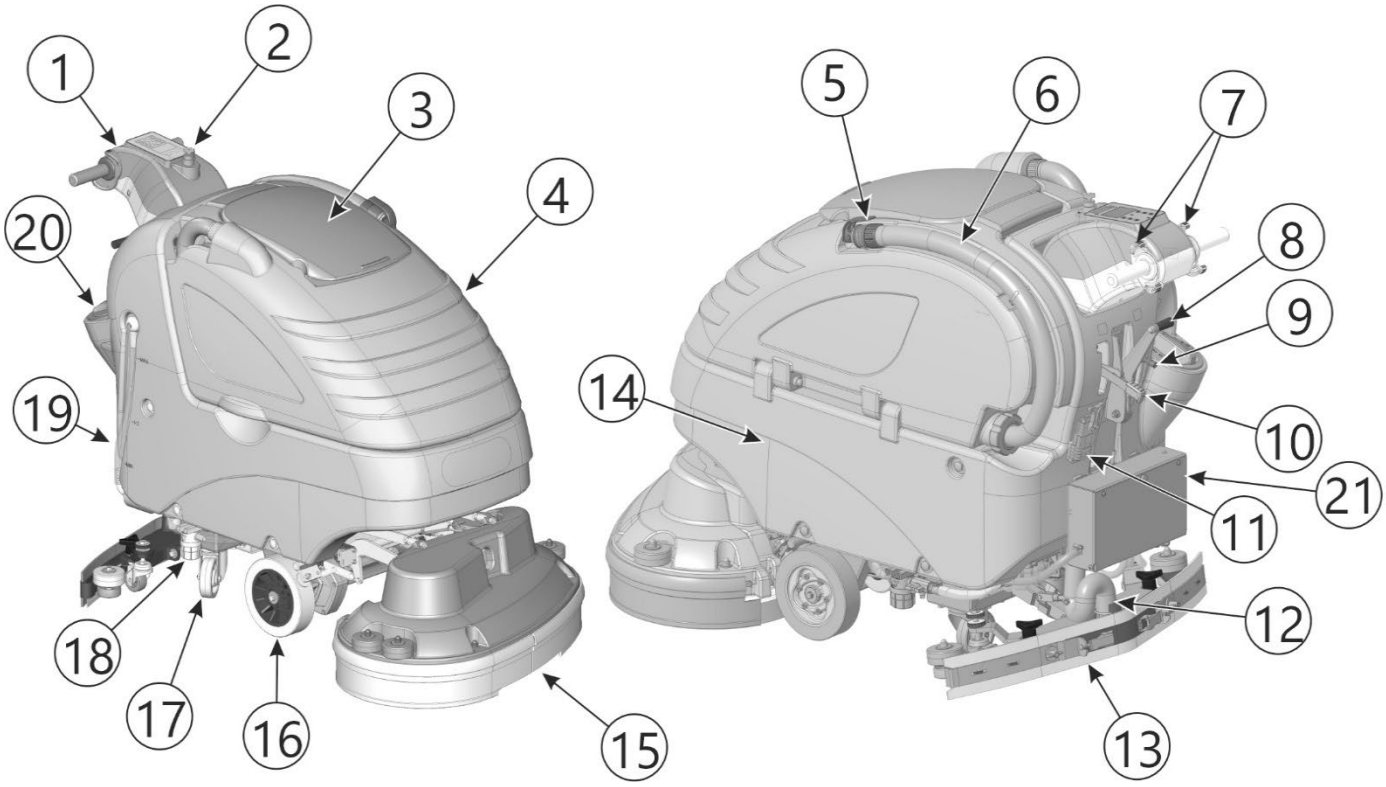
LEGEND CONTROL PANEL

1. DISPLAY
2. BUTTON MAXIMUM SPEED REDUCTION
3. BUTTON SUCTION MOTOR
   BUTTON SUCTION MOTOR SILENT MODE
4. BUTTON UP/DOWN BRUSHES
5. BUTTON MAXIMUM SPEED INCREASE
6. SOLUTION LEVEL BUTTON (3S/ OZONE + 3S ONLY)
7. SOLENOID VALVE OPEN/CLOSE



LEGEND MACHINE

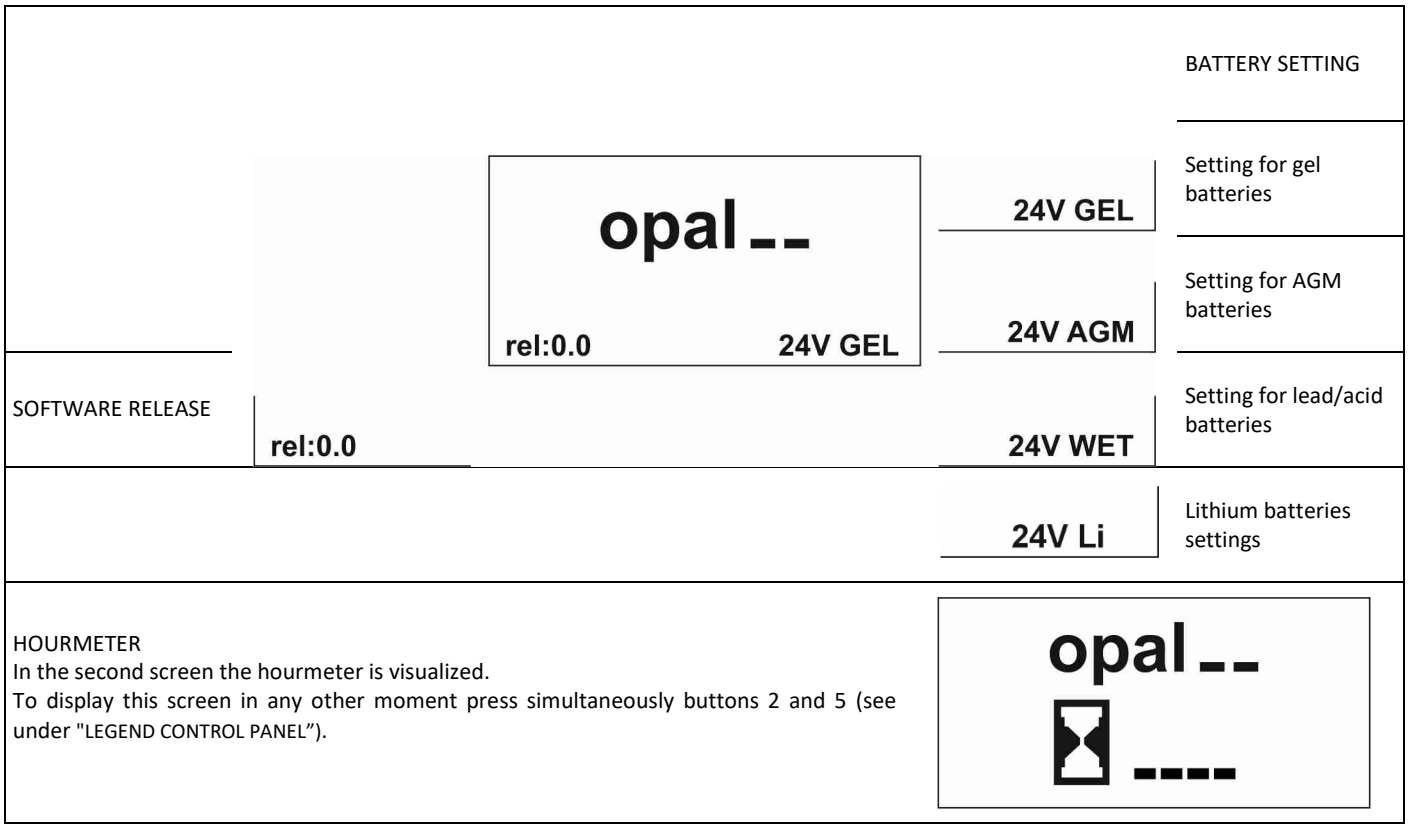
1. INSTRUMENT BOARD
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5. PLUG EXHAUST HOSE
6. EXHAUST HOSE
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11. CONNECTOR BATTERIES
12. SQUEEGEE HOSE
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15. BRUSHES BASE ASSEMBLY
16. TRACTION WHEELS
17. CASTOR WHEELS
18. DETERGENT SOLUTION FILTER
19. WATER LEVEL HOSE
20. SCREW CAP FOR INLET DETERGENT SOLUTION
21. OZONE SYSTEM BOX



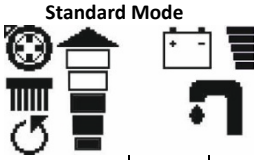
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DISPLAY READING

VISUALIZATION WHILE SWITCHING ON
When the machine is switched on, the display shows the following screen which indicates the software release and the battery setting.



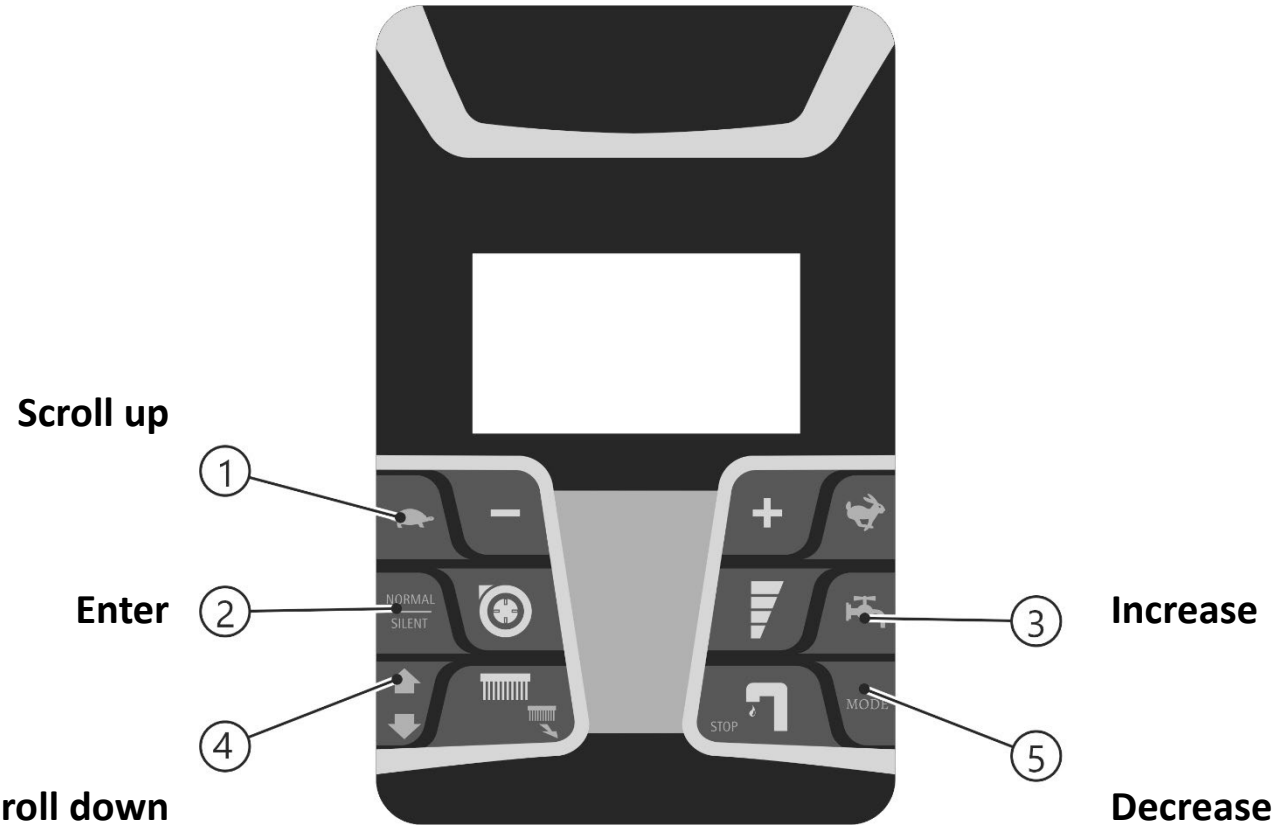
VISUALIZATION CONTROLS



Aspirator off		Base up		Parking brake ON		Battery charge level		Standard mode selection	
Aspirator on		Base down		Maximum speed level set				Solenoid valve activated	
Aspirator in silent mode		Brush in function						Solenoid valve deactivated	
								3S mode selection	3S
								3s solenoid valve on and water flow level	H1
								3s solenoid valve off and water flow level	H1
								Ozone + 3S mode selection	$O_3$3S

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NAVIGATION CONTROLS



GENERAL SETTING
To enter the menu for the setting, use the keyboard of the instrument board and proceed as follows:

1. Keep the buttons (1) and (5) pressed simultaneously.
2. Turn the key to switch on the machine.
3. When “ID CHECK” is shown on the display, press the enter button (2).

Once entered in GENERAL SETTING it will be possible to change the following default settings by simply scrolling through the menu using buttons (1) and (4).

DISPLAY LANGUAGE SELECTION
English is the default language; it is possible to change it into Italian.
To select the language just visualize first "Language", then select it scrolling with the buttons (3) and (5).
Once the language is chosen, confirm using button (2).

TO CHANGE THE BATTERY SETTING
Once entered “General Setting”, it is possible to set the machine depending on the batteries installed (AGM / GEL / LEAD-ACID).
To select the proper setting, just visualize first "BATTERY", then select it by scrolling with the buttons (3) and (5).
Once the setting is chosen, confirm using button (2).



An incorrect setting may damage irreparably the battery.
ALWAYS verify to have set the correct parameter.
The defined battery setting is visible when the machine is turned on (see "BATTERY SETTING or DISPLAY READING").

DISPLAY TUNE (DISPLAY CONTRAST)
Once entered in General Setting, it is possible to improve the display contrast using the button (3) to increase it and the button (5) to decrease it.
Once selected the contrast, confirm using button (2).

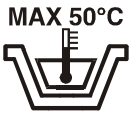
DISPLAY BRIGHTNESS
Once entered in General Setting, it is possible to increase or decrease the display brightness using buttons (3) and (5).
Once selected the brightness, confirm using button (2).

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SYMBOLOGY ON THE MACHINE



Symbol denoting the solution valve.
Indicates the solution valve lever.



Indication of the maximum temperature of the solution detergent.
It is placed near the charging hole of the solution tank.



Symbol denoting the lowering of the squeegee.



Symbol denoting the lifting of the squeegee.



Brushes base UP/DOWN
Brush release



Symbol indicating an increase in speed



Vacuum motor ON/OFF
Mode selection (Normal/Silent).



Solution flow enable button /
Water system selection: Standard, 3s, Ozone, Ozone + 3s



Symbol denoting the lever of the emergency and parking brake.



Symbol denoting the maximum capacity level reached in the solution tank visible through the level hose.



Symbol denoting the halfway capacity level reached in the solution tank, visible through the level hose.



Symbol denoting the minimum capacity level reached in the solution tank, visible through the level hose.



Brush release symbol
Indicates the button used to automatically release the brush.



Symbol indicating a decrease in speed



Level selection button

SYMBOLOGY ON THE MANUAL



Symbol denoting the open book.
Indicates that the operator has to read the manual before the use of the machine.



Symbol denoting the open book.
For the good functioning of the on-board battery charger (optional), read the manual of the constructor.



Warning symbol.
Read carefully the sections marked with this symbol, for the security of both the operator and the machine.



Symbol that indicates the obligations of disconnecting the system from the batteries by disconnecting the connector before operating on the machine.



Symbol indicating the part of the manual related to the unboxing, preparation and start of the machine.



Icon indication the part of the manual related to the maintenance of the machine.



Symbol that indicates the obligation of wearing safety glasses.



Symbol that indicates the obligation of wearing safety gloves.



Symbol that precedes an important information about the proper use of the machine.

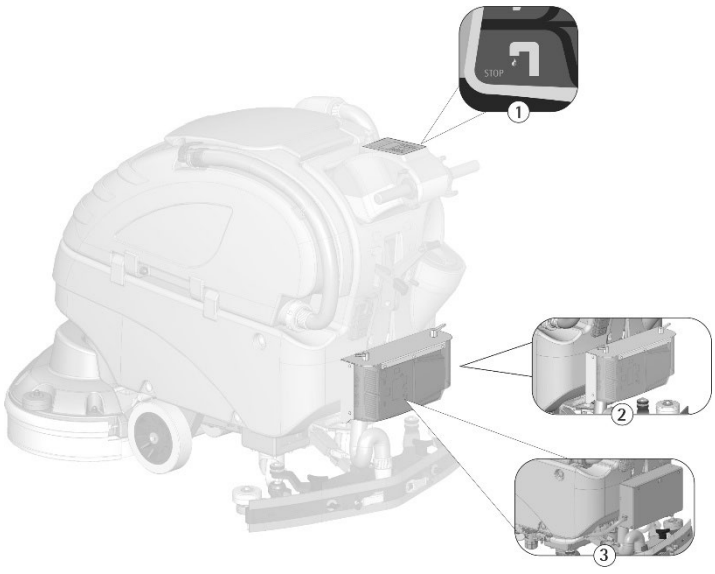


Symbol that indicates operations that have to be carried out only by qualified personnel.



Icon indicating the part of the manual related to the machine use.

OPTIONAL ACCESSORIES
The optional accessories are:
3S – Solution Saving System (1);
On-board battery charger (2);
Ozone System (3).

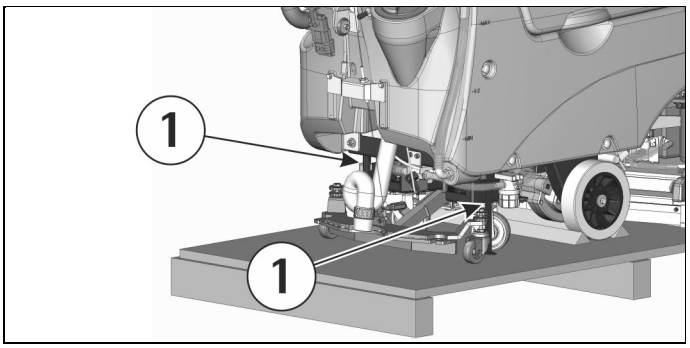


BEFORE USE

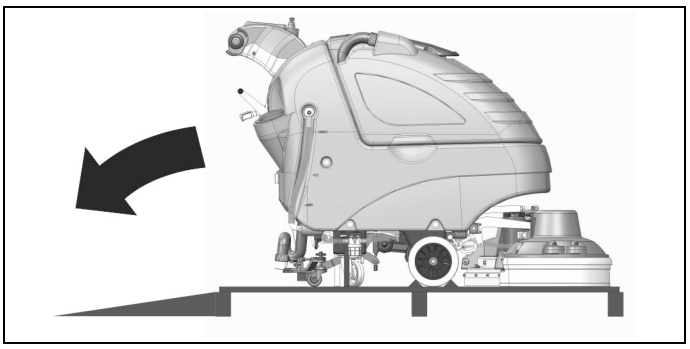
HANDLING OF THE PACKED MACHINE
The machine is supplied with suitable packing foreseen for fork lift truck handling.
brushes base 66: the total weight is 363kg (800 lbs.).
brushes base 80: the total weight is 368kg (811 lbs.).
Packing dimensions:
Base: 161 cm x 87 cm (63"x34")
Height: 123 cm (48")

Do not place more than 2 packings on top of each other.

UNPACKING OF THE MACHINE
1. Remove the external packing.
2. Unscrew the brackets (1) that secure the machine to the pallet.

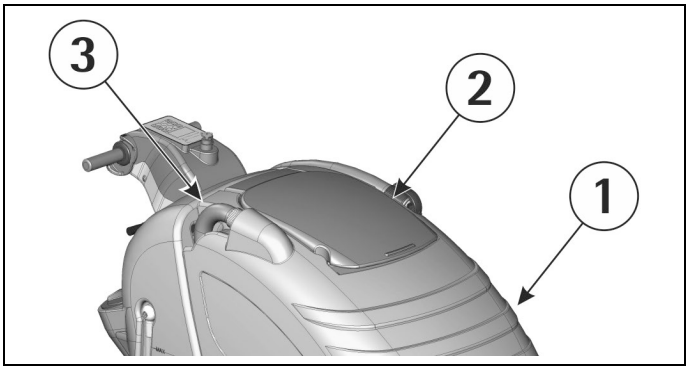


3. Provide for an inclined base.
4. Move the machine backwards, as indicated in the figure, avoiding heavy contacts to mechanical parts.

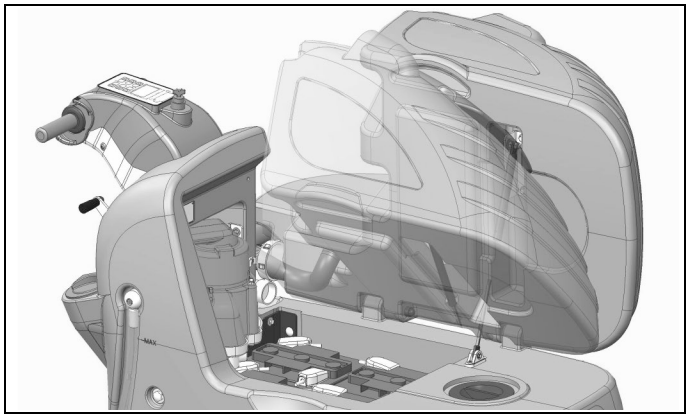


5. Keep the pallet and the brackets for eventual transport.

ACCESS TO THE BATTERY COMPARTMENT
To reach the battery compartment, first of all make sure that the recovery tank (1) is empty by opening the cover (2).
If the tank is full, proceed as indicated under “RECOVERY TANK CLEANING”, otherwise take off the squeegee hose (3) and lift the tank.



Thanks to a blocking system of 2 levels, the machine allows the battery charging with a partial tank opening.



BATTERY INSTALLATION
The machine is equipped either with batteries in serial connection or elements of DIN-type assembled together and connected in series, placed in its appropriate compartment under the recovery tank and must be handled using suitable lifting equipment (due to weight, considering the type of batteries chosen, and coupling system).
The batteries must be in accordance with CEI 21-5 Norms.

The machine foresees the standard use of traditional lead/acid batteries.
CHECK SETTING ON THE INDICATOR (see under paragraph "BATTERIES CHARGE LEVEL INDICATOR").
In case of GEL or AGM batteries installation, it is necessary TO MODIFY THE SETTING (see under “TO CHANGE THE BATTERY SETTINGS”).

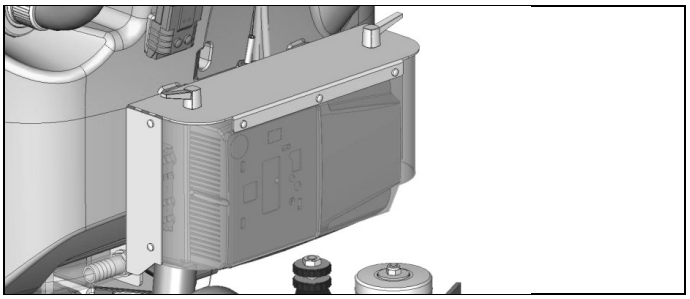
Strictly follow manufacturer/distributor indications for the maintenance and recharge of the batteries. All installation and maintenance operations must be executed by specialized staff, using suitable protection accessories.

BATTERY CHARGER

Be sure that the battery recharger is suitable for the installed batteries both for their capacities and type (lead/acid or GEL or AGM).

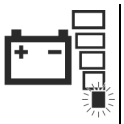
In the plastic bag containing the use and maintenance you will find the coupling connector for the recharger. It must be assembled onto the cables of your recharger, following the instructions given by the manufacturer.

ON-BOARD BATTERY RECHARGER (OPTIONAL)
If the machine is equipped with the on-board battery recharger (see under "OPTIONAL ACCESSORIES”) please refer to the instructions of the constructor of this accessory what the recharging operations concern.
The battery recharger is connected directly to the battery poles.
During the recharging operations a device is activated which does not permit the machine's functioning.
The main cable of the battery recharger has a maximum length of two meters and must be connected to a single-phase socket type CEE 7/7.



BATTERIES CHARGE LEVEL INDICATOR
The battery charge level is visualized on the display with its respective symbol (see "VISUALIZATION CONTROLS").





When the last segment of charge starts blinking, the battery is almost low and the suction and brushes functions are disabled.

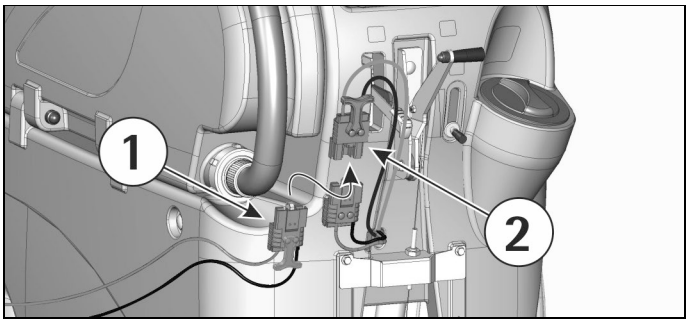


When even the last segment of charge turns off, the battery is completely low and the machine stops.

BATTERIES RECHARGING
1. Bring the machine on a leveled surface.
2. Plug in the connector (1) of the battery recharger to the batteries connector (2) placed in the rear part of the machine.
3. Proceed with the recharging keeping the recovery tank lifted (see under “ACCESS TO THE BATTERY COMPARTMENT”).
4. Maintain the connection with the battery recharger until the indication of the end of charge is not visualized on the charger.



Never disconnect the batteries connector during the recharging phase.

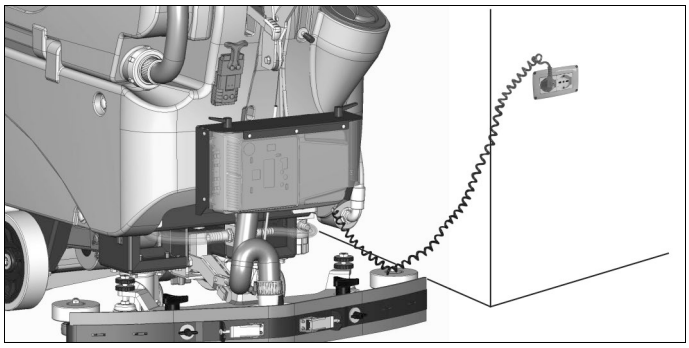


BATTERIES RECHARGING WITH ON-BOARD CHARGER (OPTIONAL)



Bring the machine on a leveled surface near to a single-phase socket (within 2m) with tension 230V, frequency 50Hz (for USA 120V, 60Hz), nominal current 10A.
Switch off the machine and proceed as follows.
1. Insert the plug into the mains socket.
2. Proceed to the recharging keeping the recovery tank lifted (see under paragraph “ACCESS TO THE BATTERY COMPARTMENT” in “BEFORE USE”).
3. Do not take off the plug from the mains socket until the indication of the end of charge is not visualized on the recharger.

At the end of the recharging, take off the plug from the mains socket.





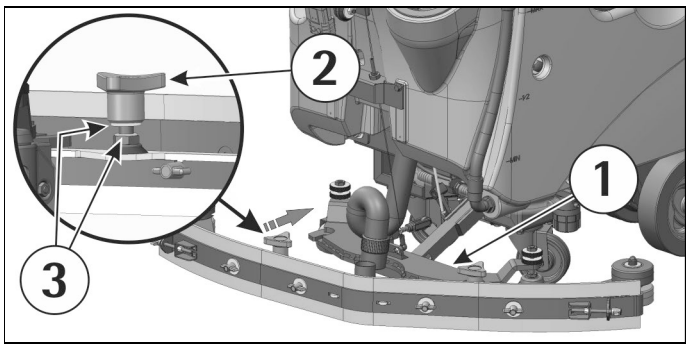
Never leave the batteries completely discharged even if the machine is not used. In case of lead/acid batteries, please check the electrolyte level every 20 recharging cycles and eventually top up with distilled water at the end of the recharge. Never leave the batteries discharged for more than two weeks.



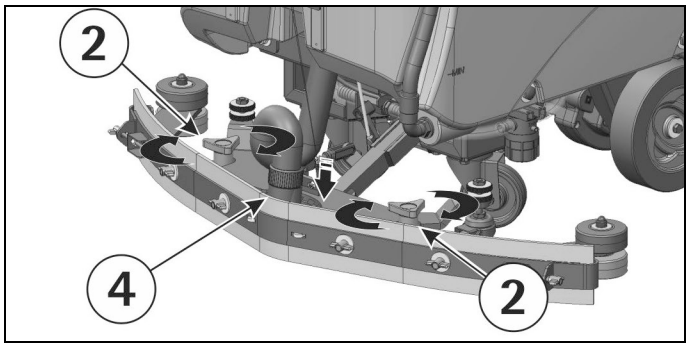
Danger of gas exhalations and emission of corrosive liquids. Fire danger: do not approach with free flames.

BATTERIES DISPOSAL
It is compulsory to hand over exhausted batteries, classified as dangerous waste, to an authorized institution according to the current laws.

SQUEEGEE ASSEMBLY
1. Maintain the squeegee support (1) slightly lifted from the floor.
2. Insert the threaded parts of the two knobs (2) making them slide inside the two slots present on the support. Pay attention to put the washers (3) into position, they are two for each knob, so that they are assembled one under and the other on top of the two slots present on the support.

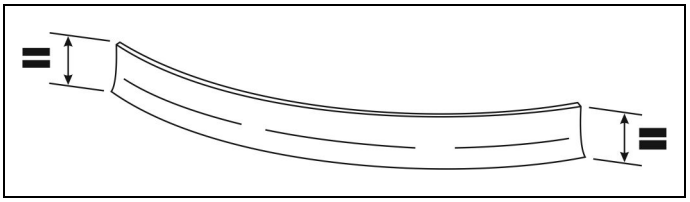


3. Block the squeegee by rotating the two knobs (2) clockwise.
4. Insert the squeegee hose (4) into its coupling, respecting its position as indicated in the figure.



ADJUSTMENT OF THE SQUEEGEE

In order to have a perfect drying result through the squeegee, the rear rubber must have the lower bending uniformly adjusted in all its length. For the adjustment, it is necessary to put oneself in working condition and therefore the suction motor has to be switched on and the brushes have to function together with the detergent solution.



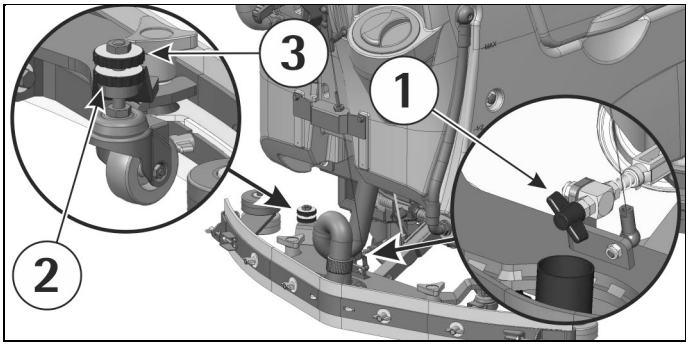
The bending is not uniform

Adjust the squeegee inclination rotating counterclockwise the wing nut (1) to increase the bending in the central part, or clockwise to increase the bending on the extremities.

Height adjustment

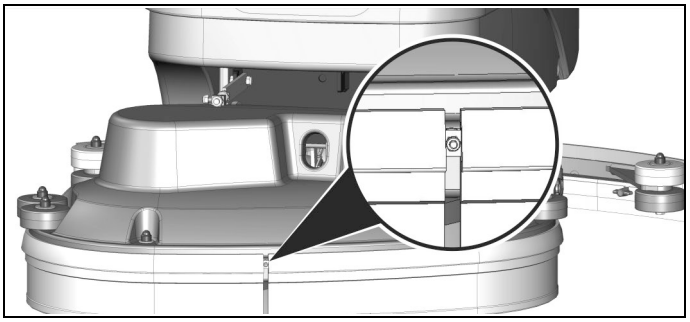
Once that the squeegee inclination has been adjusted, it is necessary to fix this optimum condition making touch slightly the wheels onto the floor. Release the wheels rotating counterclockwise the register (2), rotate the register (3) to raise or to lower the wheels until the desired bending is reached.

At the end block again the wheels through the register (2).

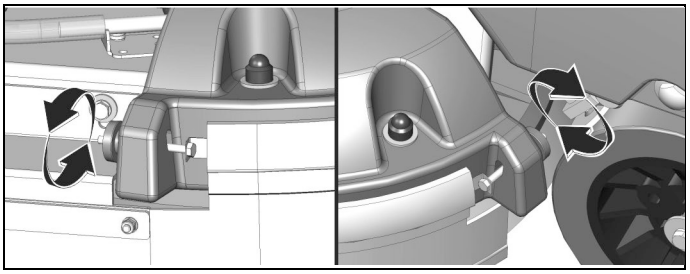


SPLASH GUARD ASSEMBLY

The two splash guards have to be assembled onto the brushes base group. Insert the metal strips inside the suitable slots present on the rubber. Place the hole at the flat extremity of the strip onto the screw placed in the front of the cover. Secure the strips with the nut.



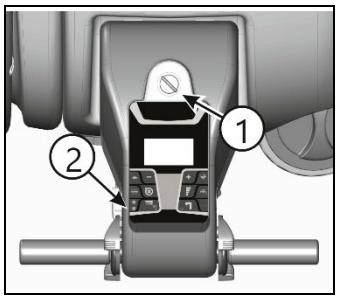
Screw down the knobs in the rear part of the cover in the free extremity of the metal strips. The operation has to be carried out for both splash guards. With the brushes assembled, the splash guard must slightly touch the floor.



BRUSHES ASSEMBLY

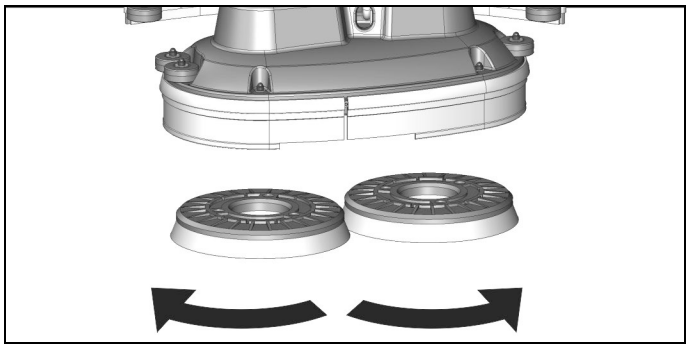
To assemble the brushes, proceed as follows:

1. Switch on the machine turning the key (1) clockwise.
2. Press the push button (2) of up/down of the brushes base to lift the brushes.
3. Take off the electric supply by turning the key (1) counterclockwise.

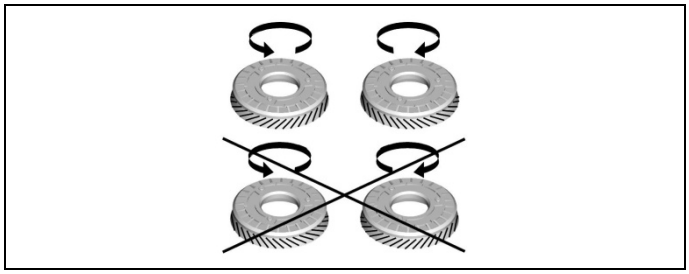


With the brushes base group in lifted position, insert the brushes into their plate seat underneath the brushes base turning them until the three metal buttons are properly seated in their slots; rotate energetically the brushes to push the button towards the coupling spring until they get blocked.

The figure shows the rotating sense for brushes coupling.



For a longer life of the brushes we suggest to invert daily their position. Whenever brushes were deformed we suggest to reassemble them in the same position, avoiding that the different inclination of the bristles causes excessive motor overload or troublesome vibrations.



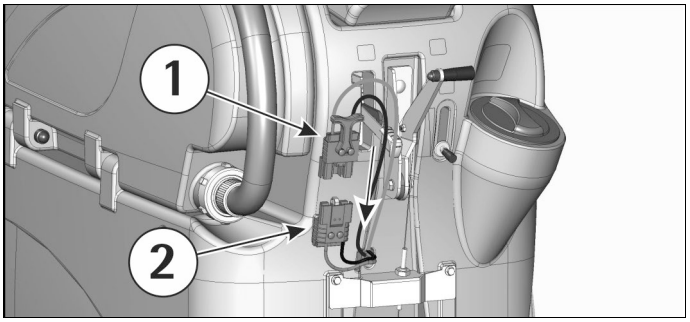
Use only brushes supplied with the machine or the ones indicated in the paragraph “RECOMMENDED BRUSHES”. The use of other brushes can compromise security.

STANDBY MODE

After 10 minutes of inactivity, if the machine is on, it goes in stand-by mode and the display turns off. To start again press any button on the instrument board, the display will turn on again and after few seconds the machine returns operative.

FLOOR CLEANING

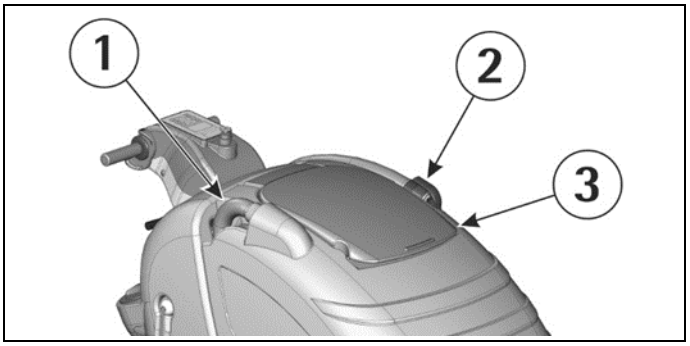
CONNECTION OF THE BATTERIES TO THE MACHINE
Plug in the batteries connector (1) to the machine connector (2), placed in the rear part of the machine.



RECOVERY TANK

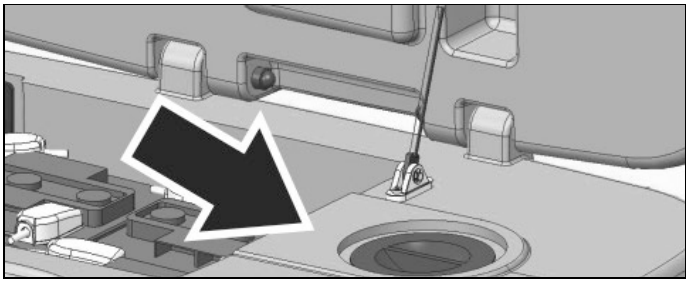
Verify that the squeegee hose coupling (1) is correctly inserted into its seat and that the exhaust hose plug (2) is well closed.

The recovery tank is provided with a cover (3) that blocks itself thanks to the vacuum created by the suction motor during its use.

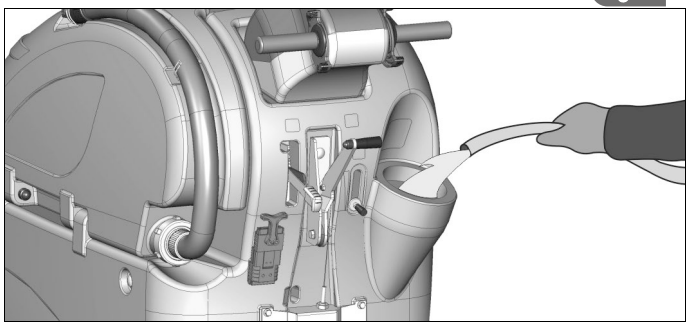


DETERGENT SOLUTION TANK

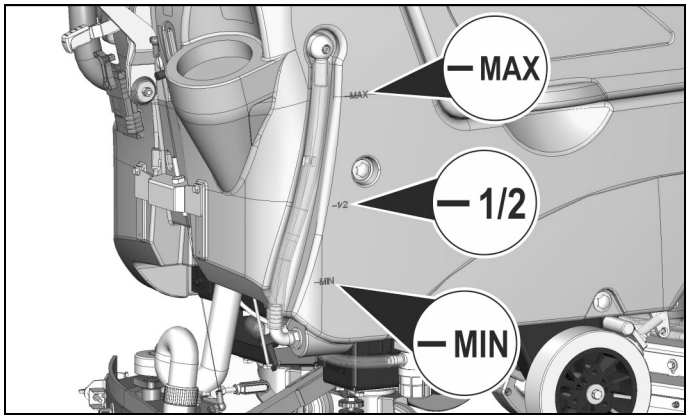
The solution tank is provided with an inspection opening. This permits to clean the exit point of the detergent solution.
Be sure that the cap is well tightened after the cleaning.



The capacity of the detergent solution tank is indicated in the technical data.
Open the screw plug placed in the rear right part of the machine and fill the detergent solution tank with clean water at a maximum temperature of 50°C. Add the liquid detergent in the percentage and conditions foreseen by the manufacturer. To avoid excessive foam presence, which could cause problems to the suction motor, use the minimum percentage of detergent recommended.



Always on the left side of the machine there is placed a level hose that permits to see easily the solution quantity inside the tank both during the filling of the solution and during the working.

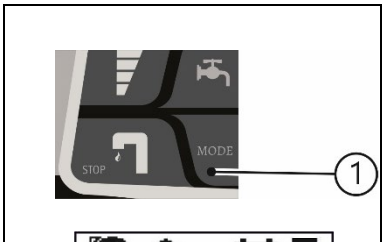


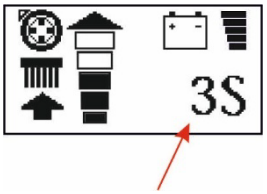
Screw down the plug of the solution tank.

Use always low foam detergent. To avoid foam presence, before starting working operation, introduce into the recovery tank a minimum quantity of anti-foam product.
Never use pure acid.

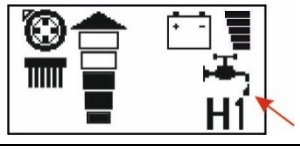
3S SYSTEM “SOLUTION SAVING SYSTEM” (OPTIONAL)

It is a system that allows controlled use of the cleaning solution during operation.
To activate it, press and hold the tap button (1) for more than one second: the symbol will start flashing.
Select the 3S system using the navigation buttons (+ and -). Once the desired mode has been selected, wait a couple of seconds and the circuit will be enabled.





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

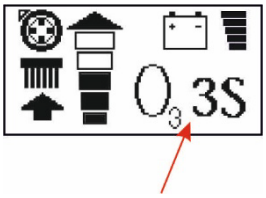


Once activated you can proceed with the cleaning.

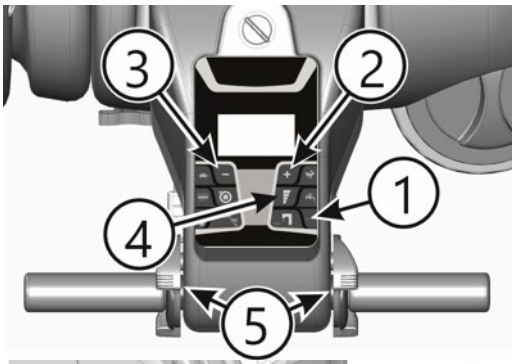
OPERATION OF THE OZONE SYSTEM + 3S (optional)

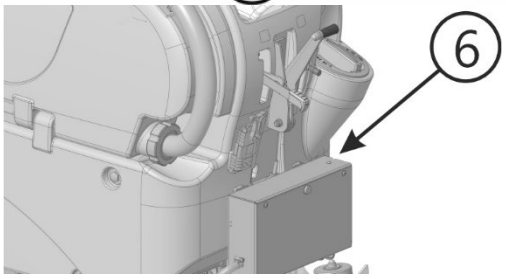
The machine can produce water with an ozone concentration high enough to provide disinfection of the treated surfaces. For this to occur, it is essential that the ozonated water reaches an ORP level above 650 mV.
To make the best use of the ozone system, proceed as follows:

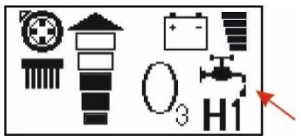
1. Ensure that the inside of the solution tank is clean; if necessary, rinse it by performing at least a couple of filling and emptying cycles.
2. Fill the solution tank with tap water (**do not add any detergent**).
3. Select the Ozone + 3S system using the navigation buttons (+ and -). Once the desired mode has been selected, wait a couple of seconds and the circuit will be enabled.



4. At system start-up, the green LED on the ozone unit remains off (6).
5. Set the desired water flow rate (see “Flow Rate Level Selection – 3S and Ozone System”).
6. Enable the brush control (see “STARTING OF THE MACHINE”)
7. Enable the drive control by operating the levers located on the handlebar. When the solenoid valve is activated, the water pump starts and ensures the desired flow within the system.
8. The system performs a polarity inversion cycle of 30 cumulative seconds at each start-up and every 2 cumulative hours of operation. This phase allows self-cleaning of the generator in order to ensure correct operation over time. The polarity inversion time is counted only when there is water flow within the system.
1. Once the polarity inversion has occurred, the green LED (6) lights up, indicating that the system is generating ozone. The system allows continuous operation for two hours. At the end of the two-hour period, the system performs self-cleaning again fully automatically.
9.









Ozone is a gas with a very pungent smell and can be irritating.

Ozonated water is highly oxidizing. Therefore, to protect the metal parts of the machine from oxidation (rust), it is recommended to rinse the entire lower part of the machine with water at least once a week.

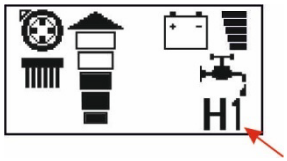
At the end of the operation, it is not necessary to empty the solution tank.

FLOW RATE LEVEL SELECTION - 3S SYSTEM AND OZONE +3S

To adjust the solution flow rate, press the level button (1)



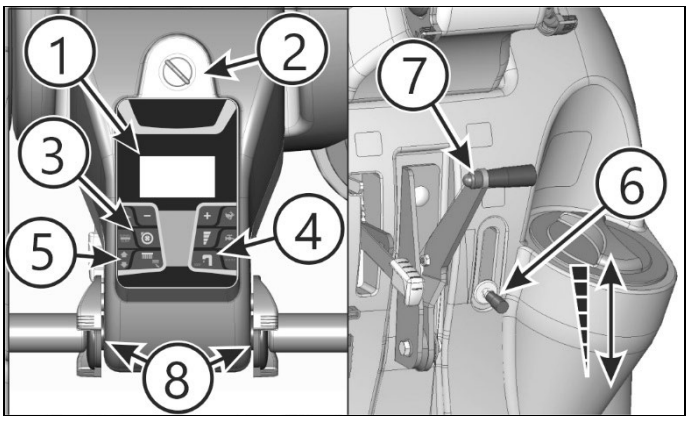
The level symbol will start flashing.



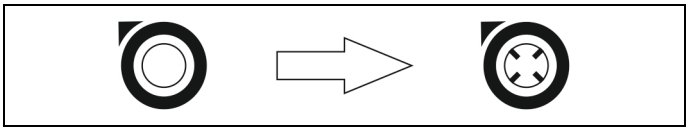
Press the “+” and “-” buttons to adjust the level. Once the desired level has been selected, wait a couple of seconds; it will stop flashing and will be selected.

STARTING OF THE MACHINE

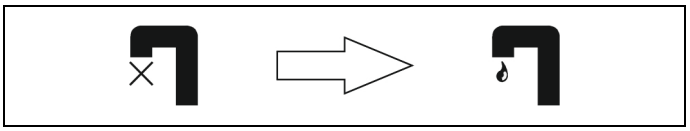
Every control is visualized on the display (1).



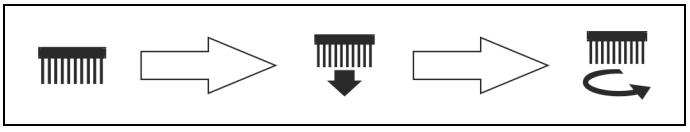
1. Turn the key (2) clockwise.
2. Check the battery type and the charge level on the display (1).
3. Press the suction motor push button (3); the suction motor symbol changes from off to on and the motor starts suck up.



4. Press the solenoid valve push button (4); the solenoid valve symbol changes from closed to open. For the operation of the 3s system and the Ozone + 3S system, refer to the dedicated section.



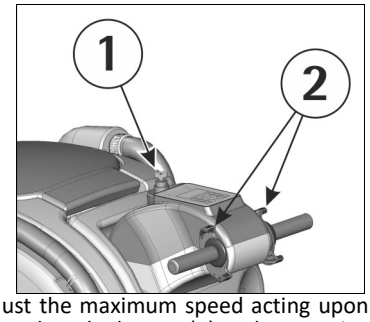
5. Lower the brushes base onto the floor by pressing the push button (5); on the display is visualized first the down symbol and then the one of the brushes motor activation.



6. Acting upon the solution valve lever (6) open and adjust the detergent solution flow.
7. On models equipped with the 3S system (optional) and the Ozone System (optional), it is also necessary to press the suitable push button to activate the detergent solution supply by choosing between the traditional adjustment system through the solution valve or the system of fixed optimum supply (see “3S SYSTEM SOLUTION SAVING SYSTEM”). For the operation of the Ozone System, also refer to che chapter "OPERATION OF THE OZONE + 3S SYSTEM (OPTIONAL)".
8. Acting upon the squeegee lifting lever (7) lower the squeegee.
9. Acting upon the levers drive control (8) the machine starts to move, the brushes start to rotate, and the water begins to flow automatically.
   Releasing the drive control levers will stop the flow.
10. During the first metres check that the squeegee adjustment guarantees a perfect drying action and that the detergent solution flow is appropriate. It has to be sufficient to wet the floor uniformly avoiding the leakage of detergent from the splash guards. Always consider that the correct quantity of solution detergent depends on the type of floor, dirtiness and machine speed.

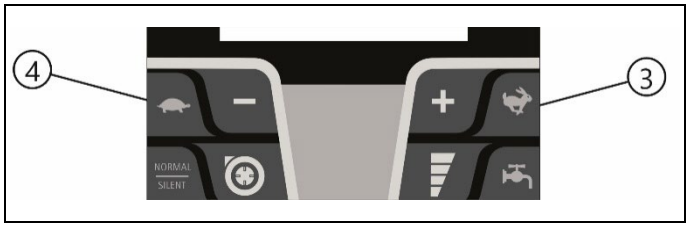
MOVEMENT AND SPEED ADJUSTMENT

The traction of the machine is given through an electronically controlled motor.

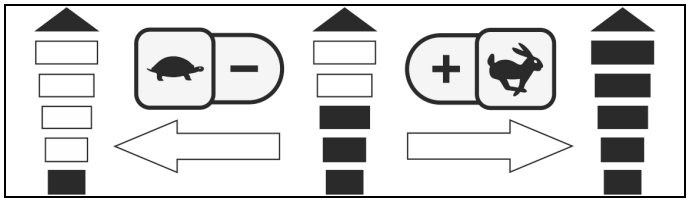


To move the machine, act upon the key (1) and then rotate the levers drive control (2) placed on the handlebar, in forward for the forward drive, in reverse for the backward drive. The control acts in a progressive way, therefore it is possible to graduate the speed depending on each requirement rotating the levers whatever it is necessary.

Furthermore it is possible to adjust the maximum speed acting upon the push button (3) to increase it and on the button (4) to decrease it.

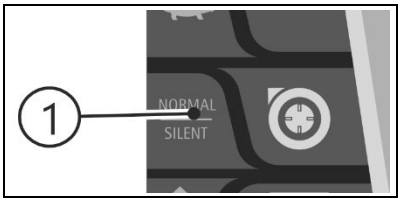


Every change will be visualized through its symbol on the display.



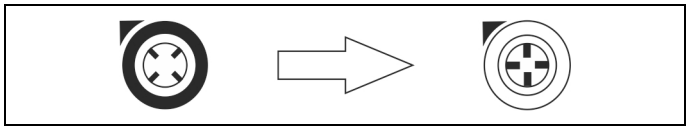
During reverse motion the speed is reduced.

SUCTION MOTOR SILENT MODE

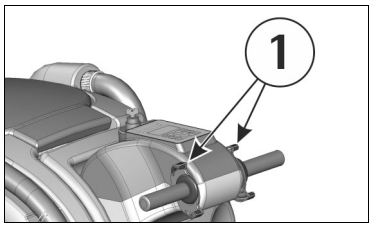


It is possible to start the silent mode of the suction motor by pressing for a few seconds the switch-on button (1) of the suction motor.

When the silent mode is on, the symbol on the display changes.



WORKING BRAKE

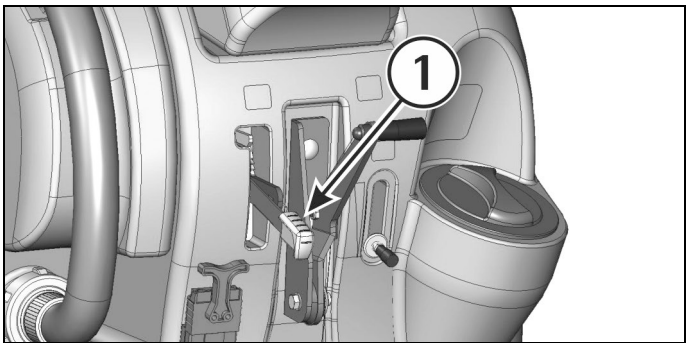


To stop the machine during normal working situation, it is sufficient to release the levers drive control (1), as the machine is equipped with an electronic braking system. The brushes and the detergent solution stop automatically.

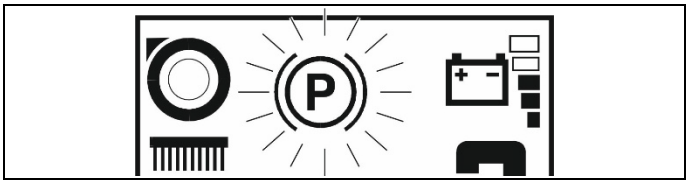
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EMERGENCY BRAKE

In case of an emergency, an immediate stop can be obtained acting upon the lever of the emergency and parking brake (1) by lowering it.



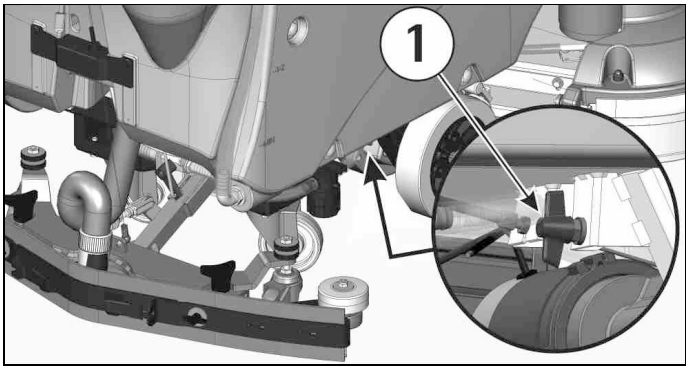
On the display will be shown the emergency brake activation together with its symbol.



This control blocks the machine immediately stopping all functions. The emergency brake functions also as a parking brake. To start again to work, release the lever by unblocking the parking button on the lever itself and act again upon the levers drive control.

ADJUSTMENT OF THE BRUSHES PRESSURE

Through the register (1) it is possible to adjust the brushes pressure on the cleaned surface.
By turning the knob clockwise the pressure increases, rotating it counterclockwise, the pressure decreases.
This device allows a more efficient cleaning action also on very difficult and dirty surfaces.



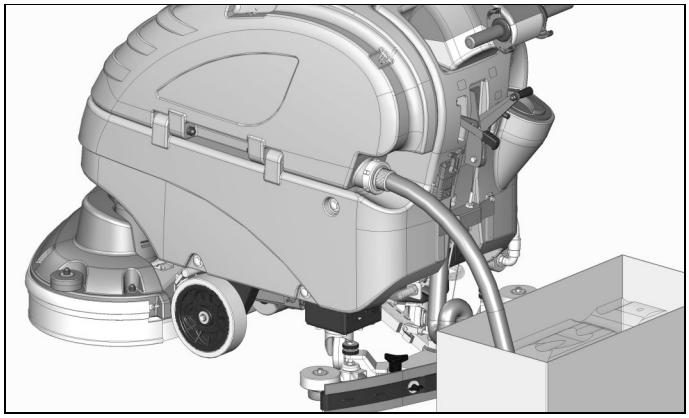
In order not to overload the brushes motor, it is convenient to reduce the brushes pressure going from smooth floors to rough ones (ex. concrete).

BRUSHES MOTOR OVERLOAD PROTECTION DEVICE
The machine is equipped with a protection device of the brushes motor. This device blocks the motor functioning in order to protect it and indicates the overload on the display with the message "ALLARME 1".
When this happens, try to reduce the brushes pressure (see under "ADJUSTMENT OF THE BRUSHES PRESSURE").
If the problem persists, contact the authorized technical assistance.



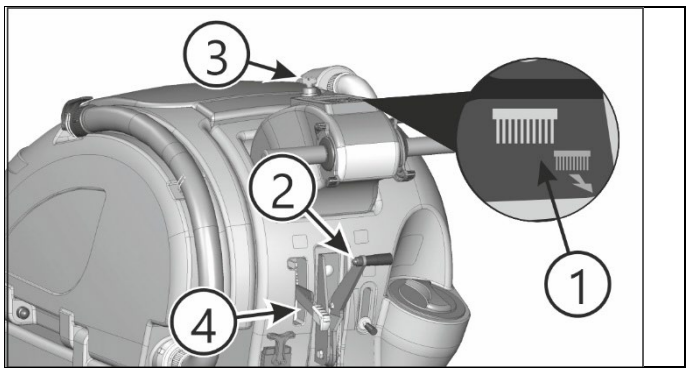
OVERFLOW DEVICE

In order to avoid serious damages to the suction motor, the machine is equipped with a float that intervenes when the recovery tank is full. When this happens, it is necessary to empty the recovery tank. Hold the exhaust hose of the machine. Take off the plug and empty the recovery tank into appropriate containers, according to the standard norms.



STOP OF THE MACHINE AFTER CLEANING OPERATION

After cleaning operation proceed as follows:
1. Press up/down button (1) to raise the brushes.
2. Lift the squeegee acting upon the lever (2).
3. Bring the machine to an appropriate place for tanks draining.
4. Turn the key (3) counterclockwise.
5. Insert the parking brake (4).

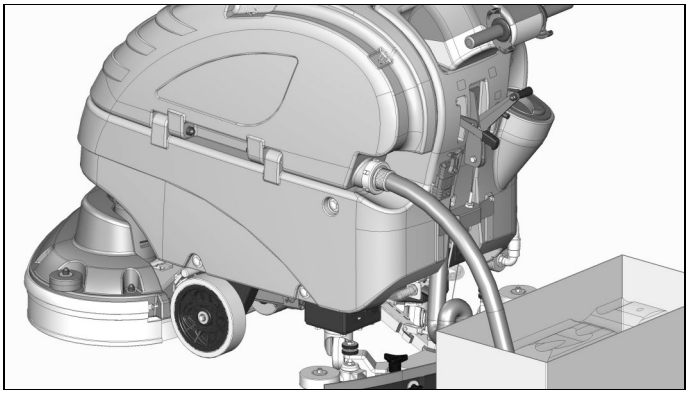


DAILY MAINTENANCE

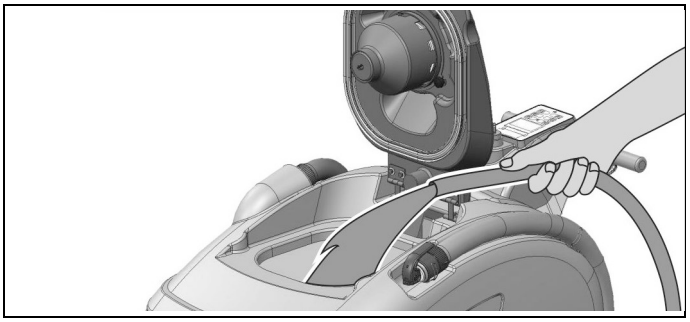
RECOVERY TANK CLEANING

1. Hold the exhaust hose placed in the left part of the machine.
Take off the plug of the exhaust hose acting upon its lever and empty the recovery tank into appropriate containers.

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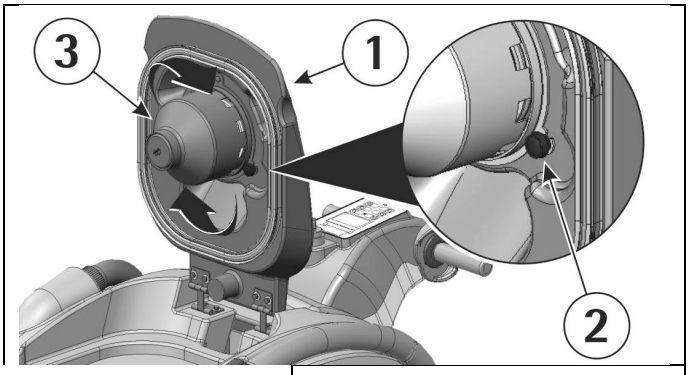


2. Open the cover of the recovery tank.
3. Rinse the tank with a water jet.

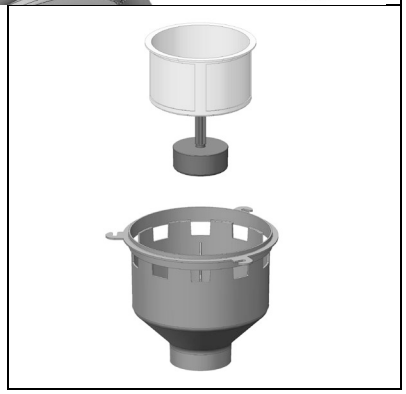


SUCTION FILTER CLEANING

1. Open the cover (1) and unscrew the knob (2) to release the filter protection (3).
2. Rotate the filter protection clockwise to release it.



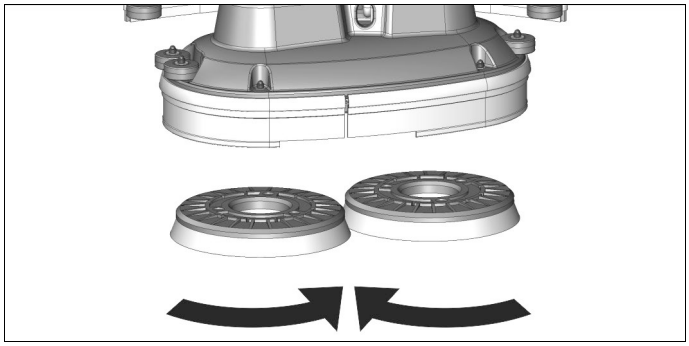
3. Take off the filter and the filter protection.
4. Clean all parts with a water jet especially the inside surfaces and the filter bottom.
5. Carry out cleaning operations carefully.
6. Reassemble all parts.



MANUAL DISASSEMBLY OF THE BRUSHES

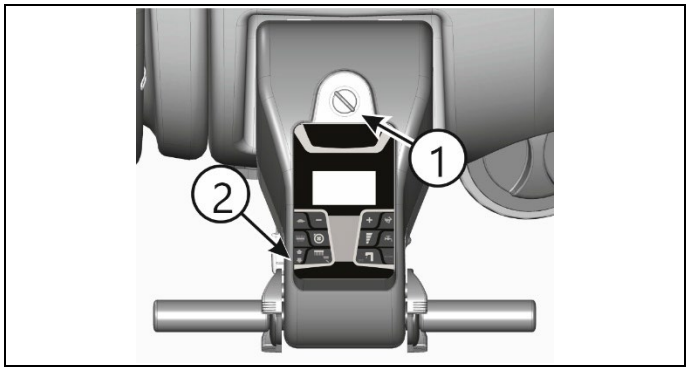


With the brushes base in lifted position, turn the brush in the rotating sense as indicated in the figure, until it is released from the brush holder plate seat. The figure shows the rotating sense for the release.



AUTOMATIC DISASSEMBLY OF THE BRUSHES

1. Turn the key (1) clockwise to switch on the machine.
2. Press the push button (2) of up/down brushes base to lift the brushes.
3. Keep pressed for some time the push button (2).





Move the machine before taking the brushes in order to avoid injuries.

BRUSHES CLEANING

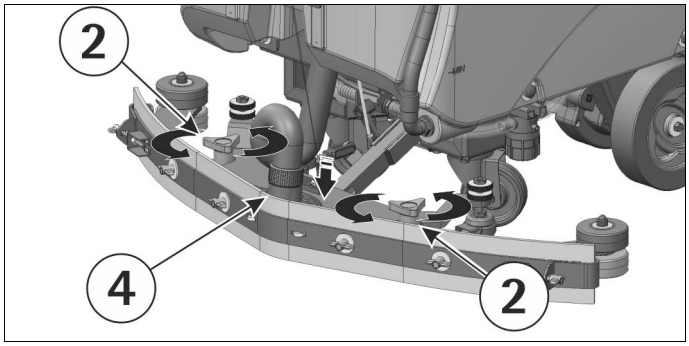
Disassemble the brushes and clean them with a water jet (check under paragraph of “BRUSHES DISASSEMBLY”).

SQUEEGEE CLEANING



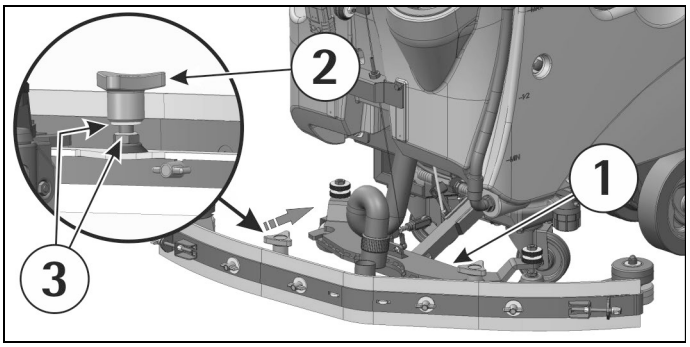
Keeping the squeegee clean guarantees always the best drying result.
For its cleaning it is necessary to:

1. Take off the squeegee hose (4) from the coupling.
2. Disassemble the squeegee from its support (1) by loosening the knobs (2) counterclockwise and making slide the threaded parts in the appropriate slots up to their release.



3. Clean with care the internal part of the squeegee inlet eliminating eventual dirt residuals.
4. Clean with care the squeegee rubbers.

5. Reassemble all parts paying attention to put the washers (3) into position, they are two for each knob, so that they are assembled one under and the other on each of the two slots present on the support.

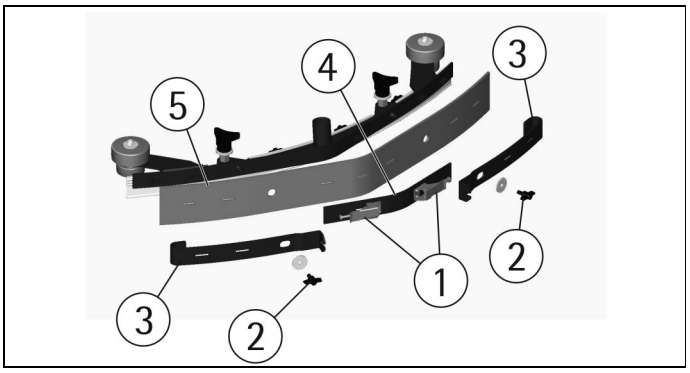


WEEKLY MAINTENANCE

REAR SQUEEGEE RUBBER CHECK

Check the squeegee rubber wear and eventually turn or replace it.
For the replacement it is necessary to:
1. Lift the squeegee (see under paragraph “STOP OF THE MACHINE AFTER CLEANING OPERATION”).
2. Release the hooks (1).
3. Unscrew the wing nuts (2) to take off the terminals of the outer rubber holder blades (3) and then take off the central rubber holder blade (4).
4. Take off the rubber (5), turn it to a new side or replace it.

To reassemble the squeegee repeat reverse the operations above mentioned.



SQUEEGEE HOSE CLEANING

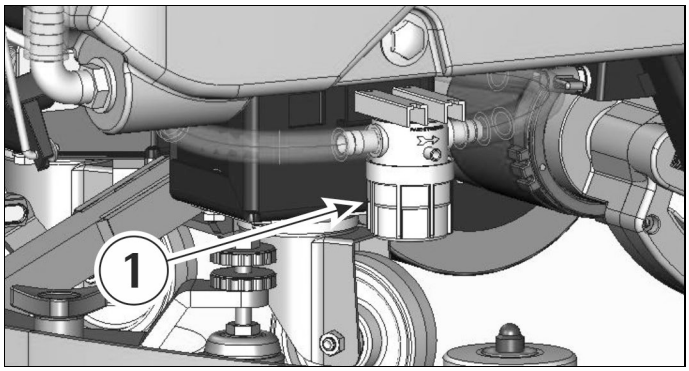
Weekly or in case of insufficient suction, it is necessary to check that the squeegee hose is not obstructed. Eventually, to clean it, proceed as follows:
1. Take off the hose from the squeegee coupling.
2. Wash the inside of the hose with a water jet.

To reassemble the hose repeat reverse the operations above-mentioned.

Do not wash the hose that goes from the suction motor to the recovery tank.

CLEANING OF THE SOLUTION TANK

1. Bring the machine to an appropriate place for the detergent solution draining.
2. Unscrew the solution tank cap.
3. Unscrew the cap of the exhaust filter (1) so that the detergent solution flows out into appropriate containers.



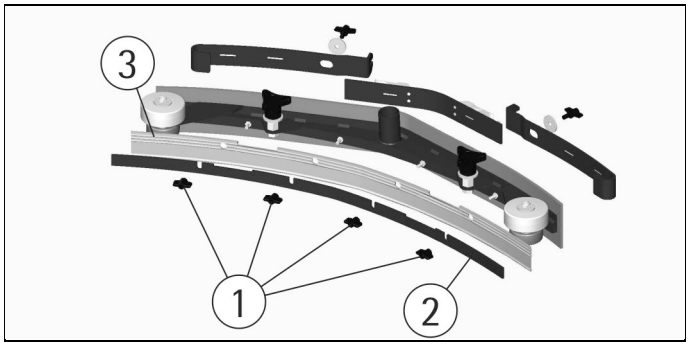
4. Rinse with a water jet the solution tank.
5. Reassemble all parts.

TWO-MONTHLY MAINTENANCE

CHECK AND REPLACEMENT FRONT SQUEEGEE RUBBER

Check the wear of the squeegee rubber and eventually replace it.
For the replacement it is necessary to:
1. Take off the squeegee (see under paragraph “SQUEEGEE CLEANING”).
2. Disassemble the rear part of the squeegee (see under paragraph “REAR SQUEEGEE RUBBER CHECK”).
3. Unscrew the wing nuts (1) and take off the front rubber holder blade (2).
4. Replace the front rubber (3).

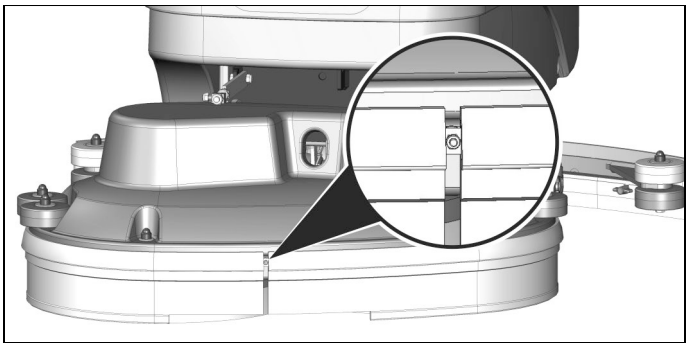
To reassemble the squeegee repeat reverse the operations above mentioned.

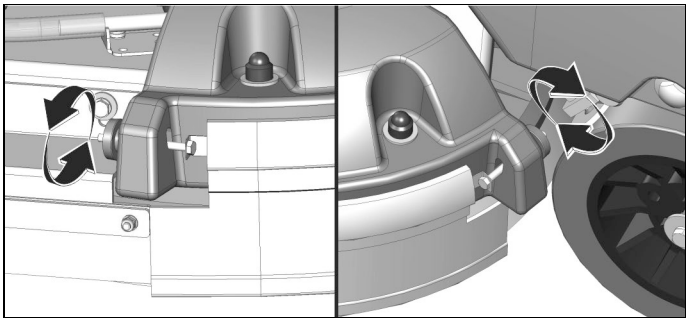


SPLASH GUARD REPLACEMENT

1. Unscrew the knobs in the rear part of the brushes base group from the extremity of the metal strips. The operation has to be carried out on both splash guards.
2. Unscrew the nut on the front part of the brushes base group and take off the metal strips.
3. Replace the splash guard rubbers and follow the assembling instructions under “SPLASH GUARD ASSEMBLY” paragraph.

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



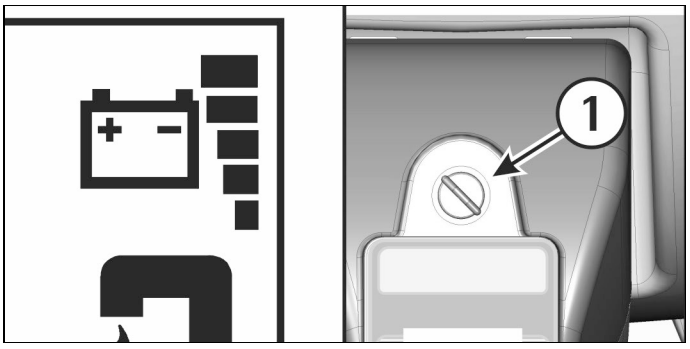


TROUBLESHOOTING GUIDE

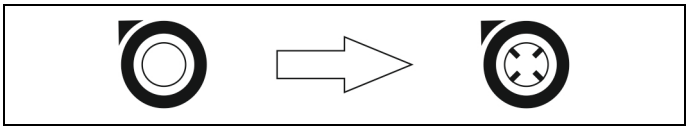
The checking of all the other foreseen machine operations is left to the authorized technical assistance**.**

Never leave the batteries completely discharged for a long time.
In case of alarm visualizations contact the technical assistance.

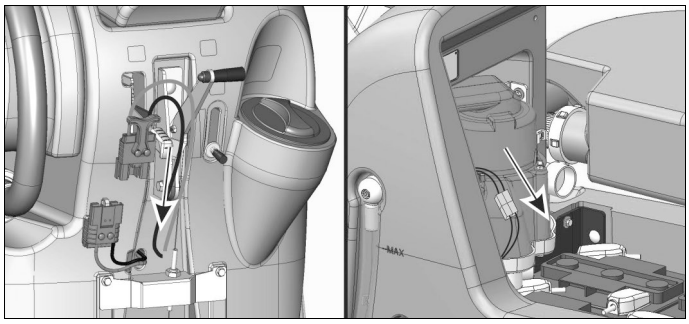
THE SUCTION MOTOR DOES NOT WORK
1. Verify that the key switch (1) is in the correct position.
2. Check the charge level of the batteries on the display.



3. Check that the battery connector is correctly plugged in.
4. Check on the display that the starting signal of the suction motor is on.

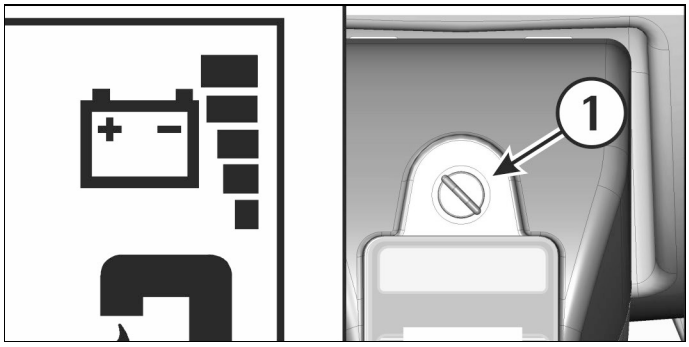


5. Check that the red connector of the suction motor is correctly plugged in.

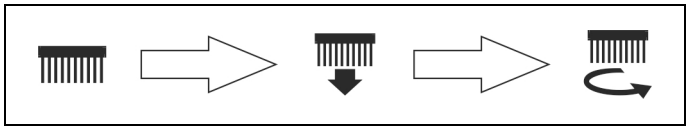


If the problem persists, please contact the authorized technical assistance.

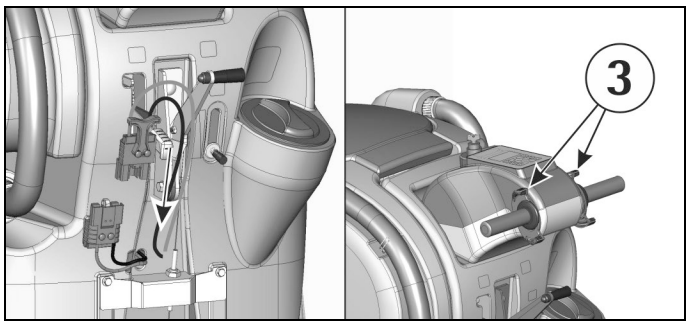
THE BRUSHES MOTOR DOES NOT WORK
1. Verify that the key switch (1) is in the correct position. Switch off and on again the machine.
2. Check the charge level of the batteries on the display.



3. Check on the display that the activation signal of the brushes motor is on.



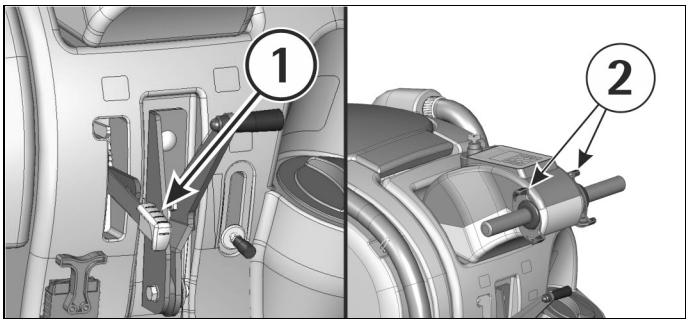
4. Check that the battery connector is correctly plugged in.
5. Act upon the levers drive control (3).



If the problem persists, please contact the authorized technical assistance.

THE TRACTION MOTOR DOES NOT WORK
1. Switch off and on again the machine.
2. Release the brake (1) until the signal on the display comes off.
3. Act upon the levers drive control (2).

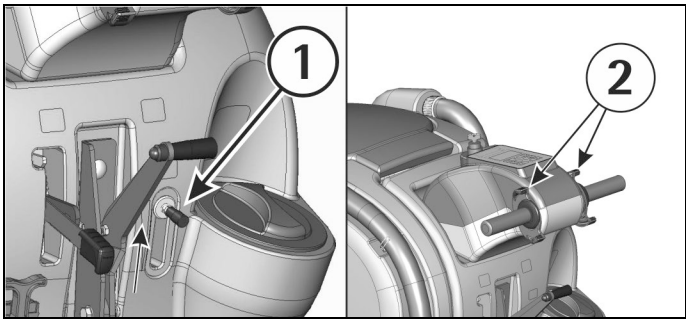
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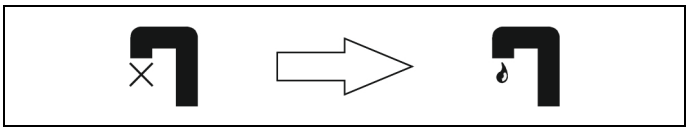
If the problem persists, please contact the authorized technical assistance.

THE DETERGENT SOLUTION ON THE BRUSHES IS NOT SUFFICIENT

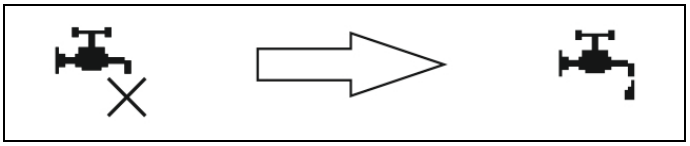
1. Check that the solution valve lever (1) is open.
2. Check the level of the liquid in the solution tank.
3. Check that solution filter is clean (see under paragraph “CLEANING OF THE SOLUTION FILTER”).
4. The machine is equipped with solenoid valve, therefore act upon the levers drive control (1) to let come down the detergent solution.



5. Check on the display that the signal of the open solenoid valve is activated.



If the machine is equipped with the optional 3S System (see “3S SYSTEM – Solution Saving System”), make sure that the system has been activated.



If the problem persists, please contact the authorized technical assistance.

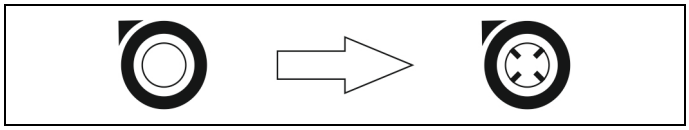
THE MACHINE DOES NOT CLEAN PROPERLY

1. The brushes do not have the suitable bristle dimension: contact the authorized technical assistance.
2. The brushes have got worn bristles. Check the brushes wear condition and eventually replace them (the brushes have to be replaced when the bristles have reached a height of about 15mm). To replace the brushes, see instructions at paragraph “BRUSHES DISASSEMBLY” and “BRUSHES ASSEMBLY”.
3. The detergent solution is insufficient: open more the solution valve.
4. Check that the liquid detergent is in the recommended percentage.
5. Increase the brushes base pressure (see at paragraph "ADJUSTMENT OF THE BRUSHES PRESSURE").

Contact the authorized technical assistance for advice.

THE SQUEEGEE DOES NOT DRY PERFECTLY

1. Check that the squeegee rubbers are clean.
2. Check the adjustment of the height and the inclination of the squeegee (see section “ADJUSTMENT OF THE SQUEEGEE” in “BEFORE USE”).
3. Check that the suction hose is correctly inserted in the proper seat on the recovery tank or that it is not obstructed.
4. Clean the suction filter.
5. Replace the rubbers if worn out.
6. Check on the display that the starting signal of the suction motor is on.

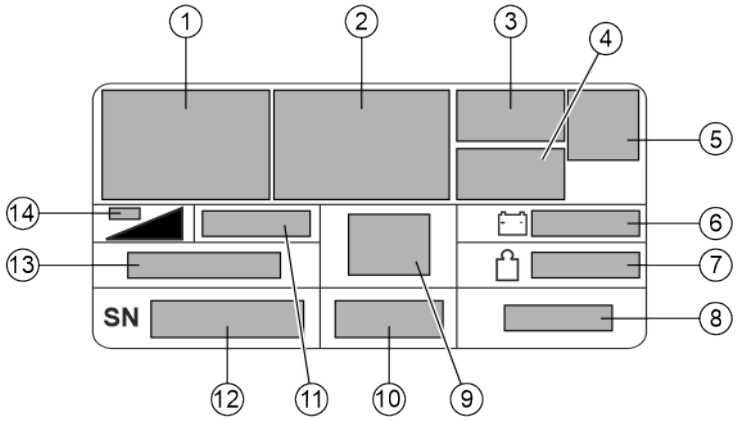


EXCESSIVE FOAM PRODUCTION

Check that low foam detergent has been used. Eventually add small quantities of anti foam liquid into the recovery tank.
Please be aware that a bigger quantity of foam is produced when the floor is not very dirty. In this case please dilute detergent solution.

EN

LEGEND SERIAL NUMBER PLATE



1	Name of the producer
2	Manufacturer's registered office
3	Country of production
4	CE labelling
5	Waste disposal regulations
6	Maximum weight for suitable batteries
7	Gross weight of the machine (IEC/EN 60335-2-72 clausola 3.114)
8	Power in force
9	Electrical safety class of the machine
10	Safety degree of the machine against water and dust
11	Battery voltage and circuit type
12	Serial number of the machine
13	Model of the machine
14	Maximum gradient allowed

How to read the Serial Number (Pos. 12)

SN	2	0	x	x	z	z	z	z

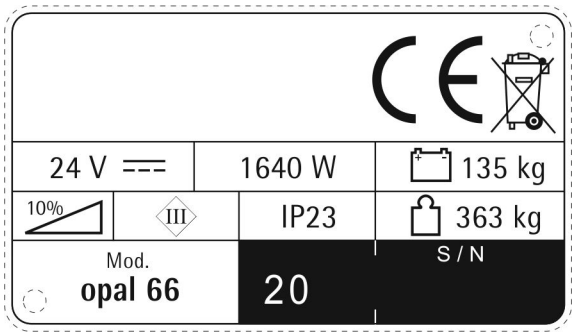
20xx = they mark **the year of manufacture** of the machine (inserted in to the Serial Number as per regulation CEI EN 60335-2-72).
zzzz = they mark the progressive number of that machine produced in its year of construction.

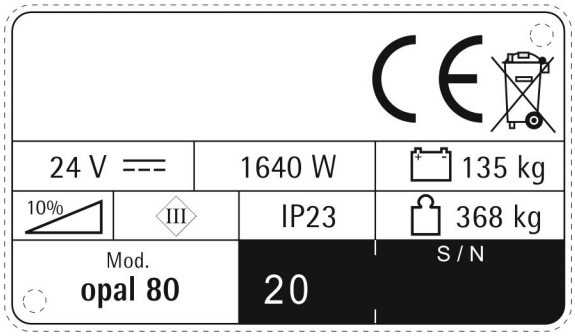
How to read the model of the machine (Pos. 13)

xxxx	zz

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

POSITION OF THE SERIAL NUMBER PLATE ON THE MACHINE





RECOMMENDED BRUSHES

Brushes must be chosen depending on type of floor and dirt to be removed.
The employed material and the bristles diameter are the elements that distinguish different types of brushes.

MATERIAL	CHARACTERISTICS
PPL (Polypropylene)	Good wear resistance. Maintains characteristics with hot water up to 50°C. It is not hygroscopic.
NYLON	Excellent wear resistance, even with hot water. It is hygroscopic.
TYNEX	Nylon bristles with grains of abrasive material. Use with caution in order not to mark the floor or ruin the polishing.
BRISTLES THICKNESS	Thicker bristles are more rigid and must be used on smooth floor or floor with small joints. On irregular floors with deep joints or relieves, it is recommended to use softer bristles which penetrate more easily and deeper. Please be aware that when brush bristles are worn out and therefore too small, they become rigid and unable to penetrate and clean deeper. This may also happen with thicker bristles creating brush vibration.
PAD HOLDER	It is equipped with anchor points which permit the blocking of the abrasive pad during work. The pad is recommended to clean smooth floors.

MACHINE	CODE	QUANTITY	DESCRIPTION	USE
opal 66	48914030	2	Brush PPL 0,6 Ø 355	Normal floors.
	48914040	2	Brush PPL 0,9 Ø 355	Smooth floors with small joints and persistent dirt.
	48914050	2	Brush TYNEX Ø 355	Floors of resistant material and particularly dirty.
	48914060	2	Brush 5-mix Ø 355	For all types of floors.
	48803010	2	Pad holder Ø 330	For pads of 14”, for smooth surfaces cleaning.
	48803030	2	Pad holder Ø 330 + center lock green	For pads of 14”, for smooth surfaces cleaning.
	48803040	2	Pad holder Ø 330 + center lock black	For pads of 14”, for smooth surfaces cleaning.
opal 80	48914010	2	Brush PPL 0,6 Ø 406	Normal floors.
	48914020	2	Brush PPL 0,9 Ø 406	Smooth floors with small joints and persistent dirt.
	48914070	2	Brush TYNEX Ø 406	Floors of resistant material and particularly dirty.
	48914080	2	Brush 5-mix Ø 406	For all types of floors.
	48814010	2	Pad holder Ø 385	For pads of 16”, for smooth surfaces cleaning.
	48814020	2	Pad holder Ø 385 + center lock green	For pads of 16”, for smooth surfaces cleaning.
	48814030	2	Pad holder Ø 385 + center lock black	For pads of 16”, for smooth surfaces cleaning.