

## **onyx 43** **onyx 43Li**



**11 2016**



### **Use and maintenance**



**Attention! Please read the instructions before use.**

TECHNICAL DESCRIPTION	U/M	AGM	Li
Cleaning width	mm in	430 17	430 17
Squeegee width	mm in	510 20	510 20
Battery voltage	V	24	24
Battery capacity	Ah <sub>5</sub>	34	40
Power rating	W A	760 31,5	760 31,5
Working capacity, up to	m <sup>2</sup> /h sqft/h	1505 11483	1505 11483
Brush diameter	mm in	430 17	430 17
Brush rpm	rpm	150	150
Brush pressure	kg lbs.	35 77	35 77
Suction vacuum	mbar water lift	82 33	82 33
Type of drive		semi autom.	semi autom.
Maximum gradient	%	2	2
Capacity solution tank	l gal	23 6	23 6
Capacity recovery tank	l gal	23 6	23 6
Machine length (min)	mm in	793 31	793 31
Machine height	mm in	603 24	603 24
Machine width	mm in	518 20	518 20
Machine weight (empty, with batteries)	kg lbs.	86,5 191	65 143
Weight of the batteries	kg lbs.	30 66	8.6 190
Recharging time max	h	10	2
Battery compartment (L x W x H)	mm in	346x207x210 14x8,1x8,2	346x207x210 14x8,1x8,2
Acoustic pressure level (in conformity with EN 604- _01)	dB (A)	<70	<70
Class			
Protection level	IP	X3	X3
Battery charger voltage	V ~	230 120	230 120
Battery charger frequency	Hz	50 60	50 60
Battery charger class		I	I



## INTRODUCTORY COMMENT

Thank you for having chosen our machine. This floor cleaning machine is used for the commercial cleaning and is able to clean most types of hard floor, except carpet cleaning (if unsure please consult your floor manufacturer/supplier). During its forward movement, the combined action of the brush and the detergent solution removes the dirt which is recovered 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 good condition. 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.

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## 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 slopes.
- **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.
- 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.
- The socket for the power supply must be equipped with a standard earthing (ground) system.

### TRANSFER

- Do not strike shelvings or scaffoldings where there is danger of falling objects.
- Do not go up or down the stairs.

### 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

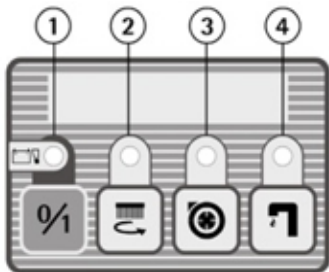
- Do not use the machine on surfaces covered with inflammable liquids or dusts (for example hydrocarbons, ashes or soot).
- In case of fire, use a powder based fire-extinguisher. Do not use water.
- Do not use the machine in explosive atmosphere.
- The machine has to carry out simultaneously the operations 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.
- Avoid brush operation when the machine is standing still in order to prevent floor damages.
- Do not damage the mains cable by squashings, bendings or stressings.

## MAINTENANCE

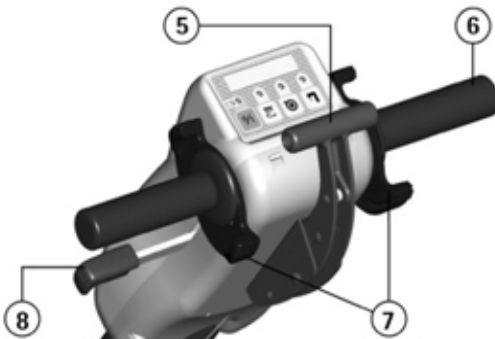
- If the machine does not work properly, check by conducting simple maintenance procedures. Otherwise, as for technical advice from an authorized assistance centre.
- For any cleaning and/or maintenance operation take off the power supply from the machine.
- Where parts are required, ask for ORIGINAL spare parts from the distributor and/or from an authorized dealer.
- Use only ORIGINAL brushes indicated in the paragraph "RECOMMENDED BRUSHES".
- 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.

## LEGEND INSTRUMENT BOARD AND CONTROLS

1. ON/OFF SWITCH WITH SIGNAL LAMP
2. BRUSH MOTOR SWITCH WITH SIGNAL LAMP
3. SUCTION MOTOR SWITCH WITH SIGNAL LAMP
4. SOLENOID VALVE SWITCH WITH SIGNAL LAMP



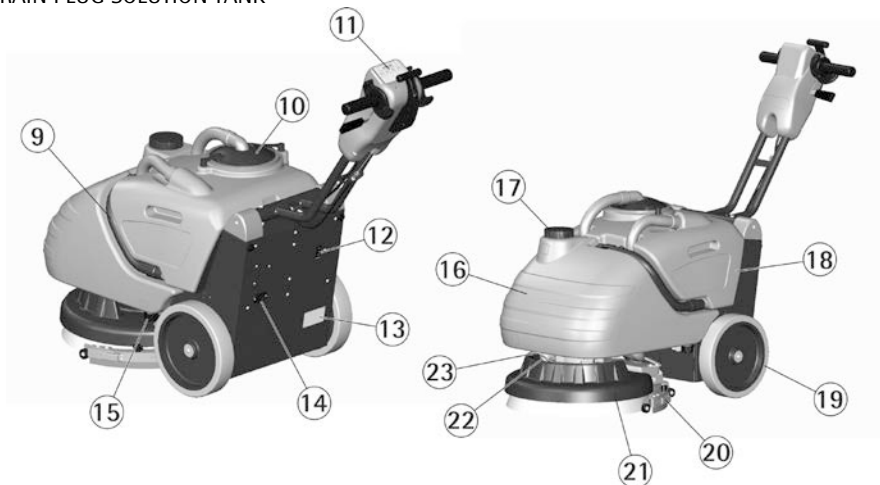
5. SQUEEGEE LIFT LEVER
6. HANDLE BARS
7. SCRUB CONTROL LEVERS
8. HANDLE BAR RELEASE LEVER



## LEGEND MACHINE

9. EXHAUST HOSE RECOVERY TANK
10. SUCTION COVER
11. INSTRUMENT BOARD
12. BATTERY CHARGE LEVEL LED INDICATOR (AGM)
13. SERIAL NUMBER PLATE
14. MAINS PLUG FOR ELECTRIC CABLE BATTERY CHARGER
15. DRAIN PLUG SOLUTION TANK

16. SOLUTION TANK
17. CAP FOR SOLUTION TANK FILLING
18. RECOVERY TANK
19. WHEELS
20. SQUEEGEE ASSEMBLY
21. BRUSH COVER
22. FILTER SOLUTION TANK
23. SOLUTION FLOW ADJUSTMENT



## SYMBOLGY MACHINE



Symbol 0/1 indicating the ON/OFF switch and its signal lamp.



Symbol denoting the switch for the water opening and the signal lamp that the water is open.



Symbol denoting the signal lamp of the starting of the brush rotation.



Symbol denoting the switch and the signal lamp of the suction motor.



Symbol denoting the charge level of the batteries.



Symbol that indicates the position of the outlet plug of the solution tank.



This symbol indicates that the tanks are to be emptied before rotating the machine.

MAX 50°C



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



Symbol that indicates the flow adjuster of the detergent solution.



Symbol denoting the crossed bin. Indicates that at the end of its activity, the machine has to be disposed conforming to the laws in force.

## SYMBOLGY HANDBOOK



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 incorporated battery recharger, 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.



Obligation symbol, disconnect the installation from the batteries acting upon the connector before any operation on the machine.



Obligation symbol requiring the wear of protection glasses.



Obligation symbol requiring the wear of protection gloves.



Symbol preceding an information about the correct use of the machine.



Symbol indicating operations to be carried out only by qualified personnel.

## BEFORE USE

### HANDLING OF THE PACKED MACHINE

The machine is supplied with suitable packing.  
The total weight for agm is 100kg (221lbs) max.  
The total weight for Li is 79kg (174lbs) max.

Packing dimensions:

**Base:** 84,5 cm x 57 cm (33"x22")

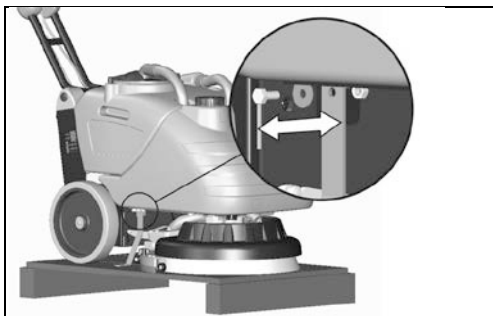
**Height:** 85 cm (33")



Do not stack more than 2 machines.

### UNPACKING OF THE MACHINE

1. Remove the outer package.
2. Loosen the two screws that fix the two brackets to the machine.
3. Unscrew the screws that fix the brackets to the pallet and remove the brackets.
4. Bring the handle bar into working position (see under "MOVEMENTS OF THE HANDLE BAR") to lower the machine from the pallet and pushing it forwards by the wheels inclining the machine a little backwards to avoid heavy contacts to the mechanical parts.
5. Keep the packaging for eventual transport needs.



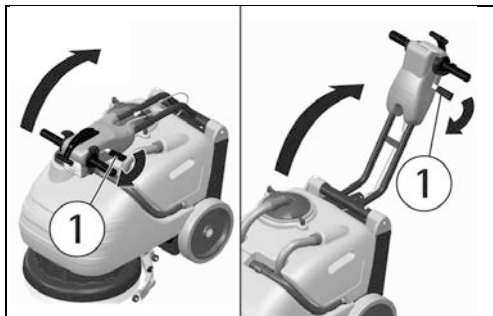
### MOVEMENTS OF THE HANDLE BAR

The handle bar in the package arrives in closed position.

To rotate the handle bar into one of the different working positions:

1. Pull up the release lever (1) near the handle bars.
2. Rotate the handle bar into the working position while holding the release lever (1).
3. Let go of the release lever (1) to lock the handle bar.

Use the same procedure for further height adjustment of the handle bar in order to find the most comfortable working position.



To avoid excessive stress on the handle bar it is recommended to empty the solution tank (see under "EMPTYING AND CLEANING OF THE SOLUTION TANK") if you were to cover very uneven flooring (eg. asphalt or cobblestones).

### CONNECTION BATTERIES

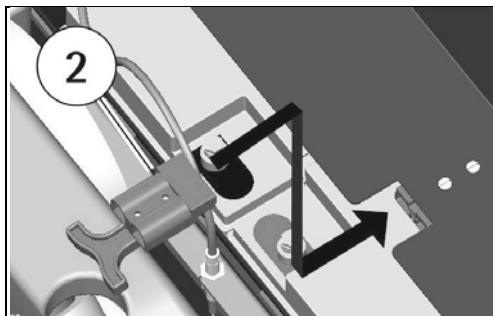
This machine is normally supplied with two batteries already connected, AGM in series or one Lithium battery, placed in its appropriate compartment under the recovery tank.

In case the batteries need to be replaced, please contact the authorized technical assistance.

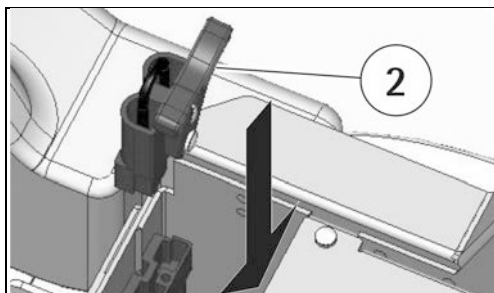
The replacement of AGM batteries must be made exclusively with batteries having the **identical** performances as the ones already installed, that is 12V 34Ah<sub>5</sub>.

The replacement of Lithium battery must be made exclusively with **original spare parts**.

With the connector (2) it is possible to connect or disconnect the batteries.







### BATTERY CHARGING

The presence of a label with the indication "AGM" placed on the frame in the rear part of the machine, identifies that the machine is equipped with AGM batteries and its suitable battery charger.

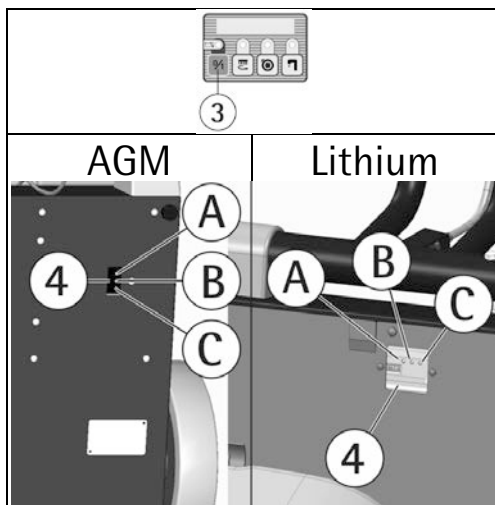
Switching on the machine using the ON/OFF switch (3), the charge level of the batteries (4) is visible.

A: green led on = batteries charged.

B: orange led on = batteries almost discharged.

C: red led on = complete discharge of the batteries.

When the led of the recharger becomes red (C), contemporarily the led of the ON/OFF switch (3) becomes red too, with consequent automatic switching off of all the functions of the machine. The leds are visible in the rear part of the machine for the AGM-version, while for the lithium battery they are placed internally.

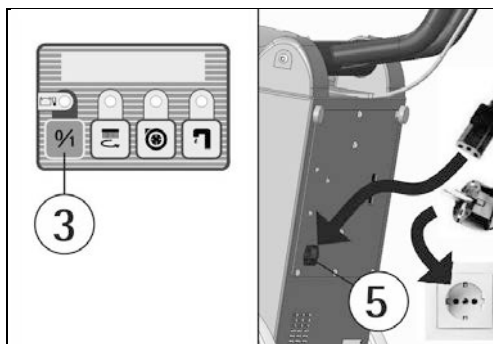


During the recharging operations the machine's functions are disabled.

To charge the batteries, park the machine on a level surface near to a mains single-phase socket. Switch off the machine at the on/off switch (3). Connect the mains cable supplied with the machine both to the machine (5) and to the outlet socket as indicated in the figure.

At the end of the recharging phase take off the mains cable.

The recharge phase is complete only when on the recharger the green led (A) comes on.



In order not to cause permanent damages to the batteries, never leave them completely discharged.

If a stop of more than two weeks of the machine is expected, disconnect the battery connectors (see under "CONNECTION BATTERIES").

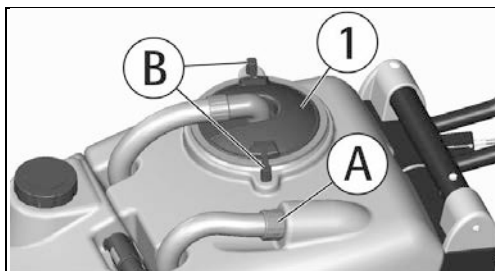
In case of AGM batteries, provide for their recharging after a total use of 30 minutes.

### BATTERIES DISPOSAL

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

### RECOVERY TANK

Check that the cover of the suction filter (1) is correctly secured, after rotating the levers (B). Furthermore, check that the squeegee hose is correctly seated in its seat (A).



### SOLUTION TANK

The capacity of the solution tank is indicated in the technical data.

Open the screw plug (6) situated on top and fill the solution tank with clean water at a maximum temperature of 50°C (122°F). Add the liquid detergent in the percentage recommended by the manufacturer. To avoid excessive foaming, which could cause problems to the suction motor, use the minimum percentage of detergent. Screw down the plug to close the tank.



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

### FLOOR CLEANING

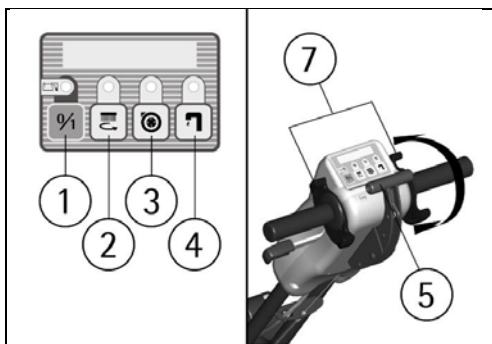
#### STARTING OF THE MACHINE

The push buttons on the instrument board are lighted with an upper green signal LED that shows the activation of each control.

1. Switch on the machine pressing the on/off switch (1).
2. Check the battery charge level (see under "BATTERY CHARGING").
3. Lower the squeegee by rotating downwards the handle of the squeegee lifting lever (5) placed in the centre of the handle bar.
4. Press the switch for the brush motor (2).
5. Press the switch for the suction motor (3). Press the switch for the solenoid valve (4).

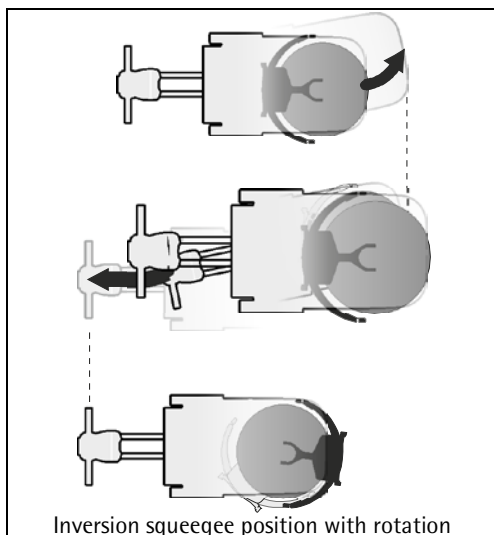
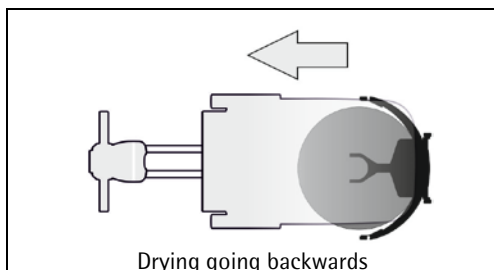
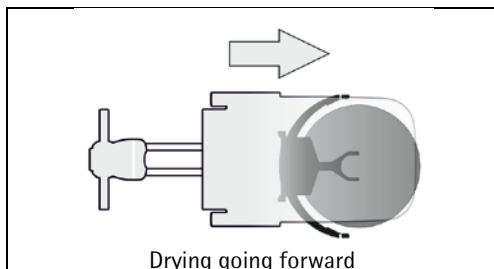
The machine is equipped with a solenoid valve, which activates the solution flow automatically when the scrub control levers (7) are engaged. Releasing these levers will stop the flow automatically.

6. Activating the levers (7) the brush will start rotating. The solution flow begins and the squeegee will start drying the floor.
7. During the first few meters (feet) check that the solution flow is appropriate. The flow adjuster of the solution is already adjusted at the factory to satisfy the cleaning of most floors. If it is necessary to adjust the quantity of solution onto the floor, adjust the lever of the flow adjuster (8).



### COMPLETE SQUEEGEE ROTATION

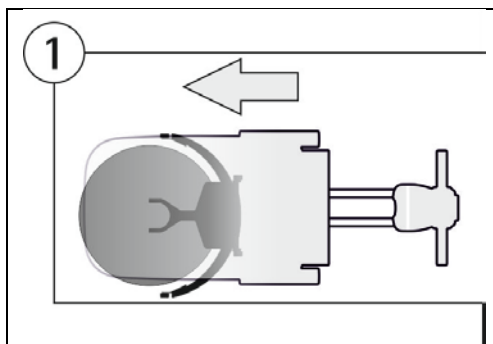
Thanks to the complete squeegee rotation, it is possible to wash and dry both in forwards and in backwards. Following the course indicated in the drawings, the reversal of the squeegee position is made easier, permitting the drying also in reverse motion.



### DRYING GOING BACKWARDS

With the squeegee positioned in the front part of the machine it is possible to dry where a traditional squeegee does not manage. Here below some examples of how to use the functionalities of the complete squeegee rotation.

Wash the interested surface (1).

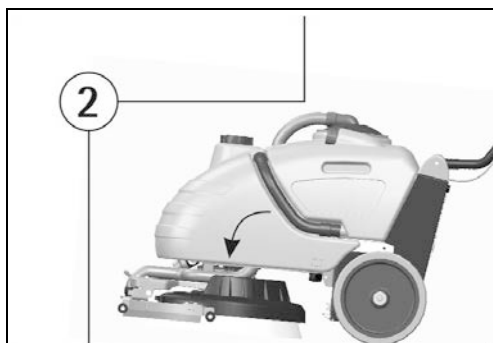


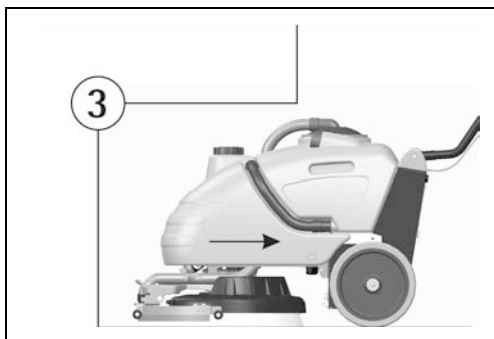
Rotate the squeegee to the right or to the left (see under "COMPLETE SQUEEGEE ROTATION") to bring it to the front.

Lift slightly the machine (2) and get again onto the surface to dry (3).

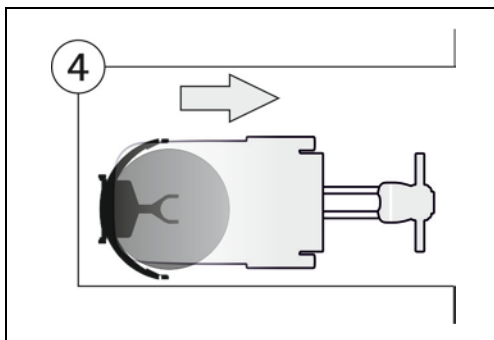


When the machine is lifted, release the handle bar levers so to stop the brush rotation avoiding therefore water splashes.



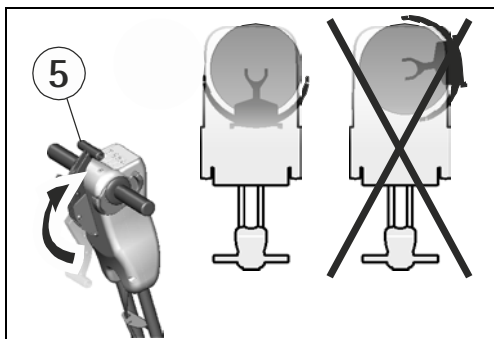
**GB**

Proceed backwards to dry the surface just washed (4).



### SQUEEGEE LIFTING

To lift the squeegee rotate upwards the lever (5) situated in the central part of the handle bar.



It is possible to lift the squeegee when this is situated close to the central point.

**GB**

If the squeegee is not close to the central point, even moving the lever (5) it will not lift.



During working operation, the lifting lever of the squeegee has to be kept in the low position.

### HANDLE BAR ADJUSTMENT

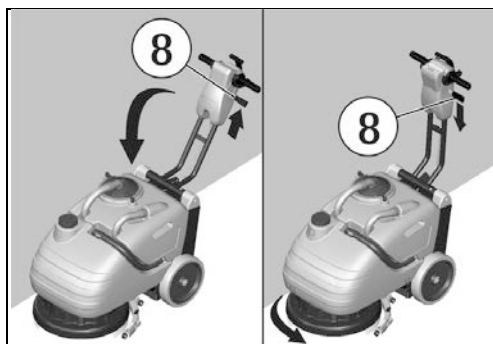
When approaching obstacles or near walls, it is possible to simplify the handling of the machine by adjusting the handle bar more vertically with respect to the machine.

To rotate the handle bar:

1. Lift the release lever (8) present near the handle bar.
2. Rotate the handle bar into the new working position keeping the release lever (8) pulled.
3. Release the lever (8) to lock the handle bar in the desired position.

Once the obstacle has been passed and the maneuver completed repeat the operation to return to the previous working position.

This operation is possible also with the machine in motion maintaining pressed contemporarily the handle bar levers.



### 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, closing the suction hose and stopping the suction.

When this happens, it is necessary to empty the recovery tank.

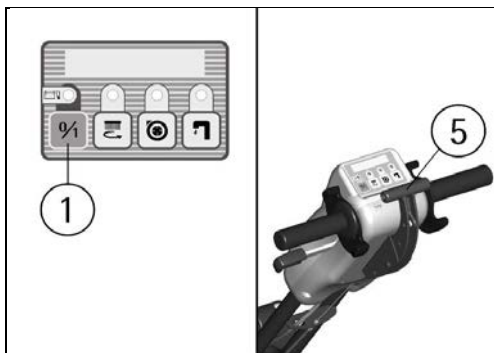
1. Hold the exhaust hose (9) of the recovery tank.
2. Take off the exhaust plug and empty the recovery tank into appropriate containers, according to the standard norms for the liquid disposal.



## STOPPING THE MACHINE AFTER CLEANING OPERATION

Before carrying out any type of maintenance:

1. Switch off the on/off switch (1).
2. Lift the squeegee rotating upwards the lever (5) placed in the centre of the handle bar (see under "SQUEEGEE LIFTING").
3. Move the machine to an appropriate place for tank draining.



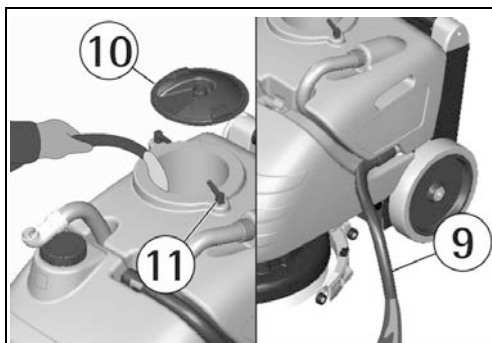
The machine is not equipped with a parking brake, therefore do not leave it on slopes.

## DAILY MAINTENANCE

### RECOVERY TANK CLEANING



1. Hold the exhaust hose (9) of the recovery tank.
2. Take off the exhaust plug and empty the recovery tank into appropriate containers (see under "OVERFLOW DEVICE").
3. Take off the suction cover (10) after rotating the blocking levers (11).
4. Empty the tank by means of the hose (9).
5. Rinse the tank with a water jet.



### EMPTYING AND CLEANING OF THE SOLUTION TANK AND FILTER



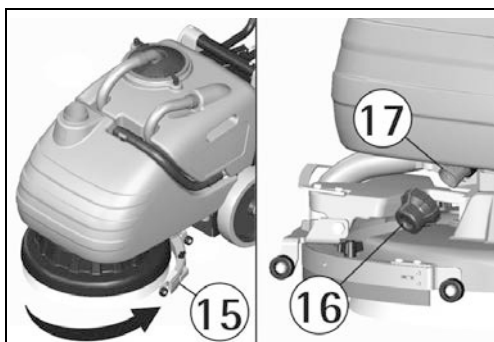
To empty the solution remained in the solution tank:

1. Move the machine to an appropriate place for tank draining.
2. Switch off the machine pressing the on/off switch.
3. Unscrew the cap (12) of the solution tank filling and take off the filter (14).
4. Unscrew the drain plug (13) placed in the rear low left part of the machine and wait that all the solution has drained off.

GB



5. Rotate manually the squeegee (15) towards the front part of the machine so to have free access to the filter (16).
6. Unscrew the filter cover (16), remove the cartridge (17) and rinse it with a water jet.
7. Reassemble all parts.

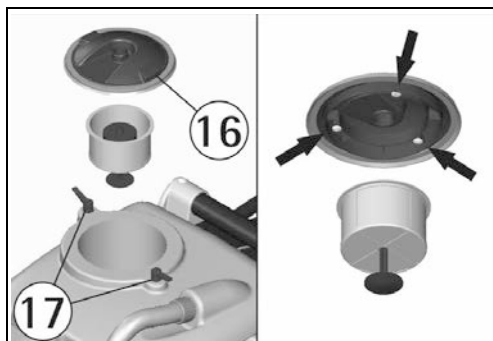


#### SUCTION FILTER CLEANING



1. Take off the suction cover (16) after rotating the blocking levers (17).
2. Take off the filter with the float bending the filter edge to release it from the screws present on the cover.
3. Clean all parts with a water jet and especially the surfaces and the filter bottom.
4. Carry out carefully the cleaning operations.
5. Reassemble everything.

GB



#### VERTICAL POSITIONING OF THE MACHINE

The machine can assume a vertical positioning tipped over at the back after having folded the handle bar onto the machine.

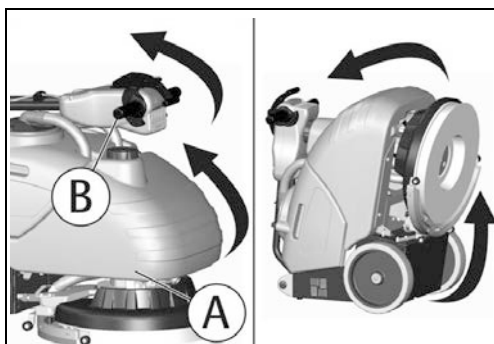
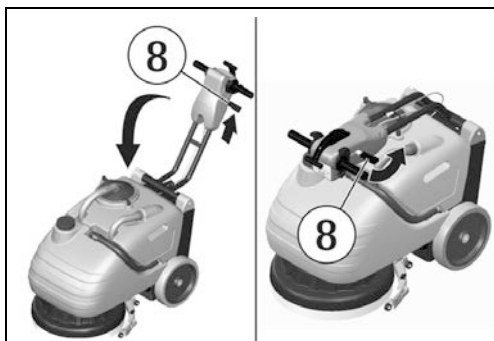
This position allows the unit to be stored in a small space and simplifies maintenance operations.

To rotate the machine it is necessary to:

1. Switch off the machine.
2. Check that both tanks are empty, otherwise provide to empty them (see under "EMPTYING AND CLEANING OF THE RECOVERY TANK" and "EMPTYING AND CLEANING OF THE SOLUTION TANK").
3. Pull up on the handle bar release lever (8) near the handle bar.
4. Rotate the handle bar towards the tanks keeping the release lever (8) pulled.
5. Release the lever (8) to lock the handle bar.
6. Hold the machine with both hands in point (A) of the tank side and (B) from the handle bar as indicated in the figure.
7. Lift the front part of the machine rotating it on the rear wheels and bringing it into the vertical position as shown in the figure.



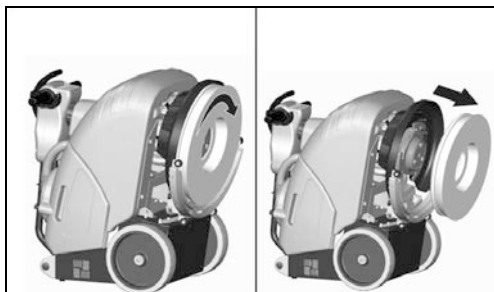
The position of the vertical parking is indicated when you expect not to use the machine for a period of more than 2/3 days, to avoid that the weight of the machine may damage the brush compromising hence the correct functioning of the machine.



### BRUSH REMOVAL/FITTING

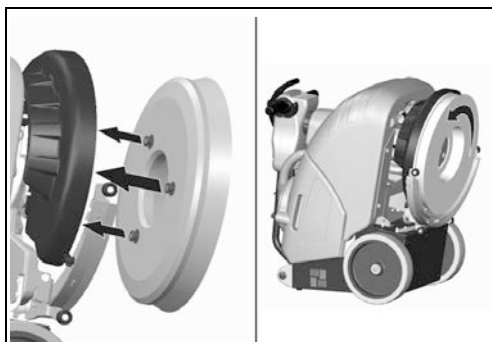


1. Tip the machine over backwards (see under "VERTICAL POSITIONING OF THE MACHINE") paying attention to remember to switch off the on/off switch and to empty the tanks.
2. With the machine in this position rotate the brush clockwise, as indicated in the figure, until it is released from their seats of the brush holder plate.



3. To reassemble the brush insert the coupling buttons into the slots of the brush holder plate and rotate counterclockwise until it locks.

It is possible to use also other brush types, depending on the floor type to be cleaned and on its dirt conditions (see under "RECOMMENDED BRUSHES").



### BRUSH CLEANING



Remove the brush and clean it with a water jet (for the disassembly see under "BRUSH REMOVAL/FITTING").

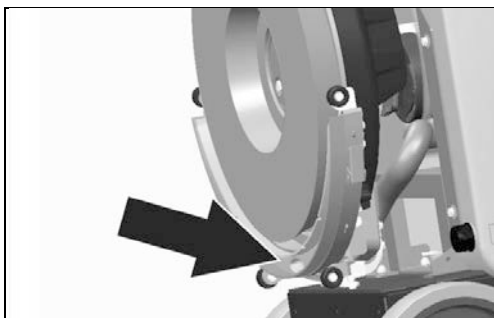
### SQUEEGEE CLEANING



Keeping the squeegee clean guarantees the best drying action.

1. Tip over the machine backwards (see under "VERTICAL POSITIONING OF THE MACHINE") paying attention to remember to switch off the on/off switch and to empty the tanks.
2. With the machine in this position take care to clean both the rubber squeegee blades and particularly the suction inlet. Also remove any fibres (string or hair) that can prevent the support turning freely.





## ORDINARY MAINTENANCE

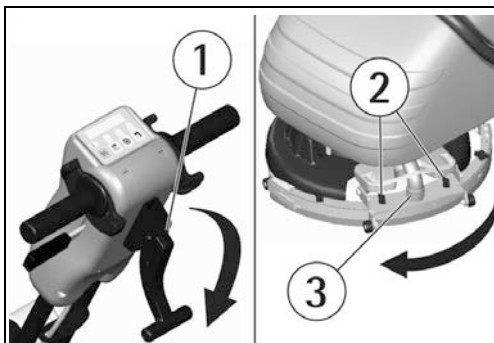
### REAR SQUEEGEE RUBBER REPLACEMENT



Check the squeegee rubber wear and eventually turn or replace it.

For the replacement it is necessary to:

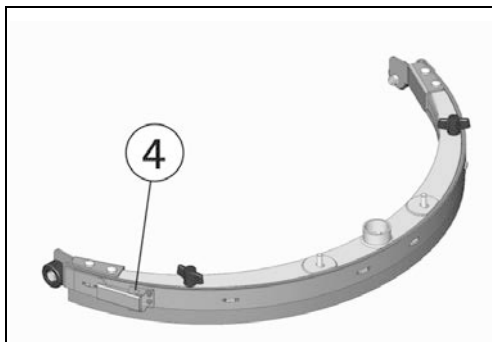
1. Lower the squeegee by lowering the handle lever (1) placed in the centre of the handle bar.
2. Rotate the squeegee outwards.
3. With the squeegee in this position operate on the wing nuts (2) unscrewing them completely to free the squeegee.
4. Take off the coupling (3) of the squeegee hose and take off the squeegee.



5. Release the catch (4) of the rubber blade clamp and take the rubber off to turn it to a new side or replace it.

6. Check that the coupling and the squeegee hose are not obstructed and if necessary, clean the entire assembly.

To reassemble the squeegee reverse the operations above.



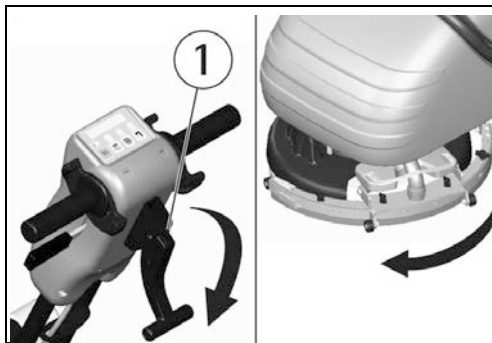
### FRONT SQUEEGEE RUBBER REPLACEMENT



Check the wear of the front squeegee rubber and replace it if worn out.

For the replacement it is necessary to:

1. Lower the squeegee by lowering the handle lever (1) placed in the centre of the handle bar.
2. Rotate the squeegee outwards.

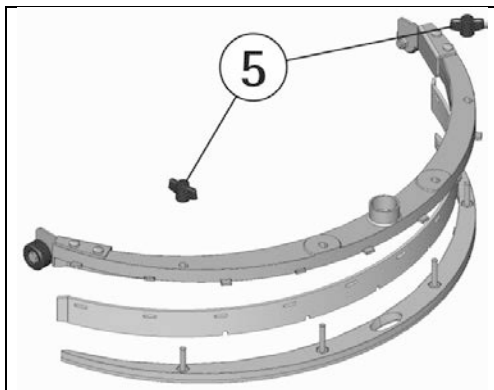


3. With the squeegee in this position take it off and then take off the rear squeegee rubber (see under "REAR SQUEEGEE RUBBER REPLACEMENT").
4. Take off the wing nuts (5) in the upper part of the squeegee body, separate the two



metal parts that form the squeegee body to take off the front rubber.

5. Clean all the components with water.  
To reassemble the squeegee reverse the operations above.

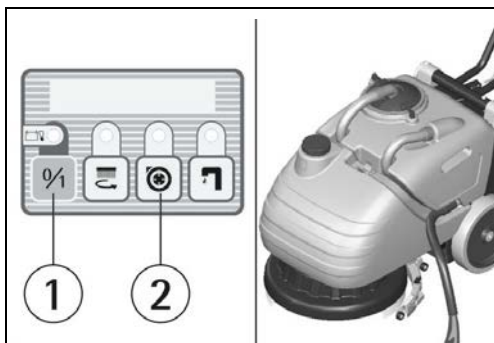


## TROUBLESHOOTING GUIDE

### THE SUCTION MOTOR DOES NOT WORK

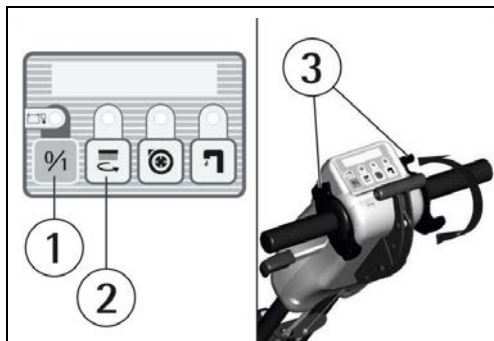
1. Check the charge level of the batteries that is visible when switching on (1) (see under "BATTERY CHARGING").
2. Verify that the suction motor switch (2) is activated checking that its green signal lamp is on.
3. Check the level in the recovery tank (see under "OVERFILL PROTECTION") and if necessary, empty the tank.

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



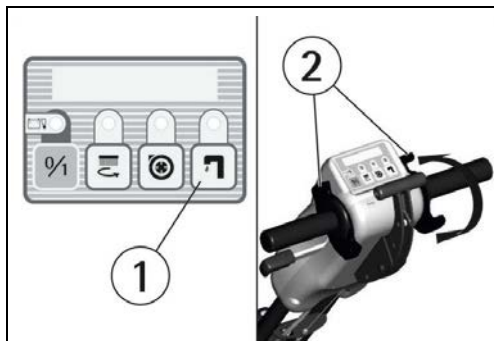
### THE BRUSH MOTOR DOES NOT WORK

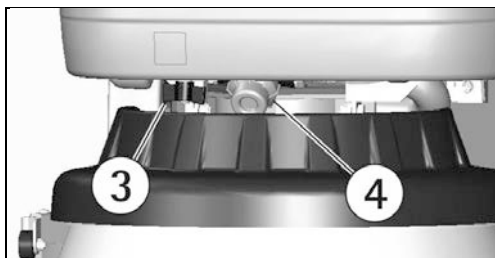
1. Check the charge level of the batteries that is visible when switching on (1) (see under "BATTERY CHARGING").
2. Verify that the brush motor switch (2) is activated checking that its green signal lamp is on.
3. Activate the scrub control levers (3).  
If the problem persists, please contact the authorized technical assistance.



### INSUFFICIENT WATER ON THE BRUSH

1. Check that the solenoid valve switch (1) is activated verifying that the green signal lamp is on.
  2. Check the level of the liquid in the solution tank (see under "SOLUTION TANK").
  3. Check that the solution flow adjuster (3) placed in front underneath the solution tank is sufficiently open.
  4. Press the brush control levers (2).
  5. Check that the solution filter (4) is clean.
- If the problem persists, please contact the authorized technical assistance.





### THE MACHINE DOES NOT CLEAN PROPERLY

1. The brush does not have the suitable bristle dimension: use only original brushes. For advice, contact the authorized technical assistance.
2. The detergent solution is insufficient: open the solution flow adjuster (3).
3. Check that the liquid detergent is in the recommended percentage.

Contact the authorized technical assistance for advice.

### THE SQUEEGEE DOES NOT DRY PERFECTLY

1. Check that the squeegee rubbers are clean.
2. Check that the coupling of the suction hose is correctly inserted in the proper seat on the recovery tank and on the squeegee bar.
3. Check the suction filter and clean it.
4. Replace the rubbers if worn.
5. Check that the suction motor switch is on.
6. Check the level in the recovery tank (see under "OVERFILL PROTECTION") and if necessary, empty the tank.

### EXCESSIVE FOAM PRODUCTION

Check that low foam detergent has been used. Add small quantities of anti foam liquid into the recovery tank.

Do not use excessive amounts of detergent as even with low foaming agent, the foam will be created and lead to vacuum motor damage. Also excessive detergent will result in solution pipe blockages over time.

Please be aware that a larger quantity of foam is produced when the floor is not very dirty. In this case please dilute detergent solution.

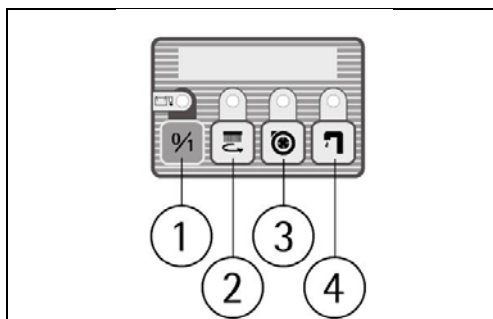
### LED (2), (3) AND (4) BECOME RED

If the machine is in the driving sense, with the general switch (1) on green and one of the three led (2), (3) or (4) change colour, from green to red, it means that, an amperemetric protection is taking place, for example:

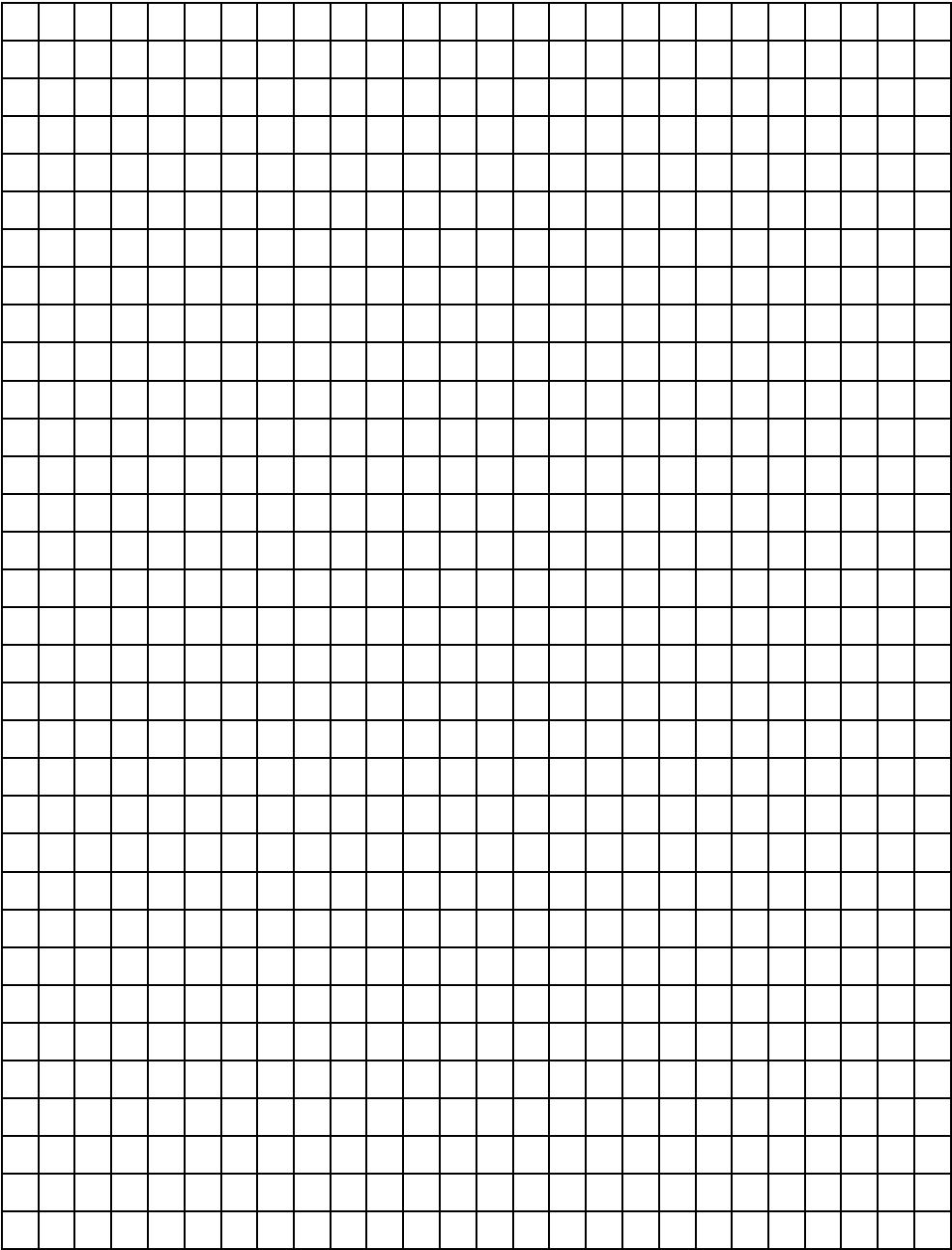
- LED (2) RED: the brush motor is having too big stress.
- LED (3) RED: the suction motor is aspirating water and therefore is forcing too much.
- LED (4) RED: the coil of the solenoid valve may be short-circuited.

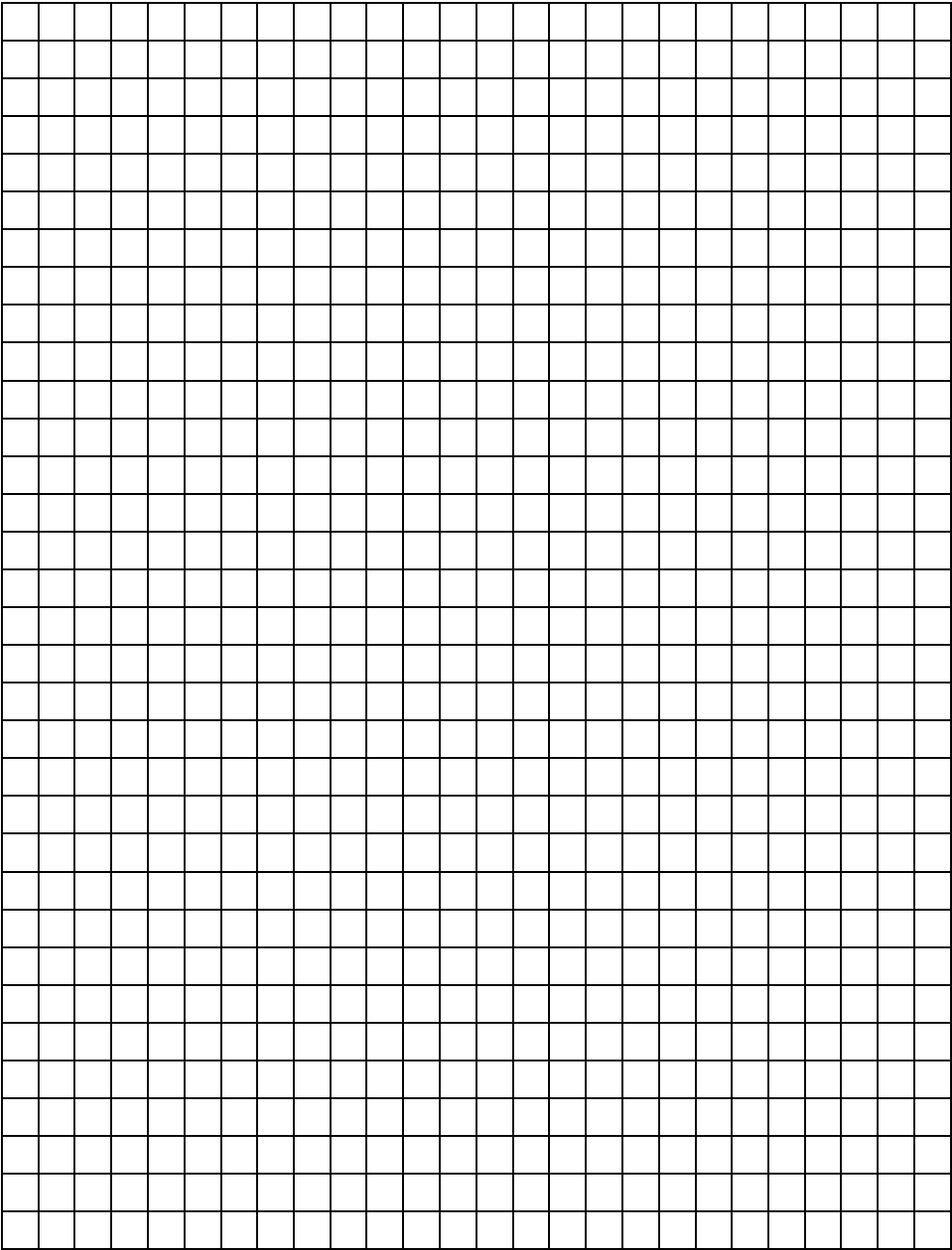
To reset, switch off the general switch (1), wait a few minutes and then switch on again.

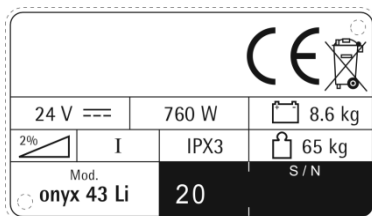
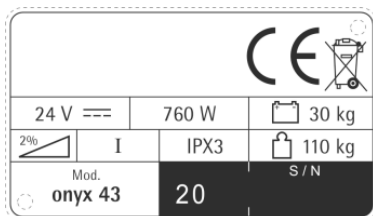
If the problem persists, please contact the authorized technical assistance.



PROGRAMMED MAINTENANCE			
INTERVENTION	DAILY	WEEKLY	ORDINARY/MONTHLY
RECOVERY TANK CLEANING	•		
SUCTION FILTER CLEANING	•		
BRUSH CLEANING	•		
BRUSH REMOVAL	•		
SQUEEGEE ASSEMBLY CLEANING			• if required
FRONT SQUEEGEE RUBBER REPLACEMENT			• if required
REAR SQUEEGEE RUBBER REPLACEMENT			•
SQUEEGEE HOSE CLEANING			•
SOLUTION TANK CLEANING			
SOLUTION FILTER CLEANING		•	







## RECOMMENDED BRUSHES

Brushes must be chosen depending on type of floor and dirt to be removed.

The employed material and the bristle diameter are the elements that distinguish different types of brushes.

MATERIAL		CHARACTERISTICS		
PPL (Polypropylene)		Good wear resistance. Maintains characteristics with hot water up to 60°C. It is not 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, softer bristles penetrate more easily and deeper. Please be aware that when brush bristles are worn out they become rigid and unable to penetrate and clean deeper. This may also cause brush vibration with thicker bristles.		
PAD HOLDER		Pads are recommended to clean smooth surfaces. The pad holder has anchor points to retain the pad. It is important that the height of the pad holder with its pad is the same as the one of the brush.		
MACHINE	CODE	QUANTITY	DESCRIPTION	USE
onyx 43	48903120	1	Brush PPL 0,6 Ø430/17"	Smooth floors with small joints and persistent dirt.
	48903130	1	Brush PPL 0,9 Ø430/17"	Floors of resistant material and particularly dirty.
	48903140	1	Brush TYNEX Ø430/17"	Floors of resistant material and particularly dirty.
	48903150	1	Brush 5-mix Ø430/17"	For all types of floors.
	48803020	1	Pad holder Ø425/16.7"	For pads of 17", for smooth surfaces cleaning.
	48803050	1	Pad holder Ø425/16.7" + center lock green	For pads of 17", for smooth surfaces cleaning.
	48803060	1	Pad holder Ø425/16.7" + center lock black	For pads of 17", for smooth surfaces cleaning.