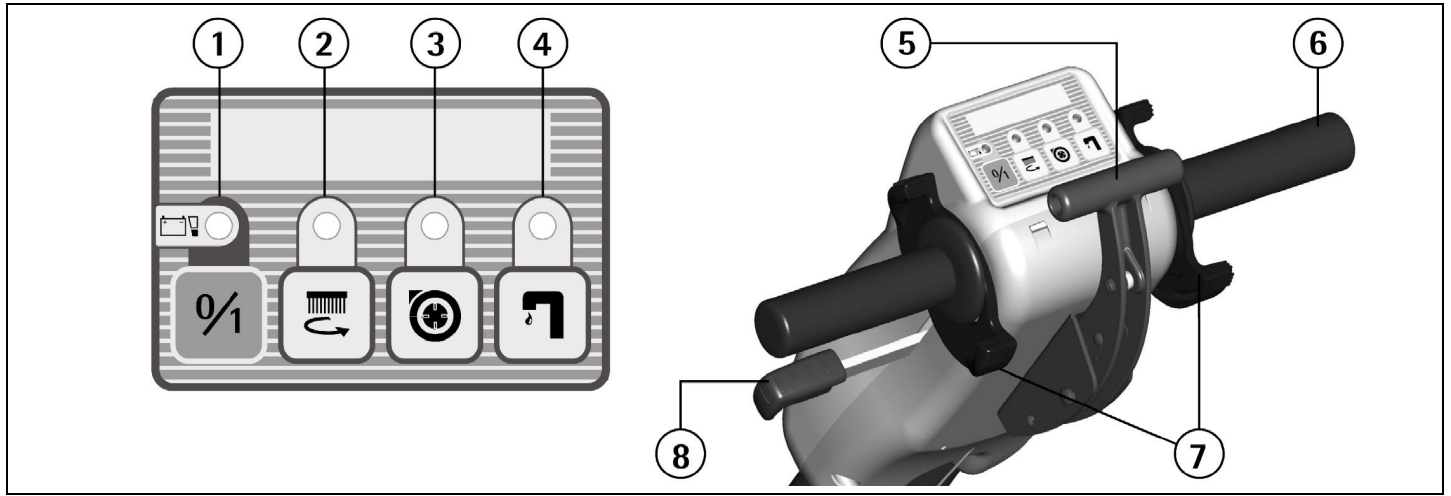


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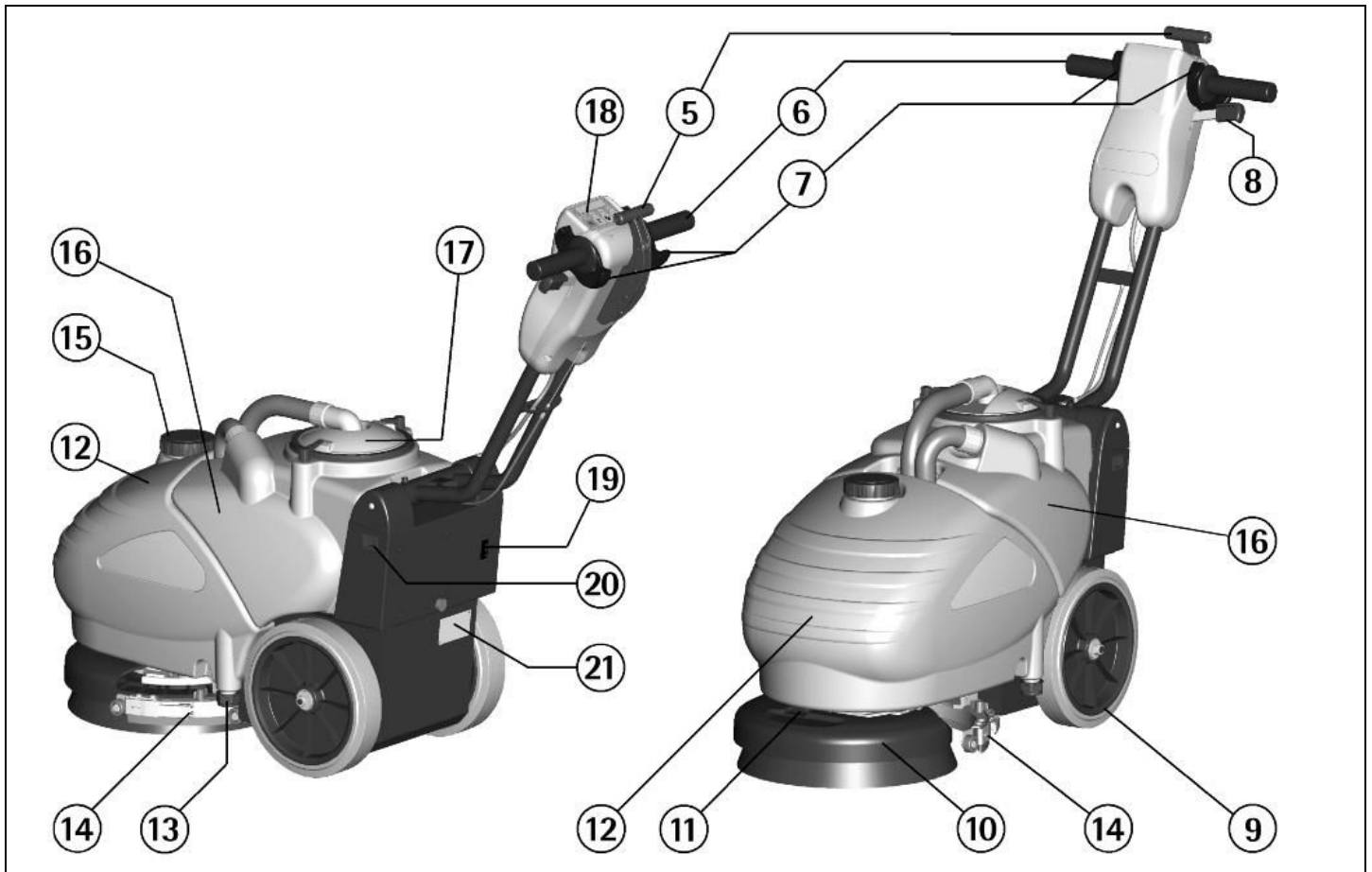
**LEGEND INSTRUMENT BOARD AND CONTROLS**

- |   |                             |
|---|-----------------------------|
| 1. ON/OFF SWITCH WITH SIGNAL SIGNAL LAMP  | 5. SQUEEGEE LIFT LEVER      |
| 2. BRUSH MOTOR SWITCH WITH SIGNAL LAMP    | 6. HANDLE BARS              |
| 3. SUCTION MOTOR SWITCH WITH SIGNAL LAMP  | 7. SCRUB CONTROL LEVERS     |
| 4. SOLENOID VALVE SWITCH WITH SIGNAL LAMP | 8. HANDLE BAR RELEASE LEVER |



**LEGEND MACHINE**

- |                              |   |
|------------------------------|---|
| 9. WHEELS                    | 16. RECOVERY TANK                                 |
| 10. BRUSH BASE ASSEMBLY      | 17. SUCTION COVER                                 |
| 11. SOLUTION FLOW ADJUSTMENT | 18. INSTRUMENT BOARD                              |
| 12. SOLUTION TANK            | 19. BATTERY CHARGE LEVEL LED INDICATOR (AGM)      |
| 13. DRAIN PLUG SOLUTION TANK | 20. MAINS PLUG FOR ELECTRIC CABLE BATTERY CHARGER |
| 14. SQUEEGEE ASSEMBLY        | 21. SERIAL NUMBER PLATE                           |



TECHNICAL DESCRIPTION		with batteries AGM	with batteries XFC
Cleaning width	mm	345	345
Squeegee width	mm	410	410
Battery voltage	V	24	24
Battery capacity	Ah <sub>5</sub>	28	35
Power rating	W	430	430
Working capacity, up to	sqm/h	1240	1240
Brush diameter	mm	345	345
Brush rpm	rpm	170	170
Brush pressure (max)	kg	25	25
Suction vacuum	mbar	90	90
Type of drive		semi automatic	semi automatic
Maximum gradient	%	2	2
Capacity solution tank	l	15	15
Capacity recovery tank	l	16	16
Machine length (min)	mm	745	745
Machine height	mm	550	550
Machine width	mm	415	415
Machine weight (empty, with batteries)	kg	65	70
Weight of the batteries	kg	22	26,4
Recharging time max	h	10	2
Battery compartment with support (L x W x H)	mm	215 x 270 x 190	---
Battery compartment without support (L x W x H)	mm	---	215 x 257 x 205
Acoustic pressure level (in conformity with EN604_01)	dB (A)	66,8	66,8
Class		I	I
Protection level	IP	23	23
Battery charger voltage	V ~	230	230
Battery charger frequency	Hz	50	50
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.

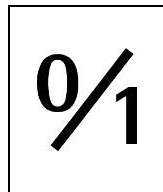
## GENERAL RULES OF SAFETY

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.
- The machine must be used exclusively by authorized staff that have been instructed on its correct and proper use.
- During the operation of the machine, pay attention to other people and especially to the children.
- In the presence of children guard the machine, so that they do not play with it.
- Do not touch or pass over the mains cable while the brush is operating.
- The socket for the power supply must be equipped with a standard earthing (ground) system.
- Do not damage the mains cable by squasings, bendings or stressings.
- Check the integrity of the mains cable. If during working a damage is noticed, stop the machine immediately and replace the cable.
- Do not mix different detergents, avoiding harmful odours.
- Storage temperature: between 0°C and +55°C.
- Perfect operating temperature: between 0°C and 40°C.
- The humidity should not exceed 95%.
- Do not use the machine in explosive atmosphere.
- Do not use the machine as a means of transport.
- Do not go up or down the stairs.
- Do not use acid solutions which could damage the machine and/or the persons.
- Avoid brush operation when the machine is standing still in order to prevent floor damages.
- 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 strike shelvings or scaffoldings where there is danger of falling objects.
- Do not use the machine on areas having a higher gradient than the one stated on the number plate.
- 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.
- If the machine does not work properly, check by conducting simple maintenance procedures. Otherwise, as for technical advice from an authorized assistance centre.
- 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".
- For any cleaning and/or maintenance operation take off the power supply from the machine.

- 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.
- Provide for the scrapping of the material of normal wear (brushes, squeegee blades etc.) 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.

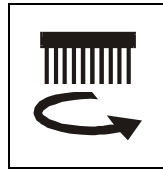
## SYMBOLOLOGY



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



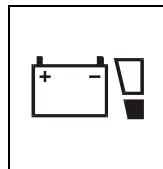
Symbol denoting the solution valve. Indicates the switch and the signal lamp of the solenoid valve.



Symbol denoting the brush. Indicates the switch and the signal lamp of the brush motor.



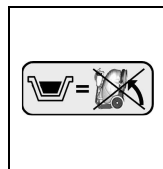
Symbol denoting the suction motor. Indicates the switch and the signal lamp of the suction motor.



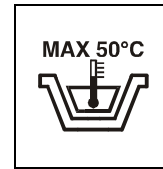
Symbol denoting the charge level of the batteries.



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



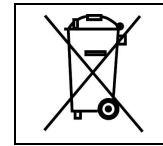
This symbol indicates that tanks are to be emptied before rotating the machine.



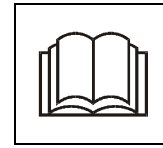
Indication of the maximum temperature of the solution detergent.



Symbol that indicates the flow adjuster of the detergent solution.



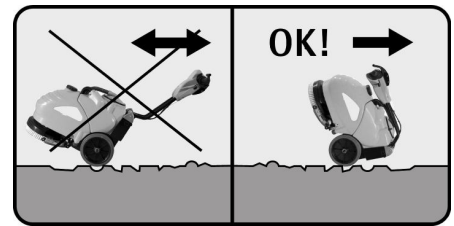
Symbol denoting the crossed bin. Indicates that at the end of its activity, the machine has to be disposed conforming to the laws in force.



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



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



Symbol denoting the correct mode to transfer the machine on uneven surfaces.

## BEFORE USE

### HANDLING OF THE PACKED MACHINE

The machine is supplied with suitable packing. The total weight is 75 kg (max).

Packing dimensions:

**without pallet:**

**Base:** 80 cm x 43 cm **Height:** 65 cm

**with pallet:**

**Base:** 80 cm x 43 cm **Height:** 75 cm

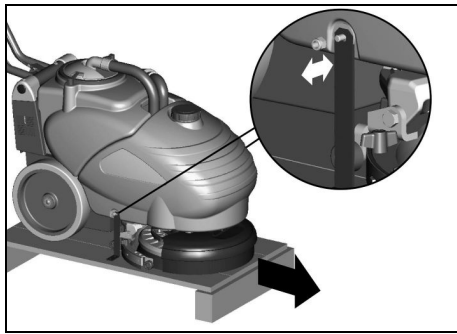


### ATTENTION:

Do not stack more than 2 machines.

### UNPACKING OF THE MACHINE

1. Remove the outer package.
2. Loosen the two nuts that fix the two brackets to the machine.
3. Unscrew the screws that fix the brackets to the pallet and remove the brackets.
4. Retighten the two nuts into their initial position onto the machine, necessary for the tank blocking.
5. 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.
6. Keep the packaging for eventual transport needs.



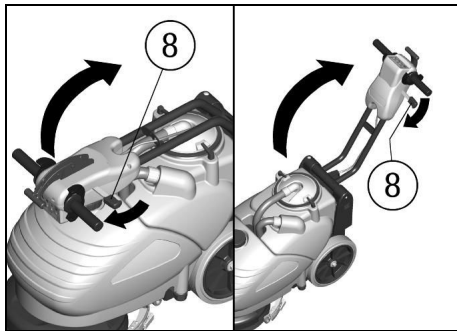
### MOVEMENTS OF THE HANDLE BAR

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 (8) near the handle bars.
2. Rotate the handle bar into the working position while holding the release lever (8).
3. Let go of the release lever (8) 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.



### CONNECTION BATTERIES

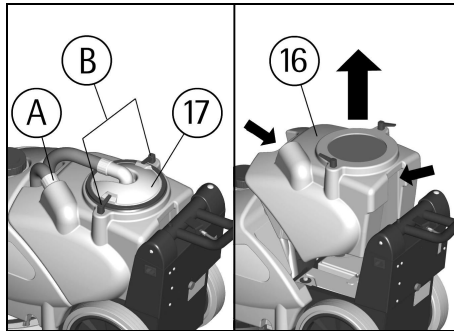
This machine is supplied with two batteries already connected in series, placed in its appropriate compartment under the recovery tank.

In case the batteries need to be disassembled and/or replaced, please contact the authorized technical assistance.

The replacement must be made exclusively with batteries which have the identical performances as the ones already installed.

To reach the battery compartment it is necessary to:

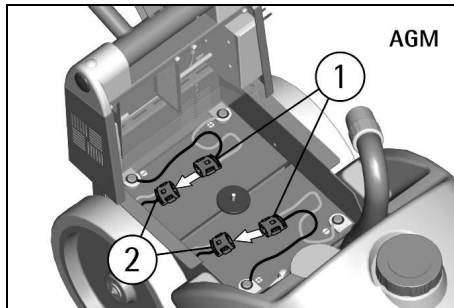
1. Remove the squeegee hose from its seat (A).
2. Remove the suction filter cover (17) after turning the blocking levers (B).
3. Lift and remove the recovery tank (16) holding it from the provided handles. One on the front and one on the rear of the tank (shown with small arrows in the drawing below).



### Connection AGM batteries:

Connect both battery connectors (1) to the connectors of the machine (2).

If a longer stop of the machine is expected, disconnect the battery connectors (1).

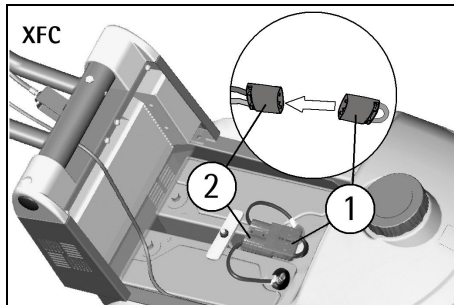


### Connection XFC batteries:

Together with the machine a connector (1) is supplied which is in the plastic bag containing the present use and maintenance.

Insert the connector (1) into the other one (2) fixed to the battery cables of the machine.

If a longer stop of the machine is expected, take off the connector (1), being careful to place it where it is not forgotten.



### ATTENTION:

All installation and maintenance operations must be executed by trained staff, using suitable protective accessories.

### BATTERY CHARGING

#### (STANDARD VERSION WITH AGM BATTERIES)

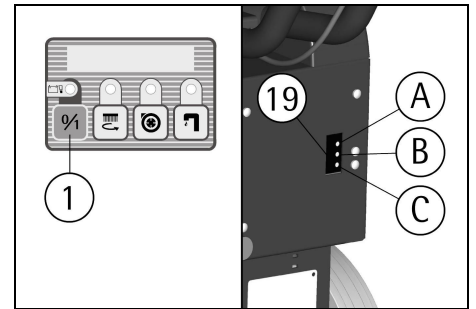
The charge level of the batteries is visible by first switching on the machine using the ON/OFF switch (1) placed on the instrument board. Check the three

luminous leds placed on the frame in the rear part of the machine (19).

A: green led on = batteries charged.

B: orange led on = batteries almost discharged.

C: red led on = complete discharge of the batteries with consequent automatic switching off of all the functions (immediate recharge necessary).



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 (1).

Connect the mains cable supplied with the machine both to the machine (20) and to the outlet socket as indicated in the figure.

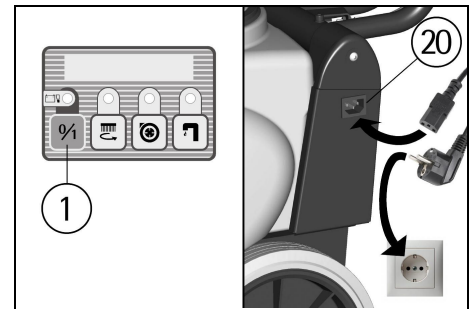
At the end of the recharging phase take off the mains cable.

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



### ATTENTION:

In order not to cause permanent damages to the batteries, never leave them completely discharged, providing for their immediate recharging. Furthermore, if a stop of more than two weeks of the machine is expected, disconnect the battery connectors (see under "CONNECTION BATTERIES").



### BATTERY CHARGING

#### (PLUS VERSION WITH XFC BATTERIES)

Machines fitted with XFC batteries (pure lead) and suitable charger are labelled with the "plus" logo on the rear.

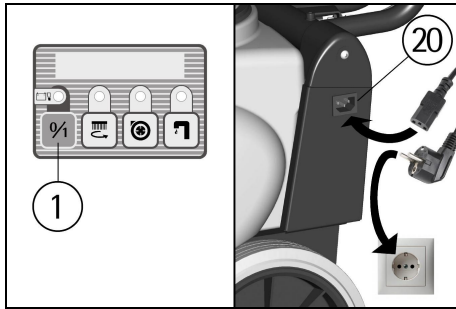
There is a phase in which the green led of the general switch (1) starts to blink. This is the best condition to carry out the battery recharging. When the led becomes red, this means that the complete discharge of the batteries has been reached with consequent automatic switching off of all the functions of the machine.

This type of equipment offers the possibility to continue working also with the discharged batteries connecting the machine to the mains system with the mains cable.

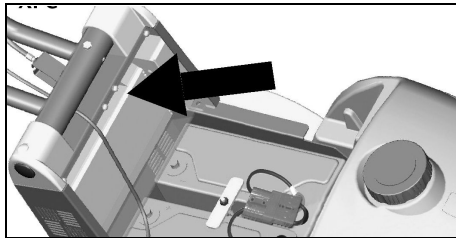
The battery charger supplies to the machine a greater electric current than that required for the functioning of the machine.

The remaining current not used for the machine allows a slow recharging of the batteries. For a faster recharge it is necessary to switch off the machine.

NOTE: Connect the mains cable supplied with the machine both to the machine (20) and to the outlet socket as indicated in the figure. Insert the plug into a single-phase socket.



The recharge phase is complete only when on the recharger the green led (A) comes on. The leds of the recharger are easily visible through the slot present under the transparent protection, by taking off the recovery tank and reaching the battery compartment (see under "CONNECTION BATTERIES").



**ATTENTION:**  
Never charge batteries with a non-suitable charger. Strictly follow the instructions supplied by the batteries and recharger manufacturer.

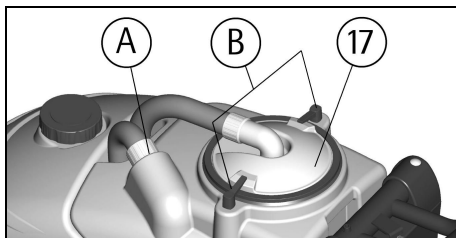
**ATTENTION:**  
In order not to cause permanent damages to the batteries, never leave them completely discharged, providing for their immediate recharging. In case of stops of more than two weeks of the machine, take off the battery connector (see under "CONNECTION BATTERIES").

#### 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 (17) is correctly secured, after rotating the levers (B). Furthermore, check that the squeegee hose is correctly seated in its seat (A).

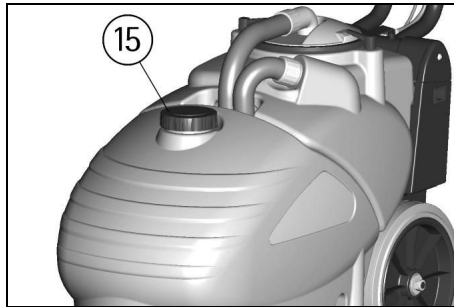


#### SOLUTION TANK

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

Open the screw plug (15) situated on top and fill the solution tank with clean water at a maximum temperature of 50°C. 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.



#### ATTENTION:

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.

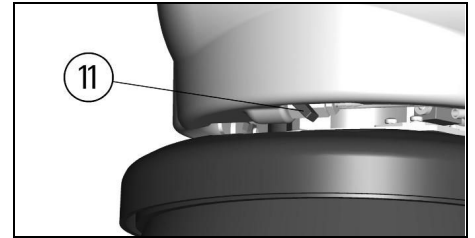
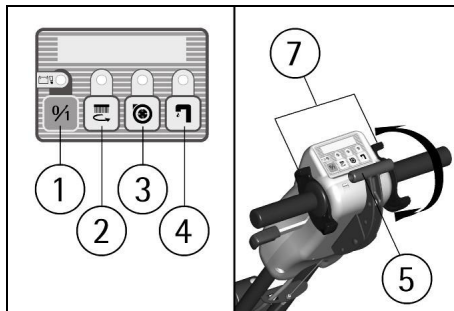
1. Switch on the machine pressing the on/off switch (1).
2. Check the battery charge level (see under "BATTERY CHARGING").
3. Lower the squeegee by rotating downwards the handle of the squeegee lifting lever (5) placed in the centre of the handle bar.
4. Press the switch for the brush motor (2).
5. Press the switch for the suction motor (3).
6. 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.

7. Activating the levers (7) the brush will start rotating. The solution flow begins and the squeegee will start drying the floor.

8. During the first few meters 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 (11).

9. When moving the machine backwards, make sure that the squeegee is lifted.



#### HANDLE BAR ADJUSTMENT

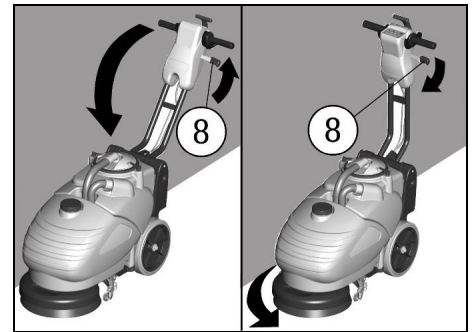
When approaching obstacles or near walls, it is possible to simplify the handling of the machine by adjusting the handle bar more vertically with respect to the machine.

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 manoeuvre 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 (7).



#### OVERFILL PROTECTION

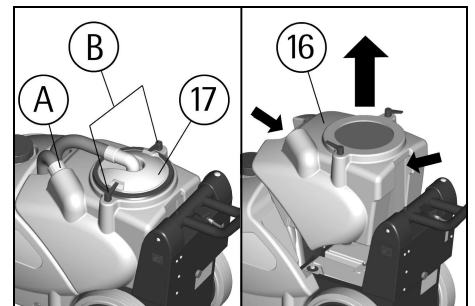
In order to avoid serious damages to the suction motor, the machine is equipped with a float that intervenes when the recovery tank is full, closing the suction hose and stopping the suction.

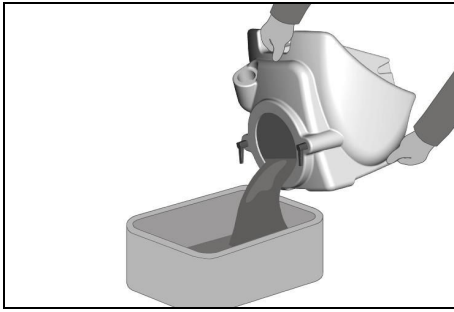
When this happens, it is necessary to empty the recovery tank.

1. Switch off the machine pressing the on/off switch.
2. Take off the suction filter cover (17) after turning the blocking levers (B).
3. Take off the squeegee hose from its seat (A).
4. Lift and remove the recovery tank (16) holding it from the provided handles, one on the front and one on the rear of the tank. Empty the recovery tank into appropriate containers, according to the standard norms for the liquid disposal.
5. Reassemble everything.

#### ATTENTION:

This operation should be carried out wearing gloves to prevent contact with dangerous solutions.

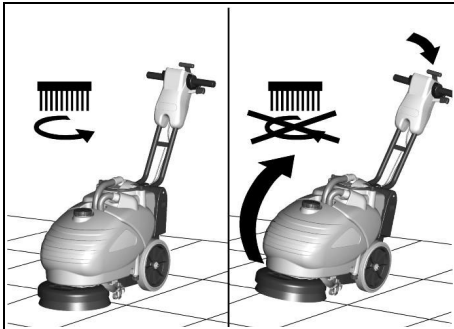




#### SECURITY DEVICE BRUSH LIFTING (OPTIONAL)

A security device prevents brush motor activation when the brush is lifted from the floor during operation. To move the machine, push down the handle bar so that the front of the machine rotates upwards pivoting on the main wheels of the machine and consequently the brush is lifted from the floor. The device intervenes also when the wheels and the brush are not on the same surface. The presence of this device prevents any possible risk because the brush is stopped.

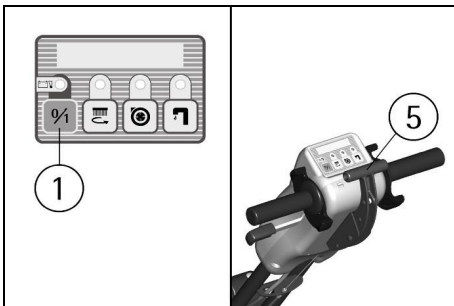
Returning to the normal working position on an even surface with the brush rested onto the floor, re-establishes immediately its normal functioning.



#### 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.
3. Move the machine to an appropriate place for tank draining.



#### ⚠ ATTENTION:

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

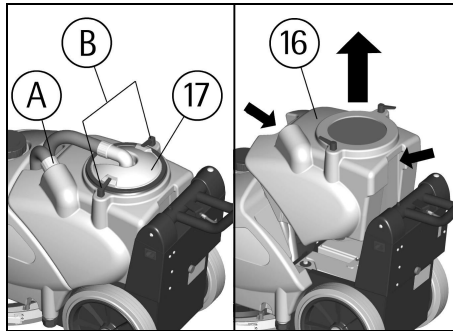
#### DAILY MAINTENANCE

##### EMPTYING AND CLEANING OF THE RECOVERY TANK

To empty and clean the recovery tank.

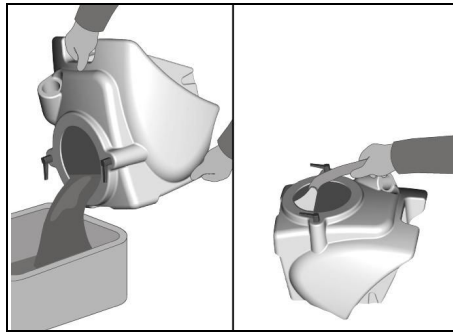
1. Switch off the machine pressing the on/off switch.

2. Take off the suction cover (17) after rotating the blocking levers (B).
3. Take off the squeegee hose (A) from the seat.
4. Lift and take off the recovery tank (16) holding it from the provided handles located on the front and back of the tank.



Empty the recovery tank into appropriate containers, according to the standard norms for the liquid disposal.

5. Rinse and clean the tank.
6. Reassemble everything.



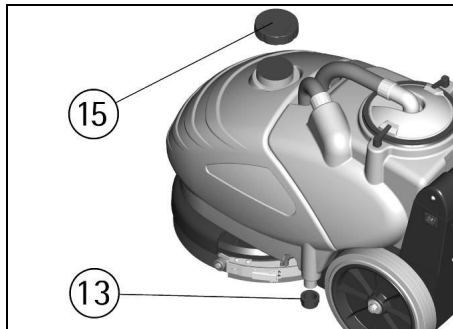
#### ⚠ ATTENTION:

This operation should be carried out wearing gloves to prevent contact with dangerous solutions.

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

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 filling cap (15) of the solution tank.
4. Unscrew the drain plug (13) placed in the rear low left part of the machine.



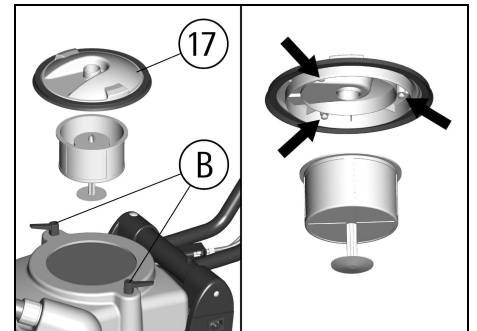
#### ⚠ ATTENTION:

This operation should be carried out wearing gloves to prevent contact with dangerous solutions.

##### SUCTION FILTER CLEANING

1. Take off the suction cover (17) after rotating the blocking levers (B).

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.



##### VERTICAL POSITIONING OF THE MACHINE

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

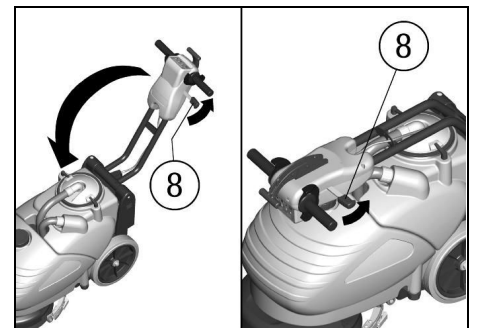
This position allows the unit to be stored in a small space and simplifies maintenance operations.

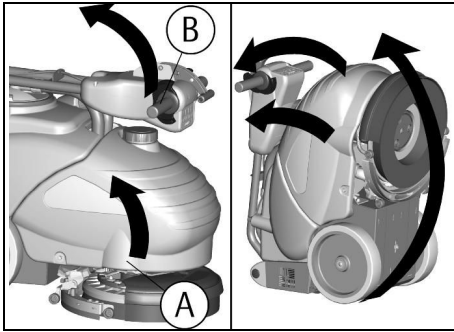
To rotate the machine it is necessary to:

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. Position yourself on the right side of the machine.
7. Hold the machine with both hands in point (A) of the tank side and (B) from the handle bar as indicated in the figure.
8. 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.

#### ⚠ ATTENTION:

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.

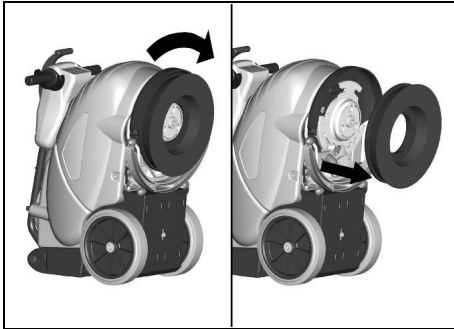


**BRUSH CLEANING**

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

**BRUSH REMOVAL/FITTING**

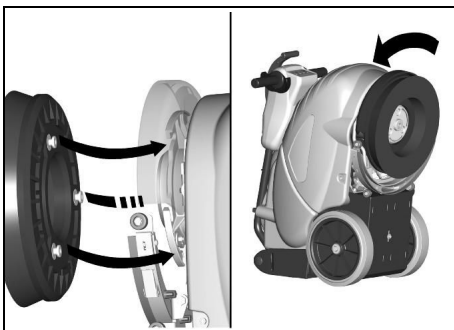
1. Tip the machine over backwards (see under "VERTICAL POSITIONING OF THE MACHINE") paying attention to remember to switch off the on/off switch and to empty the tanks.
2. With the machine in this position rotate the brush clockwise, as indicated in the figure, until it is released from their seats of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

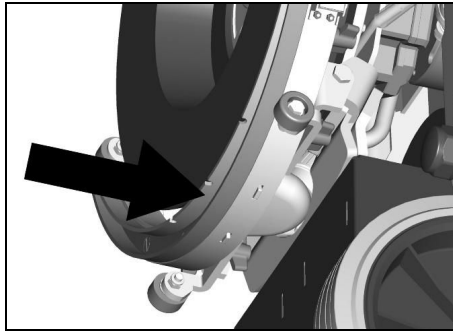
**ATTENTION:**

The handling of the brush operation must be carried out wearing suitable gloves to protect both mechanically from contact with the bristles and the chemical risk of contact with dangerous solutions.

**SQUEEGEE CLEANING**

Keeping the squeegee clean guarantees the best drying action.

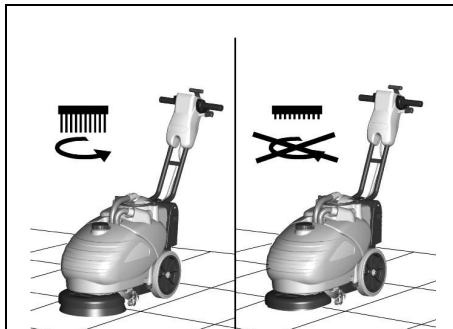
1. Tip over the machine backwards (see under "VERTICAL POSITIONING OF THE MACHINE") paying attention to remember to switch off the on/off switch and to empty the tanks.
2. With the machine in this position take care to clean both the rubber squeegee blades and particularly the suction inlet. Also remove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

**ORDINARY MAINTENANCE****CONTROL DEVICE BRUSH WEAR (OPTIONAL)**

A safety device stops the brush motor when the brush reaches a low bristle level of about 10mm such that a good cleaning result is not guaranteed and also to prevent floor damage.

A considerable brush deformation may also determine the intervention of the device.

In fact, the vertical positioning is indicated when you expect not to use the machine for a period of more than 2/3 days, to avoid that the machine weight may damage eventually the brush compromising therefore the correct machine functioning. To restore the working functionality of the machine it is necessary to replace the brush (see under "BRUSH REMOVAL/FITTING").

**BRUSH REPLACEMENT**

The brush has to be replaced when the control device brush wear intervenes. It is possible to use also other brush types, depending on the type and dirt of floor to be cleaned (see under "RECOMMENDED BRUSHES").

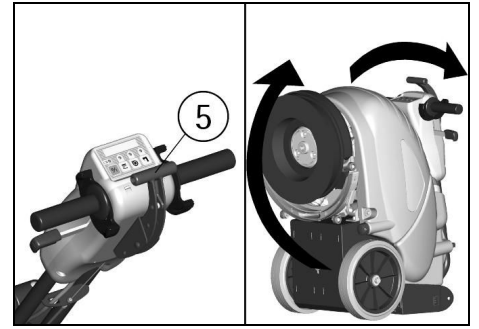
Remove the old brush and replace it with a new one (see under "BRUSH REMOVAL/FITTING").

**REAR SQUEEGEE RUBBER REPLACEMENT**

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

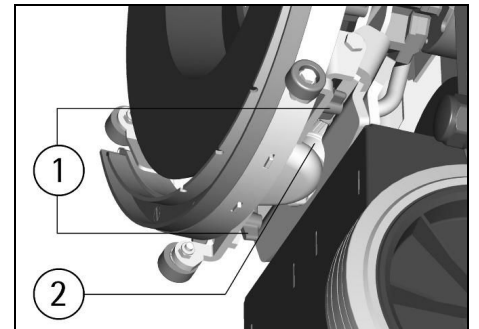
For the replacement it is necessary to:

1. Lower the squeegee by lowering the handle lever (5) placed in the centre of the handle bar.
2. 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.



3. With the machine in this position release the wing nuts (1) unscrewing them completely to free the squeegee.

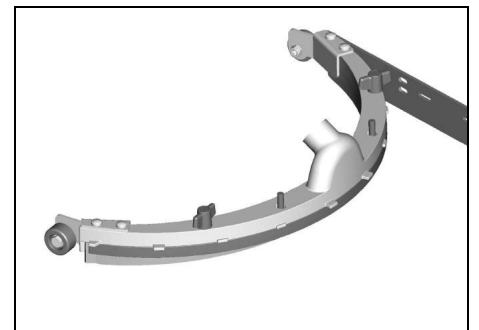
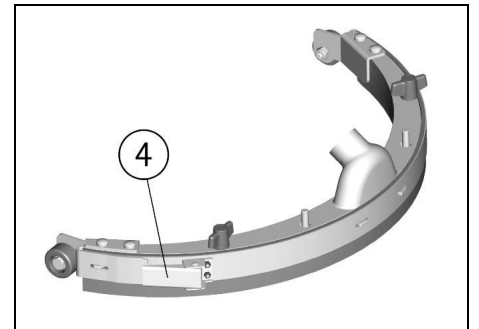
4. Take off the coupling (2) of the squeegee hose and take off the squeegee.



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**

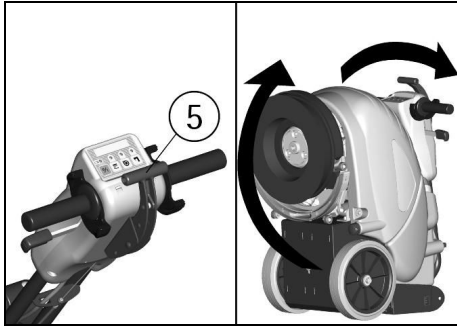
Check the wear of the front squeegee rubber and replace it if worn out.

For the replacement it is necessary to:

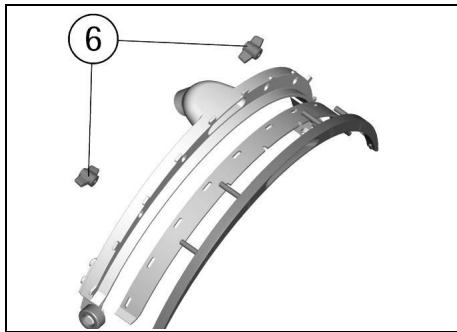
1. Lower the squeegee by lowering the handle lever (5) placed in the centre of the handle bar.



2. Tip over the machine backwards (see under "VERTICAL POSITIONING OF THE MACHINE") remembering to switch off the on/off switch and to empty the tanks.



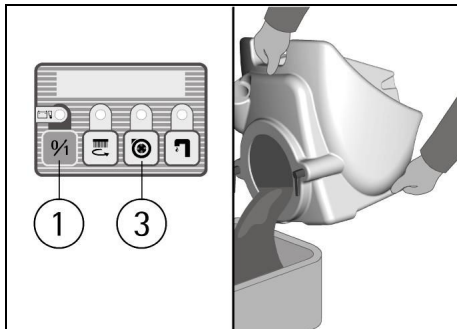
3. With the machine in this position take off the squeegee and then the rear squeegee rubber (see under "REAR SQUEEGEE RUBBER REPLACEMENT").  
4. Take off the wing nuts (6) in the upper part of the squeegee body, separate the two metal parts that form the squeegee body to take off the front rubber.  
5. Clean all the components with water.  
To reassemble the squeegee reverse the operations above.



## TROUBLESHOOTING GUIDE

### THE SUCTION MOTOR DOES NOT WORK

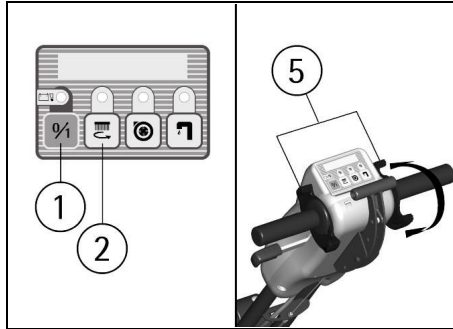
1. Check the charge level of the batteries that is visible when switching on (1) (see under "BATTERY CHARGING").  
2. Verify that the suction motor switch (3) is activated checking that its signal lamp is on.  
3. Check the level in the recovery tank (see under "OVERFILL PROTECTION") and if necessary,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



### THE BRUSH MOTOR DOES NOT WORK

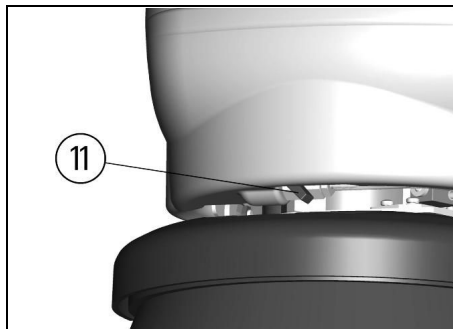
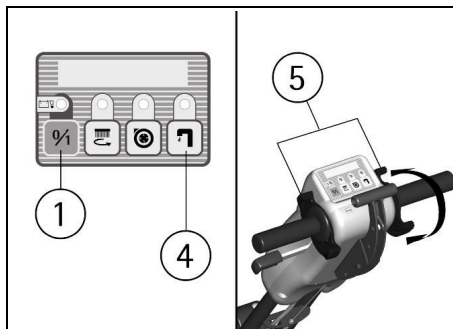
1. Check the charge level of the batteries that is visible when switching on (1) (see under "BATTERY CHARGING").

2. Verify that the brush motor switch (2) is activated checking that its signal lamp is on.  
3. Activate the scrub control levers (5).  
4. Check that the brush lift safety device is not activated (see under "SECURITY DEVICE BRUSH LIFTING").  
5. Check that the brush wear control device is not activated (see under "CONTROL DEVICE BRUSH WEAR").  
If the problem persists, please contact the authorized technical assistance.



### INSUFFICIENT WATER ON THE BRUSH

1. Check that the solenoid valve switch (4) is activated verifying that the 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 (11), placed in front underneath the solution tank, is sufficiently open.  
4. Press the brush control levers (5).  
If the problem persists, please contact the authorized technical assistance.

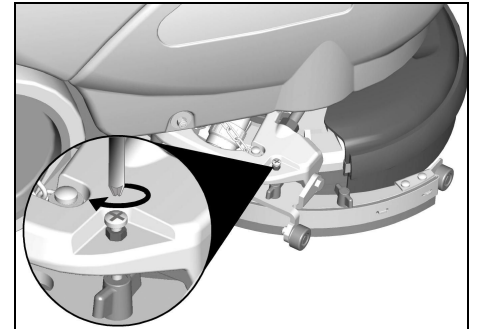


### THE MACHINE DOES NOT CLEAN PROPERLY

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 (11).  
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 is clean.  
4. Replace or rotate 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.  
7. If the floor remains wet in the central part of the drying, it is necessary to give more pressure in the rear part of the squeegee, screwing down of some turns the screw, as shown in the picture.



### 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.

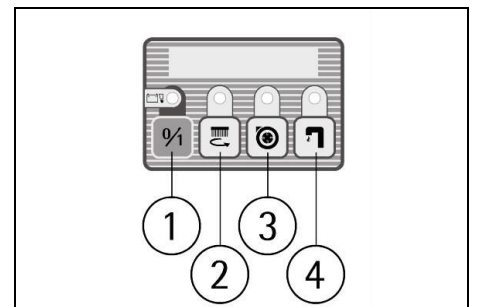
### LED (2), (3) AND (4) BECOME RED

If the machine is in the driving sense, with the general switch (1) on and one of the three led (2), (3) or (4) change colour, from green to red, it means that, an amperometric 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	ORDINARY/MONTHLY
RECOVERY TANK CLEANING	•	
SUCTION FILTER CLEANING	•	
BRUSH CLEANING	•	
BRUSH REMOVAL	•	
SQUEEGEE ASSEMBLY CLEANING	•	
FRONT SQUEEGEE RUBBER REPLACEMENT		• as required
REAR SQUEEGEE RUBBER REPLACEMENT		• as required
SQUEEGEE HOSE CLEANING		•
SOLUTION TANK 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.
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.

CODE	QUANTITY	DESCRIPTION	USE
48903020	1	Brush PPL 0,6 Ø 345	Normal floors.
48903030	1	Brush PPL 0,9 Ø 345	Smooth floors with small joints and persistent dirt.
48903050	1	Brush 5-mix Ø 345	For all types of floors.
48803010	1	Pad holder Ø 330	For pads of 14", for smooth surfaces cleaning.
48803030	1	Pad holder Ø 330 + center lock green	For pads of 14", for smooth surfaces cleaning.
48803040	1	Pad holder Ø 330 + center lock black	For pads of 14", for smooth surfaces cleaning.