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STELLA

GB

V.120/60
V.230/50
V.240/50



**TWO-SPEED BRUSHING MACHINE
SUPPLIED WITH TANK FOR WATER CLEANING**

OPERATING AND MAINTENANCE MANUAL



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GUARANTEE CONDITIONS

S.I.R.I. S.r.l. guarantees all machine parts, and will replace any of the same which prove defective due to faults in manufacturing methods or materials, for 12 months from the date of purchase.

During said period of time, all transport costs will be at the purchaser's expense. S.I.R.I. will accept goods with pre-paid carriage only.

Services covered by the guarantee will only be possible if the machine is accompanied by the guarantee certificate, if the machine has not been tampered with, repaired by unauthorised persons or damaged due to improper use.

This guarantee does not cover parts subject to wear during routine applications.

This guarantee is valid provided that:

The purchase date is confirmed by the stamp and signature of an authorised agent.

The guarantee card has been filled in and sent within 10 days from the date of purchase (freight bill date) to "SIRI S.r.l.".

IMPROPER OR UNUATHORISED APPLICATIONS OF THE MACHINE WILL RENDER THE PRESENT GUARANTEE NULL AND VOID

GUARANTEE

COMPLETE THE GUARANTEE IN ALL PARTS AND SEND IT WITHIN 10 DAYS OF PURCHASE TO:

Ditta S.I.R.I. S.r.l. - Viale Delle Nazioni,77 - 41100 MODENA

CUSTOMER NAME:		
.....		
.....		

"STELLA " Art. 4000	Serial n°:	Purchase date:
Stamp and signature of dealer:		



DECLARATION OF CE CONFORMITY

We **SI.RI S.r.l.**
 Viale delle Nazioni, 77
 41100 MODENA (ITALY)
 Tel. 059/313191 - Fax 059/311362
 www.siri.mo.it - info@siri.mo.it

Declare on our sole responsibility that the machine:

MAKE **SI.RI**
 TYPE Two-speed brushing machine
 MODEL **STELLA**
 SERIAL NUMBER
 YEAR OF MANUFACTURE 20

complies with Directive 98/37 EEC as modified by Directives 91/368 EEC, 93/68 EEC and 93/44 EEC.

Signature and stamp


CONFORMITY DECLARATION
Description:

Electrical two-speed brushing machine for floor grouting, cleaning and abrading by means of different accessories.

Model: "Maxispazzolatrice 2 Velocità"

Type: Art. 4000 "Stella"

Serial Number:

CONFORMITY DECLARATION.

We, signers of this letter, declare upon our exclusive responsibility, that this machine is in conformity with Directives 89/392/CEE, 91/368/CEE, 93/44/CEE, 93/68/CEE and also with what is written in harmonized technical norms.

EN292-1-2;
 EN60204.
 Modena, li.....



Legal representative
 Franco Trevisi

**INTRODUCTION**

Our compliments on your purchase of our electrical single-brush "Two-speed brushing machine" Art.4000

The "Brushing machine" was developed to ensure that maximum reliability and functional efficiency will be delivered over time.



The present manual contains important advice as regards setting up the machine on site, as well as full information on spare parts, cleaning and maintenance.

This much said, it is essential that the installer and the user should be suitably experienced and knowledgeable in the use and workings of the machine.

It is similarly essential that the operator read carefully and adhere scrupulously to all directions given in the manual, relative both to operating procedures and to routine and major servicing activities.

Consequently, the Operation and Maintenance manual *should be thought of as part of the machine and kept handy at all times for ready reference whenever needed: indeed the manual must stay with the machine from initial purchase through to final destruction.*

In the event of the manual being lost or damaged, the operator can obtain a replacement copy from S.I.R.I.

When reading the manual special attention must be paid to any part where the following symbols appear:  

**WARNING**

Indicates any operation or part of the equipment considered potentially hazardous in terms of jeopardizing the smooth operation or durability of the machine and its component parts.

**DANGER**

Indicates any operation or part of equipment of the machine considered potentially hazardous in terms of operator safety.

This manual contains information concerning storage, transport, installation, use, supervision and maintenance of the machine described.

This manual is an integral part of the machine and must be kept throughout the entire service life of the same for future consultation. If your copy of the manual becomes unreadable, ask the maker for a new copy at the following address:

SIRI

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 41100 MODENA (ITALY)
 Tel. 059/313191 - Fax 059/311362
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 MEMBER OF EXPO – MODENA CONSORTIUM

specifying the machine type and the serial or order number printed on the machine's nameplate.

THE OFFICIAL LANGUAGE OF THE MAKER IS ITALIAN.

No responsibility is assumed for translations in other languages, which do not correspond to the original meaning.

This manual reflects the state-of-the-art the moment the machine was supplied and cannot be considered inadequate if there have been subsequent modifications according to further experience. **SIRI** reserves the right to update its products and manuals without being obliged to inform the users of machinery previously supplied of these modifications. The provision of information concerning updates of the machine and manual is to be considered as a form of courtesy.





CHAPTER 1 DESCRIPTION OF THE MACHINE

1.1 MACHINE MANUFACTURING AND IDENTIFICATION DATA

Two data plates are fitted to the "Brushing machine", positioned on its side as illustrated in Fig. 1. The first plate bears the mark, the model and article numbers of the machine, the serial number and the year of manufacture. The second plate carries the motor data. No item of data on either plate must be altered in any way.



MODENA ITALY		SINGLE-PHASE MOTOR	
Voltage		W. 600/900	
A. 3.2/4.3	µF 60	RpM. 1650	
INSULATION CLASSEF	SERVICE S1		

Fig. 1.



4.3 REPLACING THE ACCESSORIES

⚠ CAUTION: Before performing the following operations, make certain the machine has been disconnected from the power panel.

Keep to the following instructions to replace accessories:

- 1 - Lock the handle in vertical position;
- 2 - Levering by foot placed between the wheels, lift the brush and lay the handle on a steady surface.
- 3 - Give the plate 1/4 of turn anticlockwise;
- 4 - Fix the new accessory;
- 5 - Impress 1/4 of turn clockwise to lock the accessory;
- 6 - Place the machine in working position;

⚠ Use only S.I.R.I. accessories supplied with rapid-attachment flange.

⚠ The warranty is immediately forfeited when accessories other than S.I.R.I. are used.

4.4 CLEANING THE MACHINE

⚠ All the following operations must be carried out with the machine switched off and isolated from power supply.

Perform when work has been completed:

- 1- Thouroughly empty the tank;
- 2- Disconnect the accessory from the machine to keep it from locking to the rapid-attachment flange;
- 3- Thouroughly clean the accessory (if the sponge has been used, wash it to eliminate any grout or cement residue, which would otherwise dry up and make the sponge unserviceable);

⚠ Do not immerse the machine into water.

⚠ When washing the machine, take care the water is never jetted at directly on to the motor or to the commutator.

PROLONGED IDLENESS:

Check the integrity of electrical cables;

Dismantle the handle and accessory, so to prevent distortion, then place the machine into the supplied carton box.

4.5 DISMANTLING THE MACHINE

Before packing the machine into the supplied box dismantle it as follows:

- Disconnect the machine from the power panel;
- Bring the handle in vertical position until is blocked;
- Lock the knob on the right side letting the handle lower;
- Disconnect the plug on the handle from the socket on the starting lever;
- Loosen the knob fixing the handle to the fork;
- Disconnect the handle from the fork;
- Lift the stand;
- Grip the handle on the side of the machine;
- Put the machine inside the supplied carton box.





CHAPTER 4 MAINTENANCE

⚠ Caution: All routine and major servicing operations must be performed with the machine disconnected from the power supply.

4.1 ROUTINE MAINTENANCE

The user must carry out routine maintenance operations (cleaning and lubrication) and check the integrity of the machine's working parts at least once a week.
A limited number of operations only can be performed by the user:

Replacing the cleaning accessories;
Cleaning every part of the machine;
Maintaining the water level in the tank;
Checking the state of all electrical cables.

⚠ NB: Always replace damaged cables with original spare parts.

⚠ Never perform mending operations with joints or insulating tape.

All of these operations must be carried out in strict accordance with the directions on safety and procedures contained in the present manual.

No other general maintenance is required beyond the possible replacement of parts that may become damaged during normal use; this work must be entrusted only to skilled fitters approved by the S.I.R.I. company.

4.2 MAJOR SERVICING

In addition to weekly routine maintenance, the "Brushing machine" will require some servicing operations, typically when working has been completed on site, and especially if the equipment is to remain idle for an extended period of time:

Cleaning all parts of the machine;
Carefully lubricating of all moving parts that may have had lengthy exposure to damp and dirty conditions;
Dismantling and packing into the carton box for transport.



1.2 INTENDED USE

The "Brushing machine" is a single-brush developed for:
- cleaning and treating all sorts of floors after laying operations;
- levelling the surfaces before the laying operations;
- filling the joints after laying;
by means of the proper accessories.

The Brushing machine is equipped with a lever switch with a mechanical safety device.
The machine is designed for the professional, though may be employed also by persons knowledgeable in its use.

PROTECTION DEVICES

A \varnothing 450 mm brush is the single moving part of the machine; its lower side touches the ground, while the upper one is covered by a plastic plate. No special personal protection devices are therefore needed.

ELECTRICAL COMPONENTS

The "Brushing machine" is endowed with a lever switch with safety button (Fig.2). By pushing the yellow button on the switch casing and pulling the lever (as illustrated in the serigraphy on the upper side of the switch box) the brush is set into motion.

Releasing the switch lever, the motor rotation is halted and consequently the brush stops turning, but the motor is still connected to the power supply.

The "Brushing machine" is equipped with a switch/commuter (Fig.3) performing the dual function of supplying power to the motor and selecting the first (1400 rpm) or the second (2800 rpm) speed.

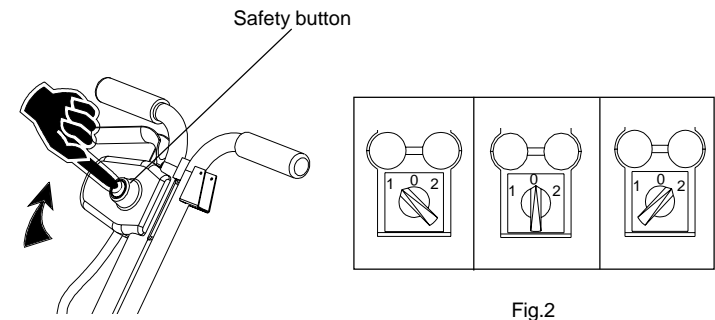


Fig.2





1.3 DETAILED DESCRIPTION OF THE MACHINE

The "Brushing machine" is a single-brush designed for allowing professional users to perform most cleaning, treating and grouting operations, required while laying tiles. The machine comprises the following main parts (Fig.4)

- 1 - Motor with gear reducer;
- 2 - 5 lt. tank;
- 3 - Brush cover;
- 4 - Switch with safety device;
- 5 - Demountable handle;
- 6 - Tank opening lever;
- 7 - Fork;
- 8 - Commuter/Condenser Casing;
- 9 - Stand with wheels.

1.3.1 MAIN PARTS OF THE MACHINE



Fig.4



3.4 OPERATING PROCEDURES

Starting up operations will be widely discussed at chapter "CLEANING OPERATIONS". Just insert the plug into the socket of the power panel with the due precautions previously described and the socket into the handle.

To set the brush into motion, turn the knob of the commutator to the position "1" or "2" according to the desired speed, then move the handle lever as previously described.

To water clean, pull the lever on the left side of the handle every time the surface needs wetting.

NB: the second need is advised for grouting and water cleaning, whereas the first is recommended for any other operations, like dry cleaning with pads or brushes and floor foundations smoothing.

3.5 CLEANING OPERATIONS

After installment of the machine as illustrated in the previous instructions, proceed as follows to perform any operations:

Before starting up the machine to perform cleaning operations with water or other products:

Fill the tank with the suitable product;

Then:

- 1- Insert the power socket into the fitted plug integral with the switch;
- 2 - Connect the plug on the opposite side of the extension with the power socket;
- 3 - Lift the stand
- 4 - Turn the commutator knob to the "1" or "2" position to select the first or second speed;
- 5 - Push the yellow button on the upper side of the lever switch;
- 6 - At the same time pull the lever of the switch to set the brush into motion;

To clean with water or detergents, whenever needed, pull the lever connected to the tank for a few seconds to let the fluid wet the surface to be treated.

NB: when operating:

- ⚠ CAUTION: One person only must operate the machine.
- ⚠ Nobody other than the user should be allowed in the space immediately surrounding the machine while working.
- ⚠ CAUTION: Daily check power cables of the machines.
- ⚠ Make certain the operator is always free from obstacles
- ⚠ Any adjustments must be carried out with the machine switched off and isolated from the power supply.





3.2 INSTALLATION

⚠ CAUTION ⚠

It is the user's responsibility to ensure that installation is carried out in compliance with local regulations. The machine must be installed by a skilled person who has read carefully and understood the information given in the present manual. All directions given concerning installation of the machine must be followed with care. For any doubts regarding installation, contact the maker without delay.

To facilitate transport operations, the machine is supplied in three parts: motor, handle and nylon brush (given with the machine). Commissioning must be carried out following some basic rules: Just one person is required to take the machine out from the box due to its relative lightness. To facilitate this operation a handle has been fixed on the back side of the machine.

First, position the machine on a side to fix the brush to the motor, by locking the accessory giving the rapid-attachment flange 1/4 of turn clockwise.

Then place the machine on an even surface and lay it on the equipment previously described. Insert the handle into the fork and lock it by means of the apposite knob and connect the plug on the handle with the socket on the fork.

Finally install the lever for the supply of the fluid inside the tank: place the lever inside the fitting support, checking that the clasping hole of the fork coincides with the hole of the support, then fix them by means of the elastic safety pin.

Always check

- that the line voltage at the panel is the same as the rated voltage given on the motor data plate and - that it is properly earthed- that plugs and sockets grant continuous earthing.

⚠ Never connect the machine to a switchboard panel that is not properly earthed. This could result in a **SEVERE AND POTENTIALLY FATAL ELECTRIC SHOCK**.

⚠ Never use the machine on any surface that is not level. Operating the brushing machine in such conditions can be very dangerous.

3.3 ADJUSTING THE MACHINE

The "Brushing machine" leaves the factory fully tested; the user need not to perform any adjustments or fixing operations, except for assembling handle and brush.



1.3.2 MOTOR REDUCER EXPLODED

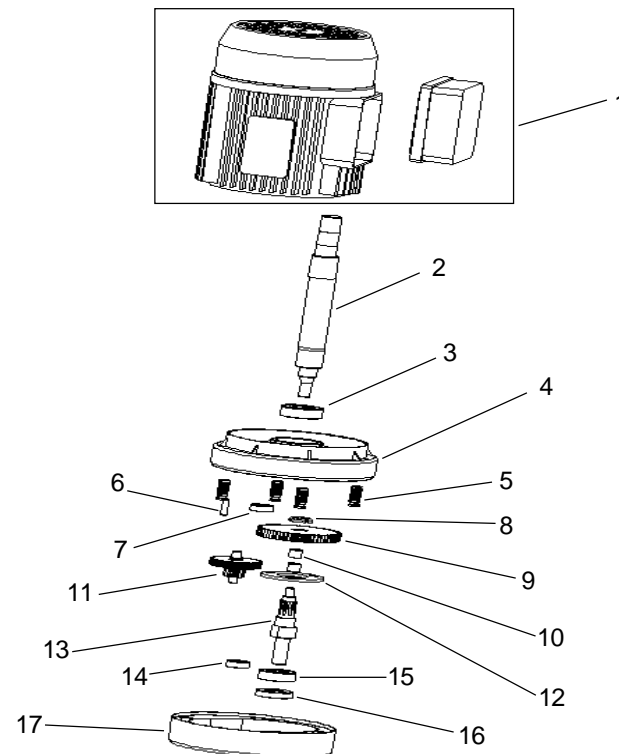


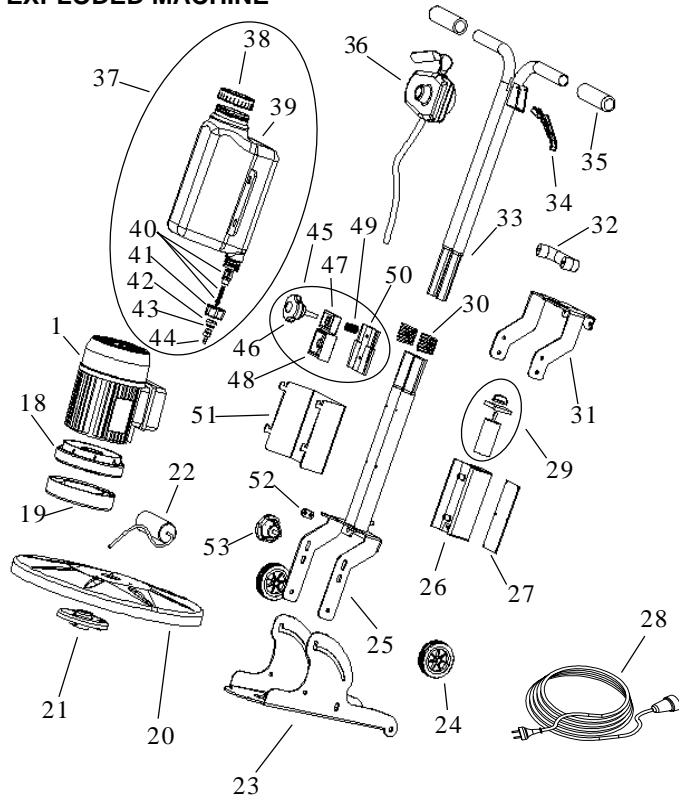
Fig. 5

Pos.	Q. ty	Description	CODE
1	1	Complete motor V, 120/60	104102
1	1	Complete motor V, 230/50	104100
1	1	Complete motor V, 240/50	104101
2	1	Shafted motor	104099
3	1	Bearing	6203
4	1	Reducer base	14-28
5	4	Insert for base	/
6	1	Parallel pin	243SPI
7	1	Bearing	14-27
8	1	Metal ring for reducer	G12X1
9	1	Main gearing	253
10	2	Case roller	14-26
11	1	Secondary gearing	251
12	1	Slab for bearing	14-51
13	1	Threated pin	821-1
14	1	Bearing	14-27
15	1	Bearing	270
16	1	Gasket ring	14-17
17	1	Reducer cap	14-24





1.3.3 EXPLODED MACHINE



Pos.	Qty	Description	CODE	Pos.	Q.ty	Descrizione	CODICE
18	1	Reducer base with gears	14-29	36	1	Lever switch	14-04
19	1	Reducer cap with gears	14-22S	37	1	Tank kit	4100
20	1	Brush cover	104085	38	1	Big plug	104156
21	1	Attachment flange	104305	39	1	Tank	104155
22	1	Condenser	104111	40	1	Tap set	104163
23	1	Motor holder plate	104321	41	1	Small plug	104157
24	2	Wheels	288-01	42	1	Metal ring tap	104162
25	1	Fork	104325	43	1	Oring tap	104166
26	1	Commuter casing	233	44	1	Joint tap	104161
27	1	Cover casing	234	45	1	Aluminium blocking set	449
28	1	10 mt cable with schuko plug V,120/60	14-120	46	1	Ball-grip D.60 M8x40	1032
28	1	10 mt cable with schuko plug V,230/50-V,240/50	14-18	47	1	Little connecting terminal	452
29	1	Commuter	538	48	1	Medium connecting terminal	451
30	2	Blocking springs	104091	49	1	Pression spring	606
31	1	Blocking plate	104341	50	1	Big connection terminal	450
32	1	Hand grip	104005	51	1	Plate tank	104158
33	1	Galvanized handle	14-06	52	1	Blocking slab	104046
34	1	Water tank lever	104170	53	1	Ball-grip D.60 M8x35	1038
35	2	Chips	361				



CHAPTER 3 INSTALLATION

3.1 TRANSPORT

To facilitate transportation and packing, the handle is disconnected from the machine (Fig.11), then the two parts are stored inside a cardboard box.

Weight of the machine and carton box: 28 kg.

NB: dimensions are given in mm.

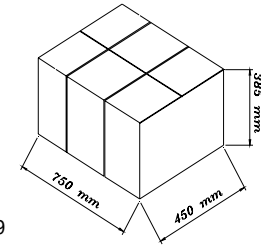


Fig. 9

Before handling on site, isolate the machine from the power supply and disconnect the plug from the electrical socket on the lower part of the handle, then unhook the locking lever from the stand.

Lower the stand until it gets connected in the second position of the locking lever, then lift the machine from the front side and handle it by means of the stand wheels.



BEFORE MOVING THE MACHINE, CUT OFF THE POWER SUPPLY, BY PRESSING THE "0" BUTTON AND DISCONNECT THE PLUG FROM THE POWER PANEL.







2.2 CORRECT USE OF SAFETY DEVICES


No special mechanical protective devices are supplied with the machine, since it presents no potentially dangerous points for the operator.


2.3 CORRECT USE OF PERSONAL SAFETY EQUIPMENT

Neither ear protectors (see section 1.7.4), nor glasses are needed to operate this machine, since there is no risk of object projections while performing cleaning operations.

2.4 INCORRECT AND PROHIBITED USE OF THE MACHINE

  Do not pour into the tank cleaners like trichloroethylene, petrol, acetone, muriate acid, oil of turpentine, or other inflammable solvents, damaging to plastic pieces, as well as to the safety of the operator.

 Use only SIRI brushes on the "Brushing machine".


 Any adjustments or operations involving the replacement of worn out mechanical parts must be carried out with the machine disconnected from the power supply.



2.5 INFORMATION ON RESIDUAL RISK FACTORS

The machine presents no residual risk factors, since, as said before, it is not dangerous.



1.4 IMPROPER USE OF THE MACHINE

 **CAUTION:** Any servicing operations must be carried out with the machine either switched off or isolated from the power supply.

  Do not pour into the tank cleaners like trichloroethylene, petrol, acetone, muriate acid, oil of turpentine, or other inflammable solvents, damaging to plastic pieces, as well as to the safety of the operator.

1.5 SAFETY DEVICES AND PROTECTIONS

The "Brushing machine" comes with no special mechanical safety devices, since it presents no dangerous points for the operator.


1.6 LIST OF CONTROLS

The "Brushing machine" is extremely simple as regards controls:

A lever switch with safety device (Fig.3) supplying power to the motor and consequently making the brush rotate;

A commutator/switch to select the first or the second gear.

It is vital that the controls are never tampered with.

 In the event of power failure, turn the knob of the commutator to the "0" position.

Access to the operating controls must be restricted exclusively to authorised persons.

1.6.1 DESCRIPTION OF CONTROLS

The main commutator/switch is designed to keep the motor connected to the power supply at the first or second speed, whereas the lever switch with safety device sets the motor, and consequently the brush, into motion.


The switch works as follows:

- Turn the knob to the "1" position to supply power for the first speed (Fig.3);
- Turn the knob to the "2" position to supply power for the second speed (Fig.3);
- Turn the knob to the "0" position to disconnect the motor from the power supply (Fig.3).

Proceed as follows to set the plate into rotation:

- After connecting the motor to the power supply, push the switch on the handle and at the same time pull the lever to set the motor and the brush into motion;
- To halt the brush rotation, release the switch lever.

 **CAUTION:** Before connecting the machine to the switch panel, make certain the panel is fitted with a residual current device.

 **CAUTION:** Check that the nominal power supply voltage of the panel is the same as the rated voltage given on the plate bearing the technical data of the motor.



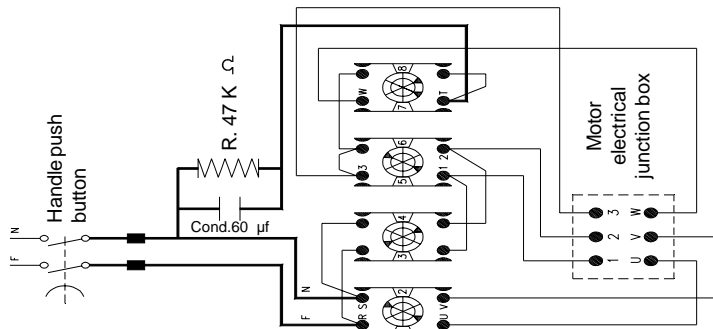


1.7 TECHNICAL DATA

	ART. 4000-1	ART. 4000	ART. 4000AU
Power supply	120 V - 60 Hz	230 - 50 Hz	240 - 50 Hz
Power draw	7 A	3 A	3 A
RPM	1650	1650	1400
Capacitor	240 mf	60 mf	60 mf
IP protection rating	54	54	55
Insulation class	F	F	F
Tank capacity	5 lt	5 lt	5 lt
Max brush diameter	Ø45cm	Ø45cm	Ø45cm
Max smoother diameter	Ø53cm	Ø53cm	Ø53cm
Weight	26 kg	26 kg	26 kg
Overall dimensions	1200x550	1200x550	1200x550

1.7.1 ELECTRICAL SYSTEM DIAGRAM

The various items accompanying the machine also include the diagram of the electrical system (fig.7). Should this ever be lost or mislaid, contact S.I.R.I.



1.7.2 OVERALL DIMENSIONS

Weight of machine: Kg. 26.

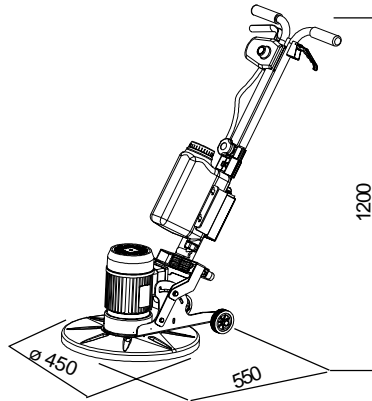


Fig. 7



1.7.3 NOISE LEVELS

Acoustic pressure at operator station is lower than 70 dBA.



**EAR PROTECTORS
NEED NOT TO BE WORN
WHILE OPERATING THE
BRUSHING MACHINE**



CHAPTER 2 GENERAL SAFETY REGULATIONS

2.1 GENERAL POINTS

- ⚠ Any repair or servicing operations must be carried out with the machine switched off and disconnected from the power supply.
Read carefully through the manual before laying operations and before starting up, servicing or performing any operation on the machine.
- ⚠ Do not allow unauthorised persons to work on the machine.
- ⚠ Do not wear rings, wrist watches, jewellery, or any other clothing (baggy or loose fitting, unzipped, unbuttoned or torn) that could catch on moving parts; hair should also be gathered and tied if particularly long.
Do not occupy or encumber the operating area around the machine.
Never attempt to start the machine when affected by technical problems.
Make certain that any condition posing a possible threat to safety is eliminated before using the machine.
Report any irregularities in operation to site managers or appointed supervisors.
- ⚠ Make certain that all guards and other protective parts are properly in place and that all safety devices are installed and operational.
Observe procedures and information given in the manual regarding maintenance and customer service.
- ⚠ Do not use petrol, solvents or other inflammable cleaners on the machine.
- ⚠ Use only proprietary solvents certified non-inflammable and non-toxic.
- ⚠ One person only must operate the machine.
- ⚠ Nobody other than the operator should be allowed in the space immediately surrounding the machine when working.
- ⚠ Do not perform mending operations when the machine is working or connected to the power supply.
- ⚠ Check every day the status of the power cables.
- ⚠ Before connecting the machine to the switch panel, make certain the panel is fitted with a residual current device.
- ⚠ Before connecting the machine, check that the nominal power supply voltage is the same as the rated voltage of the machine.

