



# exclusiva

## **BlueStar**

Scrubber Dryer



PLEASE NOTE:  
Before use, carefully read  
the instructions.

**BlueStar 55BT M**

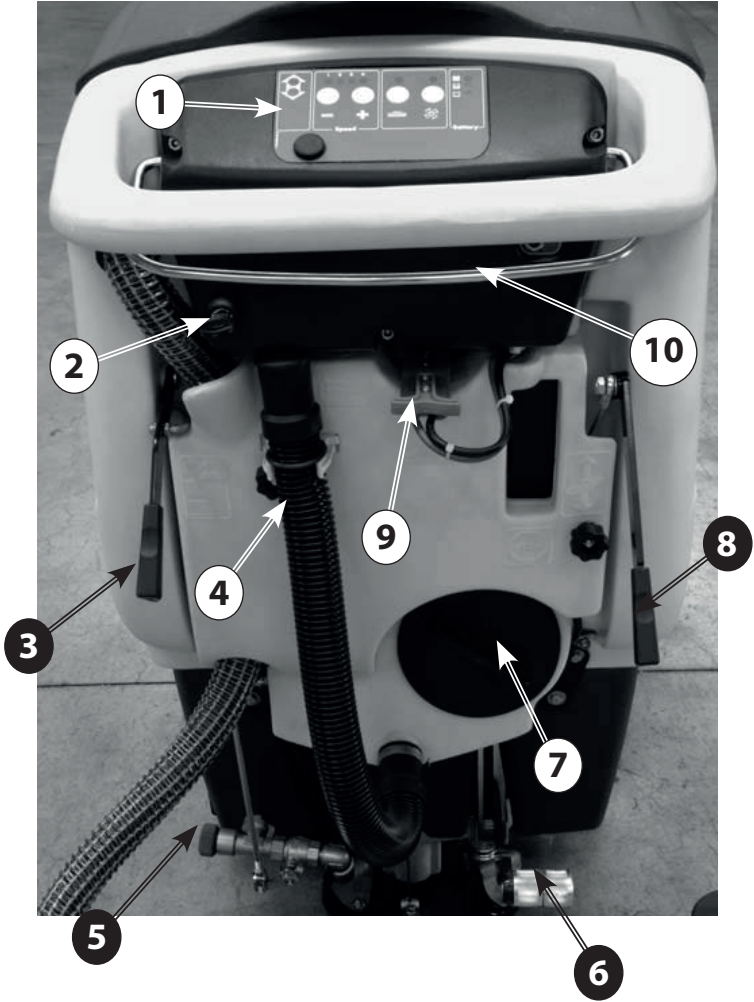
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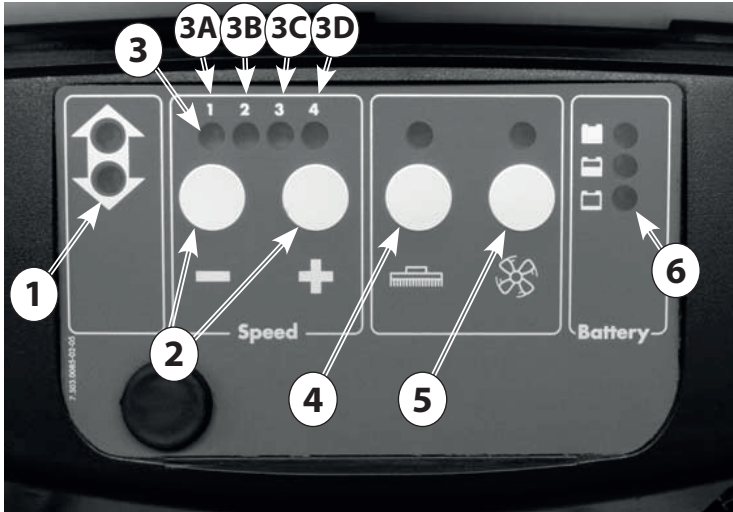
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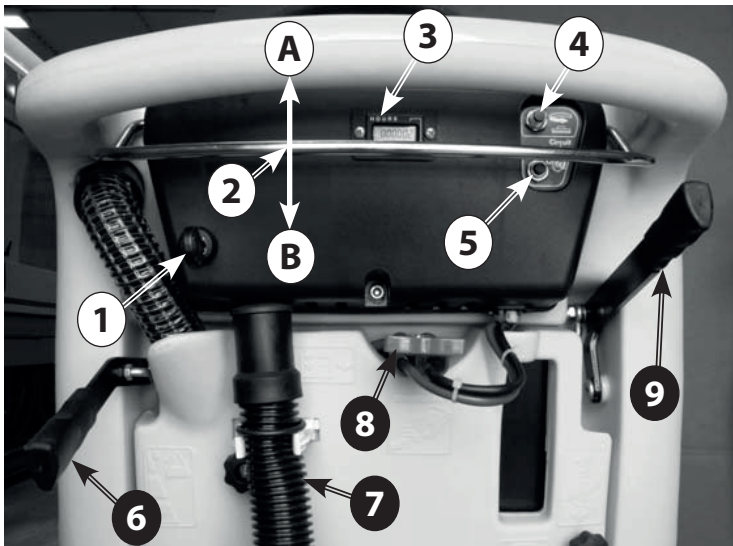


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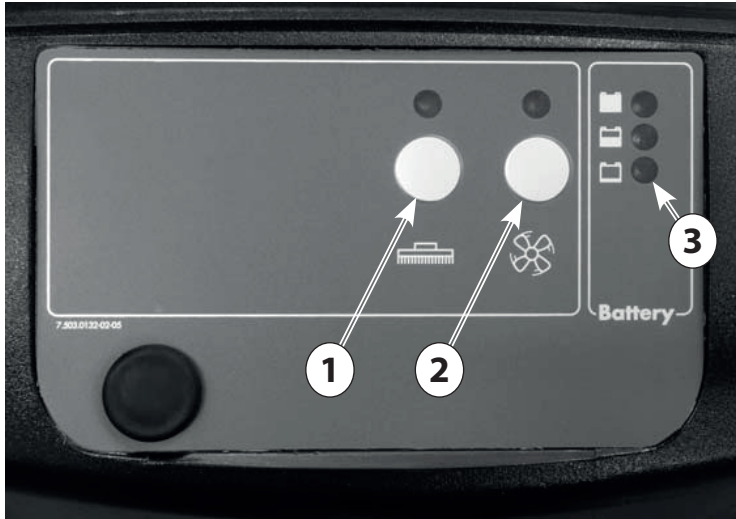


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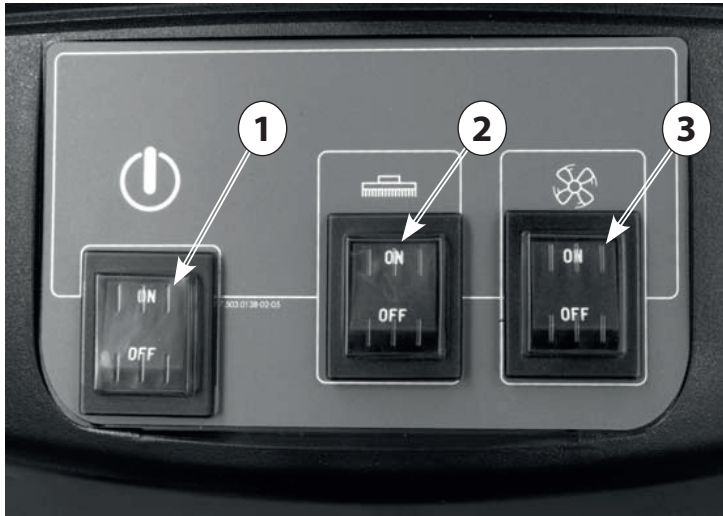


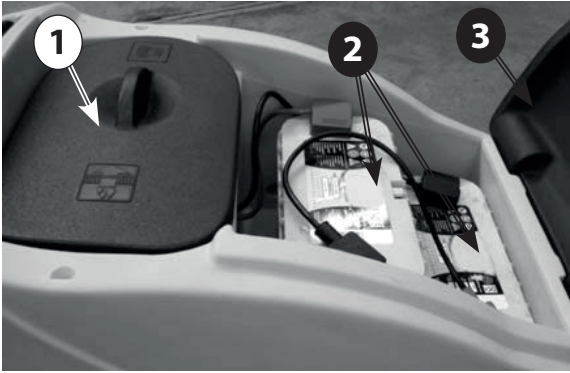
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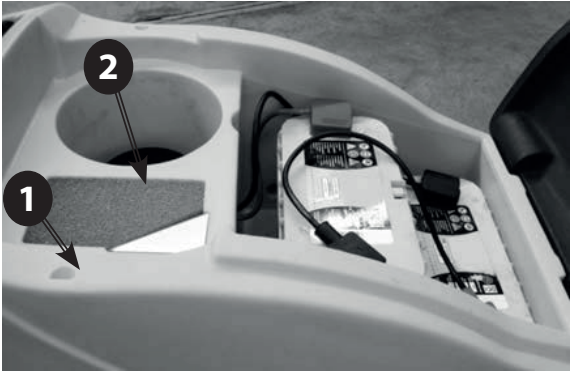


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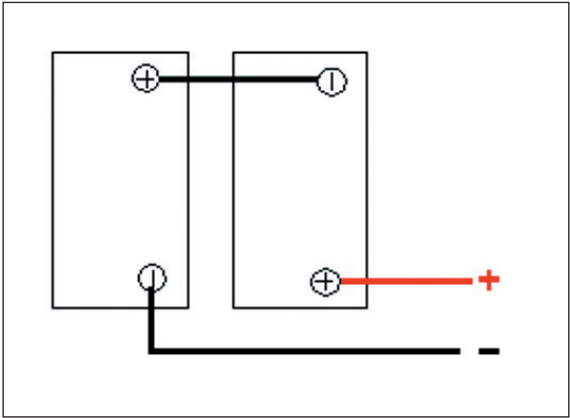




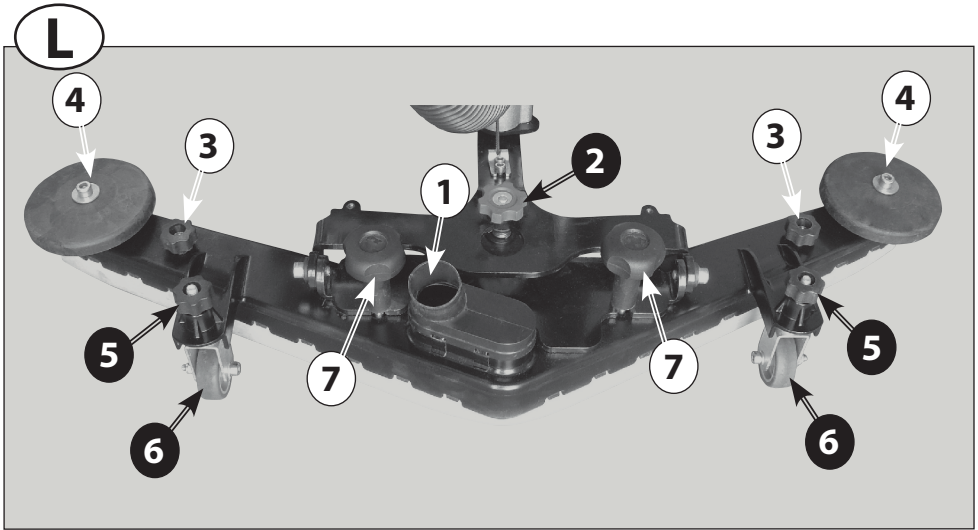
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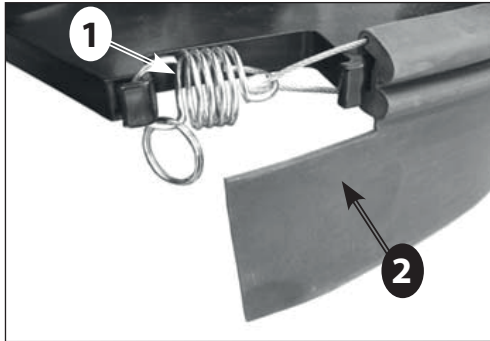
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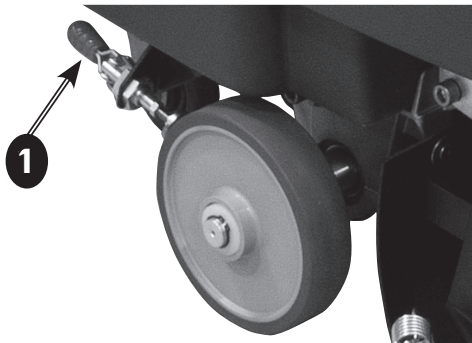
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# 1. GENERAL INFORMATION

## 1.1. SCOPE OF THE MANUAL

To make it easier to read about and look up various subjects, refer to the table of contents at the beginning of the section in your language.

This manual has been prepared by the manufacturer and is an integral part of the product. As such, it must be kept in a safe place for the machine's entire service life until demolition.

The customer must ensure that machine operators have read or are familiar with the contents of this manual so that they strictly follow the instructions described herein.

Constant compliance with the instructions provided in this manual is the only way to guarantee the best results in terms of safety, performance, efficiency and service life of the product you now own. Non-compliance with these rules may cause injuries to people and damage to the machine, the scrubbed surface and the environment: in no case can such injuries or damage be attributed to the manufacturer.

This manual refers in detail to the machine and provides instructions and descriptions only about our batteries and battery chargers (optional).

The batteries and the battery charger are basic complementary machine parts and will affect its operation in terms of running time and performances. Only the correct combination of the two accessories (batteries and battery charger) will ensure the highest possible performances and avoid wasting lots of money. For more detailed information refer to the special battery and battery charger manuals.

Our recommended battery chargers and batteries (optionals) ensure the best combination with the machine and offer outstanding versatility (battery charger) as well as the category's highest quality and performance standards.


## 1.2. TERMINOLOGY AND SYMBOL LEGEND


For the sake of clarity and to efficiently highlight the various aspects of the instructions provided, terms and symbols were used that are defined and illustrated here below:


- **Machine.** This definition replaces the commercial name to which this manual refers.

- **Operator.** 'operator' means the person or persons given the task of installing, operating, adjusting, maintaining, cleaning, repairing or transporting machinery.

- **Technician.** A technician is considered a person who has the experience, technical education, legislative and regulatory knowledge that allows him to carry out any type of required work, and the ability to recognise and to avoid possible risks during machine installation, and maintenance.

 - **INDICATION SYMBOL.** Particularly important information to avoid machine malfunctions.

 - **ATTENTION SYMBOL.** Very important information to avoid serious damage to the machine and to the environment in which it operates.

 - **DANGER SYMBOL.** Vital information to avoid serious (or extreme) consequences affecting the health of persons and causing damage to the product and the environment in which it operates.

 **Total weight (ready to operate)**

 **Max. working range incline 2%  
(Max. transporting range incline 10%)**

 **Rated power brush drive**

 **Rated power suction turbine**

## 1.3. PRODUCT IDENTIFICATION

**The nameplate located under the dashboard, above the battery connector, contains the information.**

## 1.4. SPECIFIC USE

**This appliance is suited for the commercial use, e.g. in hotels, schools, hospitals, factories, shops, offices, and rental companies.**

This machine is a floor scrubber-drier: it must be used to scrub and to vacuum liquids of flat, rigid, horizontal, smooth or moderately rough and uniform floors that are free from obstacles in both civic and industrial environments. Any other use is prohibited.

Please refer very carefully to the safety information reported in this manual.

The scrubber-drier distributes a quantity of a water and detergent solution (adjustable) on the surface to be cleaned, while the brushes remove any dirt on the ground. The machine's suction system, using a ground squeegee, perfectly dries the liquids and the dirt just removed from the front brushes in a single pass.

By efficiently combining a cleaning detergent with various types of brushes (or abrasive disks), the machine can adapt to all the various combinations of floors and dirt.

## 1.5. TECHNICAL MODIFICATIONS

The manufacturer reserves the right to make technical modifications to the product, without prior notice, in order to make the necessary technical upgrades or improvements. For this reason, some details of your machine may be different from the information in the sales catalogues or from the illustrations presented in this booklet. However, this will not reduce safety or invalidate the information supplied to this regard.

# 2. SAFETY INFORMATION

## 2.1. BASIC RECOMMENDATIONS

 **Carefully read the "instruction manual" before starting, using, performing unscheduled or routi-**

**ne maintenance or any other work on the machine.**  
**⚠ Rigorously comply with all the instructions provided in this manual and in those for the batteries and battery chargers (with particular attention to warnings and danger notices).**

The manufacturer will not be held responsible for injuries to persons or damage to property due to non-compliance with the aforementioned instructions.

⚠ This machine must be powered only with the safety extra-low voltage indicated on the technical data plate.

🔧 Before using the machine, make sure that each part is in the correct position.

⚠ The appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

⚠ Do not operate this machine for any other purpose except for the use for which it was specifically designed. Evaluate the type of building where it will be utilised and rigorously comply with the current safety regulations and conditions.

🏠 Do not use the machine in places without adequate lighting, in explosive environments, when harmful dirt is present (dust, gas, etc.), on roads or public passage ways and in outdoor environments in general.

⚠ The machine operating temperature range is +4°C to +35°C; when not being used, store the machine in a dry and non-corrosive environment within a temperature range of between +10°C and +50°C.

When using the machine under any condition the humidity must range between 30% and 95%.

🚫 **Never use or vacuum liquids, gases, dry dust, acids and solvents (e.g. paint thinners, acetone, etc.), even if diluted, inflammables or explosives (e.g. petrol, fuel oil, etc.); never vacuum flaming or incandescent objects.**

⚠ **Do not use the machine on slopes or ramps steeper than 2%;**

for small slopes, do not use the machine sideways, always handle it with caution and never move backwards. When transporting (**10% max**) the machine on steeper ramps or slopes, be very careful to avoid tipping and/or uncontrolled accelerations.

The machine can be handled on ramps and/or steps only with the brush head and squeegee lifted off the ground.

⚠ **Never park the machine on a slope.**

🔧 Never leave the machine unattended with the key in and connected; it may be left only after having disconnected it and taken the key out and guaranteeing against accidental movements and, if necessary,

disconnecting it from the electrical power supply.

🏠 Make sure there are no other persons, and children in particular, in the area where the machine is being used.

⚠ Do not use the machine to transport persons/things or to tow objects. Do not tow the machine.

🔧 Do not use the machine as a support surface for any weight for any reason.

Do not block the ventilation and heat dispersion openings.

⚠ Do not remove, modify or by-pass the safety devices.

⚠ Always use individual safety devices to ensure operator safety: aprons or safety overalls, non-slip and waterproof shoes, rubber gloves, goggles and earphones, and masks to protect the respiratory tract. Before starting to work, remove necklaces, watches, ties and other objects that may cause serious injuries.

⚠ Do not insert hands between moving parts.

🔧 Do not use detergents that differ from those required and follow the instructions indicated on the relative safety sheets. Detergents should be stored in a place that is inaccessible to children. In case of contact with the eyes, rinse immediately with copious amounts of water and, if swallowed, immediately consult a physician.

Make sure that the battery charger power sockets are connected to an efficient earthing system and that they are protected by magnetothermal and differential circuit-breakers.

⚠ Follow the battery manufacturer's instructions and comply with legal provisions. The batteries should always be clean and dry to avoid surface leakage currents. Protect the batteries against impurities, such as metallic dust.

🏠 If the machine is equipped with gel batteries it is essential to make sure the run-down indicator (located on the panel) is adjusted correctly. Contact your dealer or refer to the specific paragraph.

🏠 Do not place tools on top of the batteries: they may cause a short-circuit or an explosion.

🏠 When using battery acid, rigorously respect the relative safety instructions. In the presence of particularly strong magnetic fields, evaluate the possible effect on electronic control devices.

Never spray water on the machine to clean it.

🔧 Recovered fluids contain detergents, disinfectants, water, as well as organic and inorganic material collected during work operations: dispose of them in accordance with current legal provisions.

⚠ If the machine malfunctions and/or operates inefficiently, turn it off immediately (disconnecting it from the electric power supply or from the batteries) and do not tamper with it.

Contact one of the manufacturer's technical service centres.

🏠 All maintenance or accessory replacement operations must be carried out in environments with adequate lighting and only after having disconnected

the machine from the electric power supply by detaching the battery connector.

☞ All work on the electrical system and all maintenance and repair operations (especially those not explicitly described in this manual) should be carried out only by authorised service centres or by specialised technical personnel who are experts in the sector and in the pertinent safety regulations.

☞ The machine owner can only use original accessories and spare parts supplied exclusively by the manufacturer since such parts are the only ones that guarantee that the equipment will operate safely without any problems. Do not use parts disassembled from other machines or other kits as spare parts.

☞ Before each use, check the machine and, in particular, check that the battery charging cable and the connector are in good condition and safe for use. If they are not in perfect condition, do not use the machine for any reason until an authorised specialist repairs the defective parts.

☞ If foam or liquid is noted, immediately turn off the suction motor.

☞ Do not use the machine on textile flooring, such as rugs, carpeting, etc.

Wax, foaming detergents or dispersions along the hoses may cause serious problems for the machine or clog the hoses.

## 2.2. NOISE AND VIBRATIONS

See last page.

## 3. HANDLING INFORMATION

### 3.1. PACKING LIFTING AND TRANSPORT

⚠ During all lifting or transport operations, make sure that the packed machine is securely anchored to prevent it from tipping over or falling accidentally. Transport vehicle loading and unloading operations must be carried out with adequate lighting.

The packed machine must be handled using adequate devices, making sure not to damage/strike any part of the packing, not to tip it over and to be very careful when placing it on the ground.

☞ All these instructions also apply to the batteries and the battery charger.

### 3.2. CHECKS UPON DELIVERY

☞ When the goods are delivered (machine, battery or battery charger) by the transporter, carefully check the condition of the packing and its contents. If the contents have been damaged, notify the transporter and reserve the right, in writing (select the word "reserve" on the document), to submit a claim for compensation before accepting the goods.

### 3.3. UNPACKING

⚠ Wear safety clothing and use adequate tools to limit the risks of accidents.

Carry out the following steps if the machine is packed with a cardboard housing:

- Use scissors or clippers to cut and eliminate the plastic straps.

- Slip off the cardboard housing from the top of the packed machine.

- Remove the envelopes inside and check their contents (use and maintenance manual, battery charger connector)

- Remove the metallic brackets or plastic straps that secure the machine to the pallet.

- Release the brushes and the squeegee from the packing.

- Take the machine off the pallet (pushing it backward) by using an inclined surface that is solidly attached to the floor and to the pallet.

Take the same precautions and follow the same instructions to remove the optional battery charger from the packing (holding the special handles to extract it from the top of the packing) and the optional battery.

After moving the machine away from all the packing, start mounting the accessories and the batteries as per the instructions provided in the specific section.

Keep all the pieces of the packing since they might be useful in the future to protect the machine and the accessories during transport to another location or to authorised service centres. If not, the packing can be disposed in accordance with current disposal laws.

### 3.4. LIFTING AND TRANSPORT: MACHINE, BATTERY AND BATTERY CHARGER

⚠ Never use a forklift truck to lift the machine. There are no places on the frame that can be used to lift the machine directly.

Before preparing the packing and transporting the machine:

- Empty the recovery tank and the detergent solution tank.

- Disassemble the squeegee and the brushes or scrapers.

- Disconnect and remove the batteries. Place the machine on the original pallet (or an equivalent one that can bear the weight and is big enough for the machine's overall dimensions) using an inclined surface.

Solidly anchor the machine and the squeegee to the pallet using metallic brackets or other elements that can bear the weight of the parts.

Lift the pallet with the machine and load it on the transport vehicle.

Secure the machine and the pallet using ropes connected to the transport vehicle.

As an alternative, when using private transport vehicles, use inclined ramps to push the machine without the pallet, making sure to protect all parts and the machine itself against violent impacts, humidity,

vibrations and accidental movements during transport.

The battery boxes have holes where tools can be hooked for handling.

☞ To lift or insert the battery (into the machine compartment), use only suitable personnel and equipment (cables, eyehooks, etc.) for the operation and to bear the weight of the loads involved. When transporting, take the same precautions and follow the same instructions provided for the machine together with those in the special manufacturer's manual. The battery charger can be transported on its supports, both vertically and horizontally. Take the same precautions and follow the same instructions provided for the machine together with those in the special manufacturer's manual.

## 4. TECHNICAL INFORMATION

### 4.1. GENERAL DESCRIPTION

#### 4.1.1. MACHINE

We can summarise the machine's main features as follows:

- The form of the squeegee, the air flows and the specially designed rubber blades produce excellent drying results even on tiled floors. Thanks to the particular balanced shape of the machine frame and the squeegee support, no water residues are left behind in a curve, and even when a smaller squeegee is used. Excellent distribution of weights and dimensions thanks also to the heavy weight of the brush plate and batteries in the centre of the machine.

- A heavy weight on the brushes makes them work efficiently on the floor. The pressure is generated by the weight of the plate, without springs or additional devices that lead to difficulties and inaccuracy. The entire mass is generated by the hanging weight of a 15 mm steel ship's plate.

- A large volume of water in the tanks reduces dead time since fewer trips are needed to collect water and dump dirt. There is no delicate flexible diaphragm that, at a technical level, is difficult to clean.

- The dirty water tank leaves several litres for decanting any foam

- Robust construction. The frame and squeegee are made in extra thick plate and aluminium 6 mm, 8 mm, 10 mm up to 20 mm – are laser cut and welded. The brush plate is made from 15 mm ship's sheet metal, with a surface treatment that protects the plate and the paint for thousands of hours in a saline fog. All screws are made with stainless steel; the tanks (body) are made with 7-8 mm thick shockproof polyethylene. Everything is simple and very strong, without any other complicated designs.

- The battery compartment can house very large batteries, which guarantees extended running time.

- The suction motor is housed inside the machine, thus reducing operating noise to a minimum.

- The recovery tank is very easy to clean due to the lack of the characteristic difficult access points of recovery tanks located in a lower position.

#### 4.1.2. BATTERY

Regardless of the type of construction, battery performances are indicated with the term capacity, which always refers to a discharge period. Another important value is the number of possible discharges. The capacity is expressed in amps per hour (Ah), while the discharge period is generally indicated as 20 hours (C20 or 20h, or not expressly indicated) or 5 hours (C5 or 5h). The discharge/charge cycles indicate the number of times that the battery can hold a charge under the best conditions, i.e. they indicate the useful battery service life complying with all the necessary measures.

Therefore, the capacity of a battery varies depending on how fast it uses energy (current). That's why there's such a variation in the capacity values expressed as C5 or C20. These factors must be taken into account when comparing products available on the market with our own.

This machine can be equipped with two types of batteries that differ in terms of their construction and features.

- Pb-Acid battery with tubular armoured modules: the electrolyte level in each element must be periodically checked!

**⚠ If one element is no longer covered by the acid solution it will oxidise in 24 hours, thus permanently affecting that element's performance.**

☞ Refer to the battery manual to avoid physical damage and economic loss.

- Gel module battery: this type of battery is maintenance free and does not require special environments for recharging (since it does not emit any harmful gases); therefore, it is highly recommended.

**⚠ It should not be taken for granted that batteries and battery chargers with the same technical features as those we offer will produce the same results. Only perfect compatibility between these elements (Pb-Acid batteries, gel batteries and battery chargers) will safeguard the performances, the service life, the safety and the economic value invested.**

#### 4.1.3. BATTERY CHARGER

This type of high-frequency battery charger efficiently charges batteries, extending their operating and service life. In addition, because they can be configured it is a very versatile solution that reduces the number of chargers required in the warehouse. The same battery charger can be used for both Pb-Acid batteries and for gel batteries.

The information indicated on the digital display can be used to always keep the charging process, the bat-

tery and the battery charger under control (read the specific manual for more details).

**⚠ It should not be taken for granted that batteries and battery chargers with the same technical features as those we offer will produce the same results. Only perfect compatibility between these elements (Pb-Acid batteries, gel batteries and battery chargers) will safeguard the performances, the service life, the safety and the economic value invested.**

Refer to the relevant manufacturer's manual provided.

## 4.2. STRUCTURE AND FUNCTIONS

### 4.2.1. MACHINE

#### PHOTO A

- 1 BATTERY COMPARTMENT HOOD
- 2 RECOVERY WATER TANK
- 3 SOLUTION WATER TANK PLUG
- 4 SOLUTION WATER TANK
- 5 BRUSH MOTOR PROTECTIVE COVER
- 6 SPLASH GUARD
- 7 FRONT RIGHT BUMPER WHEEL
- 8 MACHINE RIGHT WHEEL

#### PHOTO B

- 1 CONTROL PANEL
- 2 GENERAL ON / OFF KEY SWITCH
- 3 SOLUTION WATER OUTLET ADJUSTING LEVER
- 4 RECOVERY TANK DRAIN HOSE
- 5 SOLUTION WATER TANK DRAIN PLUG
- 6 BRUSH PLATE LIFT/LOWER PEDAL
- 7 RECOVERY TANK INSPECTION PLUG
- 8 SQUEEGEE LIFT/LOWER LEVER
- 9 BATTERY CHARGER CONNECTOR
- 10 FORWARD/REVERSE TRACTION LEVER

#### PHOTO C DC 24V MODEL WITH TRACTION

- 1 FORWARD/REVERSE LED INDICATORS
- 2 PUSH SWITCH FOR THE ADJUSTING OF DRIVING SPEED
- 3 DRIVING SPEED LED INDICATORS
- 4 BRUSH MOTOR SWITCH
- 5 SUCTION MOTOR SWITCH
- 6 BATTERY POWER TEST

#### PHOTO D DC 24V MODEL WITH TRACTION

- 1 GENERAL ON / OFF KEY SWITCH
- 2 FORWARD/REVERSE TRACTION LEVER
- 2A FORWARD DRIVE
- 2B REVERSE DRIVE
- 3 HOUR METER
- 4 BRUSH MOTOR THERMAL BREAKER
- 5 TRACTION MOTOR THERMAL BREAKER
- 6 SOLUTION WATER OUTLET ADJUSTING LEVER

- 7 RECOVERY TANK DRAIN HOSE
- 8 BATTERY CHARGER CONNECTOR
- SQUEEGEE LIFT/LOWER LEVER

#### PHOTO E DC 24V MODEL WITHOUT TRACTION

- 1 BRUSH MOTOR SWITCH
- 2 SUCTION MOTOR SWITCH
- 3 BATTERY POWER TEST

#### PHOTO F AC 230V MODEL

- 1 GENERAL ON/OFF SWITCH
- 2 BRUSH MOTOR SWITCH
- 3 SUCTION MOTOR SWITCH

#### PHOTO G DC 24V MODEL

- 1 SUCTION COMPARTMENT HOOD
- 2 BATTERY COMPARTMENT WITH 12V BATTERIES
- 3 BATTERY COMPARTMENT HOOD

#### PHOTO H DC 24V MODEL

- 1 SUCTION FILTER
- 2 VACUUM MOTOR COMPARTMENT

#### PHOTO I DC 24V MODEL

BATTERY CONNECTION DIAGRAM

#### PHOTO L

- 1 SUCTION HOSE CONNECTOR
- 2 SQUEEGEE INCLINATION ADJUSTING KNOB
- 3 SQUEEGEE BLADES REPLACEMENT KNOB
- 4 SQUEEGEE BUMPER WHEEL
- 5 SQUEEGEE PRESSURE ADJUSTING KNOB
- 6 SQUEEGEE WHEEL
- 7 SQUEEGEE FIXING KNOB

#### PHOTO M

- 1 SPLASH GUARD FIXING SPRING CLIP
- 2 SPLASH GUARD

#### PHOTO M

- 1 BRAKE LEVER

### 4.2.2. BATTERY

If supplied, the Pb-Acid (if not dry charged) or gel batteries are ready to be installed:

Positive pole - red

Negative pole - black

### 4.3. ACCESSORIES


Your machine supplier can provide a complete and updated list of all available accessories, such as brushes, scrapers, disks, etc.

## 5. INSTALLATION INFORMATION


### 5.1. BATTERY PREPARATION

**⚠** The technical features of the batteries used must


match those indicated in the technical features section. Using different batteries may cause serious damage to the machine or may require them to be charged more frequently.

 During installation or when performing any type of battery maintenance, the operator must be equipped with adequate safety accessories to prevent accidents. Work far from open flames, do not short-circuit the battery poles, do not generate sparks and do not smoke. The batteries are normally supplied full of acid solution (for the Pb-Acid type) and ready for use. In any case, follow the steps indicated in the manual supplied with the battery and carefully follow the instructions regarding safety and operating procedures.


## 5.2. BATTERY INSTALLATION AND PREPARATION

 These operations must be carried out by specialised personnel.

Disconnect the Anderson connector of the battery wiring from the Anderson connector of the machine wiring. Always hold the connectors with the hands and never pull on the cables.

 **Attach the battery wiring to the battery, connecting the terminals only on the poles marked with the same symbol (red wiring "+", black wiring "-")! A battery short-circuit may cause an explosion!**


After checking that all the controls on the panel are in position "0" or at rest, connect the battery connector to the machine connector.

 Close the battery compartment making sure not to crush any wires.

### 5.2.1. CIRCUIT BOARD SETTINGS CONFIGURATION


The machine is equipped to GEL battery circuit board configured. If the operator wishes to use a Pb-Acid battery, it is necessary to set the electronic circuit board as follows:

#### Model "B" (DC 24V)

 TO ENTER THE BATTERY THRESHOLD CONFIGURATION MODE:

1) Press simultaneously the push buttons "BRUSH MOTOR SWITCH" (Photo E - 1) and "SUCTION MOTOR SWITCH" (Photo E - 2) within 2 seconds after switching on the machine with the key switch (Photo D - 1). The three LED of the battery power test (Photo E - 3) will be ON.

2) Press "SUCTION MOTOR SWITCH" (Photo E - 2) key within 5 seconds from the previous action; you have now entered in the configuration mode: the green and yellow LED of the battery power test (Photo E - 3) will be ON.

 CONFIGURATION SETTINGS ARE DISPLAYED ON THE BRUSH LED (Photo E - 1) and on the SUCTION LED (Photo E - 2):

#### Gel:

BRUSH LED (Photo E - 1) on.  
SUCTION LED (Photo E - 2) off.

#### Pb-Acid:

BRUSH LED (Photo E - 1) off.  
SUCTION LED (Photo E - 2) off.

#### Li-Lithium:

BRUSH LED (Photo E - 1) off.  
SUCTION LED (Photo E - 2) on.

 TO MODIFY CONFIGURATION SETTINGS:

Press the "BRUSH MOTOR SWITCH" (Photo E - 1)


 TO SAVE THE SETTINGS AND EXIT THE MODE:

Press the "SUCTION MOTOR SWITCH" (Photo E - 2)

Once the settings have been set, we have different battery discharge levels with differentiated intervention on the machine functions as specified in the following table:

Battery discharge indicator and functions - Model "B" (DC 24V)					
Volts Battery Type			Battery power test indicator LED	Brush operation indicator LED	
Pb-Acid	GEL	Li	Signaling	Signaling	Action
24,0	24,0	>25,4	Green LED ON	LED ON	All working
21,5	22,5	>23,5	Yellow LED ON	LED ON	All working
20,5	21,5	>22,6	Red LED ON	LED FLASHING	Brush motor is not working
20,0	21,0	<22,6	Red LED FLASHING	LED FLASHING	Brush and suction motors are not working

#### Model "BT" (DC 24V with traction)

 TO ENTER THE BATTERY THRESHOLD CONFIGURATION MODE:

1) Press simultaneously the push buttons "REDUCE SPEED" (Photo C - 2-) and "SUCTION MOTOR SWITCH" (Photo C - 5) within 2 seconds after switching on the machine with the key switch (Photo D - 1). The second LED of the speed indicator (Photo C - 3B) will be ON.  
2) Press "INCREASE SPEED" (Photo C - 2+) key within 5

seconds from the previous action; you have now entered in the configuration mode.

△ THE CONFIGURATION SETTINGS ARE VISIBLE ON THE SPEED INDICATOR LED:

- 1) The first two LEDs (Photo C - 3A, 3B) indicate the type of setting of the indicator intervention threshold and both must be ON;
- 2) The third and fourth LEDs (Photo C - 3C, 3D) indicate the battery type: for the Pb-Acid battery only the third LED (Photo C - 3C) should be ON, while for the GEL battery both should be ON (Photo C - 3C, 3D)

- 3) To select Li batteries, press the "BRUSH ON" button (Photo C - 4) for 2 seconds together with the "SUCTION ON" button (Photo C - 5) until the third LED (Photo C - 2-C) and the fourth LED (Photo C - 3D) switch off.

△ TO MODIFY CONFIGURATION SETTINGS:

- 1) The "INCREASE SPEED" (Photo C - 2+) and "REDUCE SPEED" (Photo C - 2-) keys are used to set the indicator's intervention threshold in such a way that the first two speed indicators LEDs turn ON;
- 2) The "BRUSH MOTOR SWITCH" (Photo C - 4) is used to set the Pb-Acid battery type while the "SUCTION MOTOR SWITCH" (Photo C - 5) is used to set the GEL battery type

△ TO SAVE THE SETTINGS AND EXIT THE MODE:

Press the "REDUCE SPEED" (Photo C - 2-) switch and the "SUCTION MOTOR SWITCH" (Photo C - 5) simultaneously.

Once the settings have been set, we have different battery discharge levels with differentiated intervention on the machine functions as specified in the following table:

Battery discharge indicator and functions - MODEL "BT" (DC 24V with traction)					
Volts Battery Type			Battery power test indicator LED	Brush operation indicator LED	
Pb-Acid	GEL	Li	Signaling	Signaling	Action
24,0	24,0	>25,4	Green LED ON	LED ON	All working
21,5	22,5	>23,5	Yellow LED ON	LED ON	All working
20,5	21,5	>22,6	Red LED ON	LED FLASHING	Brush motor is not work- ing

Battery discharge indicator and functions - MODEL "BT" (DC 24V with traction)					
Volts Battery Type			Battery power test indicator LED	Brush operation indicator LED	
20,0	21,0	<22,6	Red LED FLASHING	LED FLASHING	Brush and suction motors are not working

If you do not complete the configuration procedure, the settings remain as they were originally.

△ We recommend to call the assistance centre or a technician if you have problems with the settings given. Do not open or tamper the electronic board.

### 5.3. BATTERY CHARGER CONFIGURATION

The machine is equipped with a battery charger configured for GEL batteries

To change the battery charger settings read the manual provided by the battery charger manufacturer.

If the machine is supplied with a battery and a charger, the setting of the machine and the charger is carried out by the manufacturer.

In the event of changes to the equipment, i.e. the type of battery and charger, we always recommend that you contact your authorised service centre both for the machine setting and the setting of the charger's charging curve.

As a general rule, the following criteria apply:

**For Pb-acid and GEL batteries:**

charging current of approx. 10-12% of the capacity in Ah-C20

**For lithium batteries:**

current of approx. 40% of the capacity in Ah

**Failure to comply may result in serious damage to the battery and warranty invalidation.**

### 5.4. MACHINE PREPARATION

△ Before starting to work, wear non-slip shoes, gloves and any other personal protection device indicated by the supplier of the detergent used or considered necessary based on the operating environment.


☞ Do the following before starting to work. Refer to the relative sections for a detailed description of these steps:

check the battery charge level and charge, if necessary. Mount the brushes or scraper disks (with the abrasive disks) that are suitable for the surface and work involved.

Mount the squeegee, check that it is solidly attached and connected to the suction hose and that the drying blades are not too worn.

Make sure that the recovery tank is empty. If not, empty it completely. Check and completely close the detergent solution release control.

Fill the detergent solution tank with a mix of clean water and non-foaming detergent in an adequate concentration through the anterior hole. Leave 2 cm between the mouth of the plug and the level of the liquid.

 To avoid risks, become familiar with the machine movements, carrying out test runs on a large surface without obstacles.

To obtain the best results in terms of cleaning and equipment service life, you should do the following simple but important operations:

- Identify the work area, moving all possible obstacles out of the way; if the surface is very extensive, work in contiguous and parallel rectangular areas.


- Choose a straight work trajectory and begin working from the farthest area to avoid passing over areas that have already been cleaned.

## 6. OPERATING INFORMATION

### 6.1. BATTERY CHARGING


Prepare and check the battery charge according to the instructions provided in the specific section.

Detach the battery connector from the machine power connector (the one with the gripping fins) and connect the battery connector to the battery charger connector.

 Do not connect the battery charger to the scrubber-drier's main wiring connector.

Hold the connectors with the hands; do not pull them using the cables.

If the machine is equipped with **Pb-Acid batteries**, charge only in a well-ventilated area, lift the superior cover and open the battery plugs.

 Follow the steps indicated in the battery manufacturer's operating and safety manual (see the battery maintenance section).

If the machine is equipped with **gel batteries** (maintenance free), follow the instructions indicated here below. If the machine is used regularly:

Always keep the batteries connected to the battery charger when the machine is not being used.

If the machine is not used for extended time periods: Charge the battery during the night after the last work period, then disconnect the battery from the battery charger.

Charge the battery during the night before using the machine again.

Intermediate or incomplete charging while working should be avoided.

If the machine is equipped with Pb-Acid batteries, use a hydrometer to check the element liquid intensity on a regular basis: if one or more elements are discharged and the others fully charged, the battery has been damaged and should be replaced or repaired

(refer to the battery service manual).

Close the element plugs and lower the superior cover. Hold the connectors with the hands; don't pull them using the cables.

Reconnect the machine connectors.

### 6.2. SQUEEGEE AND SPLASH GUARD ASSEMBLY, DISASSEMBLY AND ADJUSTMENT

The squeegee is the main component that ensures perfect drying.

#### 6.2.1. SQUEEGEE ASSEMBLY

Slightly screw the two knobs ( Photo L - 7 ) into the squeegee body and insert the squeegee into the slots situated on the squeegee support.

Screw the two knobs ( Photo L - 7 ) in order to secure the squeegee to the support.

Firmly insert the suction hose ( Photo L - 1 ) into the pipe in the squeegee body.

#### 6.2.2. SQUEEGEE DISASSEMBLY

Disconnect the suction hose from the squeegee body.

Unscrew the two knobs ( Photo L - 7 ) that secure the squeegee to its support and pull the squeegee to free it.

#### 6.2.3. SQUEEGEE BLADES DISASSEMBLY / ASSEMBLY

Disassemble the squeegee from its support (see 7.2.2) Unscrew the knobs ( Photo L - 7 ) ( Photo L - 3 ) placed on the squeegee body and apply some pressure on their bolts in order to push out the plastic support of the squeegee blades from the squeegee body.

Tear off the rubber blades from the plastic support. Assemble the new blades on the plastic support by the means of the plastic pins that have to be fixed in the holes placed the blades.

Push the plastic support of the squeegee blades into the squeegee body and screw the knobs ( Photo L - 7 ) to secure it to the squeegee body.

Reassemble the squeegee to its support (see 7.2.1).

#### 6.2.4. SQUEEGEE ADJUSTMENT

The knob screw on the squeegee support ( Photo L - 2 ) adjusts the squeegee's inclination with respect to the floor. The two red knobs on the sides, connected to the rear wheels of the squeegee ( Photo L - 5 ) are to adjust the pressure of the squeegee to the floor.

When the squeegee is perfectly adjusted, the rear squeegee blade, sliding as it moves, bends in all points forming an angle of 45° with the floor.

As the machine operates (advances), the knobs ( Photo L - 2 ) ( Photo L - 5 ) can be used to adjust the inclination and pressure of the squeegee blades on the floor.

Squeegee drying must be uniform along the entire drying line: damp patches mean that drying is insuffi-

cient; turn the adjustment knobs to optimize drying.

### 6.2.5. SPLASH GUARD ASSEMBLY/ DISASSEMBLY

The splash guard is assembled to the brush plate with a spring holder linked to the brush plate itself ( Photo M - 1 ).

To disassemble the splash guard simply detach the spring holder and pull the splash guard.

To reassemble, fix the splash guard in the brush plate, and then hook the steel cable to one side of the plate and the spring holder to the other side of the brush plate.

### 6.3. BRUSH ASSEMBLY / DISASSEMBLY

⚠ Never use the machine if brushes or scrapers and abrasive disks are not perfectly installed.

Assembly:

Make sure that the brush plate is raised; otherwise lift it by following the instructions provided in the specific section.

Make sure that the ignition key on the control panel is in position "0".

Bring the brushes (or the guide disks equipped with abrasive disks) near the connections, under the brush plate; lower the washing plate and start the brushes turning: the brushes/discs couple automatically;

⚠ Do not allow the length of the rows of brushes to become lower than 1 cm.

⚠ Do not allow the thickness of the abrasive disks to become less than 1 cm.

Working with excessively worn brushes or excessively thin abrasive disks may damage the machine and the floor.

Regularly check the wear on these parts before starting to work.

Disassembly or replacement:

Make sure that the brush plate is raised; otherwise lift it by following the instructions provided in the specific section.

Make sure that the ignition key on the control panel is in position "0".

While holding the brushes (or the guide disks) with the hands under the plate, turn them in the rotation direction while lowering to release them from the guide plate.

### 6.4. FILLING AND DRAINING THE DETERGENT SOLUTION TANK

⚠ **The temperature of the water or the detergent should never exceed 50°C.**

• Always empty the detergent solution tank before filling it up.

To fill:

- Remove the plug in the front of the machine .
- Leave 2 cm between the mouth of the plug and the liquid level. Do not fill beyond this point!
- Add the required quantity of the chemical product,

considering the percentage indicated by the supplier, with reference to the full tank capacity listed on the product sheet.

• Use only those products suitable for the floor and the dirt to be removed.

⚠ The machine was designed to be used with non-foaming and biodegradable detergents made specifically for scrubber-driers. The use of other chemical products (such as sodium hypochlorite, oxidisers, solvents or hydrocarbons) may damage or destroy the machine.

• Follow the safety regulations specified in the relative section and indicated on the detergent container.

• Contact the machine manufacturer to obtain a complete list of available and suitable detergents.

⚠ Always add the detergent after filling the tank with water to prevent foam from being created inside.

• Do not leave the water hose unattended and insert it completely into the tank: the hose might move and get sensitive parts of the machine wet.

Close the tank with its plug...

To drain:

- Unscrew the cock.
- Close the drainage plug firmly.

### 6.5. DRAINING THE RECOVERY TANK

The dirty water must be drained in accordance with national regulations.

The user is completely responsible for ensuring compliance with such rules.

After the detergent solution is finished, always empty the recovery tank before filling it again.

In general, the recovery tank can be emptied whenever required, and even during intermediate phases of the work cycle.

The recovery tank volume is higher than the detergent solution volume, therefore a potentially dangerous situation for the suction motor should never occur. In any case, a safety float turns off the suction motor if the dirty liquid level is too high.

⚠ If water or foam starts leaking from under the tanks for any reason, immediately turn off the suction motor and empty the recovery tank.

To drain the tank:

Drive the machine to a suitable location to drain the dirty water and preferably near a toilet or a sewer drain (comply with the national regulations for waste water disposal).

Turn off the machine and remove the key from the panel.

Detach the drain hose from the hook and, keeping it high, unscrew the plug.

Lower the drain hose toward the selected drainage point.

The emptying operation can be interrupted quickly and whenever required just by raising the drain hose.

Check how much dirt is still in the tank and, if neces-

sary, wash it inside through the inspection hole by unscrewing the rear window .  
Fully tighten the drain hose with the screw plug and hang it on the support behind the machine. The drain hose plug must be airtight, otherwise the subsequent pressure loss will reduce drying efficiency.

## **6.6. DRIVING THE MACHINE**

Check connection between the power and battery connectors, located under the control panel.

Put the ignition key in and turn it.

Check battery charge status via the control unit and, if sufficient, select the running speed wanted, operate the brush control key and the suction control key. Now open the solution cock by lowering the detergent dosage lever which is at the back of the machine, lower the suction unit by lowering the squeegee control level, lower the washing unit, levering with your foot on the brush plate control lever.

Move forwards, pulling the forward lever up . Remember to lift the floor cleaner before reversing to avoid damaging it.

## **6.7. WORK METHOD**

### **6.7.1. PREPARATION AND WARNINGS**

Remove any loose solid residue from the surface to be treated (using suitable tools, such as vacuum cleaners, sweepers, etc.). If this is not done, the solid dirt might prevent the squeegee from operating correctly, reducing drying efficiency.

This machine can driven only by trained personnel.

### **6.7.2. OPERATING CONTROLS**

• Battery charge control: the sequence of lights progressively turns off until the battery is discharged . When the red light turns on, turn off the brush motor, close the solution supply, finish drying the small residual moisture and go to the battery charging area to charge the battery.

⚠ The batteries may be irreparably damaged if the residual charge level drops too low (see the battery operating manual). Do not force the battery discharge beyond the safety limits, turning the key off and on or in any other manner.

⚠ When an abnormal situation occurs, such as when the machine doesn't have enough power and the safety devices don't trip, stop immediately: follow the instructions in the troubleshooting section and contact a specialised worker to check the discharge control devices.

### **6.7.3. DIRECT SCRUBBING OR FOR SLIGHTLY DIRTY SURFACES**

Scrubbing and drying in a single pass.

Prepare the machine as previously described.

Check connection between the power and battery connectors, located under the control panel.

Put the ignition key in and turn it.

Check battery charge status via the control unit and, if sufficient, select the running speed wanted, operate the brush control key and the suction control key. Now open the solution cock by lowering the detergent dosage lever which is at the back of the machine, lower the suction unit by lowering the squeegee control level, lower the washing unit, levering with your foot on the brush plate control lever .

Move forwards, pulling the forward lever up or push it down to reverse . Remember to lift the floor cleaner before reversing to avoid damaging it.

Never use the machine without the detergent solution: the floor might be damaged.

### **6.7.4. INDIRECT SCRUBBING OR FOR VERY DIRTY SURFACES**

Scrubbing and drying in various passes.

Prepare the machine as previously described.

First set of operations:

Check the connection between the power and battery connector, located under the control panel.

Put the ignition key in and turn it.

Check battery charge status via the control unit and, if sufficient, operate the brush control key. Now open the solution cock by lowering the detergent dosage lever which is at the back of the machine, lower the brushing unit by levering with your foot on the brush plate control lever. Move forwards, pulling the forward lever up .

**Allow the detergent solution to work on the dirt according to what is indicated in the information relative to the detergent used.**

Second set of operations:

Proceed as explained in the previous "Direct Washing" paragraph (7.7.3) to also proceed with drying the floor.

Never use the machine without the detergent solution: the floor might be damaged.

### **6.7.5. POST-SCRUBBING OPERATIONS**

Cut off the supply of detergent.

Lift the brush unit and turn off the brush motor.

After having completely dried any traces of water on the surface, wait a few seconds and then lift the squeegee and turn off the suction motor.

Move to a suitable location to drain the tanks (as described in 7.4 and 7.5).


Empty and clean the tanks (see sections 7.4 and 7.5). Turn off the machine using the key and remove it from the control panel.


If necessary, charge the battery (see the relative section).

## **6.8. SPECIFIC INSTRUCTIONS FOR THE USE OF POWER MAINS AC 230V MODEL**

The power mains AC 230V machine may be turned on only if the voltage indicated on the tag corresponds

with the available voltage and that the electrical outlet is grounded (earthed).  
Do not damage the feed cable; do not crush or pull on it.

 **ATTENTION** Make sure that the power cable does not come into contact with the rotary brushes.

 **ATTENTION !!! - The power mains AC 230V machine has parts, which are connected to the current; contact with these could cause grave injuries or even death.**

- Before executing any type of operation on the machine always disconnect it from the electrical source.
- Never touch electric cables that are defective or worn.
- Before gaining access to the electrical system it is always necessary to disconnect the machine from the electrical source by removing the plug from the socket-outlet.
- In the case of defective, damaged, or cracked electric cables, replace immediately with authentic replacement parts.

ment parts.  
- The network of connections must be protected from water spray.

**- The patch cord for the connection of the machine to the mains power must conform to current safety rules.**

- The electrical system to which the machine is connected must be equipped with a cutout box.
- It is absolutely forbidden to use the machine in proximity to swimming pools or stretches of water.

 **EMERGENCY SITUATIONS**

**In case of emergency:**


**- Immediately disconnect the machine from the power mains.**


**- Immediately apply proper first-aid.**

If an accident should occur the machine must not be put into operation until a technician authorized by the manufacturer has examined it.

**7. MAINTENANCE INFORMATIONS**

	When needed	After every use	Weekly	Monthly
Remove and wash the squeegee		X		
Drain the recovery tank	X			
Drain, rinse with clean water or sanitize the recovery tank		X		
Charge the batteries	X	X		
Check the acid level in the battery cells (if batteries are not maintenance-free)		X		
Check the wear of the squeegee rubber blades		X		
Open and clean the suction filter		X		
Remove brushes and check for brush wear, foreign bodies and wrapped belts		X		
Verify the machine general conditions.		X		
Open and clean the solution water filter			X	
Verify that suction hose and conduct are free from obstructions			X	
Check and clean the pivoting wheels			X	
Check wear and function of traction drive belt or chain; if necessary, adjust belt or chain tension			X	
Clean the brush plate, squeegee support and squeegee				X
Check the lifting/lowering of the brush plate.				X
Check the lifting/lowering of the squeegee.				X
Grease the moving parts.				X
Check the control cable for the opening of the solution water tap.				X
Descale water hoses.				X

 Turn the key, remove it from the control panel and disconnect the battery from the machine wiring.

 All work on the electrical system as well as all maintenance and repair operations (especially those not explicitly described in this manual) should be carried out only by authorised service centres or by specialised technical personnel who are experts in the sector and in the pertinent safety regulations.

Performing regular maintenance on the machine, and carefully following the manufacturer's instructions, is the best guarantee for obtaining the best performances and extended machine service life.

### 7.1. TANKS

Drain the two tanks as described in the relative sections.

Remove any solid dirt by filling and draining the tanks until all dirt has been eliminated: use a washing hose or similar tool to do this.

**⚠ Water hotter than 50°, a high-pressure cleaner or excessively powerful sprays may damage the tanks and the machine.**

Leave the plugs of the tanks open (only while the machine is not being used) so that they can dry and thus prevent the formation of foul odours.

### 7.2. SUCTION HOSE

Detach the suction hose from the squeegee.

Now you can wash the hose and remove any obstructions.

Firmly insert the hose on the squeegee body.

### 7.3. SQUEEGEE

**⚠** Do not handle the squeegee with bare hands: wear gloves and any safety clothing needed to carry out the operation.

Detach the squeegee from the machine and clean it under running water using a sponge or a brush.

Check the efficiency and the wear on the strips in contact with the floor. They are designed to scrape the film of detergent and water on the floor and to isolate that portion of the surface to enhance the vacuum of the suction motor: this ensures that the machine will dry very efficiently. Working constantly in this manner tends to round or to deteriorate the sharp edge of the strip, thus reducing drying efficiently. This is why the squeegee strips must be replaced. To replace the worn blades, follow the instructions in the relative section. Turn the blades around to wear down the other sharp corners or to install new ones.

### 7.4. ACCESSORIES

Remove and clean the brushes or the scraper disks.

**⚠** To avoid damaging the floor and the machine, carefully check if foreign matter, such as metallic parts, screws, chips, cords or similar items, has become jammed.

Check that the brushes are flat as they work on the

surface (check for any irregular wear on the brushes or on the abrasive disks). If necessary, adjust the slant of the action on the floor.

Use only the accessories recommended by the manufacturer: other products may reduce operating safety.

### 7.5. MACHINE BODY

Use a sponge or a soft cloth to clean the exterior of the machine and, if necessary, a soft brush to eliminate tough dirt. The machine's shockproof surface is rough to make it harder to see scratches caused during use. However, this does not make it easier to remove tough stains on the surface. Steam machines can be used but it's prohibited to use hoses with running water or a high-pressure cleaner.

### 7.6. BATTERIES

#### PB-ACID

Carry out maintenance operations in accordance with the manufacturer's instructions and with all the other instructions provided in this manual.

Exposing the element plates (not completely immersed in the acid solution) will lead to rapid oxidation and irreparably reduce the element's operating capacities.

An overflowing acid solution may corrode the machine. Use battery chargers recommended by the manufacturer and, in any case, those that are suitable for the type of battery to be charged.


Always charge batteries in well-ventilated rooms: there is an explosion risk!

The use of gel or maintenance-free batteries is highly recommended.

#### GEL

Carry out maintenance operations in accordance with the manufacturer's instructions and with all the other instructions provided in this manual.

Use only those battery chargers recommended by the manufacturer.

** If the batteries are not used, in either case, for an extended period of time, disconnect them and restore the charge within the time limits specified for the type of battery used (generally and as a precaution, no more than 3 months for Pb-acid/GEL/AGM batteries, 6 months for Li-ion batteries).**

**The manufacturer accepts no liability for damage to batteries caused by failure to follow this procedure.**

### 7.7. FUSES AND THERMAL BREAKERS

The machine is equipped with electric protection devices on the main operating components to avoid costly malfunctions.

Thermal cutouts are installed to protect the drive motor wherever foreseen and the brush motor.

When one of these breakers trips automatically, the disabled function can be reactivated by fully depres-

sing the breaker that tripped.

When the thermal breakers trip, especially when the machine is used during the first few weeks, it might not be caused by actual machine malfunctions. However, a specialised technician should check the device if the relative breaker continues to trip.

## **7.8. PERIODIC MAINTENANCE**

For all the operations described herein, refer to the instructions and detailed warnings in the relative sections.

## **7.9. RECOMMENDED SPARE PARTS**

You'll always be able to use your machine as efficiently as possible by maintaining a stock of the most common consumable materials and by scheduling routine and extraordinary maintenance. Contact your dealer for a list of these spare parts.

## **8. OPERATING CHECKS**

### **8.1. THE MACHINE DOESN'T WORK**

- ⊗ The key isn't inserted or correctly turned.
- ☺ Insert and turn the key to position "1".
- ⊗ The battery connector is disconnected or poorly attached to the main wiring connector.
- ☺ Firmly connect the two connectors.
- ⊗ The machine is charging.
- ☺ Complete the charging operation.
- ⊗ The batteries are dead.
- ☺ Charge the batteries.

### **8.2. THE MACHINE DOESN'T MOVE FORWARD**

- ⊗ The direction selection lever is in the neutral position.
- ☺ Select a running direction.
- ⊗ The floor slope is too steep.
- ☺ Manually push the machine to the new level.
- ⊗ The parking brake is applied
- ☺ Disengage the parking brake lever.
- ⊗ The thermal breaker of the drive motor is tripped.
- ☺ Stop the machine, allow it to remain inactive for 5 minutes, replace the fuses.
- ⊗ The batteries are dead.
- ☺ Charge the batteries.

### **8.3. THE BRUSHES DON'T ROTATE**

- ⊗ The brush motor switch is not selected.
- ☺ Press the button to activate the brushes.
- ⊗ The brush motor thermal breaker tripped; the motor overheated.
- ☺ Troubleshoot the cause (cords or similar items that impede movement, surface too rough, etc.) and press the reset breaker (the first from the top).
- ⊗ The transmission belt is broken.
- ☺ Replace it.
- ⊗ The motor relay or the brush motor is broken.
- ☺ Replace it.

### **8.4. NOT ENOUGH OR TOO MUCH DETERGENT**

- ⊗ The detergent solution tank is empty.
- ☺ Fill the detergent solution tank after having emptied the recovery tank.
- ⊗ The flow adjustment lever is closed or almost closed.
- ☺ Adjust/increase the detergent solution outlet flow as required.
- ⊗ The detergent feed conduit is clogged in some point.
- ☺ Clean out the conduit by removing the dirt.

### **8.5. NO SUCTION**

- ⊗ The suction hose is not connected to the squeegee.
- ☺ Connect it correctly.
- ⊗ The suction hose or the squeegee conduit are clogged.
- ☺ Clean out and remove any obstructions from the conduits.
- ⊗ The suction motor is turned off.
- ☺ Activate it.
- ⊗ The recovery tank is full.
- ☺ Empty it.
- ⊗ The suction motor is not receiving electric power or is burned.
- ☺ Check the connections and, for the latter case, replace the motor.

### **9.5 INSUFFICIENT SUCTION**

- ⊗ The recovery tank cover was not correctly tightened.
- ☺ Tighten it correctly.
- ⊗ The recovery tank drain hose plug is not perfectly closed.
- ☺ Close it correctly.
- ⊗ The suction hose, the squeegee conduit or the inspection compartment is clogged.
- ☺ Clean out and remove any obstructions from the conduits.

### **8.6. THE BRUSH MOTOR OR THE SUCTION MOTOR DOESN'T STOP**

- ☺ Stop the machine, cutting off the main power supply and disconnecting the main battery connector, and contact the technical service centre.

### **8.7. THE SQUEEGEE DOESN'T CLEAN OR DRY EFFICIENTLY**

- ⊗ The squeegee blades are worn or are dragging solid dirt.
- ☺ Replace or clean them.
- ⊗ The squeegee adjustment is not correct; the advancement must be exactly perpendicular to the running direction.
- ☺ Adjust the squeegee.
- ⊗ The suction hose or the squeegee conduit are clogged.
- ☺ Clean out and remove any obstructions from the conduits.

### 8.8. THE BATTERY CHARGER DOESN'T WORK

- ⊗ The battery charge doesn't start.
- ⊙ Check that the battery charger is connected to the battery. Consult the battery charger manual.

### 8.9. THE BATTERIES DO NOT CHARGE OR DO NOT HOLD A CHARGE

- ⊗ At the end of the charging process, the battery is not correctly charged (see the battery manufacturer's instruction-maintenance manual)
- ⊙ Check the battery charger error message and check the data indicated on the display (see the battery charger's instruction manual).
- ⊗ The batteries are new and do not generate 100% of the rated performances.
- ⊙ The accumulator reaches the maximum performance after 20-30 complete charge cycles.
- ⊗ The electrolyte has evaporated and does not completely cover the plates.
- ⊙ Check the battery manufacturer's use and maintenance manual.
- ⊗ There are significant differences in density among the various elements.
- ⊙ Replace the damaged battery.

Always consult the battery and battery charger use and maintenance manual. If this does not solve the problem, contact the authorised technical service centre.

**The manufacturer CANNOT solve problems caused by using batteries and battery chargers that were not directly supplied.**

## 9. CONDITIONS OF WARRANTY

All our appliances are subjected to rigorous tests and are covered by warranty against material or manufacturing defects for a period of 12 months. The warranty comes into effect from the date of purchase. The date of purchase is the date indicated on the receipt issued by the Reseller when the appliance is consigned. The manufacturer shall repair or replace any faulty parts free of charge during the period covered by the warranty. Any defects, which cannot be clearly attributed to material or manufacturing defects shall be examined by one of our Technical Service Centres or at our factory and charged in accordance with the outcome. The following are anyhow not covered by the warranty: accidental damage during transportation or handling, accidental damage caused by negligence or unsuitable conduct, damage due to incorrect or improper uses or installations which do not conform with the warnings included in the instruction manual, and anyhow due to unusual events which do not depend on the running or use of the appliance. Appliances requiring repair must be delivered at the Technical Service Centre complete with all their original accessories together with proof of purchase. If the appliance has been repaired or tampered with by unauthorised third parties, the warranty shall be considered null and void. The war-

ty shall also be considered null and void if the user is not able to produce an original (legible and complete) document proving purchase or if it not possible to read the appliance serial number located on the frame. The appliance shall not be replaced and the warranty shall not be extended once the appliance has been affected by a fault. Repairs shall be carried out at one of our Authorised technical Service Centres or at our factory. Appliances for repair must be sent carriage free, that is, the user shall pay and be responsible for carriage. The warranty does not cover the cleaning of working parts, any scheduled maintenance nor the repair or replacement of parts subject to normal wear and tear. The manufacturer shall not be held liable for damage to persons or things caused by any installation which does not comply with the instructions in the manual or faulty use of the appliance.

### 9.1. SCRAPPING OF THE MACHINE

If the machine will no longer be used, remove the batteries and dispose of them in accordance with the eco-compatibility regulations as set forth in European standard **2013/56/EU** or deposit them in an authorised collection centre.

To dispose of the machine, comply with the current laws where it is used:

- disconnect the machine from the mains and clean it after emptying any liquids;
  - separate the machine into groups of homogeneous materials (plastics in accordance with the recycling symbol, metals, rubber, packing). For parts containing different materials, contact the competent authorities;
- Each homogeneous group must be disposed of in accordance with recycling laws.

In addition, it is recommended to eliminate those parts of the machine that may be dangerous, especially for children.

### 9.2. DISPOSAL (WEEE)



As the owner of electrical or electronic equipment, the law (in accordance with the EU Directive **2012/19/EU** on waste from electrical and electronic equipment and the national laws of the EU Member States that have implemented this Directive) prohibits you from disposing of this product or its electrical / electronic accessories as municipal solid waste and obliges you to make use of the appropriate waste collection facilities.

The product can be disposed of by returning it to the distributor when a new product is purchased. The new product must be equivalent to that being disposed of. Disposing of the product in the environment can cause great harm to the environment itself and human health. The symbol in the figure indicates the urban waste containers and it is strictly prohibited to dispose of the equipment in these containers. Non-compliance with the regulations stipulated in the Directive **2012/19/EU**

and the decrees implemented in the various EU Member States is administratively punishable.



<b>EN</b> Extension cord	<b>220-240 V ~</b> <b>50 Hz</b>	<b>&lt; 1500 W</b> <b>(&lt; 1.5 KW)</b>	<b>1500 - 2200 W</b> <b>(1.5 - 2.2 KW)</b>	<b>&gt; 2200 W</b> <b>(&gt; 2.2 KW)</b>
	<b>&lt; 20 m</b>	1,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>
	<b>&gt; 20 - 50 m</b>	2,5 mm <sup>2</sup>	2,5 mm <sup>2</sup>	4,0 mm <sup>2</sup>

<b>LpA 69 dB(A)</b> <b>EN</b> Acoustic pressure	<b>LwA 76,35 dB(A)</b> K (uncertainty) ±1dB (A) Acoustic power measured	<b>LwA 80 dB(A)</b> Acoustic power granted
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<b>EN</b> Vibrations	<b>0,14 m/s<sup>2</sup></b> K (uncertainty) ±15%
Values according to standard <b>EN 60335-2-72)</b>	



**EC/EU DECLARATION OF CONFORMITY** according to Directive (and following amendments): 2006/42/EC  
(+2009/127/EC)  
2014/30/EU

**EN** PRODUCT: FLOOR SCRUBBER      MODEL-TYPE:      **P85.0640**

complies with directives **EC/EU** and subsequent modifications,  
and the standards **EN** (and subsequent amendments):

EN 60335-1  
EN 60335-2-72  
EN 62233:2008

EN 55014-1:2006  
+A1:2009+A2:2011  
EN 55014-2:1997  
+EC:1997+A1:2001  
+IS1:2007

Serial number starting from:

**0.000.0000-0000-2022/02-0000**



**exclusiva**

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