



 EQUIPMENT

 PARTS

 RENTALS

 SERVICE

 SUPPLIES

# USE AND MAINTENANCE MANUAL

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# HAMMERHEAD<sup>®</sup>

## 450RS

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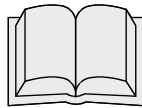
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### Symbols used in the manual

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Open book symbol with an "i"  
Indicates the need to consult the instruction manual



Open book symbol  
Used to tell the operator to read the manual before using the machine



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



Warning symbol  
Indicates danger of gas fumes and the leakage of corrosive liquids



Warning symbol  
Danger of fire: do not go near with free flames



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### On delivery of the machine

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When the machine is delivered to the customer, an immediate check must be performed to ensure all the material mentioned in the shipping documents has been received, in addition to verifying that the machine has not been damaged during transportation. If this is the case, the carrier must ascertain the extent of the damage at once, informing our customer service office. It is only by prompt action of this type that the missing material can be obtained, and compensation for damage successfully claimed.

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### Serial number plate

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### Introduction

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450RD is a floor scrubbing machine which, by means of the mechanical action of the rotating brush and the chemical action of a water/detergent solution, can clean any type of flooring. As it advances, it also collects removed dirt and the detergent solution not absorbed by the floor.

**The machine must only be used for this purpose.** Even the best machines will only work well if used correctly and kept in good working order. We therefore suggest you read this instruction booklet carefully and read it again whenever difficulties arise while using the machine. If necessary, remember that our customer assistance service (organised in collaboration with our dealers) is always available for advice or direct intervention.

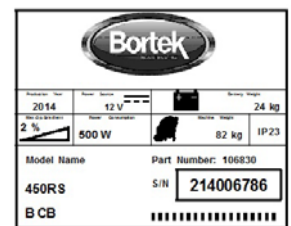
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### Intended use

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The scrubbing machine is designed exclusively for the professional cleaning of surfaces and floors in industrial, commercial and public environments. The machine is only suitable for use in closed (or at least covered) places.

The machine is not suitable for use in the rain, or under water jets. It is **FORBIDDEN** to use the machine for picking up dangerous dusts or inflammable liquids in places with a potentially explosive atmosphere. In addition, it is not suitable as a means of transport for people or objects.



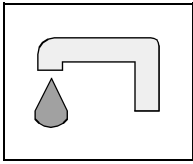
Bortek			
Reference: 2014	Power: 12 V	Weight: 24 kg	
Max. speed: 2 %	Power: 500 W	Weight: 82 kg	IP23
Model Name: 450RS	Part Number: 106830	S/N: 214006786	BCB



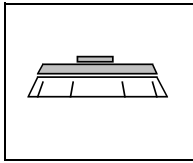


TECHNICAL DESCRIPTION	UM	450RD
Rated power	W	500
Working width	mm	406
Width of rear squeegee	mm	440
Work capacity	m <sup>2</sup> /h	1215
Water consumption	g/m <sup>2</sup>	-
Brushes (diameter or length)	Ø mm	406
Brush rotations	rpm	140
Pressure on the brushes	kg	20
Brush motor	V / W	12 / 250
Type of advance		semi-aut.
Maximum gradient		2%
Suction motor	V / W	12 / 250
Suction vacuum	mbar	-
Solution tank PE	l	22
Recovery tank PE	l	20
Machine weight (not including battery)	kg	42
Gross weight of the machine ready for use	kg	86
Battery (if present)	V/Ah	12 / 65
Battery charger (if present)	V/A	12/6
Battery compartment dimensions (Length / Height / Width)	mm / mm / mm	286 / 235 / 180
Machine dimensions (Length / Height / Width)	mm / mm / mm	685 / 945 / 460
Noise level (in compliance with IEC 704/1)	dB (A)	69.28
Vibration level	m/s <sup>2</sup>	1.79

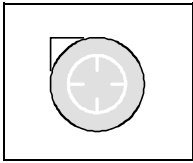
SYMBOLS USED ON THE MACHINE



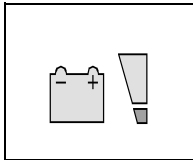
Tap symbol  
Used to indicate the solenoid valve switch



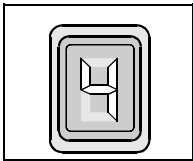
Brush symbol  
Used to indicate the brush motor switch



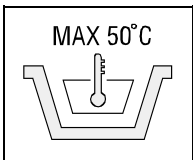
Symbol denoting suction motor  
Used to indicate the suction motor switch



Battery symbol



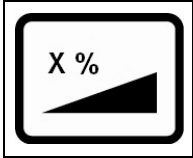
Battery charge level indicator



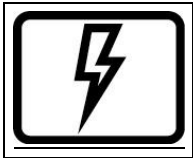
Indicates the maximum temperature of the detergent solution  
Located near the solution tank inlet



Indicates the danger of crushing hands



Indicates the maximum gradient



Warning high voltage 110-220 Volt



## GENERAL SAFETY REGULATIONS

The regulations below must be carefully followed in order to avoid harm to the operator and damage to the machine.

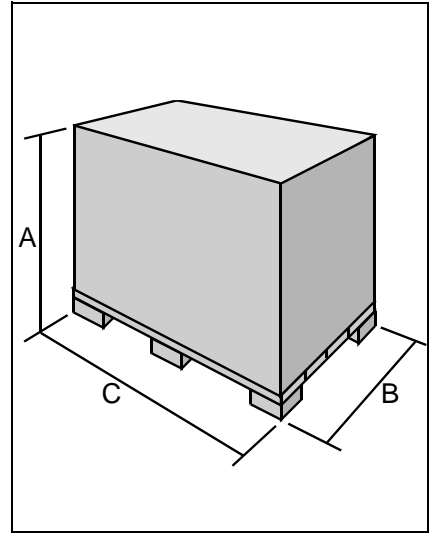
- Read the labels on the machine carefully. Do not cover them for any reason and replace them immediately if they become damaged.
- The machine must be used exclusively by authorised, trained personnel.
- During the working of the machine, pay attention to other people and especially to children.
- The machine is not suitable for cleaning carpets.
- The socket for the battery charger cable must have a prescribed earth connection.
- Avoid damaging the battery charger cable by crushing or bending it, or applying stress.
- If you notice any damage to the battery charger cable, contact a **BORTEK** technical assistance centre immediately.
- Do not mix different types of detergent as this may produce harmful gases.
- Do not place any liquid containers on the machine.
- The machine is designed for dry use only and should not be used or kept outdoors in damp conditions.
- The storage temperature must be between -25°C and +55°C; do not store outdoors in damp conditions.
- Conditions of use: room temperature between 0°C and 40°C with relative humidity between 30 and 95%.
- Do not use the machine in an explosive atmosphere.
- Do not use the machine as a means of transport.
- Do not use acid solutions which may damage the machine.
- Avoid working with the brushes when the machine is standing still, so as not to damage the floor.
- Do not vacuum inflammable liquids.
- Do not use the device to collect dangerous powders.
- In the event of a fire, use a powder extinguisher. Do not use water.
- Do not knock against shelving or scaffolding, where there is a danger of falling objects.
- If you use the machine where there is a risk of falling objects, the machine must be equipped with protection devices against falling objects
- Do not use the machine on surfaces with an inclination greater than the one shown on the plate.
- The machine is designed to simultaneously carry out washing and drying operations. Different operations should only be carried out in areas where the passage of unauthorised persons is prohibited. Signal the presence of damp floors with suitable signs.
- If the machine does not work properly, check this is not caused by failure to carry out routine maintenance. Otherwise, request the intervention of the **BORTEK** technical assistance centre.
- If you need to replace any components, request the ORIGINAL spare parts from a **BORTEK** dealer and/or Authorised Retailer.
- Before carrying out any maintenance work, switch off the machine and disconnect the battery connector.
- Do not remove any protection devices which require the use of tools in order to be removed.
- Do not wash the machine with direct water jets or with pressurised water, nor with corrosive substances.
- Have the machine checked by a **BORTEK** technical assistance centre every year.
- To prevent scaling in the solution tank filter, do not fill the tank with detergent solution many hours before using the machine.
- Before using the machine, verify that all the hatches and covers are positioned as shown in this Use and Maintenance Manual.
- When disposing of consumption materials, comply with currently effective laws and regulations.
- When your **BORTEK** machine has reached the end of its long working life, dispose of the materials it contains (especially oils and electronic components) in an appropriate manner, while taking into account that the machine itself was constructed by using 100% recyclable materials.
- Only use the brushes supplied with the device, or those specified in the Use and Maintenance Manual (page 19). The use of other brushes could compromise safety levels.
- The device must be disconnected from the power supply before removing the battery.
- The battery must be removed from the device before its disposal.
- The battery and battery charger must be disposed of in a safe manner, scrupulously respecting the laws in force.
- The machine is not suitable for use by children or people with reduced physical, mental and sensorial capacities, or people lacking experience and knowledge, unless supervised and instructed in the use of the machine by a person responsible for their safety.
- Children must be supervised to ensure they do not play with the device.

## MACHINE PREPARATION

### 1. HANDLING THE PACKAGED MACHINE

The machine is contained in specific packaging.  
Every pallet consists of two machines arranged side by side.  
It is not possible to place more than two packages on top of each other.  
The total weight is kg 72  
The overall dimensions of the package are:

- A : 102.5 mm
- B : 85.5 mm
- C : 55 mm

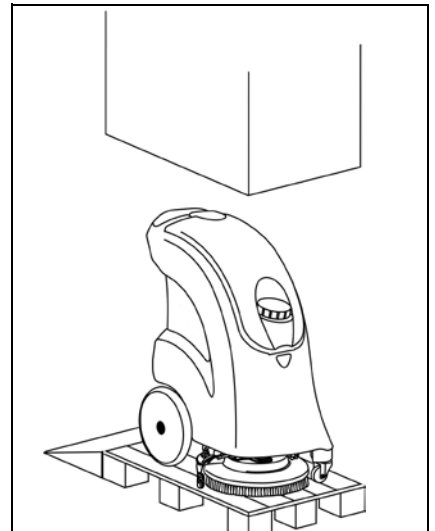


### 2. HOW TO UNPACKAGE THE MACHINE

1. Open the packaging on the side indicated
2. The machine has been secured with the straps, remove them
3. Take the machine out of its packaging
4. Use a chute to get the machine down from the pallet, pushing it backwards
5. Keep the pallet for any future transport needs

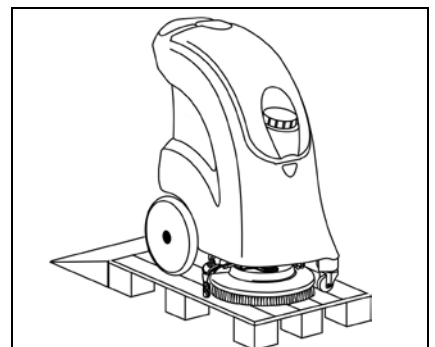


**WARNING:** if the product is delivered in cardboard containers, handle the packed product with suitable lifting means that comply with the legal requirements.



### 3. HOW TO MOVE THE MACHINE

1. To safely move the machine, you should use a pallet to support it positioning wooden wedges to block the wheels.
2. Lower the squeegee with the lever
3. Lower the base until the brushes touch, by means of the lever
4. Secure the machine using wooden wedges on the wheels





## MACHINE PREPARATION

### 4. TYPE OF BATTERY

To power the machine you must use:

The maximum dimensions of each battery are:

- width 168 mm
- length 259 mm
- height 207 mm

OTHER TYPES MUST NOT BE USED.

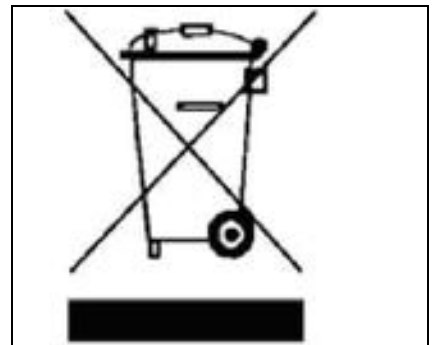
Enbloc batteries must be used with voltage of 12V 60Amp/h AGM or Gel Ah

### 5. BATTERY MAINTENANCE AND DISPOSAL

For maintenance and recharging, respect the instructions provided by the battery manufacturer.

Particular attention must be paid when choosing the battery charger, if not supplied, since there are different kinds according to the type and capacity of the battery.

When the battery reaches the end of its working life, it must be disconnected by expert, trained personnel, then lifted (using the grips and suitable lifting devices) in order to remove it from the battery compartment. **DEAD BATTERIES ARE CLASSIFIED AS DANGEROUS WASTE AND MUST BE DELIVERED TO THE AUTHORISED BODIES FOR CORRECT DISPOSAL.**



### 6. INSERTING/CONNECTING THE BATTERIES

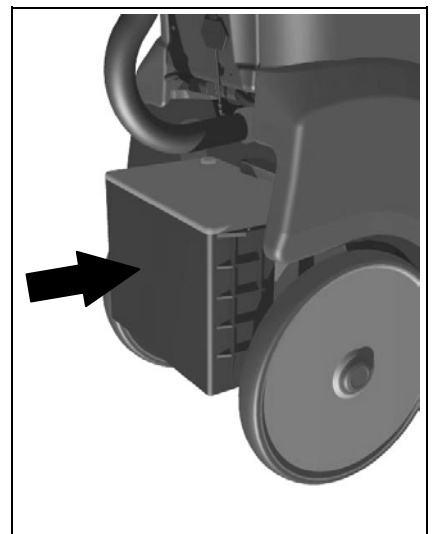
The machine is supplied with a built-in battery charger and an airtight gel battery. If you use batteries other than those supplied with the machine, use only 12V 60Amp/h AGM or Gel batteries, and proceed as follows:

1. The battery must be placed in the special compartment beneath the tank
2. Position the battery in the compartment, using the handle
3. Connect the clamps of the cable supplied as follows:
  - red clamp on the positive pole (+) of the battery
  - black clamp on the negative pole (-) of the battery
4. The battery must be secured with the appropriate safety strap.
5. Verify that the battery is correctly inserted and does not protrude from the compartment.



WARNING: you are advised to use airtight batteries only in order to avoid the leakage of acids!

WARNING: you are advised to have the electric connections made by a qualified, BORTEK-trained technician



WARNING: you are advised to always wear protective gloves in order to avoid the risk of serious injury to your hands.



WARNING: You are advised to only lift and move the batteries with lifting and transportation means suitable for the specific weight and size

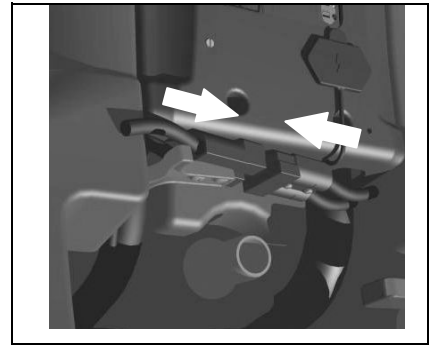
## MACHINE PREPARATION

### 7. CONNECTING THE CONNECTOR

Connect the battery connector to the machine connector located above the battery compartment.



**WARNING:** this process must be carried out by qualified personnel. The incorrect or imperfect connection of the cables to the connector can seriously harm people and damage objects.



### 8. CHARGING THE BATTERY (WITH BUILT-IN BATTERY CHARGER)

Perform a battery charging cycle before using the machine.

When replacing the battery, be sure to use batteries suitable for the battery charger installed (use only 12V 65A/h AGM or Gel batteries).

In order to recharge the battery:

1. Make sure the recovery tank and the solution tank are empty
2. Position the machine in its parking area

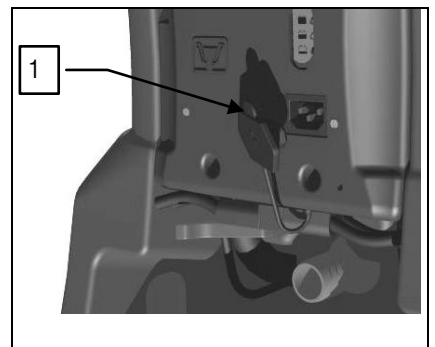


**WARNING:** Park the machine indoors, on a flat and level surface; objects that can damage or be damaged through contact with the machine must not be present close to the machine.

3. Remove the battery charger connector socket protection on the back of the machine (1)
4. Plug the battery charger cable (supplied with the machine) into the freed socket
5. Plug the battery charger cable into the mains socket
6. For the correct use of the battery charger, follow the instructions in the enclosed booklet



**WARNING:** If one of the three LEDs flashes refer to the battery charger manual supplied with the machine



## MACHINE PREPARATION

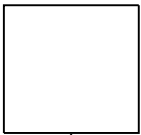


**WARNING:** The machine is equipped with an automatic system that disconnects the power supply from the electrical system while the batteries are being recharged

**WARNING:** In order not to cause permanent damage to the batteries it is essential to avoid their complete discharge: arrange the recharge within a few minutes of the switching on of the flashing "discharged batteries" signal

**WARNING:** Never leave the batteries completely discharged, even if the machine is not being used

**WARNING:** For the daily recharging of the batteries, you must fully respect the indications provided by the manufacturer or retailer. All installation and maintenance operations must be carried out by specialised personnel



**WARNING:** danger of gas fumes and the leakage of corrosive liquids



**WARNING:** Danger of fire: do not go near with free flames.

### 9. CHARGING THE BATTERY (WITHOUT BUILT-IN BATTERY CHARGER)

Perform a battery charging cycle before using the machine.

When replacing the battery, be sure to use batteries suitable for the battery charger installed (use only 12V 65A/h AGM or Gel batteries).

In order to recharge the battery:

1. Make sure the recovery tank and the solution tank are empty
2. Position the machine in its parking area

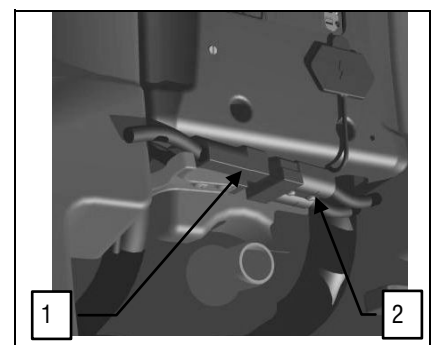


**WARNING:** Park the machine indoors, on a flat and level surface; objects that can damage or be damaged through contact with the machine must not be present close to the machine.

7. Disconnect the machine connector (1) of the battery connector (2).
8. Connect the battery charger connector to the battery connector (2).
9. Wait for the green LED of the battery charger to light.
10. Disconnect the battery charger connector from the battery connector (2).
11. Connect the machine connector (1) to the battery connector (2)



**WARNING:** Please carefully read the use and maintenance instructions of the battery charger that is use for charging.



## MACHINE PREPARATION

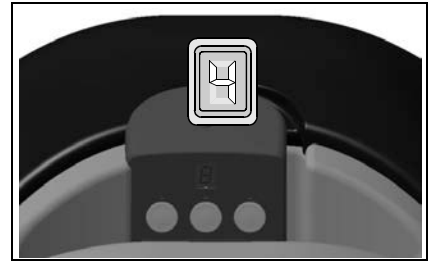
### 10. BATTERY INDICATOR

The battery indicator is digital, with 4 fixed positions and a flashing one. The numbers that appear on the display show the approximate charge level.

4 = maximum charge, 3 = 3/4 charge, 2 = 2/4 charge, 1 = 1/4 charge, 0 = batteries run down (flashing)



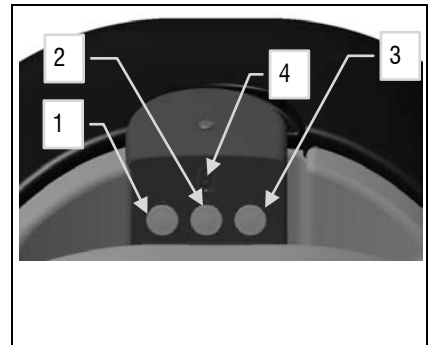
**WARNING:** A few seconds after the appearance of the flashing "0", the brush motor switches off automatically. With the remaining charge it is possible to complete the drying process before recharging.



### 11. INSTRUMENT PANEL COMPONENTS

The instrument panel components are identified as follows:

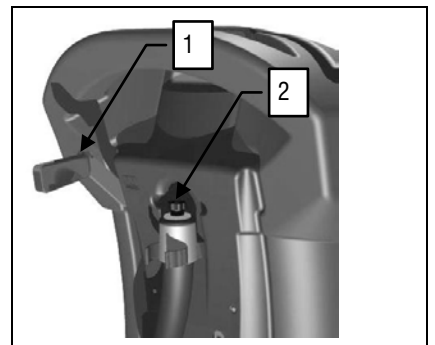
1. Main switch (1)
2. Suction switch (2)
3. Solenoid valve switch (3)
4. Digital battery level indicator (4)



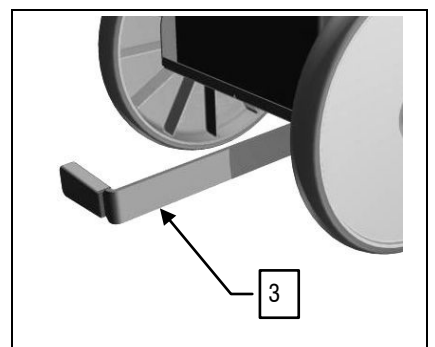
### 12. REAR COMPONENTS

The rear components of the machine are identified as follows:

1. Squeegee lifting lever
2. Recovery tank discharge hose



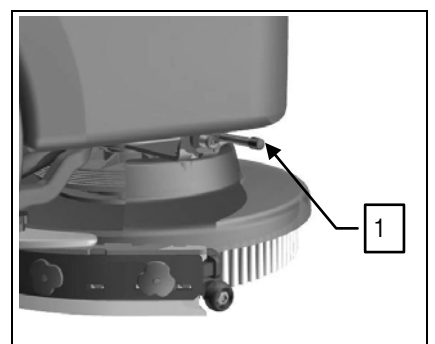
3. Base lifting pedal



### 13. FRONT - SIDE COMPONENTS

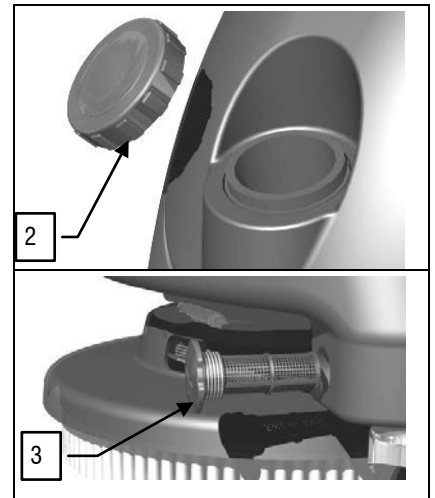
The side components of the machine are identified as follows:

1. Base release lever



## MACHINE PREPARATION

2. Solution water filler cap
3. Solution tank filter cap



### 14. LID

Verify that the lid is correctly inserted beneath the protruding command panel.

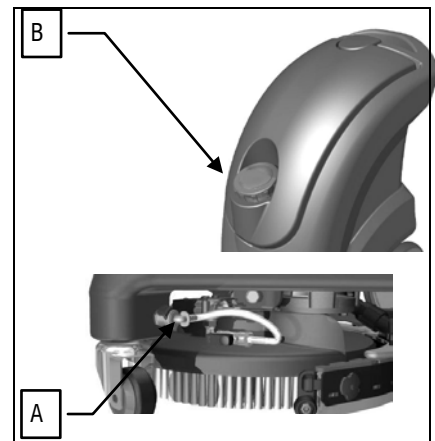


**WARNING:** risk of crushed hands



### 15. SOLUTION TANK

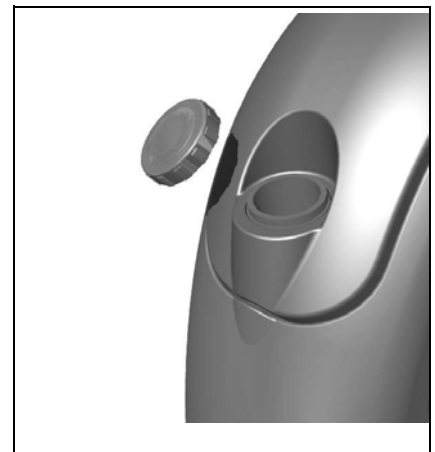
Verify that the solution-water filler cap is tightened properly.  
Verify that the cap is screwed on correctly in its housing (B).  
Verify that the valve is correctly engaged (A).



### 16. DETERGENT SOLUTION

Proceed as follows to fill the solution tank:

1. Remove the front filler cap and verify that the solution filter (B) is correctly assembled.
2. Verify that the filter cap (beneath the tank) is correctly closed.
3. Fill it with clean water at a temperature not exceeding 50°C. You can check the quantity in the tank by means of the rear tube (3).
4. The recovery tank must be completely empty each time the solution tank is filled.



## MACHINE PREPARATION

The solution tank has a maximum capacity of about 20 litres. Add the liquid detergent to the tank in the concentration and manner indicated on the detergent manufacturer's label. The formation of excess foam could damage the suction motor, so use only the minimum amount of detergent necessary.



**WARNING:** Always use detergents whose manufacturer's label indicates their suitability for scrubbing machines. Do not use acid or alkaline products or solvents without this indication.

In addition, you are advised to always use low foam detergents.

Do not use pure acids



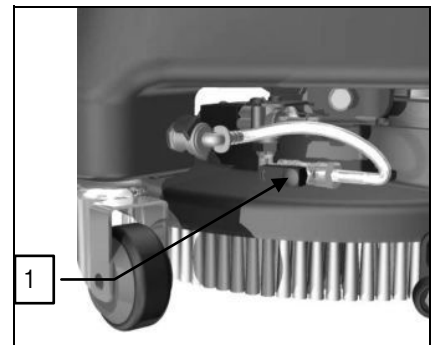
Acid or alkaline detergents can be used with pH values between 4 and 10 and that do not contain: oxidising agents, chlorine or bromine, formaldehyde, mineral solvents.



**WARNING:** you are advised to always wear protective gloves in order to avoid the risk of serious injury to your hands

### 17. DETERGENT SOLUTION ADJUSTMENT

Adjust the amount of solution through the tap lever on the front of the machine (1), pressing the main switch of the machine the brush is activated and the machine starts moving. During the first few meters check that the amount of solution is sufficient to wet the floor, but not excessive to exit the splash guard. Bear in mind that the correct amount of solution is always depends on the nature of the floor, the degree of dirt and the forward speed.



### 18. ASSEMBLING THE BRUSH

Proceed as follows to assemble the brush:

1. Raise the base by means of the appropriate pedal
2. Place the brush on the floor near the base body of the machine
3. With the base up, position the brush in line with the coupling on the machine.
4. Lower the base by means of the appropriate pedal
5. Press and instantly release main switch of the machine



**WARNING!** During this operation, ensure that there are no people or objects near the brushes



**WARNING:** you are advised to always wear protective gloves in order to avoid the risk of serious injury to your hands



## WORK

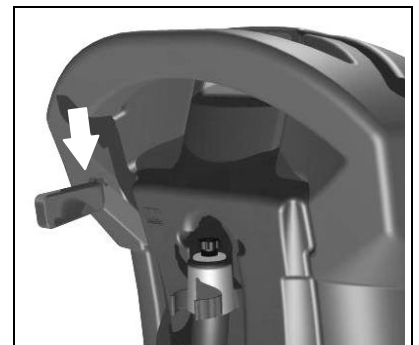
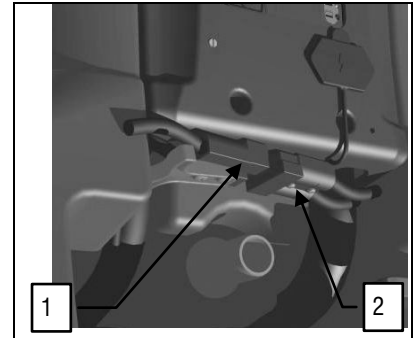
### 1. PREPARING TO WORK

1. Connect the electrical system connector (2) to the battery connector (1)



**ATTENTION:** before using the machine, the operators must be suitable trained. We therefore suggest you read this instruction booklet carefully and read it again whenever difficulties arise while using the machine

2. Make sure that the recovery tank is empty
3. lower the squeegee command lever in order to start working



4. Release the base by means of the pedal

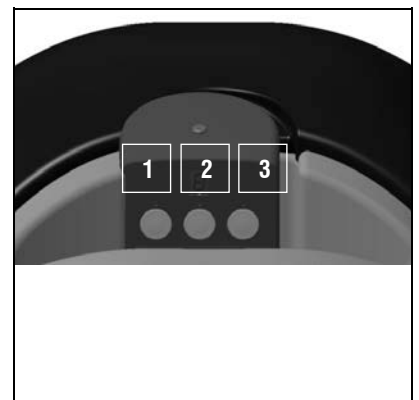


5. Press the main switch (1) and check that the green light is on and the brush are working
6. press the suction switch (2)
7. press the solenoid valve switch (3)

At this point the machine can operate at full efficiency until all the detergent solution has finished, the filling of the recovery tank or until all the battery is flat.



**WARNING:** If the machine is used in places where there is a risk of falling objects, the operator must be provided with all the appropriate protection devices as laid out in the legal requirements



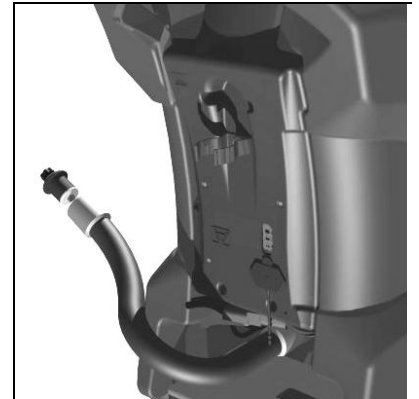
## WORK

### 2. OVERFLOW DEVICE

The machine is fitted with a ball filter which intervenes when the recovery tank is full, causing the suction tube to close. In this case, you must switch off the machine and empty the recovery tank.



**WARNING:** this operation must be carried out by wearing gloves in order to protect against contact with dangerous solutions.



### 3. FORWARD MOVEMENTS

The traction of these machines is obtained by means of the brush which, working with the correct weight distribution, is able to drag the machine forwards.



**WARNING:** when making even brief reverse movements, check the squeegee is raised.

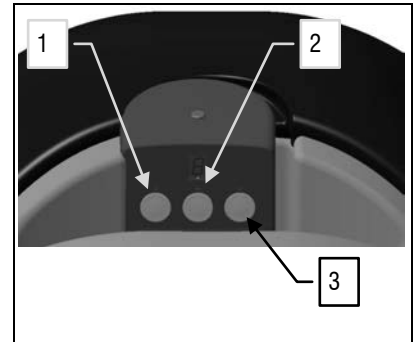




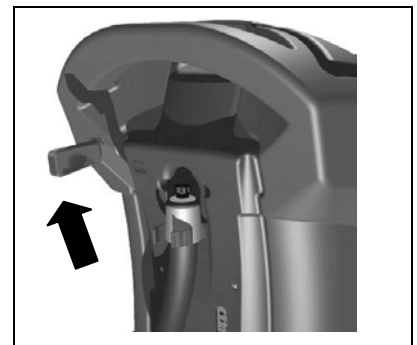
## AT THE END OF THE WORK

At the end of the work, and before carrying out any type of maintenance, perform the following operations:

1. Turn off the solenoid valve switch (3)
2. Turn off the suction switch (2)
3. Turn off the brush / main switch (1)



4. Raise the rear handle to lift up the squeegee
5. Raise the brush from the ground using the lifting pedal
6. Push the machine to the place provided for draining the water



7. Grasp the tube on the rear of the machine.
8. Remove the drainage cap and empty the tank

To simplify the draining operation, you are advised to keep the tube bent with one hand and, with the other, unscrew the knob and remove the plug. Slowly straighten the tube and the liquid will start draining at the desired speed.



**WARNING:** This operation must be carried out by using gloves in order to protect against contact with dangerous solutions

9. dis-assemble the brush and clean it with a jet of water (to disassemble the brush, see "DISASSEMBLING THE BRUSH" below)



10. At the end of the work, park the machine in a closed place.

Do not leave the squeegee and brush base resting on the floor for a long time.



**WARNING:** Do not leave the machine unattended without first unplugging the electrical connector from the battery connector. In addition, do not park the machine in open places or on sloping floors

## DAILY MAINTENANCE

### PERFORM ALL MAINTENANCE OPERATIONS IN SEQUENCE

#### 1. CLEANING THE RECOVERY TANK

1. Grasp the tube on the rear of the machine.
2. Remove the drainage cap and empty the tank.



**WARNING:** Before carrying out any type of maintenance, disconnect the machine's battery connector.



**WARNING:** this operation must be carried out by using gloves in order to protect against contact with dangerous solutions

To simplify the draining operation, you are advised to keep the tube bent with one hand and, with the other, unscrew the knob and remove the plug. Slowly straighten the tube and the liquid will start draining at the desired speed.



3. Slip off the casing that covers the tank.
4. Remove the suction filter and clean it under running water
5. Rinse the tank and clean with a jet of water



**WARNING:** this operation must be carried out by wearing gloves in order to protect against contact with dangerous solutions.



DO NOT rotate the machine while cleaning the tanks.  
DO NOT rotate the machine when the tanks are full.



**WARNING:** Before carrying out any type of maintenance, disconnect the machine's power supply cable.



#### 2. CLEANING THE SQUEEGEE

Check the squeegee rubbers are always clean, for a better drying action.  
To clean them you must:

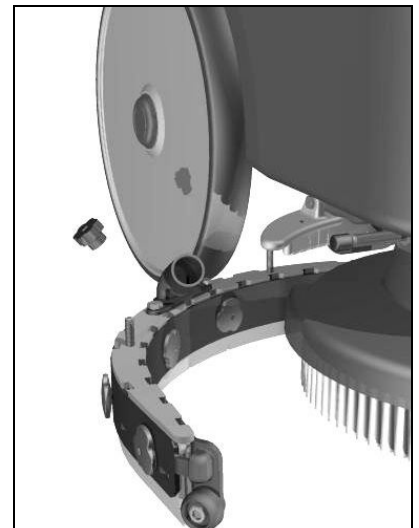
1. raise the squeegee
2. Loosen the two knobs and remove the squeegee
3. remove the tube from the squeegee nozzle, so the squeegee can be removed
4. carefully clean inside
5. carefully clean the squeegee rubbers
6. re-assemble all the elements



**WARNING:** Before carrying out any type of maintenance, disconnect the machine's battery connector.



**WARNING:** this operation must be carried out by using gloves in order to protect against contact with dangerous solutions



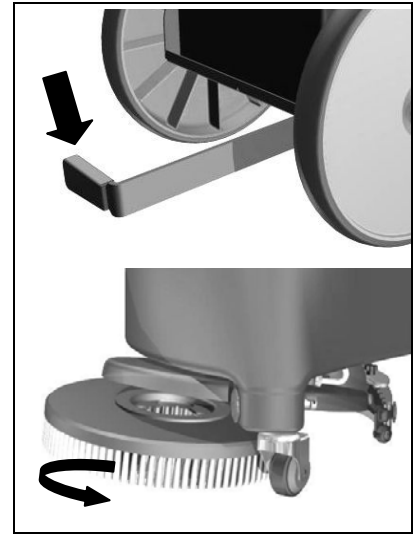
## DAILY MAINTENANCE

### 1. DISASSEMBLING THE BRUSH

1. Lower the rear lever.
2. Pressing with your foot, raise the base.
3. With the base in the raised position, push the brush control switch with pulses. The brush will be released automatically.
4. place the lever in the vertical position.



**WARNING:** during this operation, ensure that there are no people or objects near the brush.



## WEEKLY MAINTENANCE

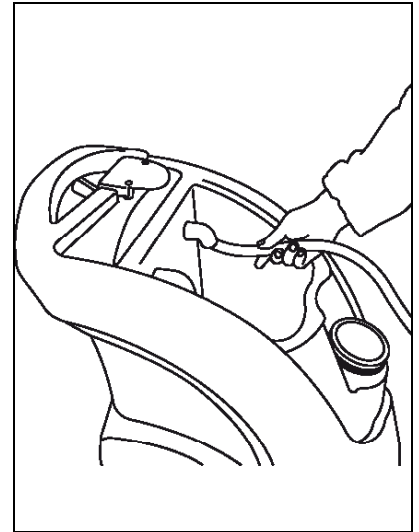
### 1. CLEANING THE SQUEEGEE TUBE

Periodically, or whenever suction seems to be unsatisfactory, check the squeegee tube is not obstructed. To clean it, proceed as follows:

1. remove the tube from the sleeve on the squeegee
2. remove the other end from the recovery tank
3. wash the inside of the tube with a water jet introduced from the side where it is connected to the tank
4. Reconnect the pipe to the squeegee and the tank



**WARNING:** Do not wash the pipe that goes from the tank to the suction motor.



### 2. REPLACING THE SQUEEGEE RUBBERS

Verify that the state of wear and tear of the squeegee rubbers and, if necessary, replace them. To replace them you must:

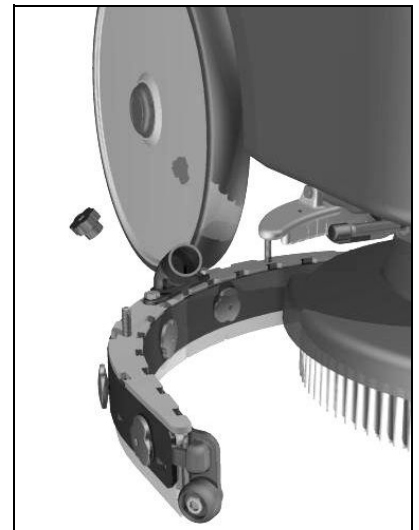
1. raise the squeegee
2. remove the two knobs
3. disassemble the squeegee from its support
4. remove the tube from the squeegee nozzle, so the squeegee can be removed



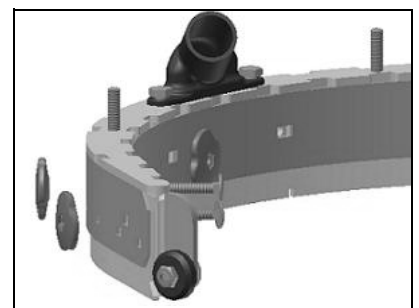
**WARNING:** Before carrying out any type of maintenance, disconnect the machine's battery connector.



**WARNING:** This operation must be carried out using by gloves in order to protect against contact with dangerous solutions



5. unscrew the knobs on the squeegee that block the rubber-pressing blades, and remove them
6. remove the rubber-pressing blades
7. replace the rubbers
8. reassemble everything, carrying out the above-mentioned operations in the reverse order



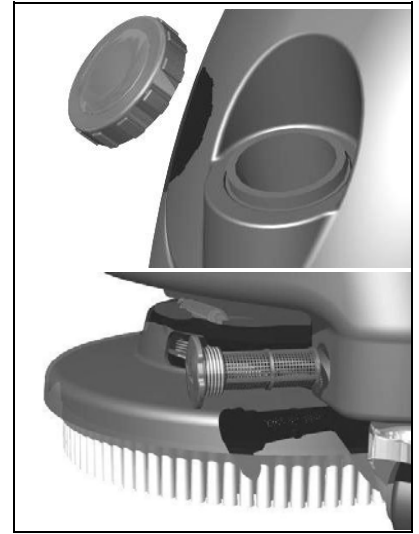
## WEEKLY MAINTENANCE

### 3. CLEANING THE SOLUTION TANK AND FILTER

1. Loosen the solution tank cap.
2. Remove the filter and clean it.
3. Rinse the solution tank with a jet of water.
4. Re-assemble the filter and cap.



**WARNING:** this operation must be carried out by wearing gloves in order to protect against contact with dangerous solutions.



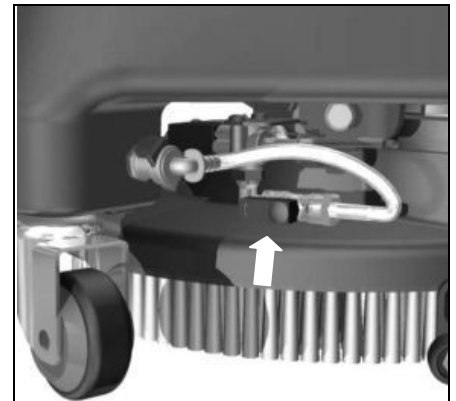
## TROUBLESHOOTING

### 1. ELECTRICAL SYSTEM SAFETY

The machine is fitted with self-restoring safety fuses that interrupt the power supply to the brush and suction motors when the machine exceeds the pre-determined load. To restore the power supply to the motor, switch off the machine and wait for a few minutes. If the protection devices intervene again, contact the BORTEK technical assistance centre.

### 2. INSUFFICIENT WATER ON THE BRUSHES

1. Verify that the solution tank filter is clean
2. Verify that the solenoid valve switch is on
3. Verify that the quick connection is correctly inserted
4. Check the regulation of the water outlet tap

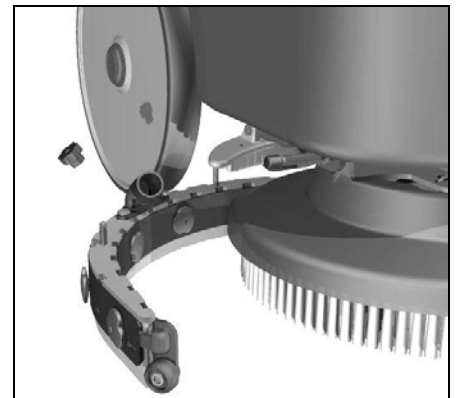


### 3. THE MACHINE DOES NOT CLEAN WELL

1. Check the state of wear and tear of the brushes and, if necessary, replace them. The brushes should be changed when the bristles are about 15 mm long.

### 4. THE SQUEEGEE DOES NOT DRY PERFECTLY

1. Verify that the squeegee rubbers are clean.
2. Verify that the suction tube is correctly inserted in its housing on the squeegee.
3. Verify that the distributor is clean.
4. Replace the rubbers, if worn.



### 5. EXCESSIVE FOAM PRODUCTION

Verify that a low foam detergent has been used. If necessary, add a small quantity of antifoam liquid to the recovery tank.

Remember that, when the floor is not very dirty, more foam is generated. In this case the detergent solution should be more diluted.



## CHOOSING AND USING THE BRUSHES

### POLYPROPYLENE BRUSH (PPL)

Used on all types of floors. Good resistance to wear and tear, and hot water (no greater than 60°C). The Polypropylene brush is non-hygroscopic and therefore retains its characteristics even when working in wet conditions.

### PAD HOLDER

The pad holder is recommended for cleaning shiny surfaces.

The CENTRE LOCK type pad holder has a plastic snap-in centre locking system, which allows you to perfectly centre the abrasive pads and keep them engaged without the risk of detachment.

It is fitted with a number of bunches of bristles that allow the abrasive floor pad to be held and dragged while working

TABLE FOR CHOOSING THE BRUSHES

Machine	No. of brushes	Code	Type of bristles	Ø Bristles	Ø Brush	Notes
450RD	1	429372	PPL	0.3	406	
		428782	PPL	0.6	406	
		429371	Pad holder	-	405	

## MACHINE DISPOSAL

To dispose of the machine, take it to a demolition centre or an authorised collection centre.

Before scrapping the machine, it is necessary to remove and separate the following materials and then send them to the appropriate collection centres, in accordance with currently effective environmental hygiene regulations.

- brush
- felt/pads
- electric and electronic parts\*
- Battery

(\* ) In particular, to scrap the electric and electronic parts, contact your area distributor.

