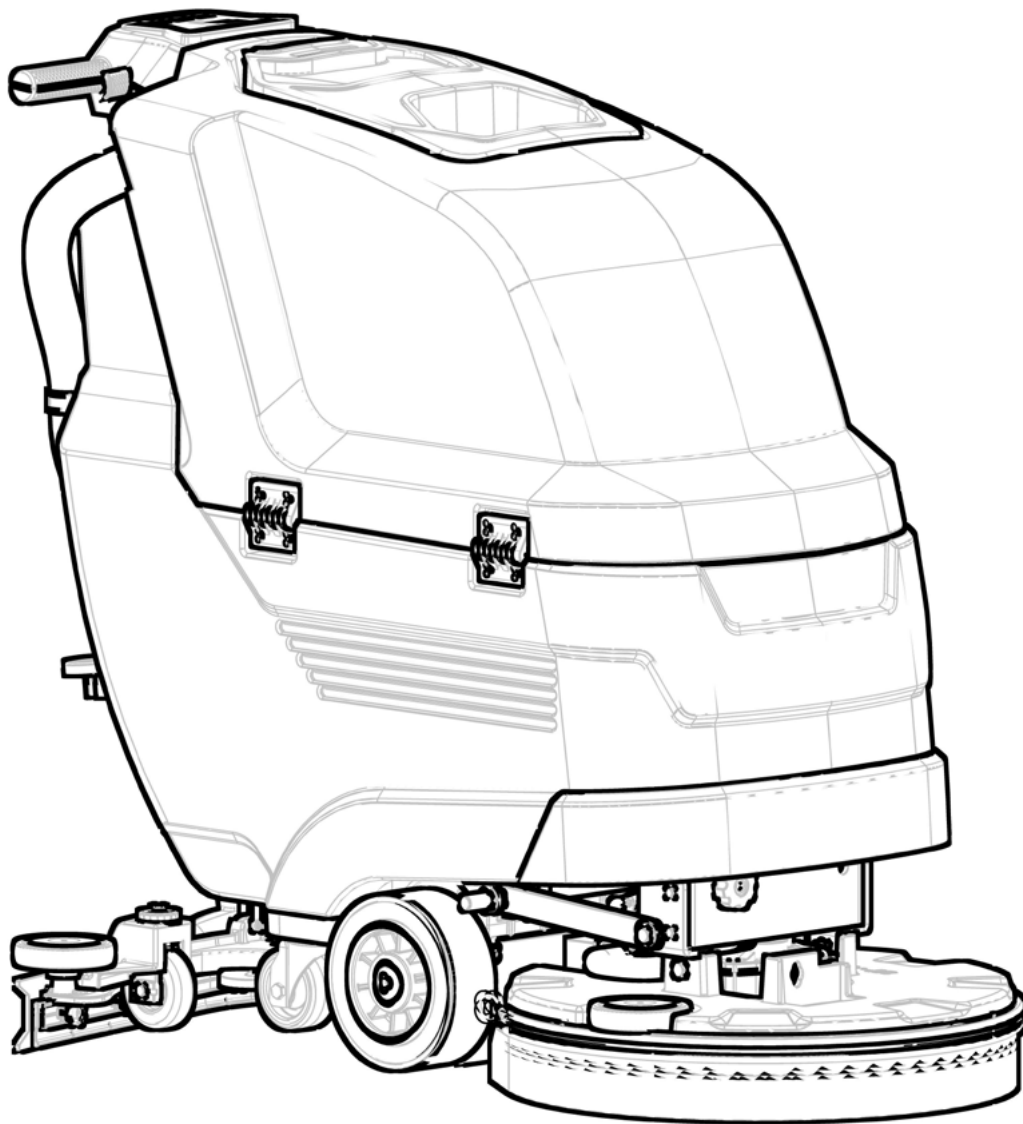


TEMPO RUN 55-65



SCRUBBING MACHINES

USE AND MAINTENANCE MANUAL

BOMA



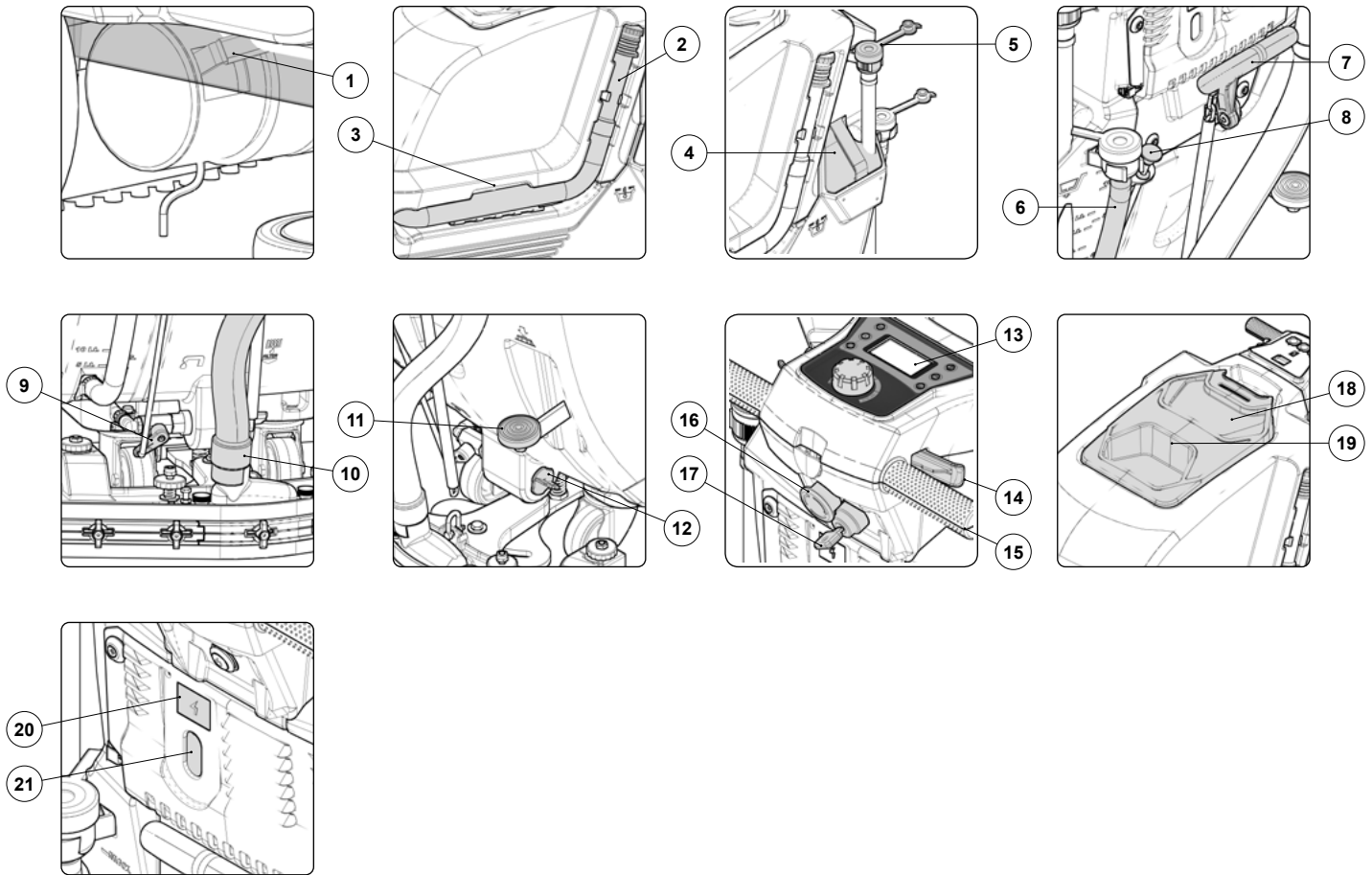
ORIGINAL INSTRUCTIONS Doc. 10069703-AB
DATE 2018-06

CONTENTS

CONTENTS	3
LOCATION OF THE MAIN MACHINE COMPONENTS	5
GENERAL DESCRIPTION	6
GENERAL SAFETY REGULATIONS	6
DEFINITION OF LEVELS OF WARNING	6
SYMBOLS USED IN THE MANUAL	6
PURPOSE AND CONTENT OF THE MANUAL	7
TARGET GROUP	7
PRESERVATION OF THE USER	7
ON CONSIGNMENT OF THE MACHINE	7
INTRODUCTORY COMMENT	7
IDENTIFICATION DATA	7
TECHNICAL DESCRIPTION	7
INTENDED USE	7
SAFETY	7
REGULATIONS	7
SERIAL NUMBER PLATE	8
TECHNICAL DATA	8
SYMBOLS AND LABELS USED ON THE MACHINE	9
SYMBOLS PRESENT ON THE REGISTRATION PLATE	9
SYMBOLS PRINTED ON THE MACHINE	9
LABELS ON THE MACHINE	9
SYMBOLS USED ON THE CONTROL INSTRUMENT PANEL (<i>Tempo Run 50 NT version</i>)	11
SYMBOLS USED ON THE CONTROL PANEL (<i>Tempo Run 50 version</i>)	11
SYMBOLS USED ON THE CONTROL PANEL (<i>Tempo Run 50 PM version</i>)	11
SYMBOLS USED ON THE CONTROL PANEL (<i>Tempo Run 55-65 version</i>)	12
SYMBOLS USED ON THE CONTROL DISPLAY (<i>versions with traction</i>)	12
PREPARATION OF MACHINE	13
HANDLING THE PACKAGED MACHINE	13
HOW TO UNPACK THE MACHINE	14
HOW TO MOVE THE MACHINE	15
MACHINE SAFETY	15
BATTERY MAINTENANCE AND DISPOSAL	15
TYPE OF BATTERY TO BE USED	15
INSERTING THE BATTERIES INTO THE MACHINE	15
CONNECTING THE BATTERIES TO THE MACHINE SYSTEM	16
RECHARGING THE BATTERIES	16
FITTING THE BRUSH HEAD BODY BRUSH (<i>single brush version</i>)	17
FITTING THE BRUSH HEAD BODY SPLASH GUARD (<i>single brush version</i>)	18
FITTING THE BRUSH HEAD BODY BRUSH (<i>dual brush version</i>)	18
ASSEMBLING THE SQUEEGEE BODY	18
INSERTING THE WATER SYSTEM FILTER CAP	19
FILLING THE SOLUTION TANK WITH WATER	19
ADJUSTING THE DETERGENT SOLUTION (<i>versions without CDS system</i>)	19
FILLING THE DETERGENT CANISTER (<i>versions with CDS system</i>)	19
PREPARING TO WORK	20
STARTING WORK (<i>versions without traction</i>)	21
HOUR METER	21
BATTERY CHARGE LEVEL INDICATOR	22
OVERFLOW DEVICE	22
STARTING WORK (<i>versions with traction</i>)	22
BATTERY CHARGE LEVEL INDICATOR	23
HOUR METER	23
OVERFLOW DEVICE	23
WORKING PROGRAMS (<i>versions without traction</i>)	24
SCRUBBING WITH DRYING	24

SCRUBBING WITHOUT DRYING	24
DRYING WITHOUT SCRUBBING	25
WORKING PROGRAMS (versions with traction)	25
SCRUBBING WITH DRYING	25
SCRUBBING WITHOUT DRYING	26
DRYING WITHOUT SCRUBBING	27
ADDITIONAL FUNCTIONS (versions without traction)	28
ADJUSTMENT OF THE DETERGENT SOLUTION FLOW	28
REGULATING THE FORWARD SPEED	28
ADDITIONAL FUNCTIONS (versions with traction)	28
ACTIVATING ECO MODE	29
ACTIVATING BOOST MODE (TEMPO RUN 50 PM SC versions)	29
ACTIVATING REVERSE FUNCTION	29
ACTIVATING THE BRUSH HEAD BODY BRUSH UNCOUPLING FUNCTION (single brush version)	29
ADJUSTING THE DETERGENT SOLUTION FLOW (versions without CDS system)	29
DOSING SYSTEM FUNCTION (CDS versions)	30
ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)	30
SOLUTION SMART CONTROL FUNCTION (SSC versions)	30
SPEED ADJUSTMENT	30
PRESSURE MONITORING FUNCTION (PM versions)	31
ACTIVATING THE BRUSH HEAD BODY EXTRA PRESSURE FUNCTION (versions with PM system)	31
IMMEDIATE STOP BUTTON	31
ALARM SCREEN	31
AT THE END OF THE WORK (versions without traction)	31
AT THE END OF THE WORK (versions with traction)	32
ROUTINE MAINTENANCE	33
CLEANING THE SQUEEGEE BODY	34
CLEANING THE WATER SYSTEM FILTER	34
CLEANING THE VACUUM MOTOR FILTER	34
CLEANING THE RECOVERY TANK	35
CLEANING THE BRUSH HEAD BODY BRUSH (single brush version)	35
CLEANING THE BRUSH HEAD BODY BRUSH (dual brush version)	35
CLEANING THE VACUUM TUBE	36
EMPTYING THE RECOVERY TANK	36
EMPTYING THE SOLUTION TANK	36
EXTRAORDINARY MAINTENANCE	37
REPLACING THE SQUEEGEE BODY RUBBER BLADES	37
REPLACING THE BRUSH HEAD BODY BRUSH (single brush version)	38
REPLACING THE BRUSH HEAD BODY BRUSH (dual brush version)	38
ADJUSTMENT INTERVENTIONS	38
ADJUSTING THE SQUEEGEE BODY'S RUBBER BLADES	39
CHOOSING AND USING BRUSHES	39
TROUBLESHOOTING	40
DISPOSAL	40
EC DECLARATION OF CONFORMITY	43
UKCA DECLARATION OF CONFORMITY	44

LOCATION OF THE MAIN MACHINE COMPONENTS



The basic machine components are identified as follows:

1. Electrobrake activation-deactivation lever.
2. Recovery tank drainage hose.
3. Recovery tank lifting handle.
4. Solution tank dosing cap.
5. Solution tank rapid filling hose.
6. Solution tank level - drain hose.
7. Squeegee body lifting handle.
8. Detergent solution flow adjustment shaft.
9. Tap command lever.
10. Squeegee body vacuum tube.
11. Brush head control pedal, only for versions without PM.
12. Cap - solution tank filter.
13. Control panel.
14. Dead man's lever.
15. Handlebars.
16. Emergency switch.
17. Main switch.
18. Recovery tank lid.
19. Storage compartment.
20. Battery charger socket cap, only for battery charger versions.
21. Battery charge LED display, only valid for battery charger versions.

GENERAL DESCRIPTION

The descriptions contained in this document are not binding. The company therefore reserves the right to make any modifications at any time to elements, details, or accessory supply, as considered necessary for reasons of improvement or manufacturing/commercial requirements. The reproduction, even partial, of the text and drawings contained in this document is prohibited by law. **The company reserves the right to make any technical and/or supply modifications. The images are shown as reference only and are not binding as to the actual design and/or equipment.**

GENERAL SAFETY REGULATIONS

Before using the machine, please read the following document carefully and follow the instructions contained herein, along with the instructions in the document supplied with the machine itself, "GENERAL SAFETY REGULATIONS" (document code 10083659).

DEFINITION OF LEVELS OF WARNING

-  **DANGER:** indicates an imminent dangerous situation that, unless avoided, will result in death or serious injuries.
-  **WARNING:** Indicates a potentially dangerous situation that, unless avoided, could cause death or serious injury.
-  **ATTENTION:** Indicates a potentially dangerous situation that, unless avoided, could cause slight or moderate injuries.
-  **N.B.:** instructs the reader to pay particular attention to the topic that follows.

SYMBOLS USED IN THE MANUAL

	Open book symbol with an "i": Indicates the need to consult the instruction manual.
	Open book symbol: Tells the operator to read the user manual before using the device.
	Covered place symbol: The operations preceded by this symbol must always be carried out in a dry, covered area.
	Information symbol: Indicates additional information for the operator, to improve the use of the device.
	Warning symbol: Carefully read the sections preceded by this symbol meticulously following the instructions indicated for the safety of the operator and the device.
	Danger symbol (corrosive substances): The operator should always wear protective gloves to avoid the risk of serious injury to the hands caused by corrosive substances.
	Danger symbol (battery acid leakage): Indicates the danger of leaking acid or acid fumes from the batteries while they are being recharged.
	Danger symbol (moving carriages): Indicates that the packed product should be handled with suitable carriages that conform to legal requirements.
	Mandatory room ventilation symbol: Informs the operator that the room must be ventilated while the batteries are being recharged.
	Symbol indicating the compulsory use of protective gloves: Indicates that the operator should always wear protective gloves, to avoid the risk of serious injury to his hands from sharp objects.
	Recycling symbol: Tells the operator to carry out the operations in compliance with environmental regulations in force in the place where the appliance is being used.
	Disposal symbol: Carefully read the sections marked with this symbol for disposing of the appliance.

PURPOSE AND CONTENT OF THE MANUAL

The aim of this manual is to provide customers with all the information needed to use the machine in the safest, most appropriate and most autonomous way. This includes information concerning technical aspects, safety, operation, downtime, maintenance, spare parts and scrapping. The operators and qualified technicians must carefully read the instructions in this manual before carrying out any operations on the machine. If in doubt about the correct interpretation of instructions, contact your nearest BOMA Customer Service Centre to obtain the necessary clarifications.

TARGET GROUP

This manual is written both for operators and for qualified machine maintenance technicians. Operators must not perform operations that should be carried out by qualified technicians. The manufacturer is not liable for damages resulting from failure to comply with this veto.

PRESERVATION OF THE USER

The Use and Maintenance Manual must be stored in its special pouch close to the machine, protected from liquids and anything else that could compromise its legibility.

ON CONSIGNMENT OF THE MACHINE

When the machine is consigned to the customer, an immediate check must be performed to ensure all the material mentioned in the shipping documents has been received, and also to check the machine has not suffered damage 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.

INTRODUCTORY COMMENT

Any floor scrubbing machine can only work properly and effectively if used correctly and kept in full working order by performing the maintenance operations described in the attached documentation. 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 assistance service (organised in collaboration with our dealers) is always available for advice or direct intervention.

IDENTIFICATION DATA

For technical assistance or to request replacement parts, always give the model, the version and the serial number (written on the relevant plate). See "SERIAL NUMBER PLATE" on page 8.

TECHNICAL DESCRIPTION

The **Tempo Run 50-55-65** is a floor scrubbing machine that can handle a wide variety of floors and types of dirt by using the mechanical action of one or two brushes and the chemical action of a water-detergent solution. As it advances, it collects the dirt removed and the detergent solution not absorbed by the floor. **The machine must only be used for this purpose.**

INTENDED USE

This scrubbing machine was designed and built for the cleaning (scrubbing and drying) of smooth, compact flooring in the commercial, residential and industrial sectors by a qualified operator in proven safety conditions. The scrubbing machine is not suitable for cleaning rugs or carpet floors. It is only suitable for use in closed (or at least covered) places.



ATTENTION: the machine is not suitable for use in the rain, or under water jets.



IT IS FORBIDDEN to use the machine in environments with an explosive atmosphere to clean dangerous powders or flammable liquids. In addition, it is not suitable as a means of transport for people or objects.

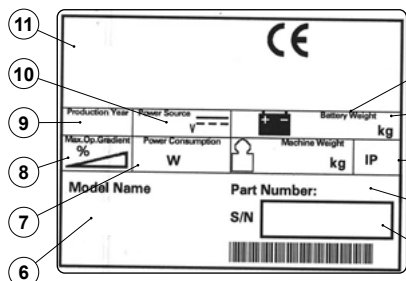
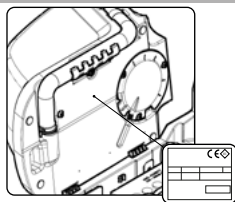
SAFETY

Operator cooperation is paramount for accident prevention. No accident prevention programme can be effective without the full cooperation of the person directly responsible for machine operation. The majority of occupational accidents that happen either in the workplace or whilst moving are caused by failure to respect the most basic safety rules. An attentive, careful operator is most effective guarantee against accidents and is fundamental in order to implement any prevention programme.

REGULATIONS

All references to forwards and backwards, front and rear, right and left indicated in this manual should be understood as referring to the operator in the driving position, with his/her hands on the control handlebars.

SERIAL NUMBER PLATE



The serial number plate is located inside the solution tank, and indicates the general characteristics of the machine, in particular the serial number of the machine. The serial number is a very important piece of information and should always be provided together with any request for assistance or when purchasing spare parts. The serial number plate contains the following:

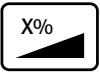
1. The weight of the batteries that power the machine (expressed in kg).
2. The IP protection rating of the machine.
3. The gross weight of the machine (expressed in kg).
4. The machine ID code.
5. The machine serial number.
6. The machine ID name.
7. The nominal power consumed by the machine (expressed in W).
8. The maximum grade that the appliance can handle during work activities (expressed in %).
9. The year of machine manufacture.
10. The nominal voltage of the machine (expressed in V).
11. The commercial name of the machine, and the manufacturer's address.

TECHNICAL DATA

TECHNICAL DATA	U/M [KMS]	TEMPO RUN 50 NT	TEMPO RUN 50	TEMPO RUN 50 PM	TEMPO RUN 55	TEMPO RUN 65
Rated machine power	kW	0,91	1,09	1,09	1,39	1,39
Theoretical working capacity up to	m ² /h	1880	1880	1880	2070	2425
Maximum working width	mm	508	508	508	560	655
Squeegee width	mm	703	703	703	800	800
Brush head brush (Ø external bristles)	mm	508	508	508	290	340
Electrical characteristics of the brush head motor	V / W	24 - 500	24 - 500	24 - 500	24 - 400	24 - 400
Single brush rpm	rpm	140	140	140	240	240
Weight exerted on the floor by the brush head	kg	32	32	32	25	30
Traction motor electrical properties (voltage - power)	V / W	-	24 - 180	24 - 180	24 - 180	24 - 180
Maximum slope during work (GVW)	%	2	10	10	10	10
Maximum working speed	km/h	3.5	3.5	3.5	3.5	3.5
Suction motor electrical properties (voltage - power)	V / W	24 - 410	24 - 410	24 - 410	24 - 410	24 - 410
Vacuum on vacuum head	mmH ₂ O	1240	1240	1240	1240	1240
Maximum solution tank capacity	l	40	40	40	60	60
Maximum recovery tank capacity	l	60	60	60	65	65
Maximum solution tank capacity (versions with CDS)	l	-	3	3	3	3
Machine dimensions (length - height - width)	mm	1177	1177	1177	1190	1196
		1009	1009	1009	1050	1050
		591	591	591	620	695
Battery compartment dimensions (length - height - width)	mm	285	285	285	285	285
		350	350	350	350	350
		355	355	355	355	355
Machine weight when empty	kg	80	87	87	92	96
Transported machine weight	kg	154	163	163	166	170
GVW	kg	191	200	200	226	230
Sound pressure level in operator seat [ISO 11201] (L _{PA})	dB	65,7	65,7	65,3	65,3	65,3
Sound power level [IEC 60335-2-72; IEC 62885-9; ISO 3744] (L _{WA})	dB	<80	<80	<80	<80	<80
Uncertainty K _{PA}	dB	1,5	1,5	1,5	1,5	1,5
Hand-arm vibrations [IEC 60335-2-72; IEC 62885-9; ISO 5349-1]	m/s ²	<2.5	<2.5	<2.5	<2.5	<2.5
Vibration measurement uncertainty		4%	4%	4%	4%	4%

SYMBOLS AND LABELS USED ON THE MACHINE

SYMBOLS PRESENT ON THE REGISTRATION PLATE

	Direct current symbol: It is used on the machine's registration plate to indicate that it is powered by a DC power supply.
	Battery symbol: Used on the machine's registration plate to indicate the mass of the batteries used to power the machine (expressed in kg). The value refers to the batteries that the manufacturer offers, see paragraph. "TYPE OF BATTERY TO BE USED" on page 15
	Maximum gradient symbol: Used on the machine serial number plate, to indicate the maximum gradient that can be safely handled with the machine at GVW..

SYMBOLS PRINTED ON THE MACHINE

	Tank empty symbol: Used on the rear of the machine to indicate the position of the solution tank drainage cap.
	Brush head unit control symbol: Used on the rear of the machine to indicate the position of the brush head control pedal.
	Tap position symbol: Used on the rear of the machine to indicate the position of the detergent solution control tap.
	Cap/filter position symbol: Applied to the rear of the machine to indicate the position of the solution tank filter - cap.
	Symbol of maximum temperature for filling the solution tank: Located on the side of the machine to indicate the maximum temperature of the water for filling the solution tank safely.

LABELS ON THE MACHINE

	Label indicating the squeegee body control lever: Located on the rear part of the machine, near the squeegee body control lever. By turning the squeegee body control lever upwards, the squeegee body will be lifted off the floor and moved into the idle position. By turning the squeegee body control lever downwards, the squeegee body will be rested on the floor and moved into the work position.
	Label indicating the detergent solution flow adjustment lever: Located on the rear part of the machine, near the detergent solution flow adjustment lever. By moving the lever upwards, the flow of detergent solution in the machine's water circuit is reduced. By moving the lever downwards, the flow of detergent solution in the machine's water circuit is increased.
	Label indicating the brush head body tilt adjustment knob: Located on the front of the machine, next to the knob for adjusting the brush head body tilt. By turning the knob clockwise, the brush head body will increase the angle of the tilt with respect to the floor. By turning the knob anti-clockwise, the brush head body will decrease the angle of the tilt with respect to the floor.
	Label with squeegee body vacuum tube position warning: Used on the back of the machine to identify the correct position for the squeegee body vacuum tube. The tube must be positioned behind the squeegee unit's lifting chain.
	Label warning about the risk of crushed hands: Located on the front of the solution tank to warn of the risk of crushing hands when closing the recovery tank.



Label indicating the need to read the Use and Maintenance Manual:

Located by the control handlebar to warn the operator to read the use and maintenance manual (this document) before using the machine.



Daily maintenance label:

Located on the back of the machine, to indicate which maintenance operations the operator must carry out at the end of the day.



Solution tank filter cleaning label:

Located on the back of the machine to instruct the operator to clean the solution tank filter at the end of the work.



Label indicating that touching the brush when moving is prohibited:

Located on the brush head body, and indicates that coming close to the brush head body while the brush is moving is prohibited.



Machine use warning label:

Located on the rear part of the machine, near the main switch, to inform the operator that vacuuming/collecting flammable and/or explosive dust and/or liquids or incandescent particles is strictly forbidden.



Warning during battery charging label:

Located inside the machine by the battery compartment to instruct the operator to take care when performing the battery charge cycle.



Battery charging sequence label:

Used inside the machine above the recovery tank, near the batteries, to inform the operator of the sequence to be followed in order to charge the batteries correctly.



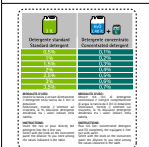
Battery charging sequence label (versions with battery charger):

Used inside the machine above the recovery tank, near the batteries, to inform the operator of the sequence to be followed in order to charge the batteries correctly.



Detergent solution automatic dosing system warning label (versions with CDS system):

Located inside the machine above the recovery tank, near the detergent tank, to indicate to the operator which type of pH detergent can be used with the CDS system without damaging it.



Detergent dilution label (versions with CDS system):

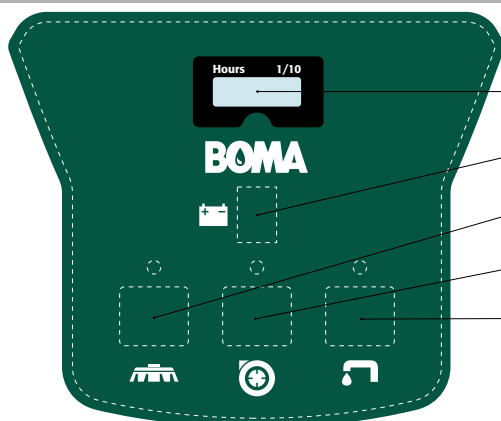
Located inside the machine above the recovery tank, near the detergent tank, to indicate the capacity of the detergent tank and the dilution percentage of the CDS system to the operator.



Detergent solution automatic dosing system warning label (versions with CDS system):

Located above the detergent tank to indicate to the operator which type of pH detergent can be used with the CDS system without damaging it.

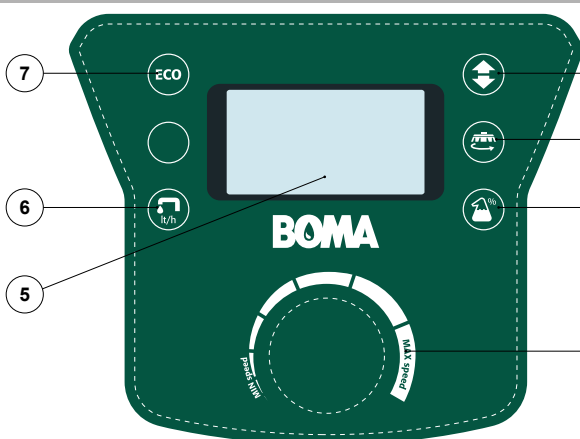
SYMBOLS USED ON THE CONTROL INSTRUMENT PANEL (Tempo Run 50 NT version)



The control panel is divided as follows:

1. Hour meter.
2. Battery charge level display.
3. Brush head gearmotor activation-deactivation switch.
4. Suction motor activation - deactivation switch.
5. Detergent solution solenoid valve activation - deactivation switch.

SYMBOLS USED ON THE CONTROL PANEL (Tempo Run 50 version)



The control panel is divided as follows:

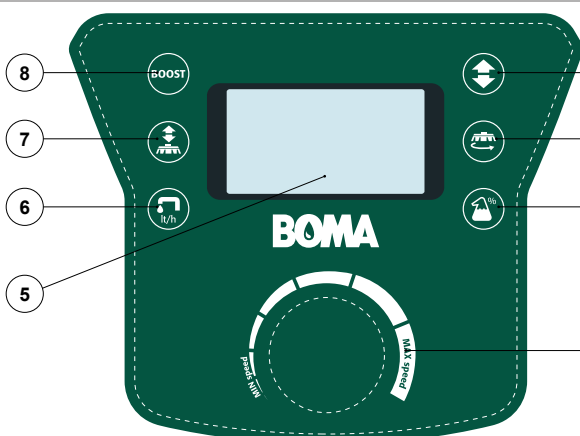
1. Reverse activation-deactivation symbol: indicates the button that activates the reverse function, see paragraph "ACTIVATING REVERSE FUNCTION" on page 29.
2. Brush uncoupling activation-deactivation symbol: indicates the button that activates the brush uncoupling function, see paragraph "ACTIVATING THE BRUSH HEAD BODY BRUSH UNCOUPLING FUNCTION (single brush version)" on page 29.
3. Detergent percentage adjustment symbol: indicates the button that enables the percentage of detergent present inside the water circuit of the machine to be adjusted, see paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30.
4. Traction motor potentiometer symbol: indicates the knob that enables the forward speed of the machine to be adjusted, see paragraph "SPEED ADJUSTMENT" on page 30.
5. Control display: this is a digital display that enables the parameters set in the machine during its use to be viewed, see paragraph "SYMBOLS

USED ON THE CONTROL DISPLAY (versions with traction)" on page 12.

6. Water percentage adjustment symbol: indicates the button that enables the percentage of water present inside the water circuit of the machine to be adjusted, see paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30.

7. Symbol for ECO-MODE program: indicates the switch that enables the ECO-MODE working mode to be activated, see paragraph "ACTIVATING ECO MODE" on page 29.

SYMBOLS USED ON THE CONTROL PANEL (Tempo Run 50 PM version)



The control panel is divided as follows:

1. Reverse activation-deactivation symbol: indicates the button that activates the reverse function, see paragraph "ACTIVATING REVERSE FUNCTION" on page 29.
2. Brush uncoupling activation-deactivation symbol: indicates the button that activates the brush uncoupling function, see paragraph "ACTIVATING THE BRUSH HEAD BODY BRUSH UNCOUPLING FUNCTION (single brush version)" on page 29.
3. Detergent percentage adjustment symbol: indicates the button that enables the percentage of detergent present inside the water circuit of the machine to be adjusted, see paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30.
4. Traction motor potentiometer symbol: indicates the knob that enables the forward speed of the machine to be adjusted, see paragraph "SPEED ADJUSTMENT" on page 30.
5. Control display: this is a digital display that enables the parameters set in the machine during its use to be viewed, see paragraph "SYMBOLS

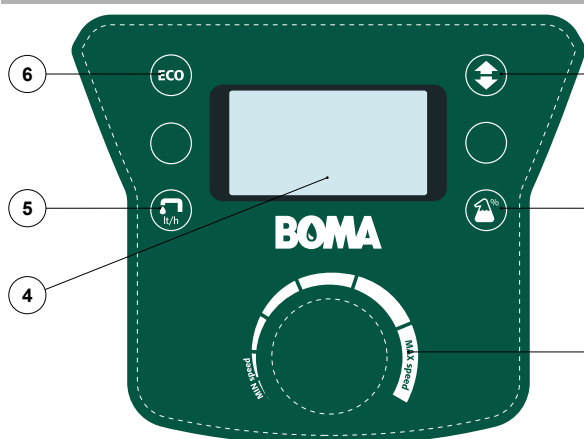
USED ON THE CONTROL DISPLAY (versions with traction)" on page 12.

6. Water percentage adjustment symbol: indicates the button that enables the percentage of water present inside the water circuit of the machine to be adjusted, see paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30.

7. Brush head control symbol: indicates the button that enables the jack for lifting the brush head to be controlled, valid for versions with the PM system, see paragraph "PRESSURE MONITORING FUNCTION (PM versions)" on page 31.

BOOST program symbol: indicates the switch that enables the BOOST working mode to be activated, see paragraph "ACTIVATING BOOST MODE (TEMPO RUN 50 PM SC versions)" on page 29.

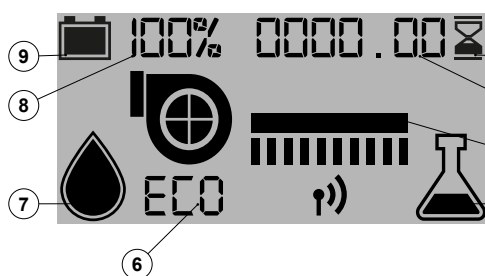
SYMBOLS USED ON THE CONTROL PANEL (Tempo Run 55-65 version)



The control panel is divided as follows:

1. Reverse activation-deactivation symbol: indicates the button that activates the reverse function, see paragraph "ACTIVATING REVERSE FUNCTION" on page 29.
2. Detergent percentage adjustment symbol: indicates the button that enables the percentage of detergent present inside the water circuit of the machine to be adjusted, see paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30.
3. Traction motor potentiometer symbol: indicates the knob that enables the forward speed of the machine to be adjusted, see paragraph "SPEED ADJUSTMENT" on page 30.
4. Control display: this is a digital display that enables the parameters set in the machine during its use to be viewed, see paragraph "SYMBOLS USED ON THE CONTROL DISPLAY (versions with traction)" on page 12.
5. Water percentage adjustment symbol: indicates the button that enables the percentage of water present inside the water circuit of the machine to be adjusted, see paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30.
6. Symbol for ECO-MODE program: indicates the switch that enables the ECO-MODE working mode to be activated, see paragraph "ACTIVATING ECO MODE" on page 29.

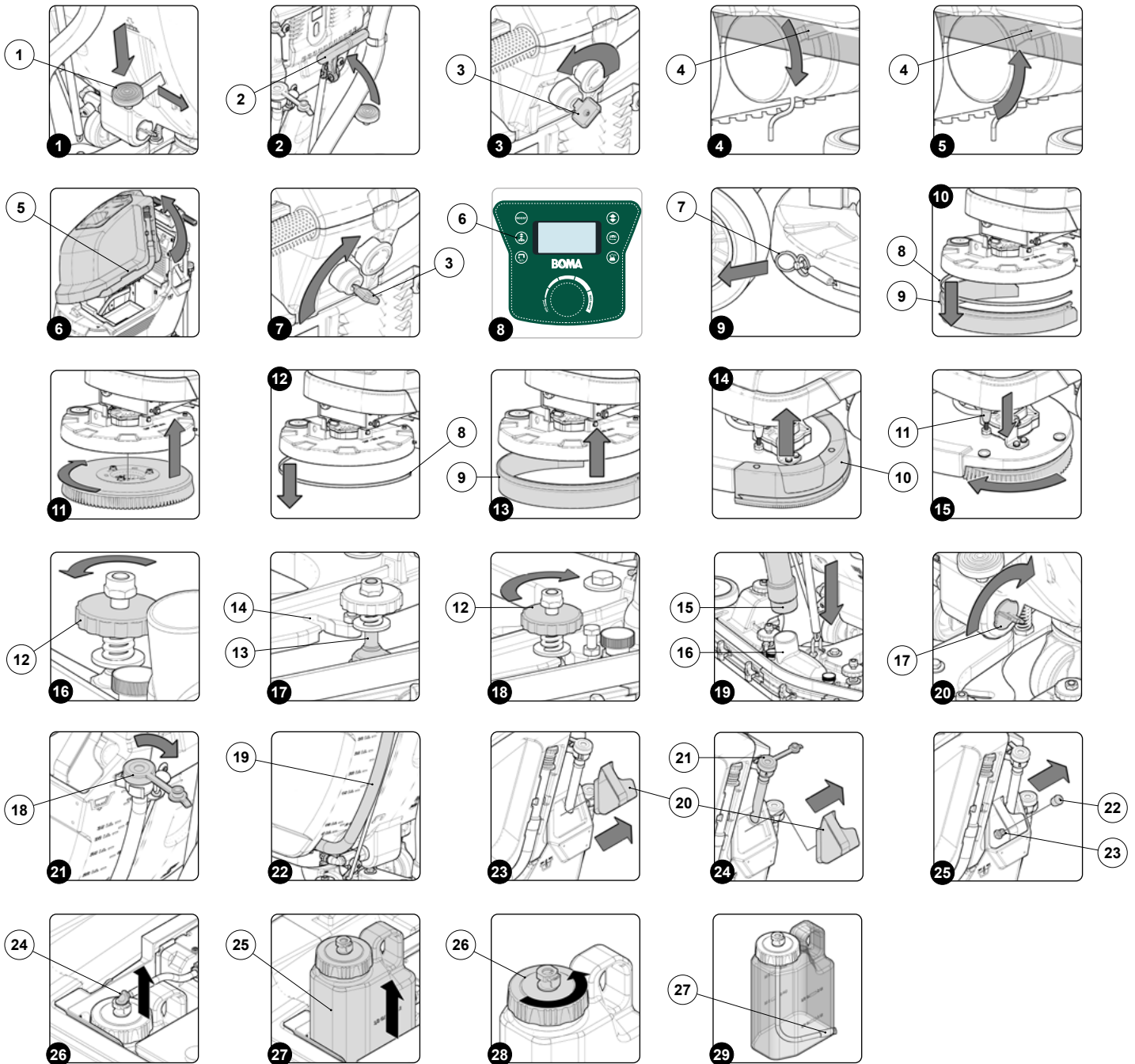
SYMBOLS USED ON THE CONTROL DISPLAY (versions with traction)



The control screen is divided in:

1. Graphic symbol that identifies the machine hour meter.
2. Numerical value that identifies the total working time of the machine; this value is expressed in hours and minutes, see paragraph "HOUR METER" on page 23.
3. Graphic symbol that identifies the type of work program in use, see chapter "WORKING PROGRAMS (versions with traction)" on page 25.
4. Graphic symbol that identifies the percentage level of chemical product inside the machine water system (valid for versions with CDS system), see paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30.
5. Graphic symbol indicating that the ECO-MODE working mode is active, see paragraph "ACTIVATING ECO MODE" on page 29. Or graphic symbol indicating that BOOST-MODE working mode is active, see paragraph "ACTIVATING BOOST MODE (TEMPO RUN 50 PM SC versions)" on page 29.
6. Graphic symbol that identifies the level of water inside the machine water system (valid for versions with CDS system), see paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30.
7. Numerical value that identifies the percentage of charge of the batteries present in the machine.
8. Graphic symbol that identifies the percentage of charge of the batteries present in the machine, see paragraph "BATTERY CHARGE LEVEL INDICATOR" on page 23.

PREPARATION OF MACHINE



HANDLING THE PACKAGED MACHINE

Machine	Mass
Tempo Run 50 NT	95Kg
Tempo Run 50	100Kg
Tempo Run 50 PM	120Kg
Tempo Run 55	115Kg
Tempo Run 65	120Kg

The overall weight of the machine with its packaging is:

The external dimensions of the package are:

Tempo Run 50 Length = 125cm; Width = 61cm; Height = 113.5cm

Tempo Run 55-65 Length = 125cm; Width = 73cm; Height = 130cm



N.B.: it is recommended that all the packaging components be kept for any future machine transportation.

DANGER: Move the packaged product with handling equipment that complies with legal requirements regarding size and mass of the packaging.

HOW TO UNPACK THE MACHINE

The machine is shipped in specific packaging. To remove it, proceed as follows:

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

 **N.B.:** Use the pictograms printed on the box as reference.

2. Remove the outer package.

 **WARNING:** The machine is contained in specific packaging materials, whose elements (plastic bags, staples, etc.) can pose potential hazards, and must not be left within reach of children, disabled persons, etc.

 **ATTENTION:** It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Raise the brush head body and press the brush head control pedal (1) (on the rear of the machine) downwards (**Fig.1**).
4. Raise the squeegee body and turn the squeegee control lever (2) in the direction of the arrow in (**Fig.2**). The lever is located on the back of the machine.
5. Check that the machine is off, otherwise set the main switch (3) to "0" by turning the key a quarter turn to the left (**Fig. 3**). Remove the key from the instrument panel.
6. The machine is secured to the footboard with wedges that lock the wheels, remove these wedges.
7. Go to the rear right-hand area of the machine and switch off the electrobrake, turn the lever (4) in the direction of the arrow (**Fig.4**).
8. Use a ramp to bring the machine down from the pallet in reverse.

 **ATTENTION:** The ramp gradient must not be such as to cause damage to the machine as it comes down.

 **ATTENTION:** during this operation, check there are no people or objects near the machine.

 **N.B.:** do not fit the brush and the rear squeegee body before unloading the machine, and avoid any violent jolts to the brush head and squeegee support.

Stages for a machine with PM function:

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

 **N.B.:** Use the pictograms printed on the box as reference.

2. Remove the outer package.

 **CAUTION:** It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Check that the machine is off, otherwise set the main switch (3) to "0" by turning the key a quarter turn anti-clockwise (**Fig. 3**). Remove the key from the instrument panel.
4. Go to the rear right-hand area of the machine and switch on the electrobrake, turn the lever (4) in the direction of the arrow (**Fig.5**).
5. Grip the handle (5) on the left-hand side of the recovery tank (**Fig.6**) and turn the tank as far as it will go.
6. Connect the battery pad connector to the main system connector.

 **WARNING:** It is recommended that all installation and maintenance operations be carried out by expert personnel, trained at the specialised assistance centre.

7. Grip the handle (5) on the left-hand side of the recovery tank and turn the tank until it reaches the work position.
8. The machine is fixed to the pallet by means of chocks, which block the wheels and brush head; remove these chocks.
9. Insert the ignition key into the slot in the machine's main switch.
10. Switch on the machine, turn the main switch (4) to position "I" and turn the key a quarter turn clockwise (**Fig.7**).
11. Lift the brush head body, press the "BRUSH HEAD COMMAND" button (6) on the control panel (**Fig.8**).
12. Switch off the machine, turning the main switch (4) to position "0"; turn the key a quarter turn anti-clockwise (**Fig.3**). Remove the key from the instrument panel.
13. Raise the squeegee body, turn the squeegee control lever (2) in the direction of the arrow in (**Fig.2**). The lever is located on the back of the machine.
14. Go to the rear right-hand area of the machine and switch off the electrobrake, turn the lever (4) in the direction of the arrow (**Fig.4**).
15. Use a ramp to bring the machine down from the pallet in reverse.

 **ATTENTION:** The ramp gradient must not be such as to cause damage to the machine as it comes down.

 **ATTENTION:** during this operation, check there are no people or objects near the machine.

 **N.B.:** do not fit the brush and the rear squeegee body before unloading the machine, and avoid any violent jolts to the brush head and squeegee support.

 **N.B.:** The device will in any case have safety braking; once a set critical speed has been exceeded, the internal braking system will activate automatically.

HOW TO MOVE THE MACHINE

To transport the machine safely, proceed as follows:

1. Carry out the steps necessary to secure the machine, see paragraph "MACHINE SAFETY" on page 15.
2. Go to the rear right-hand area of the machine and switch off the electrobrake, turn the lever (4) in the direction of the arrow (**Fig.4**).
3. Use a ramp to move the machine up onto the transport vehicle.

 **ATTENTION:** during this operation, check there are no people or objects near the machine.

 **N.B.:** the ramp gradient must not be such as to cause damage to the machine as it goes up.

 **N.B.:** The device will in any case have safety braking; once a set critical speed has been exceeded, the internal braking system will activate automatically.

 **WARNING:** Secure the device according to the directives in force in the country of use, so that it cannot slide or tip over.

MACHINE SAFETY

To ensure that work is carried out in the best safety conditions, proceed as follows:

1. Take the machine to the maintenance area.

 **WARNING:** The place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Raise the brush head body (for versions without PM function) and press the brush head control pedal (1) (on the rear of the machine) downwards (**Fig.1**). For versions with the PM function, press the "BRUSH HEAD CONTROL" button (6) on the control panel. (**Fig.8**)
3. Raise the squeegee body and turn the squeegee control lever (2) in the direction of the arrow in (**Fig.2**). The lever is located on the back of the machine.
4. Check that the solution tank and the recovery tank are empty; if this is not the case, empty them. See paragraphs "EMPTYING THE SOLUTION TANK" on page 36 and "EMPTYING THE RECOVERY TANK" on page 36.
5. Switch off the machine, turn the main switch to position "0" by turning the key (3) a quarter turn clockwise (**Fig.3**). Remove the key from the main switch.
6. Grip the handle (5) on the left-hand side of the recovery tank (**Fig.6**) and turn the tank as far as it will go.
7. Disconnect the general system connector from the battery connector.

 **WARNING:** It is recommended that all electrical disconnection operations be carried out by expert personnel, trained at the specialised assistance centre.

8. Grip the handle on the left-hand side of the recovery tank and turn the tank until it reaches the work position.

BATTERY MAINTENANCE AND DISPOSAL

For battery maintenance and recharging, respect the instructions provided by the battery manufacturer. When the batteries reach the end of their service life, they must be disconnected by a specialised and properly trained operator, and must be subsequently removed from the battery compartment using suitable lifting devices.



N.B.: Dead batteries are classified as dangerous waste and as such must be delivered to an authorised body for disposal.

TYPE OF BATTERY TO BE USED

CODE	DESCRIPTION
410875	TP BATTERY 12V 110Ah (ACID)
410877	MFP BATTERY 12V 105Ah (GEL)

Used batteries must meet the requirements set out in DIN EN 50272-3 "Traction batteries for industrial trucks".

To ensure proper performance, the machine must be powered with 24V.

The machine can be powered with the batteries listed in the table to the side.

 **N.B.:** The use of two 12TP110 batteries is recommended.

INSERTING THE BATTERIES INTO THE MACHINE

The batteries must be housed in the special compartment inside the machine and should be handled using lifting equipment that is suitable both regard to the weight and the coupling system used.

 **ATTENTION:** It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

 **ATTENTION:** to prevent an accidental short circuit use insulated tools to connect the batteries, and do not place or drop metal objects on the battery. Remove rings, watches and any clothing with metal parts that may come into contact with the battery terminals.

The various phases for inserting the batteries in the battery compartment are as follows:

1. Carry out the steps necessary to secure the machine, see paragraph "MACHINE SAFETY" on page 15.
2. Grip the handle (5) on the left-hand side of the recovery tank (**Fig.5**) and turn the tank as far as it will go.



N.B.: for battery maintenance and daily recharging, you must fully respect the indications provided by the manufacturer or retailer.



ATTENTION: all installation and maintenance operations must be carried out by specialised personnel.



N.B.: before installing the battery, clean the battery compartment.



N.B.: Check that the connectors on the cables supplied are functioning correctly.



ATTENTION: check that the characteristics of the battery that you are looking to use are appropriate for the type of work to be performed.



ATTENTION: Check the battery charge and the condition of the contacts on the battery.



N.B.: you are advised to only lift and move the batteries with lifting and transportation means suitable for the specific weight and size



ATTENTION: the lifting hooks must not damage the blocks, connectors or cables.



N.B.: Before inserting the batteries into the machine, remember to cover the terminals with a little grease to protect them against external corrosion.

3. House the batteries in the compartment, positioning the poles "+" and "-" opposite each other.

CONNECTING THE BATTERIES TO THE MACHINE SYSTEM



WARNING: The batteries should be connected so as to obtain a total voltage of 24V.



WARNING: It is recommended that all installation and maintenance operations be carried out by expert personnel, trained at the specialised assistance centre.



WARNING: to prevent an accidental short circuit use insulated tools to connect the batteries, and do not place or drop metal objects on the battery. Remove rings, watches and any clothing with metal parts that may come into contact with the battery terminals.

The various phases for inserting the batteries in the battery compartment are as follows:

1. Using the jumper cable supplied with the machine, connect the batteries to the "+" and "-" poles in series.
2. Connect the battery connector cable to the "+" and "-" poles in order to obtain the terminal voltage of 24V.
3. Connect the electrical system connector to the battery connector.

RECHARGING THE BATTERIES

The batteries must be charged prior to first use, and whenever they no longer provide sufficient power to perform the desired work.



ATTENTION: The control board and the battery charger, if present on board, are set for GEL batteries, contact the nearest BOMA service centre to modify the setting if you want to use another type of battery.



ATTENTION: to avoid any permanent damage to the batteries, it is essential to avoid their complete discharge; begin recharging them within a few minutes of noting the "discharged batteries" signal.



ATTENTION: Never leave the batteries completely discharged, even if the machine is not being used.

1. Bring the machine to the battery recharging area.



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



DANGER: the room used to recharge the batteries must be adequately ventilated to prevent the accumulation of gases that leak from batteries.

2. Carry out the steps necessary to secure the machine, see paragraph "MACHINE SAFETY" on page 15.
3. Grip the handle (5) on the left-hand side of the recovery tank (**Fig.5**) and turn the tank as far as it will go.

To recharge the batteries without the built-in battery charger, proceed as follows:



ATTENTION: the following operations must be carried out by qualified personnel. An incorrect connection of the connector may cause a malfunction of the device.

- Disconnect the battery connector from the electric system connector.
- Connect the external battery charger cable to the battery connector.

 **N.B.:** the coupling connector of the battery charger is consigned inside the bag containing this instruction booklet, and must be assembled on the cables of the battery charger as indicated in the instructions.

 **DANGER:** before connecting the batteries to the battery charger, make sure it is suitable for the batteries used.

 **N.B.:** carefully read the use and maintenance instructions of the battery charger that is used for charging.

 **ATTENTION:** Keep the recovery tank in the maintenance position for the duration of the battery charging cycle to allow gas fumes to escape.

- Once the recharge cycle has been completed, disconnect the battery charger's cable from the battery connector.
- Connect the battery connector to the electrical system connector.
- Grip the handle on the left-hand side of the recovery tank and turn the tank until it reaches the work position.

To recharge the batteries with the on-board battery charger proceed as follows:

 **ATTENTION:** the following operations must be carried out by qualified personnel. An incorrect connection of the connector may cause a malfunction of the device.

 **N.B.:** Carefully read the use and maintenance instructions of the battery charger that is used for charging, this document is delivered along with the machine.

- Go to the back of the machine and remove the cap from the battery charger socket.

 **ATTENTION:** before connecting the batteries to the battery charger, make sure it is suitable for the batteries used.

 **WARNING:** Before inserting the battery charger power cable into the socket, verify that there is no condensate or other forms of liquids.

 **N.B.:** the battery charger power cable is delivered inside the bag containing this instruction booklet.

- Plug the battery charger cable into the mains socket.
- Connect the battery charger's power cable to the socket on the battery charger itself.

 **ATTENTION:** Keep the recovery tank in the maintenance position for the duration of the battery charging cycle to allow gas fumes to escape.

- When the recharge cycle is complete, disconnect the battery charger cable from the mains.
- Disconnect the battery charger's power cable from the socket on the battery charger itself.
- Reposition the cap in the battery charger socket.
- Grip the handle on the left-hand side of the recovery tank and turn the tank until it reaches the work position.

FITTING THE BRUSH HEAD BODY BRUSH (single brush version)

For packaging reasons, the brush is supplied disassembled from the machine. To assemble it on the brush head body, proceed as follows:

1. Take the machine to the maintenance area.

 **WARNING:** The place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Carry out the steps required to secure the machine; see paragraph "MACHINE SAFETY" on page 15.

 **ATTENTION:** It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. If the brush head splash guard is present, release the brush head splash guard retainer spring (7) (**Fig.9**).
4. Remove the retainer blade (8) and the splash guard (9) (**Fig.10**).
5. With the brush head UP, insert the brush in the plate housing underneath the brush head, turning it until the three buttons engage with the niches on the plate itself Turn until the pin is pushed towards the coupling spring and is locked into place. The photo (**Fig.11**) shows the rotation direction for brush coupling.
6. Replace the splash guard, inserting first the rear left part and then the right part. Remember to fix it to the brush head using the retainer blade.
7. Fix the retainer blade to the brush head with the aid of the spring.

FITTING THE BRUSH HEAD BODY SPLASH GUARD (single brush version)

For packaging reasons, the brush head splash guard comes disassembled from the machine. To assemble on the brush head body, proceed as follows:

1. Take the machine to the maintenance area.



WARNING: The place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Carry out the steps required to secure the machine; see paragraph "MACHINE SAFETY" on page 15.



ATTENTION: It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Release the retainer spring (6) on the brush head splash guard (**Fig.6**).
4. Remove the retainer blade (7) (**Fig.9**).
5. Fit the splash guard (8), inserting first the left part and then the right part. Remember to fix it to the brush head using the retainer blade (**Fig. 10**).
6. Fix the retainer blade to the brush head with the aid of the spring.

FITTING THE BRUSH HEAD BODY BRUSH (dual brush version)

To assemble the brushes to brush head body, which for reasons of packaging are supplied dismantled from the machine, proceed as follows:

1. Take the machine to the maintenance area.



WARNING: The place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Carry out the steps required to secure the machine; see paragraph "MACHINE SAFETY" on page 15.



ATTENTION: It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. With the brush head in the raised position, remove the brush head splash guards (10) (**Fig.14**).
4. Insert the brush into the flange on the brush head body, press the brush-holder plate retainer (11) and simultaneously rotate the brush in the direction shown in the image (**Fig.15**).



ATTENTION: **Fig.15** shows the rotation direction of the left-hand brush, rotate in the opposite direction for the right-hand brush.

5. When the brush is in position, refit the splash guard removed previously.
6. Repeat the operations completed for the right-hand front brush as well.

ASSEMBLING THE SQUEEGEE BODY

For packaging reasons, the squeegee body comes disassembled from the machine. To assemble it on the squeegee body support, proceed as follows:

1. Take the machine to the maintenance area.



WARNING: The place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Carry out the steps necessary to secure the machine, see paragraph "MACHINE SAFETY" on page 15.



ATTENTION: It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Unscrew the knobs (12) in the squeegee body pre-assembly (**Fig.16**).
4. First, insert the pin (13) on the squeegee body into the slit (14) in the squeegee support (**Fig.17**), making sure that the washer and spring adhere to the top of the squeegee support.
5. Screw in the knobs (12) in the squeegee body pre-assembly (**Fig.18**).
6. Insert the vacuum tube (15) in the sleeve (16) in the squeegee body (**Fig.19**).



N.B.: The squeegee has been adjusted beforehand; however, should you need to adjust it again, see paragraph "ADJUSTING THE SQUEEGEE BODY'S RUBBER BLADES" on page 39.

INSERTING THE WATER SYSTEM FILTER CAP

Before using the machine for the first time, the water system filter must be put back in position; this is removed from the machine for shipping. To insert the water system filter into the machine, proceed as follows:

1. Take the machine to the maintenance area.

 **WARNING:** The place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Carry out the steps necessary to secure the machine, see paragraph "MACHINE SAFETY" on page 15.

 **ATTENTION:** It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

3. Go to the rear of the machine and screw the filter cap (17) into the hole in the solution tank (**Fig.20**).

 **N.B.:** The o-ring gasket in the filter cap must be placed in position inside the cap before the filter cap is screwed to the tank.

FILLING THE SOLUTION TANK WITH WATER

Before filling the solution tank, carry out the following steps:

1. Take the machine to the usual place for filling the solution tank.

 **WARNING:** The place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Carry out the steps required to secure the machine; see paragraph "MACHINE SAFETY" on page 15.
3. Check that the water system filter cap (17) has been tightened; if this is not the case, turn it clockwise (**Fig.20**).
4. Check that the solution tank discharge cap (18) is open. If it isn't, open it (**Fig.21**).
5. Fill with clean water, at a temperature not higher than 50°C and not lower than 10°C. You can check the quantity in the tank by means of the level tube (19) (**Fig. 22**).

The solution tank can be filled with water in three different ways:

- Removing the cap/measuring device (20) and filling the solution tank by means of a rubber hose or a bucket (**Fig.23**).
- Using the filler hose (21) (**Fig.24**), which supports the water hose on its own. In this case, be sure to remove the cap/measuring device (20) in order to allow the air to vent properly.
- Using the optional system for automatic clean water top-up. This system has a float for avoiding any overflow. Before connecting the water hose to the quick coupling (23), remove the cap covering it (22). (**Fig.25**).

ADJUSTING THE DETERGENT SOLUTION (versions without CDS system)

For the versions without automatic detergent dosing system, after filling the solution tank with clean water, add the liquid detergent to the tank in the concentration and manner indicated on the detergent manufacturer's label.

To prevent the formation of an excessive amount of foam that could damage the vacuum motor, use the minimum percentage of detergent required.

 **CAUTION:** It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

 **ATTENTION:** 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.

 **ATTENTION:** always use low-foam detergent. To avoid the production of foam, put a minimum quantity of antifoam liquid in the recovery tank before starting to clean. Do not use pure acids.

 **N.B.:** to make it easier to measure the detergent on the cap/measuring device, there are two notches indicating the two main detergent percentage quantities that can be used.

FILLING THE DETERGENT CANISTER (versions with CDS system)

To fill the detergent canister, proceed as follows:

1. Take the machine to the usual place for filling the solution tank.

 **WARNING:** The place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Carry out the steps required to secure the machine; see paragraph "MACHINE SAFETY" on page 15.
3. Grip the handle (5) on the left-hand side of the recovery tank (**Fig.6**) and turn the tank as far as it will go.
4. Disconnect the male insert (24) from the female insert on the cap of the detergent canister (**Fig.26**).

i N.B.: Before pulling on the male insert, push the lever on the female insert.

5. Grip the handle on the detergent canister (25) to remove it from the compartment in the solution tank (**Fig.27**).
6. Unscrew the cap (26) of the detergent canister (**Fig.28**).
7. Fill the canister with the required detergent, as indicated on the label of the machine.

CAUTION: It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

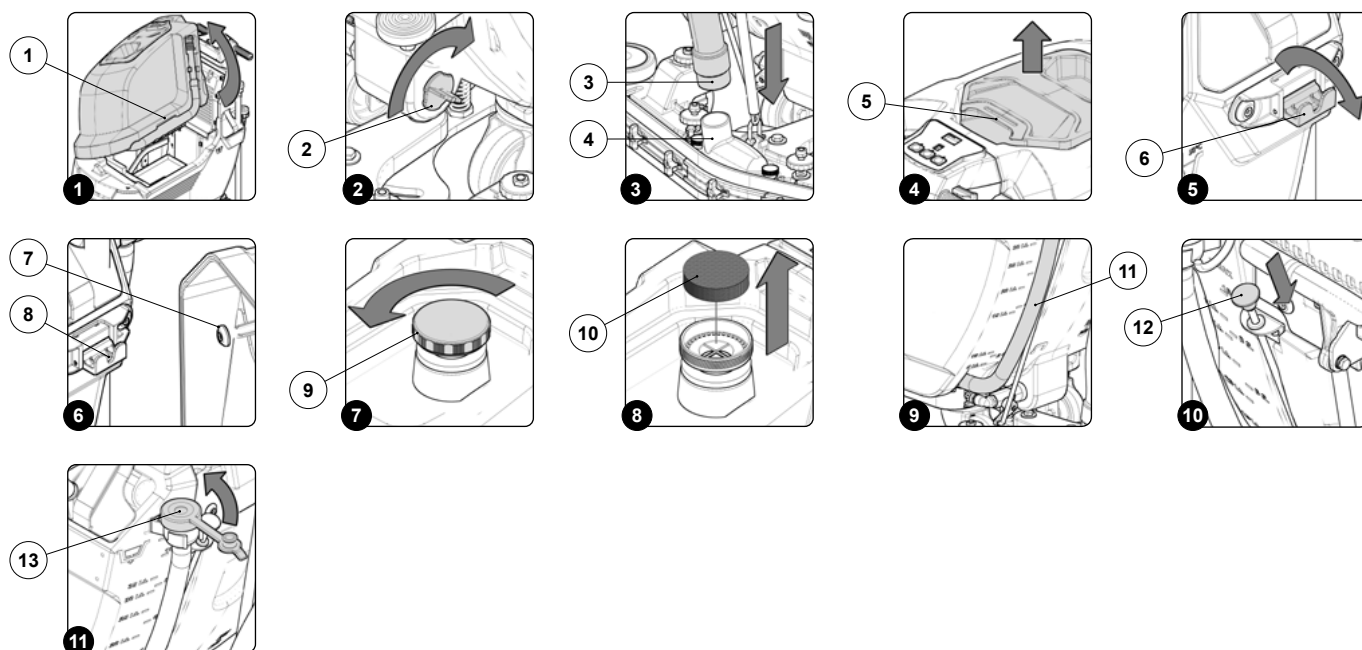
i N.B.: always use low-foam detergent. To avoid the production of foam, put a minimum quantity of antifoam liquid in the recovery tank before starting to clean. Do not use pure acids.

ATTENTION: 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.

ATTENTION: The dosing system is suitable for frequent maintenance cleaning. Acid or alkaline maintenance detergent can be used with pH values between 4 and 10 and that do not contain: oxidising agents, chlorine or bromine, formaldehyde, mineral solvents. The detergents used must be suitable for use with scrubbing machines. Wash the circuit with water after use if the system is not used daily. The system can be excluded. In case of sporadic use of detergents with pH between 1-3 or 11-14, use the floor scrubbing machine in the traditional way by adding the detergent in the clean water tank and excluding the dosing circuit.

8. Ensure that you tighten the cap (26) properly to avoid any leakage of liquid while working. Make sure the detergent suction filter (27) is correctly positioned on the bottom of the canister (**Fig.29**).
9. Grip the canister handle to replace the canister in its compartment inside the solution tank.
10. Connect the male insert to the female insert in the cap of the detergent canister.
11. Grip the handle (5) on the left-hand side of the recovery tank and turn the recovery tank into the work position.

PREPARING TO WORK



Before beginning to work, it is necessary to:

1. Grip the handle (1) on the left-hand side of the recovery tank (**Fig.1**) and turn the tank as far as it will go.

ATTENTION: the following operations must be carried out by qualified personnel. An incorrect connection of the connector may cause a malfunction of the device.

2. Connect the battery connector to the electrical system connector.
3. Grip the handle on the left-hand side of the recovery tank and turn the tank until it reaches the work position
4. Move to the rear of the machine and check that the water system filter cap (2) is closed, otherwise tighten it (**Fig.2**).
5. Make sure the vacuum tube (3) is correctly connected to the sleeve (4) in the squeegee body. If it isn't, connect it (**Fig.3**).
6. Grip the handle (5) on the back of the recovery tank cover and remove it (**Fig.4**).
7. Rotate the recovery tank cover support (6). The optional support is positioned on the left side of the machine (**Fig.5**).
8. Insert the clamp (7) of the recovery tank cover in the slot (8) on the recovery tank cover support (**Fig.6**).
9. Make sure the recovery tank is empty; if not, empty it completely. See paragraph "EMPTYING THE RECOVERY TANK" on page 36.
10. Remove the suction motor filter guard (9) by rotating clockwise (**Fig.7**).
11. Check that the suction motor filter (10) is clean (**Fig.8**). If this is not the case, clean it. See paragraph "CLEANING THE VACUUM MOTOR

FILTER" on page 34.

12. Refit the suction motor filter guard.

13. Refit the recovery tank cover.

14. Check that the quantity of detergent solution present in the solution tank is correct for the type of work to be carried out; if not, refill the solution tank. See paragraphs "FILLING THE SOLUTION TANK WITH WATER" on page 19 and "ADJUSTING THE DETERGENT SOLUTION (versions without CDS system)" on page 19 for machines without CDS system on board, or see "FILLING THE DETERGENT CANISTER (versions with CDS system)" on page 19 for machines with CDS system on board.

i N.B.: The amount inside the tank can be seen by means of the level tube (11) which is located on the rear of the machine (**Fig.9**).

15. Make sure the water tap is fully open; the solution adjustment knob (12) should be completely down (**Fig.10**).

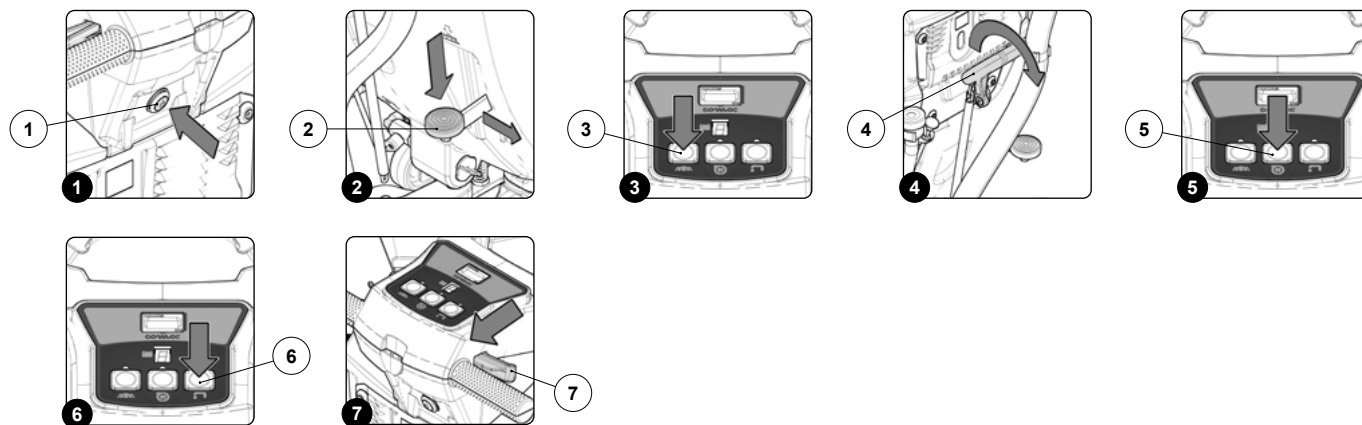
16. Check that the solution tank discharge cap (13) is closed. If it isn't, open it (**Fig.11**).

17. Check that the squeegee rubber blades are in a suitable condition for performing the work; in case of excessive wear, replace them. See paragraph "REPLACING THE SQUEEGEE BODY RUBBER BLADES" on page 37.

18. Check the condition of the brush; in case of excessive wear, replace it. See paragraph "REPLACING THE BRUSH HEAD BODY BRUSH (single brush version)" on page 38 or paragraph "REPLACING THE BRUSH HEAD BODY BRUSH (dual brush version)" on page 38.

i N.B.: The wear of the brushes can be inspected by checking if the bristles are longer than 10mm; if this is not the case, they must be replaced (the brush has a tuft of yellow bristles, the total height of the tuft is 10mm).

STARTING WORK (versions without traction)



As an example, let's take the "SCRUBBING WITH DRYING" working programme. To start work in this mode, proceed as follows:

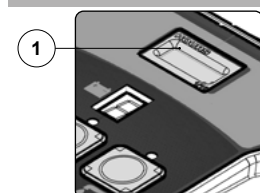
1. Carry out all the checks listed in the chapter "PREPARING TO WORK" on page 20.
2. Sit on the driver's seat.
3. Switch the machine on, by pressing the main switch (1) located at the rear of the machine (**Fig.1**).

i N.B.: The main switch is in the working position when the LED inside it is on and the activation symbol is visible.

4. Lower the brush head body by pressing the brush head control pedal (2) on the back of the machine (**Fig.2**).
5. Activate the brush head gearmotor by pressing the brush head gearmotor activation - deactivation switch (3) on the control panel of the machine (**Fig.3**).
6. Lower the squeegee body using the lever (4) on the back of the machine (**Fig.4**).
7. Activate the suction motor by pressing the suction motor activation - deactivation switch (5) on the control panel of the machine (**Fig.5**).
8. Activate the supply of detergent solution onto the brush by pressing the solenoid valve activation - deactivation switch (6) on the machine control panel (**Fig.6**).
9. When you push the dead man's lever (7), the machine will begin to move (**Fig.7**).
10. During the first few metres, check that the amount of detergent solution being supplied is appropriate to the work to be carried out; if not, adjust this. See paragraph "ADJUSTMENT OF THE DETERGENT SOLUTION FLOW" on page 28.

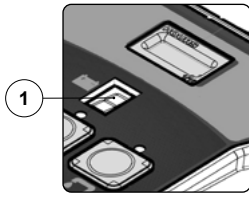
The machine will now begin to work with full efficiency until the battery is flat or until the detergent solution has finished. During the first few metres, check that there is sufficient solution and that the squeegee is drying correctly.

HOURLY METER



The machine control panel contains the hour meter display (1), which shows the total usage time of the machine. The digits that precede the "." symbol identify hours, whilst the digit that follows it indicates hour decimals (an hour decimal corresponds to six minutes).

BATTERY CHARGE LEVEL INDICATOR



The machine control panel contains the battery charge level indicator (1) which indicates the state of charge of the batteries present in the machine. The battery charge level is represented by five numbers from 0 to 4, where 0 corresponds to a critical charge level and 4 corresponds to a fully charged battery.

N.B.: Each number corresponds with approximately 20% battery charge, so 0 corresponds with 20% charge and 4 corresponds with 100% charge.

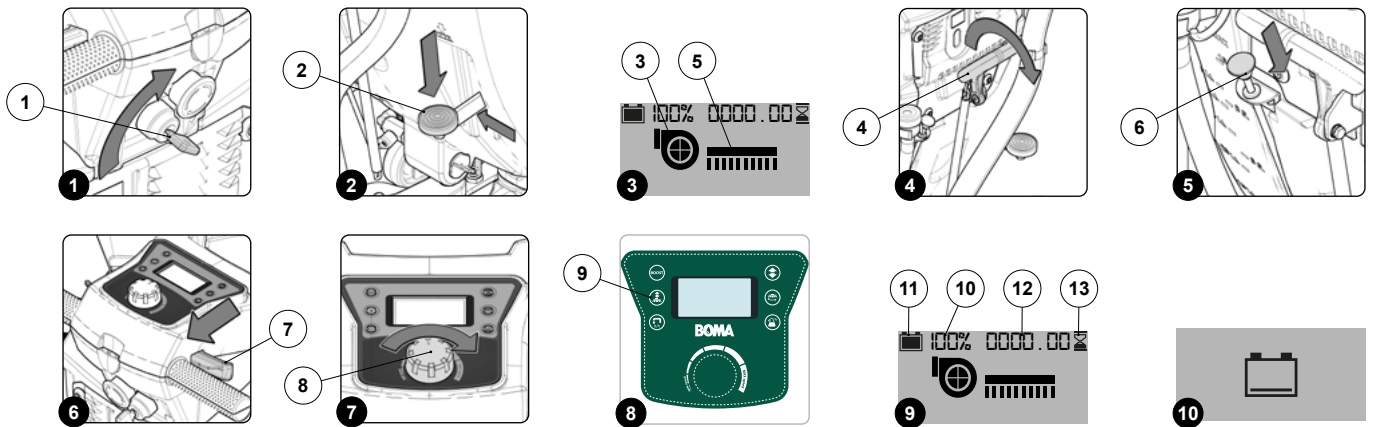
N.B.: a few seconds after the battery charge level reaches 20%, the brush motor switches off automatically. With the remaining charge it is possible to complete the drying process before starting the recharge.

N.B.: a few seconds after the battery charge level reaches 10%, the suction motor switches off automatically. With the remaining charge, it is still possible, however, to move the machine to the location designated for its recharging.

OVERFLOW DEVICE

The standard model machine is NOT equipped with an overflow device, because the volume of the recovery tank is larger than the capacity of the solution tank. In extraordinary cases, there is a mechanical device (float) under the recovery tank lid that, when the recovery tank is full, shuts off the air to the vacuum motor intake to protect it; the sound of the suction motor will then be deeper. Empty the recovery tank, see paragraph "EMPTYING THE RECOVERY TANK" on page 36.

STARTING WORK (versions with traction)



To start working, do as follows:

1. Carry out all the checks listed in the chapter "PREPARING TO WORK" on page 20.
2. Turn on the machine, turn the main switch to position "I" by turning the key (1) a quarter turn clockwise (Fig.1).
3. When the display comes on, three screens appear in sequence:
 - The first screen displayed indicates the logo of the manufacturer of the machine.
 - The second screen displayed indicates the name of the machine.
 - The third screen displayed indicates the machine programming characteristics.
4. Lower the brush head body, for versions without PM function, by pressing the brush head control pedal (2) on the back of the machine (Fig.2). For versions with the PM function, press the "BRUSH HEAD CONTROL" button (9) on the control panel. (Fig.8).

N.B.: As soon as the brush head body is removed from the idle position the control display shows the symbol (5) (Fig.3).

5. Lower the squeegee body using the squeegee control lever (4); the lever is located on the back of the machine (Fig.4).

N.B.: As soon as the squeegee body is removed from the idle position the control display shows the symbol (3) (Fig.3).

N.B.: When both symbols (3) and (5) appear on the control display, it means that a "SCRUBBING WITH DRYING" operation is being carried out (Fig.3).

6. Open the flow of detergent solution, move the knob (6) on the rear of the machine downwards (Fig.5).

N.B.: Remember to open the flow of detergent solution fully, moving the knob (6) downwards as far as it will go.

N.B.: See paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions without CDS system)" on page 29 or "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30 for instructions on how to correctly adjust the flow of solution onto the brushes during work.

7. Use the dead man's levers (7) on the instrument panel (**Fig.6**).

i **N.B.:** The machine features two forward speeds. By pushing the dead man's levers beyond the first CLICK the "SLOW" speed is activated, continuing to push the levers beyond the second CLICK the "FAST" speed is activated.

8. Set the required forward speed by turning the knob (8) gradually to the right (**Fig.7**).

i **N.B.:** To adjust the forward speed, see paragraph "SPEED ADJUSTMENT" on page 30.

9. When you push the dead man's lever (7), the machine will begin to move.

i **N.B.:** the gearmotor will only begin functioning, and the solenoid valve will only begin dispensing detergent solution, when the brush head body is in its working position.

10. During the first few meters, check that the detergent solution coming out is appropriate to the work to be carried out; if this is not the case, adjust it.

The machine will now begin to work with full efficiency until the battery is flat or until the detergent solution has finished. During the first few metres, check that there is sufficient solution and that the squeegee is drying correctly.

i **N.B.:** If the dead man's lever is released during the scrubbing with drying operation, the brush motor and the solenoid valve will be deactivated after the set delay time. The suction motor will continue to work for a certain period of time.

i **N.B.:** if the squeegee body is raised during the scrubbing and drying operation, the suction motor will continue working at maximum speed for a certain period of time, and then switch off. This ensures that all the liquid in the vacuum tube is eliminated.

i **N.B.:** when filling the solution tank, it is good practice to empty the recovery tank using the special drainage hose.

BATTERY CHARGE LEVEL INDICATOR

The control panel of the machine features the control display; in the upper left area, a numerical value (10) is displayed which identifies the percentage of charge of the batteries. (**Fig.9**).

The graphic symbol (11) consists of 5 levels, each of which represents around 20% of residual battery charge.

With a residual charge of 20%, the graphic symbol starts to flash. After a few seconds it appears in larger dimensions in the middle of the screen (**Fig.10**); at this point, the machine must be taken to the designated recharging place.

i **N.B.:** a few seconds after the battery charge level reaches 20%, the brush motor switches off automatically. With the remaining charge it is still possible, however, to complete the drying process before recharging

i **N.B.:** a few seconds after the battery charge level reaches 10%, the suction motor switches off automatically. With the remaining charge, it is still possible, however, to move the machine to the location designated for its recharging.

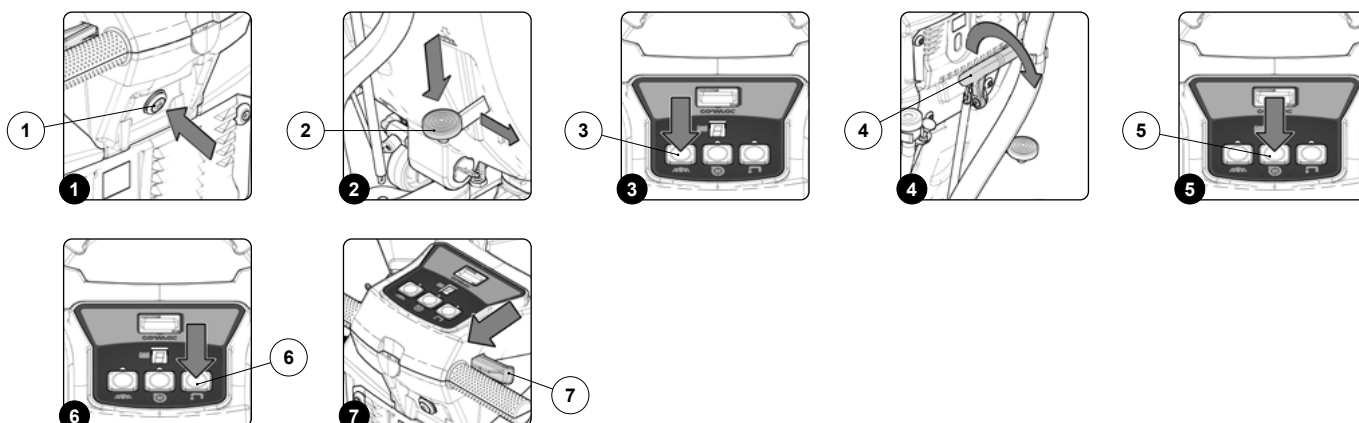
HOUR METER

On The control panel of the machine features the control display; in the upper right area, the total time of use of the machine is displayed (12) (**Fig.9**). The numbers to the left of the "." symbol identify the hours, whereas the numbers to the right of the "." symbol identify the minutes (**Fig.9**).

OVERFLOW DEVICE

The standard model machine is NOT equipped with an overflow device, because the volume of the recovery tank is larger than the capacity of the solution tank. In extraordinary cases, there is a mechanical device (float) under the recovery tank lid that, when the recovery tank is full, shuts off the air to the vacuum motor intake to protect it; the sound of the suction motor will then be deeper. Empty the recovery tank, see paragraph "EMPTYING THE RECOVERY TANK" on page 36.

WORKING PROGRAMS (versions without traction)



SCRUBBING WITH DRYING

To perform a scrubbing and drying program, proceed as follows:

1. Carry out all the checks listed in the chapter "PREPARING TO WORK" on page 20.
2. Sit on the driver's seat.
3. Switch the machine on, by pressing the main switch (1) located at the rear of the machine (**Fig.1**).



N.B.: The main switch is in the working position when the LED inside it is on and the activation symbol is visible.

4. Lower the brush head body by pressing the brush head control pedal (2) on the back of the machine (**Fig.2**).
5. Activate the brush head gearmotor by pressing the brush head gearmotor activation - deactivation switch (3) on the control panel of the machine (**Fig.3**).
6. Lower the squeegee body using the lever (4) on the back of the machine (**Fig.4**).
7. Activate the suction motor by pressing the suction motor activation - deactivation switch (5) on the control panel of the machine (**Fig.5**).
8. Activate the supply of detergent solution onto the brush by pressing the solenoid valve activation - deactivation switch (6) on the machine control panel (**Fig.6**).
9. When you push the dead man's lever (7), the machine will begin to move (**Fig.7**).
10. During the first few meters, check that the amount of detergent solution being supplied is appropriate to the work to be carried out; if not, adjust this. See paragraph "ADJUSTMENT OF THE DETERGENT SOLUTION FLOW" on page 28.
11. The machine will now work at its maximum efficiency level.

SCRUBBING WITHOUT DRYING

To perform a scrubbing program without drying, proceed as follows:

1. Carry out all the checks listed in the chapter "PREPARING TO WORK" on page 20.
2. Sit on the driver's seat.
3. Switch the machine on, by pressing the main switch (1) located at the rear of the machine (**Fig.1**).



N.B.: The main switch is in the working position when the LED inside it is on and the activation symbol is visible.

4. Lower the brush head body by pressing the brush head control pedal (2) on the back of the machine (**Fig.2**).
5. Activate the brush head gearmotor by pressing the brush head gearmotor activation - deactivation switch (3) on the control panel of the machine (**Fig.3**).
6. Activate the supply of detergent solution onto the brush by pressing the solenoid valve activation - deactivation switch (6) on the machine control panel (**Fig.6**).
7. When you push the dead man's lever (7), the machine will begin to move (**Fig.7**).
8. During the first few meters, check that the amount of detergent solution being supplied is appropriate to the work to be carried out; if not, adjust this. See paragraph "ADJUSTMENT OF THE DETERGENT SOLUTION FLOW" on page 28.
9. The machine will now work at its maximum efficiency level.

DRYING WITHOUT SCRUBBING

To perform a working program of only drying without scrubbing the floor, proceed as follows:

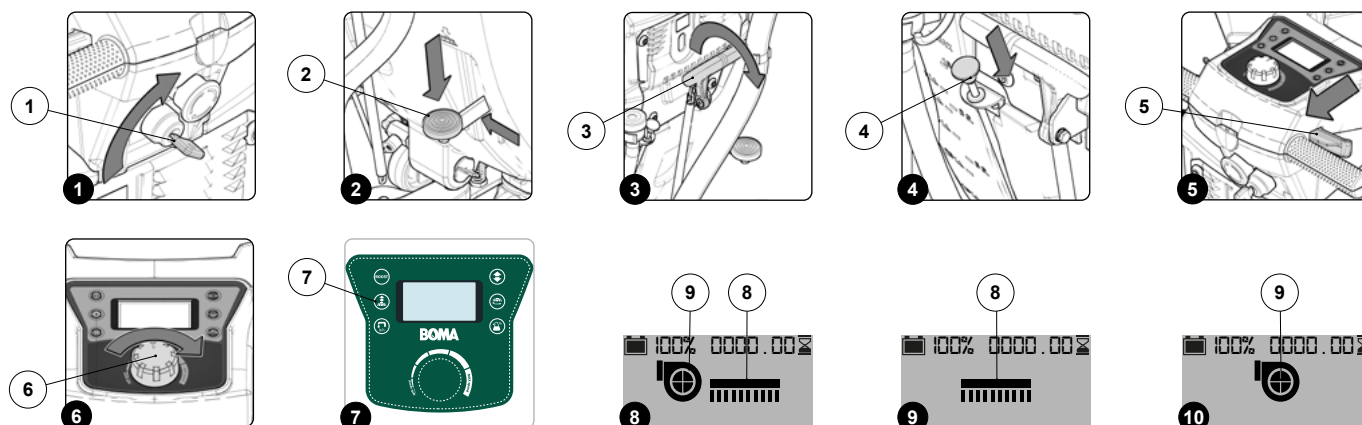
1. Carry out all the checks listed in the chapter "PREPARING TO WORK" on page 20.
2. Sit on the driver's seat.
3. Switch the machine on, by pressing the main switch (1) located at the rear of the machine (**Fig.1**).

i N.B.: The main switch is in the working position when the LED inside it is on and the activation symbol is visible.

4. Lower the brush head body by pressing the brush head control pedal (2) on the back of the machine (**Fig.2**).
5. Activate the brush head gearmotor by pressing the brush head gearmotor activation - deactivation switch (3) on the control panel of the machine (**Fig.3**).
6. Lower the squeegee body using the lever (4) on the back of the machine (**Fig.4**).
7. Activate the suction motor by pressing the suction motor activation - deactivation switch (5) on the control panel of the machine (**Fig.5**).
8. When you push the dead man's lever (7), the machine will begin to move (**Fig.7**).
9. The machine will now work at its maximum efficiency level.

! ATTENTION: The drying without scrubbing operation should only be carried out if the device was used beforehand to carry out a scrubbing without drying operation.

WORKING PROGRAMS (versions with traction)



SCRUBBING WITH DRYING

To perform a scrubbing and drying program, proceed as follows:

1. Carry out all the checks listed in the chapter "PREPARING TO WORK" on page 20.
2. Turn on the machine, turn the main switch to position "I" by turning the key (1) a quarter turn clockwise (**Fig.1**).
3. Lower the brush head body, for versions without PM function, by pressing the brush head control pedal (2) on the back of the machine (**Fig.2**). For versions with PM function, press the "BRUSH HEAD CONTROL" button (7) on the control panel. (**Fig.7**).

i N.B.: As soon as the brush head body is removed from the idle position, the control display will display the symbol (8) (**Fig.8**).

4. Lower the squeegee body using the squeegee control lever (3); the lever is located on the back of the machine (**Fig.3**).

i N.B.: As soon as the squeegee body is removed from the idle position, the control display will display the symbol (9) (**Fig.8**).

i N.B.: When both symbols (8) and (9) appear on the control display, it means that a "SCRUBBING WITH DRYING" operation is being carried out (**Fig.8**).

5. Open the flow of detergent solution, move the knob (4) on the rear of the machine downwards (**Fig.4**).

i N.B.: Remember to open the flow of detergent solution fully, moving the knob (4) downwards as far as it will go.

i N.B.: See paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions without CDS system)" on page 29 or "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30 for instructions on how to correctly adjust the flow of solution onto the brushes during work.

6. Use the dead man's levers (5) on the instrument panel (**Fig.5**).

- i** **N.B.:** The machine features two forward speeds. By pushing the dead man's levers beyond the first CLICK the "SLOW" speed is activated, continuing to push the levers beyond the second CLICK the "FAST" speed is activated.
- 7. Set the required forward speed by turning the knob (6) gradually to the right (**Fig.6**).
- i** **N.B.:** To adjust the forward speed, see paragraph "SPEED ADJUSTMENT" on page 30.
- 8. When you push the dead man's lever (5), the machine will begin to move.
- i** **N.B.:** the gearmotor will only begin functioning, and the solenoid valve will only begin dispensing detergent solution, when the brush head body is in its working position.
- 9. During the first few meters, check that the detergent solution coming out is appropriate to the work to be carried out; if this is not the case, adjust it.

As soon as the dead man's levers are pressed, all of the motors and the gear motors will start working. As a result, the solenoid valve will also begin working and detergent solution will be delivered to the brush.

During the first few metres, check that there is sufficient solution and that the squeegee is drying correctly.

The machine will now begin to work with full efficiency until the battery is flat or until the detergent solution has finished.

- i** **N.B.:** If the dead man's levers are released during work, the machine will stop moving forward, the brush motor and solenoid valve will stop operating after the set delay time, and the suction motor will continue to work for a certain period of time.
- i** **N.B.:** For machine versions without PM function, if the machine is switched off with the brush head and the squeegee body still in contact with the floor, when switched on again the work display will show the symbols (8) and (9), indicating that when it was switched off it was carrying out scrubbing with drying (**Fig.8**).
- i** **N.B.:** For machine versions with PM function, if the machine is switched off with the brush head and the squeegee body still in contact with the floor, when it is switched on again, the control board will perform a reset, bringing the brush head body into the idle position (raised off the floor).

SCRUBBING WITHOUT DRYING

To perform a scrubbing program without drying , proceed as follows:

- 1. Carry out all the checks listed in the chapter "PREPARING TO WORK" on page 20.
- 2. Turn on the machine, turn the main switch to position "I" by turning the key (1) a quarter turn clockwise (**Fig.1**).
- 3. Lower the brush head body, for versions without PM function, by pressing the brush head control pedal (2) on the back of the machine (**Fig.2**). For versions with PM function, press the "BRUSH HEAD CONTROL" button (7) on the control panel. (**Fig.7**).
- i** **N.B.:** As soon as the brush head body is removed from the idle position, the control display will display the symbol (8) (**Fig.9**).
- i** **N.B.:** When only the symbol (8) is shown on the control display, it means that the work being carried out is "SCRUBBING WITHOUT DRYING" (**Fig.9**).
- 4. Open the flow of detergent solution, move the knob (4) on the rear of the machine downwards (**Fig.4**).
- i** **N.B.:** Remember to open the flow of detergent solution fully, moving the knob (4) downwards as far as it will go.
- i** **N.B.:** See paragraph "ADJUSTING THE DETERGENT SOLUTION FLOW (versions without CDS system)" on page 29 or "ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)" on page 30 for instructions on how to correctly adjust the flow of solution onto the brushes during work.
- 5. Use the dead man's levers (5) on the instrument panel (**Fig.5**).
- i** **N.B.:** The machine features two forward speeds. By pushing the dead man's levers beyond the first CLICK the "SLOW" speed is activated, continuing to push the levers beyond the second CLICK the "FAST" speed is activated.
- 6. Set the required forward speed by turning the knob (6) gradually to the right (**Fig.6**).
- i** **N.B.:** To adjust the forward speed, see paragraph "SPEED ADJUSTMENT" on page 30.
- 7. When you push the dead man's lever (5), the machine will begin to move.
- i** **N.B.:** the gearmotor will only begin functioning, and the solenoid valve will only begin dispensing detergent solution, when the brush head body is in its working position.
- 8. During the first few meters, check that the detergent solution coming out is appropriate to the work to be carried out; if this is not the case, adjust it.

As soon as the dead man's levers are pressed, all of the motors and the gear motors will start working. As a result, the solenoid valve will also begin working and detergent solution will be delivered to the brush.

During the first few metres, check that there is sufficient for the work that needs to be carried out.

The machine will now begin to work with full efficiency until the battery is flat or until the detergent solution has finished.

-  **N.B.:** If the dead man's levers are released during the work, the machine will stop moving forward, the brush motor and the solenoid valve will stop working after the set delay time.
-  **N.B.:** For machine versions without PM function, if the machine is switched off with the brush head still in contact with the floor, when switched on again the work screen will show the symbol (8), indicating that when it was switched off it was carrying out scrubbing without drying (**Fig.9**).
-  **N.B.:** For machine versions with PM function, if the machine is switched off with the brush head and the squeegee body still in contact with the floor, when it is switched on again, the control board will perform a reset, bringing the brush head body into the idle position (raised off the floor).

DRYING WITHOUT SCRUBBING

To perform a drying program only, proceed as follows:

1. Carry out all the checks listed in the chapter "PREPARING TO WORK" on page 20.
2. Turn on the machine, turn the main switch to position "I" by turning the key (1) a quarter turn clockwise (**Fig.1**).
3. Lower the squeegee body using the squeegee control lever (3); the lever is located on the back of the machine (**Fig.3**).

 **N.B.:** As soon as the squeegee body is removed from the idle position, the control display will display the symbol (9) (**Fig.10**).

 **N.B.:** When only the symbol (9) is shown on the control display, it means that the work being carried out is "DRYING" (**Fig.10**).

4. Use the dead man's levers (5) on the instrument panel (**Fig.5**).

 **N.B.:** The machine features two forward speeds. By pushing the dead man's levers beyond the first CLICK the "SLOW" speed is activated, continuing to push the levers beyond the second CLICK the "FAST" speed is activated.

5. Set the required forward speed by turning the knob (6) gradually to the right (**Fig.6**).

 **N.B.:** To adjust the forward speed, see paragraph "SPEED ADJUSTMENT" on page 30.

6. When you push the dead man's lever (5), the machine will begin to move.

As soon as the dead man's levers are pushed, the suction motor will start operating.

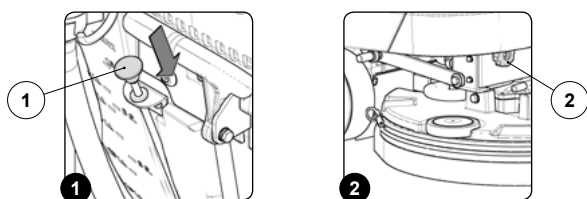
The machine will now work at its maximum efficiency level until the batteries run down.

 **N.B.:** If the dead man's levers are released during work, the machine will stop moving forward, the suction motor will continue to work for a certain period of time and the symbol (9) will start flashing until the suction motor switches off.

 **N.B.:** If the machine is switched off with the squeegee body still in contact with the floor, when switched on again, the work screen will show the symbol (9), indicating that when it was switched off it was carrying out a drying operation (**Fig.10**).

 **ATTENTION:** The drying without scrubbing operation should only be carried out if the device was used beforehand to carry out a scrubbing without drying operation.

ADDITIONAL FUNCTIONS (versions without traction)



ADJUSTMENT OF THE DETERGENT SOLUTION FLOW

To adjust the flow of detergent solution during work, proceed as follows:

- During the first few working meters check that the amount of solution is sufficient to wet the floor, but not enough to be collected by the squeegee.
- If the amount of solution that is being delivered is not suitable, you can control this by moving the solution adjustment knob (1) (**Fig.1**).

i **N.B.:** Moving the solution adjustment knob (1) downwards will increase the flow of detergent solution on the brush.

i **N.B.:** Moving the solution adjustment knob (1) upwards will decrease the flow of detergent solution on the brush.

REGULATING THE FORWARD SPEED

The traction of this machine is obtained by means of the brush which, working with the right weight distribution, is able to drag the machine forwards. To regulate the forward speed, proceed as follows:

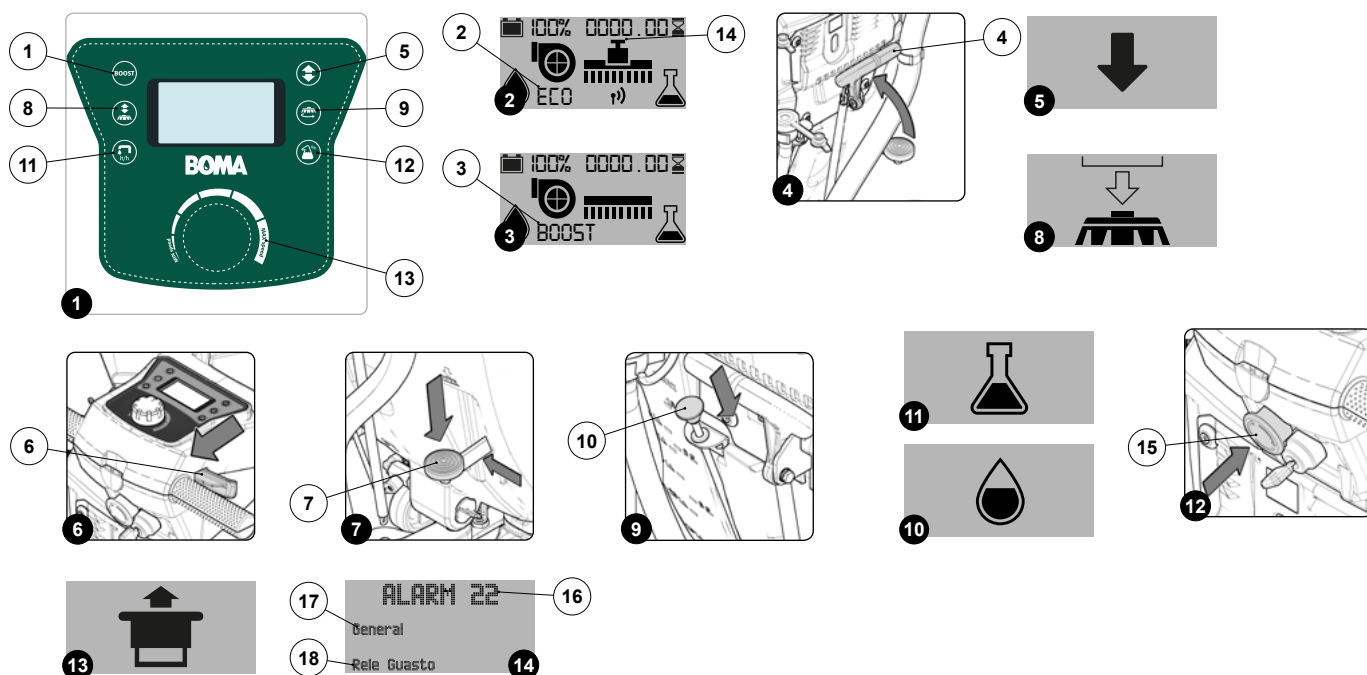
- When the machine is not moving, turn the knob (2) at the front of the machine. (**Fig.2**).

i **N.B.:** Turning the knob (2) clockwise tilts the brush forward, thus increasing the friction with the floor and increasing the working speed of the machine.

i **N.B.:** Turning the knob (2) counter-clockwise tilts the brush backwards, thus decreasing the friction with the floor and decreasing the working speed of the machine.

- Check that the adjustment carried out is as required, otherwise adjust the knob again (1).

ADDITIONAL FUNCTIONS (versions with traction)



ACTIVATING ECO MODE

In the control panel is the ECO MODE button; pressing this will activate the economical work mode, a program which guarantees the best possible performance in terms of consumption and cleaning. To activate or deactivate the ECO MODE function, proceed as follows.

1. With the machine working, press the button (1) located on the control panel (**Fig.1**).

 **N.B.:** When the ECO MODE function is active, the word "ECO" will be visible on the control display (2) (**Fig.2**).

2. To disable the ECO MODE function, simply press the button (1) (**Fig. 1**).

ACTIVATING BOOST MODE (TEMPO RUN 50 PM SC versions)

In the control panel is the BOOST button; pressing this will activate the maximum efficiency work mode, a program which guarantees the best possible performance in terms of machine performance. To activate or deactivate the BOOST function, proceed as follows.

1. With the machine working, press the button (1) located on the control panel (**Fig.1**).

 **N.B.:** When the BOOST function is active, the word "BOOST" will be visible on the control display (3) (**Fig.3**).

2. To disable the BOOST function, simply press the button (1) (**Fig. 1**).

ACTIVATING REVERSE FUNCTION

To reverse, proceed as follows:

1. Raise the squeegee body, turn the squeegee control lever (4) anti-clockwise (**Fig.4**); the lever is located on the rear of the machine.
2. Press the "REVERSE MOVEMENT ACTIVATION - DEACTIVATION" button (5) on the control panel (**Fig.1**).

 **N.B.:** As soon as the button (5) is pressed, the "REVERSE" screen will appear on the control display (**Fig.5**).

3. Activate the dead man's levers (6) on the handlebars (**Fig.6**) to start moving the machine in reverse mode.

 **N.B.:** the reverse speed is lower than the forward speed to comply with current health and safety standards.

 **N.B.:** it is impossible to reverse if the squeegee unit touches the floor. In order to reverse, lift the squeegee body from the floor using the relevant lever on the back of the machine.

 **N.B.:** to disable reverse movement, press the button (5) on the control panel again (**Fig.1**).

ACTIVATING THE BRUSH HEAD BODY BRUSH UNCOUPLING FUNCTION (single brush version)

To activate the brush head body brush uncoupling function (SCRUBBING version), proceed as follows:

1. Raise the brush head body, for versions without PM, depress the "BRUSH HEAD CONTROL" pedal (7) at the rear of the machine fully (**Fig.7**). For versions with PM, raise the brush head body, pressing the "BRUSH HEAD CONTROL" button (8) on the control panel (**Fig.1**).

 **N.B.:** For versions without PM, do not lift the brush head body completely.

2. Press the "BRUSH UNCOUPLING" button (9) on the control panel (**Fig.1**).

 **N.B.:** as soon as the "BRUSH UNCOUPLING" button (9) on the control panel is pressed (**Fig.1**), the control display will show the "CONFIRM UNCOUPLING?" screen (**Fig.8**).

3. Press the "BRUSH UNCOUPLING" button(9) again to confirm.

 **ATTENTION:** during this operation, check there are no people or objects near the machine.

ADJUSTING THE DETERGENT SOLUTION FLOW (versions without CDS system)

To adjust the flow of detergent solution during work, proceed as follows:

1. During the first few working meters check that the amount of solution is sufficient to wet the floor, but not enough to be collected by the squeegee.
2. If the amount of solution that is being delivered is not suitable, you can control this by moving the solution adjustment knob (10) (**Fig.9**).

 **N.B.:** Moving the solution adjustment knob (10) downwards will increase the flow of detergent solution on the brush.

 **N.B.:** Moving the solution adjustment knob (10) upwards will decrease the flow of detergent solution on the brush.

DOSING SYSTEM FUNCTION (CDS versions)

On request, the machine can be equipped with the Dosing System function; this is a system that enables the separate management of the water present in the solution tank and the detergent present in the chemical product tank. This function enables the percentage of chemical detergent inside the water circuit of the machine to be adjusted in accordance with the type of dirt to be cleaned, allowing detergent waste to be reduced, thus reducing costs and ensuring greater respect for the environment.

ADJUSTING THE DETERGENT SOLUTION FLOW (versions with CDS system)

To regulate the amount of detergent solution on the brushes, proceed as follows:

1. Open the flow of water in the solution tank to the maximum, move the knob (10) located on the rear of the machine downwards (**Fig.9**).

i **N.B.:** Before proceeding with adjusting the solution, check that the detergent is present in the internal canister, see paragraph "FILLING THE DETERGENT CANISTER (versions with CDS system)" on page 30.

2. By pressing the "WATER LEVEL ADJUSTMENT" button (11) once (**Fig.1**), you can view the level of water currently set in the machine's water system on the control display.
3. As soon as the button (11) is pressed, a symbol will appear in the centre of the control display showing the water level currently set in the machine's water system. (**Fig.10**).
4. pressing the button (11) again, you can change the level.

i **N.B.:** The water level refers to the flow delivered at maximum machine speed; at intermediate speeds, the flow is reduced and is proportional to the value set (only valid for machine versions with the SSC function).

i **N.B.:** A total of eight levels can be set (from 0 to 7); pressing the button (10) will increase by one level. Once level 7 has been reached, pressing the button (10) will take you back to level 0.

i **N.B.:** the right water flow should be proportional to the degree of dirt on the floor.

5. By pressing the "DETERGENT LEVEL ADJUSTMENT" button (12) once (**Fig.1**), you can view the level of detergent currently set in the machine's water system on the control display.
6. As soon as the button (12) is pressed, a symbol will appear in the centre of the control display showing the detergent level currently set in the machine's water system. (**Fig.11**).
7. pressing the button (12) again, you can change the level.

i **N.B.:** The detergent quantity level refers to the percentage of chemical product present in the detergent solution in relation to the amount of water previously selected.

i **N.B.:** A total of eight levels can be set (from 0 to 7); pressing the button (12) will increase by one level. Once level 7 has been reached, pressing the button (12) will take you back to level 0.

i **N.B.:** The percentage of chemical product present in the detergent solution must be proportional to the intensity of the dirt on the floor.

8. 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.

⚠ **ATTENTION:** To resolve any issues with the function of the CDS system, contact the BOMA Assistance Centre nearest to you.

SOLUTION SMART CONTROL FUNCTION (SSC versions)

On request, the machine can be equipped with the Solution Smart Control function; this is a system than enables the intelligent management of the detergent solution delivered to the brushes. The machine will automatically increase or decrease the flow of detergent solution in accordance with the working speed, thus reducing detergent solution waste.

SPEED ADJUSTMENT

This machine is equipped with electronic traction control. To regulate the potentiometer, proceed as follows:

1. Adjust the forward speed by gradually turning the knob (13) clockwise (**Fig.1**).

i **N.B.:** The machine will not start to move (either forward or backward) if the potentiometer adjustment knob (13) is set to minimum.

i **N.B.:** Forward speed can be increased by turning the potentiometer's knob (13) clockwise.

i **N.B.:** The machine features two forward speeds. By pushing the dead man's levers (6) (**Fig. 6**) beyond the first CLICK, the "SLOW" speed is activated; continuing to push the levers beyond the second CLICK activates the "FAST" speed.

i **N.B.:** Adjusting a speed, slow or fast, will imply the automatic modification of the other.

PRESSURE MONITORING FUNCTION (PM versions)

On request, the machine can be equipped with the Pressure Monitoring function; this is a system that enables the intelligent management of the pressure on the brushes. The machine automatically adjusts the linkage that controls the position of the brush head in relation to the floor, controlling the power supplied by the brush motors to ensure maximum effectiveness on any type of floor.

ACTIVATING THE BRUSH HEAD BODY EXTRA PRESSURE FUNCTION (versions with PM system)

To activate or deactivate the extra pressure function (only valid for machines with PM system), proceed as follows:

1. During the work programs "SCRUBBING WITH DRYING" or "SCRUBBING WITHOUT DRYING", holding down the dead man's lever (6) (Fig.6) and pressing the "BRUSH HEAD CONTROL" button (8) for at least three seconds (Fig.1) will activate the "BRUSH HEAD EXTRA PRESSURE" function.

i N.B.: As soon as the "EXTRA PRESSURE" function is active, the "weight" symbol (14) will appear in the centre of the brush symbol on the control display. (Fig.2).

i N.B.: To deactivate the "EXTRA PRESSURE" function, press and hold the dead man's lever (6) (Fig.6) and press the "BRUSH HEAD CONTROL" button (8) for at least three seconds (Fig.1).

IMMEDIATE STOP BUTTON

If any problems occur during the work, press the immediate stop button (15) located under the control handlebars (Fig.12). This function interrupts all functions active at that moment, in this way both the brush head body and the squeegee body will rise from the floor and automatically switch off with the expected delays.

i N.B.: As soon as the button (15) is pressed, the dedicated symbol appears on the control display (Fig. 13).

Once you have stopped the machine and solved the problem, to resume work proceed as follows:

1. Turn the main machine switch to "0", turn the key a quarter turn counter-clockwise.
2. Move the emergency switch to the rest position; turn the switch as indicated by the arrows printed on it.
3. Turn the main machine switch to "", turn the key a quarter turn clockwise.

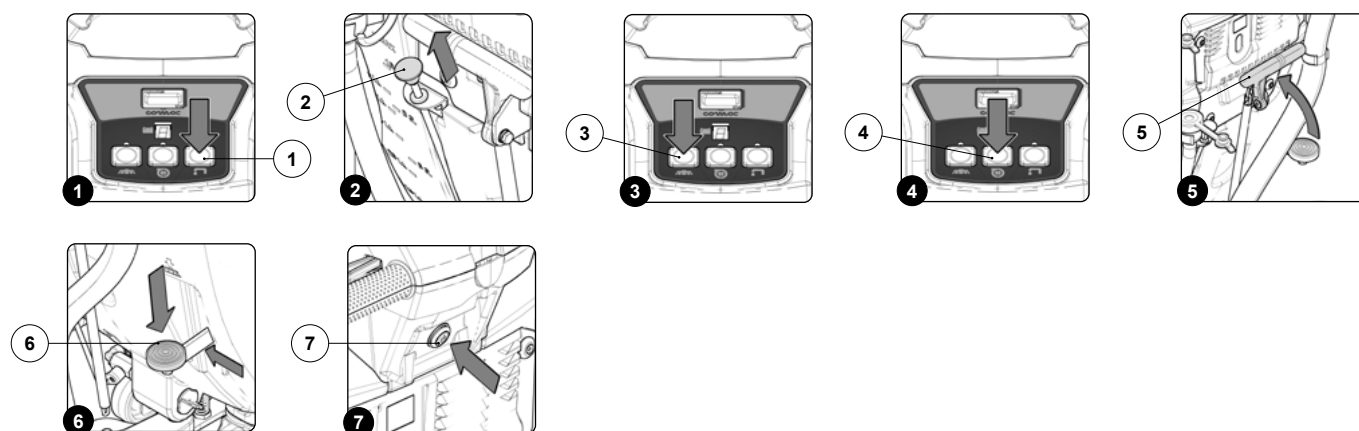
ALARM SCREEN

When an error occurs, the corresponding alarm screen will appear on the control display (Fig.14). The alarm display consists of:

- A first flashing line, which contains the alarm code (16).
- A second, non-flashing line which displays the origin of the error (17).
- A third, non-flashing line that describes the error (18).

The alarm screen will remain visible until the error itself has been resolved; stop the machine and try turning it off and back on again, if the problem persists, contact the specialist BOMA service center nearest you.

AT THE END OF THE WORK (versions without traction)



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

1. Turn off the solenoid valve in the brush head body by pressing the switch (1) on the control panel (Fig.1).
2. Close the tap in the machine water system, by moving the knob (2) on the rear of the machine upwards (Fig.2).
3. Turn off the brush head gearmotor by pressing the switch (3) on the control panel (Fig.3).
4. Turn off the suction motor by pressing the switch (4) on the control panel (Fig.4).

5. Raise the squeegee body off the floor by rotating the lever (5) on the back of the machine in a counter-clockwise direction (**Fig.5**).
6. Take the appliance to the dedicated dirty water drainage area.
7. Raise the brush head body from the floor, and press the pedal (6) (on the rear of the machine) downwards and to the left (**Fig.6**).
8. Switch the machine on, by pressing the main switch (7) located at the rear of the machine (**Fig.7**).



N.B.: The main switch is in the idle position when the LED inside it is off and the activation symbol is not visible.

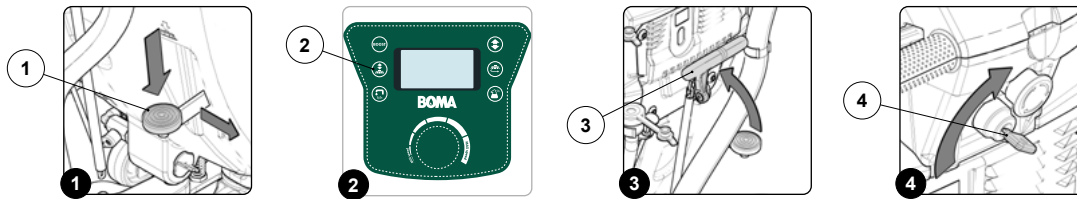
9. Carry out all the procedures listed in "RECOMMENDED PERIODIC MAINTENANCE" (in the "AT THE END OF THE WORK" column).
10. Once the routine maintenance operations have been completed, take the machine to the area designated for storage.



ATTENTION: Park the machine in an enclosed place, on a flat surface, and at a safe distance from any objects that could either damage it or be damaged due to contact with the machine itself.

11. Secure the machine, see paragraph "MACHINE SAFETY" on page 15.

AT THE END OF THE WORK (versions with traction)



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

1. Raise the brush head body, for versions without PM, depress the "BRUSH HEAD CONTROL" pedal (1) at the rear of the machine fully (**Fig.1**). For versions with PM, raise the brush head body, pressing the "BRUSH HEAD CONTROL" button (2) on the control panel (**Fig.2**).



N.B.: to lock the brush head in the raised position, depress the pedal (1) fully and then move it towards the right-hand side of the machine (**Fig.1**).

2. Raise the squeegee body off the floor, turn the squeegee control lever (3) clockwise (**Fig.3**).
3. Take the appliance to the dedicated dirty water drainage area.
4. Switch off the machine and turn the main switch (4) to position "0" by turning the key a quarter turn anti-clockwise (**Fig.4**). Remove the key from the instrument panel.
5. Carry out all the procedures listed in the chapter entitled "ROUTINE MAINTENANCE" on page 32, indicated in the column "AT THE END OF THE WORK".
6. Once the maintenance operations are complete, take the machine to the designated storage location.



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

7. Secure the machine, see paragraph "MACHINE SAFETY" on page 15.



ATTENTION: if the machine is left unused for more than one whole day, remove the brush from the brush head body, and the squeegee body from the squeegee support.

ROUTINE MAINTENANCE

Before carrying out any routine maintenance operations, proceed as follows:

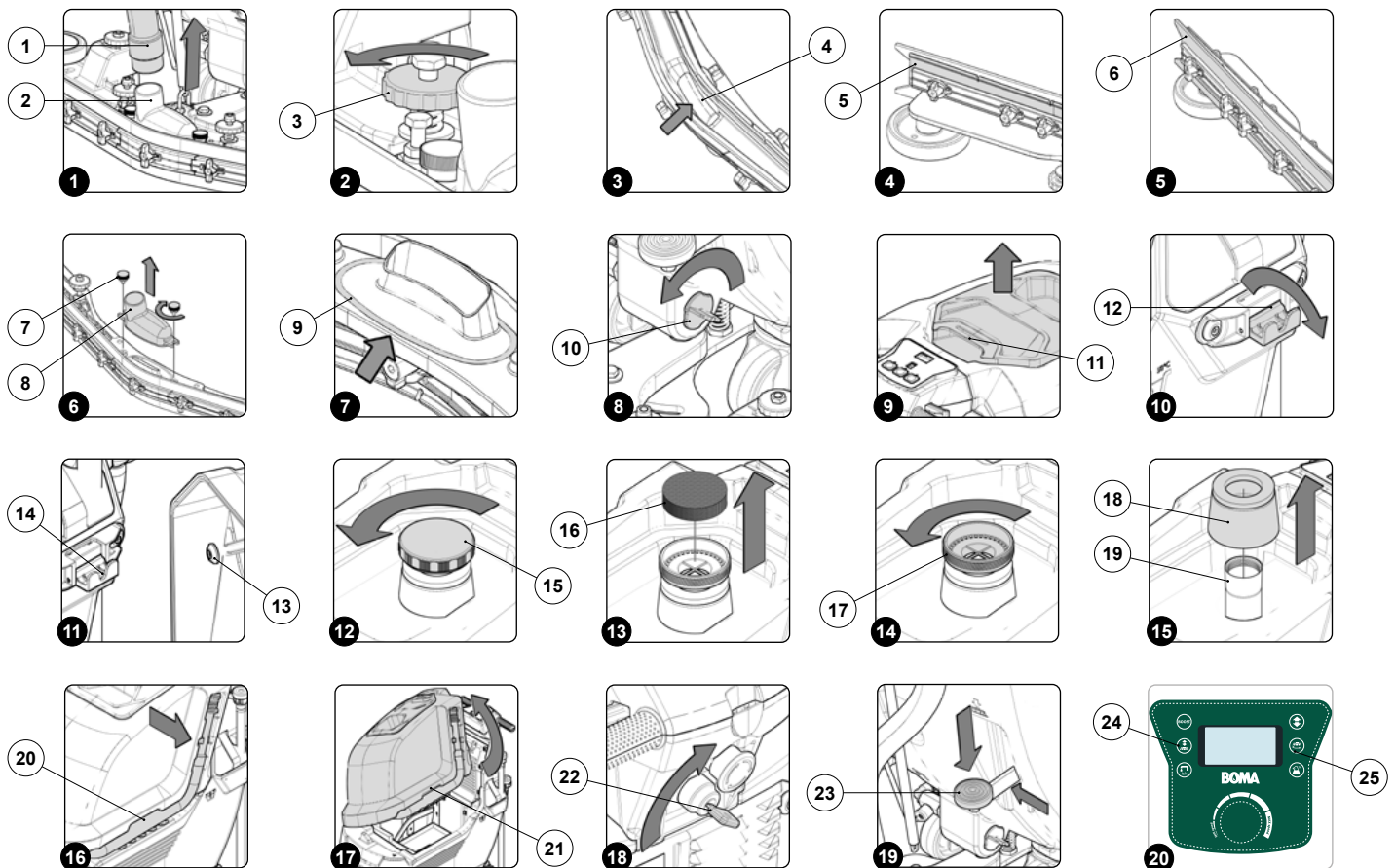
1. Take the machine to the maintenance area.

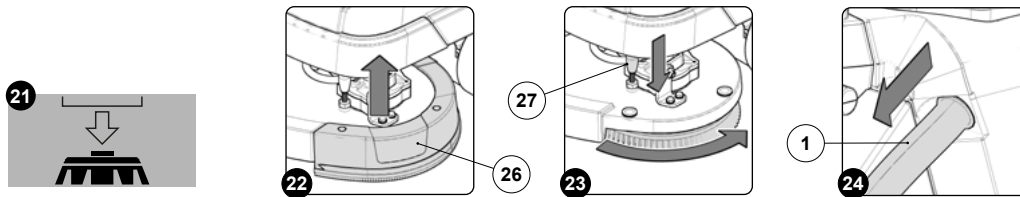
WARNING: the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Carry out the steps necessary to secure the machine, see paragraph "MACHINE SAFETY" on page 15.

ATTENTION: It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

TYPE OF MAINTENANCE	AT THE END OF THE WORK	DAILY	WEEKLY	LONG PERIODS OF NON-USE	TRANSPORT
CLEANING THE SQUEEGEE BODY	X		X	X	
CLEANING THE WATER SYSTEM FILTER			X	X	
CLEANING THE VACUUM MOTOR FILTER		X		X	
CLEANING THE RECOVERY TANK			X	X	
CLEANING THE BRUSH HEAD BODY BRUSH (single brush versions)		X		X	
CLEANING THE BRUSH HEAD BODY BRUSH (dual brush versions)		X		X	
CLEANING THE VACUUM TUBE		X		X	
EMPTYING THE RECOVERY TANK	X			X	X
EMPTYING THE SOLUTION TANK		X		X	X





CLEANING THE SQUEEGEE BODY

The careful cleaning of the whole vacuum unit ensures better drying and cleaning of the floor as well as a longer vacuum motor life. To carry out the cleaning of the squeegee body, proceed as follows:

1. Remove the vacuum tube (1) from the vacuum nozzle (2) on the squeegee body (Fig.1).
2. Completely unscrew the knobs (3) on the squeegee body pre-assembly (Fig.2).
3. Remove the squeegee body from the slits in the squeegee connector.
4. Thoroughly clean the squeegee body vacuum chamber (4) with a jet of water, and then with a damp cloth (Fig.3).
5. Thoroughly clean the squeegee body front rubber blade (5) with a jet of water, and then with a damp cloth (Fig.4).
6. Thoroughly clean the squeegee body rear rubber blade (6) with a jet of water, and then with a damp cloth (Fig.5).



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



N.B.: If necessary, replace the squeegee rubber blades. See paragraph "REPLACING THE SQUEEGEE BODY RUBBER BLADES" on page 37.

7. Unscrew the knobs (7) that fix the vacuum nozzle (8) to the squeegee body (Fig.6).
8. Remove the vacuum nozzle from the squeegee body.
9. Thoroughly clean the vacuum nozzle with a jet of water, and then with a damp cloth.
10. Also clean the support surface (9) on the squeegee body (Fig.7).
11. Repeat the operations described above in reverse order to reassemble all the parts.

CLEANING THE WATER SYSTEM FILTER

The careful cleaning of the water system guarantees a longer life span of the water circuit, ensuring better floor cleaning performance. To clean the water system filter, proceed as follows:

1. Make sure the solution tank is empty. If it isn't, empty it completely. See paragraph "EMPTYING THE SOLUTION TANK" on page 36.
2. Unscrew the detergent solution cap-filter (10), turning it counter-clockwise (Fig.8).
3. Clean it under a jet of clean water. Remove any impurities that may be present.



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

4. Repeat the operations described above in reverse order to reassemble all the parts.

CLEANING THE VACUUM MOTOR FILTER

Careful cleaning of the suction motor in the recovery tank guarantees better cleaning of the floor as well as a longer suction motor life. Proceed as follows to clean the suction motor filter:

1. Grip the handle (11) on the back of the recovery tank cover and remove it (Fig.9).
2. Rotate the recovery tank cover support (12). The optional support is positioned on the left side of the machine (Fig.10).
3. Insert the clamp (13) of the recovery tank cover in the slot (14) on the recovery tank cover support (Fig.11).
4. Make sure the recovery tank is empty; if not, empty it completely. See paragraph. "EMPTYING THE RECOVERY TANK" on page 36
5. Remove the floating cover by unscrewing it (15) counter-clockwise (Fig.12).
6. Remove the vacuum filter (16) and clean it (Fig.13).



N.B.: you are advised to use a jet of air to remove the impurities before cleaning the filter. Position the filter at least 20cm from the air jet.



N.B.: do not use highly corrosive products to clean the filter, to avoid damaging it.

7. Remove the upper part of the float body by unscrewing it (17) anti-clockwise (Fig.14).



N.B.: when removing the upper part of the float, be very careful not to remove the lower part as well (19) (Fig.15).

8. Remove the float (18) (Fig.15). Rinse the inside of the float with a jet of water. If necessary, use a spatula to remove the sludge that has accumulated at the bottom of the float.



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



N.B.: If the polyurethane ring on the float body (18)(Fig.15) is excessively worn or damaged, contact the nearest service centre and replace the entire float body.

9. Repeat the operations described above in reverse order to reassemble all the parts.

CLEANING THE RECOVERY TANK

Careful cleaning of the recover tank ensures better cleaning of the floor as well as a longer suction motor life. Proceed as follows to clean the recovery tank:

1. Grip the handle (11) on the back of the recovery tank cover and remove it (**Fig.9**).
2. Rotate the recovery tank cover support (12). The optional support is positioned on the left side of the machine (**Fig.10**).
3. Insert the clamp (13) of the recovery tank cover in the slot (14) on the recovery tank cover support (**Fig.11**).
4. Make sure the recovery tank is empty; if not, empty it completely. See paragraph. "EMPTYING THE RECOVERY TANK" on page 36
5. Release the recovery tank drainage tube (20) (on the left-hand side of the machine) from the retainers (**Fig.16**).
6. Unscrew the drainage tube cap and lay the hose near the waste water soakaway.
7. Clean the inside of the recover tank with a jet of water, and use a brush to remove any residual impurities if necessary.



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

8. Repeat the operations in reverse order to reassemble all the parts.

CLEANING THE BRUSH HEAD BODY BRUSH (single brush version)

Careful cleaning of the brush guarantees better cleaning of the floor as well as a longer brush head gearmotor lifespan. To clean the brush, proceed as follows:

1. Grip the handle (21) on the left-hand side of the recovery tank (**Fig.17**) and turn the tank as far as it will go.
2. Connect the battery connector to the electrical system connector.



WARNING: It is recommended that all installation and maintenance operations be carried out by expert personnel, trained at the specialised assistance centre.

3. Grip the handle on the left-hand side of the recovery tank and turn the tank until it reaches the work position.
4. Turn on the machine, turn the main switch to position "I" by turning the key (22) a quarter turn clockwise (**Fig.18**).
5. Raise the brush head body, for versions without PM, depress the "BRUSH HEAD CONTROL" pedal (23) at the rear of the machine fully (**Fig.19**). For versions with PM, raise the brush head body, pressing the "BRUSH HEAD CONTROL" button (24) on the control panel (**Fig.20**).



N.B.: do not lift the brush head body completely.

6. Press the "BRUSH UNCOUPLING" button (25) on the control panel (**Fig.20**).



N.B.: as soon as the "BRUSH UNCOUPLING" button (25) on the control panel is pressed (**Fig.20**), the control display will show the "CONFIRM UNCOUPLING?" screen (**Fig.21**).

7. Press the "BRUSH UNCOUPLING" button(25) again to confirm.



ATTENTION: during this operation, check there are no people or objects near the machine.

8. Clean the brush under a stream of running water to remove any impurities from its bristles.



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

9. Check the wear status of the bristles and replace the brushes if they are excessively consumed (the bristles' protrusion must not be less than 10 mm; this distance is indicated on the brush by the yellow band).



N.B.: To replace the brush, see paragraph "REPLACING THE BRUSH HEAD BODY BRUSH (single brush version)" on page 38.

10. Once the brush has been cleaned, refit it; see paragraph "FITTING THE BRUSH HEAD BODY BRUSH (single brush version)" on page 17.

CLEANING THE BRUSH HEAD BODY BRUSH (dual brush version)

Careful cleaning of the brush guarantees better cleaning of the floor as well as a longer brush head gearmotor lifespan. To clean the brush, proceed as follows:

1. Move to the front of the machine.
2. With the brush head in the raised position, remove the left-hand side splash guard (26) (**Fig.22**).
3. Press the brush-holder plate retainer (27) and simultaneously rotate the brush in the direction shown in the image (**Fig.23**).



N.B.: **Fig.23** shows the rotation direction of the left-hand brush.

4. When brush rotation is prevented, turn until the button on the brush is disengaged from the coupling spring on the brush-holder plate.
5. Repeat the same operation for the right-hand brush.
6. Clean the brushes under a stream of running water to remove any impurities from the bristles.



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

7. Check the wear status of the bristles and replace the brushes if they are excessively consumed (the bristles' protrusion must not be less than 10 mm; this distance is indicated on the brush by the yellow band).



N.B.: To replace the brush, see paragraph "REPLACING THE BRUSH HEAD BODY BRUSH (dual brush version)" on page 38.

8. Once the brush has been cleaned, refit it; see paragraph "FITTING THE BRUSH HEAD BODY BRUSH (dual brush version)" on page 18.

CLEANING THE VACUUM TUBE

Careful cleaning of the vacuum hose guarantees better cleaning of the floor as well as a longer vacuum motor life. Proceed as follows to clean the vacuum hose:

1. Remove the vacuum hose (1) from the vacuum nozzle (2) on the squeegee body (**Fig.1**).
2. Remove the vacuum tube (1) via the hole on the back of the recovery tank (**Fig.24**).
3. Remove the recovery tank drainage hose from the clamps.
4. Rinse the inside of the vacuum hose with a jet of running water.



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

5. Repeat the operations described above in reverse order to reassemble all the parts.



N.B.: Pay particular attention when placing the vacuum tube behind the lifting chain, as indicated on the label located on the rear of the machine.

EMPTYING THE RECOVERY TANK

Proceed as follows to empty the recovery tank:

1. Grip the handle (11) on the back of the recovery tank cover and remove it (**Fig.9**).
2. Rotate the recovery tank cover support (12). The optional support is positioned on the left side of the machine (**Fig.10**).
3. Insert the clamp (13) of the recovery tank cover in the slot (14) on the recovery tank cover support (**Fig.11**).
4. Release the recovery tank drainage tube (20) (on the left-hand side of the machine) from the retainers (**Fig.16**).
5. Bend the end of the drainage tube, so as to create a choke and prevent the contents from coming out, put the tube on the discharge surface, unscrew the cap and gradually release the tube.



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

6. Repeat the operations in reverse order to reassemble all the parts.

EMPTYING THE SOLUTION TANK

Proceed as follows to empty the solution tank:

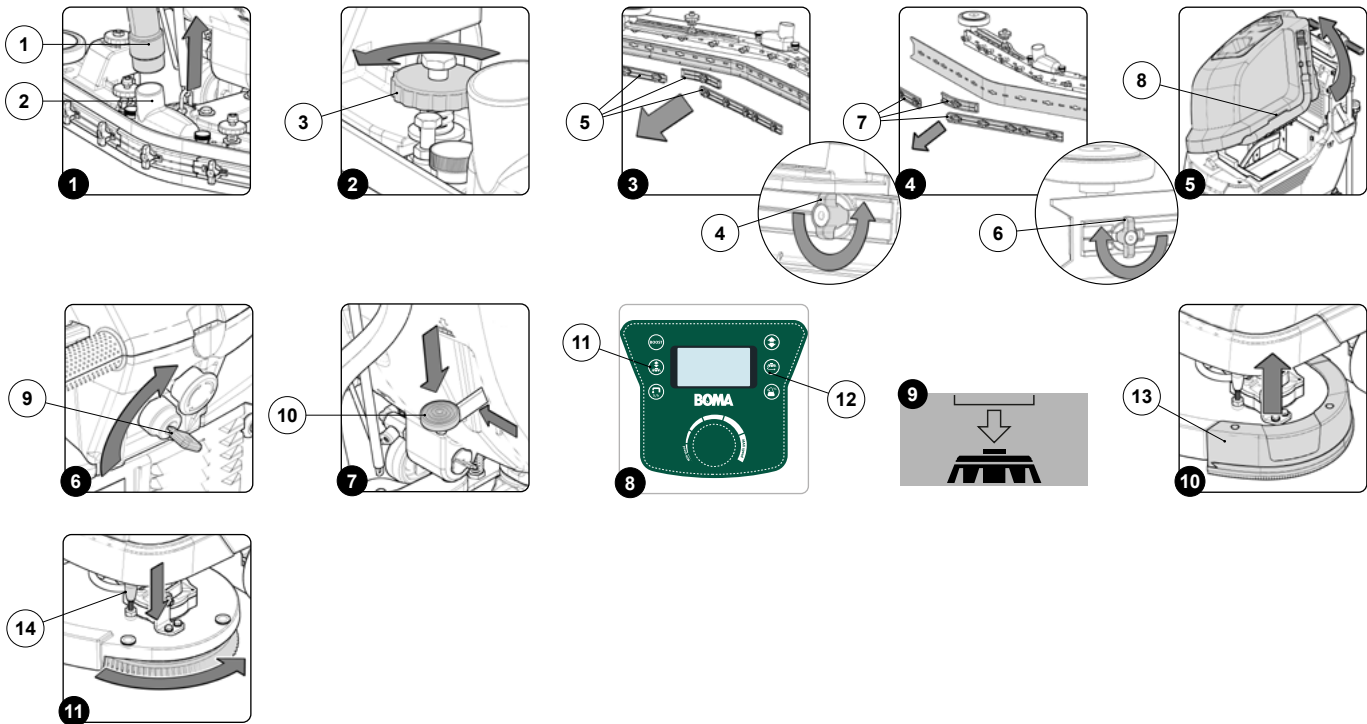
1. Unscrew the detergent solution filter cap (10), turning it anti-clockwise (**Fig.8**); when the solution tank is empty, rinse the inside of the solution tank with a jet of running water.



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

2. Repeat the operations described above in reverse order to reassemble all the parts.

EXTRAORDINARY MAINTENANCE



Before carrying out any extraordinary maintenance operations, proceed as follows:

1. Take the machine to the maintenance area.

WARNING: the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Carry out the steps necessary to secure the machine, see paragraph "MACHINE SAFETY" on page 15.

ATTENTION: It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

REPLACING THE SQUEEGEE BODY RUBBER BLADES

Ensuring the integrity of the squeegee body's rubber blades guarantees better floor cleaning and drying results, as well as a longer service life for the vacuum motor. In order to replace the squeegee body's rubber blades, do the following:

1. Remove the vacuum hose (1) from the vacuum nozzle (2) on the squeegee unit (**Fig.1**).
2. Completely unscrew the knobs (2) in the squeegee body's pre-assembly (**Fig.2**).
3. Remove the squeegee body from the slits in the squeegee connector.
4. Remove the front rubber-pressing blade (5); turn the knobs (4) on the front of the squeegee to the horizontal position (**Fig.3**).
5. Remove the front rubber blade from the squeegee body.
6. Remove the rear rubber-pressing blade (7); turn the knobs (6) on the rear of the squeegee to the horizontal position (**Fig.4**).
7. Remove the rear rubber blade from the squeegee body.
8. Replace the worn rubber blades with new ones.
9. Repeat the operations described above in reverse order to reassemble all the parts.

i N.B.: Before using the machine, remember to adjust the squeegee body. See paragraph "ADJUSTING THE SQUEEGEE BODY'S RUBBER BLADES" on page 39.

i N.B.: It is recommended to replace both squeegee body blades in order to ensure good results when drying the floor.

REPLACING THE BRUSH HEAD BODY BRUSH (single brush version)

To replace the brush, proceed as follows:

1. Grip the handle (8) on the left-hand side of the recovery tank (Fig.5) and turn the tank as far as it will go.
2. Connect the battery connector to the electrical system connector.



WARNING: It is recommended that all installation and maintenance operations be carried out by expert personnel, trained at the specialised assistance centre.

3. Grip the handle on the left-hand side of the recovery tank and turn the tank until it reaches the work position.
4. Turn on the machine, turn the main switch to position "I" by turning the key (9) a quarter turn clockwise (Fig.6).
5. Raise the brush head body, for versions without PM, depress the "BRUSH HEAD CONTROL" pedal (10) at the rear of the machine fully (Fig.7). For versions with PM, raise the brush head body, pressing the "BRUSH HEAD CONTROL" button (11) on the control panel (Fig.8).



N.B.: do not lift the brush head body completely.

6. Press the "BRUSH UNCOUPLING" button (12) on the control panel (Fig.8).



N.B.: as soon as the "BRUSH UNCOUPLING" button (12) on the control panel is pressed (Fig.8), the control display will show the "CONFIRM UNCOUPLING?" screen (Fig.9).

7. Press the "BRUSH UNCOUPLING" button (12) again to confirm.



ATTENTION: during this operation, check there are no people or objects near the machine.

8. Replace the worn brush with a new one. See paragraph "FITTING THE BRUSH HEAD BODY BRUSH (single brush version)" on page 17.

REPLACING THE BRUSH HEAD BODY BRUSH (dual brush version)

To replace the brush, proceed as follows:

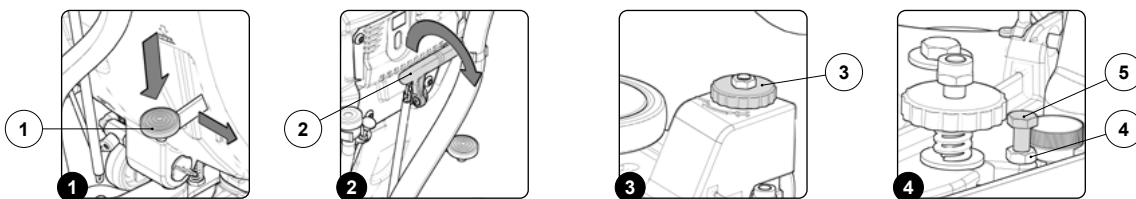
1. Move to the front of the machine.
2. With the brush head in the raised position, remove the left-hand side splash guard (13) (Fig.10).
3. Press the brush-holder plate retainer (14) and simultaneously rotate the brush in the direction shown in the image (Fig.11).



N.B.: The image Fig.11 shows the rotation direction of the left brush.

4. When brush rotation is prevented, turn until the button on the brush is disengaged from the coupling spring on the brush-holder plate.
5. Repeat the same operation for the right-hand brush.
6. Replace the worn brush with a new one. See paragraph "FITTING THE BRUSH HEAD BODY BRUSH (dual brush version)" on page 18.

ADJUSTMENT INTERVENTIONS



Before carrying out any adjustments, proceed as follows:

1. Take the machine to the maintenance area.



WARNING: the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Carry out the steps necessary to secure the machine, see paragraph "MACHINE SAFETY" on page 15.



ATTENTION: It is recommended to wear the appropriate PPE (Personal Protective Equipment), suitable for the work to be carried out.

ADJUSTING THE SQUEEGEE BODY'S RUBBER BLADES

Careful adjustment of the height between the squeegee rubber and the floor guarantees better drying and cleaning of the flooring as well as a longer vacuum motor life. To adjust the squeegee rubber, proceed as follows:

1. Take the machine to the maintenance area.

 **WARNING:** the place designated for this operation must comply with current regulations concerning safety at work and current environmental protection regulations.

2. Sit on the driver's seat.
3. Lower the brush head body by pressing the brush head control pedal (1) on the back of the machine (**Fig.1**).
4. Lower the squeegee body using the lever (2) on the back of the machine (**Fig.2**).

Adjusting the height of the squeegee body:

- Adjust the height of the rubber blade in relation to the floor by loosening or tightening the knobs (3) (**Fig.3**).

 **N.B.:** Figure 3 shows the right-hand knob; turning it the direction indicated by the "+" symbol increases the distance between the floor and the squeegee support. Turning it in the direction indicated by the "-" symbol decreases the distance between floor and the squeegee support.

 **N.B.:** By decreasing the distance between the squeegee support and the floor, the rubber blades present in the squeegee's body move closer to the floor.

 **N.B.:** the right-hand and left-hand knobs must be rotated the same number of times, so that the squeegee is parallel to the floor when it is working.

Adjusting the tilt of the squeegee body:

- Loosen the lock nut (4) on the squeegee tilt adjustment screw (5) (**Fig.4**).
- To adjust the tilt of the squeegee body rubber blades in relation to the floor, tighten or loosen the screw (5) until the blades are bent outwards by about 30° in relation to the floor, in an even manner along their entire length.
- Once the adjustment has been completed, tighten the lock nut (4).

CHOOSING AND USING BRUSHES

POLYPROPYLENE BRUSH (PPL)

Used on all types of floors. Good resistance to wear and tear, and hot water (no greater than 50°C.). PPL is non-hygroscopic and therefore retains its characteristics even when working in wet conditions.

ABRASIVE BRUSH

The bristles of this type of brush are charged with highly aggressive abrasives. It is used to clean very dirty floors. To avoid floor damage, work only with the pressure strictly necessary.

BRISTLE THICKNESS

Thicker bristles are more rigid and are therefore used on smooth floors or floors with small joints.

On uneven floors or those with deep joints, it is advisable to use softer bristles which can enter the gaps more easily.

Remember that when the bristles are worn and therefore too short, they will become rigid and are no longer able to penetrate and clean deep down. In this case, like with over-large bristles, the brush tends to jump.

ABRASIVE PAD:

BLACK PAD: suitable for total wet de-waxing of hard surfaces with de-waxing chemicals and standard speed machines.

BROWN PAD: suitable both for dry de-waxing of protected floors and wet de-waxing with a standard chemical wax remover.

GREEN PAD: suitable for partial wet de-waxing of non-protected hard surfaces. Can also be used to prepare hard surfaces before re-waxing and to completely de-wax floors such as linoleum or vinyl.

RED PAD: suitable for spray cleaning operations, to be used with chemical detergents.

RED PAD: suitable for dry polishing of protected floors.

MACHINE	CODE	QTY	TYPE OF BRISTLE	COLOUR	NOTES
Tempo Run 50	404654	1	PPL Ø0,3	LIGHT BLUE	DISC BRUSH ØF=495mm ØE=508mm
	405631	1	PPL Ø0,6	WHITE	
	404653	1	PPL Ø0,9	BLACK	
	405632	1	ABRASISA	GREY	
	449908	1	TAMPICO	-	
	405527	1	-	-	BRUSH PAD HOLDER ØF=497mm WITH CENTER LOCK

MACHINE	CODE	QTY	TYPE OF BRISTLE	COLOUR	NOTES
Tempo Run 55	427709	2	PPL Ø0,3	LIGHT BLUE	DISC BRUSH ØF=280mm ØE=290mm
	427710	2	PPL Ø0,6	BIANCO	
	427711	2	PPL Ø0,9	NERO	
	427712	2	ABRASISA	GRIGIO	
	449920	2	TAMPICO	-	BRUSH PAD HOLDER ØF=280mm WITH CENTER LOCK
	427713	2	-	-	
Tempo Run 65	422189	2	PPL Ø0,3	AZZURRO	DISC BRUSH ØF=320mm ØE=340mm
	422971	2	PPL Ø0,6	BIANCO	
	422972	2	PPL Ø0,9	NERO	
	422981	2	ABRASISA	GRIGIO	
	449914	2	TAMPICO	-	BRUSH PAD HOLDER ØF=320mm WITH CENTER LOCK
	422973	2	-	-	



DISPOSAL

Proceed with scrapping the machine in accordance with the waste disposal regulations in force in the country in which the machine is being used.

TROUBLESHOOTING

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

PROBLEM	POSSIBLE CAUSE	SOLUTION
THE MACHINE DOES NOT START	the machine is off.	For versions without traction, check that the main switch is active (the led light inside it should be illuminated); if this is not the case, press it.
		For versions with traction, make sure that the main switch is in the "I" position, otherwise turn the key a quarter turn clockwise.
THE MACHINE IS NOT WORKING	Check there are no alarm messages on the control display when the appliance is switched on (valid for versions with traction).	Stop the machine immediately, and contact a specialised service centre.
	Make sure that the batteries are correctly connected to each other and that the battery connector is connected to the electrical system connector.	See paragraphs "INSERTING THE BATTERIES INTO THE MACHINE" on page 15 and "CONNECTING THE BATTERIES TO THE MACHINE SYSTEM" on page 16.
	Check the charge level of the batteries.	If the battery charge level is critical, perform a complete charge cycle; see paragraph "RECHARGING THE BATTERIES" on page 16.
THE BATTERIES ARE NOT CHARGED CORRECTLY (VERSIONS WITHOUT AN ON BOARD BATTERY CHARGER)	The connector of the battery charger cable is not properly inserted in the battery connector.	Connect the battery charger cable connector to the battery connector again. It is recommended that all installation and maintenance operations be carried out by expert personnel, trained at the specialised assistance centre.
	The plug on the battery charger's power cable is not correctly inserted into the electrical outlet.	Check that the battery charger power supply cable plug is connected to the mains socket.
	The characteristics of the mains power supply do not correspond to those required by the battery charger.	Check that the characteristics in the battery charger plate are the same as those of the mains supply. Contact a service centre technician for more information.
	The LEDs of the battery charger blink repeatedly.	Referring to the battery charger use and maintenance manual, check the meaning of the flashing signals that the battery charger emits during the battery recharge stage.

PROBLEM	POSSIBLE CAUSE	SOLUTION
THE BATTERIES ARE NOT CHARGED CORRECTLY (VERSIONS WITH AN ON BOARD BATTERY CHARGER)	The plug on the battery charger's cable is not correctly inserted into the socket on the battery charger itself.	Reconnect the battery charger's power cable. It is recommended that all installation and maintenance operations be carried out by expert personnel, trained at the specialised assistance centre.
	The plug on the battery charger's power cable is not correctly inserted into the electrical outlet.	Check that the battery charger power supply cable plug is connected to the mains socket.
	The characteristics of the mains power supply do not correspond to those required by the battery charger.	Check that the characteristics in the battery charger plate are the same as those of the mains supply. Contact a service centre technician for more information.
	The LEDs of the battery charger blink repeatedly.	Referring to the battery charger use and maintenance manual, check the meaning of the flashing signals that the battery charger emits during the battery recharge stage.
THE MACHINE HAS A VERY LOW WORK AUTONOMY	Check the battery charge level (check the symbol on the control display).	If the battery charge level is critical, perform a complete charge cycle; see paragraph "RECHARGING THE BATTERIES" on page 16.
NOT ENOUGH DETERGENT SOLUTION ON THE BRUSH	The quantity of detergent solution in the water system is not sufficient for the work to be carried out.	For machine versions without CDS function, check that the amount of detergent solution present in the machine water system is sufficient for the work to be carried out; if this is not the case, top it up. See paragraphs "FILLING THE SOLUTION TANK WITH WATER" on page 19 and "ADJUSTING THE DETERGENT SOLUTION (versions without CDS system)" on page 19.
	The quantity of detergent solution in the water system is not sufficient for the work to be carried out.	For machine versions with CDS function, check that the amount of detergent solution present in the machine water system is sufficient for the work to be carried out; if this is not the case, top it up. See paragraphs "FILLING THE SOLUTION TANK WITH WATER" on page 19 and "FILLING THE DETERGENT CANISTER (versions with CDS system)" on page 19.
	Detergent solution filter obstructed.	Check that the detergent solution filter is not clogged; if it is, clean it. See paragraph "CLEANING THE WATER SYSTEM FILTER" on page 34.
THE MACHINE DOES NOT CLEAN CORRECTLY	Not enough detergent solution comes out.	Read the section entitled NOT ENOUGH DETERGENT SOLUTION ON THE BRUSH.
	The brush is not correctly inserted in the machine.	For single brush versions of the machine, check that the brush is correctly inserted in the machine, see paragraph "FITTING THE BRUSH HEAD BODY BRUSH (single brush version)" on page 17.
		For dual brush versions of the machine, check that the brush is correctly inserted in the machine, see paragraph "FITTING THE BRUSH HEAD BODY BRUSH (dual brush version)" on page 18.
	The brush bristles are excessively worn.	For single brush versions of the machine, check the wear of the brush, and if excessive (bristle height of less than 10mm), replace the brush, "REPLACING THE BRUSH HEAD BODY BRUSH (single brush version)" on page 38.
		For dual brush versions of the machine, check the wear of the brush, and if excessive (bristle height of less than 10mm), replace the brush, "REPLACING THE BRUSH HEAD BODY BRUSH (dual brush version)" on page 38.
	The type of brush used is not suitable for the work to be carried out.	Contact your nearest BOMA service center and explain the type of work you want carry out; the type of floor you want to clean; the type of dirt you want to remove.
	The type of abrasive pad used is not suitable for the work to be carried out.	

PROBLEM	POSSIBLE CAUSE	SOLUTION
THE SQUEEGEE DOES NOT DRY PERFECTLY	The vacuum unit is obstructed.	Check that the squeegee body is not clogged; if it is, clean it. See paragraph "CLEANING THE SQUEEGEE BODY" on page 34.
		Check that the vacuum tube is not clogged; if it is, clean it. See paragraph "CLEANING THE VACUUM TUBE" on page 36.
		Check that the suction motor filter is not clogged; if it is, clean it. See paragraph "CLEANING THE VACUUM MOTOR FILTER" on page 34.
	The cap on the recovery tank drainage tube is not properly positioned.	Check that the cap on the recovery tank drainage tube is positioned properly.
	The recovery tank lid is not positioned correctly.	Check that the recovery tank lid is properly positioned on the machine.
	The elements that make up the suction unit are worn.	Check that the rubber blades in the squeegee body are not worn or broken; if they are, replace them. See paragraph "REPLACING THE SQUEEGEE BODY RUBBER BLADES" on page 37.
		Check that the vacuum tube is not broken; if it is, contact a service centre technician to have it replaced.
		Check that the suction motor filter is not broken; if it is, contact a service centre technician to have it replaced.
EXCESSIVE FOAM PRODUCTION	The type of squeegee rubber blades used are not suitable for the work to be carried out.	Contact your nearest BOMA service center and explain the type of work you want carry out; the type of floor you want to clean; the type of dirt you want to remove.
	The detergent being used is not suitable.	Check that a low foam detergent has been used. If necessary, add a small quantity of anti-foam liquid to the recovery tank.
THE MACHINE DOES NOT VACUUM CORRECTLY	The floor is not very dirty.	Dilute the detergent more.
	The recovery tank is full.	Empty the recovery tank, see paragraph "EMPTYING THE RECOVERY TANK" on page 36.
	The vacuum device is obstructed	Read the section "THE SQUEEGEE DOES NOT DRY PERFECTLY".

EC DECLARATION OF CONFORMITY

The undersigned company:
Boma NV
Noorderlaan 131 – 2030 Antwerp - Belgium
declares under its sole responsibility that the products

SCRUBBING MACHINES - mod.

**Tempo Run 50 NT;
Tempo Run 50;
Tempo Run 50 PM SC;
Tempo Run 55; Tempo Run 65**

comply with the requirements of the following Directives:

- 2006/42/EC: Machinery Directive.
- 2014/35/EC: Low Voltage Directive.
- 2014/30/EC: Electromagnetic compatibility directive.

They also comply with the following standards:

- EN 60335-1:2012/A11:2014
- EN 60335-2-72:2012
- EN 12100:2010
- EN 60335-2-29:2004/A2:2010
- EN 61000-6-2:2005/AC:2005
- EN 61000-6-3:2007/A1:2011/AC:2012
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 55014-1:2006/A1:2009/A2:2011
- EN 55014-2:2015
- EN 62233:2008/AC:2008

The person authorized to compile the technical file:

Mr Bresseleers
Noorderlaan 131 – 2030 Antwerp - Belgium

Antwerp, 24/04/2020

Manufacturer:
COMAC S.p.A.
Via Maestri del Lavoro, 17
Post code/ zip 37059 - S. Maria di Zevio (VR) - Verona - Italy
Tel. +39 045 8774222 - Fax. +39 045 8750303
E-mail: com@comac.it
Web: www.comac.it

Boma NV
Legal representative
Mr Bresseleers

Agent:
Boma NV
Noorderlaan 131
2030 Antwerp - Belgium
Tel. Service: 0032 3 202 84 90
E-mail Service: service@boma.be
Website: www.boma.eu

UKCA DECLARATION OF CONFORMITY

The undersigned company:
Boma NV
Noorderlaan 131 – 2030 Antwerp - Belgium
declares under its sole responsibility that the products

SCRUBBING MACHINES - mod.

Tempo Run 50 NT;
Tempo Run 50;
Tempo Run 50 PM SC;
Tempo Run 55; Tempo Run 65

comply with the requirements of the following Directives:

- Supply of Machinery (Safety) Regulations 2008.
- Electrical Equipment (Safety) Regulations 2016.
- Electromagnetic Compatibility Regulations 2016.

They also comply with the following standards:

- BS EN 60335-1:2012+A2:2019
- BS EN 60335-2-72:2012
- BS EN 12100:2010
- BS EN 60335-2-29:2004+A11:2018
- BS EN IEC 61000-6-2:2019
- BS EN 61000-6-3:2007+A1:2011
- BS EN IEC 61000-3-2:2019
- BS EN IEC 61000-3-3:2019
- BS EN 55014-1:2017+A11:2020
- BS EN 55014-2:2015
- BS EN 62233:2008

The person authorized to compile the technical file:

Mr Bresseleers
Noorderlaan 131 – 2030 Antwerp - Belgium

Antwerp, 24/04/2020

Manufacturer:

COMAC S.p.A.

Via Maestri del Lavoro, 17
Post code/ zip 37059 - S. Maria di Zevio (VR) - Verona - Italy
Tel. +39 045 8774222 - Fax. +39 045 8750303
E-mail: com@comac.it
Web: www.comac.it

Boma NV
Legal representative
Mr Bresseleers

Agent:
Boma NV
Noorderlaan 131
2030 Antwerp - Belgium
Tel. Service: 0032 3 202 84 90
E-mail Service: service@boma.be
Website: www.boma.eu



Boma NV

Noorderlaan 131 – 2030 Antwerp - Belgium

Tel. Service: 0032 3 202 84 90 - Email Service: service@boma.be

Website: www.boma.eu or www.bomac.nu