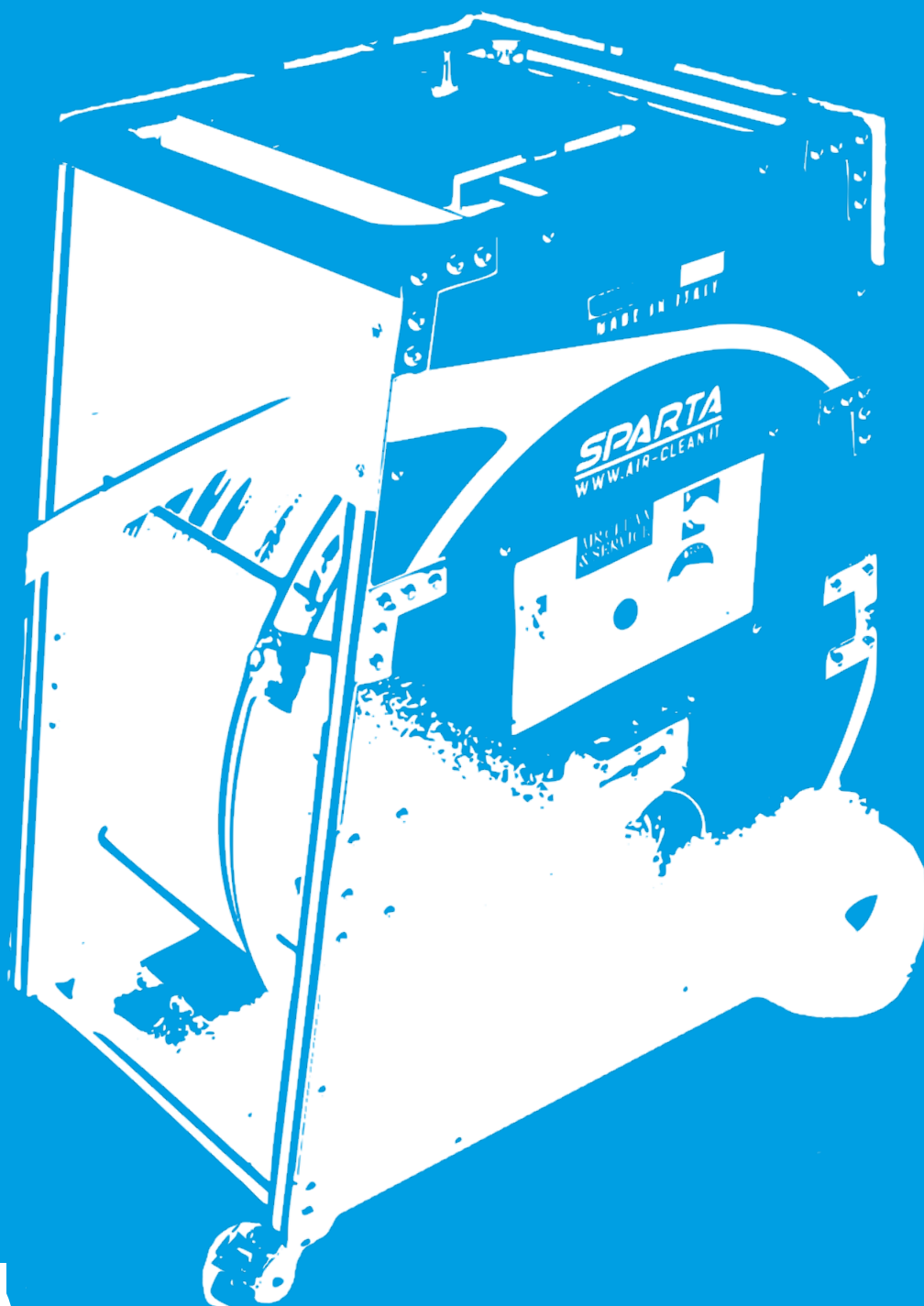
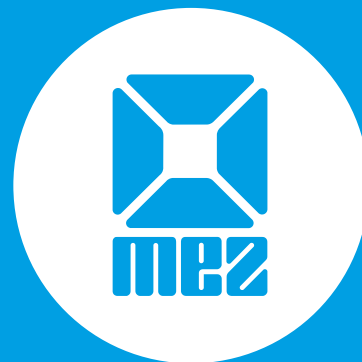


CLEANING MACHINES
SPARTA AC-SPARTA-24-PLC



USER MANUAL

..... GENERAL NOTES

Publication issued by: Airclean&Service S.r.l. - Corso Martiri, 162 41013 Castelfranco Emilia (MO) Italy

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This manual is an integral part of the supply and must be read carefully in order to ensure correct use, in accordance with the essential safety requirements; drawn up in accordance with the provisions of the Machinery Directive 2006/42/EC, it contains the technical information necessary to correctly carry out all the procedures in safe conditions; it must be carefully stored and must accompany the BRUSHING MACHINE SPARTA throughout its life, including any changes of ownership, it was made in Italian as the language of origin.

In case of loss or deterioration, it is possible to receive a copy by requesting the company Airclean&Service S.r.l. indicating the data shown on the identification plate.

Airclean&Service S.r.l. declines all responsibility for damage caused as a result of operations not covered in this manual.

Machines from code 110000-01 onwards



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EC DECLARATION OF CONFORMITY

..... 1.1 PREMISE

AIRCLEAN&SERVICE S.r.l. congratulates you for choosing the SPARTA BRUSHING MACHINE, the subject of this manual. Read carefully the manual and all the technical documentation supplied with the SPARTA BRUSHING MACHINE, to operate correctly and safely.

..... 1.2 SYMBOLOGY

Symbols that indicate risky situations or very important information.

Attention!



It indicates situations of risk for people, recalls accident prevention regulations, suggests behavioral procedures.

Warning!



Indicates the risk situations for the SPARTA BRUSHING MACHINE, and/or for the product being processed.

Please note!



Indicates useful information for consulting the manual and for the proper functioning of the SPARTABRUSHING MACHINE

> >> Symbols that indicate risky situations or very important information.

Specialized Operators!



Indicates the possible operating instructions for specialized operators

Qualified Technical Maintenance Technician!



Indicates the routine and scheduled maintenance procedures that are the responsibility of the maintenance technician mechanical or electrical, with installation, commissioning and/or extraordinary maintenance procedures (electrical/mechanical)

..... 1.3 TERMINOLOGIES AND ABBREVIATIONS

- **Operating machine:** SPARTA
- **Operator:** Staff dedicated to the use of the brushing machine SPARTA
- **Exposed person:** Any person who is in the vicinity of a dangerous vehicle.
- **Protection:** Fixed guards (casings), safety gates and safety devices
- **Danger zone:** Any area or use of tools or machinery defined as risky by the SOP drawn up by the Company for that work site
- **P.P.E:** Personal Protective Equipment
- **T.A.C:** Technical Assistance Center

..... 1.4 LIST OF ATTACHMENTS

- **EC Declaration of Conformity**
- **Manual Operator**
- **Wiring diagram**

..... 1.5 PERSONNEL QUALIFICATION

Operators must be aware of the content of all the documents supplied with the **SPARTA** BRUSHING MACHINE, and possess the following requirements, or acquire them through appropriate training:

- sufficient general and technical preparation to understand the content of the documents containing the instructions for use and maintenance, and correctly interpret the drawings and diagrams contained therein;
- knowledge of the main hygiene, accident prevention and technological rules relating to the production process adopted; specific experience of the technology used;
- general knowledge of how it is composed, and of the equipment installed on the **SPARTA** BRUSHING MACHINE, in particular the position of the emergency stop devices and the isolation of energy sources
- knowledge of what to do in an emergency, where to find personal protective equipment and how to use it correctly
- sufficient training to perform their duties skillfully, especially in emergencies. sources > follows

..... 1.5 OPERATOR'S QUALIFICATION

In addition to the above, maintenance technicians must have basic technical knowledge adequate to the required interventions. In particular, they must know the main construction methods of the **SPARTA BRUSHING MACHINE**.

..... 1.6 TECHNICAL ASSISTANCE

The AIRCLEAN & Service technical assistance service is available for clarifications, maintenance interventions to be agreed on a case-by case basis.



AIRCLEAN&SERVICE S.R.L

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..... 2.1 CE MARKING

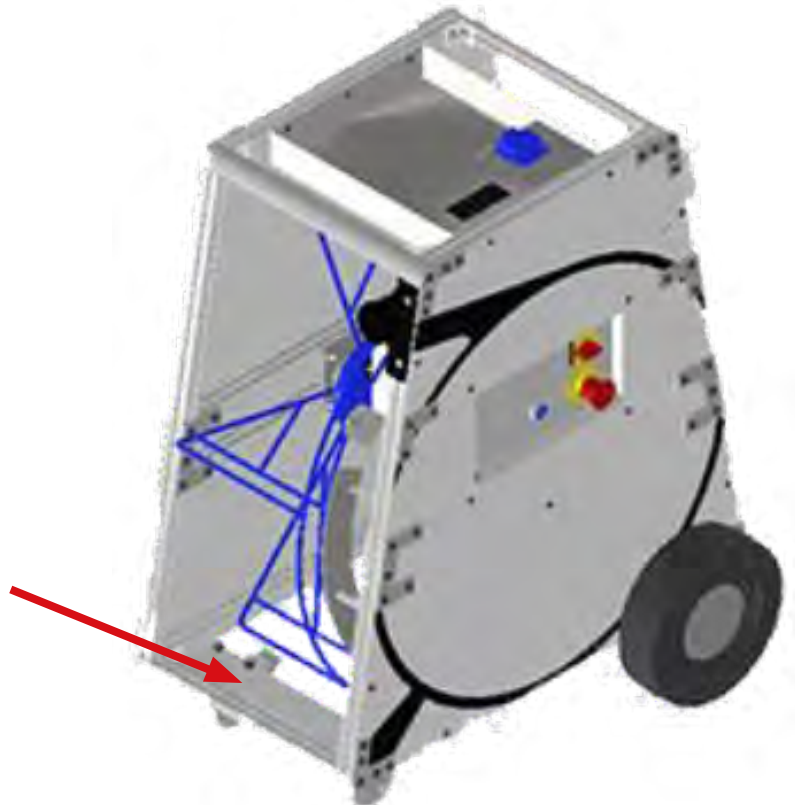
The identification and compliance of the requirements of the Machinery Directive are shown on the plate shown in the figure and by the Declaration of Conformity at the beginning of the manual.



It is forbidden to remove, damage or modify the data on the nameplate.

CE plate fixing point

AIRCLEAN & SERVICE <small>s.r.l.</small>		CE
<small>Airclean&Service S.r.l. Corso Marzù, 182 - 41013 Castelfranco Emilia (MO) Tel: +39 059 923266 - Fax: +39 059 9536184</small>		
Modello Model	<input type="text"/>	Anno Year
Matricola S. Number	<input type="text"/>	Peso Weght
		<input type="text"/>



..... 2.2 DECLARATION OF CONFORMITY

The brushing machine **SPARTA** was made in conformity of the EU Directive 2006/42/EC.

Below is the FAC SIMILE of the Declaration of Conformity The original will be delivered separately as an attachment to this manual.

Dichiarazione CE di conformità per macchine **Direttiva Macchine 2006/42/CE, Allegato II, parte 1, sezione A** **(Dichiarazione originale)**

Fabbricante: Airclean&Service S.r.l.

Indirizzo: Caduti sul lavoro, 2 – 41013 Piumazzo - Castelfranco Emilia (MO)

Persona autorizzata a costituire il Fascicolo Tecnico: Airclean&Service S.r.l.

Si dichiara in merito alla seguente fornitura

DESCRIZIONE: Spazzolatrice Modello: *SPARTA*
Attrezzatura realizzata per la pulizia di condotti di vario genere.

MATRICOLA: da 110000-01 a seguire

ANNO DI COSTRUZIONE: 2020

che la macchina è conforme a tutte le disposizioni pertinenti contenute nella Direttiva Macchine 2006/42/CE

- che la macchina risulta conforme alle disposizioni delle seguenti altre direttive:
 - Direttiva 2014/35/UE “Compatibilità elettromagnetica”;
 - Direttiva 2014/30/UE “Materiale elettrico destinato ad essere adoperato entro taluni limiti di tensione”.

In conformità a quanto indicato nell’Allegato II, parte 1, sezione A della Direttiva 2006/42/CE, il fabbricante evidenzia che tale dichiarazione è relativa esclusivamente alla macchina sopra descritta, nello stato e con le destinazioni d’uso per le quali è stata immessa sul mercato, escludendosi i componenti eventualmente aggiunti e/o le operazioni effettuate successivamente dall’utente finale senza l’autorizzazione del fabbricante.

Castelfranco Emilia lì.....

Resp.Tecnico

Roberto Ragazzi

..... 2.3 INTENDED USE

The BRUSHING MACHINE **SPARTA** is a powerful single-phase electric brushing machine, **SPARTA** has been designed and built for the **INTERNAL CLEANING OF VENTILATION DUCTS, both rectangular and circular section, any other use of the machine is considered improper.**

The composition of the brushing machine **SPARTA** is indicated in paragraph 2.5



The use of the brushing machine **SPARTA** is only possible by fitting a suitable brush e proportionate to the ventilation duct to be cleaned, **WITHOUT** the brush the machine cannot be used.

Choice of brushes with respect to the duct to be cleaned:

Brushes in rectangular duct and proportional sizing of the brushes.

There are mainly 2 families of brushes:

- **SOFT.** The bristle is thin, max 0.5 mm, it bends easily on itself and offers no resistance in the duct to be cleaned;
- **RIGID/AGGRESSIVE.** The bristle can reach thicknesses from 0.5 to 1.5 mm, does NOT bend easily and offers a lot of resistance in the duct to be cleaned.

The dimensional ratio of the brush to the Rectangular/square duct should not normally exceed 20%-25% of the height of the conduit.

Indicative examples:

RECTANGULAR/SQUARE DUCTS

Duct mm. 500 x 700 > MAX size soft brush 600 mm

Duct mm. 500 x 700 > MAX size rigid brush 500/550 mm

..... 2.3 INTENDED USE

CIRCULAR/OVAL DUCTS

Duct Diameter mm. 500 > MAX size soft brush 600 mm

Duct Diameter mm. 500 > MAX size Rigid brush 530/550 mm



The choice of the hardness/abrasiveness of the brush It is carried out according to the type of dirt to be removed.

Any other USE of the BRUSHING MACHINE is considered improper, unintended, and therefore dangerous. The use of the SPARTA BRUSHING MACHINE for other purposes, described in par. 2.3, is considered "IMPROPER USE". Therefore, the company AIRCLEAN&SERVICE S.r.l. is exempt from liability derived from non-compliance with these requirements.

..... 2.3.1 ENVIRONMENT OF USE

THE BRUSHING MACHINE **SPARTA** It is NOT designed to operate in open environments (not protected from atmospheric agents) or to Environments where there is a risk of explosion or fire (It is NOT made in explosion-proof equipment).

..... 2.4 PROHIBITED USES



Failure to comply with the provisions relieves the manufacturer of any liability.

It is FORBIDDEN to use the **SPARTA** BRUSHING MACHINE in one or more of the following conditions:

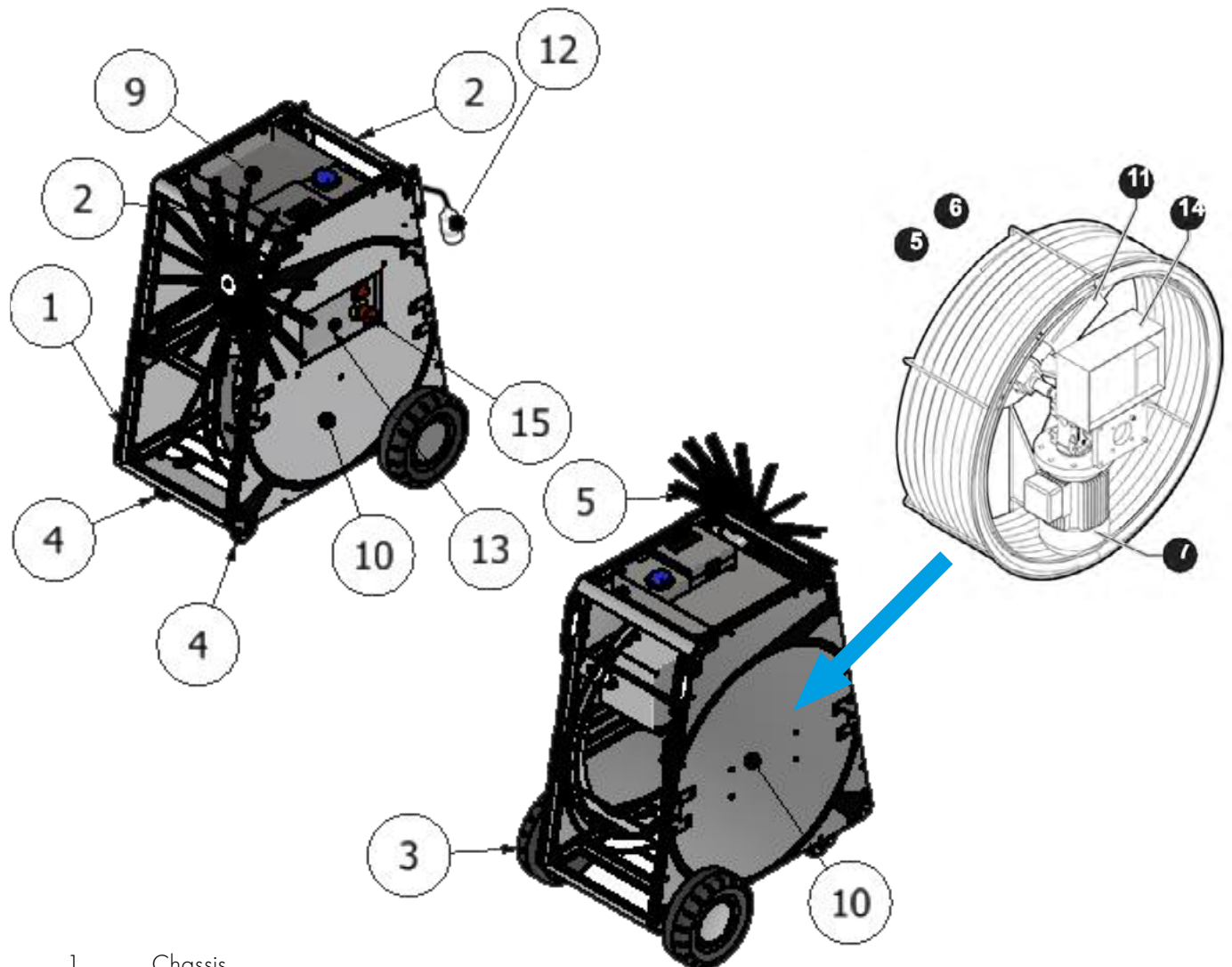
- as a system for moving things or people;
- on sloped surfaces;
- in dangerous conditions or in presence of malfunctions;
- after changes or interventions unauthorized by the manufacturer;
- to make a different use of it from the one provided by the manufacturer (IMPROPER USE);
- by untrained personnel;
- in case of partial or total non-compliance of the instructions;
- performing operations that were not reasonably foreseeable;
- in the event of a lack of maintenance;
- in explosive atmospheres;



IMPORTANT!

- **DO NOT use for transporting things or people. It is not allowed to stand with your feet on the BRUSHING MACHINE SPARTA.**
- **DO NOT use to transport products other than those approved and defined in agreement with the MANUFACTURER.**
- **These conditions apply to the use of the SPARTA BRUSHING MACHINE.**
- **The definition of limits for the presence of personnel is the responsibility of the person in charge of the workstation(s) and may involve more restrictive limitations.**
- **For exceptions to what is reported herein, a specific written declaration by the manufacturer is required.**
- **It is not permitted to carry out modifications to parts of the BRUSHING MACHINE that impair its function or add additional risks not considered by the manufacturer.**
- **Any change in operation must be communicated and approved by the manufacturer in writing. Any variation that modifies the risks, if carried out without the manufacturer's authorization, will void all forms of warranty and the EC declaration of conformity.**

..... 2.5 COMPOSITION OF BRUSHING MACHINE



1. Chassis
2. Handle for pushing/pulling
3. Fixed Wheels
4. Rotating wheels with brake
5. Rotating cable with brush
6. Brush cable housing basket
7. Gearmotor
9. Tool tray
10. Protective casing
11. Brush cable connection
12. Industrial Plug
13. Reset button
14. Junction Box
15. EMERGENCY Button

..... 2.5.1 ELECTRICAL PARTS

The electrical parts provided to manage the SPARTA brushing machine are:

- An electric box «14» (Fig. 2.5) with industrial plug «12» (Fig. 2.5)
- A command and control panel «13» (Fig. 2.5)
- An emergency button «15» (Fig. 2.5)
- A reset button for ignition and to restart the machine after emergency activation.
- At the top there is also the ON/OFF switch for turning the machine on and off.



All cables have a plate with the code to which they belong, the same identifiable on the wiring diagram. All electrical components and their connections can be found in the enclosed wiring diagrams.



BEFORE WORKING ON ANY ELECTRICAL COMPONENTS (ELECTRIC BOX, TERMINAL BLOCK ON MOTOR, ETC.) DISCONNECT POWER FROM THE MAIN SWITCH SUPPLYING THEM AND DISCONNECT THE MAINS POWER SOCKET

..... 2.5.2 PROTECTIONS AND SAFETY DEVICES



IMPORTANT!

The lack of protections and safety devices does not lead to malfunctions or production defects, can however, create DANGEROUS SITUATION FOR OPERATORS, consequently, the user must verify that they are in good state of efficiency, such as to guarantee their function.



IMPORTANT!

The guards listed below can be removed using dedicated tools (hex keys, Allen keys, etc.), consequently, access to hazardous areas is only possible through intentional procedures. These protections have dimensions and different shapes. Their function is to insulate and contain mechanical or electrical parts, that can create situations of danger to operators.

Fixed guards

Protection panel "10" fig. 2.5

Panels fixed on both sides of the frame, which prevent the operator:

- to reach the Brushes rotation system and the Basket during the winding phases and unfolding the Whip, avoiding the risk of dragging;
- to reach the electrical panel junction box not allowing direct contact with the live parts (230 Volts).

Carter „11“ fig. 2.5

Guard that prevents the brush rotation system from being reached, avoiding the risk of dragging.

Protection system

Brake rotating wheels "4" fig. 2.5

The brakes of the swivel wheels have been provided to prevent them from moving while stationary.

..... 2.5.2 PROTECTIONS AND SAFETY DEVICES

ACCESS TO THE ELECTRICAL PANEL JUNCTION BOX IS CARRIED OUT BY REMOVING THE PROTECTION PANEL, BY SPECIALIZED AND AUTHORIZED TECHNICAL PERSONNEL, AS THERE ARE LIVE COMPONENTS (230 VOLTS) INSIDE WITH RESIDUAL RISK.



Emergency button „15“ fig. 2.5

The emergency button, located on the top of the BRUSHING MACHINE **SPARTA**, is a mushroom button with mechanical latch which, if activated, causes the immediate stop of all movements. Rearmament is allowed only after a correct restoration of the optimal condition of the BRUSHING MACHINE **SPARTA**. The circuit is designed so that in the event of a connection interruption, the BRUSHING MACHINE **SPARTA** is brought to a condition of safe stop.

..... 2.5.3 CONTROLS – SIGNALLING DEVICES



The location of the control and signalling equipment is indicated in paragraph 2.5, their operation is described in chapter 5, while the operation of the software is described in the OPERATOR'S MANUAL.

..... 2.6 TECHNICAL DATA BRUSHING MACHINE

General technical characteristics

- Model: SPARTA
- Material: Alloy
- Weight and dimensions: see figure 2.6-1
- Noise: see paragraph 2.7

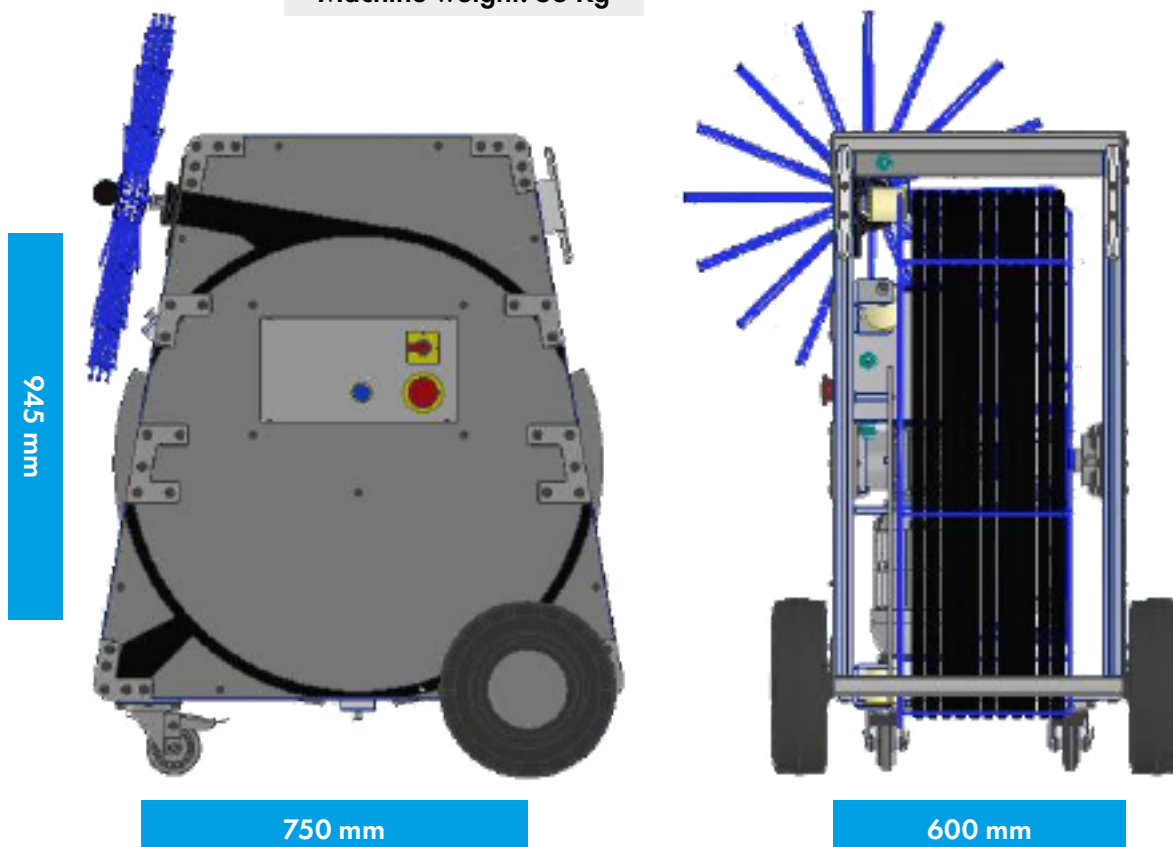
Electrical system features

- Tension: 240V
- Frequency: 50 Hz
- Total installed power: 1,4 kW
- Connection: SINGLE-PHASE + EARTH



Do not deviate from the values or processing limits described in the Technical Data of this manual. Any other use not envisaged, as it does not comply with the design and technical specifications, is to be considered „NOT ALLOWED“.

Machine weight: 63 Kg



945 mm

750 mm

600 mm

..... 2.7 NOISE

The weighted equivalent continuous sound pressure level emitted by the **SPARTA BRUSHING MACHINE** is less than 60 dB(A).

The measurement was carried out on a typical brushing machine operating near the operators' workstations.



Il value shown refers only to the SPARTA BRUSHING MACHINE. It is therefore not a value to be taken into consideration as the level of exposure to which operators are EXPOSED IN THE WORK ENVIRONMENT IS HIGHER. Consequently, investigations will have to be carried out to define the sound pressure level and evaluate whether to use hearing protection devices

..... 3.1 GENERAL SAFETY WARNINGS

Do not allow UNTRAINED personnel to work on the **SPARTA** BRUSHING MACHINE.

1. DO NOT START THE **SPARTA** BRUSHING MACHINE IN FAILURE.
2. Before using the **SPARTA** BRUSHING MACHINE It must be ensured that any conditions that are hazardous to safety have been properly eliminated. Check that all guards (guards, safety devices) are in place and fully efficient.
3. All maintenance operations must be carried out with the **SPARTA** BRUSHING MACHINE isolated from the energy distribution networks (electrical, pneumatic or other) and with the circuits without pressure.
4. When there is a possibility of being hit by projections or falling solid parts, use goggles with side blinders and, if necessary, hard hats or gloves.
5. Before any manual work on the **SPARTA** BRUSHING MACHINE or on the material being processed, the **SPARTA** BRUSHING MACHINE must be deactivated by performing the „SAFE MAINTENANCE PROCEDURE“.
6. ELECTRICAL EQUIPMENT... Connection work, commissioning, maintenance, measurements and adjustments of the electrical equipment or its components may only be carried out by qualified personnel.
7. For work to be carried out with live parts, the relevant regulations must be complied with.



IT IS FORBIDDEN:

- start the work cycle without first checking that there are no people nearby and that there are no foreign objects on the **SPARTA** BRUSHING MACHINE. Ensure that commissioning is not dangerous to personnel;
- Remove or deactivate guards (guards and safety devices). Temporary deactivation of the guards is only permitted for maintenance work;
- carry out adjustment or maintenance operations with the **SPARTA** BRUSHING MACHINE switched on;
- operate on moving parts or electrical parts without first having removed electrical voltage;
- tamper with or remove the safety plates placed on the **SPARTA** BRUSHING MACHINE;
- carry out modifications to the **SPARTA** BRUSHING MACHINE without the authorization of the manufacturer;
- operate or deregulate control apparatus without possessing the appropriate skills;
- render inoperative or make improper use of the safety devices of the **SPARTA** BRUSHING MACHINE or of the operating area;
- throw water on electrical components;
- make holes in conduits or in the passages of electrical cables.



IT IS MANDATORY:

- read all the documentation supplied with the **SPARTA** BRUSHING MACHINE before operating;
- wear protective equipment suitable for the operations to be performed;
- maintain efficient safety systems and emergency buttons;
- keep the control instruments efficient and legible, providing for their replacement when they are damaged;
- interrupt the process as soon as an anomaly occurs;
- keep the safety plates on board the **SPARTA** BRUSHING MACHINE, the controls of the push-button panels in good condition and make sure that they remain legible.

..... 3.2 RESIDUAL RISKS AND IMPORTANT RECOMMENDATIONS

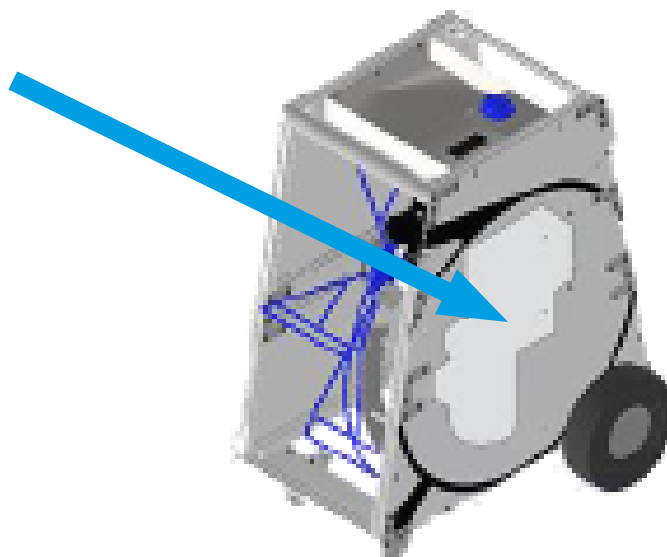
The protections used in the SPARTA BRUSHING MACHINE are such as to reduce or limit accessibility to danger areas. However, the following recommendations should be respected:

- The SPARTA BRUSHING MACHINE is equipped with a powerful twisting force. It is forbidden to rotate the brush freely outside the duct, which could dangerously catch clothing, hair and objects, thus causing potential damage to people or property.
- If there are no suitable openings in the duct to be cleaned, it is a good idea to create them in order to properly access the inside of the duct. The opening in the duct must be such that it can allow you to work easily and safely. The sizing of the openings with respect to the duct is regulated by UNI EN 12097.
- To use the brushing machine correctly, two people are needed, one at the control panel and one, usually positioned higher, who operates by inserting the Whisk equipped with a brush into the duct.
- Avoid working on ladders, use special scaffolding with wheels, which are more stable, safe and spacious than a ladder.
- Make at least two openings: from one, connect, through a hose, an air extractor equipped with special filters that creates a capture current for dust; on the opposite side, insert the Whisk with brush connected to the Brushing Machine. Activate its rotation ONLY after the Brush has entered at least 30/40 cm inside the duct and check its speed according to the diameter of the brush.



DANGER OF HIGH VOLTAGES (230 VOLT) **Risk of electric shock**

When operating inside the electrical panel junction box or inside the gear motor terminal board, it is necessary to disconnect the voltage from the main switch that supplies them or disconnect the plug, otherwise voltage remains in the power supply terminal blocks.



..... 3.2 RESIDUAL RISKS AND IMPORTANT RECOMMENDATIONS

IMPORTANT!




IT IS FORBIDDEN:

- TOUCHING MOVING OR ELECTRICALLY ENERGIZED PARTS. ONLY SPECIALIZED AND AUTHORIZED OPERATORS CAN WORK ON LIVE PARTS;
- TOUCH THE MOVING BRUSH;
- EVADE THE OPERATION OF THE EMERGENCY BUTTON;
- CARRY OUT ADJUSTMENT OR MAINTENANCE WORK WITHOUT FIRST CARRYING OUT THE MAINTENANCE PROCEDURE SAFELY.
- LEAVE THE SPARTA BRUSHING MACHINE UNATTENDED WITHOUT THE SWIVEL WHEEL BRAKE ENGAGED.

..... 3.2 SAFETY SIGNS



Keep the signs in good condition and legible conditions. If they are worn or removed from the SPARTA BRUSHING MACHINE, it will be necessary to apply identical ones to the previous ones in the points described below.

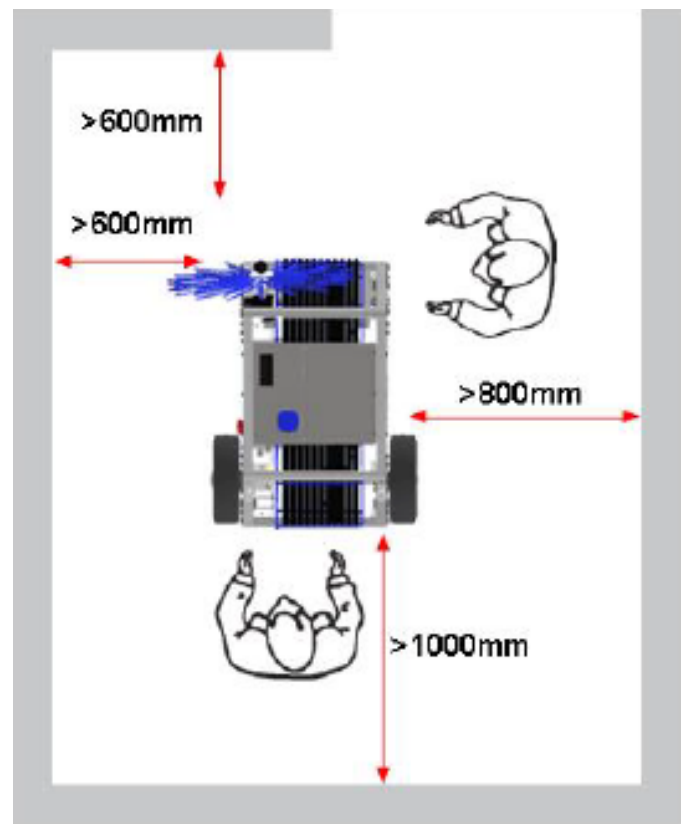
Label	Description
	<p>Danger voltage 230 Volt</p> <p>Adhesive plate applied to the electrical panel junction box and to the gear motor terminal board to warn of the risk of electric shock in the components inside them. Do not approach live components with tools such as screwdrivers, etc.</p>

..... 4.1 WORK ENVIRONMENT REQUIREMENTS

The correct preparation and control of the conditions of the working environment in which the **SPARTA BRUSHING MACHINE** operates is certainly a fundamental requirement for its correct and safe operation.

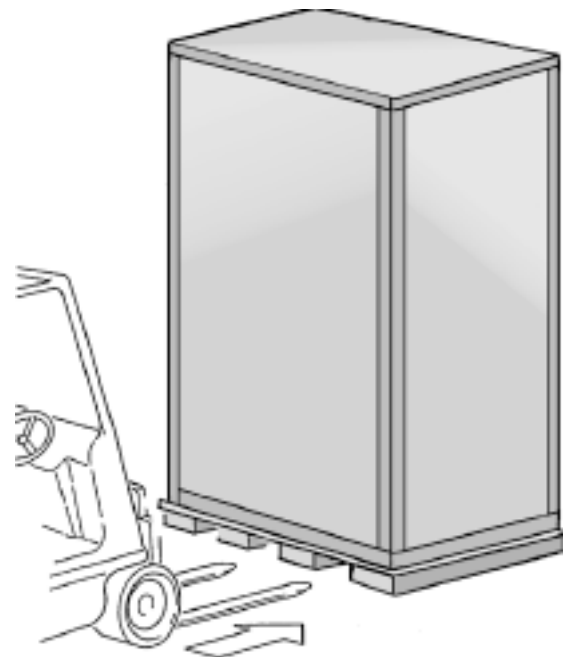
It is the user's responsibility to prepare:

- the room with the spaces necessary for the use of the **SPARTA BRUSHING MACHINE**;
- the lanes for the circulation of lifting equipment (forklifts, cranes, etc.) must be clearly identifiable by operators;
- the spaces intended for the stationing of the operators necessary for use and maintenance;
- the arrival line must be connected to a main switch, having a breaking capacity equal to the adequate load; The value is shown on the wiring diagram. Arrange for the correct conduct of the earth connection.



..... 4.2 UNLOADING FROM THE MEANS OF TRANSPORT

- The **SPARTA BRUSHING MACHINE** is unloaded from the means of transport using a suitable lifting vehicle.
- Unloading operations from the means of transport and handling must be carried out by qualified personnel.
- During unloading and handling operations, the presence of a helper is necessary for any signals during transport.
- The capacity of the lifting equipment must be greater (with a safety margin) than the self-weight of the components to be transported.
- Lifting must be carried out continuously, without jerking or sudden movements.
- It is forbidden to pass and stop under suspended loads.



4.3 MOVING THE BRUSHING MACHINE

The **SPARTA** BRUSHING MACHINE is equipped with four wheels that facilitate its movement. If the surfaces on which it must pass are uneven or uneven, it must be lifted by means of a lifting device.

4.3.1 MANUAL SHIFT

The movement of the SPARTA BRUSHING MACHINE is carried out by gripping the two handles on both sides of the machine.



Before moving the SPARTA BRUSHING MACHINE, release the brake of the two swivel wheels. Once the movement is complete, apply the brake again to the two swivel wheels.



4.3.2 MOVING WITH LIFTING EQUIPMENT

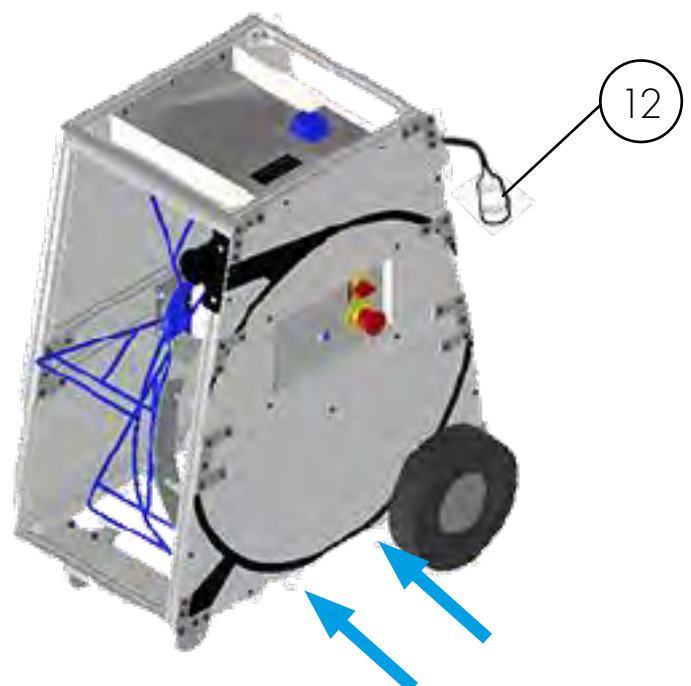
Insert the forks of the lifting vehicle as shown in the figure and lift the SPARTA BRUSHING MACHINE.

4.4 INSTALLATION AND COMMISSIONING

Move the **SPARTA** BRUSHING MACHINE by pushing it using the wheels provided and bring it to the desired position.

Brake the swivel wheels.

Connect the industrial plug „12” to the electrical outlet at the installation site.



..... 5.1 CONTROL EQUIPMENT

..... 5.1.1 CONTROL PANEL

1. **Main switch:** "ON": enables the operation of the SPARTA BRUSHINGMACHINE. „OFF“: SPARTA BRUSHING MACHINE turned off.
2. **BLUE «EMERGENCY RESET»** button Enables the SPARTA BRUSHINGMACHINE to start-up.
3. **Mushroom button „EMERGENCY“** It causes the SPARTA BRUSHINGMACHINE to stop immediately, removing tension.
4. **Touch screen Control panel:** From the panel it is possible to use themanagement controls of the SPARTA BRUSHING MACHINE.

To find out about its functions, see point 5.4 Using operating functions (how to work with the machine).



..... 5.2 IGNITION AND STARTING

Turn the main switch to the „I“ (ON) BUTTON 1 position to turn on the SPARTA BRUSHING MACHINE.

..... 5.3 EMERGENCY STOP

The emergency stop is carried out:

- by pressing the emergency button (BUTTON 3);
- turning the main switch to OFF „0“ BUTTON 1

Following one of these operations, the **SPARTA** BRUSHING MACHINE stops instantly;

..... 5.3.1 RESTORATION OF OPERATION DUE TO ACTIVATION OF THE MUSHROOM BUTTON

To restore the working condition, it is necessary to:

- remove the cause of the alarm;
- Unlock the mushroom button by turning it clockwise.

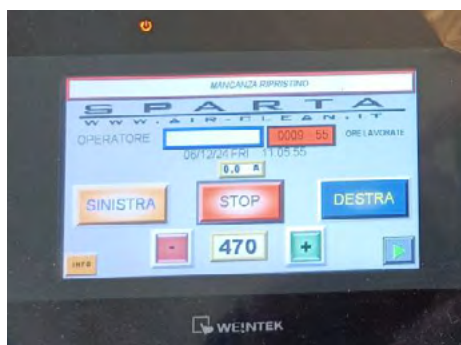
press the EMERGENCY RESET BUTTON 2 setting the **SPARTA** BRUSHING MACHINE waiting to start.

5.4 USE OF THE WORK PROGRAM

Turn on the machine BUTTON 1, press button 2 (lights up);

To operate the brush rotation, press the LEFT button (counterclockwise) or the RIGHT button (clockwise), to stop the brush rotation press the STOP button, with the – or + buttons adjust the brush rotation speed.

5.5 USE OF THE BRUSHING MACHINE



To enable the commands, use the Control Panel.

5.5.1 CLEANING PHASE



Before starting cleaning, make sure that the extractor is plugged in and there is enough airflow to catch any dust that is detached by brushing.

Place the **SPARTA BRUSHING MACHINE** near the duct to be cleaned and lock the brakes of the Spinner Wheels. Insert the cable shaft into the duct entrance.

1. The operator near the duct instructs the operator on the Brushing Machine side to activate the brush rotation via the Control Panel.
2. Depending on the direction of rotation, place the Brush on the right side or on the left side of the duct (e.g. rotation to the RIGHT, place the brush on the RIGHT side of the duct). The operator on the duct side must carry out the insertion slowly and steadily while the operator on the Machine side helps him in unwinding the cable shaft, from the basket, for the desired length.
3. Once the decided point has been reached, the operator on the duct side requests the rotation to be reversed and positions the brush on the opposite side to the clean one, at the same time pulling the brush towards him until it is completely extracted. During this operation, the operator on the Machine side helps in rewinding the shaft cable in the basket.

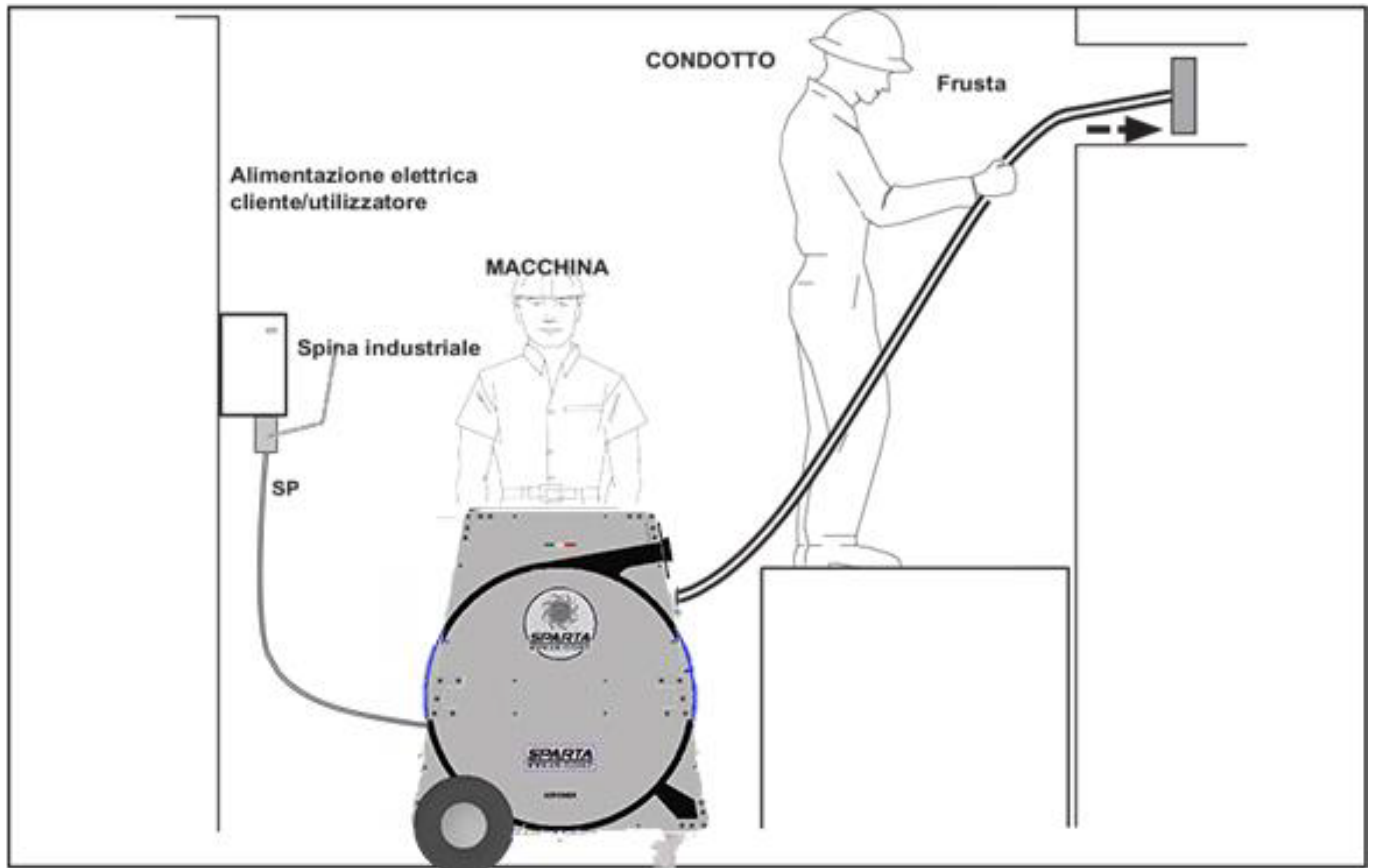


Carry out cleaning operations in both directions at slow and constant speed.



We recommend the use of a visual system that allows the verification of the correct cleaning phase and the relative detachment and capture of dust from the extractor.

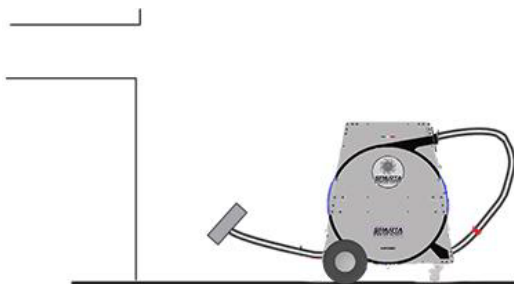
If the brush is too large for the duct, consider replacing the brush with a smaller or softer one.



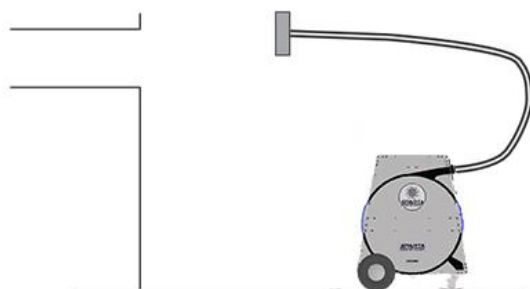
..... 5.5.1 CLEANING PHASE



Avoid leaving too much portion of the Slow Whisk between the part inserted in the duct and the part connected to the SPARTA BRUSHING MACHINE, in any case the cable must never come into contact with the floor or undergo irregular curvatures



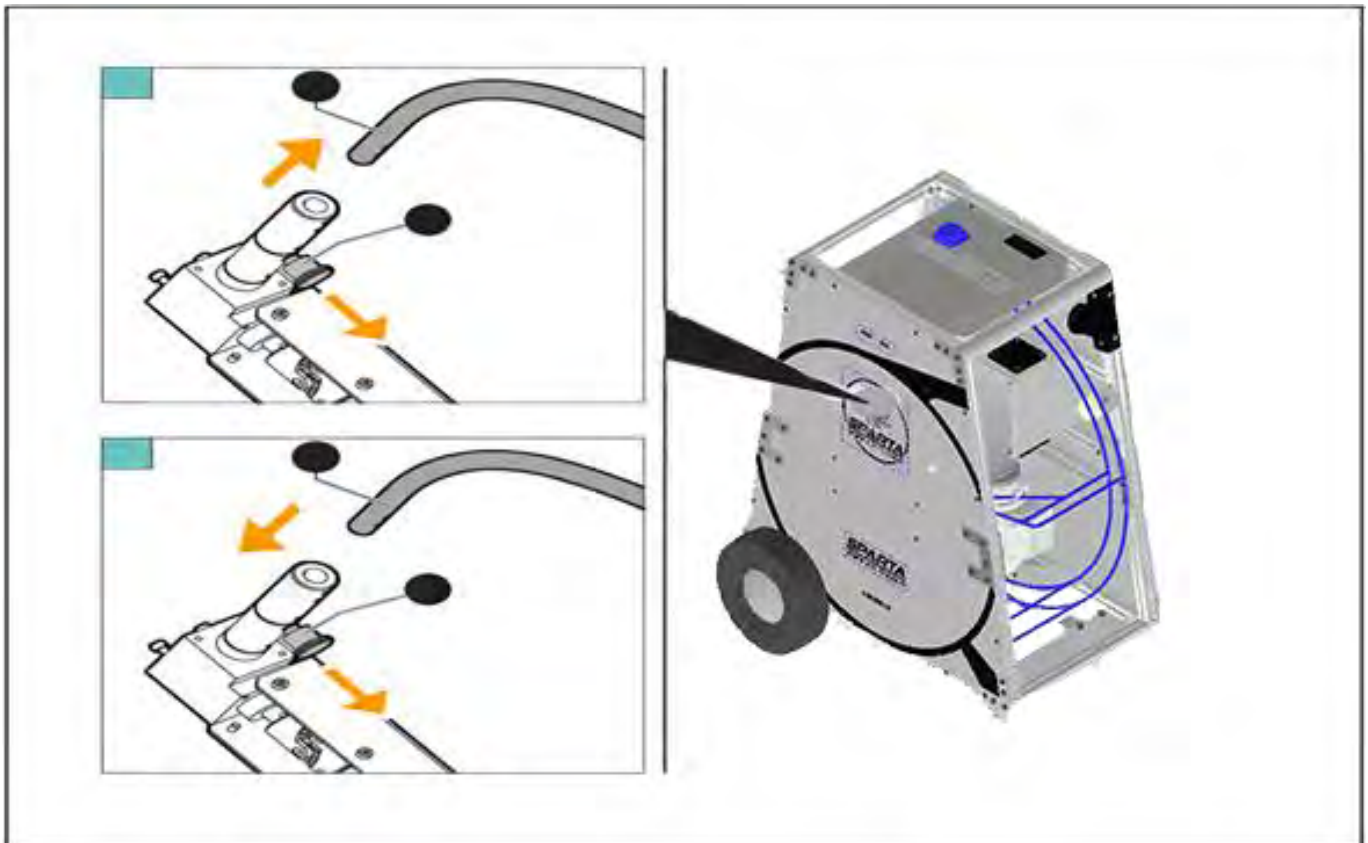
NO!



NO!

..... 5.6 REPLACING THE CABLE SHAFT WITH BRUSH

1. Carry out the maintenance procedure safely and disconnect the industrial plug.
2. Reach for the spring piston „A“ and pull it to release the shaft „B“
3. Slide the shaft out of the slot and remove it completely from the basket.
4. Insert the new shaft making sure that the spring piston pin is positioned inside the shaft seat by locking it.



5.6.1 EXAMPLES OF BRUSHES AND MAXIMUM USABLE SIZE



To use the non-center brushes in Nylon, the accessory (AC137) for the adaptation between brush and spindle is required.



For information on the correct instructions for use of the brushing machine and its accessories, please contact:

AIR CLEAN&SERVICE S.r.l.

Registered office: Corso Martiri, 162 - 41013 Castelfranco Emilia (MO) Tel. +39 059/923266 - Fax: +39 059/9536184
 Headquarters: Caduti sul lavoro, 2 - 41013 Piumazzo - Castelfranco Emilia (MO) Tel. +39 059/5801486



Soft brush
Maximum diameter 600mm



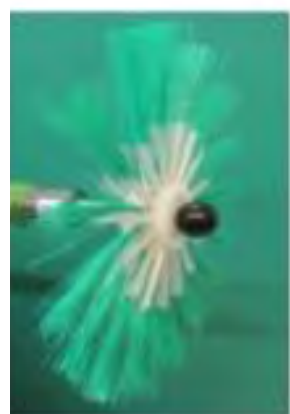
Soft combi brush
Maximum diameter 600mm



Grease brush M12
Maximum diameter 600mm



Double soft brush
Maximum diameter 600mm



Abrasive tynex brush
Maximum diameter 600mm



Nylon brushes
Maximum diameter 600mm



..... 6.1 GENERAL SAFETY WARNINGS



IT IS FORBIDDEN TO CARRY OUT MAINTENANCE, LUBRICATION OR REPAIR WORK WHEN THE SPARTA BRUSHING MACHINE IS UNDER ELECTRICAL VOLTAGE.

Report the performance of maintenance operations by displaying special warning signs.

- **Cleaning, ordinary and extraordinary maintenance must be entrusted exclusively to experienced personnel connoisseurs of the SPARTA BRUSHING MACHINE.** Unauthorized persons must keep a proper distance from it. No untrained person may operate or linger in the vicinity of the SPARTA BRUSHING MACHINE during operation or maintenance.
- **The removal of guards and/or the deactivation of safety devices must only be carried out by qualified and authorized personnel for the duration necessary for maintenance operations, after which it will be necessary to restore the initial conditions of use.**
- **After each intervention, always reassemble any protections that have been removed, returning the SPARTA BRUSHING MACHINE to its initial state.**
- **Adequately illuminate the work area during maintenance and repair operations. It is forbidden to use matches, cigarettelighters, torches, open flames as means of lighting.**
- **Where necessary, use personal protective equipment (such as non-slip shoes, helmets, gloves, goggles) that comply with the regulations in force in the country where the SPARTA BRUSHING MACHINE is used. Wear protective equipment suitable for the operations to be carried out. Clothing must be close to the body and resistant to cleaning products. Avoid wearing ties, necklaces, or belts that could get caught or caught between moving parts.**
- **Before putting the SPARTA BRUSHING MACHINE back into operation, check the closure of the fixed guards, failure to comply with this warning may generate serious danger to personnel.**
- **Always keep in mind all the safety regulations listed in the following manual and those established by the regulations in force in the country of installation.**

..... 6.2 GENERAL RULES OF GOOD MAINTENANCE

To ensure regular operation and prevent any anomalies, the maintenance technician must comply with the intervention frequencies indicated in the „**ORDINARY AND SCHEDULED MAINTENANCE**“ table.

Keep the „**MAINTENANCE REGISTER**“ up to date, which must be completed by a person responsible for the maintenance of the SPARTA BRUSHING MACHINE or by those carrying out the work, in particular during the warranty period.

When disassembling components, avoid allowing dust residues to enter the work areas and the components themselves.

Do not use sponge fragments, damp and/or abrasive cloths and filamentous rags to clean;

Do not use gasoline or flammable solvents as a cleaning agent, but always use authorized non-flammable and non-toxic commercial solvents.

When replacing components, it is advisable to use ORIGINAL SPARE PARTS or equivalent if authorized in writing by the Manufacturer.

Dispose of and treat consumables and auxiliaries as well as replaced components safely, in compliance with the regulations in force for environmental protection in the country in which the **SPARTA BRUSHING MACHINE** is used.

6.3 SAFE MAINTENANCE PROCEDURE

The following procedure must be done before any maintenance operation ordinary and extraordinary, provides for the isolation of the from all energy sources.

Equip yourself with PPE and tools suitable for the type of work to be carried out.



Turn the Main Switch to the „0“ (OFF) position.

Disconnect the industrial plug from the power outlet.

Attention! Only specialized and authorized operators are allowed to work on live components.

6.4 ORDINARY AND SCHEDULED MAINTENANCE

Ordinary and scheduled maintenance includes all the periodic operations necessary for the proper management and optimal conservation of functional and control equipment.

Frequency of interventions	Operations	Procedures
Every week	Monitoring of guards, safety and control devices	If their state of wear or operation is precarious, proceed to replace them. In particular, check the operation of the emergency button. Keep them checked, clean and in good working order at all times.
	Safety sign control	Check the presence and legibility of the safety signs applied to the SPARTA BRUSHING MACHINE
Every three month	Control of the electrical panel junction box	Carry out cleaning using vacuum cleaners and dry antistatic cloths. Check that all screws related to terminals, circuit breakers, relays, etc. are correctly tightened. The power cables in the electrical panel, even with the main switch set to „0“, remain LIVE (RISK OF ELECTRIC SHOCK!!).
Every year	Annual maintenance	Carry out a general check of the state of wear and tightening of all components, including the electrical equipment and the instruction manual.



For all ordinary maintenance operations not mentioned in the table and for extraordinary maintenance operations, please contact AIRCLEAN&SERVICE S.r.l.

6.5 EXTRAORDINARY MAINTENANCE



Extraordinary maintenance operations concern breakages or adjustments of components where specific knowledge of the fault is required, consequently it is necessary to contact the manufacturer.



All the safety warnings described above also apply to extraordinary maintenance work.

..... 6.6 PROBLEM SOLVING

The type of parts that make up the SPARTA BRUSHING MACHINE do not require any major interventions, however if the problem has not been remedied, despite the instructions given in this manual, contact the manufacturer.

..... 6.7 SPARE PARTS

To order spare parts, please fill out the form on the next page, otherwise always specifies:

- Customer name and identification data;
- Order number (or protocol);
- Identification data of the **SPARTA** BRUSHING MACHINE (model, type and serial number);
- Part number and component name;
- Quantity to order.



Replacement of spare parts must be entrusted to qualified, instructed and authorized technicians. Please note that with regard to parts that affect safety, the Customer is obliged to always purchase original spare parts (or equivalent authorized in writing by the manufacturer) as the use of non-original spare parts and/or incorrect assembly of the same, frees the manufacturer from any liability.

In case of need, please contact:

AIR CLEAN&SERVICE S.r.l.


Registered office: Corso Martiri, 162 - 41013 Castelfranco Emilia (MO) Tel. +39 059/923266 - Fax: +39 059/9536184
Headquarters: Caduti sul lavoro, 2 – 41013 Piumazzo – Castelfranco Emilia (MO) Tel. +39 059/5801486



To simplify the ordering of spare parts, we recommend that you photocopy or print the „SPARE PARTS ORDER FORM“ (par. 6.7.1), then complete it in all its parts and send it to the Spare Parts Service indicated above.

6.7.1 SPARE PARTS ORDERING FORM

SPARE PARTS REQUEST FORM
 Mail: info@air-clean.it



COMPANY: ROAD:..... N

Please take note of our order N°..... of the..... with delivery requested on.....
 For the BRUSHING MACHINE **SPARTA** serial number.....

Code	Amount	Ref.	Note
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

Note:

 Date:

Letterhead and signature

6.8 MAINTENANCE LOG

Write down all extraordinary maintenance work in the following table.

Date	Type of intervention	Time required	Signature

All information without guarantee

..... 7.1 INTRODUCTION

By decommissioning we mean the parking of the SPARTA BRUSHING MACHINE in non-operational conditions for an extended period of time

- Disconnect the electrical power supply



If the BRUSHING MACHINE is stored for long periods of inactivity, It is recommended to protect it with waterproof material.SPARTA

In the event of prolonged parking of the SPARTA BRUSHING MACHINE not in normal use, it is recommended not to expose it to atmospheric agents, this would cause serious damage to many of its electrical components.

Store the SPARTA BRUSHING MACHINE in an enclosed place under environmental conditions within the following values:

- Temperature: -10/+45 °C;
- Relative humidity 90% Max.;
- Closed environment sheltered from atmospheric agents.



Values other than those indicated above can seriously damage the components.

..... 7.2 DISMANTLING, DEMOLITION AND WASTE DISPOSAL



Dismantling and demolition operations must be entrusted to specialized personnel with the mechanical and electrical skills necessary to work safely. For these operations, contact Airclean&Service S.r.l.



For legal and tax aspects (any reports, complaints, etc.) comply with the laws in force in the country where the SPARTA BRUSHING MACHINE has been installed

Disassembly procedure

- disconnect the electrical power supply to the electrical panel and observe the manufacturer's instructions for long periods of inactivity;
- disconnect the cables from the terminal block of the electrical panel;
- disassemble all the parts of the **SPARTA BRUSHING MACHINE** and divide the components to be discarded and reused considering that the structure is made of iron. The electrical box is made of sheet metal.



Each material of which the SPARTA BRUSHING MACHINE is made must be treated, disposed of or recycled, according to the classification and legislation in force in the country of use.

Declaration of conformity

Manufacturer Name: Air Clean&service S.r.l.

Manufacturer address: Corso Martiri 162/C – 41013 Castelfranco Emilia Modena (ITALY)

Telefono +39059/5801486

mail: info@air-clean.it web. www.air-clean.it

SPARTA brushing machine

Serial number: From 110000-01 onwards

You hereby declare, under your own responsibility,
that the machines referred to in this document comply with the
requirements of the following directives:

- EU Machinery Directive MD 2006/42/EC
- EU Low Voltage Directive LVD 2006/95/EC
- EU Electromagnetic Compatibility Directive EMC 2004/108/EC
- EU Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment ROHS2002/95/EC

Source that harmonizes standards:

EMC: EN 55014 Electromagnetic compatibility

- Part 2: Technical principles

EN 60204-1:2007 Safety of Machinery: Electrical equipment of machines, General Requirements

Additional information: none

The product meets the requirements for the CE mark

The Technical Manager

