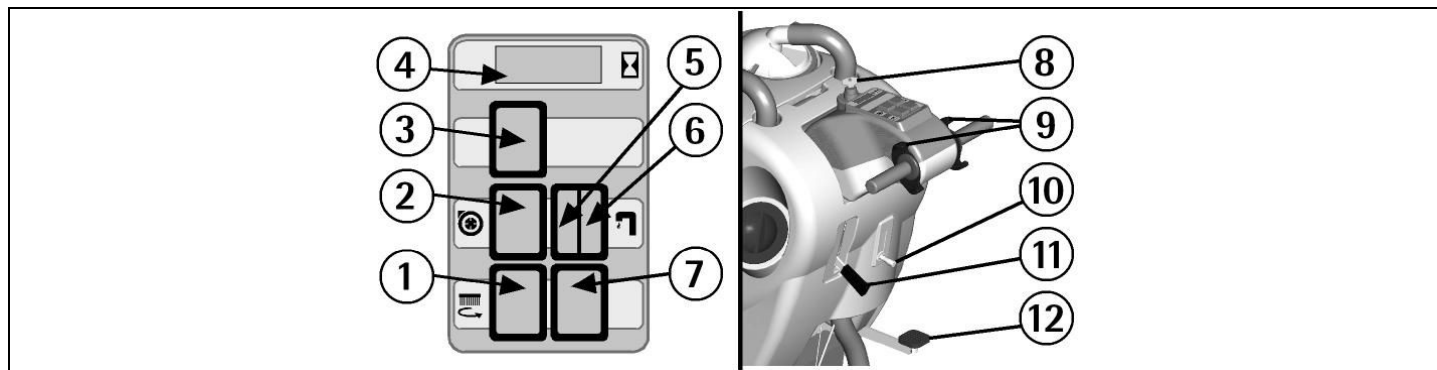


SUMMARY

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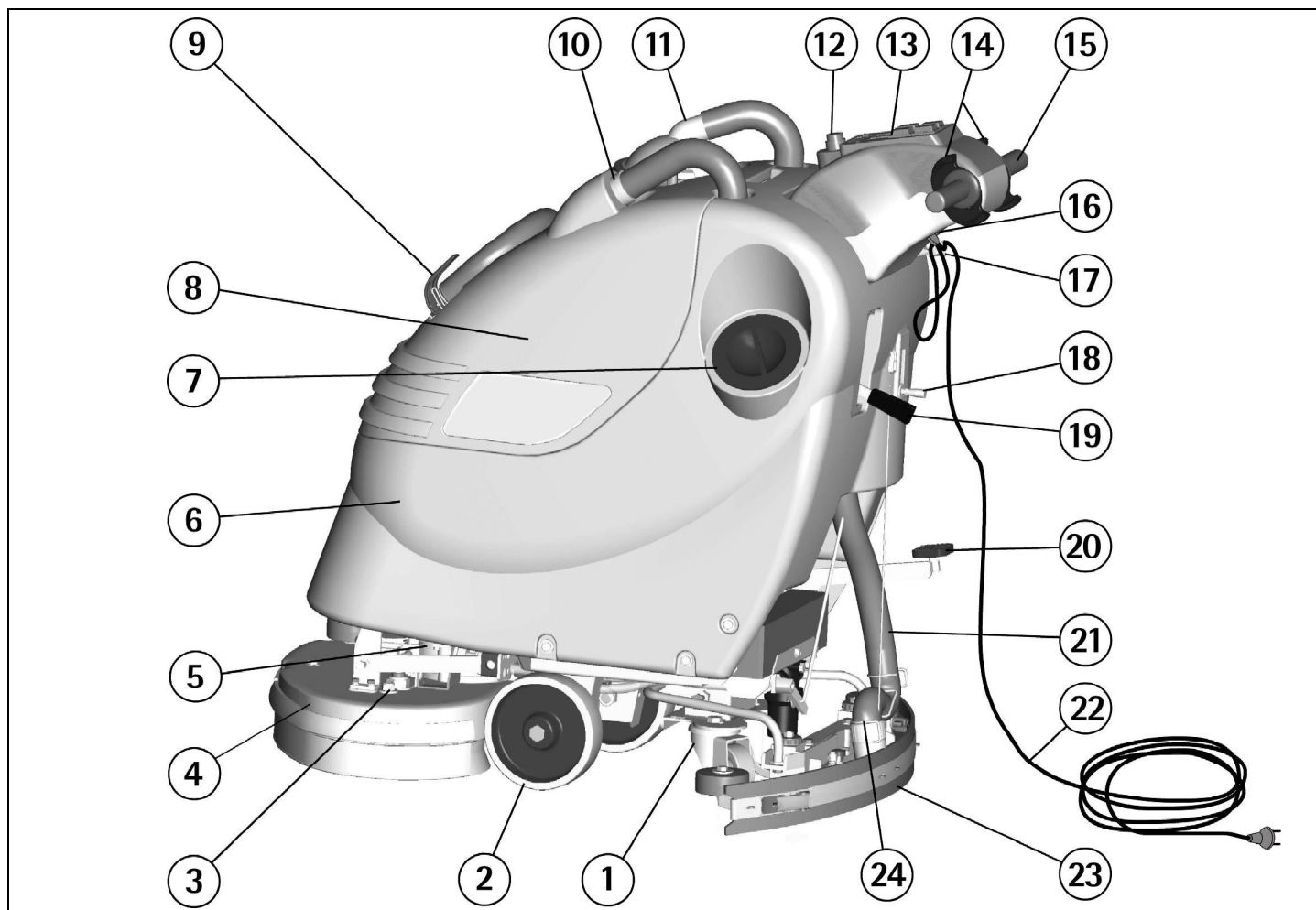
LEGEND INSTRUMENT BOARD AND CONTROLS

- | | |
|--|--------------------------------------|
| 1. SWITCH BRUSHES MOTOR | 7. RESTORABLE FUSE BRUSHES MOTOR |
| 2. SWITCH SUCTION MOTOR | 8. SWITCH WITH KEY (OPTIONAL) |
| 3. PUSH BUTTON BRUSH RELEASE (not available) | 9. LEVERS FOR PRESENCE |
| 4. HOUR METER (not available) | 10. LEVER SOLUTION VALVE |
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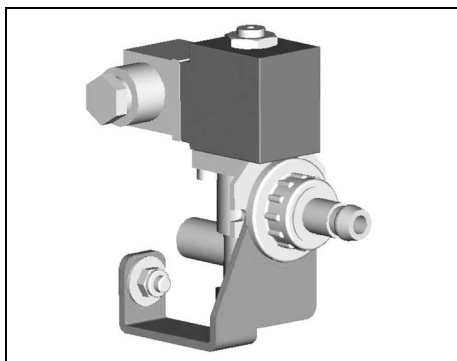


LEGEND MACHINE

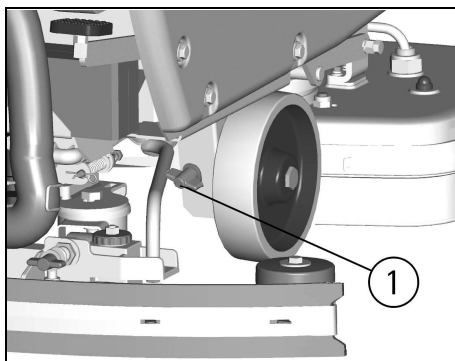
- | | |
|--|--------------------------------------|
| 1. CASTOR WHEELS | 12. SWITCH WITH KEY (OPTIONAL) |
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| 6. SOLUTION TANK | 17. SUPPORT CABLE BLOCK |
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| | 23. SQUEEGEE ASSEMBLY |
| | 24. GUIDE SPRING SQUEEGEE HOSE |



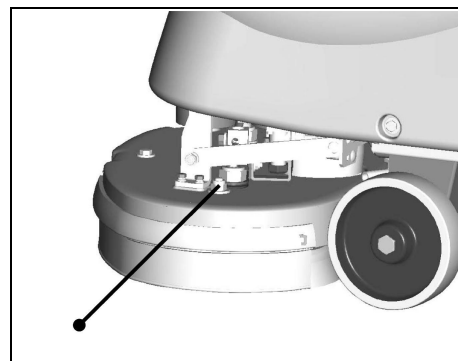
OPTIONAL ACCESSORIES



Solenoid valve



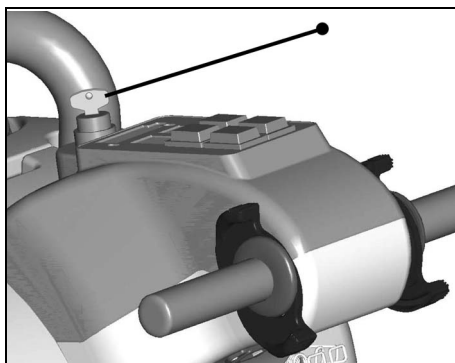
Adjustment brushes pressure



Adjustment brushes inclination



Emptying device of the solution tank



Switch with key

| TECHNICAL DESCRIPTION | U/M | ruby 45e | ruby 55e |
|----------------------------------|-------|-----------|-----------|
| Cleaning width | mm | 450 | 550 |
| Squeegee width | mm | 770 | 770 |
| Working capacity, up to | sqm/h | 1575 | 1925 |
| Brushes diameter | mm | 2x235 | 2x285 |
| Brushes rpm | rpm | 432 | 345 |
| Pressure on the brushes | kg | 22 max | 25 max |
| Brushes motor | W | 1000 | 1000 |
| Type of drive | | semi-aut. | semi-aut. |
| Maximum gradient | | 2% | 2% |
| Suction motor | W | 450 | 450 |
| Suction vacuum | mbar | 110 | 110 |
| Solution tank | l | 45 | 45 |
| Recovery tank | l | 48 | 48 |
| Machine length | mm | 1102 | 1140 |
| Machine height | mm | 1033 | 1033 |
| Machine width (without squeegee) | mm | 527 | 586 |
| Weight of the machine (empty) | kg | 85 | 87 |
| Mains cable (length) | m | 20 | 20 |
| Power supply | V~ | 230 | 230 |
| Frequency rate | Hz | 50 | 50 |
| Noise level | dB(A) | 66,3 | 66,3 |
| Level of vibration | m/sqs | 0,45 | 0,45 |
| Class | | I | I |
| Protection level | IP | 23 | 23 |

INTRODUCTORY COMMENT

Thank you for having chosen our machine. This floor cleaning machine is used for the industrial and civil cleaning, suitable for hard and not very rough floorings. 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 SECURITY

The rules below have to be followed carefully in order to avoid damages to the operator and to the machine.

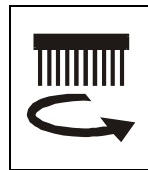
- Read the labels carefully on the machine. Do not cover them for any reason and replace them immediately if damaged.
- The machine must be used exclusively by authorized staff that has been instructed for its use.
- During the working of the machine, pay attention to other people and especially to the children.
- Do not mix different detergents, avoiding harmful odours.
- Do not place any liquid containers onto the machine.
- Storage temperature: between -25°C and +55°C.
- Perfect operating temperature: between 0°C and 40°C.
- The humidity should be between 30 and 95%.
- Do not use the machine in explosive atmosphere.
- Do not use the machine as a means of transport.
- Do not use acid solutions which could damage the machine and/or the persons.
- Do not touch or pass over the mains cable while the brushes are operating.
- The socket for the power supply must be equipped with a standard earthing (ground) system.
- Do not damage the mains cable with squashes, bendings or stressings.
- Check the integrity of the mains cable. If during working a damage is noticed, stop the machine immediately and take off the plug from the mains socket. Replace with the special cable available at the authorized center of the technical assistance.
- In bad mains conditions, the machine could cause transitory voltage drops.
- Avoid working with the brushes when the machine stands 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 fire-extinguisher. Do not use water.
- Do not strike shelvings or scaffoldings, where there is danger of falling objects.
- Adapt the working speed to the adhesion conditions.
- 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.
- Signal the areas of moist floors with suitable signs.
- If the machine does not work properly, check by conducting simple maintenance procedures. Otherwise, ask for technical advice to an authorized assistance centre.
- Where parts are required, ask for ORIGINAL spare parts to the distributor and/or to 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 to be removed.
- 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 through an authorized service department.
- In order to avoid scales on the solution tank filter, do not fill the detergent solution many hours before the machines' use.
- Before using the machine, check that all panels and coverings are in their position as indicated in this use and maintenance catalogue.
- Be sure the recovery tank is empty before removing it.
- Restore all electrical connections after any maintenance operation.
- 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 and electronic components, and considering that the machine itself has been, where possible, constructed using recyclable materials.

SYMBOLOLOGY



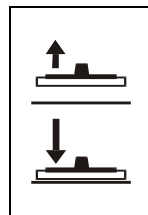
Symbol denoting the solution valve.
Indicates the solution valve lever and the signal lamp of the solenoid valve (optional).



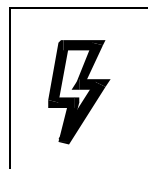
Symbol denoting the brush.
Indicates the switch of the brushes motor.



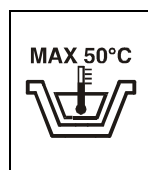
Symbol denoting the suction motor.
Indicates the switch of the suction motor.



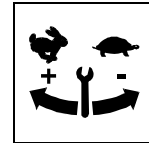
Symbol denoting up - down of the squeegee.
Indicates the squeegee lever.



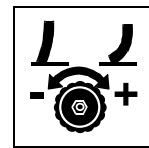
Symbol denoting the flash.
Indicates the signal lamp for presence of the mains tension on the machine.



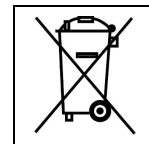
Indication of the maximum temperature of the solution detergent.
It is placed near the charging hole of the solution tank.



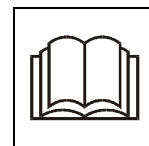
Symbol denoting the speed adjustment of the traction through the brushes inclination (optional).



Symbol denoting the squeegee adjustment.



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.

BEFORE USE

HANDLING OF THE PACKED MACHINE

The machine is supplied with suitable packing foreseen for fork lift truck handling. The total weight is 111 kg.

Packing dimensions:

Base: 118 cm x 67 cm

Height: 119 cm

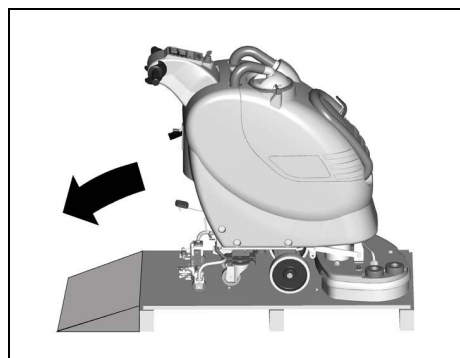
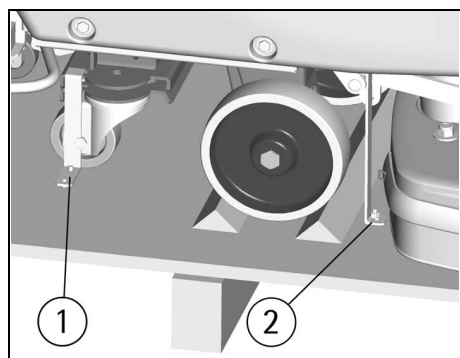


ATTENTION:

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

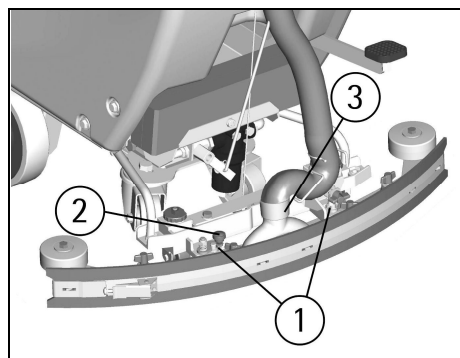
UNPACKING OF THE MACHINE

1. Remove the external packing.
2. Unscrew the brackets (1+2) that secure the machine to the pallet.
3. Move the machine backwards, as indicated in the figure, avoiding heavy contacts to mechanical parts.
4. Keep the pallet for eventual transport.



SQUEEGEE ASSEMBLY

With the squeegee support lowered, slide the two stud bolts (1) placed on the upper part of the squeegee, inside the slots on the support. Block the squeegee by rotating the lever (2) clockwise. Insert the squeegee hose (3) into its coupling, respecting its position as indicated in the figure.



ADJUSTMENT OF THE SQUEEGEE HEIGHT

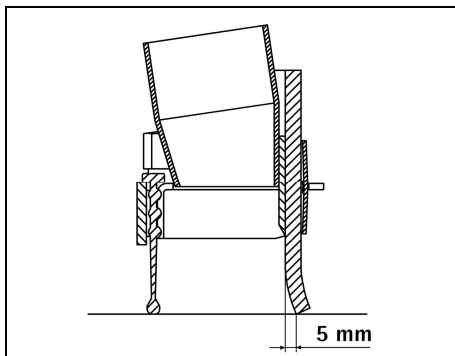
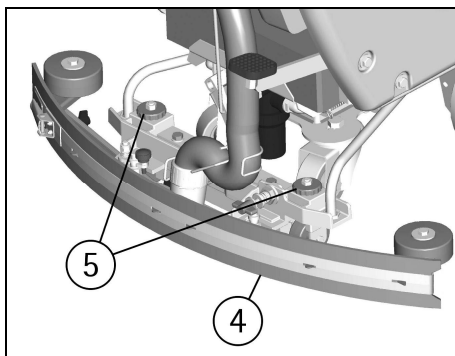
The squeegee must be adjusted in height depending on the rubber wear. In order to guarantee a perfect

drying during the operation, the lower blade of the rear squeegee rubber (4) must work slightly bent backwards (operator side) in uniform way in all its length.

Acting clockwise upon the two registers (5) it is possible to increase the bending of the rubber. Acting counterclockwise it is possible to decrease the rubber bending.

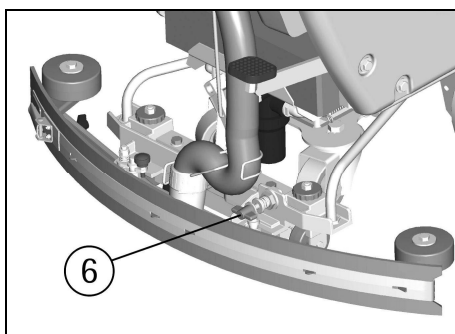
A label placed near the two registers (5) indicates rotation sense to increase or reduce the height.

Note: The wheels of the squeegee support must be adjusted through the registers (5) at the same height so that the squeegee works parallel to the floor.



ADJUSTMENT OF THE SQUEEGEE INCLINATION

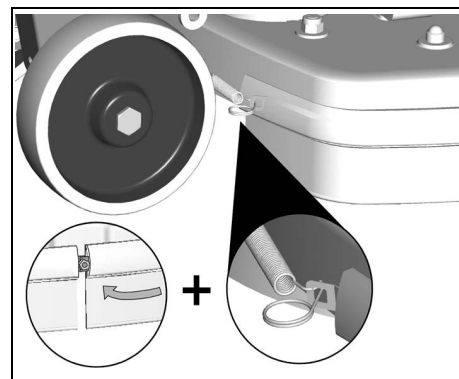
In case of need, to increase the rubber bending in the central part, it is necessary to tilt the squeegee body rotating counterclockwise the register (6). To increase the rubber bending on the squeegee extremities, rotate the register clockwise.



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 round hole at the flat extremity of the strip onto the screw placed in the front part of the brushes base group. Secure the strips through the nut blocking it. Hook the spring in the rear part of the brushes base group to the slot placed at the extremity of the metal strip still free. Please act as above for both the splash guard rubbers, paying attention to reduce to the minimum the gap between the two rubbers in the front part of the brushes base group.

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



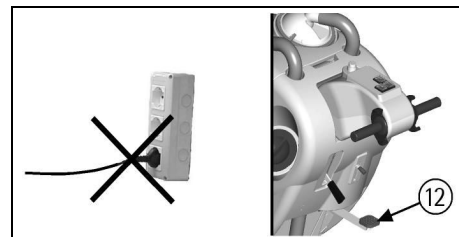
MANUAL ASSEMBLY OF THE BRUSHES



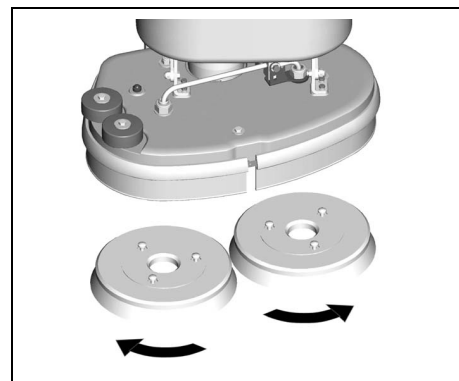
ATTENTION:

Check that the mains plug is disconnected.

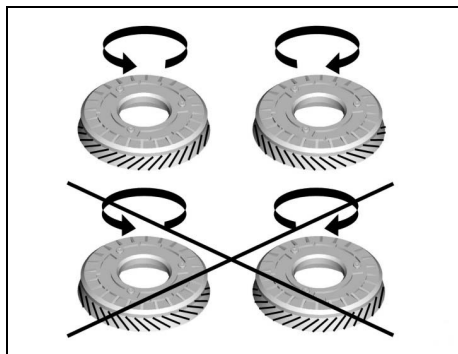
1. Acting upon the pedal (12) lift the brushes base group.



2. 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.



We suggest to invert daily the brushes position, in order to guarantee a longer operating life of them. Whenever brushes were deformed we suggest to re-assemble them in the same position, avoiding that the different inclination of the bristles causes excessive motor overload or troublesome vibrations.

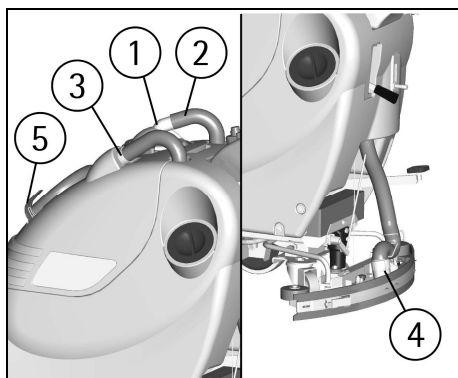
**ATTENTION:**

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

RECOVERY TANK

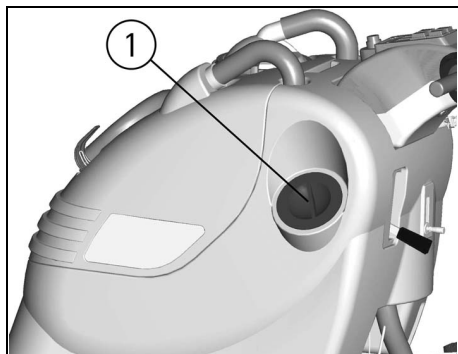
Check that the cover of the suction filter (1) is correctly secured, after rotating the levers and that the suction motor hose (2) is correctly connected.

Verify also that the squeegee hose is correctly inserted into the seats (3 and 4) and that the exhaust hose plug (5) placed in the front part of the machine, is closed.

**DETERGENT SOLUTION TANK**

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

Open the screw plug (1) placed in the rear left 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. Screw down the plug to close the tank.

**ATTENTION:**

Use always low foam detergent. To avoid foam presence, before starting working operation, introduce

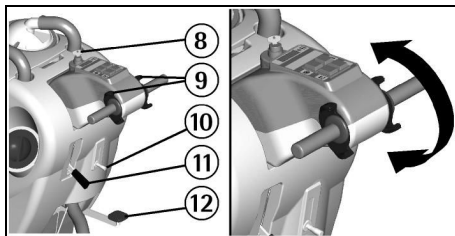
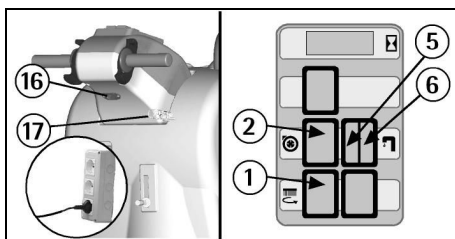
into the recovery tank a minimum quantity of anti-foam product.

Never use pure acid.

FLOOR CLEANING**STARTING OF THE MACHINE**

The machine is equipped with a mains cable complete with a plug for the connection to the mains system and with a socket connector to insert inside the plug (16) situated underneath the instrument board.

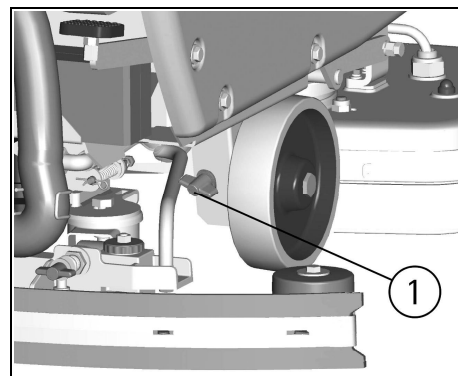
1. Insert the socket inside the machine plug (16).
2. Hook the cable onto the support (17) to avoid that probable tears can damage the socket.
3. Insert the plug into the appropriate mains socket and check that on the instrument board the signal lamp for tension presence comes on (5).
4. For machines equipped with key switch (see under "OPTIONAL ACCESSORIES"), turn the key (8) clockwise to switch on the machine, counterclockwise to switch it off.
5. Press the brushes motor switch (1).
6. Press the switch of the suction motor (2) and this will start to function.
7. Acting upon the solution valve lever (10) adjust the solution detergent quantity bringing the floor uniformly wet, avoiding the leakage of detergent from the splash guards. Always consider that the correct quantity of solution detergent depends on type of floor, dirtiness and machine speed.
8. For machines optionally equipped with solenoid valve (see under "OPTIONAL ACCESSORIES") the flow of detergent solution will be activated automatically, once the solution valve has been opened through the lever (10), acting upon the levers presence (9). On the instrument board the signal lamp of the open solution valve will come on (6). Releasing these levers, flow will stop automatically.
9. Acting upon the brushes base lifting pedal (12) lower the brushes base.
10. Acting upon the squeegee lifting lever (11) lower the squeegee.
11. Activating the levers (9), the brushes will start rotating transferring to the machine a forward movement. The squeegee will start drying the floor.
12. During the first meters check that the detergent solution flow is appropriate and that the squeegee adjustment guarantees a perfect drying action.

**ADJUSTMENT OF THE BRUSHES PRESSURE (OPTIONAL)**

Through the register (1) placed in the inner part near the front right wheel, it is possible to adjust the brushes pressure on the cleaned surface.

By turning the wing nut clockwise the pressure increases, rotating the wing nut counterclockwise, the pressure decreases.

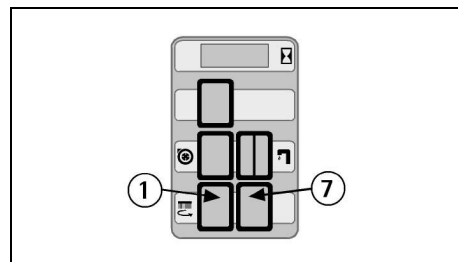
This device allows a more efficient cleaning action also on very difficult and dirty surfaces.

**BRUSHES MOTOR OVERLOAD PROTECTION DEVICE**

The machine is equipped with a protection device (7) that intervenes in case of an overload of the brushes motor disconnecting the motor. If the protection device intervenes again and often, contact the authorized technical assistance.

**ATTENTION:**

To reset the brushes motor, turn off the brushes motor switch (1) for a few seconds and turn it on again, rearm the push button of the protection device (7).

**OVERFLOW DEVICE**

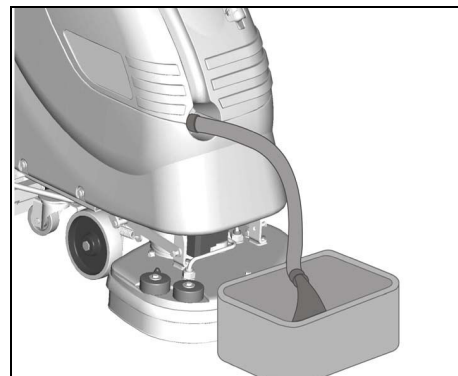
In order to avoid serious damages to the suction motor, the machine is equipped with a float that intervenes when the recovery tank is full, closing the suction hose and stopping the suction.

When this happens, it is necessary to take off the plug from the mains socket and to empty the recovery tank.

1. Hold the exhaust hose placed in the front part of the machine.
2. Take off the exhaust plug acting upon its lever and empty the recovery tank into appropriate containers, according to the standard norms.

**ATTENTION:**

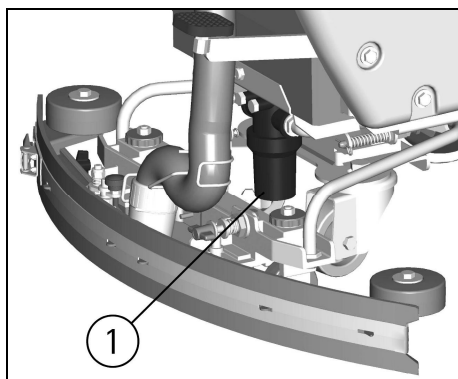
This operation must be carried out using gloves to protect from contact with dangerous solutions.



EMPTYING DETERGENT SOLUTION

To empty the detergent solution remained in the solution tank:

1. Bring the machine to an appropriate place for tanks draining.
2. Unscrew the exhaust plug (1).



ATTENTION:

This operation must be carried out using gloves to protect from contact with dangerous solutions.

EMPTYING DEVICE DETERGENT SOLUTION (OPTIONAL)

To recover the detergent solution, it is necessary to use the emptying device provided for the purpose and proceed as follows:

1. Unhook the hose.
 2. Open the solution valve directing the jet into a collecting container.
 3. When the operation has been completed, close the solution valve.
- Put the hose back into its position, placing it into the spring.



ATTENTION:

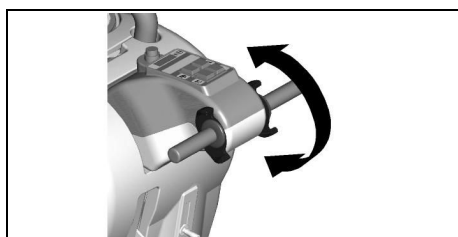
This operation must be carried out using gloves to protect from contact with dangerous solutions.

FORWARD MOVEMENT

The traction of these machines is given by the brushes that, working on an inclined axle, transmit to the machine the forward movement. The effect is bigger with brushes that have thicker bristles.

STOP

Releasing the lever of the presence, brushes rotation will end, stopping the machine movement.

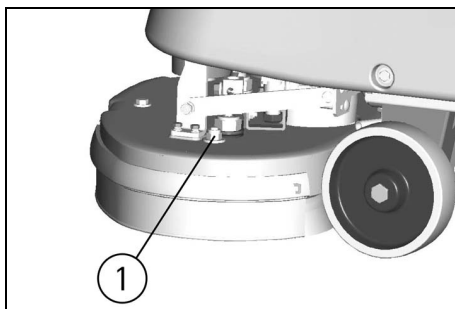


ATTENTION:

Moving the machine backwards, make sure that the squeegee is lifted.

ADJUSTMENT BRUSHES INCLINATION (OPTIONAL)

Through the register (1) placed on the brushes base group, it is possible to adjust the brushes inclination increasing/decreasing the speed of the machine. A label placed on the brushes base indicates the adjustment levels LOW/FAST.



STOP OF THE MACHINE AFTER CLEANING OPERATION

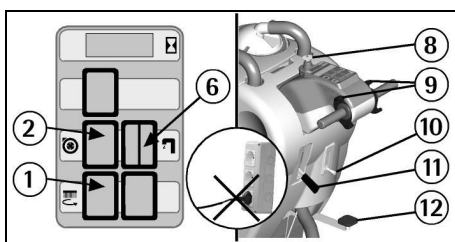
Before executing any type of maintenance:

1. Close the solution valve through the lever (10).
2. For machines optionally equipped with solenoid valve (see under "OPTIONAL ACCESSORIES") the flow of detergent solution will stop automatically when the levers (9) are released. On the instrument board the signal lamp of the open solution valve will go off (6).
3. Lift the brushes base acting upon the pedal (12).
4. Lift the squeegee acting upon the lever (11).
5. Turn the brushes motor switch off (1).
6. Turn the suction motor switch off (2).
7. Take off the plug from the mains socket.
8. Bring the machine to an appropriate place for tanks draining.



ATTENTION:

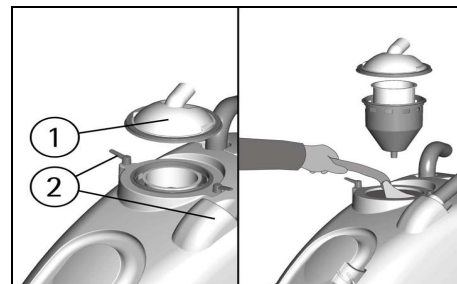
The machine is not equipped with a parking brake, therefore do not leave it on slopes.



DAILY MAINTENANCE

RECOVERY TANK CLEANING

1. Hold the exhaust hose placed in the front part of the machine.
2. Take off the exhaust plug acting upon its lever and empty the recovery tank into appropriate containers (see under "OVERFLOW DEVICE").
3. Take off the suction cover (1) after rotating the blocking levers (2).
4. Take off the filter and filter protection.
5. Rinse the tank with a water jet.

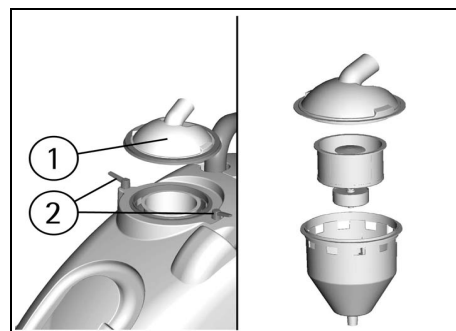


ATTENTION:

This operation must be carried out using gloves to protect from contact with dangerous solutions.

SUCTION FILTER CLEANING

1. Take off the suction cover (1) after rotating the blocking levers (2).
2. Take off the filter and filter protection.
3. Clean all parts with a water jet especially inside surfaces and filter bottom.
4. Carry out carefully the cleaning operations.
5. Reassemble all parts.



BRUSHES CLEANING

Disassemble the brushes and clean them with a water jet (for the brushes disassembly, check "BRUSHES DISASSEMBLY" paragraph).

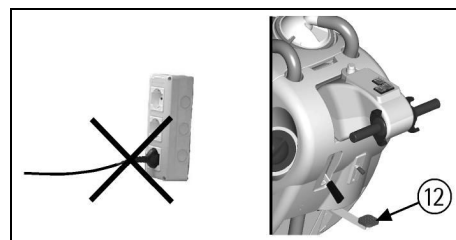
BRUSHES DISASSEMBLY



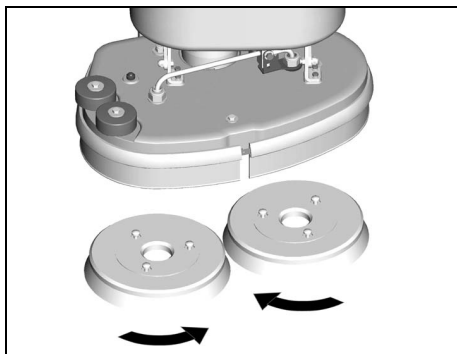
ATTENTION:

Check that the plug is disconnected.

1. Lift the brushes base lowering the pedal (12).



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



⚠ ATTENTION:

The execution of brushes disassembly operations with electric supply on, may cause damages to hands.

⚠ ATTENTION:

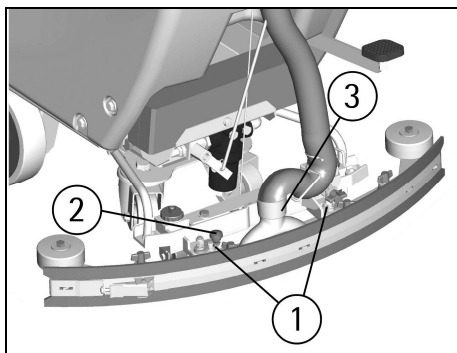
The handling of the brushes operation must be carried out using suitable gloves to protect both mechanically from contact with the bristles and the chemical risk of contact with dangerous solutions.

SQUEEGEE CLEANING

Keeping the squeegee clean guarantees always the best drying action.

For the cleaning it is necessary to:

1. Take off the squeegee hose (3) from the coupling.
2. Disassemble the squeegee from the support rotating the lever (2) counterclockwise sliding the stud bolts (1) in their slots.
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.



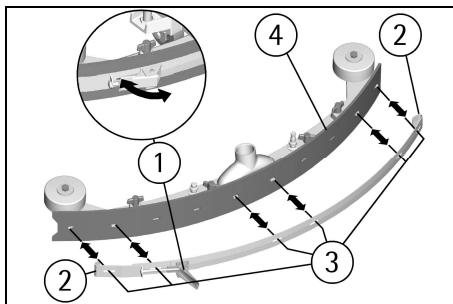
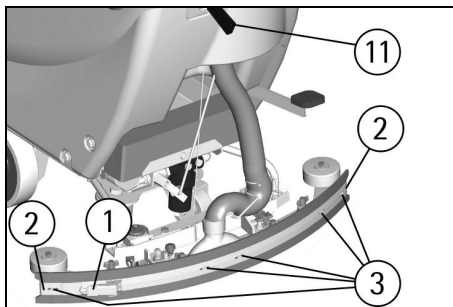
WEEKLY MAINTENANCE

REAR SQUEEGEE RUBBER REPLACEMENT

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

For the replacement it is necessary to:

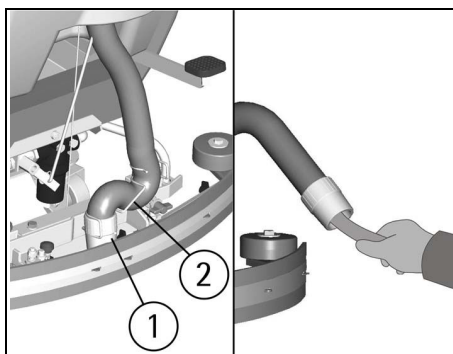
1. Lift the squeegee acting upon the lever (11).
 2. Uncouple the hook (1) of the rubber holder blade, release the extremities (2) from the squeegee body and take off the rubber (4).
 3. Turn the rubber (4) to a new side or replace it.
- To reassemble the squeegee repeat reverse the operations above-mentioned, inserting the rubber (4) on the guides (3), couple the extremities (2) of the rubber holder blade onto the squeegee body and finally block the hook (1).



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 (1) and release the guide spring of the squeegee hose (2).
2. Wash the inside of the hose with a water jet from the squeegee hose side.
3. To reassemble the hose repeat reverse the operations above-mentioned.



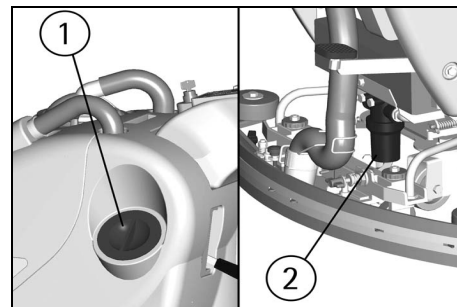
CLEANING OF SOLUTION TANK AND FILTER

1. Bring the machine to an appropriate place for tanks draining.
2. Unscrew the solution tank cap (1).
3. Unscrew the exhaust plug (2).
- 3a. The machines equipped with the optional device of the solution drainage, it is sufficient to open the solution valve of the device (see under "EMPTYING DEVICE DETERGENT SOLUTION").
4. Rinse with a water jet the solution tank.
5. Rinse the solution tank filter placed inside the exhaust plug, under the machine.
6. Reassemble all parts and close, if present, the solution valve of the drainage device.



⚠ ATTENTION:

This operation must be carried out using gloves to protect from contact with dangerous solutions.



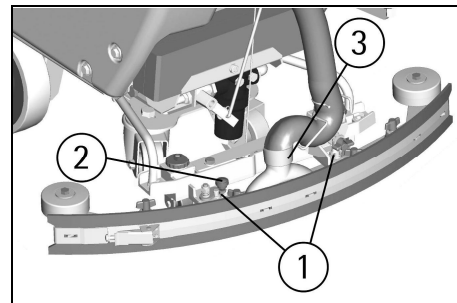
TWO-MONTHLY MAINTENANCE

FRONT SQUEEGEE RUBBER REPLACEMENT

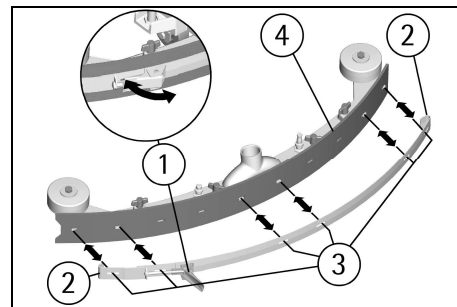
Check the wear of the squeegee rubber and eventually replace it.

For the replacement it is necessary to:

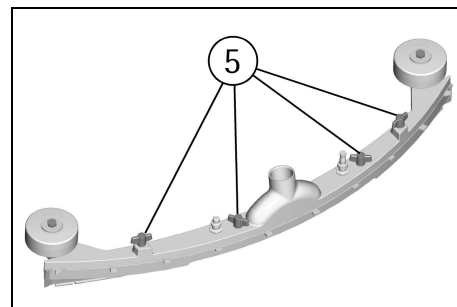
1. Take off the squeegee hose (3) from its coupling.
2. Disassemble the squeegee from the support rotating the lever (2) counterclockwise and sliding the stud bolts (1) in their slots.



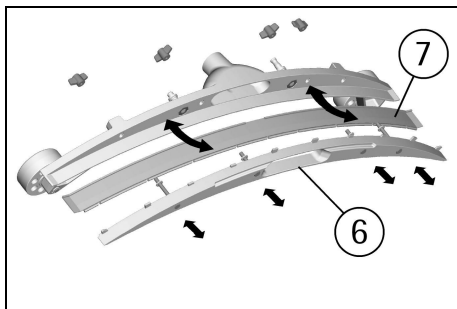
3. Uncouple the hook (1) of the rubber holder blade, release the extremities (2) from the squeegee body and take off the rubber (4).



4. Unscrew the wing nuts (5) in the upper part of the squeegee.



5. Slip off the lower part (6) of the squeegee body, so to take off the front rubber (7).

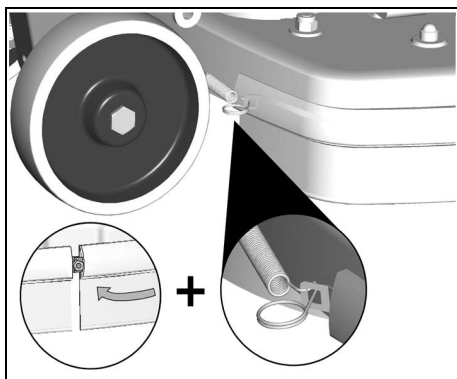


6. Replace the front rubber.
7. To reassemble the squeegee repeat reverse the operations above-mentioned.

SIX-MONTHLY MAINTENANCE

SPLASH GUARD REPLACEMENT

1. Release the spring in the rear part of the brushes base group from the slot placed at the extremity of the metal strip.
 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 at "SPLASH GUARD ASSEMBLY" paragraph.
- With brushes assembled, the splash guard must slightly touch the floor.

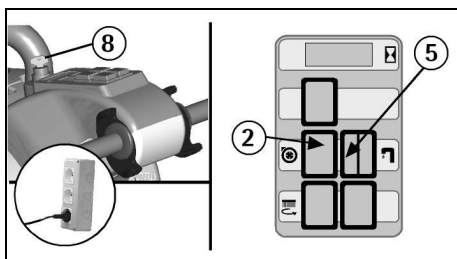


The checking of all the other foreseen machine operations is left to the authorized technical assistance.

TROUBLESHOOTING GUIDE

THE SUCTION MOTOR DOES NOT WORK

1. Verify that the signal light for presence of the tension (5) is on, if necessary, check that the plug is correctly inserted in a functioning mains socket.
 2. The model equipped with the key switch (see under "OPTIONAL ACCESSORIES"), turn the key (8) clockwise to switch on the machine.
 3. Verify that the switch (2) is on.
- If the problem persists, please contact the authorized technical assistance.



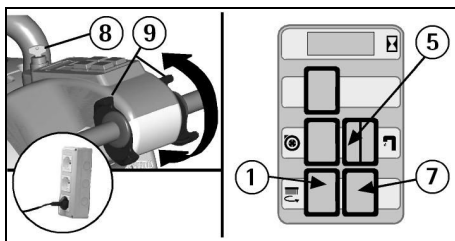
THE BRUSHES MOTOR DOES NOT WORK

1. Verify that the signal light for presence of the tension (5) is on, if necessary, check that the plug is correctly inserted in a functioning mains socket.
 2. The model equipped with the key switch (see under "OPTIONAL ACCESSORIES"), turn the key (8) clockwise to switch on the machine.
 3. Verify that the switch (1) is on.
 4. Activate the levers for presence (9).
 5. Check that the brushes motor overload protection device (7) did not intervene; in this case, rearm it.
- If the problem persists, please contact the authorized technical assistance.



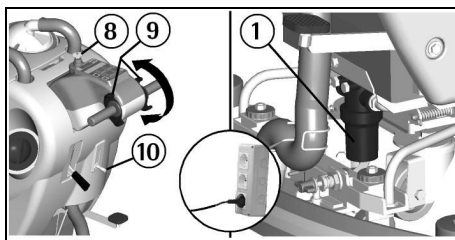
ATTENTION:

Never leave the socket inserted in the mains plug when the machine is not being used.



INSUFFICIENT WATER ON THE BRUSHES

1. Check that the solution valve lever (10) is open.
 2. Check the level of the liquid in the solution tank.
 3. Check that solution filter (1) is clean.
 4. If the machine is equipped with the solenoid valve (see under "OPTIONAL ACCESSORIES"), act upon the levers presence (9).
 5. The model equipped with the key switch (see under "OPTIONAL ACCESSORIES"), turn the key (8) clockwise to switch on the machine.
- 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: use only original brushes. For advice, 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 solution detergent is insufficient: open more the solution valve.
 4. 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 the height and inclination of the squeegee (see section "SQUEEGEE" in "BEFORE USE").
3. Check that the suction hose is correctly inserted in the proper seat on the recovery tank.
4. Clean the suction filter.
5. Replace the rubbers if worn out.
6. Check that the suction motor switch is on.
7. Check that the recovery tank is empty.

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.

PROGRAMMED MAINTENANCE

| INTERVENTION | DAILY | WEEKLY | TWO-MONTHLY | SIX-MONTHLY |
|-----------------------------------|-------|--------|-------------|-------------|
| RECOVERY TANK CLEANING | • | | | |
| SUCTION FILTER CLEANING | • | | | |
| SOLUTION TANK FILTER CLEANING | | • | | |
| BRUSHES CLEANING | • | | | |
| BRUSHES DISASSEMBLY | • | | | |
| SQUEEGEE CLEANING | • | | | |
| FRONT SQUEEGEE RUBBER REPLACEMENT | | | • | |
| REAR SQUEEGEE RUBBER REPLACEMENT | | • | | |
| SPLASH GUARD RUBBER REPLACEMENT | | | | • |
| SQUEEGEE ADJUSTMENT CHECK | | • | | |
| SQUEEGEE HOSE CLEANING | | • | | |
| SOLUTION TANK CLEANING | | • | | |
| BRUSHES MOTOR CHECK | | | | • |
| SUCTION MOTOR CHECK | | | • | |
| BRUSHES BASE GROUP CHECK | | | • | |
| SCREW TIGHTENING | | | | • |

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 60°C. It is not hygroscopic. |
| NYLON | Excellent wear resistance, even with hot water over 60°C. It is hygroscopic. It loses its physical characteristics over the time. |
| 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 brushes 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 | Pad holder is recommended to clean smooth surfaces. It has anchor points which permit the blocking of the abrasive pad during work. |

| MACHINE | CODE | QUANTITY | DESCRIPTION | USE |
|----------|----------|----------|-----------------------|--|
| ruby 45e | 48901010 | 2 | Brush PPL 0,3 Ø 235 | Irregular floors with large joints. |
| | 48901040 | 2 | Brush NYLON 0,5 Ø 235 | Smooth floors with small joints and persistent dirt. |
| | 48901050 | 2 | Brush PPL 0,6 Ø 235 | Smooth floors with small joints and persistent dirt. |
| | 48901060 | 2 | Brush TYNEX Ø 235 | Floors of resistant material and particularly dirty. |
| | 48901070 | 2 | Brush 5 mix Ø 235 | For all types of floors. |
| | 48901080 | 2 | Brush PPL 0,9 Ø 235 | Smooth floors with small joints and persistent dirt. |
| | 48801010 | 2 | Pad holder Ø 230 | For pads of 9", for smooth surfaces cleaning. |
| ruby 55e | 48901110 | 2 | Brush PPL 0,3 Ø 285 | Irregular floors with large joints. |
| | 48901140 | 2 | Brush NYLON 0,5 Ø 285 | Smooth floors with small joints and persistent dirt. |
| | 48901150 | 2 | Brush PPL 0,6 Ø 285 | Smooth floors with small joints and persistent dirt. |
| | 48901160 | 2 | Brush TYNEX Ø 285 | Floors of resistant material and particularly dirty. |
| | 48901170 | 2 | Brush PPL 0,9 Ø 285 | Smooth floors with small joints and persistent dirt. |
| | 48901180 | 2 | Brush 5-mix Ø 285 | For all types of floors. |
| | 48801020 | 2 | Pad holder Ø 280 | For pads of 11", for smooth surfaces cleaning. |