



Organizzazione con
Sistema di Gestione Certificato
ISO 9001 : 2008



ING. O. FIORENTINI S.p.A.
INDUSTRIAL CLEANING MACHINES

CARPET SWEEPER
MOD. "650"



OPERATING INSTRUCTIONS
AND MAINTENANCE

Congratulations for your choice!

FIorentini S.p.A. thanking you for the preference to our product, would like to remind you that **FIorentini's S.p.A.** production covers manufacture and marketing of industrial cleaning machines and is currently a Leading industry in this sector .

Our tradition and competence guarantee technical quality of your choice; actually all our products are being built first quality materials through criteria that can give reliability, solidity and functionality satisfying every kind of customers. **FIorentini** has recently obtained the quality system certificate conforming to the requirements of **UNI EN ISO 9001:2000**.

We wish therefore inviting you to contact us, unhesitatingly, for every kind of request, as technical or commercial; we'll be pleased to be at your disposal for any information you may need.

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1. GENERAL INFORMATION

1.1. USED SYMBOLS

	<p><i>This symbol is used to quote the attention of the operator on procedures or precautions to be followed to avoid damages to users or to the support</i></p>
	<p><i>This symbol is used to quote the attention of the operator on general informations</i></p>

1.2. NOTES

	<p><i>This manual is property of FIorentini S. p. A. All rights reserved to copy, totally or in part, and transmission to third parties with mechanic, electronic or whatever means, without permission of manufacturer. It's been made in one original copy unless differently specified in order place.</i></p> <p><i>Manual is delivered with relative machine, of whom it constitutes integral part, and it has to be given in case of transfer of the machine too. We remind to put it in a safe place and keep it for all the machine lifetime. Purchaser is responsible to show it to qualified people. In case of loss ask for a duplicate to FIORENTINI Co..</i></p> <p><i>FIORENTINI decline every responsibility for any kind of possible damages caused by persons and/or things due to non-observance of instructions in this manual.</i></p> <p><i>FIORENTINI reserves the right to introduce in every moment and without notice all the technical and commercial changes useful considered. Therefore data and information reported could have changes and/or updating notes.</i></p>
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1.3. MANUAL REFERENCES

This manual deals exhaustively with all necessary arguments for easy and safe use of the machine, as recommended by European Directives about product security.

Consequently we recommend to all authorised operators to use it of reading attentively this manual in every part and carefully applying everything indicated, asking for explanations to FIORENTINI in case of doubt. The manual must also be used as referring documentation each time it needs to remind a procedure or operation or to train new operators.

For publishing reasons, pictures and drawings can look different from reality however without showing meaning doubts.

Special symbols and **bold type** and/or *slipping* remind the attention of the reader on remarkable information, particularly for safety.

Index of review is reported, each single page, at the bottom. List of revised pages can be found to the end of the manual.

1.4. WARRANTY

Terms and conditions of warranty are stated to the following points if not differently specified in the order confirmation.

OBJECT OF WARRANTY

The autoscrubber has been conceived and built for a long-term use without relevant problems; anyway, in case of anomalies during the warranty periode, FIORENTINI Co. is engaged to repair and/or substitute for free parts which have shown early brakage or wear and tear caused by defective materials, working defects or imperfect assembly.

Warranty is not given for parts which early brakage or wear and tear are due to:

- Non-respect of instructions included in this manual;
- Breaking and/or changes made up without FIORENTINI's approval;
- Not-use of genuine wear parts;
- Interventions made up by unauthorised personnel;
- Maintenance missing;
- Natural calamities.

WARRANTY TERMS

Warranty is granted for a 12 months periode since delivery date; this is a single warranty term, and extensions cannot be given following to substitutions or reparations made in this periode.

EXCLUSIONS

Warranty does not cover normal wear parts and materials (brushes, squeegee blades, etc...), and those parts of whom is impossible to define lifetime in advance.

APPLICATION MODES

In order to establish anomalies causes, so that warranty could be applied, is necessary that defective components must be sent to FIORENTINI. Repairing or substituting works under warranty will be, by FIORENTINI's opinion, made in its own workshop, or by third party on place. Works on place, are supplied with customer's energy sources and exceptional equipment to repairing if necessary.

INTERVENTION DEMANDS

Possibile intervention demands have to be addressed to the technical assistance service of FIORENTINI Co. in writing or by phone, just after a attentive analysis of fault and of causes, so that it would be necessary to report to the agent the following data:

- Machine model, get from the relative label (point 2.1.);
- number, get from the relative label (point 2.1.);
- detailed description of defect and the way it happened;
- controls and/or regulations made;
- code number and position of possibile defective component, deduced from spare parts list (point 7.2);

GOODS TO BE RETURNED

In case of goods to be returned for warranty replacement, it is necessary to have a written acceptance from FIORENTINI technical department before sending them.

All defective parts must be carefully packed in order to avoid further damages during transport.

Goods must be shipped ex-warehouse and followed by :

- **serial number of the equipment where they were installed on;**
- **item code of the defective part;**
- **detailed description of the defect and of the condicions where it happened.**

In case of defective electric or electronic goods, please return them separately from other materials, in order to help us in dividing dangerous wastegoods and recicle the (RAEE) as DER 2002/96/CEE LOW.



Components recognized under warranty are delivered ex works; those ones being substituted are property of FIORENTINI Co..



The relative label missing will involve the loss of any kind of warranty.

1.5. CONFORMITY DECLARATION

Conformity declaration is consigned with the support and the manual of operating and maintenance instructions.

**DICHIARAZIONE CE DI CONFORMITA' - DECLARATION OF CONFORMITY
DECLARATION DE CONFORMITE-EG-KONFORMITÄTSEKTLÄRUNG-
DECLARACION DE CONFORMIDAD**
(ai sensi dell'allegato II 1.A della Direttiva Macchine 2006/42/CE)

La ING.O.FIORENTINI SPA
con sede in Via Piancaldoli 1896 Firenzuola, 50033, (FI)

DICHIARA/DECLARES/DECLARE/ERKLÄRT/ DECLARA
in qualità di costruttore sotto la propria responsabilità che la macchina
As manufacturer under its own responsibility that the machine
En tant que fabricant sous sa propre responsabilité que la machine
Als Hersteller, erklären, in alleiniger Verantwortung, dass das Produkt
Como fabricante, bajo su responsabilidad que la máquina

CE

Modello/model/modèle/Typ/modelo
**Matricola/serial number/numero de série/
Fabriknummer/ Número matricula**
**Anno di costruzione /
Year of production/ Année de production/
Baujahr/ Año de producción**

a cui la presente dichiarazione si riferisce è conforme alle prescrizioni
which this declaration refers to, is in conformity with the requirements
à laquelle se réfère cette déclaration, est en conformité avec les prescriptions
Auf das sich diese Erklärung bezieht, mit der normativen übereinstimmt.
que esta declaración se refiere, está en conformidad con los requisitos

*della direttiva macchine 2006/42/CE/ Directive 2006/42/CE / de la Directive 2006/42/CE / der EG-Richtlinie 2006/42/EG über
Maschinen / De la directiva máquinas 2006/42/CE*

*della direttiva compatibilità elettromagnetica 2014/30/EU/ the Electromagnetic Compatibility Directive 2014/30 / EU / de la Directive
Compatibilité Electromagnétique 2014/30 / EU / elektromagnetische Verträglichkeit (EMV) 2014/30/EU / la directiva de
compatibilidad electromagnética 2014/30/EU*

*della direttiva sui rifiuti di apparecchiature elettriche ed elettroniche (RAEE) 2012/19/UE/ Directive on Waste of Electrical and
Electronic Equipment (WEEE) 2012/19 / EU / de la directive relative aux déchets d'équipements électriques et électroniques (DEEE)
2012/19 / UE / Elektrische und elektronische Geräte Abfälle (DEEE)2012/19/UE Directiva sobre residuos de aparatos eléctricos y
electrónicos (RAEE) 2012/19/UE/
(ISCRIZIONE AL REGISTRO PRODUTTORI A.E.E.: N° IT1201000007391)*

In particolare alle disposizioni normative
In particular, the regulatory rules
En particulier, les dispositions réglementaires
Gemäß den Bestimmungen der Richtlinie
En particular, las normas reguladoras

**EN ISO 12100, EN ISO 13857, EN ISO 13850, EN 60204-1, EN 349,
EN 953, EN ISO 4413, EN 60335, EN 60335-1, EN 60335-2-69, EN 60335-2-72, EN 55014-1, EN 55014-2,
EN 62233, EN 61000-6-2, EN 61000-6-4**

Il fascicolo tecnico è costituito da Ing.O.Fiorentini S.p.a. in qualità di persona giuridica - via Piancaldoli 1896 Firenzuola 50033 Fraz. Piancaldoli (FI) - Italia
The technical dossier consists of Ing.O.Fiorentini Spa as a legal person - via Piancaldoli 1896 Firenzuola 50033 Fraz. Piancaldoli (FI) - Italy
Le dossier technique est constitué de Ing.O.Fiorentini Spa comme personne juridique - via Piancaldoli 1896 Firenzuola 50033 Fraz. Piancaldoli (FI) - Italie
Die technische Dokumentation besteht aus Ing.O.Fiorentini Spa as a legal person - via Piancaldoli 1896 Firenzuola 50033 Fraz. Piancaldoli (FI) - Italy
El expediente técnico se compone de Ing.O.Fiorentini Spa como una persona jurídica - via Piancaldoli 1896 Firenzuola 50033 Fraz. Piancaldoli (FI) - Italia

Piancaldoli
Luogo e data

Ing. O. Fiorentini S.p.a.
Il Legale Rappresentante/president/gérant/ representante
Angelica Maria Cerutti
Firma *Angelica Maria Cerutti*

2. SUPPORT FEATURES AND SPECIFICATIONS

2.1. IDENTIFICATION

The CARPET SWEEPER machine can be identified with an adhesive label put on the protection carter in the backside of the machine which will clearly report the data referring to “CE” marking

FIGURA N° 2.1

Ing. O. Fiorentini SPA Piancaldoli (FI)		MADE IN ITALY	CE
	Mod. S650	S.N.	2008
V 12	Hz.		
Kg 48	A	W	



The label has never to be removed and should be always kept legible. In case of damaging it's necessary to ask for a duplicate. The autoscrubber machine cannot be commercialized without the label.

2.2. DESCRIPTION AND COMPONENTS

The CARPET SWEEPER machine 650 has been designed for treatment of flat areas, hard and carpets, by a sweeping process that puts the dust in a dust tank in the back of the machine. The power supply is furnished with accumulator batteries at 12V and the traction system is due to the brushes' inertia.

The machine is supplied with two rotating brushes: one lateral and one central. The lateral brush moves the dust to the center of the machine and the main /central brush conveys the dust in the tank, aspirated by a fan motor. This machine must be utilized on dry surfaces. It is aspirated and piped in the recovery tank.

The testboard controls some of the functions of the machine and puts at the operator's disposal a signalling system, through lighting leds, of the remaining charge of the battery. With the testboard it is possible to carry out the following functions:

- to switch on and off the machine;
- to start the 2 brushes;
- to select the pressure level;
- to start the suction motor;
- to start the filter shaker;
- to check the battery level charge

The main components of the machine are:

- black painted chassis;
- recovery tank in plastic ;
- carter in plastic;
- brush motor;
- reduction motor;
- main brush;
- lateral brush ;
- tree free wheels;
- filter motor shaker;
- aspiration fan ;
- driving handle;

FIorentini Co., taking care of new safety rules in CE community , has manufactured the machine following safety and health rules of the CE normaty. High quality material used, high tecnologia and Fiorentini experience allowed to have performant machine .

Each machine is inspected during the manufacturing time and the final check is done before shipping out the machine.

2.3. TECHNICAL DESCRIPTION

CARATTERISTICHE TECNICHE – TECHNICAL CHARACTERISTICS – CARACTERISTIQUES TECHNIQUE	
	CARPET SWEEPER 650
DIMENSIONI IN UTILIZZO LxLaxH mm	900X650X950
DIMENSIONI A RIPOSO LxLaxH mm	900X650X450
CAPACITA' SERBATOIO RIFIUTI	38 L
LARGHEZZA LAVORO –	650 MM
DIMENSIONE SPAZZOLA CENTRALE -	400 MM
MOTORIDUTTORE SPAZZOLA LATERALE	24 v 220 RPM
MOTORE SPAZZOLA CENTRALE –	12 V 2300 RPM
MOTORE ASPIRAZIONE –	12 V
DIMENSIONE SPAZZOLA LATERALE	DIAM 300
PESO CON BATTERIA–	48 KG



The above characteristics are not a must for the manufacturer so they can be changed without any notice .In any case ING.O.FIORENTINI Co. Is always at disposal for any information (7.1).

MEASUREMENT UNITS CONVERSION			
Lenght	1 inch = 1" = 25,4 mm	Power	1 kW = 1,36 CV = 1,34 BHP
Temperature	T (K) = t (°C) + 273 / t (°F) = 1,8 t (°C) + 32	Pressure	1 bar =100 kPa = 14,5 psi

3. SAFETY

3.1. CORRECT USE



The machine is a carpet sweeper machine and has been studied and manufactured to be used to clean flat floors or with maximum slope of 5%..

3.2. INCORRECT USE



- *Not authorized operator uses;*
- *Not regular floors cleaning*
- *Cleaning of surfaces with more than 5% slope*
- *To use the machine in place with dangerous products*
- *Floor cleaning with inflammable products;*
- *To use the machine as transport vehicle of person or goods;*
- *Modify or removing protection device;*
- *Charging the batteries in places with no suction or with good ventilation;*
- *No respect of safety rules from the operator;*
- *Any modification that can modify the correct machine function;*
- *Any modification not authorized by Fiorentini Co.*
- *Use of acid products that can damage the machine*
- *Not respect of what mentioned in the operator's manual.*



*Read carefully the information labels placet on the machine , don't cover them for any reason.
FIORENTINI is not responsabile for the machine use not in a correct way .*

3.3 SUGGESTED EQUIPMENT

In order to use in a better way the machine characteristics i ssuggested to use the original parts and spare parts studied by Fiorentini Co.. In any case the Technical department is at customers disposal in order to satisfy any needs .

3.4. OPERATOR QUALIFICATION

Follow the request operator qualification for different uses

OPERATION TYPE	OPERATOR QUALIFICATION
Use /Inspection	Taught operator
Installation / disinstallation	Specialized technician
Mechanical parts maintenance	Specialized technician
Electrical parts maintenance	Specialized technician
Ordinary maintenance	Taught operator
Dismantling and demolition	Specialized technician

We recommend to teach the personnel to the use of the machine, above all for that it concerns safety aspects ; particularly operators must read and understand this manual.



FIorentINI decline every responsibility for accidents to persons or things from using the machine by non-authorized or unqualified operators.

3.5. PROTECTION AND ALARM SYSTEMS



- *It is absolutely forbidden to camper with these dispositives, keep them out or disconnect during the functioning of the machine.*
- *We recommend to verify periodically their efficiency (point 5.1).*

<p>Brushes covers</p>	<p>The machine CS650 is equipped by two brushes, one lateral and one central, which rotate during working. The prevent the accessibility to the danger areas there are plastic carters. To remove these parts only by specialized thecnical.</p>
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3.6 SAFETY DEVICES

This machine is provided of the following safety systems.

3.7 DIAGNOSTIC MESSAGES

DIAGNOSTIC			
ERROR N°	ERR SIGN	NOTE	CHECKING
ERR1	CHARGER	THE MACHINE IS UNDER CHARGER; IT CAN NOT WORK	REMOVE THE CHARGING CABLE BEFORE START TO WORK
ERR2	BRUSH CURRENT	CURRENT OUT OF TOLERANCE	CHECK THE CABLE CONNECTION
ERR3	VACUUM CURRENT	CURRENT OUT OF TOLERANCE	CHECK THE CABLE CONNECTION
ERR4	SHAKER CURRENT	CURRENT OUT OF TOLERANCE	CHECK THE CABLE CONNECTION
ERR5	JACK CURRENT	CURRENT OUT OF TOLERANCE	CHECK THE CABLE CONNECTION
ERR6	BATTERY	THE BATTERY MUST BE RECHARGED	RECHARGE THE BATTERY
ERR8	BRUSHES	THE BRUSH CAN NOT WORK; THE BRUSH MUST BE CHANGED	SOMETHING LOCK THE BRUSH; CHANGE THE BRUSH

3.8 RESIDUAL DANGERS

La FIORENTINI ha analizzato tutti i pericoli correlati all'uso della macchina allo scopo di eliminare, o perlomeno ridurre, il rischio di infortunio per gli operatori, fin dalla fase progettuale. Per ridurre il rischio associato ai pericoli residui si è provveduto informando gli operatori mediante segnaletica e indicando i mezzi e le procedure antinfortunistiche da adottare.

CRUSHING DANGER

Crushing danger may happen:

- **When replace the main and lateral brushes;**
- **When clean the aspiration filter;**
- **When adjust the brush pressure;**

All the maintenance operations must be do with the machine turned off.

Also, there are appropriate signals on the machine in order the remember the dangers.

OVERTURNING DANGER

Overturning danger may happen:

- During the normal utilizing when the machine passes the gradient limits specified in this manual or when the machine is utilized on not regular surface which have holes. (Point 3.2)


	<ul style="list-style-type: none"> • Don't use the machine to clean up areas exceeding 5% of sloping or presenting holes, and depressions which might compromise the stability of the machine.
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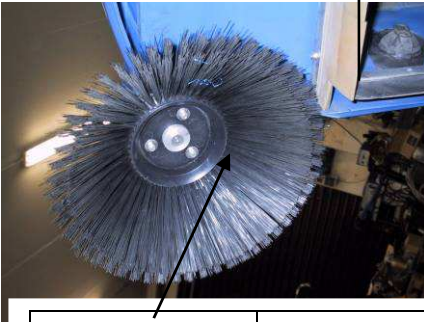
	<p><i>FIORENTINI decline every responsibility for accidents to persons or things using the machine on surfaces that can compromise the stability of the same one. The operator has to follow recommendations about areas conditions on which he has to work.</i></p>
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3.9. SAFETY SIGNALS

Safety signals include :


DANGERS		Signals are triangular shaped with black coloured in yellow field pictograms
PROHIBITIONS		Signals are circular shaped with black coloured in white field red-crossed pictograms

	What is it ?	This signal shows the prohibition to remove covers in which members are still moving.
	What to do ?	In phase of installation/maintenance we recommend, to remove mobile protections, to disconnect the ignition key from the control board. When the machine is in action not enter with body's parts and make sure that all covers are well fixed.



	What is it ?	This signal shows crushing dangers due to moving parts of the machine.
	What to do?	In phase of installation/maintenance we recommend to keep away the ignition key from the control board.



	What is it ?	This signal shows crushing dangers due to moving parts of the machine.
	What to do?	In phase of installation/maintenance we recommend to keep away the ignition key from the control board.



In case of wear and tear, the purchaser must re-establish similar signals of danger. It's absolutely forbidden to keep out or to temper with these signals.

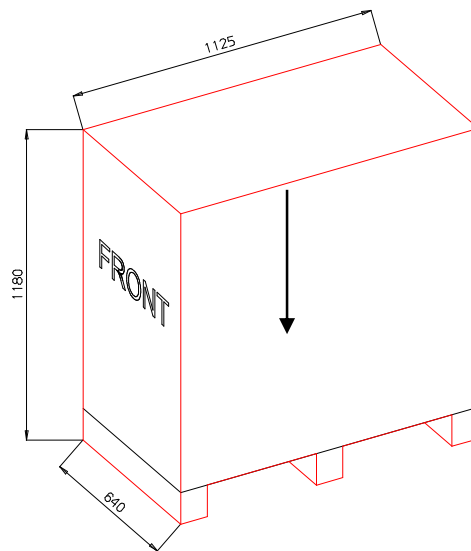
4. INSTRUCTIONS FOR STARTING AND USE

4.1. TRANSPORT AND HANDLING

This autoscrubber is delivered to the purchaser in a special package, which features are well showed in picture 4.1, completely assembled. The package shows the barycentre position indicated with a black arrow. The forks of the truck or transpallet must be placed in such a way as the black arrow is at the center of them. The package has to be moved carefully. We recommend not to place packages one on the top of the other. As agreed with purchaser, the machine can be delivered without package, placed on a bed and blocked with bands.



*At the moment of delivery we suggest to check the machine about accidental damages while transported and about have received all material indicated in coverings ; in case of damages or missing parts, please inform the forwarder and the manufacturer that will soon as possible provide to the mishap.
Missing particular agreements, the goods travel at the purchaser's risk.*



PIC. 4.1.

Handling of the machine has to be carried out with suitable lifting apparatus, as showed below. Take always care about the elevator forks, or the sling bands, that have to be placed with the black arrow, as drawn on the package, has to be put at the center of the lifting system. Anchorage or slinging points are prepared for having a good balanced position when lifting up the machine.

PACKAGE TYPE	LIFTING APPARATUS	PIC.
Cartoon or plywood with bed	Elevator with forks	N° 4.1



Bands to be used must be suitable for the effective loading. Operations must be executed slowly avoiding oscillations or upsettings. The uncorrect way of operating can damage the support or expose to dangers.



Machine dimensions and mass are explained at point 2.3. We strongly recommend authorised personnel for lifting operations.

LOADING DIAGRAM



FIGURA N° 4.2

4.2. STORAGE

In case the machine is not immediately installed, it has to be preserved in a dry and closed Place to grant a perfect conservation and efficiency of its body parts. Humidity must be lesser than 80 % and storage temperature between $3^{\circ} \text{C} \leq t \leq + 45^{\circ} \text{C}$.

4.3. INSTRUCTIONS TO UNPACK THE MACHINE

- Cut off the bands being careful of the elastic reversion
- Take away on the base of the cartoon the clips that keep it together with the pallet.
- Where plywood is take away the clips at both sides and at the base of each panel.
- Cut off the clips that stop the machine.
- Put the machine at round level.

4.4 HANDLE THE UNPACKED MACHINE

- Check the machine and mount the batteries if not installed.
- To deplace it, after use, take off the battery cables, the brushes and the squeegee; to deplace it through a longer space pack the machine once again in its own package.

4.5. INSTALLATION



The installation must be done by authorized personnel after reading this manual.

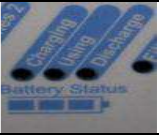

4.6. CONTROL DEVICES

4.6.1. CONTROL BRIDGE

The control bridge is composed by some switches which control the main functions of the machine. Here below there is a tab that resume all the main functions of the bridge panel (pic. N° 4.6).



FIGURA N° 4.6

POS.	PULSANTE	FUNZIONE
1	Brushes 1	<u>BRUSH PRESSURE 1</u>
2	Brushes 2	<u>BRUSH PRESSURE 2</u>
3	Filter Shake	FILTER SHAKE
4	Suction	<u>ON/OFF SUCTION</u>
5		<u>BATTERY CHARGE LEVEL</u>
6		<u>START / STOP</u>

4.7. FUNCTIONING

To cleaning in the right way a surface, it is a delicate operation and based on the operator experience to choose the right brushes to use. For example, if there is a carpet to clean, it is advisable to have a double cleaning action and also to make a little pressure on the handle. The traction is helped by the rotation of the main brush, if will be hard to move the machine, please check the right brush rotation.



Before proceeding with any kind of operation, check out that protections are still firmly fixed.

4.7.1 STARTING AND MACHINE PREPARATION

The carpet sweeper is equipped with a battery charger in order to recharge the battery only with the utilize of the cable provided.(p/n 1 pict. 4.7) All the operations must be do with the machine switched off.

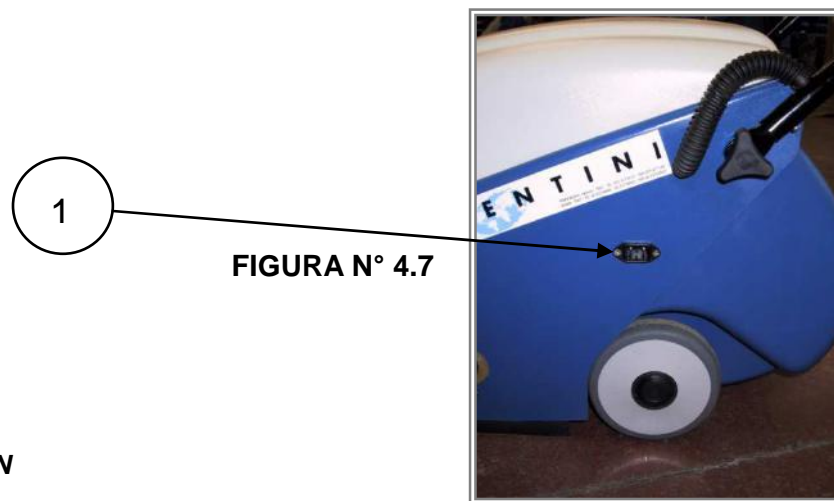


FIGURA N° 4.7

4.7.3 HANDLE REGULATION

The drive system can be regulate in function on the operator high..

- Knob for the regulation of the inclination(1 pict 4.8);
- To unscrew the R.h. and L.f. knob and regulate the handle position. After regulation, screw the 2 knob.

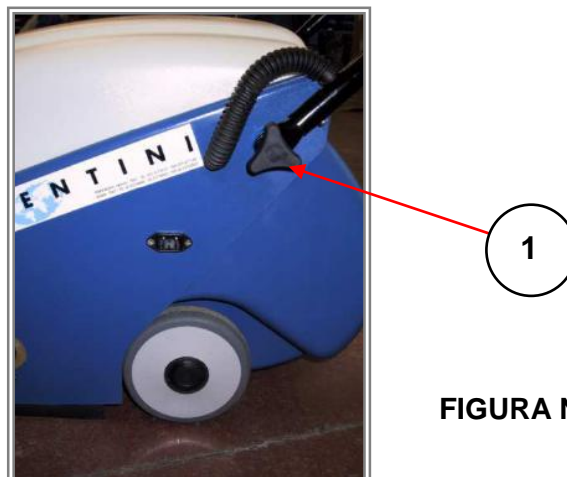
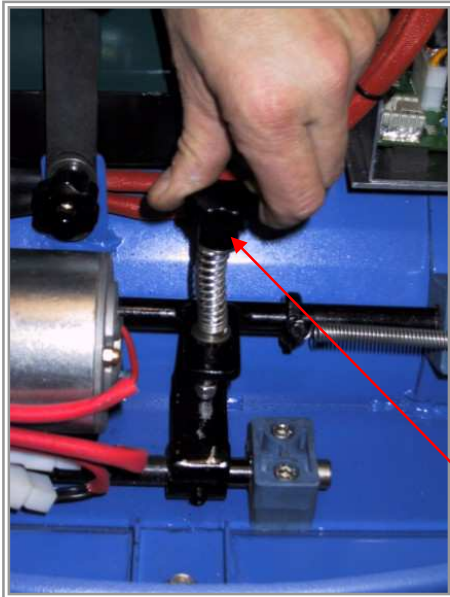


FIGURA N° 4.8



1



2

FIGURA N° 4.9

4.7.4 LEVERAGE FUNCTION

The machine is due by 2 levers:

- Lateral brush pressure lever (p/n 1 pct 4.9). screw and unscrew the knob to increase or decrease the pressure of the lateral brush.
- Replaced lever for the main brush (p/n 2 pct 4.9). pull out the lever and replace the wear main brush. The machine must be switch off.

4.7.5 WASTE TANK EMPTYING

The operator has to follow the instructions below in order to empty the waste tank:

- Unlock the claps (p/n 1 pct 4.10)
- To empty the tank (p/n 2 pct 4.10).in the appropriate rubbish bin
- Insert the tank and lock it

All the operations must be do with the machine switched off.



2

1



FIGURA N° 4.10

4.7.6 BRUSHES REPLACING

To replace the main brush to follow all below sequences:

- Turn off the machine.
- Pull up the machine as showed in pct 4.11
- Pull the lever (p/n 1 fig. 4.11) in order to remove the bearing from the brush.
- Remove the main brush and replace it with a new one.
- To leave the lever and replace the bearing into the brush.
- Let down the machine, ready to work

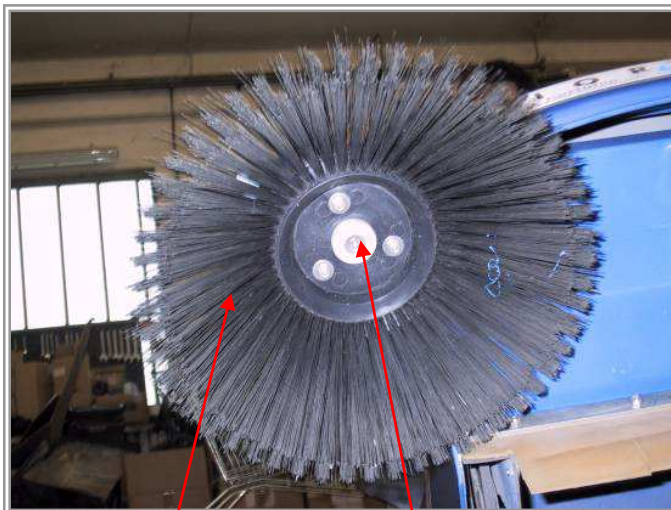


FIGURA N° 4.11

1

To replace the lateral brush to follow all below sequences:

- Turn off the machine.
- Pull up the machine as showed in pct 4.12
- Unscrew the central screw (pct 1 fig. 4.12)
- Remove the brush and replace it with a new one (pct 2 fig. 4.12)
- To screw the brush and let down the machine.



2

1



FIGURA N° 4.12


5. MAINTENANCE

5.1. MAINTENANCE TABEL

To keep a good efficiency of this autoscrubber machine and grant a good reliability during the warranty periode, is essential to keep a periodic maintenance using the tab reported in this manual.



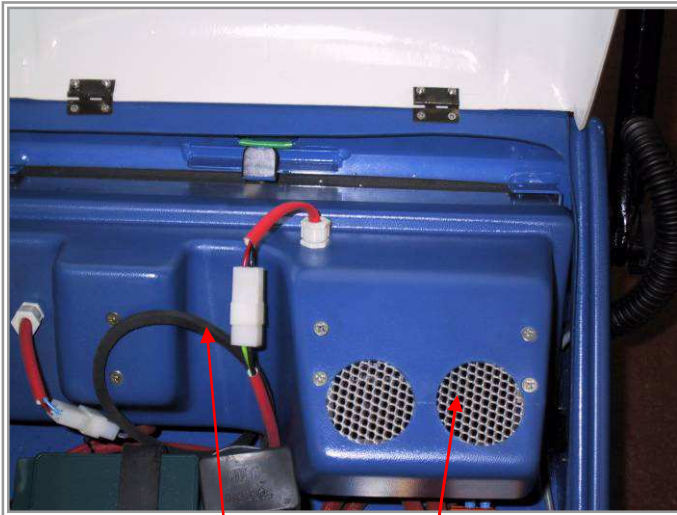
- *Authorized personnel only can service this machine, particularly for electrical and electromechanical parts using suitable tools and equipment for every intervention.*
- *For assistance and spare parts address exclusively to Fiorentini S.p.A. (point 7.1. / 7.2.).*

OPERATIONS TO BE MADE	INTERVENTION MODALITIES	FREQUENCY
Cleaning up	Clean up the recovery tank and filter and suction motor filter	Every day
	 <ul style="list-style-type: none"> • Never use corrosives. • Don't use water jets. 	
Control	➤ Check suction	Weekly
	➤ Brushes worn ➤ Electrical cable without problems	Every 15 days
	➤ Safety devices ➤ Electrical card systems	Every year

5.3 MAINTENANCE OF SUCTION MOTOR

The suction motor must be efficient and cleaned. Every six months check the brushes and if necessary replace them . Maintenance of suction motor needs the following operations :

- Stop the machine and disconnect the plug from the battery;
- Keep the motor and the filter removing the blocking rubber (particular fig.5.1).
- Keep out the filter and clean it with the air. (particolare 2 Fig. 5.1)
- To check the aspiration motor inside the plastic carter. (particolare 3 fig.5.1)



1

3

FIGURA N° 5.1

2

5.4 ELECTRICAL EQUIPMENT CHECKING

The electrical system must be checked every two years. Possible defects, such as connections off and burnt cables, must be suddenly replaced.



All intervention on the electrical system must be done by a technician.
All maintenance or repair out of the ordinary maintenance must be done with personnel authorized only by FIORENTINI.

5.5 MAINTENANCE REGISTER

DATE	OPERATOR	TIPOLOGY / NOTE	SIGNATURE

6. TECHNICAL ASSISTENCE

6.1. SERVICING ADDRESSES

For warranty assistance and/or request of maintenance and repair, or information, customer can apply to the Technical Service of FIORENTINI S.p.A. as follows:

ING. O. FIORENTINI S.p.A.

“THE BEST IN FLOOR MACHINES”

FILIALI:

20132 MILANO – Fax. 02/2592779

Via Palmanova 211/a – Tel. 02/27207783 - 2564810

00012 Guidonia Montecelio (ROMA) – Fax. (0774)353419 - 353314

Via B. Pontecorvo 20 – Tel. (0774)357184 - 353015

STABILIMENTO:

50030 PIANCALDOLI (FI) – Fax. 055/817144

Loc. Rombola – Tel. 055/8173610

Many technical problems can easily find a solution; therefore, before contacting our Customer Service, we advice to read carefully this manual.

Where consulting the Service, it occurs to clearly specify kind and modalities of problem, to provide with the in a suitable way.

6.2 VERBAL CLAIM

fiorentini S.p.A, has a big consideration of customer needings, that's why we think we can always get precious information to improve our products, placing at customer's disposal a statement to point out possible defects using our CARPET SWEEPER 650.

Form filled in by:	
Firm: _____	
Name of compiler: _____	
Position in the firm: _____	
Date: _____	Signature: _____

Description of the machine:	
Machine: _____	Model: _____
Purchase date: _____	Chassis number: _____
Machine under warranty: <input type="checkbox"/> YES <input type="checkbox"/> NO	Hours of work : _____
Point out working environment of the machine: _____	

Description of defect:	
Code of defective particular: _____	Name: _____
Typology of defect:	Short description of defect:
<input type="checkbox"/> Detective mechanical component	_____
<input type="checkbox"/> Incorrect functioning	_____
<input type="checkbox"/> Electrical system failure	_____
<input type="checkbox"/> Engine failure	_____
<input type="checkbox"/> Missing component	_____
<input type="checkbox"/> Excessive noisiness	_____
<input type="checkbox"/> Water leakage	_____
<input type="checkbox"/> Other	_____

Customer's notes :
<p>Please point out notes and/or suggestions on products / services of Ing. O. Fiorentini S.p.A.</p> <p>_____</p> <p>_____</p>

Mat. n.
Serial no. _____
Nr. de serie

Data di spedizione
Date of shipment _____
Date de spedition

Distributed by:

ING. O. FIORENTINI S.p.A.

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