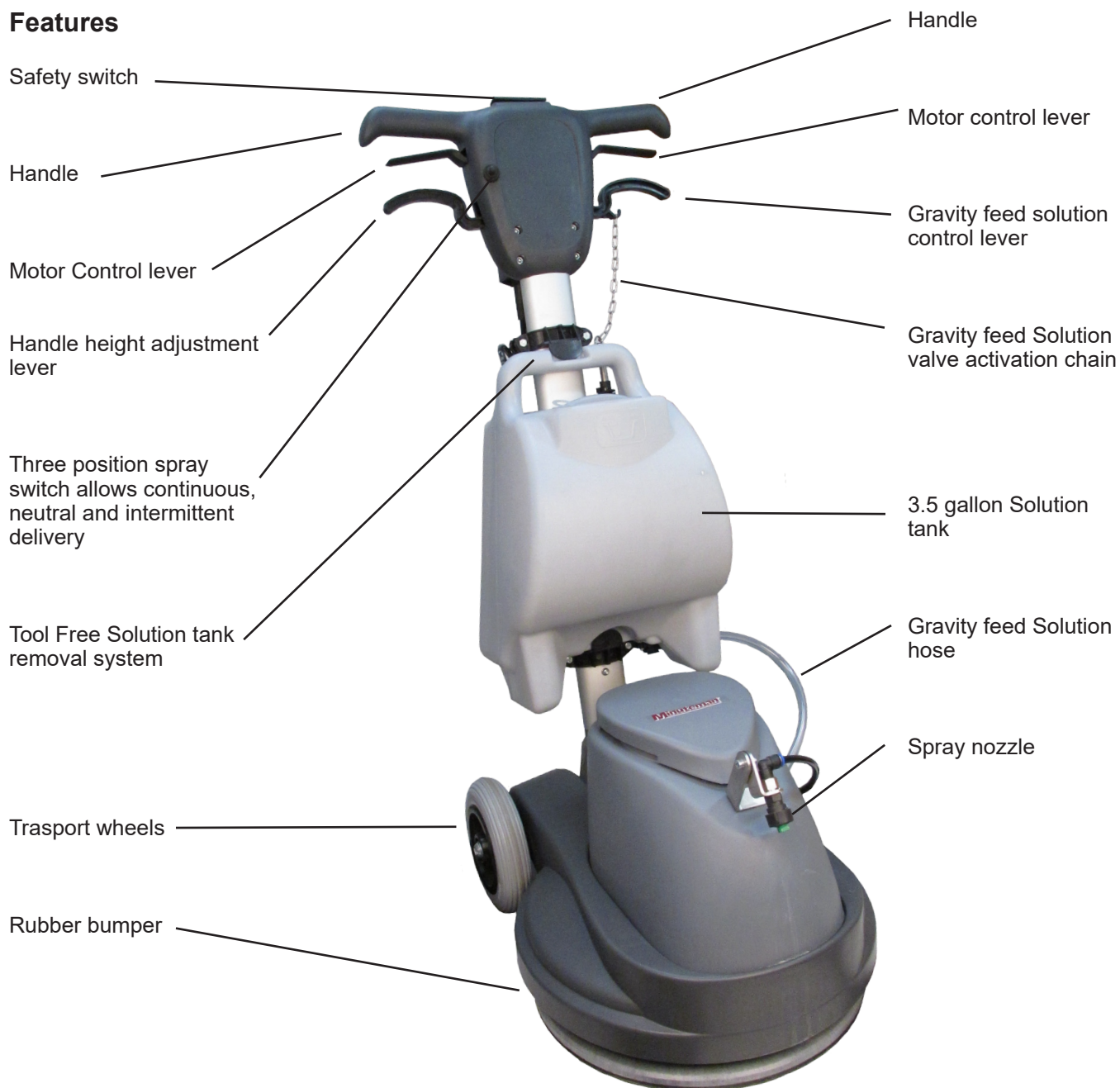


ROS-17

User Manual

Roto Orbital Single Disk Machine

Features



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

WARNING:

- This appliance should not be used by people (including children) with reduced physical, sensorial and mental capabilities, or by people without any experience or knowledge, unless they have been controlled and instructed in the use of the appliance by people responsible for their safety. Children must be supervised to ensure they do not play with the appliance.
- Carefully read the labels on the appliance. Do not cover them for any reason and replace them immediately if they become damaged.
- The appliance must always be stored and used in a closed place.
- The appliance must be only used by authorized, trained personnel.
- Do not use the appliance on surfaces with an inclination greater than the one shown on the serial number plate.
- Always make sure that the work surfaces, floors and ramps, are able to withstand the weight of the appliance.
- The appliance is not suitable for cleaning rough or uneven floors. Do not use the appliance on slopes.
- In the event of danger, quickly remove the power cable plug from the mains socket.
- For all maintenance interventions, switch off the machine and disconnect the power cable from the socket.
- To prevent unauthorized use of the machine, the power supply should be interrupted, switch off the appliance and pull out the power cable from the socket.
- Children must be supervised to ensure they do not play with the device.
- When using the appliance, pay attention to other people and especially to children.
- The appliance must only be powered with a voltage and a frequency equal to that shown on the serial number plate.
- When left unattended, the appliance must be protected from unintentional movements.
- Do not approach the machine with clothes that can get entangled, AVOID the use of scarves, shawls, wraps and loose clothing.
- Avoid working over pieces of rope, wire, cables: these can be caught in the brush and create friction.

The appliance is contained in specific packaging; to remove the appliance from the packaging proceed as follows:

1. Place the lower part of the outer packaging in contact with the floor.

ATTENTION: Indicates that the packed product should be handled with suitable lifting devices that comply with the legal requirements

ATTENTION: Use the pictograms printed on the box as reference.

2. Remove the holding straps.
3. Open the outer packaging.

ATTENTION: You are advised to always wear protective gloves, to avoid the risk of serious injury to your hands.

4. Remove the optional accessories contained in the packing.
5. Remove the appliance from the box.

ATTENTION: During this operation, check there are no people or objects near the appliance.

ATTENTION: To remove the appliance from the box do not use the control handlebar since it could be damaged.

ATTENTION: it is recommended that all the packaging components be kept for any future transportation of the appliance.

To safely transport the appliance, proceed as follows:

1. Do what is required to make sure the appliance is in a safe condition (see "APPLIANCE SAFETY").
2. Using a ramp, bring the appliance up onto the pallet, pushing it backwards.
3. Lay the brush head on top of the pallet.
4. Using the straps, fix the appliance to the pallet.
5. Now the appliance can be transported safely.

ATTENTION: You are advised to always wear protective gloves, to avoid the risk of serious injury to your hands.

ATTENTION: When transporting the appliance on vehicles, secure it according to the directives in force so that it cannot slide or tip over.

How to Transport the Unit

To safely transport the appliance, proceed as follows:

1. Do what is required to make sure the appliance is in a safe condition (see "APPLIANCE SAFETY").
2. Using a chute, bring the appliance up onto the pallet, pushing it backwards.
3. Lay the brush head on top of the pallet.
4. Using the straps, fix the appliance to the pallet.

5. Now the appliance can be transported safely.



ATTENTION: You are advised to always wear protective gloves, to avoid the risk of serious injury to your hands.

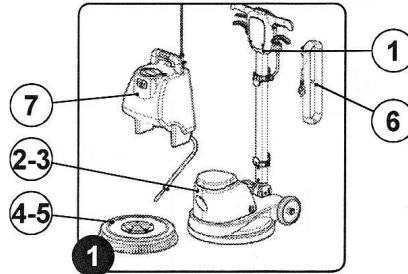


ATTENTION: When transporting the appliance on vehicles, secure it according to the directives in force so that it cannot slide or tip over.

Main Components of Unit

The basic components of the appliance are as follows:

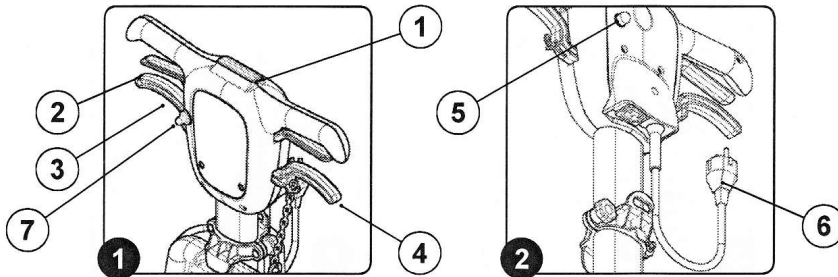
1. Control handlebar.
2. Brush head.
3. Brush head carter.
4. Brush. (ACCESSORY)
5. Pad holder.
6. Power cable (ACCESSORY)
7. Solution tank kit.



Components of Handle

The handlebar components are identified as follows:

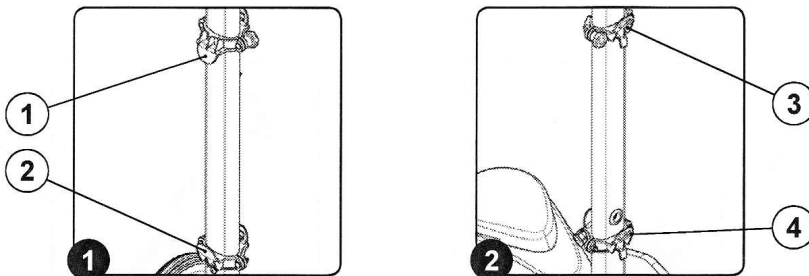
1. dead man's lever.
2. Control lever main switch (positioned under the grip of the handlebar).
3. Handlebar tilt adjustment lever.
4. Detergent distribution valve control lever.
5. Brush head motor thermal circuit breaker.
6. Power cable.
7. Spray kit control switch



Components of Column

The handlebar components are identified as follows:

1. Upper support solution tank kit.
2. Lower support solution tank kit.
3. Attachement for power cable
4. Lower cable tidy.



Attaching Brush

To insert the brush/pad holder into the brush head body of the appliance, proceed as follows:

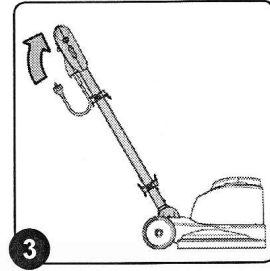
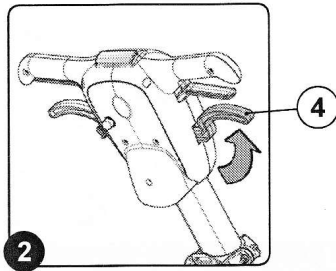
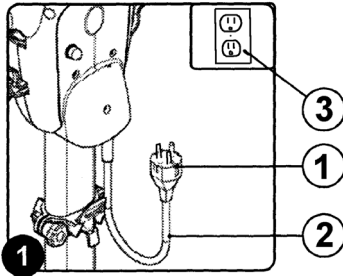
⚠ ATTENTION: To prevent damaging the power cable, disconnect the plug from the mains socket by directly pulling the plug and not the cable.

1. Check that the plug (1) on the power cable (2) has been taken out of the socket (3) of the main supply (Fig.1), and if not, disconnect it.



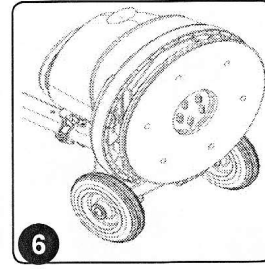
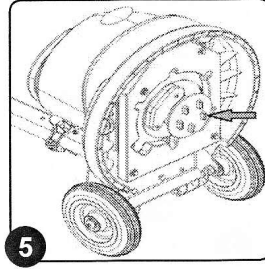
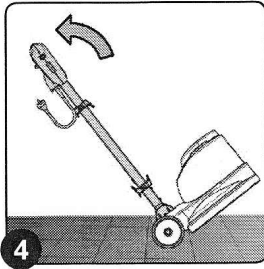
ATTENTION: You are advised to always wear protective gloves, to avoid the risk of serious injury to your hands.

2. Check that the handlebar is in the vertical position, if not, press the uncoupling lever (4) (Fig.2) and turn the handlebar to the vertical position (Fig.3). When the handlebar is vertical, release the uncoupling lever (4).



3. Tip the appliance back (Fig.4), block one of the rear wheels and shift the control column backwards.
4. Unscrew and remove the fixing lugs and centering plate (Fig.5).

5. Turn the brush anti-clockwise to secure it to the hub (Fig.6). Insert the drive disc, be careful to center the fastening pins on the machine with the drive holes. Then insert the centering plate and then screw down the 5 fixing keys securely.

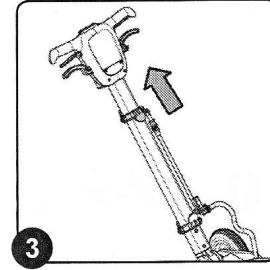
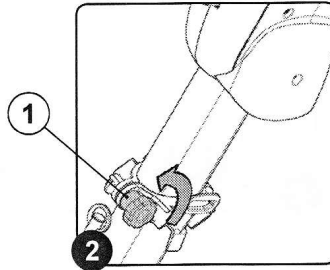
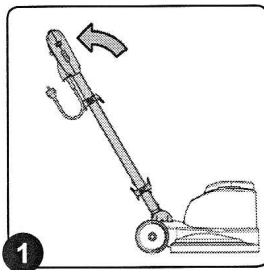


Attaching Solution Tank

To insert the solution tank onto the handlebars, proceed as follows:

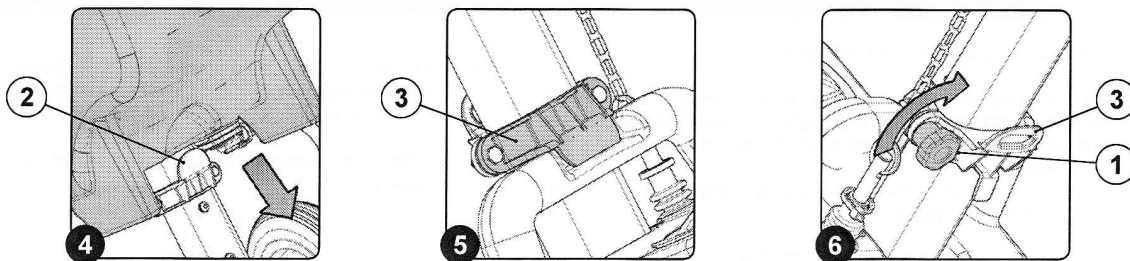
1. Secure the handlebar in a position at about 45° with respect to the ground (Fig.1).

2. Unscrewing the closing knob (1) (Fig.2) position the upper brackets beyond half of the column (Fig.3) (if it has not already been positioned).

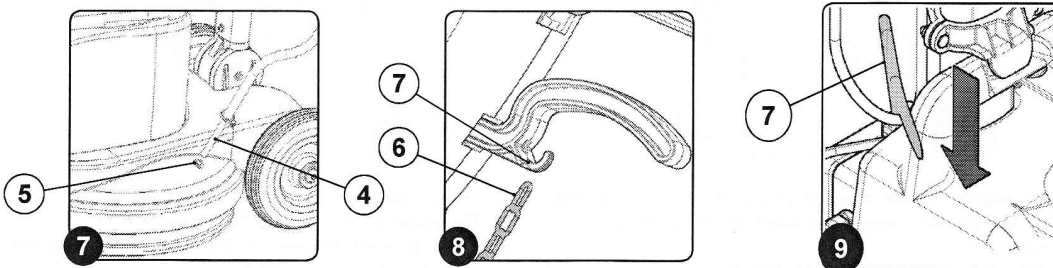


3. Put the solution tank on the column, so that the bottom of the tank is anchored to the fixed bracket (2) on the column itself (Fig.4).
4. Holding the tank with one hand, move the mobile bracket (3) down until the solution tank is locked to the column (Fig.5).

5. Lock the position of the mobile bracket (3) by tightening the closing knob (1) (Fig.6).
6. Insert the water distribution pipe (4) in the hole on the brush head (5) (Fig.7).

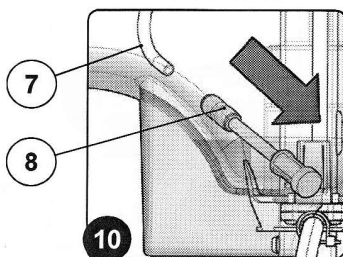


7. Insert the solution tank tap tie chain (6) in the coupling in the tap control handle (7) (Fig.8).



8. Insert the cleaning solution tube (7) into the hole in the solution tank (Fig.9).

9. Connect the cleaning solution tube (7) with the quick-release filter attachment and push it to the bottom of the tank. (Figure 10).



Adding Chemical

Fill the solution tank only when the column is in vertical position, by proceeding as follows:

1. Remove the solution tank cap (1) (Fig.1).
2. Fill with clean water, at a temperature no higher than 50°C.
3. 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 internal components of the appliance, so only use the minimum amount of detergent needed.

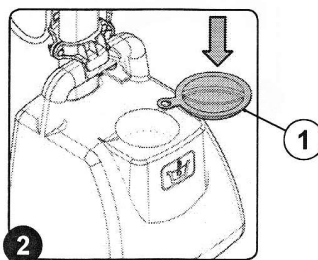
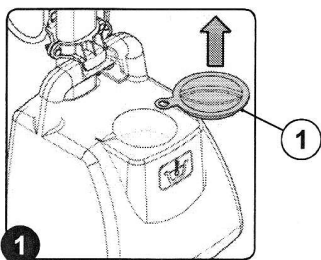
4. Insert the solution tank cap (1) (Fig.2).



ATTENTION: You are advised to always wear protective gloves, to avoid the risk of serious injury to your hands.



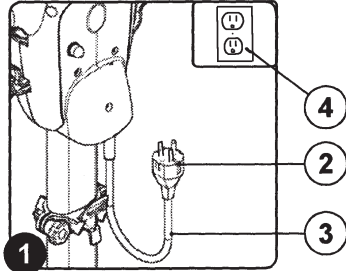
ATTENTION: We recommend that you vacuum at intervals the dirt-loaded foam with a vacuum cleaner for liquids.



Operation

Before beginning to work, it is necessary to:

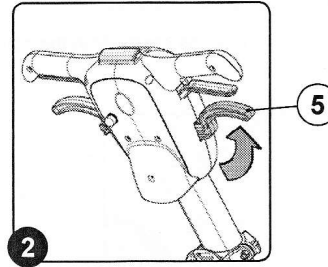
1. Before using, the appliance must be in order and safe to use with the work equipment, especially the power cable and the extension cable. If everything is not in order, the appliance must not be used.
2. Insert the plug (2) of the power supply cable (3) in the main supply socket (4) (**Fig.2**).



3. Release the control handlebar from the vertical position. Press the control column stop lever (5) in the direction indicated by the arrow (**Fig.3**) and turn the control column towards yourself (**Fig.4**).



ATTENTION: During this operation, do not rest your foot on the appliance.

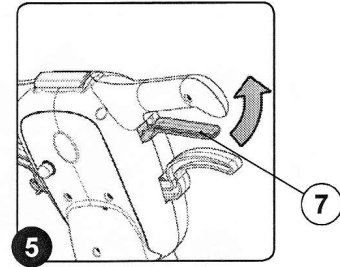
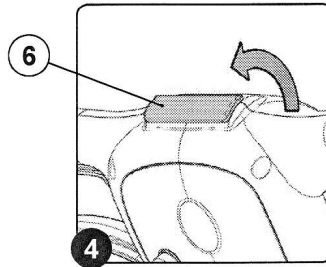
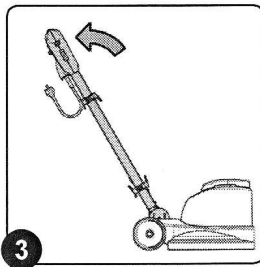


4. Turn the control column towards you until you find the best position, this position should be comfortable when using the appliance.
5. Once the ideal position has been found, release the control column stop lever (5) to lock the handlebar.
6. Turn the dead man's handle towards you (6) (**Fig.4**).
7. Press the control levers main switch (7), located under the grips

on the handlebar (**Fig.5**).

8. The appliance will now start to move.

9. Apply a small amount of detergent solution to the floor by pressing the lever (8) (**Fig.6**).
10. Push the appliance with the brush rotating from left to right or vice versa.



11. Immediately afterwards, push the appliance in the same way but in the opposite direction, so that about one quarter of the working width overlaps the previous one.
You can work by moving the car back and forth.
12. We recommend that you vacuum up the dirt-loaded foam at intervals with the aid of a vacuum cleaner for liquids.



ATTENTION: Do not insist too much on the same area so as to avoid damaging the floor, also in function of the type of brush or abrasive floor pad chosen.



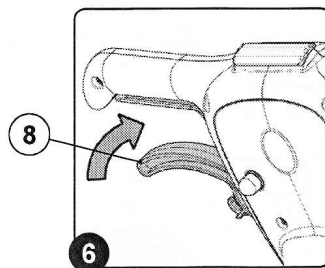
ATTENTION: If you need to work in tight spaces you can turn the control column to the vertical position.



ATTENTION: Work in slow movements to the right and left, possibly moving back so that the operator always stands on an area of the floor yet to be cleaned up.



ATTENTION: Keep the power supply cable behind the operator, taking care not to operate the appliance in its vicinity in order not to damage it.



1. If you intend to use the spray system, operate the lever of pump control switch (8) on the control handlebar.

ATTENTION: Pushing the lever (8) forwards starts the pump in intermittent mode (Fig.7).

ATTENTION: Pushing the lever (8) backward starts the pump in continuous mode.

2. Push the machine with the brush rotating from left to right or vice versa.
3. Immediately afterwards, push the machine in the same way but in the opposite direction, so that about one quarter of the working width overlaps the previous one.
4. We recommend that you vacuum up the dirt-loaded foam at intervals with the aid of a vacuum cleaner for liquids (optional solution tank kit).

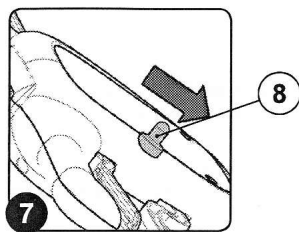
ATTENTION: The first time an operator uses the machine, he/she should become familiar with the movements to be imparted to the shaft in order to be confident enough with the directionality of movement of the machine, and should therefore not operate the machine near people or obstacles.

ATTENTION: Work in slow movements to the right and left, possibly moving back so that the operator always stands on an area of the floor yet to be cleaned up.

ATTENTION: Keep the power supply cable behind the operator, taking care not to operate the machine in its vicinity in order not to damage it.

ATTENTION: Do not insist too much on the same area so as to avoid damaging the floor, also in function of the type of brush or abrasive floor pad chosen.

ATTENTION: If you need to work in tight spaces you can turn the control column to the vertical position.



Finishing Job

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

1. Disconnect the plug (1) of the power supply cable (2) in the main supply socket (3) (Fig.1).

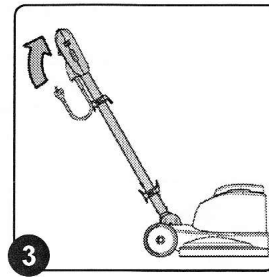
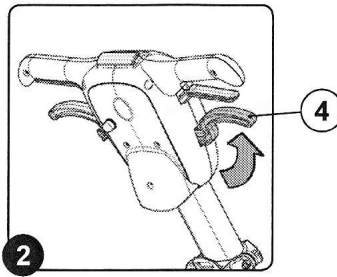
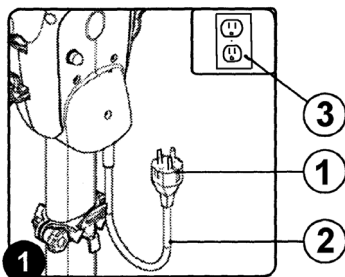


ATTENTION: You are advised to always wear protective gloves, to avoid the risk of serious injury to your hands.



ATTENTION: To prevent damaging the power cable, disconnect the plug from the mains socket by directly pulling the plug and not the cable.

2. Turn the handlebar to the vertical position, press the uncoupling lever (4) (Fig.2) and turn the handlebar to the vertical position (Fig.3). When the handlebar is vertical, release the uncoupling lever (4).



ATTENTION: During this operation, do not rest your foot on the appliance.

3. Tip the appliance back and take it to the maintenance area and carry out all the procedures listed in the section "RECOMMENDED PERIODIC MAINTENANCE" indicated in the column "AT THE END OF THE WORK".



ATTENTION: Park the appliance in an enclosed place, on a flat surface; near the appliance there must be no objects that could either damage it, or be damaged through contact with it.

Maintenance

Type of Maintenance	At the end of each job	Weekly	Prior to long storage	Prior to transporting
Check and clean brush and pad holder	X		X	X
Check and clean solution tank		X	X	X
Check and clean hoses		X	X	
Check and clean nozzle		X	X	

Cleaning Brush and Pad

Careful cleaning of the brush guarantees better cleaning of the floor as well as a longer brush motor life. To clean the pad holder, proceed as follows:

1. Take the appliance to the dedicated dirty water drainage area.



ATTENTION: The place this operation is carried out should comply with current environmental protection regulations.

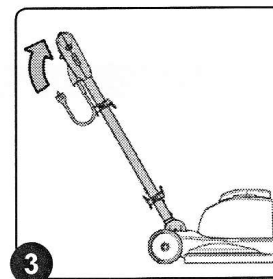
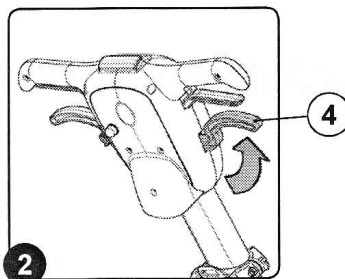
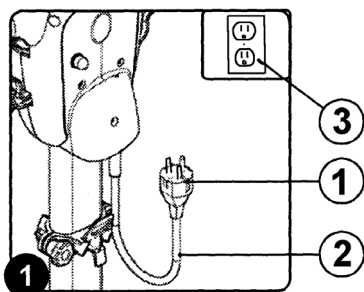
2. Check that the plug (1) on the power cable (2) has been taken out of the socket (3) of the main supply (**Fig.1**), and if not, disconnect it.



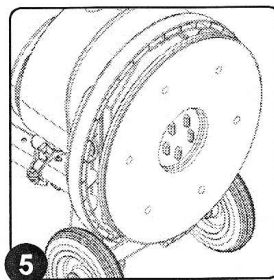
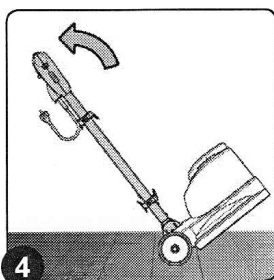
ATTENTION: You are advised to always wear protective gloves, to avoid the risk of serious injury to your hands.



ATTENTION: To prevent damaging the power cable, disconnect the plug from the mains socket by directly pulling the plug and not the cable.



3. Check that the handlebar is in the vertical position, if not, press the uncoupling lever (4) (**Fig.2**) and turn the handlebar to the vertical position (**Fig.3**). When the handlebar is vertical, release the uncoupling lever (4).
4. Tip the appliance back (**Fig.4**), block one of the rear wheels and shift the control column backwards.
5. Loosen the fixing keys, then remove the centering plate. Now you can remove the brush / pad holder (**Fig.5**).
6. Remove the brush from the appliance (**Fig.6**).
7. Clean the brush/pad holder under running water and remove any impurities present in the bristles of the brush or on the surface of the Check the bristles. If they are excessively worn, replace the brush (the bristles should protrude by at least 10mm).
8. Repeat the operations in reverse order to reassemble all the parts.



Cleaning Solution Tank

Carefully cleaning the solution tank ensures the floor is cleaned properly. Proceed as follows to clean the solution tank:

1. Take the device to the dedicated maintenance area.



ATTENTION: the place designated for this operation must comply with current environmental protection regulations.

2. Check that the plug (1) on the power cable (2) has been taken out of the socket (3) of the main supply (Fig.1), and if not, disconnect it.

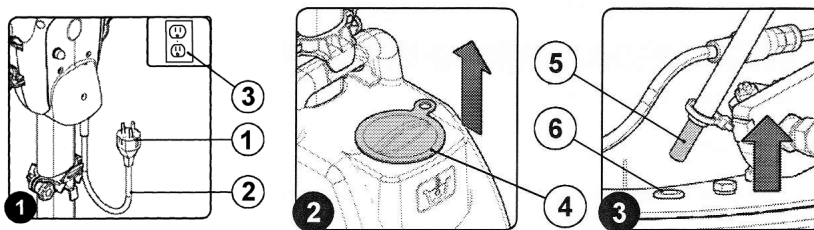


ATTENTION: these operations must be carried out using protective gloves to avoid any possible contact with the edges or tips of metal objects.



ATTENTION: To prevent damaging the power cable, disconnect the plug from the mains socket by directly pulling the plug and not the cable.

3. Make sure the solution tank is empty, otherwise empty it completely.
4. Remove the solution tank cap (4) (Fig.2).
5. Remove the water distribution pipe (5) in the hole on the brush head (6) (Fig.3).

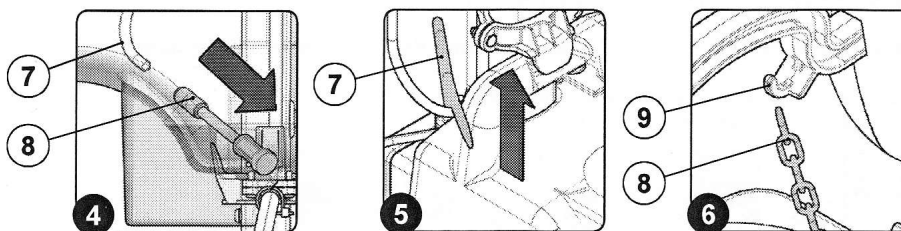


1. Disconnect the detergent solution pipe (7) from the quick coupling (8) (Fig.4).



ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

2. Remove the detergent solution pipe (7) from the hole in the solution tank (Fig.5).
3. Remove the solution tank tap tie-rod chain (8) in the coupling in the tap control handle (9) (Fig.6).
4. Turning the closing knob (10) (Fig.7) shift the top brackets beyond the stops in the tank.

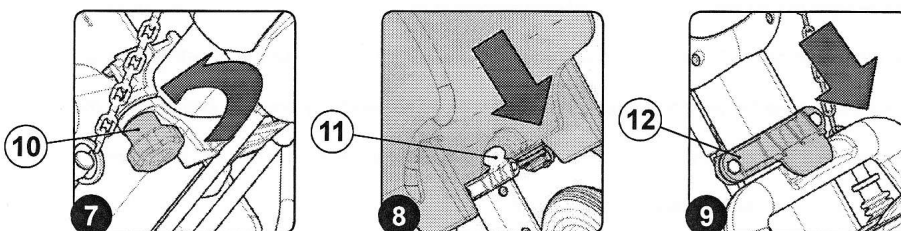


5. Remove the solution tank kit from the appliance, to lift it use the handle on the tank.
6. Rinse the inside with a jet of water, if necessary use a spatula to remove the sludge that has accumulated at the bottom of the tank.

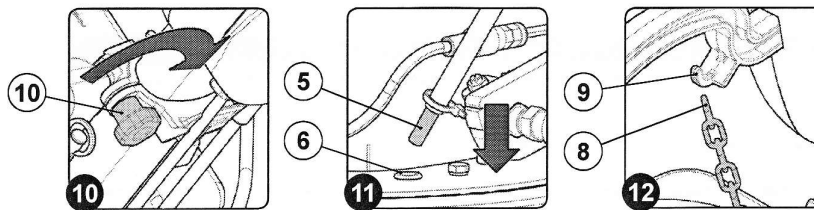


ATTENTION: Be careful not to lose the detergent solution draught filter.

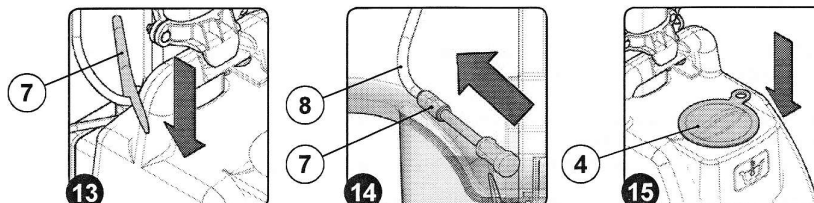
7. Put the solution tank on the column, so that the bottom of the tank is anchored to the fixed bracket (11) on the column itself (Fig.8).
8. Holding the tank with one hand, move the mobile bracket (12) down until the solution tank is locked to the column (Fig.9).



1. Lock the position of the mobile bracket (12) by tightening the closing knob (10) (Fig.10).
2. Insert the water distribution pipe (5) in the hole on the brush head (6) (Fig.11).
3. Insert the solution tank tap tie chain (8) in the coupling in the tap control handle (9) (Fig.12).



1. Insert the detergent solution pipe (7) into the hole in the solution tank (Fig.13).
2. Connect the detergent solution draught filter (7) to the quick coupling (8) (Fig.14). Make sure that the draught filter stays inside the solution tank.
3. Insert the solution tank cap (4) (Fig.15).



Cleaning Supply Hose

Proceed as follows to clean the detergent solution draught filter:

1. Take the device to the dedicated maintenance area.

ATTENTION: the place designated for this operation must comply with current environmental protection regulations.

2. Check that the plug (1) on the power cable (2) has been taken out of the socket (3) of the main supply (Fig.1), and if not, disconnect it.

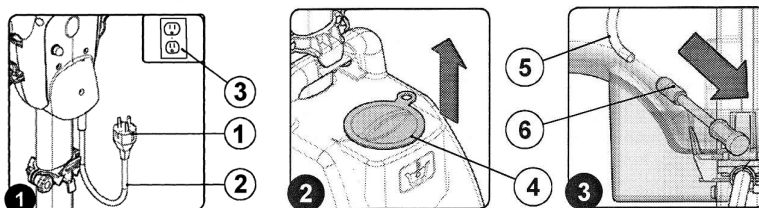
ATTENTION: these operations must be carried out using protective gloves to avoid any possible contact with the edges or tips of metal objects.

ATTENTION: To prevent damaging the power cable, disconnect the plug from the mains socket by directly pulling the plug and not the cable.

3. Make sure the solution tank is empty, otherwise empty it completely.
4. Remove the solution tank cap (4) (Fig.2).
5. Disconnect the detergent solution pipe (5) from the quick coupling (6) (Fig.3).

ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

6. Clean the filter under running water, if necessary remove any impurities.
7. Repeat the operations in reverse order to reassemble all the parts.



Cleaning Nozzle

To clean the detergent solution spray nozzle proceed as follows:

1. Take the device to the dedicated maintenance area.

ATTENTION: the place designated for this operation must comply with current environmental protection regulations.

2. Check that the plug (1) on the power cable (2) has been taken out of the socket (3) of the mains supply (Fig.1), and if not, disconnect it.

ATTENTION: these operations must be carried out using protective gloves to avoid any possible contact with the edges or tips of metal objects.

ATTENTION: To prevent damaging the power cable, disconnect the plug from the main socket by directly pulling the plug and not the cable.

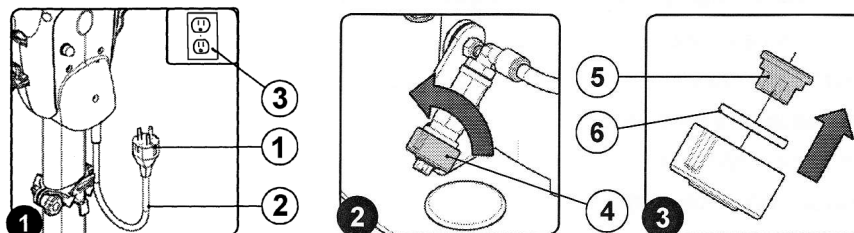
3. Make sure the solution tank is empty, otherwise empty it completely.

4. Remove the ring nut fixing the nozzle (4) (Fig.2).
5. Remove the spray nozzle (5), being careful not to lose the washer (6) (Fig.3).



ATTENTION: users are advised to always wear protective gloves, to avoid the risk of serious injury to hands.

6. Clean the nozzle under a jet of running water, if necessary remove any impurities.
7. Repeat the operations in reverse order to reassemble all the parts.



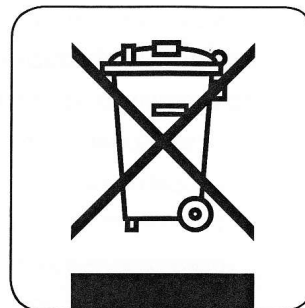
Disposal

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

Before scrapping the appliance, it is necessary to remove and separate out the following materials, then send them to the appropriate collection centres in accordance with applicable environmental hygiene regulations:

- Pad holders or brushes
- Electric and electronic parts*
- Plastic parts
- Metallic parts

(*) In particular, contact your distributor when scrapping electric and electronic parts.



Troubleshooting

This chapter lists the most common problems linked with the use of the appliance. If you are unable to resolve the problems with the information given here, please contact your nearest assistance centre.

Problem	Cause	Solution
Machine does not turn on	Power cable is not connected to power outlet or machine.	Check that the power cord is inserted into power outlet.
	Electrical specifications of machine should match power supply	Check that the power cord is connected at machine. Check the circuit breaker size at main power supply.
	Power cord damaged	Check power cable for damage
	Brush motor overheated	Check circuit breaker on the back of the handle assembly.
Insufficient chemical on pad	Solution level in tank low	Add chemical to tank.

WARNINGS

- The appliance must not be used or kept outdoors, in damp conditions or directly exposed to rain.
- The appliance must be stored in a closed area with a temperature between 13°F-130°F (-25°C and +55°C).
- Conditions of use: room temperature between 32°F-104°F (0°C and 40°C), with relative humidity 30 to 95%.
- The machine is not suitable for cleaning carpets or textile floors.
- Signal the presence of work areas with suitable wet floor signs.
- The socket for the machine power cable must have a dedicated ground connection.
- Avoid damaging the machine power cable by crushing or bending it, or by applying stress.
- Attention: do not let the power cable come into contact with the rotating brush.
- The appliance does not cause harmful vibrations.
- The appliance must never be used in environments with a potentially explosive atmosphere.
- Do not place any liquid containers on the appliance that are not designed for the unit.
- In the event of a fire, use a powder extinguisher. Do not use water.
- Adapt the speed to the adhesion conditions.
- Avoid using the brushes while the appliance is at a standstill, so as not to damage the floor.
- Do not knock against shelving or scaffolding, where there is a danger of falling objects.
- If the appliance does not work properly, check out routine maintenance.
- If you need to replace any components, request the ORIGINAL parts from an authorized distributor.
- Restore all electrical connections after any maintenance interventions.
- Have the appliance checked by an authorized technical assistance center every year.
- When disposing of consumable materials, observe the laws and regulations in force.
- If the power supply cable gets damaged, the appliance must be stopped if it is operating.
- Before using the appliance, check that all the hatches and covers are positioned as shown in this manual.
- Only use the discs supplied with the device, or those approved by the manufacturer.



Minuteman International, Inc
14N845 US-20
Pingree Grove, Illinois 60140 USA
Phone 630-627-6900