

**S2
SW2**



EN Use and Maintenance

CE

49.0257.00
ed. 02-2019

IT**DATI IDENTIFICATIVI**

I dati identificativi e la marcatura "CE" della macchina sono posizionati sulla targhetta posta sotto il pannellino comandi.

Si consiglia di trascrivere il modello della macchina e il relativo numero di matricola nella tabella riportata nella pagina seguente.

EN**IDENTIFICATION DATA**

The machine identification data and the "CE" marking are shown on the plate, located under the control panel.

It is advisable to make a note of the machine model and the relative serial number shown on the following page.

FR**DONNÉES D'IDENTIFICATION**

Les données d'identification et le marquage «CE» de la machine se trouvent sur la plaque située sur le panneau de commande.

Il est recommandé de reporter dans le tableau ci-dessous le modèle de la machine et le numéro relatif de matricule.

DE**KENNDATEN**

Die Maschinenkenndaten und die Aufprägung "CE" befinden sich auf dem Schild unter der Steuertafel. Es ist ratsam das Maschinenmodell und die dazugehörige Matrikelnummer in unten stehende Tabelle einzutragen.

ES**ESDATOS IDENTIFICATIVOS**

Los datos de identificación y la marca "CE" de la máquina están posicionadas en la placa colocada debajo del panel de mandos.

Se recomienda transcribir el modelo y el número de matrícula de la máquina en la tabla inferior

PT**DADOS IDENTIFICATIVOS/TÉCNICOS**

Os dados identificativos e a marcação "CE" da máquina estão posicionados na placa posta por baixo do painel de comandos.

Recomendamos que você anote o modelo da máquina e seu número de série na tabela abaixo.

NL**IDENTIFICATIEGEGEVENS**

De identificatiegegevens en de CE-markering van de machine zijn op het plaatje onder het bedieningspaneeltje vermeld.

We raden u aan om het machinemodel en serienummer in de tabel op de volgende pagina in te vullen.

RU

ИДЕНТИФИКАЦИОННЫЕ ДАННЫЕ

Идентификационные данные машины и "CE" маркировки приведены на табличке, расположенной под панелью управления.Рекомендуется записать модель машины и ее серийный номер в таблицу на следующей странице.

PL

DANE IDENTYFIKACYJNE

Dane identyfikacyjne i oznakowanie „CE” maszyny znajdują się na tabliczce znajdującej się pod panelem sterowniczym.

Zaleca się wpisać model i numer fabryczny maszyny do tabeli znajdującej się na kolejnej stronie.

DK

IDENTIFIKATIONSDATA

Maskinens identifikationsdata og EF-mærket er placeret på mærkepladen under kommando-panelet.

Det tilrådes at skrive maskinens model samt serienummeret på tabellen der er trykt på næste side.

SV

IDENTIFIERINGSDATA

Maskinens identifieringsdata och CE-märkning anges på märkskylten som sitter under kontrollpanelen.

Vi rekommenderar att ni skriver av maskinmodellen och det tillhörande registreringsnumret i tabellen som finns härunder.

TR

TEKNİK ÖZELLİKLER

Makinenin tanımlayıcı bilgileri ve "CE" işareti kumanda panelinin altına yerleştirilmiş tabelada bulunmaktadır.

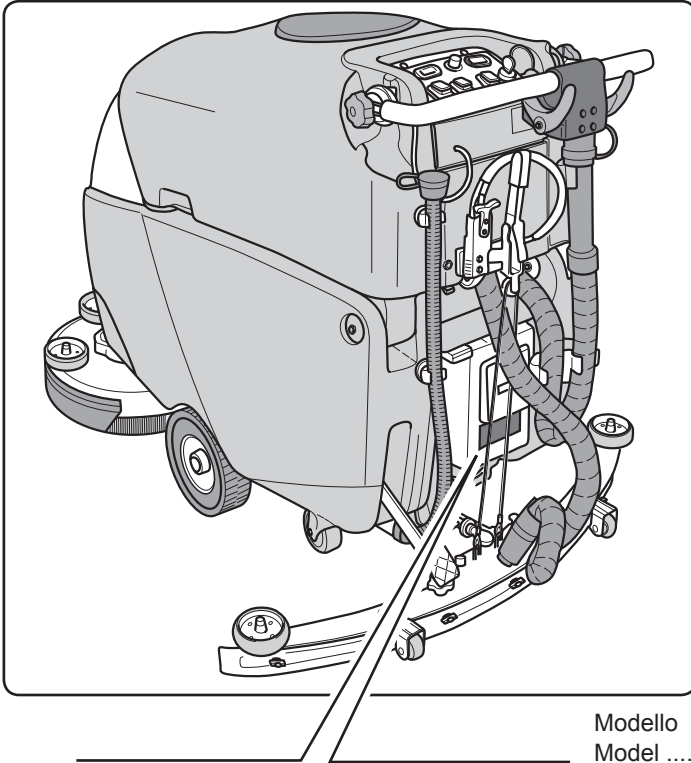
Cihazın modelini ve bir sonraki sayfadaki tabloda belirtilen ilgili ürün numarasını bir yere not etmeniz tavsiye edilir.

HU

AZONOSÍTÓ ADATOK

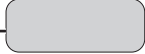

A gép azonosító adatai és „CE” jelzése a kapcsolótábla alatti táblácskán található.

Javasoljuk, hogy írja be a gép típusára és sorozatszámára vonatkozó adatokat a következő oldalon található táblázatba.



Produttore
Manufacturer
Producteur
Hersteller
Fabricante
Produtor

Modello
Model
Modèle.....
Modell
Modelo
Modelo

 _____ _____ _____		CE MAX 2% 
Scrubber Dryer V~ Tot:..... W		Mod: Art.:
Nr. MADE IN ITALY	IPX3	Year: GVW: ... Kg
Art.: Nr.		

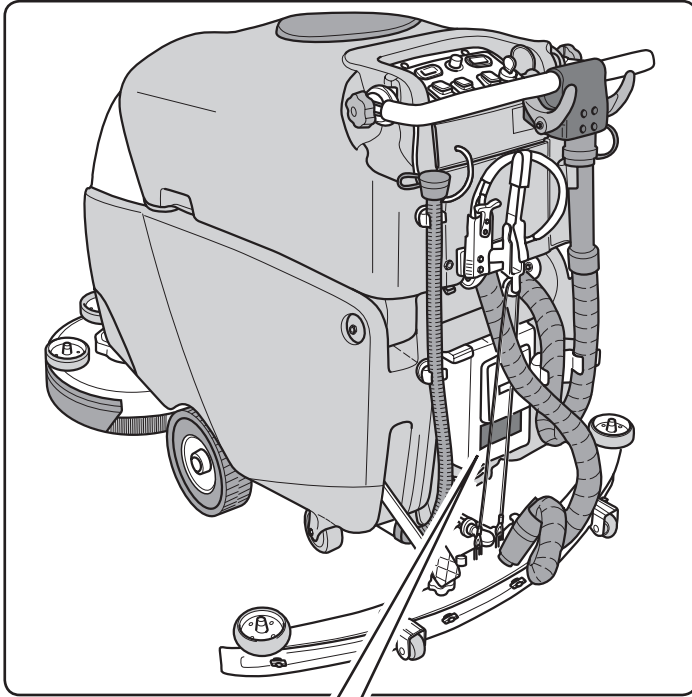
Codice articolo
Item code
Référence de l'article
Artikelnummer
Código del artículo
Código do artigo
Anno costruzione
Year of production
Année de construction
Baujahr
Año de construcción
Ano de produção

Caratteristiche elettriche
Electrical characteristics
Caractéristiques électriques
Elektrische Eigenschaften
Características eléctricas
Características elétricas

N° Matricola
Serial N°
N° Matricule.....
Matrikelnr.:
N° Matricola
Número de série



Grado di protezione
Level of protection
Degré de protection
Schutzgrad
Nível de protección
Nível de proteção

Peso in ordine di marcia
Full load weight
Poids à pleine charge
Gesamtgewicht in vollbeladenem Zustand
Peso con carga plena
Peso (plena carga)



Producent
Производитель
Gyártó
Producent
Producent
Tillverkare
Üretici Firma

Model.....
Модель.....
Modell.....
Model.....
Model.....
Modell.....
Model.....



 MAX 2%

Scrubber Dryer

..... V~ Tot:..... W

Nr.

MADE IN ITALY

Art.:

Nr.

Year:

IPX3

Mod:

Art.:

GVW: Kg

Artikelcode
Артикул
Cikkszám
Artikelcode
Kod produktu
Artikelnummer
Ürün Kodu

Konstruktionsår
Год выпуска
Gyártási év
Bouwjaar
Rok produkcji
Konstruktionsår
İmalat Yılı

Elektrisk specifikationer
Электрические характеристики
Elektromos jellemzők
Elektrische eigenschappen
Właściwości elektryczne
Elektriska egenskaper
Elektrik Özellikler

Matrikelnummer.....
Серийный номер.....
Sorozatszám.....
Serienummer.....
Nr Fabryczny.....
Registreringsnummer.....
Ürün No.....

Beskyttelsesgrad
Степень защиты
Védelmi fokozat
Beschermingsgraad
Stopień ochrony
Skyddsgrad
Koruma derecesi

Vægt ved maks. opfyldning
Вес в снаряженном состоянии
Súly üzem közben
Gewicht met volle belading
Ciężar przy pełnym załadunku
Bruttovikt
Tam yüklü ağırlık



English ENGLISH - 1
(Translation of original instructions)

*Dear Customer,
Thank you for choosing one of our cleaning products.*

The floor scrubber dryer that you have purchased has been designed to satisfy the user in terms of ease of use and reliability over time.

We are aware that in order for a good product to stay that way, over time, it requires continuous updates aimed at meeting the expectations of those who use it on a daily basis. For this reason, we hope that you will not only be a satisfied customer but also a partner who does not hesitate to give us your opinions and ideas originating from your personal day-to-day experience.

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Technical data

Type of use Operator on ground

Characteristics

Power supply 24V battery
Installed load 1520 W
Forward movement..... forward/backward traction
Washing width 700 mm
Drying width.....950 mm
Theoretical hourly working capacity3400 m²/h

Brushes

Diameter / pad / number 360 mm / 14" inch. x 1
Motor power / number350 W x 1
Motor speed.....190 rpm
Specific pressure42 g/cm²

Traction

Motor power..... W 250
Maximum forward speed 5.0 Km/h
Maximum gradient which can be overcome at full load..... 2 %

Aspiration

Motor power..... 550 W
Negative pressure 165 / 1700 mbar / mmH₂O
Air flow rate..... 32 l / sec

Tank

Type.....Dual tank
Recirculation..... No
Solution capacity 80 l
Recovery capacity 90 l

Dimensions (l x h x b) 1250 x 710 x 1080 mm

Weight

Empty weight 129 kg
Weight with batteries 255 kg
Full load weight..... 338 kg

Optional

Bristle brushes..... 0,7 - 0,9 - 1,2

Tynex brushes

PAD entrainer

Squeegee rubbers

Gel batteries 6V 200Ah

Onboard battery charger 24V 20A

Noise 67,6 db (A)

ISO 5349 Vibrations 0,94

Operating temperature -10°C ÷ 40°C

Batteries:

It is advisable to use gel batteries.

1.1 INTRODUCTION

The manual is an integral part of the machine itself; it must therefore be stored carefully in a safe place which is accessible to all users (operators and personnel in charge of maintenance) for the entire machine life until demolition.

1.1.a - Purpose of the manual

The purpose of the manual is to provide the instructions necessary for putting into service, using and maintaining the machine with which it is enclosed.

It is advisable to read the instructions carefully and comply with the safety standards described in the manual to the letter.

The non-observance of these instructions/standards may cause damage to the machine and injury to the operator for which under no circumstances is the manufacturer responsible.

The safety information described in the manual supplements and DOES NOT REPLACE standards in force in the country in which the machine is used.

1.1.b - Consulting the manual

The manual is divided into chapters according to a logical order of knowledge and use of the machine.

For help with finding a specific topic, first consult the CONTENTS shown at the beginning of the manual.

1.1.c - Key to symbols used in the manual

In order to highlight information and procedures regarding safety, maintenance etc., the following symbols have been adopted in the manual:



DANGER:

Warns of a serious, even fatal danger for the safety of the operator and/or third persons.



WARNING:

Extremely important information in order to prevent serious damage to the machine and the environment in which it operates.



N.B.:

Additional information for correct machine operation or of a general nature.

1.1.d - Conventional terminology

The terms front, rear, forward, back, upper, lower, left and right refer to the operator in the working position with his/her hands on the guide handle.

To simplify, the brand name of the model has been replaced with "Machine".

1.2 GENERAL WARNINGS

Before putting into service, using and maintaining the machine, it is necessary for the persons involved (persons in charge and operators) to be trained regarding the operating procedures and safety standards shown in this manual.

Respect all the provisions contained in the manual and in any enclosed documentation.



DANGER:

It is forbidden for untrained personnel, children and disabled persons to use the machine.

1.2.a - Personnel qualifications

Operator

The term operator refers to a generic worker able to perform simple operations such as running the machine and carrying out the relative cleaning at the end of the working shift.

Electrical/mechanical maintenance technician

A technician qualified to operate on the machine in order to repair or replace parts which require the removal of the protective cover.

1.2.b - Operator position

While using the machine, the operator is positioned at the rear of the machine with his/her hands on the handle.

1.2.c - Protective clothing

- Use protective clothing as indicated in the standards in force in the country in which the machine is used.

1.2.d - General warnings before use

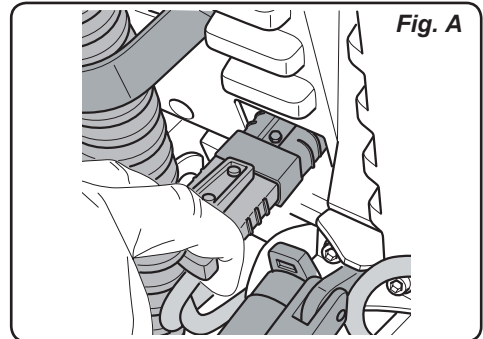
- Before using the machine, check that the fixed safety guards (covers) are always correctly secured in position.

1.2.e - General warnings while using the machine

- If the machine makes strange noises, stop it immediately and identify the cause.
- Do NOT abandon the machine on surfaces which slope by more than 2%.
- While using the machine, do not knock into shelving or cupboards.
- It is forbidden to use the machine outdoors or on public roads.
- If possible, use the machine in environments where no persons are present; in the present of unauthorised persons, warn them to move away before using the machine.
- Do not use the machine in environments with the presence of corrosive or salty substances.
- Do not use the machine in explosive environments (ATEX).
- It is not advisable to use an adaptor, multiple sockets, or an extension cord.
- If the electrical cord of this appliance is damaged, it must be replaced by an Authorized Customer Service Centre.

EMERGENCY (Fig. A)

In case of emergency pull the plug out of the socket; to disconnect power to the circuits and to stop all the functions of the machine



WARNING:

Unplug the machine while it is functioning only if absolutely necessary; do not follow this procedure to turn off the machine as it may cause serious damage to it.

1.2.f - General warnings about the batteries

- Battery acid is corrosive: in case of contact with the skin, rinse thoroughly with water.
- Use suitable personal protective equipment to prevent contact with the skin (see applicable regulations in the country in which the machine is used).
- Do not inhale the vapour: it is dangerous.
- When charging the battery, mixtures of explosive gases could form, therefore the rooms in which the battery is charged must be well-ventilated and comply with any specific applicable regulations.
- It is forbidden to smoke and/or use naked flames within a 2-metre radius of the battery during charging, in the charging area and during battery cooling after charging.
- Report any leaks of liquid from the battery: These are dangerous and highly polluting.
- Batteries must be replaced only by qualified personnel.

1.2.g - General warnings during maintenance

- Disconnect the batteries before carrying out maintenance or repairs.
- Do not rest tools and metal objects on the batteries; danger of short circuits.
- Do not use aggressive detergents, acid, lye etc. during cleaning and washing and take particular care with electrical parts.
- Do not wash the machine with direct or pressurised jets of water.
- When the machine must be lifted for any maintenance operations, it is necessary to work safely by placing fixed supports underneath it.
- Contact an authorised support centre for repairs and request ORIGINAL spare parts only.

1.2.h - General warnings in the event of a fire

- In the event of a fire, use approved powder extinguishers only; do NOT use water to put out the fire.

1.2.i - Prolonged machine standstill

- Place the machine under cover, sheltered from atmospheric agents in a place where the temperature is between 5°C and +40°C.
- Remove the ignition key.
- Drain the clean water contained in the tank.
- Charge the batteries and, once they are charged, disconnect them from the charger.
- Charge the batteries once a month.

1.3. INTENDED MACHINE USE

The machine has been designed and manufactured for washing and drying indoor floor surfaces.



DANGER:
Any other use releases the manufacturer from responsibility for damage or injury to persons and/or things and invalidates any warranty condition.

1.4 - NON-INTENDED MACHINE USE



WARNING:
The machine is not intended for outdoor use.



DANGER:

- do not wash floors with water hotter than 50°C;
- do not use diesel/petrol or corrosive detergents to wash floors;
- do not wash or suck up corrosive, flammable and/or explosive liquids, even if diluted.

1.4.a - Zone with risk of explosion

It is strictly forbidden to use the machine in environments where there is a risk of explosion with the presence of flammable and explosive gases, vapours, liquids and powders.

1.5. DEMOLISHING THE MACHINE

In order to protect the environment, proceed in compliance with local standards in force. When the appliance can no longer be used or repaired, proceed with the separate disposal of its components.



Electrical equipment cannot be disposed of as urban waste and it is necessary to dispose of it separately as introduced by the special regulation regarding the disposal of waste originating from electrical equipment (Italian Legislative Decree no. 151 of 25/7/05 - 2002/96/EC - 2003/108/EC).

The electrical equipment is marked with a symbol showing a wheeled bin with a cross on it. The symbol indicates that the equipment was put on the market after 13 August 2005 and that it must be disposed of separately.

In consideration of the substances and materials contained, inadequate or abusive disposal of the equipment or its improper use may cause damage or injury to persons and the environment.

Disposal of electrical waste which does not respect the standards in force leads to the application of administrative sanctions and penalties.

1.6. REFERENCE STANDARDS

This machine has been built in compliance with the machine directive in force and in accordance with the standards contained in the EC Declaration of Conformity supplied with the machine.

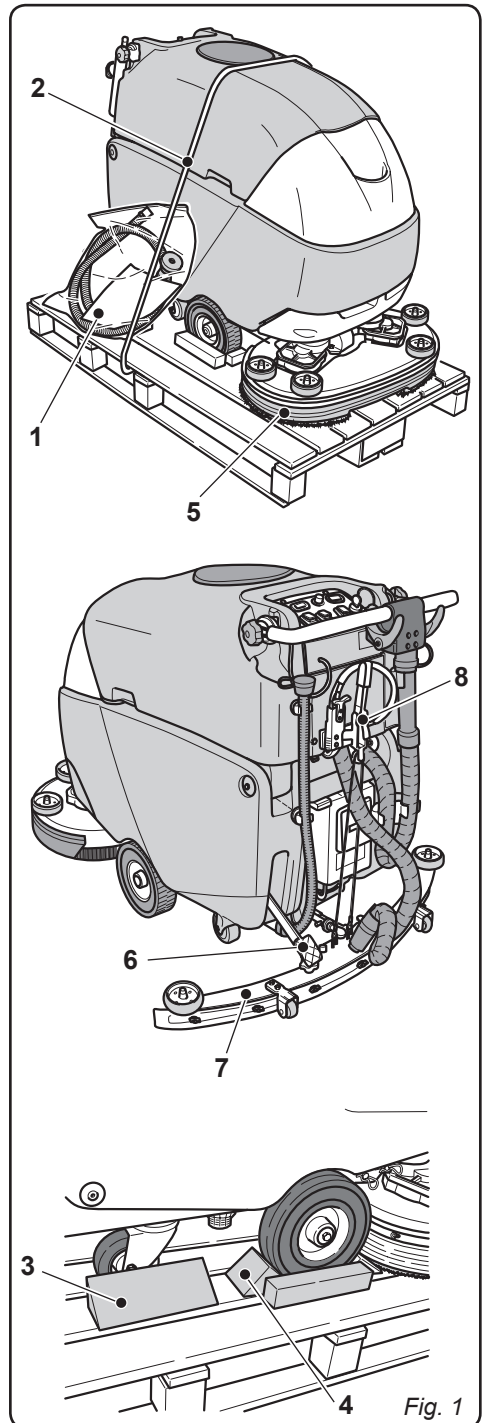
>>>

2.1 UNPACKING (Fig. 1)

Once the packaging has been removed as shown in the instructions on the packaging itself, check that the machine and all the components supplied are intact.

If any evident damage is found, contact the area agent and the carrier within 3 days of receipt.

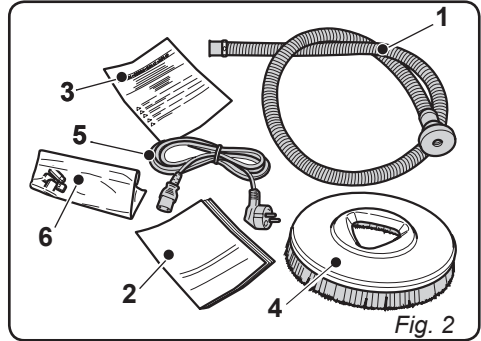
- Remove the bag (1) containing the accessories.
- Cut the strap (2).
- Remove the wooden blocks (6 and 4).
- Lift up the brush (5), by pressing the pedal (6) (see relative paragraph).
- Lift up the squeegee (7), by raising the handle (8) (see relative paragraph).
- Position a chute and unload the machine from the bench.



2.1.a - Standard machine equipment (Fig. 2)

The accessories supplied are as follows:

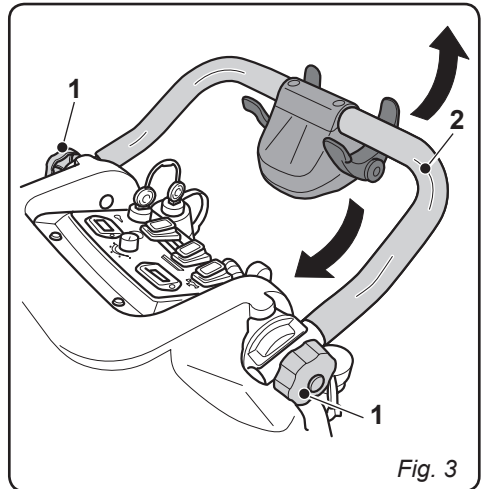
- 1) Water filling hose.
- 2) Machine use and maintenance manual.
- 3) Battery charger instruction manual (if present).
- 4) Brushes.
- 5) Battery charger power cable (if present).
- 6) 7,5A fuse - 25A fuse - 40A fuse.



3.1 ASSEMBLING THE COMPONENTS

3.1.a - Positioning of the handle (Fig. 3)

- Loosen the handwheels (1).
- Position the handle (2) at the required height then tighten the handwheels (1).



3.1.b - Installing and connecting the batteries (Fig. 4)



WARNING:

Check that the recovery tank and the clean water tank are empty.

- Disconnect the plug (1).
- Lift the tank (2) using the handle (3) until completely turned over.
- Position the batteries (4) as shown in the figure and connect them as shown on the chart in Fig. 4 using the cables supplied.
- Tighten the terminals (5) using an insulated wrench.
- Lower the tank (2).
- Connect the plug (1).



N.B.:

The battery must be connected by specialised personnel.

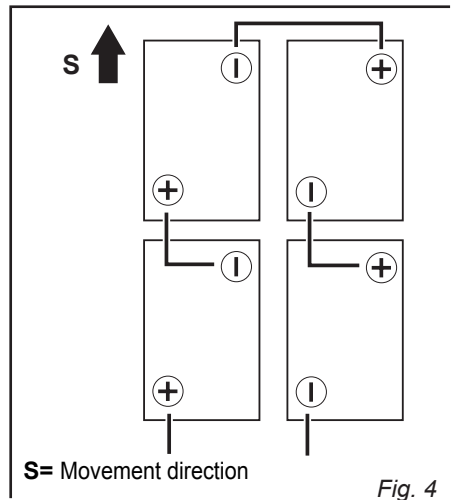
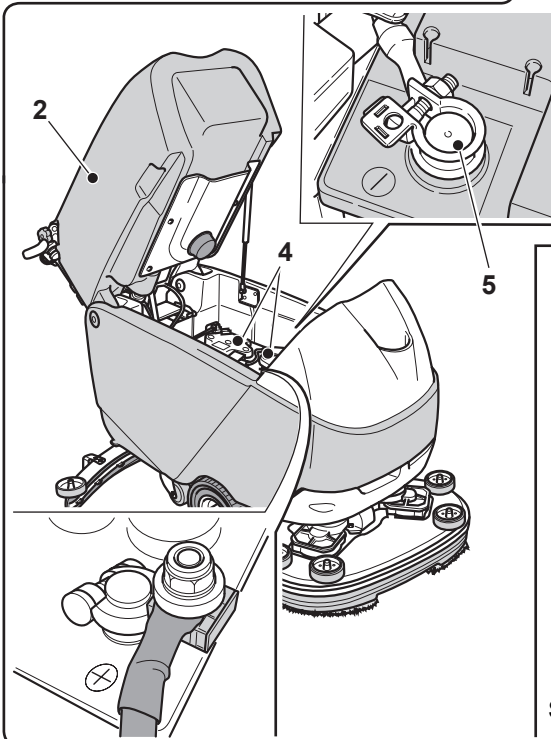
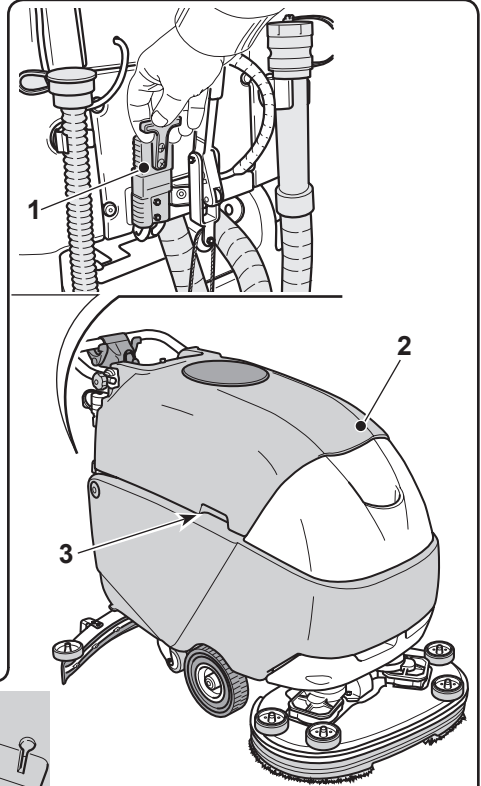


Fig. 4

4.1 CHARGING THE BATTERY



DANGER:

Charge the batteries in rooms which are well-ventilated and comply with applicable regulations in the country of use. For safety-related information, follow what is described in chapter 1 of this manual.



WARNING:

For information and warnings about the battery and on board battery charger (if present) follow what is described in the battery charger manual enclosed with this document.



WARNING:

When the machine leaves the factory, it is calibrated to operate with gel batteries. If acid batteries are installed, it is necessary to contact the Support Centre to carry out new calibration. It is forbidden to use the machine with gel batteries if the machine is calibrated for use with acid batteries.



N.B.:

For further information about calibration, please refer to the information in paragraph 10.1.h.



N.B.:

10 hours are needed for complete battery charging. Avoid partial recharges.

4.1.a - Charging the battery using the on board battery charger (if present) (Fig. 5)

- Move the machine close to a mains electricity socket.
- Remove the battery plug (1) from the system socket (2).
- Connect the battery plug (1) to the on board battery charger (4) socket (3).
- Extract the cable (5) from its special lodging and connect it to the socket on the machine (6). Connect the other end of the cable to an electrical outlet.

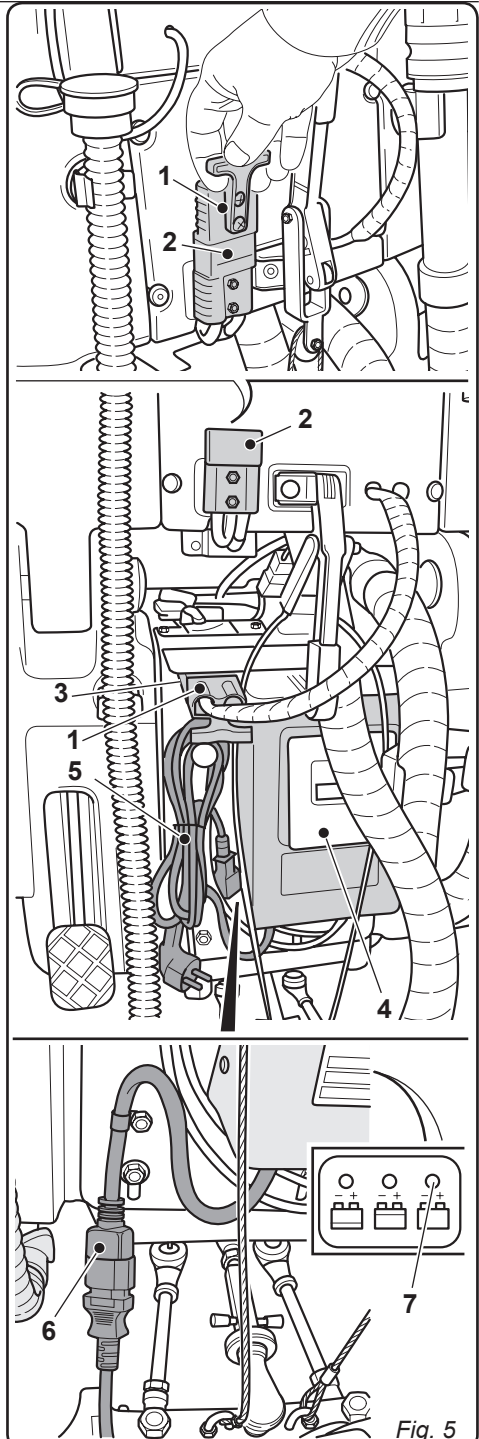


Fig. 5

**WARNING:**

Make sure that the mains electrical voltage is compatible with the battery charger's operating voltage (230 Vac for the European market; 115 Vac for the American market; 50/60 Hz).

- Leave the batteries to charge until the "Green" LED (7) lights up, then remove the power cable (5) and put it away.
- Reconnect the battery plug (1) to the system socket (2).

**AVVERTENZA:**

- Accertarsi che l'impianto elettrico di rete sia provvisto di interruttore differenziale (tipo salvavita).
- Unwind the electric power cable completely before connecting it to the mains socket.
- Utilizzare una prolunga elettrica solo se in perfetto stato; assicurarsi che la sezione sia appropriata alla potenza dell'apparecchio.
- Non lasciare mai scorrere il cavo di alimentazione su spigoli taglienti ed evitare di schiacciarlo.
- The socket must be easily accessible.

4.1.b - Charging the battery using an external battery charger (Fig. 6)

- Move the machine close to the battery charging station.
- Remove the battery plug (1) from the system socket (2).
- Connect the battery plug (1) to the external battery charger socket (3).
- Once battery charging is complete, reconnect the battery plug (1) to the system socket (2).

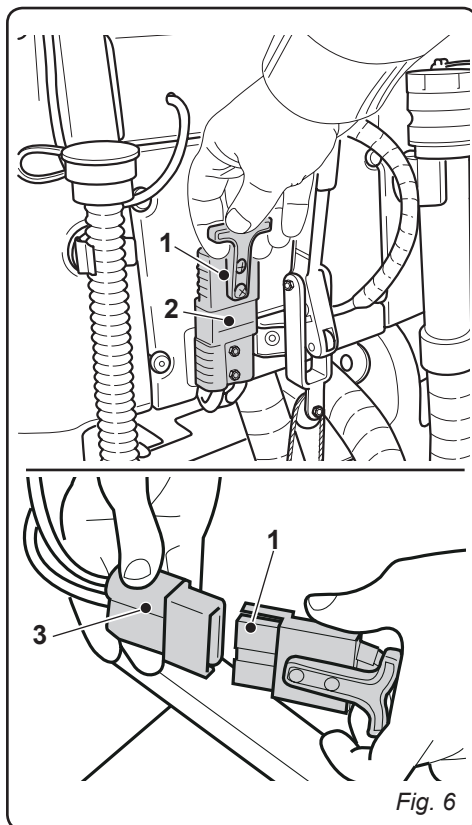


Fig. 6

5.1 GETTING TO KNOW THE MACHINE (Fig. 7)

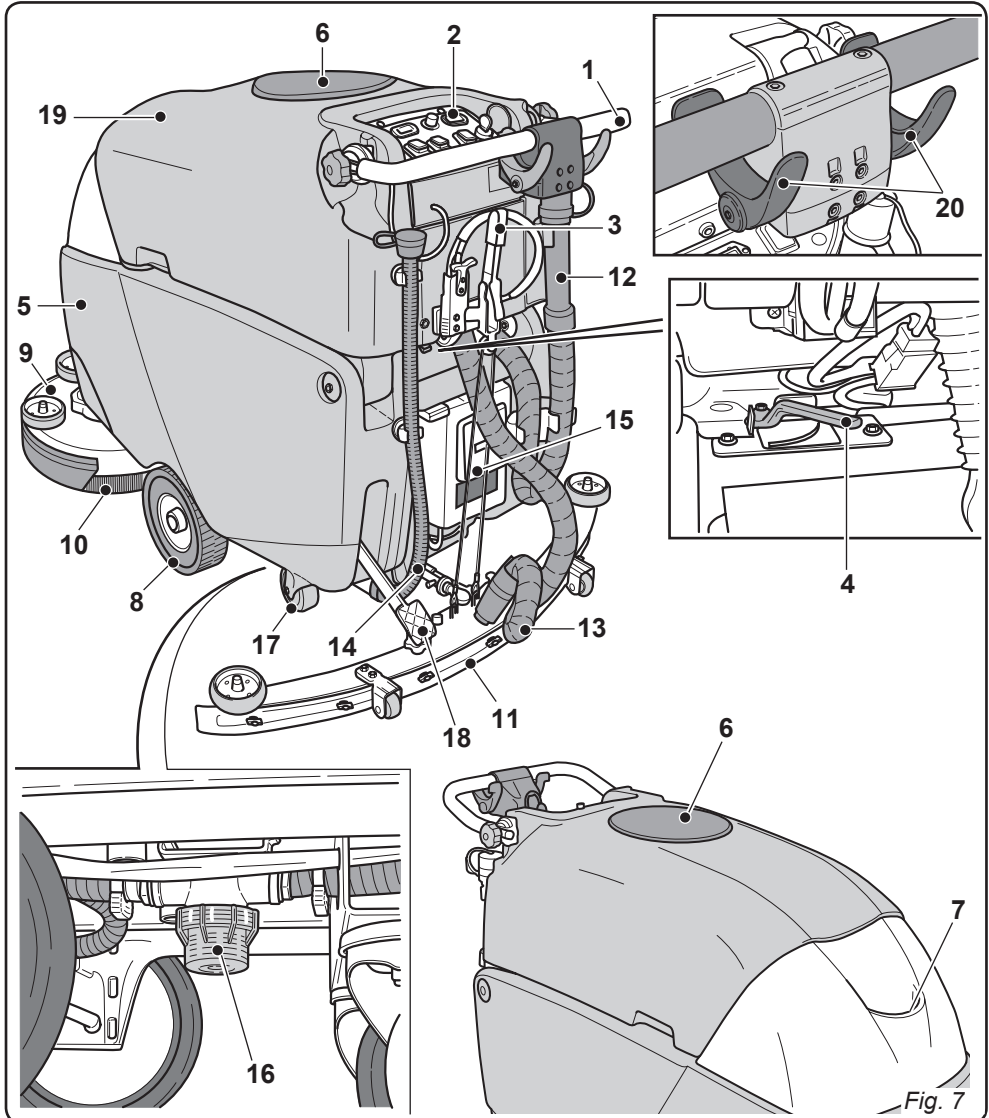


Fig. 7

- 1) Guide handle.
- 2) Control console.
- 3) Squeegee activation lever.
- 4) Water supply tap.
- 5) Clean water tank.
- 6) Tank cover.
- 7) Clean water filling opening.
- 8) Wheels.
- 9) Brushes rotation flange
- 10) Brushes.
- 11) Squeegee.
- 12) Recovery water drain hose.
- 13) Squeegee water aspiration hose.
- 14) Clean water drain hose.
- 15) Battery charger (optional).
- 16) Water filter.
- 17) Pivoting wheels.
- 18) Brush up/down pedal.
- 19) Recovery water tank
- 20) Drive mechanism and brush rotation activation levers.

6.1 CONTROL PANEL (Fig. 8)

1) Suction unit activation switch

This switch can be enabled by turning the key (2) to its "1" position. With the switch in its "1" position, press it down. The switch will light up and the suction unit will activate.

2) Starter key

Turn the key to its "1" position to enable the machine for function.

3a) Operating time indicator.

It indicates the machine's working hours.

3b) Battery charge status indicator.

This indicator lights up while the key is in its "1" position and indicates the battery charge status.

- When the green leds are on, the battery is fully charged.
- When the orange leds are on, the battery is, approximately, half charged.
- When the red led is on, the battery charge is at the lowest level.

i NOTE:

Do not use the machine when the last red led is on but approach the battery charging station.

4) Brush rotation enabling switch

This switch can be enabled by turning the key (2) to its "1" position.

The button (4) turns on when pushed, allowing the rotation of the brushes, which are controlled by the levers (8).

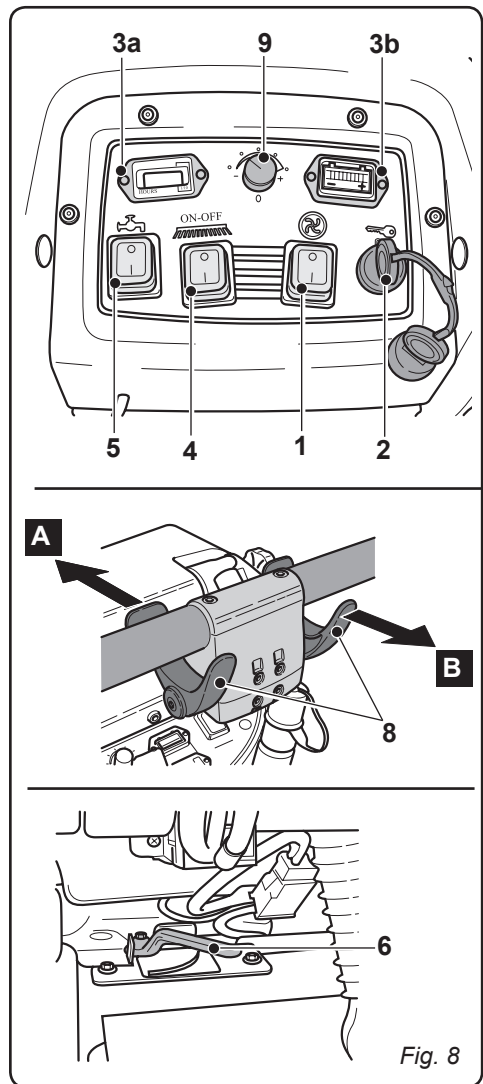


Fig. 8

5) Water solenoid valve switch

This switch can be enabled by turning the key (2) to its "1" position and the switch (4) to its "I" position.

The button (5) turns on when pushed, presetting the opening of the water solenoid valve, which is controlled by the levers (8).

Use the tap (6) to adjust the quantity of water.

6) Water quantity adjustment tap

- Turn the tap (6) counter-clockwise to increase the quantity of water or turn it clockwise to decrease it.

7) Traction and brush rotation starting levers

Operating the levers (8) when the key (2) is in the "1" position and the switch (4) in the "I" position, the traction is started, as well as the rotation of the brushes and the water flow.

Press the levers in direction "A" to activate forward movement;

press the levers in direction "B" to activate reverse movement.



N.B.:

The speed of the movement is proportional to the angle at which the levers are pressed.

9) Maximum speed adjustment handle

Turn the handle to the left to decrease the maximum speed and turn it to the right to increase it.

7.1 FILLING THE TANK (Fig. 9)



WARNING:

Only add clean mains water to the tank at a temperature no greater than 50°C.

- Remove the hose (1) supplied, connect one end (1a) to a tap and insert the other end (1b) in the tank (2).
- Turn on the tap and fill the tank (2).
- The tank's water level is indicated by the red ball in the transparent tube (1).
- Pour the liquid detergent into the tank.



N.B.:

Use non-foamy detergents only. For the quantities, follow the instructions provided by the detergent manufacturer according to the type of dirt.



DANGER:

If the detergent comes in contact with the eyes and/or skin or if swallowed, refer to the use and safety information booklet provided by the manufacturer of the detergent.

- When finished filling the tank:
Insert the tube (1) completely into the tank (2). The end of the tube (1a) acts as a cap.

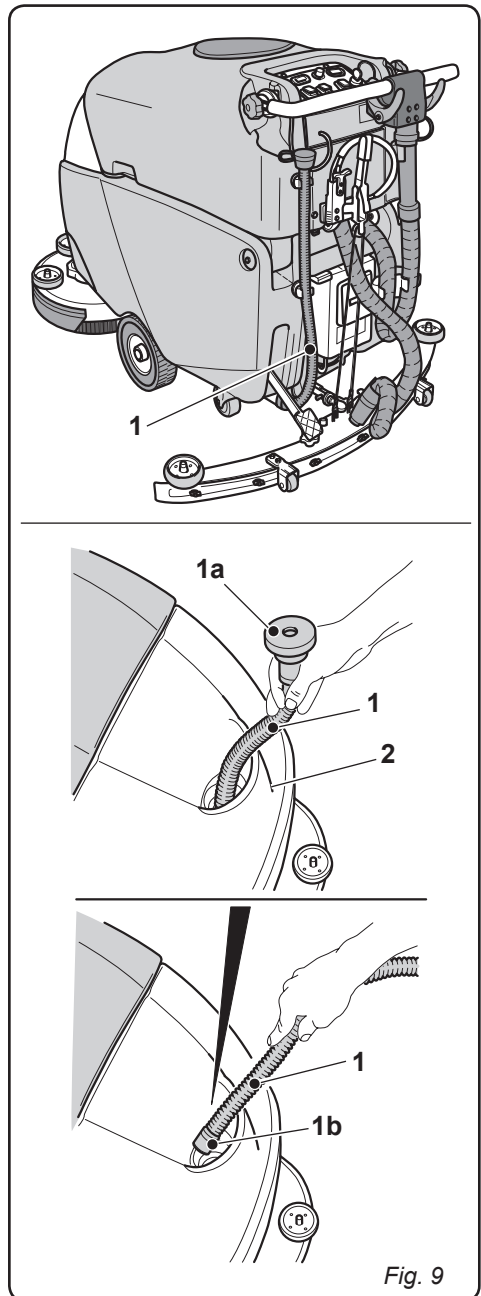


Fig. 9

8.1 OPERATION (Figs. 10-11-12)

8.1.a - Checks before use

- Check that the exhaust tube (1) of the recovery tank is properly coupled and properly sealed.
- Check that the connector (3) on the squeegee (4) is not blocked and that the hose is connected correctly.
- Make sure that the clean water drainage tube (5) is plugged and is properly connected to its appropriate supports.
- Turn the key (7) to its "1" position and use the led indicators (8) to check the battery charge level.

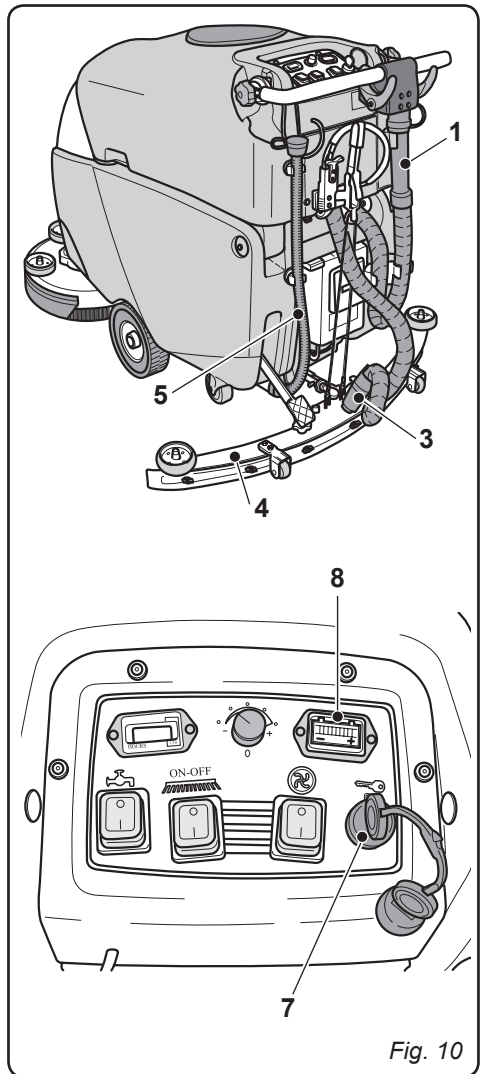


Fig. 10

8.1.b - Preparing the machine and choosing the cycle

- By turning the key (7) to the "1" position, the leds of the device (8) show the battery charge level and the display (8a) indicates the working time of the machine.
- Release the lever (9) and lower it; the floor squeegee (4) is lowered.
- Push the pedal (10), disengage it from the special hook and lift it to lower the brushes (11).

Working cycle:

- The machine can perform 4 working cycles:

Drying only cycle:

- In order to perform the drying cycle alone, press the switch (12). The suction unit will activate.
To start traction, operate the special controls.

Brushing only cycle:

- To select the brushing cycle only, push the button (13) to enable the rotation of the brushes.
To start the rotation of the brushes and the traction, use the levers placed on the big handle.

Washing, brushing cycle:

- Push the button (13) to enable the rotation of the brushes; push the button (14) to enable the water flow.

Washing, brushing, drying cycle:

- Push the button (12) to start the suction unit; push the button (13) to enable the rotation of the brushes and push the button (14) to enable the water flow.
To start the rotation of the brushes, the traction and the water flow, use the levers placed on the big handle.

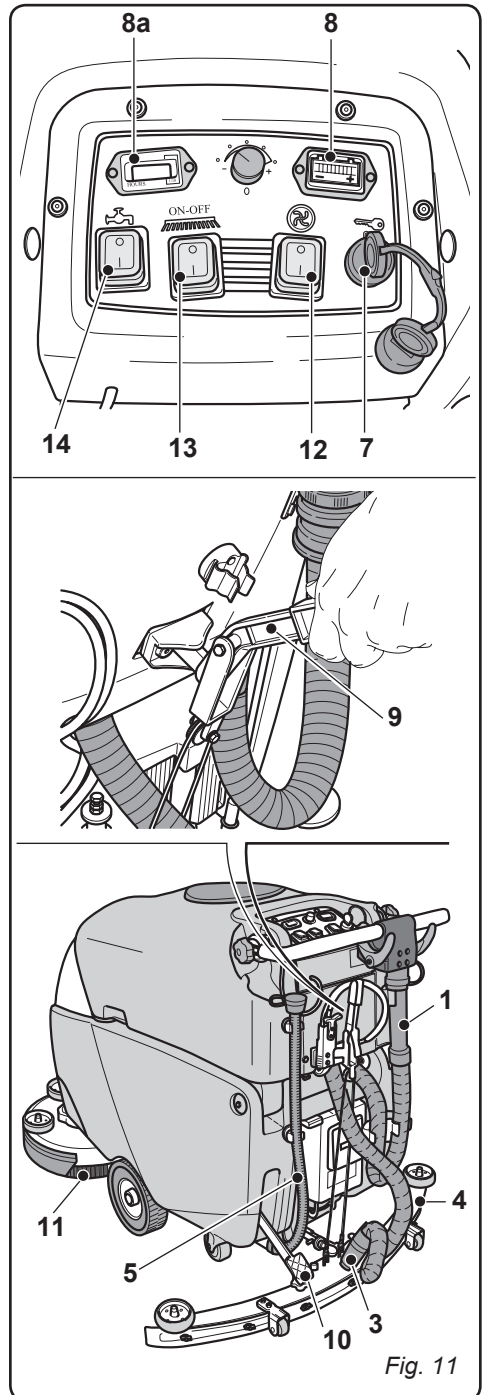


Fig. 11

8.1.c - Using the machine

- After starting the machine and selecting a cycle, start the cleaning operation by positioning the hands on the big handle (1) and using the levers (2) to start traction.



N.B.:

To avoid damaging the floor, do not use the machine in a fixed position with brush rotation activated



N.B.:

The correct way of cleaning and drying the floor is to move the machine forwards. Moving the machine backwards damages the blades as well as not allowing correct aspiration of the water present on the floor.

- If necessary, adjust the quantity of washing water using the tap (3).
- Check the status of the battery charge by the indicator (4).

8.1.d - End of use and switching off

- Once the cleaning operations have been completed, do not shut off the machine immediately: use switches (5) and (6) to deactivate water dispensing and brush rotation and continue with the suction unit in function in order to eliminate any residual liquid on the floor. When finished, press the switch (7) to shut off the suction unit.
- Lift up the floor squeegee (8) by lifting up the lever (9), hooking it in the specific fixing clip (10).
- Lift up the brush by pressing the pedal (11) as far as it will go, fitting it in the designated slot.



WARNING:

Always lift up the squeegee at the end of cleaning in order to prevent the deformation of the rubber blades.

- Turn the key (12) to its "0" position to shut off the machine.

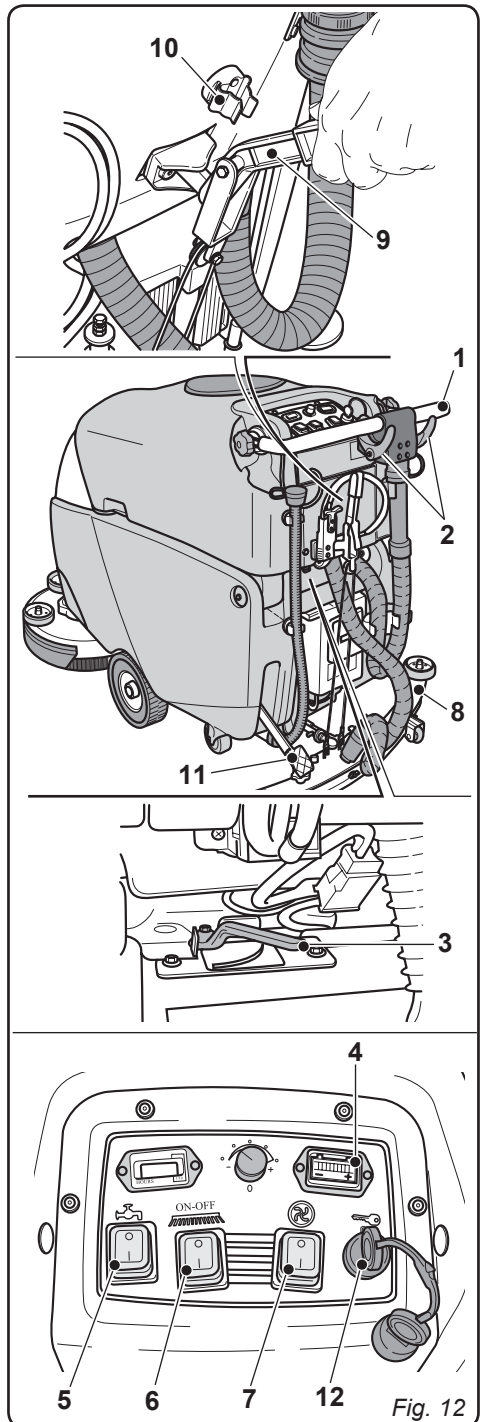


Fig. 12

8.1.e - Maximum recovery tank water level alarm (Fig. 13)

If the suction unit shuts off while the machine is in function, this indicates that the level of the liquid in the recovery tank has reached the maximum level sensors (1), which are located within the tank itself.

Go to the water drainage station and drain the recovery tank as shown in the relative paragraph.

8.1.f - Probe height (Fig. 13)

The probes (1) are regulated for machine use on a 2% slope.

If, in the working environment, there are upward or downward sloping ramps of more than 2%, it is necessary to adjust the height of the probes in order to prevent damage to the aspiration turbine.



WARNING:

For adjustment, contact the Authorised Support Service.

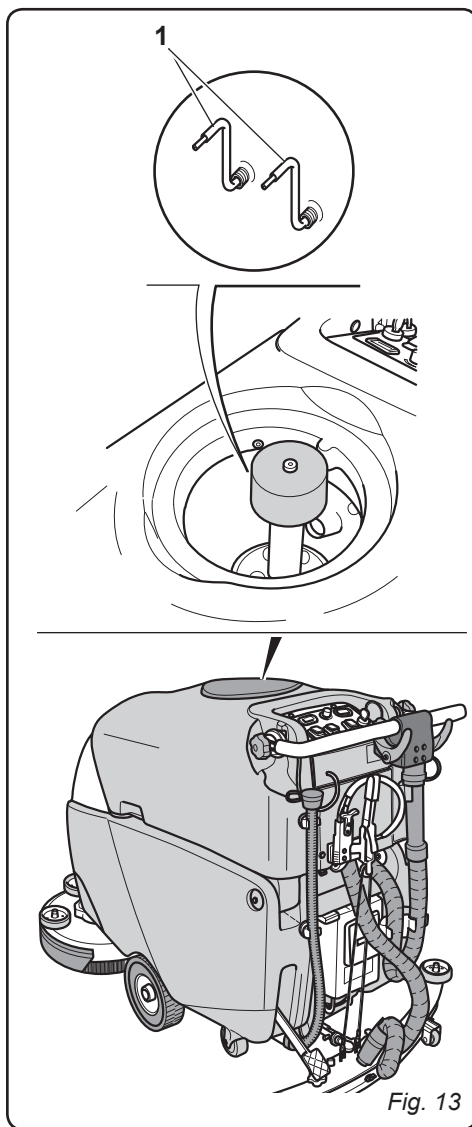


Fig. 13

8.1.g - Alarms list (Fig. 14)

When a machine malfunction occurs, various bars, which correspond to specific alarms, will flash on the display (1). The alarms which correspond to each bar are described below. In order to restore the machine's proper functionality, consult the list below and perform the recommended procedures. If the recommended actions should not resolve the problem, contact Technical Assistance.

Fixed bars (not flashing), on the other hand, indicate the battery charge status:

- 1 Bar: minimum charge;
- 10 Bars: maximum charge;

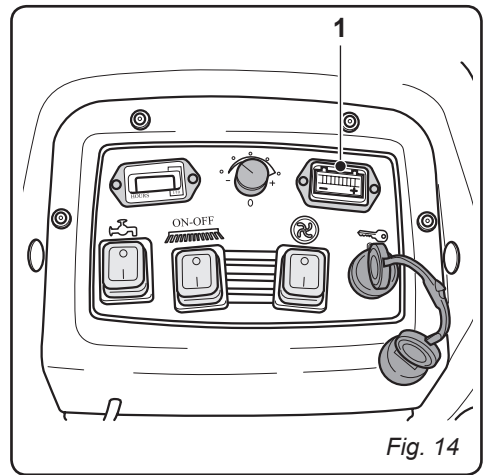





Fig. 14


Alarms list:


1 Bar
 The batteries need to be recharged.


2 Bar
 Check the connection between the motor and the electronic card.

3 Bar
 The drive motor has short circuited.
Contact technical assistance

4 Bar
 The battery charge has dropped below the configured threshold. The electronic card has inhibited certain functions.
Recharge the batteries

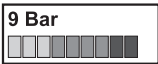
5 Bar
 No function assigned.

6 Bar
 The electronic card has deactivated the drive motor. The battery charger is probably connected.

7 Bar
 Accelerator alarm (red levers on the handlebar unit).
Make sure that the accelerator is in its central position upon machine start up.



Alarm relative to the electronic card.
Check the connections.



Magnetic brake malfunction.
Check the connections for the brake and the drive motor.



Excessive voltage supplied to the electronic card.
Check the connections.

In addition to the possibilities indicated up until this point, it is also possible for all 10 bars to continuously scroll upon the display (1): this indicates that the machine has been activated with the accelerator engaged. Release the accelerator.

9.1 DRAINING THE RECOVERY WATER (Fig. 15)

At the end of the washing cycle or when the recovery water tank (1) is full, it is necessary to empty the tank by proceeding as follows:



N.B.:

To dispose of the recovery water, comply with the standards in force in the country in which the machine is used.

- Position the machine near to a drain outlet.
- Disconnect the hose (2) from the support.
- Remove the cap (3) from the hose (2) and drain all the water contained in the tank.



N.B.:

The amount of water that comes out can be modulated by pressing on the end of the tube (2).

- Put the cap (3) back on the hose (2) and reposition it on the relative support.

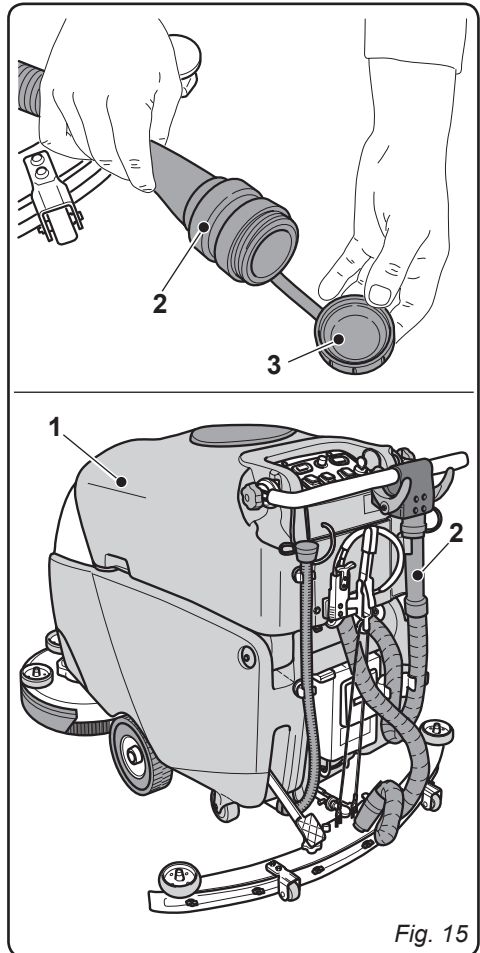


Fig. 15

10.1 MAINTENANCE AND CLEANING



WARNING:

For information and warnings regarding maintenance or cleaning, follow the information given in the “General warnings during maintenance” in chapter 1 in this manual.

OPERATIONS TO PERFORM DAILY

10.1.a - Emptying and cleaning the clean water tank (Fig. 16)



WARNING:

At the end of the washing operations, it is compulsory to drain and clean the clean water tank to prevent deposits or scaling.

After draining the recovery water tank, drain the clean water tank as follows:

- Position the machine over a drain outlet.
- Detach the tube (1) from its lodgings and lower it to the ground over the drain cover. If the cap (2) is closed, remove it and let the water drain out completely.
- Wash the inside of the tank, leaving the drain hose open and adding clean water through the top opening.
- Once finished cleaning, lift the tube (1), close it with its appropriate cap (2) and position it within its appropriate lodgings.

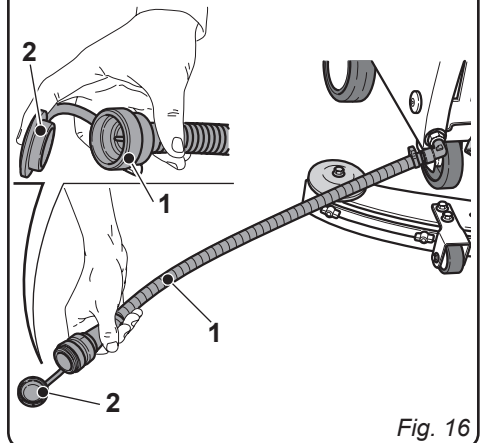
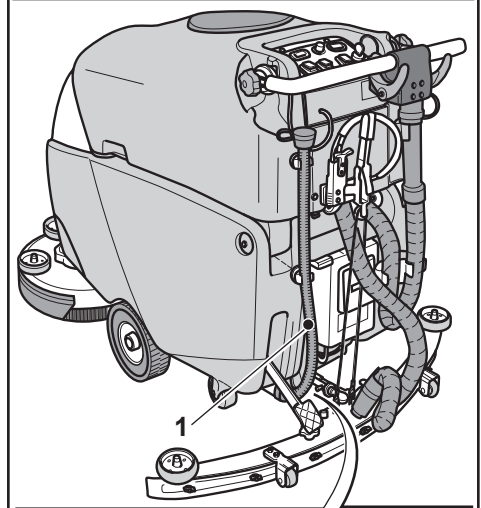
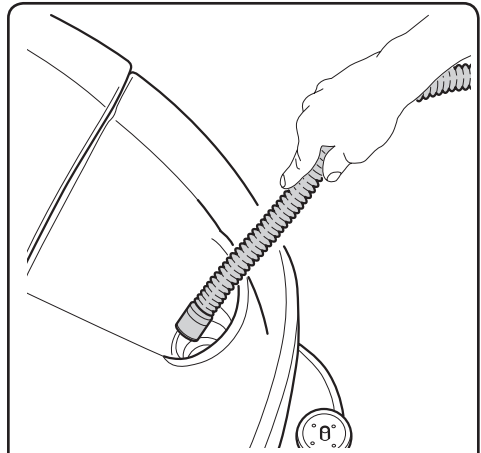


Fig. 16

10.1.b - Cleaning the recovery water tank (Fig. 17)



WARNING:

At the end of the washing operations, it is compulsory to clean the recovery water tank to prevent deposits or scaling and the proliferation of bacteria, odours or mould.

- Drain the recovery water as shown in the relative paragraph, positioning the machine over a drain outlet.
- Remove the cover (1).
- Lift the tank (2).
- Leaving the hose (3) lowered and the cap off, pour water into the tank (2) through a hose, cleaning it until clean water comes out of the drain hose.
- Put a hand inside the tank and clean the level feelers (4) with a damp cloth, paying attention not to deform them.
- Unscrew the Allen screw (5) and remove the filter cover (6).
- Remove and clean the suction filter (7), removing any pieces of paper, wood, etc., which may be obstructing it.
- Replace all the components in reverse order.

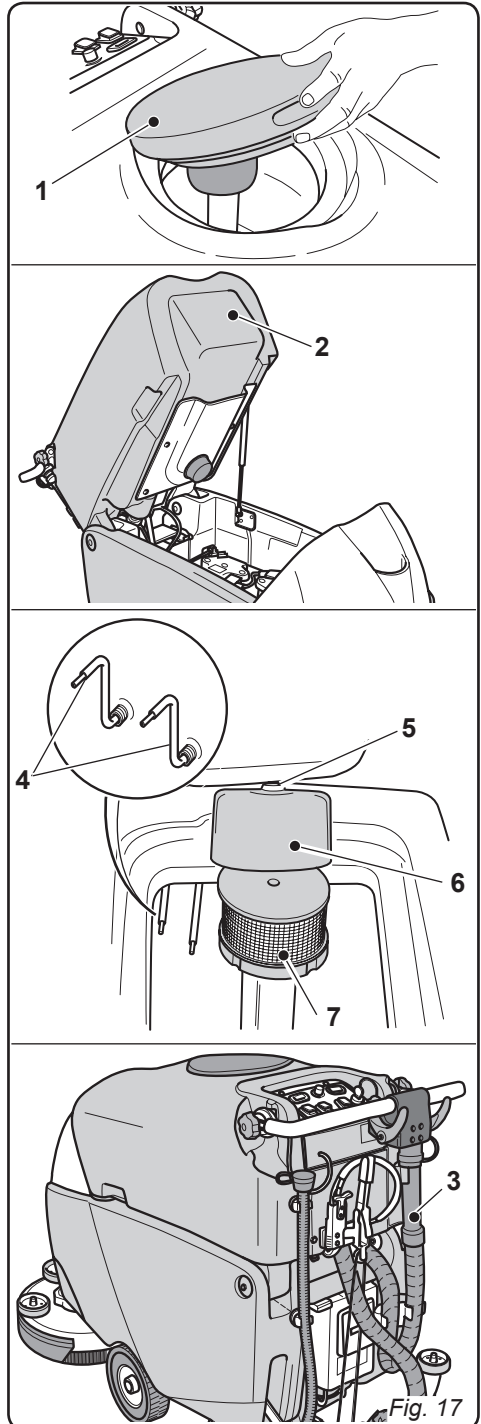


Fig. 17

10.1.c - Cleaning the squeegee**(Fig. 18)**

In order to clean the squeegee correctly (1), it is necessary to remove it as follows:

- Disconnect the hose (2) from the squeegee (1).
- Loosen the knobs (3) and remove the squeegee (1).
- Wash the squeegee and in particular the rubber blades (4) and the inside of the aspiration connector (5).

**N.B.:**

If, during washing, it is clear that the rubber blades (4) are damaged or worn, it is necessary to replace them or turn them over.

- Replace all the components in reverse order.

OPERATIONS TO PERFORM MONTHLY

10.1.d - Cleaning the clean water filter (Fig. 19)

- Unscrew the transparent filter cover (1) and remove the filter (2).
- Clean the filter (2) using running water.
- Replace all the components in reverse order.

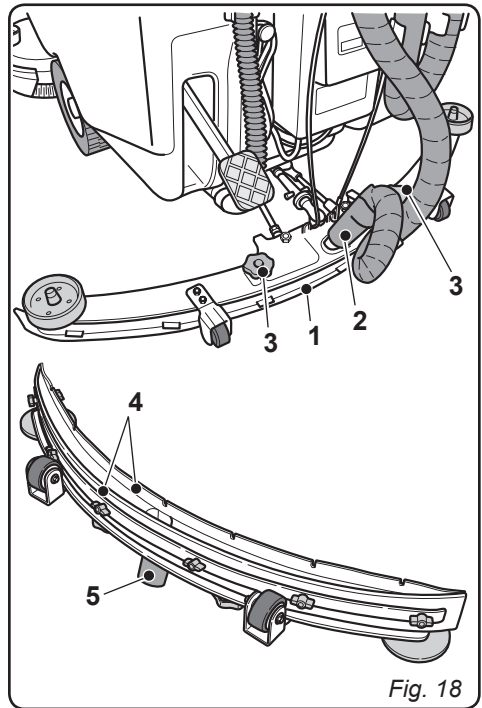


Fig. 18

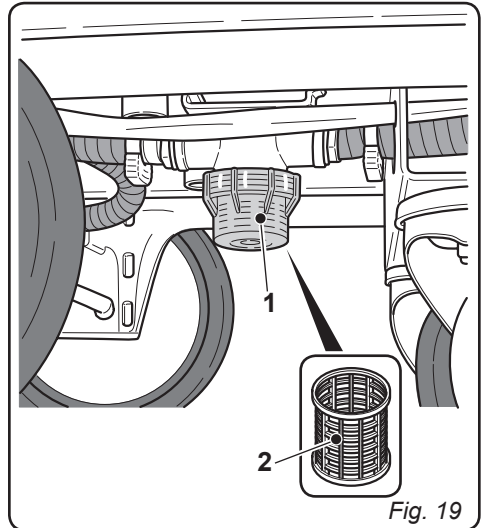


Fig. 19

OPERATIONS TO PERFORM WHEN NECESSARY

10.1.e - Replacing the brush (Fig. 20)

It becomes necessary to replace the brush when it is worn with bristles shorter than 2 cm or it must be replaced according to the type of floor to wash; to replace it, proceed as follows:

- Lift up the brush using the pedal as shown in the relative paragraph.
- Insert one hand under the brush-holder unit (1); to release the brush, rotate it sharply in the opposite direction to rotation.
- Replace the brush, positioning it under the brush-holder flange (1).
- Lower the brush-holder flange (1) using the pedal, as shown in the relative paragraph.
- Turn the key (2) to its "1" position.
- Press the switch (3) to enable the rotation of the brushes.
- Use the appropriate controls (4) on the handlebar unit to activate the rotation of the brushes until an audible "click" is heard. This indicates that the brush has been properly connected to the flange (1). Release the handlebar controls (4) to stop the rotation of the brushes.
- Turn the key (2) to its "0" position to shut off the machine.



WARNING:

Use only brushes provided by the manufacturer according to the model of the machine.

Using other types of brushes may compromise the safety of the machine.

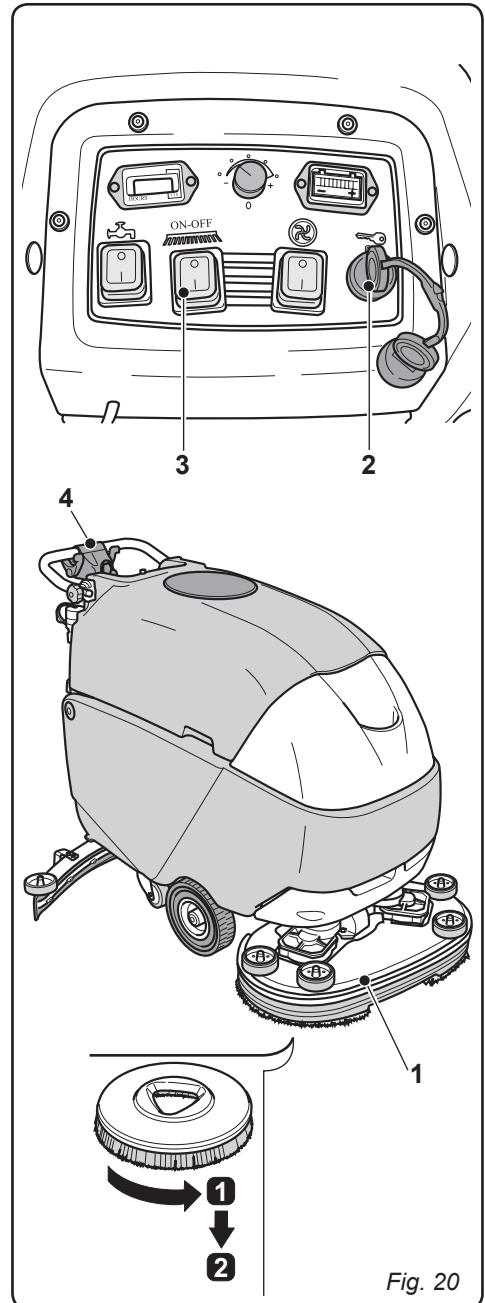


Fig. 20

10.1.f - Replacing the squeegee rubber blades (Fig. 21)

When it becomes clear that drying the floor is difficult or traces of water remain on the floor, it is necessary to check the wear on the squeegee rubber blades (1):

- Remove the squeegee unit (1) as indicated in the "Cleaning the squeegee" paragraph.
- Loosen the finned nuts (2) and remove the rubber blades (3).



N.B.:

When the rubber blades (3) are worn on one side, on one occasion they may be turned over.

- Replace or turn over the rubber blades (3) without inverting them.
- Replace all the components in reverse order.



N.B.:

It is possible to have two types of rubber blade.
Para rubber blades for all types of floor and polyurethane rubber blades for mechanical workshop floors which are dirty with oil.

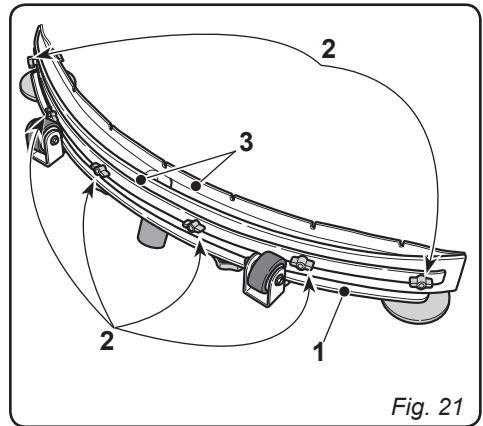


Fig. 21

10.1.g - Replacing the fuses (Fig. 22)



WARNING:

Replace the blown fuse with one with the same amperage.

- Remove the plug (1) from the socket (2).
- Remove the cover (3) to access the fuses.

Fuse (4) - 7,5A

Control panel protection.

Fuses (5) - White 25A

Rotating brush motor protection.

Fuse (6) - Red 40A

Aspirator motor protection

- Put the cover (3) back on.
- In order to replace the fuse (7) on the positive pole of the battery, do the following:



WARNING:

Check that the recovery tank and the clean water tank are empty.

- Disconnect the plug (8).
- Lift the tank (9) using the handle (10) until completely turned over.

Fuse (7) - 100A

Battery fuse.

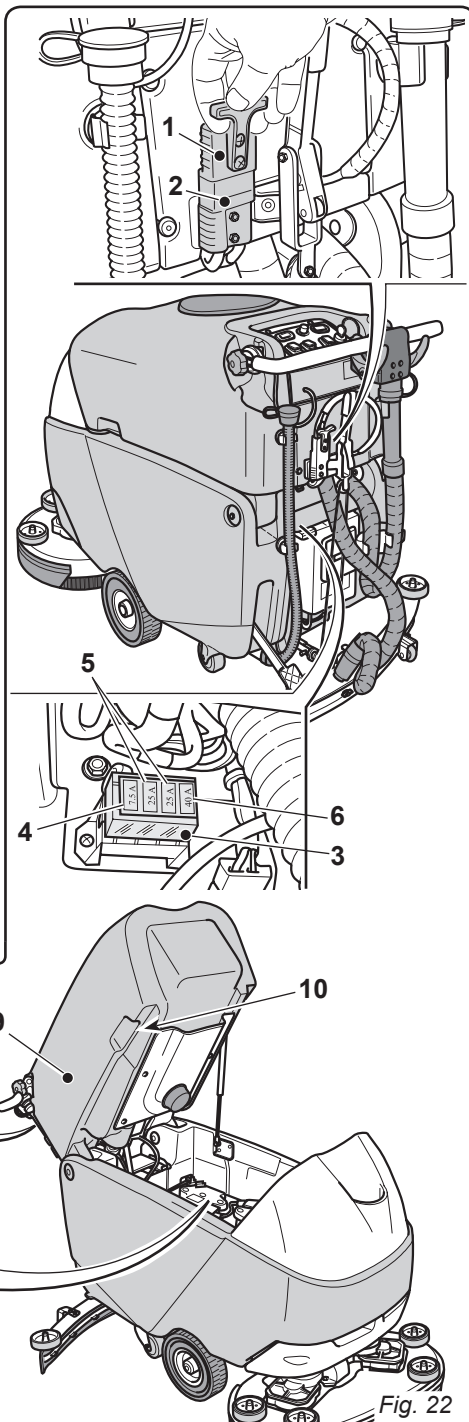


Fig. 22

10.1.h - Battery charger lay out (Fig. 23)

Standard battery charger configuration for Sonnenschein gel batteries

- Lift the cover (X) and check that the switches (1 - 2 - 3 - 4) are set to the configuration shown in the diagram (C).

Perform the following operations to modify the configuration:

Battery charger configuration for gel batteries other than Sonnenschein

- Lift the cover (X) and check that the switches (1 - 2 - 3 - 4) are set to the configuration shown in the diagram (D).

Battery charger configuration for acid batteries

- Lift the cover (X) and check that the switches (1 - 2 - 3 - 4) are set to the configuration shown in the diagram (E).



WARNING:

Only modify switches (1 - 2 - 3 - 4); do not alter the positions of switches (5 - 6 - 7 - 8).

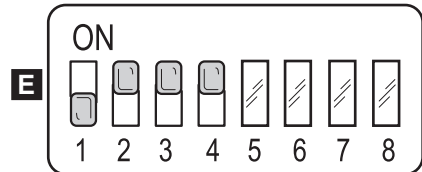
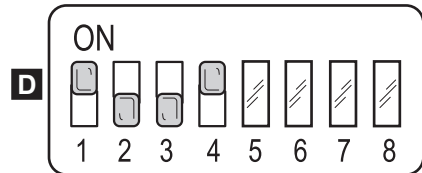
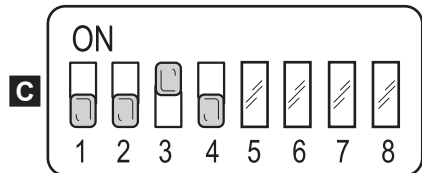
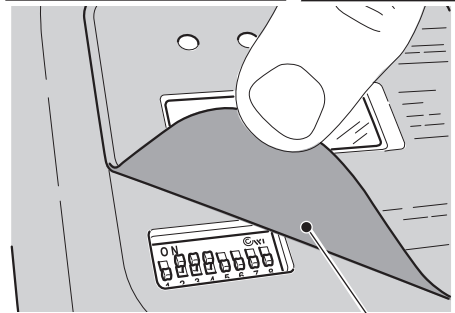
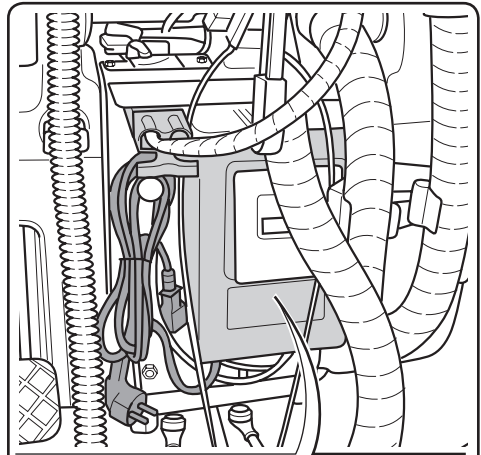


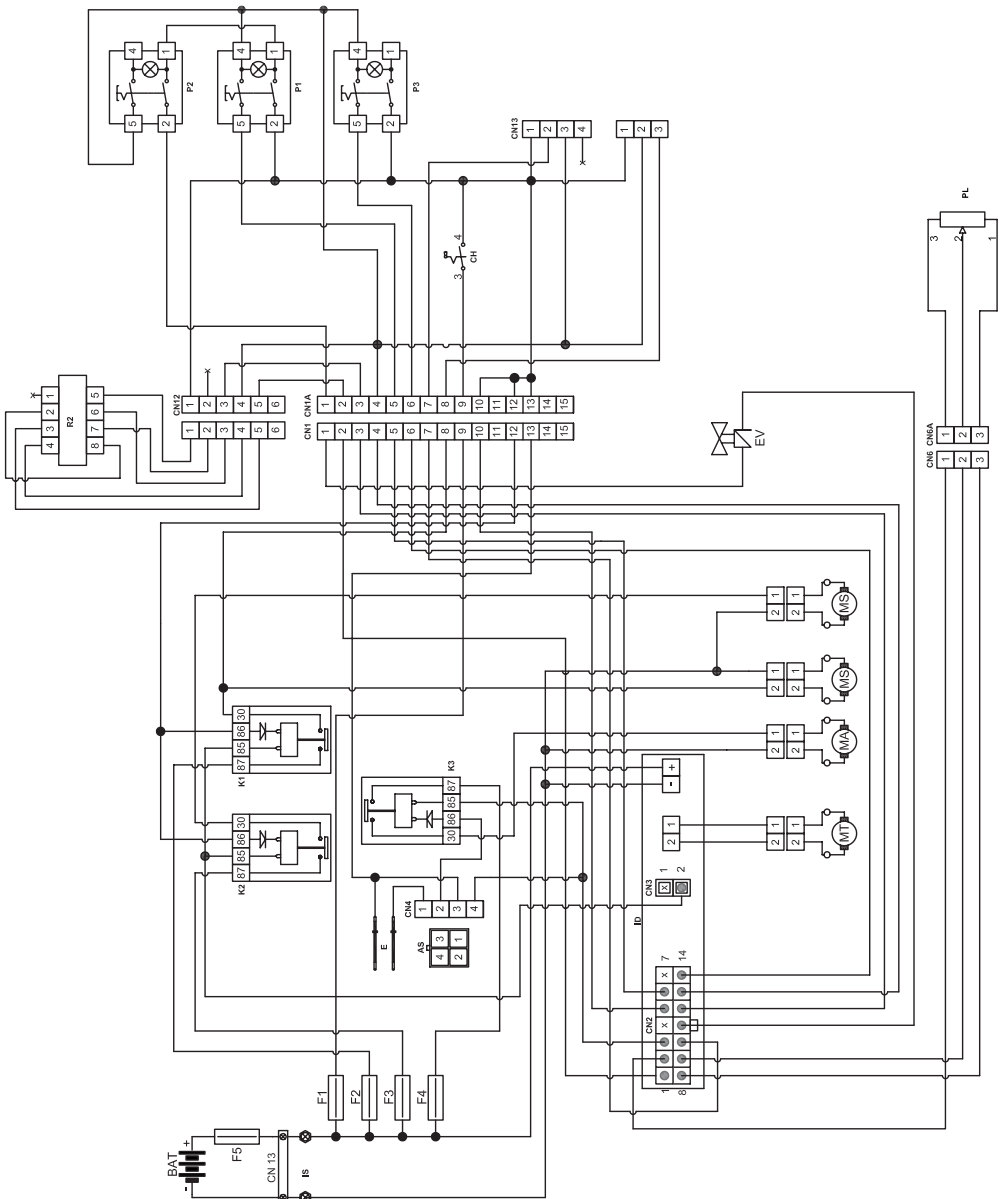
Fig. 23

TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
The machine does not turn on when the key is turned.	Low battery.	Check that the battery is charged.
	Main fuse blown.	Replace the master 7,5A fuse.
The brush does not rotate.	Brush fuse blown.	Replace the WHITE 25A brush motor fuse.
	Brush rotation enabling switch not pressed	Press the switch.
Aspirator does not work.	Aspirator fuse blown.	Replace the RED 40A fuse for the suction unit's motor.
	Suction unit switch not pressed.	Press the switch.
	Recovery tank full.	Empty, wash and clean the tank and the probes.
The machine does not dry well, leaving traces of water on the floor.	Aspirator off.	Start up the aspirator.
	Aspiration tube blocked.	Check and if necessary clean the aspiration tube that connects the squeegee to the recovery tank.
	Recovery tank full.	Empty the recovery tank.
	Squeegee rubber blades worn.	Replace or turn over the squeegee rubber blades.
No water comes out.	Tank empty.	Fill the tank.
	Solenoid valve enabling switch not pressed.	Press the switch.
	Tap turned off.	Open the tap
	Filter blocked.	Clean the filter.
	Solenoid valve does not work.	Call the technical support service.

PROBLEM	CAUSE	SOLUTION
Insufficient floor cleaning.	Unsuitable brushes or detergent. Brush worn.	Use brushes or detergents which are suitable for the type of floor or dirt to be cleaned. Replace the brush.

WIRING DIAGRAM

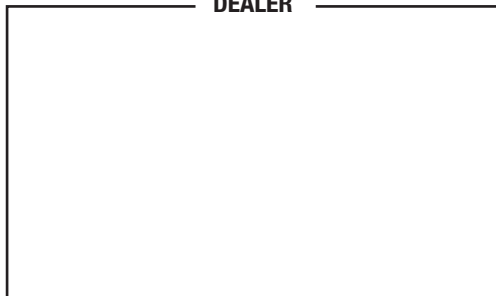


AS	Antifoam	F5	1000A fuse
BAT	24V Battery	K1	Brush relay
CN1	15 PIN Connector	K2	Brush relay
CN2	ID control unit connector	K3	Suction relay
CN3	ID control unit connector	ID	I-Drive control unit
CN4	Antifoam card connector	IS	insulators
CN6	To the PL potentiometer	MA	Suction motor
CN12	To the handlebar unit	MS	Brush motor
CN13	120A Plug socket	MT	Drive motor
E	Electrodes	P1	Brush control
EV	Solenoid valve	P2	Solenoid valve control
F1	7.5A fuse	P3	Suction control
F2	25A fuse	PL	Linear potentiometre 47K
F3	25A fuse		
F4	40A fuse		

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