



SCRUBBER DRYERS MACHINES FKC 36 and FKC 46



EN

**ORIGINAL
INSTRUCTIONS
TRANSLATION**

ATTACHED: INSTRUCTIONS FOR ELECTRONIC BATTERY CHARGER



Please read this manual for use and maintenance in all its parts before using the product. This machine has been examined in accordance with current regulations.



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1. GENERAL DIRECTIONS

We congratulate you on the purchase of your new scrubber dryer.

This manual is referred to the models FKC 36 and FKC 46, from now indicated on in this manual with terms "scrubbers" or "machine." This manual shall be considered as an integral part of the machine and shall be within reach of the personnel in charge of use and maintenance.

The user and the person in charge of the maintenance of the machine shall know the contents of this manual.

In case of troubles or doubts referred to the understanding of this manual, we recommend to contact Company Mirage Reinigungstechnik, Alt Roggentiner Weg 11, 18196 Kessin Germany, T: +49 38208 82559, F: +49 38208 82561.

This handbook contains non-binding descriptions and pictures, therefore the Manufacturer reserves the right to modify the machine, at any moment and without notice.

Before utilizing the machine make sure the data badge is placed on the latter; if it is not the case, immediately contact the dealer concerned and do not utilize the machine.

Never leave the machine unattended in the workplace.

At the end of each working day, the machine should be stored in cool and dry conditions, sheltered from the bad weather.

Before using the machine make sure the latter will run under safety conditions.

In case of dismantling, the rules in force in the machine utilization Country shall be followed.

2. USE AND SAFETY INSTRUCTIONS

Before utilizing the machine, the users shall be trained for the operations they have to carry out.

Alberti International S.r.l. decline any responsibility for accidents to persons or property arising from the use of the machine by unskilled operators and authorized.

- The machine must only be used by adults, the machine can not be used by children or persons with reduced physical, sensory or mental or as a game or as a washer-dryer: follow the instructions given in the paragraph "Prohibited uses".
- The machine must only be used indoors and must be stored indoors.
- The trained operator must keep the key in a safe place to prevent use from unauthorized persons.
- Do not leave the machine in places where the temperature is very low with the possibility of frost.
- The scrubber dryers mentioned in this use and maintenance manual require the constant presence of the operator which is to control and drive the machine during operation.
- Do not use the machine in case the power lead and/or other parts of the latter are damaged.
- At the end of each working day, the machine should be stored in cool, dry conditions, sheltered from the bad weather.
- The operation of battery charging must be done in a dry and ventilated place, away from heat sources; for further instructions please refer to the detailed instructions inside the battery.



ATTENTION !

During the operation of the battery charging pay attention to the presence of water inside the machine that could preclude the isolation of plant conditions. At the end of battery charging, check the integrity and insulation of electrical connections.

Before performing any maintenance operation, be sure to disconnect the power supply thanks to the appropriate safety device (ref.13 Figure 2)

- In order to use the machine, wear safety and anti-slip shoes for the presence of wet and slippery surfaces
- Use only original spare parts supplied by the manufacturer or approved by him.
- Always use clean water and detergents recommended: the use of unfiltered water and corrosive chemicals are harmful to the machine.
- The machine is not provided with a system that allows to keep the machine braked; it is therefore necessary that the machine is used on flat surfaces. In case it is positioned on ramps or inclined floors, it must be lowered the wiper-floor that allows to keep the position of the machine.

- Before lifting the recovery water tank to access the compartment inside the machine make sure that the recovery tank is completely empty.
- Do not use the machine in environments where it could form potentially explosive atmospheres.

3. PERSONNEL

In this manual, they are used, for the staff, the following terminology:

SKILLED OPERATOR

Unskilled personnel who can operate on the machine through the use of the controls arranged on the same machine. It has to be properly trained by reading this manual for use and maintenance. To the operator trained are given the keys of the machine in order to prevent the use of the machine by unauthorized persons.

AUTHORIZED TECHNICIAN

Qualified technician provided by the Alberti International's retailer to perform complex operations (Ex: replacement spare parts).

PERSON EXPOSED

Any person who totally or partially stand in a dangerous area.

4. DESCRIPTION AND INTENDED USE

The scrubber dryer machine FKC is designed for the treatment of flat surfaces inside buildings, for example, in hotels, schools, hospitals, factories, shops, offices, by washing and subsequent collect of water used during this operation.

The power supply system is provided according to the model of a single or a pair of accumulator batteries, which feed all motors and electrical controls, for specific details of each model, please refer to what is stated in the section "Technical data" .

The machine is equipped with a rotating brush that has the task of washing the surfaces, aided by water and detergent contained in the washing water tank. The advancing of the wiper-rear floor machine (squeegee), in contact with the floor, collects water that is sucked and conveyed simultaneously into the recovery tank.

5. FORBIDDEN USE

It is explicitly **forbidden** for the skilled operator:



- use of machines for use other than as described under "Intended Use" and / or by unauthorized personnel. This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, lack of experience and knowledge.
- washing surfaces outside buildings, with rough surfaces, inclined, or with presence of holes.
- the machine can not be used as a traction device.
- the machine cannot be used on board of ships or aircraft.
- the use of the machine in environments with hazardous substances, particularly in explosive atmospheres and / or unsuitable weather conditions.
- the cleaning of surfaces with the presence of flammable liquids.
- Use the machine as a method of transport of persons or other means.
- modification or tampering of safety devices and / or unauthorized by Alberti International Srl.
- recharging the battery packs in a non aspirated / not ventilated room.



- failure to comply with applicable safety standards / procedures by operators.
 - the application of equipment / devices that may interfere with the operation of the machine.
 - the use of acid solutions which could damage the machine; in particular we recommend using detergent liquid-based and not with powders. The detergents that are used must be biodegradable and non-corrosive, according to current regulations.
 - the use of water with hardness greater than 30 ° Fr and ferrous water to avoid damage in the water circuit.
 - the use of the machines trampling on the electrical cable, be sure that the environment for the treatment is clear of any electrical equipment, in particular if in tension.
 - dispose of the content of the discharge tank directly on the soil
 - use the machine as a means of transportation for people or materials
- It is absolutely forbidden to use the machine without reading the manual of use and maintenance and warnings in the instructions for use.

6. PROTECTION DEVICES



For the correct use of the machine, wear non-slip footwear for the presence of wet and slippery surfaces



ATTENTION !

It is absolutely forbidden to tamper with the safety devices, take them off or turn them off during normal operation of the machine. Periodically check their efficiency.

In the following table are reported the protection devices, a brief description and the graphic with reference to the following figures 1,2,3,4,5,6 to identify the individual devices in the machine.

Protection device	Rif.	Description
Brushes: carter protection	14	The scrubber-dryer is equipped with a plastic cover which limits the accessibility under the brush
Battery: emergency detachment	13	In case of emergency, the plug-socket combination allows the detachment of all power source from the battery.
Brush motor: circuit breaker button	24	The scrubber-dryer is equipped with an overload protection. For the reactivation of the brush motor it must be rearmed (press) the button.
Overcurrent and overvoltage protections	Electrical scheme	The scrubber-dryer is equipped with protection fuses, in case of intervention of these devices, they must be replaced as described below.

7. RESIDUAL RISKS







The machine has been designed and built to ensure at all times the maximum safety for the operator; however, there are unavoidable risks.



ATTENTION !

To limit these risks, please remember to respect all information given in this manual, do not force or inhibit the safety of the machine and always wear personal protective equipment provided for

Please note that all personnel involved in the use, maintenance, and cleaning of the plant must be aware of the safety standards of it.

SYMBOL	DESCRIPTION
	<p>LOSS OF STABILITY</p> <p>The machine is not provided with a system that allows to keep the machine braked; it is therefore necessary that the machine is used on flat surfaces. In case it is positioned on ramps or inclined floors, it must be lowered the wiper-floor that allows to keep the position of the machine.</p> <p>The machine is hand-carried on and it can be full of liquid aspirated or to be used, it is recommended, therefore, always proceed slowly on the go</p>
	<p>EXPLOSION AND CORROSION RISKS</p> <p>During the charging of the batteries make sure that the machine is away from heat sources and corrosive environments.</p> <p>The risk of corrosion is due to acid contained into the battery, in case of battery replacement be sure to wear protective glasses and gloves.</p>
	<p>SHOCK HAZARD</p> <p>Presence of live parts: it is prohibited to touch any live parts.</p>
	<p>DANGER OF CRUSHING</p> <p>The risk of squashing is due:</p> <ul style="list-style-type: none"> - Presence of moving parts inside the machine. During installation / maintenance make sure that the power is switched off by the key on the control panel. - At the brush and wiper floor adjustment . In particular, pay attention to the possible lower limbs squashing resulting in lowering of the floor wiper.
	<p>DANGER OF SLIPPING, TRIPPING OR FALLING</p> <p>The machine can create areas where it can form puddles of water or other liquid that can generate a risk of falling. Use non-slip footwear as personal protective equipment.</p>
	<p>PROHIBITION TO CARRY OUT JOBS WHEN THE MACHINE IS IN CHARGING</p> <p>Before performing any maintenance work, the technician must make sure that there are no live parts.</p>

In the following figures 1,2,3 have been reported the main components of the FKC 46 scrubber dryers, while in figures 4,5,6 have been reported the main components of the FKC 36. For identifying each of them it is referred to the "DRYER COMPONENTS FKC" tables in the queue to FIGS.

SCRUBBER DRYER FKC 46

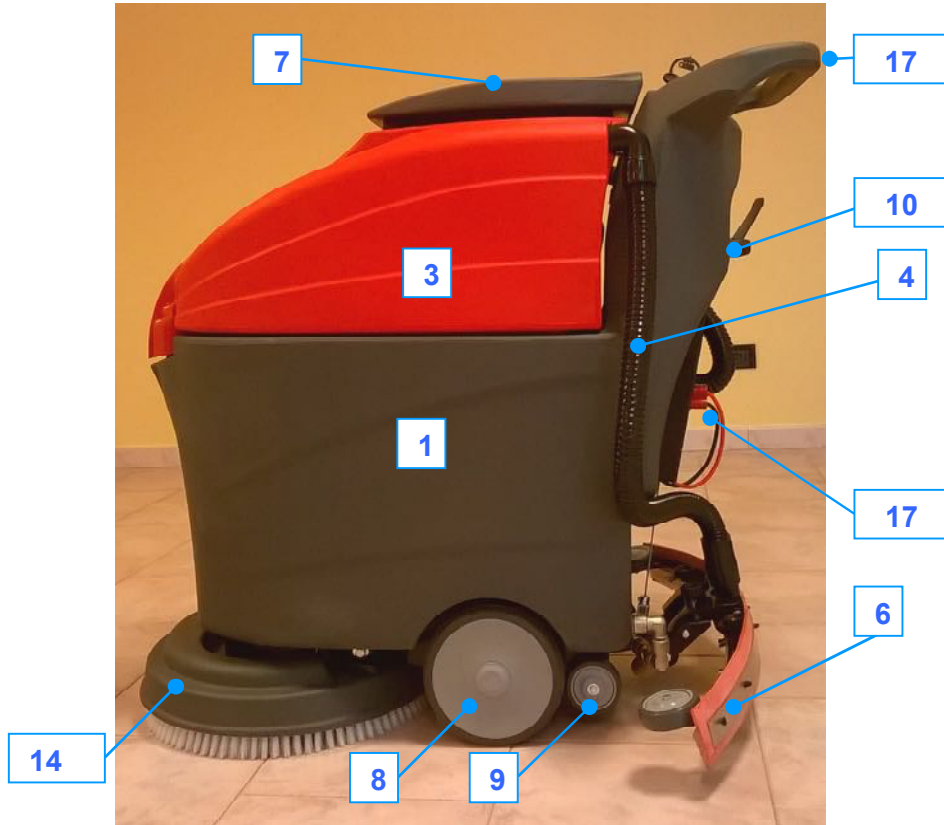


Figure 1 – FKC 46 side view

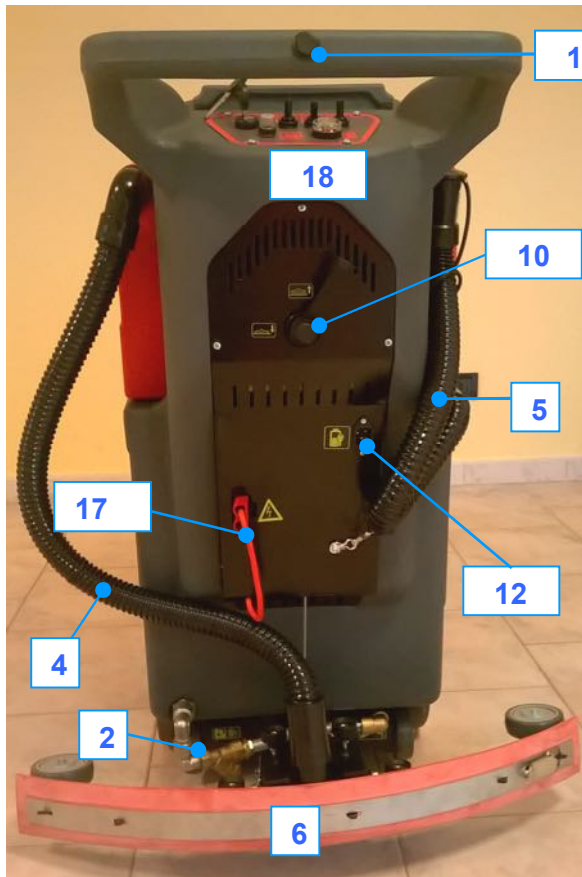


Figure 2 – FKC 46: On the left: operator position; On the right: commands rail assembly

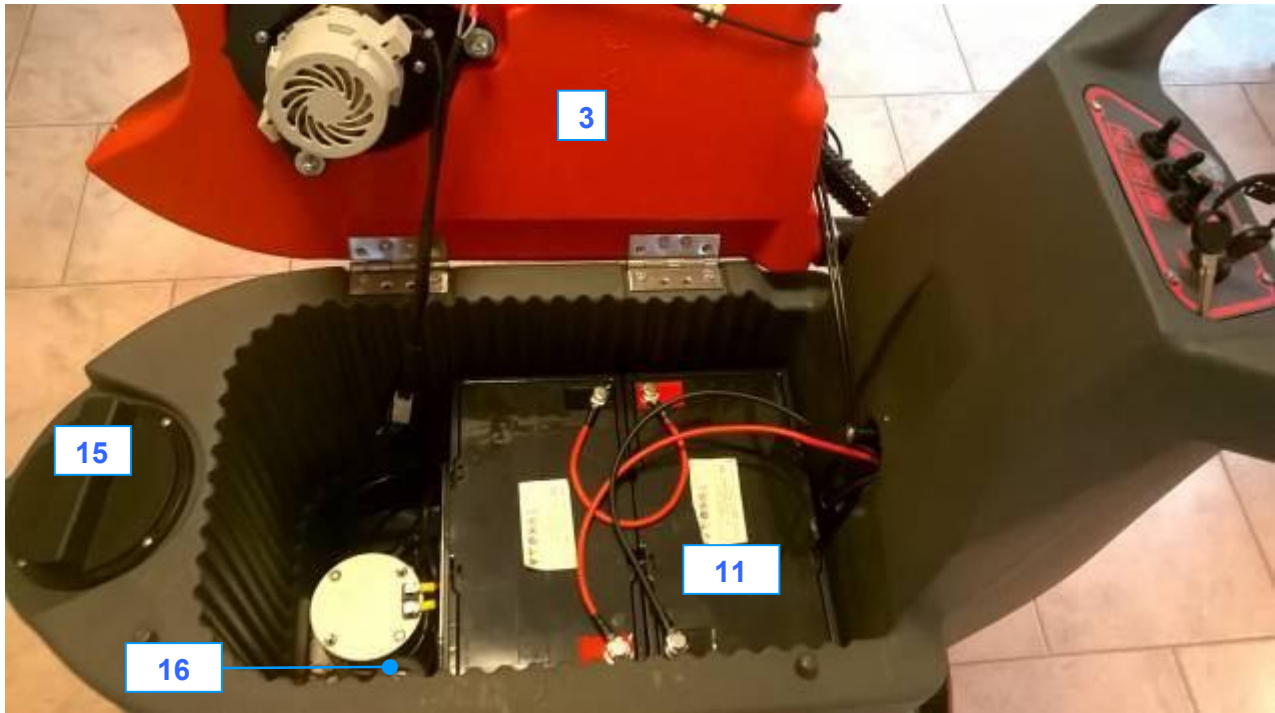


Figure 3 – FKC 46 internal view

COMPONENTS SCRUBBER DRYERS FKC 46

1	Washing liquid tank	7	Dirty water tank lid	13	Safety button for brushes activation
2	Water flow pipe to the brush	8	N° 2 wheels for moving the machine	14	Rotating brush
3	Dirty water tank	9	N° 2 support wheels for the displacements of the machine	15	Wash solution tank lid
4	Flexible suction pipe	10	Knob for lower / raise the squeegee	16	Brush regulator system: distance from the floor
5	Flexible discharge pipe	11	Batteries with its electric connections	17	Jack plug combination for battery power
6	Squeegee	12	Battery charger connection	18	Group guide provided with operating commands

CONTROL PANEL FKC 46

19	Key switch (power supply switch)	21	Suction motor switch	23	Indicator of battery status with LED lights
20	Brush motor switch	22	Water and detergent release switch	24	Motor Protection brushes botton

SCRUBBER DRYER FKC 36

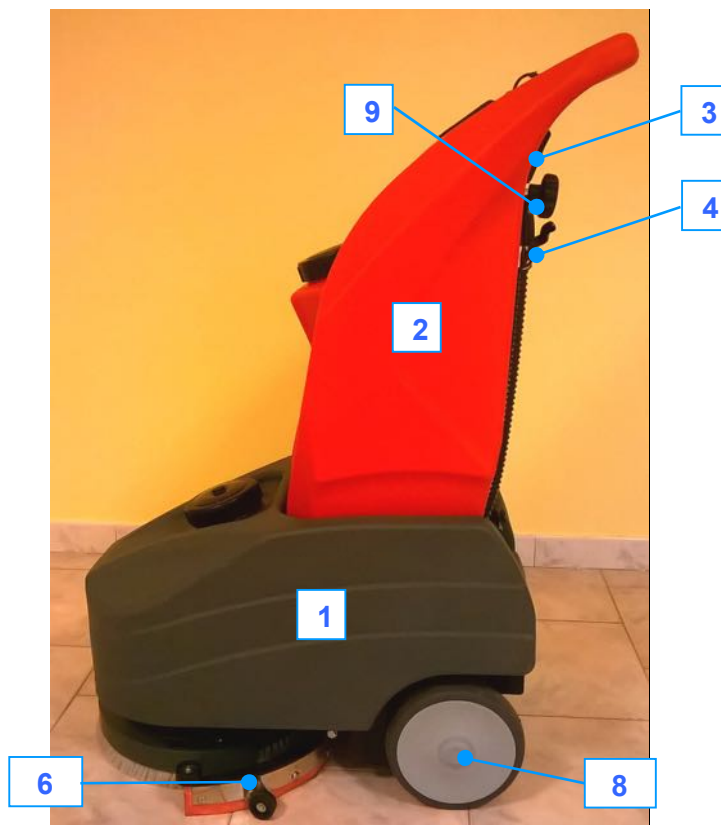


Figure 4 – FKC 36 side view

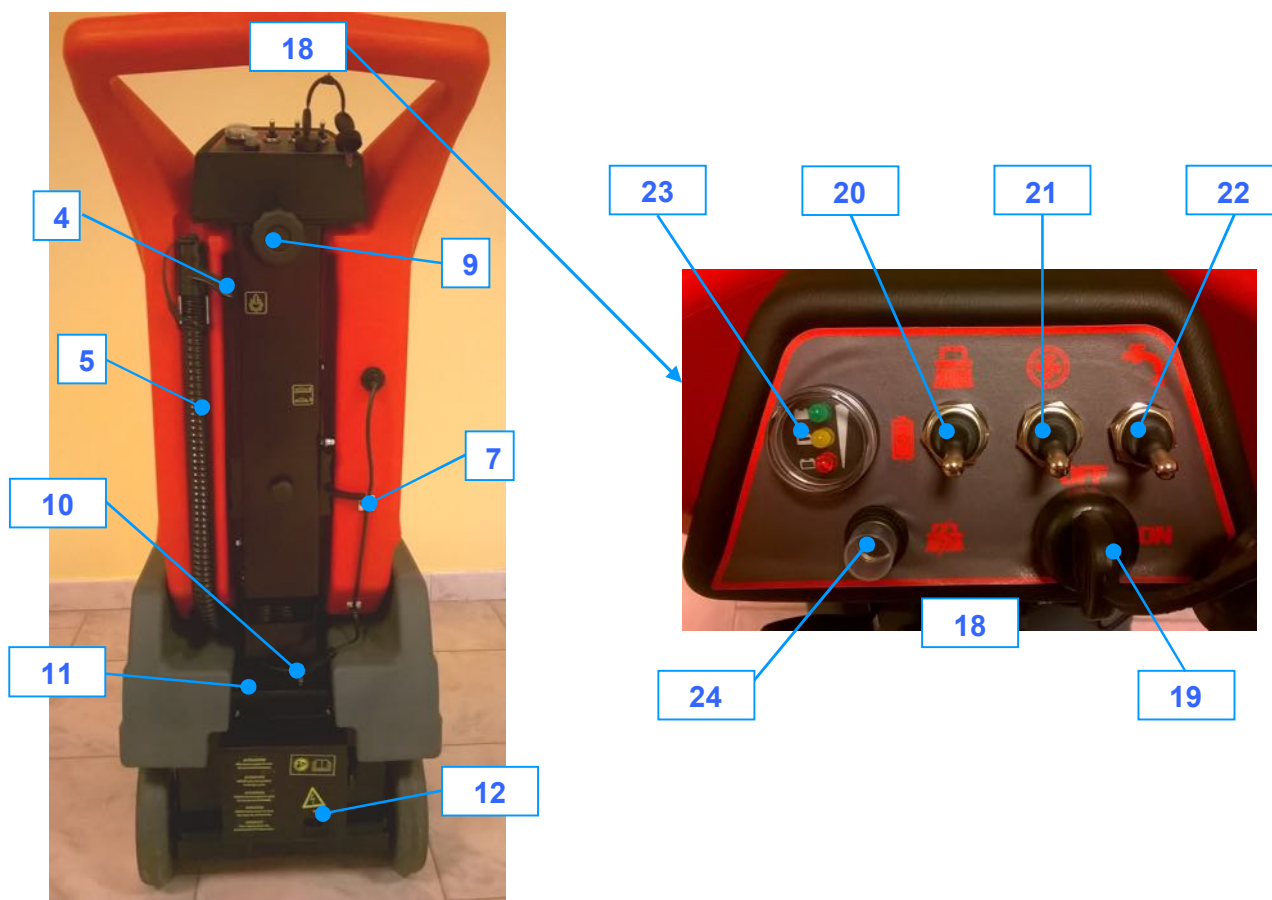


Figure 5 – FKC 36: On the left: operator position; On the right: commands rail assembly

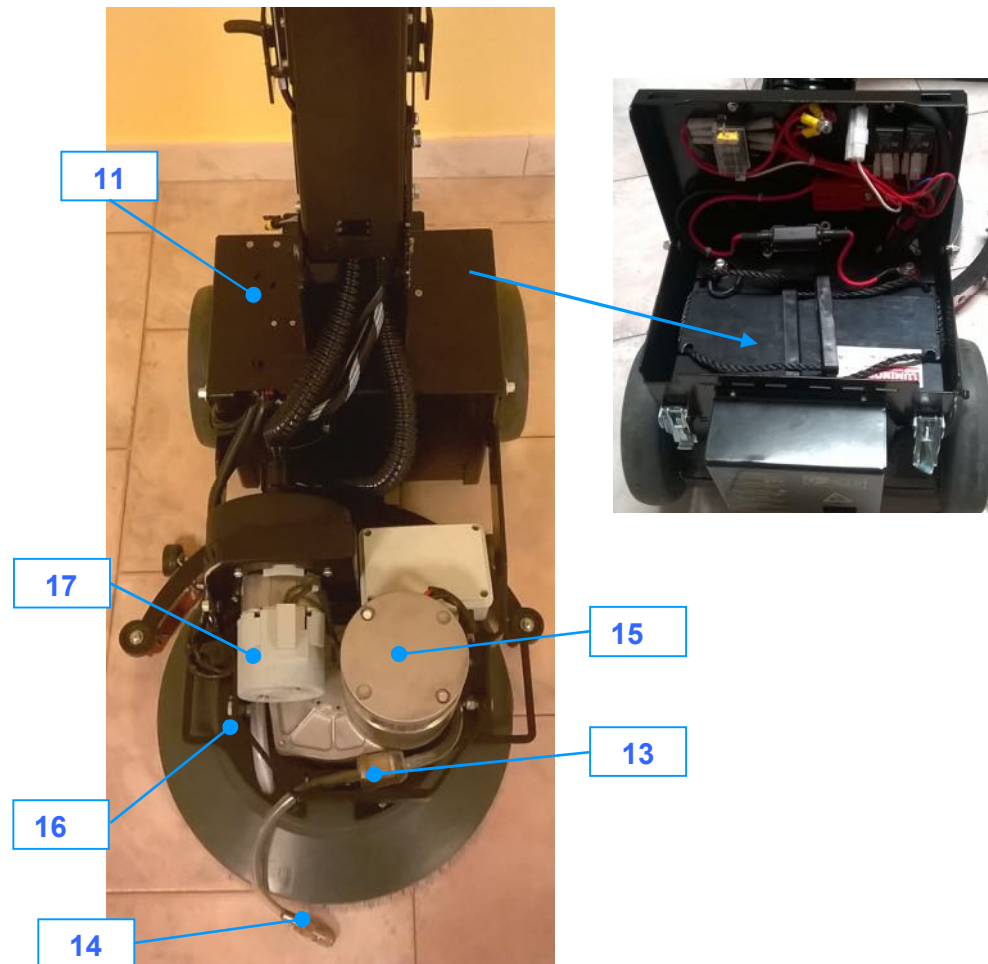


Figure 6 – FKC 36 internal view, on the left: internal battery compartment with electrical connections

COMPONENTI LAVASCIUGA FKC 36

1	Removable tank for the washing liquid charge in plastic PE-HD equipped with its lid	7	Knob to lower / raise the squeegee	13	Disposable water filter
2	Removable tank for the recovery liquid in plastic PE-HD equipped with its lid	8	N° 2 wheels for moving the machine	14	Fast attack to the tank removal of washing solution
3	Adjustable handlebar	9	Recovery tank removal knob	15	Motor applied on the brush
4	Left lever for adjusting the handlebar	10	Float sensor	16	Rotating brush support
5	Pipe drain provided with end tap	11	Box containing battery and electrical connections	17	Suction motor dirty water
6	Squeegee equipped with n ° 2 shockproof wheels	12	Charger connection point	18	Group guide provided with operating commands

COMANDI DI FUNZIONAMENTO FKC 36

19	Key switch (power supply switch)	21	Switch Suction motor	23	Indicator of battery status with LED lights
20	Switch Brush motor	22	Water and detergent release switch	24	Botton for Motor-protection brushes

8. Technical data

DIMENSIONS		FKC 36	FKC 46
Height	mm	780	1000
Width	mm	420	430
Depth	mm	1000	950
Empty machine weight	kg	37	60
Battery weight	kg	23	52
Brush diameter	mm	360	460
Solution tank capacity	Lt	15	30
Recovery tank capacity	Lt	17	30
ELECTRICAL CHARACTERISTICS		FKC 36	FKC 46
Battery	V / Ah	12 / 80	2 x 12 / 110
Battery charger	V / Ah	12 / 8	24 / 11
Brush motor	W	150	400
Vacuum motor	W	200	550
Power supply (50 Hz)	V / Hz	12 / DC	24 / DC
FUNCTIONAL CHARACTERISTICS		FKC 36	FKC 46
Squeegee lifting	-	By lever	By lever
Suction operation	-	Switch	Switch
Brushes operation	-	Switch	Switch
PERFORMANCES		FKC 36	FKC 46
Indicative autonomy	h	2	3
Speed advancement	-	Push by hand	Push by hand
Clean Area	m ² /h	1100	1800
Depression	mm/H ₂ O	700	1170
Brush rotation	RPM	140	150
NOISE AND VIBRATION		FKC	
Max acoustic pression (L _{pA})	dB(A)	79	
Uncertainty acoustic pression (K _{pA})	dB(A)	3	
Max Vibration Hand-Arm (a _h)	m/s ²	< 2.5	

The data are not binding for the manufacturer; therefore, they are subject to possible change without notice. In any case Alberti International s.r.l. is always available for any information and clarification. With regard to the specifications and requirements adopted during the measures relating to the noise and vibration, see the data inside the guarded technical dossier from the manufacturer.

FKC 36 machine is not equipped with a safety button. Where is invoked in the document, for the drive of the brushes, it has to be considered relatively to FKC 46 model. The FKC 36 is equipped with a flow regulator tap similarly to the FKC 46 but is localized in front position.

9. IDENTIFICATION

All scrubber dryers are identified by means of identification plates fixed on the protective casing in the back of the machines. It is shown on the following figures with the marking data "CE". In the figure on the left the label is on the scrubber FKC 46, while on the right it is relative to the machine FKC 36.

Lavasciuga Pavimenti a corrente continua Scrubber Dryer DC	
Model	FKC46 B
Serial nr.	2016091661
Power Supply V	24V / DC
Brush Motor	400 W
Vacuum Motor	550 W
IP CODE	IPX4
Solution Tank	30 lt
Recovery Tank	30 lt
Weight	115 kg
Year of Production	2016



Lavasciuga Pavimenti a corrente continua Scrubber Dryer DC	
Model	FKC36 B
Serial nr.	2016091661
Power Supply V	12V / DC
Brush Motor	250 W
Vacuum Motor	200 W
IP CODE	IPX4
Solution Tank	15 lt
Recovery Tank	15 lt
Weight	70 kg
Year of Production	2016



The nameplate cannot be removed and must always be kept legible. In case of damaging it must ask a duplicate. The scrubber-dryer can not be marketed without the label.

10. OPERATOR LOCATION

The machine is conduct by hand; the displacement for the FKC 46 scrubber is made possible only by pressing the release button located on the handle of the machine. The operator's position is in corrispondence of the scrubber unit where is present the control board. The speed of movement of the machine is determinated dall'andatura of the driver.

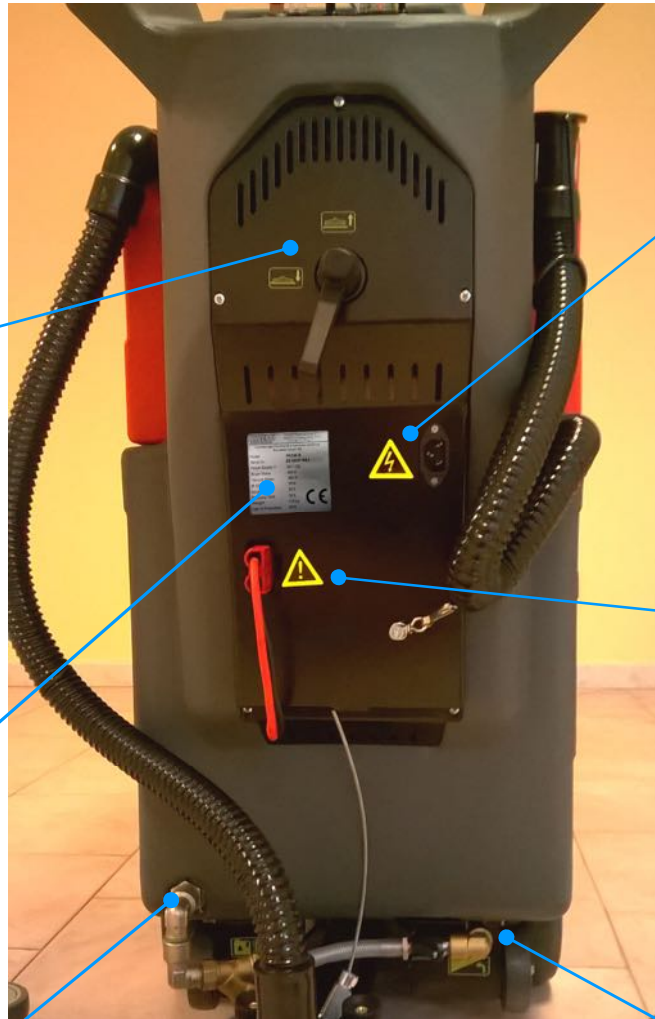


ATTENTION !

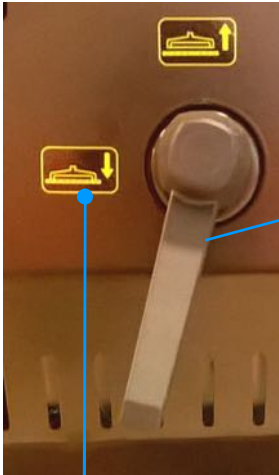
The staff must always work under bright conditions. The environments of use must be well ventilated and comply with current regulations on hygiene and safety.

11. SYMBOLS AND LABELS APPLIED ON THE MACHINE

SCRUBBER DRYER FKC 46



Lifting (deactivation) Squeegee



Squeegee maneuver



CE label and serial n° of FKC 46



Charger connection point



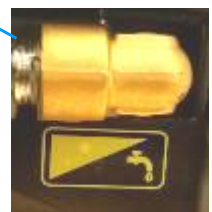
Plug socket combination for battery power supply 230 V



Water filter output from the washing solution tank



Adhesive label shown on the battery of the machine

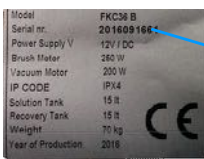


Regulator flow / quantity water released

SCRUBBER DRYER FKC 36



Left lever to adjust the inclination of the handlebar, pull the lever towards you and move downwards until you reach the desired angle.



CE label and serial n° of FKC 36

Adhesive label shown on the battery of the machine



Right lever:

- squeegee lifting (machine off)
- squeegee lowering (machine on)



Input Charger 230 V cable



ATTENTION !

Make sure that the labels are legible; otherwise apply them or replace them. Request the labels to the authorized dealer.

12. DELIVERY



ATTENTION !

Upon receipt of the machine check that the packaging is intact and has not been damaged during transport, or has been voluntarily open by a third part to subtract parts inside it. If you discover damage or missing parts inform immediately the courier, the insurance company and Alberti International Srl.

Upon receipt of the scrubber dryer is necessary to check that the machine matches the specifications on the D.D.T.



For the disposal of the packaging refer to the current regulations of the destination country.

13. STANDARD DOTATION

It is recommended to check the machine upon delivery. It must be intact and have in endowment:

for **Scrubber dryer FKC 36:**

- Battery 12V 80Ah AGM
- Battery charger 12V 8Ah included
- Brush PPL60
- Accessory for brush removing
- Battery charger cap
- N° 2 Squeegees in LATEX

for **Scrubber dryer FKC 46:**

- N°2 Batteries da 12V 110Ah AGM
- Battery charger 24V 11Ah included
- Brush PPL60
- Accessory for brush removing
- Battery charger cap
- Squeegee in LATEX and PPU

14. HANDLING AND TRANSPORT

Before every movement always make sure that the lifting device with its tools is suitable to lift the load to be moved and has the stability needed to perform the operation.

During these operations use appropriate safety guards.

Alberti International Srl, in according with the transport mode, uses packaging adequate to ensure the integrity and preservation during the same.

To transport the machines, you must:

1. Place the body of the scrubber-dryer on a pallet and secure it.
2. Lock scrubber dryer fixing it to the pallet.
3. Place the forks of the lifting equipment under the pallet, check the degree of stability of the system, the package shall be handled with extreme care and it is forbidden to overlap each other the items.

To handle the machine, simply press down lightly. The FKC 46 is provided with support wheels (ref.9 Figure 2) for the movements, despite the size and the weight, from this position it is possible to pushing it manually and easily

The dimensions and the weight of FCK 36 are reduced and the support wheels are sufficient for the handling / transport of the machine. It is also equipped with special handles located on the sides of the brushes' support to facilitate transportation.



ATTENTION !

Check weights, capacities and dimensions into the paragraph "Technical data".

Move the machine only on flat floors, regular and compact, do not move the machine on slope floors.

The subjects not involved in the operation should keep the safety distance.

15. INSTALLATION

The machine that you are going to use, will give you the best performances if it will be installed observing carefully our instructions . The installation must be performed by authorized personnel well trained and aware of these instructions.

15.1 BATTERIES INSTALLATION

To install batteries, follow the instructions below:

With reference to the machine **FKC 46**:

1. Lift the recovery tank making sure that the latch is in the correct position (ref.3 Figure 1)
2. Install the batteries into the correct place, as shown in Figure 3 ref. 11, making sure that there are no cracks in the batteries' container
3. Clean surfaces for the connections
4. Handling the batteries is facilitated by the handles on the sides of it.

With reference to the machine **FKC 36**:

- after removing the tanks as indicated in paragraph "dismantling tanks"
- Unhook both latches positioned outside of the battery box
- Install the batteries into the correct place, making sure that there are no cracks in the batteries' container
- Clean surfaces for the connections
- Handling the batteries is facilitated by the handles on the sides of it.

15.2 BATTERY CHARGER INSTALLATION

The charge of the battery must be carried out in a dry and ventilated place, away from heat sources and corrosive environments. The machine has already equipped with an incorporated battery charger; with the machine is supplied the cable used to connect the battery charger to the electrical network. See in the figure below:







Along with the electrical connection are provided the instructions for use of the battery charger, in particular the indications for correct operation, the technical specifications, the protections be present, types of interconnections and the safety instructions that we redirect to reading and comprehension.

The following are the meanings of LED indications in the presence and in the absence of the network, displayed on the device with three LEDs (Figure rif.23 2:05) mounted on the dashboard.





**ATTENTION !**

When the scrubber dryer is not in charge, it must always be equipped with the cap on the plug input of battery charging

In presenza rete

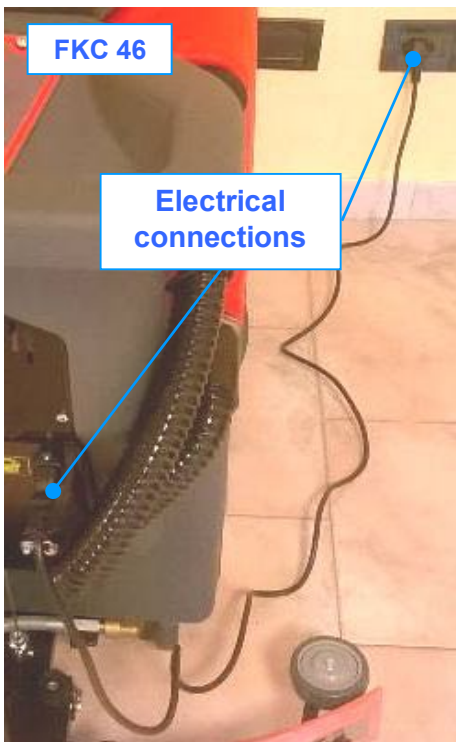
- Rosso lampeggiante:  Fase di verifica stato batteria
- Rosso:  Prima fase di carica
- Giallo:  Seconda fase di carica
- Verde:  Batteria carica Fase di mantenimento

In assenza rete

- Verde:  Batteria carica
- Giallo:  Batteria quasi scarica.
- Rosso lampeggiante:  Batteria scarica. Dopo 2min funzione Inhibit attiva
- Rosso:  Batteria scarica e funzione Inhibit attiva

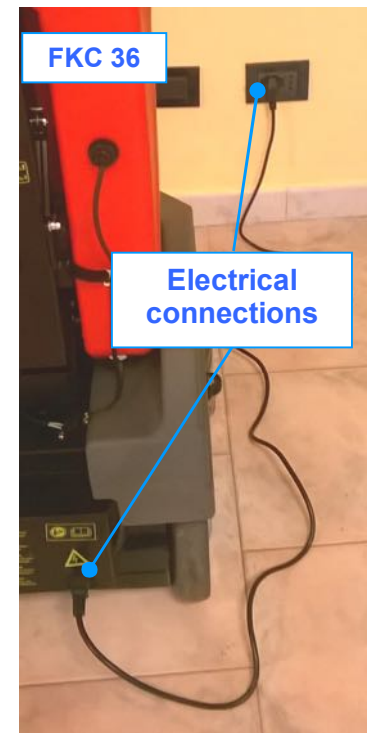
Quando è acceso il led rosso è consigliabile ricaricare al più presto la batteria per evitare danneggiamenti dovuti a scariche profonde.

The figure below shows the correct way to perform the operation of the battery charge.



The battery charger must be connected to a fixed feed point provided with an effective earth contact and controlled by switching devices against overload and leakage current.






It is recommended that the electrical feed point is protected in accordance with current legislation.



16. FUNCTIONING

16.1 DASHBOARD

The control panel consists of a series of switches, displays and buttons that enable / disable all functions of the machine, there is also a key switch that allows to disconnect the power supply. Each switch is associated with a pictogram / symbol that represents the function performed.

SYMBOL	FUNCTION
	Brush Group Switch: drives the rotational movement of the brush that allows the cleaning of the paved surface. To start the movement, you must also press the button placed on the handle (ref. 13, Figure 2)
	Switch suction group: drives the suction system which collects the dirty water and conveys it to the recovery tank. When the recovery tank reaches the level of maximum capacity a float stops the suction.
	Switch of the water and detergent solution release: actuates the release on the floor of the water-detergent solution contained in the feed tank. The water reaches by gravity the holes of which is provided with the brush. To do this you must also press the button placed on the handle (ref. 13, Figure 2)
	Button of brush motor circuit breaker: when the device is triggered by motor overload, causes the arrest of the brush. For the reactivation of the brush motor must be reset (press) the button (ref. 24, Figure 2:05).
	Indicator of the battery status by means of LED lights: signals using LEDs (green, yellow, red), the battery charge level

16.2 STARTING AND PREPARATION OF THE MACHINE

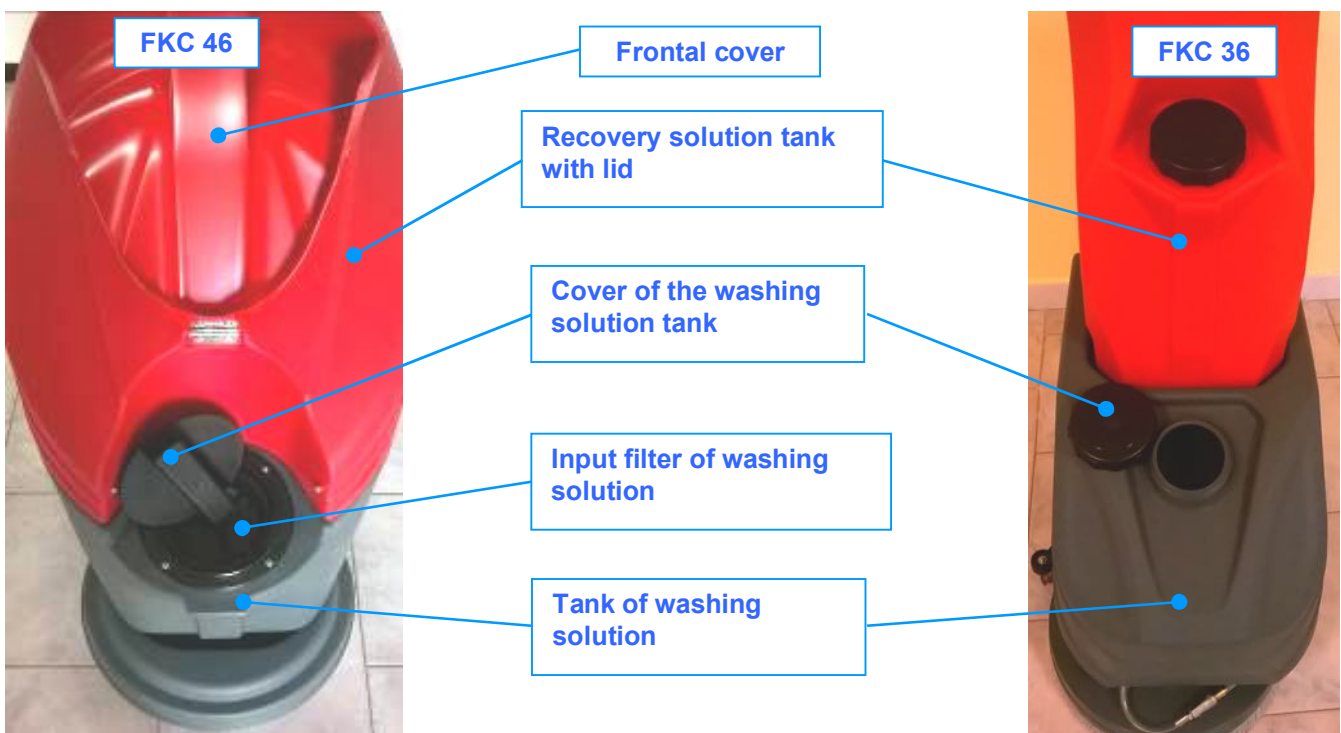
16.2.1 Filling the clean water tank

1. lift the front cover of the machine: only for the FKC 46;
2. unscrew the cover that allows access to the cleaning water tank;
3. Pour the washing solution (water and detergent) in the filter of which is provided the tank, up to about 1 cm from the filter: the tank contains about 30 liters (FKC 46) or 15 liters (FKC 36) of solution



ATTENTION!

Proceed with caution during the loading phase solution in the tank to avoid any spills of solution that may spread inside of the battery compartment and might make contact with the electrical connections of the brush motor



16.2.2 Preparation of the machine

After verifying that you have connected the power cable of the battery, turn the main switch key to "ON" (ref.19 Figure 2) mounted on the dashboard of commands. At this point you can proceed with use.

16.2.3 Detergent choice

For a good cleaning of the floor you have to find the right cleanser, a too aggressive detergent can be harmful. You need to use low-foaming detergent, or antifoam additive, in order to avoid damage to the suction motor and not corrosive.

Make sure that the detergent used is appropriate for the type of surface to be treated. Alberti International Srl is not responsible for damage caused by aggressive detergents or otherwise not suitable for the surface to be treated.

16.2.4 Tank disassembly

The tanks of the FKC 46 are not removable. To have access to the internal compartment in which are located the engines and batteries, lift the upper tank bringing the lock to the end limit.

For the FKC 36 the tanks (ref 1 and 2 of Figure 5) are removable to allow access to the operator and the service technician to the components into the inner compartment.

To extract the recovery water tank:

- disconnect the float sensor (ref. 10 Figure 5)
- unscrew the knob (ref. 9 Figure 5) and remove the tank from its seat.

To extract the wash water tank:

- unhook the quick coupler of water conduit (ref. 14 Figure 6)
- remove the tank from its seat
-

Proceed in reverse to assembly the machine.

16.3 BRUSH, HANDLEBAR AND SQUEEGEE ADJUSTMENTS

16.3.1 Brush adjustment

To ensure a perfect washing operation, it is essential that the brush is perfectly adjusted.

The adjustment is only possible for the FKC 46 and you need to act on the visible knob in the figure below, in particular it needs to:

- turn the knob clockwise to decrease the load on the brush;
- turn the knob counterclockwise to increase the load on the brush.



16.3.2 Handlebar adjustment

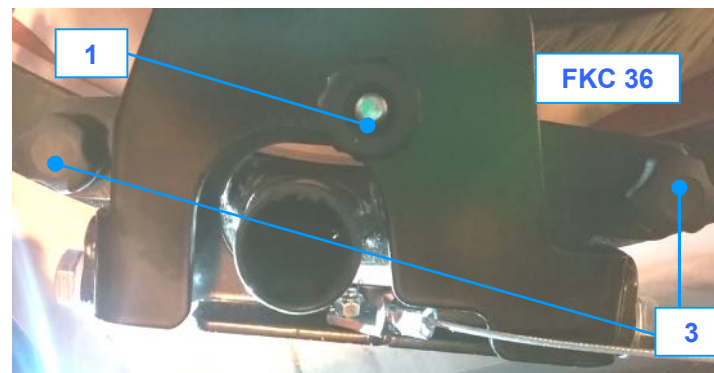
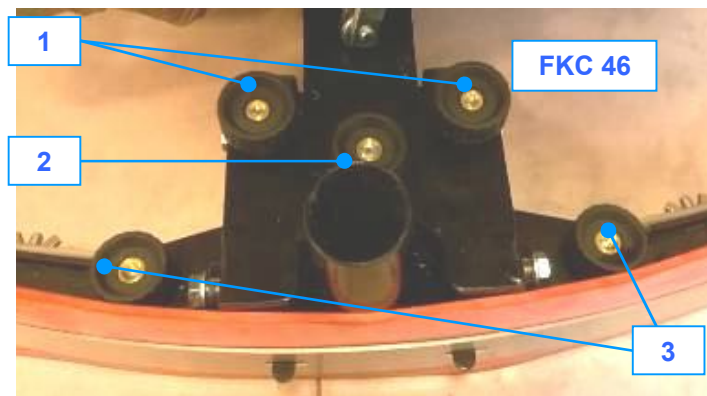
The FKC 36 is provided with adjustable handlebar unlike the FKC 46. The adjustment takes place pulling towards you the left lever (ref. 4 Figure 5) and moving the handlebar according to the inclination sought.

16.3.3 Squeegee adjustment

To ensure a perfect drying, it is essential that the squeegee is perfectly adjusted.

This type of squeegee, has the characteristic of collect perfectly the water towards the suction tube, but is very sensitive to the parallelism with the ground, making reference to the following figures:

- in reference to the FKC 46, to adjust:
 - the parallelism of the squeegee with the ground, operate on the adjustment knobs indicated with number 1
 - the tilt of the squeegee, use the knob marked with number 2 that allows you to increase or decrease the angle between the squeegee and the floor.
- in reference to the FKC 36, for the adjustment of the parallelism with the floor only act on the knob indicated with the number 1.
- The knobs indicated with the reference 3 are used for fastening the squeegee on the machine. act on these knobs when it is necessary to perform maintenance operations or to allow and facilitate the access of the machine within tight spaces.



It's very important that the supporting wheels of the squeegee are adjusted to keep the blades parallel to the squeegee and well resting on the ground.

16.4 WASHING AND DRYING FUNCTIONS

The washing operation is very delicate because it is necessary, based on experience, judge correctly whether a double cleaning action is needed, and the good choice of detergent:

- If the floor is very dirty, it is advisable to double the cleaning action. This operation consists of two phases:

1. In the first phase the squeegee is in the raised position and the brushes in the working position. To carry out the washing operation, you need to act on the brush motor switch (rif.20 Figure 2), keep pressed the safety button (ref.13 Figure 2) and press the switch for the water release (rif.22 Figure 2). The dosing of the water must be such that the whole surface, directly after the brushes, is well wet. In this way it will carry out a first pass, on a surface of some tens of square meters. The cleaning solution will be left on the floor to loosen the dirty, with completion of its function of a solvent, for a few minutes.
2. The second cleaning action will be made with the brushes lowered and the squeegee in contact with the floor, so as to complete the wash and collect water, turning on the suction (rif.21 Figure 2), left on the floor during the two previous cleanup actions

- If it is not carried out the double washing action, you need to lower the squeegee and then press the switch of the brush motor (rif.20 Figure 2),. The squeegee is lowered by the lever. The suction motor is switched on via the switch (ref. 21 Figure 2).

16.5 DRYER OFF

After the operation of washing and drying:

- 1 turn off the water (through the switch rif.22 Figure 2)
 - 2 turn off the brush switch (rif.20 Figure 2) and then terminate the drying operation,
 - 3 turn off the vacuum motor (rif.21 Figure 2),
- Turn "OFF" the general power supply switch mounted on the dashboard.

16.6 WATER DISCHARGING

The scrubber dryer is equipped with a water drain hose (ref.5 Figure 2) and a flexible hose (ref 4, Figure 2) with the suction function of the washing wastewater.

To drain the water from the tank:

- 1 place the machine on a drain well
- 2 unhook the tube from its appropriate position,
- 3 open the rubber cap at the end of the tube.

17. STORAGE

At the end of the work, proceed with the disposal of the recovery tank contents as described in paragraph "Water Discharging" and then proceed with the related cleaning of the tank with clean water or dry up the tank through a paper towel or tissue.

Keep the washer-dryer in a place sheltered from the cold and from the possibility of use by unauthorized persons by removing the key, after having put it in the OFF position. It should not be storage on a floor that, in addition to dirtying the bristles of the brush, jeopardize the stability, or on inclined surfaces; Also, make sure that the squeegee has been lowered .

It is possible to close the model FKC 36 in a compact manner by extracting from the machine frame both tanks and acting on the tilt lever position of the handle guide assembly on zero inclination (next to the frame).

18. MAINTANANCE

In order to maintain the efficiency of the washer-dryer and extend its life for the entire period of the guarantee, it is essential to carry out periodic maintenance. We recommend to record operations carried out using the proper register present herein



ATTENTION!

- All maintenance operations must be performed with the machine on a horizontal plane, with the main switch (ref.19 Figure 2) on "OFF" position, the connection battery power socket-plug disconnected; it must also be disconnected the power plug of the charger
- Good maintenance and proper use are the prerequisite to ensure the machine performance and safety.
- To ensure steady and smooth operation of the machine and its safety, use only original spare parts supplied by the manufacturer or approved by him.

18.1 BRUSH REPLACEMENT

To proceed with the replacement of the brush, it should operate in the following way:

- 1 lightly press on the handlebar down to lift the brush,
- 2 use the tool provided in the kit to hook the brush and proceed exerting a slight pressure on the brush down;
- 3 slide out and remove the brush;
- 4 to insert a new brush, it is necessary to center the hexagon of the brush with the flange attack and apply pressure with both hands upwards so that the hooks are securely anchored to the flange of attack.

18.2 SQUEEGEE REPLACEMENT

The squeegee blades should be replaced when the contact edge is worn out; the perfection of the edge is essential for a perfect drying. To carry out this operation, unscrew the wheels which act as fixing and position the squeegee on a workbench.

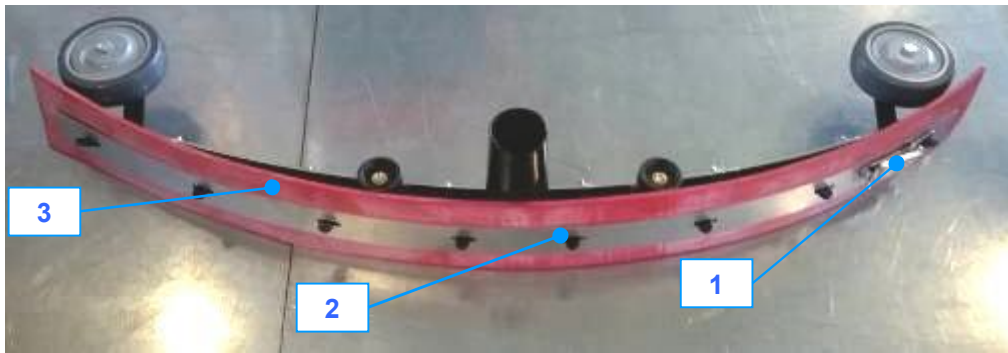
To replace the front blade proceed as follow:

1. unscrew the front wing nuts;
2. remove the blade.

To replace the rear blades do the following operations:

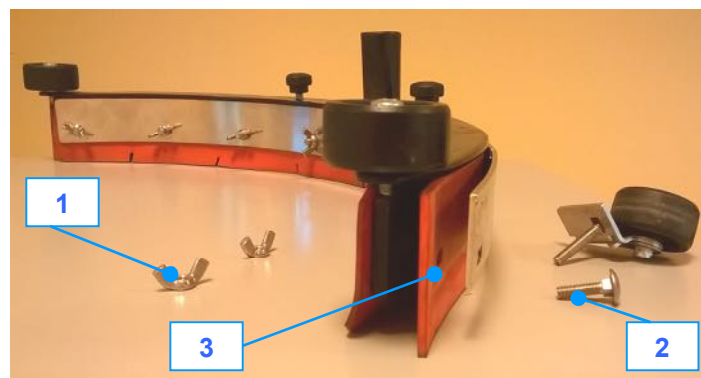
For the model FKC 46:

- unhook the catch (detail 1), slip off the steel strip (item 2) and remove the blades (item 3) worn. The blade has a two-way use, before changing it, make sure that the blade is worn out on both ends
- insert new blades; re-position the steel strip and secure it; Finally, carry out for the squeegee adjustment, as described in paragraph "Squeegee adjustment"



For the model FKC 36:

- after unscrewing the front wings nut, pull out the anchor screws (detail 1) then slip off the N° 2 steel strips (detail 2). In this way also the rear blade can be replaced (detail 3).
- insert new blades; position the steel strips and secure them with the screws and wings nut. Finally provide for the squeegee adjustment, as described in paragraph "Squeegee adjustment"



To mount the squeegee, position it within the appropriate places, in the rear of the machine, tighten the N° 2 fixing wheels and attach the suction hose.

18.3 PERIODIC MAINTENANCE

In addition to the preliminary checks, the machine requires constant checks and controls to be carried out within the deadline indicated in the first column of the table here below.

Frequency	Mode of intervention	Person
Daily	<ul style="list-style-type: none"> • Clean the recovery tank and the filter of motor suction. • Clean the filter located at the entrance of the clean water tank from possible residues. <p>To perform these cleaning operations do not use corrosive substances and high pressure water jets</p>	Skilled operator Authorized technician
Weekly	<ul style="list-style-type: none"> • Check the cleanliness of the exhaust and intake pipes and the squeegee. 	Skilled operator Authorized technician
Every 15 Days	<ul style="list-style-type: none"> • Check the condition of the inlet rubber blades of the squeegee. 	Skilled operator Authorized technician
Every Month	<ul style="list-style-type: none"> • Check and clean the filter of clean water tank. For cleaning / replacement the filter proceed as indicated in the paragraph "Cleaning / Replacing of water filter." 	Skilled operator Authorized technician

<p>Every Year</p>	<ul style="list-style-type: none"> • Check the status of the motor brush on every engine, if worn, proceed with the replacement as described in paragraph "Maintenance of suction motor" • Check the safety devices and their functionality. • Check the electrical system: Possible defects such as loose connections or scorched cables, must be rectified immediately. 	<p>Authorized technician</p>
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In addition to those described in the above table, the machine requires specific maintenance operations indicated in the following paragraphs.

18.4 WATER FILTER CLEANING / REPLACEMENT

Unscrew the filter placed below the clean water tank, present in the connecting pipe with the rotary brush (ref 2, Figure 2).

With reference to the **FKC 46**:

- Take out the filter from the water circuit (encircled in the figure below)
- Blowing it with an air jet and then screw it again, by interposing the sealing ring of which the filter is provided



With reference to the **FKC 36**:

- After removing the 2 tanks,
- Unhook from both ends the circuit where it passes through the wash water
- Replace the disposable filter (encircled in the figure below), then place the new filter and close the circuit as shown in the figure below,



<p>ATTENTION!</p>	<p>The cleaning / replacement of the water filter should be more frequent in the case of using ferrous water.</p>
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18.5 SOLENOID VALVE CLEANING

1. Proceed by disconnecting the connectors of the electrical connections present on the upper part of the solenoid positioned as in figure:

FKC 46 internal compartment adjacent to the brush motor



FKC 36 under the white derivation box inside the machine



2. Turn of half turn the solenoid valve;
3. Pull out and remove the solenoid valve;
4. For the FKC 46 and FKC 36 blow a jet of air so as to remove any deposited residues

18.6 BATTERY MAINTANANCE

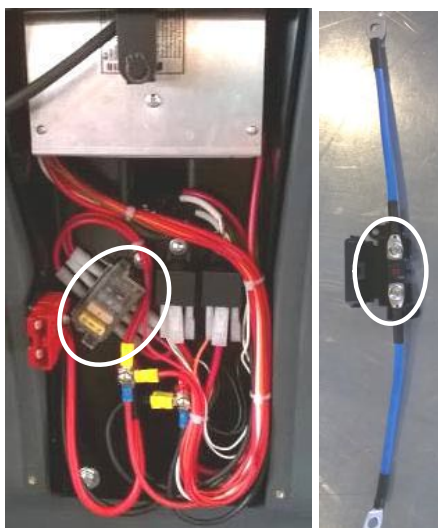
During periods of inactivity, the batteries run spontaneously (self-discharge). If the battery is not used continuously, you must do at least once a month the charge operation. If the battery remains inactive for long periods of time it must be detached from the supply and stored in a dry place.

18.7 FUSES REPLACEMENT

To replace the fuses mounted on the washer-dryer proceed as listed below. For the calibration of fuses and related circuit on which they are inserted, please refer to the electrical scheme.

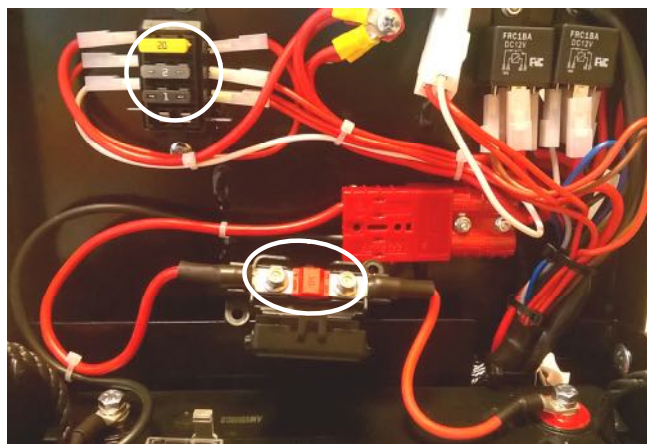
FKC 46, the fuses are positioned in the rear of the washer-dryer, under the electrical system cover panel:

1. Unscrew and pull out the lever for lifting / lowering the squeegee (ref. 10 Figure 2)
2. Unscrew the N° 5 screws holding the cover plate of the electrical system,
3. proceed with the replacement of fuses (N° 3 contained in a box + N° 1 in the connection between the battery terminals) as circled in the figure below



With reference to the **FKC 36**, the fuses are located inside the battery compartment and electrical connections (ref. 11 Figure 6)

1. extract N° 2 tanks as described in the paragraph "Tanks Removing "
2. unhook the lock of the box battery compartment and lift the lid
3. proceed with the replacement of fuses (N° 3 contained in a box + N° 1 in the connection between the battery terminals) circled in the figure below



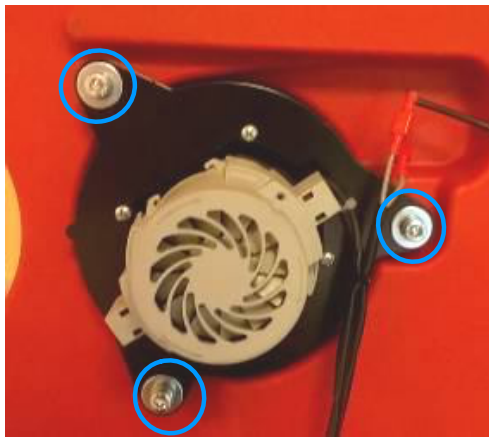
18.8 VACUUM MOTOR MAINTENANCE

The suction motor must be checked and cleaned, the operation must be performed by authorized service
Every six months the motor brushes should be checked and must be replaced if necessary

For the maintenance of the vacuum motor do the following operations:

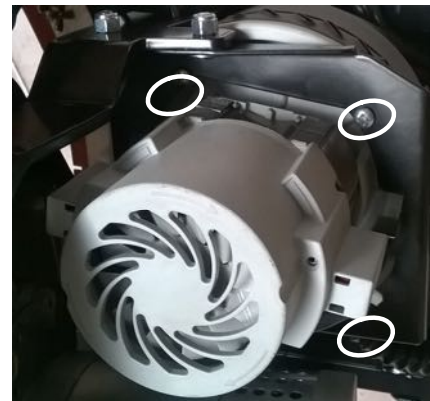
FKC 46:

- 1 remove the keys from the control panel to prevent accidental ignition and make sure that you have disconnected the electrical power connection safety system
- 2 make sure that both tanks are empty
- 3 lift the recovery tank and bring it up to the end of the roll stop race connected to the tank;
- 4 Unscrew the screws that secure the motor to the tank (circled in the figure below)
- 5 do the necessary operations of maintenance on the engine
- 6 perform the reverse operations to restore the machine.



FKC 36:

1. remove the keys from the control panel to prevent accidental ignition and make sure that you have disconnected the electrical power connection safety system
2. make sure that both tanks are empty
3. remove the tanks as indicated in paragraph "Removing the tank"
4. Unscrew the screws that secure the motor to the frame (circled in the figure below)
5. seguire le necessarie operazioni e manutenzione sul motore;
6. seguire ora le operazioni inverse per ripristinare la macchina.



18.9 BRUSH MOTOR MAINTENANCE

The brush motor is the main component of the machine and it must be controlled and kept in excellent condition, the operation must be performed by authorized technician.

For maintenance, remove the keys from the control panel to prevent accidental ignition and make sure that you have disconnected the electrical power connection safety system

Proceed in accordance to the model as shown below:

FKC 46:

1. Disconnect the squeegee from the machine by unscrewing the two fixing screws as shown in the "squeegee adjustment"
2. disconnect the brush from the machine by following the instructions in the section "Replacing the brush";
3. proceeding with caution, place the machine laterally on the side in which are present the upper reservoir hinges
4. remove the washing brush
5. unscrew the central screw, circled in the figure below, and pull out the hub of the brush;



6. unscrew the 4 screws which fix the motor brush to the machine, circled in the figure below:



- 7 remove the brush motor from the machine;
- 8 act on the hook of the black protection that circle the casing to obtain access to the brush motor
- 9 do the necessary operations of maintenance on the engine
- 10 perform the reverse operations to restore the machine.

FKC 36:

1. make sure that both tanks are empty;
2. remove the tanks as indicated in paragraph "Removing the tank"
3. proceed with caution and put the machine on the back side in order to operate smoothly on the brush
4. remove the washing brush
5. unscrew the central screw, and pull out the hub of the brush;



6. unscrew the 4 screws which fix the motor brush to the machine, circled in the figure below:



7. unscrew the 2 screws of the vacuum motor bracket, circled in the figure below;



8. remove the motor brush from the support
9. act on the hook of the black protection that circle the casing to obtain access to the brush motor
10. do the necessary operations of maintenance on the engine
11. perform the reverse operations to restore the machine.

18.10 MAINTENANCE REGISTER

DATE	TECHNICIAN	TYPE OF INTERVENTION	SIGNATURE

19. SPARE PARTS

- Alberti International Srl invites to use exclusively original spare parts and contact an authorized technical service. Each request for particular spare parts must be sent to the dealer of the company Alberti International Srl indicating:
- Model,
- Serial number,
- Year of production,
- Description and quantity



ATTENTION!

If the battery charger supply cable is damaged, it must be replaced with a specific cable available as a spare part from the manufacturer.

20. AUXILIARY ACCESSORIES

Alberti International Srl has a wide range of different accessories over the standard supply (listed in section "Standard equipment") to face all kinds of dirt on any type of surface.

Alberti International Srl has different types of brushes with bristles of different hardness, different types of abrasive pad and drying blades of different material to meet the specific needs of each area to be cleaned. To get any accessory, ask to Alberti International Srl



ATTENTION!

Use only the brushes supplied with the machine or available from Alberti International Srl

21. SCRAPPING AND DISPOSAL

If the machine has to be scrapped, follow the laws in the country of use, so you must:

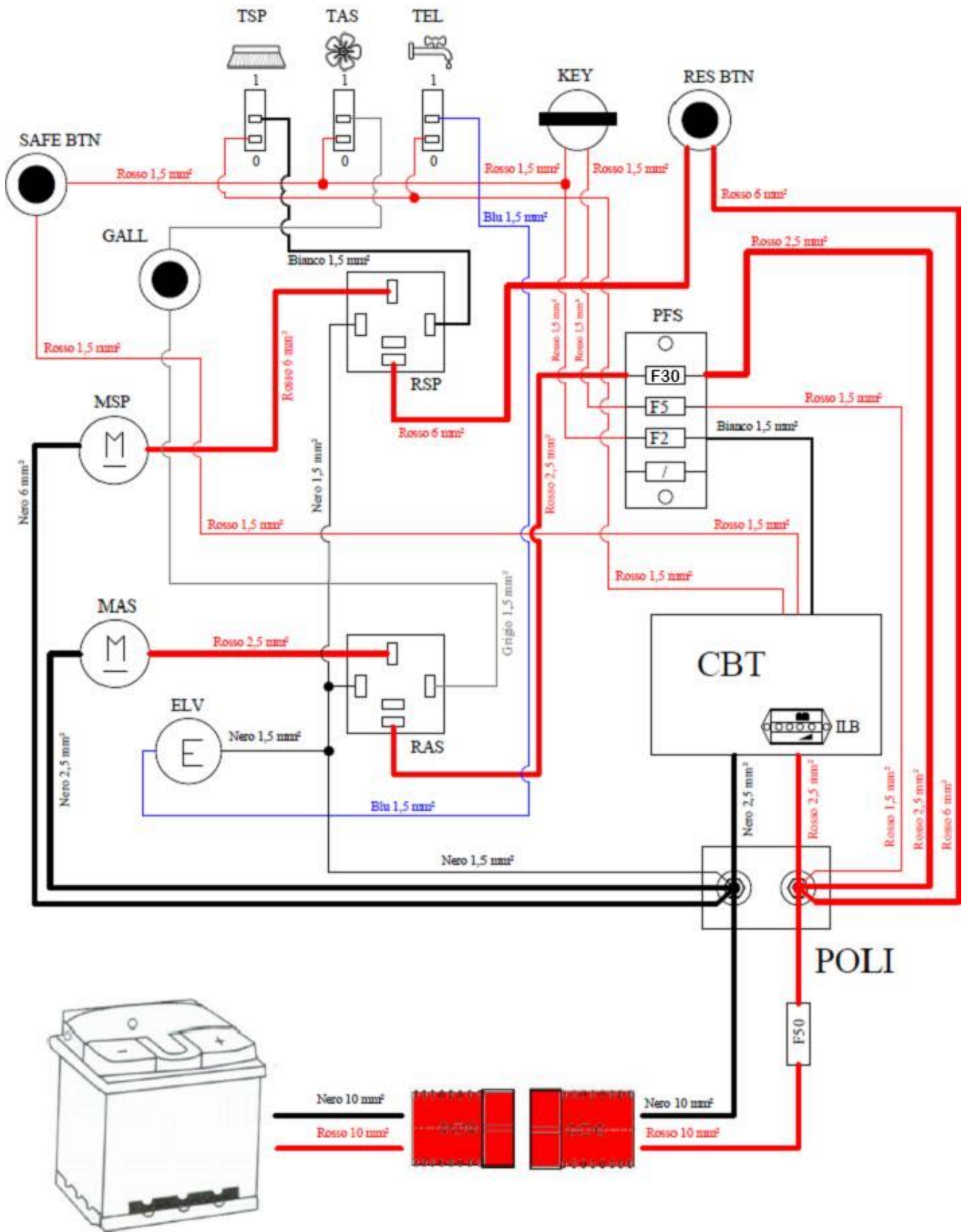
1. parts have to be separated by type (eg. plastic, hazardous liquids, metal, etc ..), in particular, there is an obligation not to dispose the WEEE (Waste Electrical and Electronic Equipment) as municipal waste and for such waste, do a separate collection
2. for the disposal you must use the public or private waste management systems defined by local legislation;
3. the exhausted batteries are considered wastes "toxic-harmful". For their disposal must be confer exclusively to collectors in possession of specific authorization the existence of which must be ascertained by the bestower. In case of impediment, the "temporary storage" must be in compliance with applicable laws, and mainly:



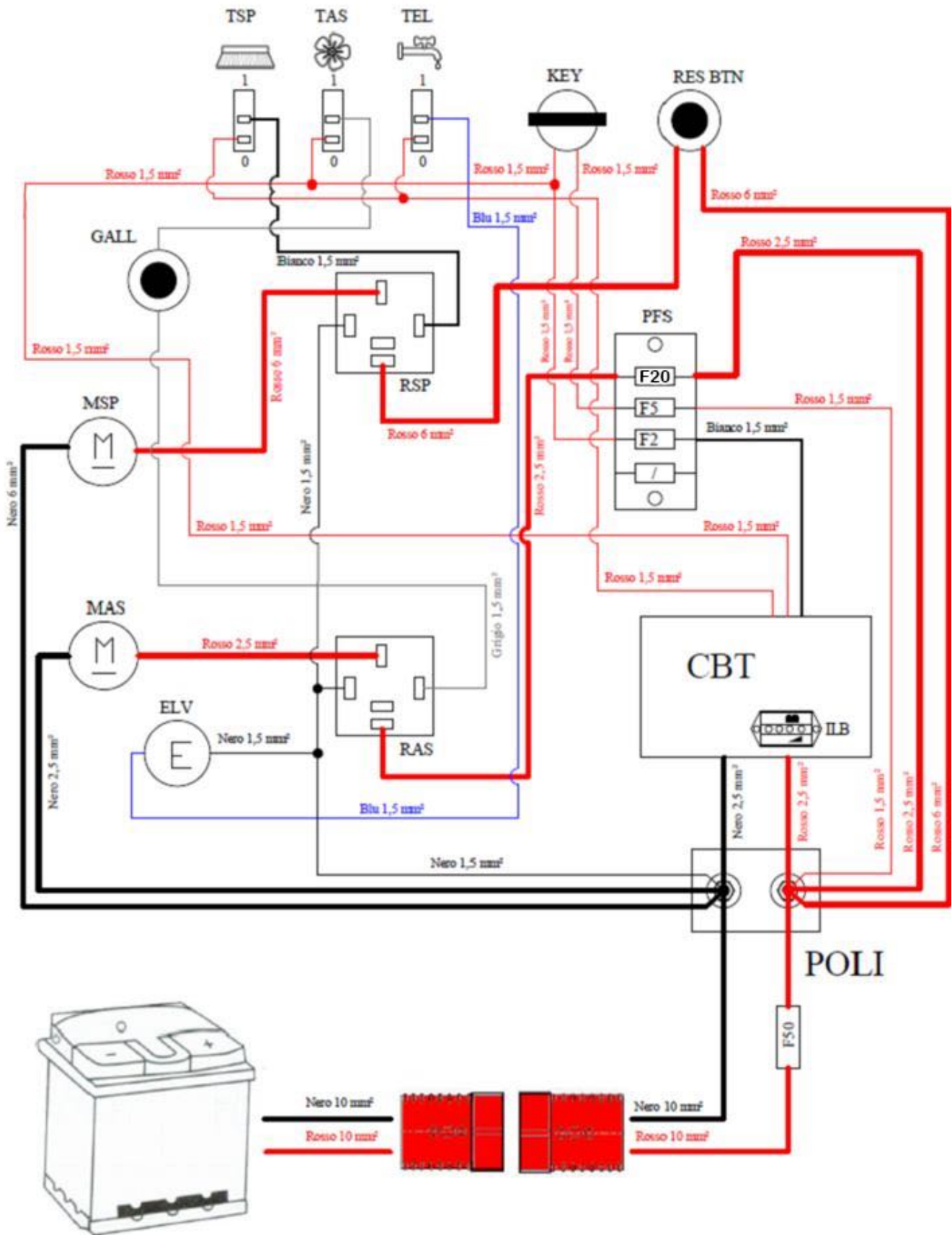
- be in possession of the interim storage;
- store in a sealed plastic containers, the capacity has to be not less than the volume of the electrolyte contained in the batteries, in any case into the container must not enter the rainwater.

22. ELECTRICAL SCHEME

ELECTRICAL SCHEME FKC46



ELECTRICAL SCHEME FKC36



23. HYDRAULIC FLOW SYSTEM

The hydraulic system consists of two circuits:

- **CLEAN WATER / SOLUTION**
- **DIRTY WATER / RECOVERY**

The circuits described below are with reference to Figures 1,2,3,4,5 and 6 in the section "Machine description."

23.1 CIRCUIT CLEAN WATER / SOLUTION

- 1 The clean water has to be inserted along with the detergent into the cap with filter positioned in front of the scrubber-dryer under the crankcase in red plastic.
- 2 The solution accumulated into the washing water tank (Ref.1 Figure 1) comes out from the hole located in the rear of the scrubber-dryer (rif.2 Figure 2), then passes through the filter and the flow regulating valve in the pipeline.
- 3 The solution passes through the solenoid valve placed in the front part of the washer-dryer, under the protective casing of the brush and is delivered directly to the washing brush through the holes.

23.2 CIRCUIT DIRTY WATER / RECOVER

- 1 The dirty water is recovered from the squeegee bar placed at the rear of the scrubber dryer (ref.6 Figure 1), directly in contact with the ground.
- 2 The dirty water passes through the suction pipe placed at the rear of the washer dryer (ref.4 Figure 2), connected to the squeegee bar.
- 3 The dirty water is collected in the recovery tank (ref.3 Figure 1) located in the upper part of the washer-dryer.
- 4 The suction of the dirty water is interrupted by the command of the switch placed on the dashboard (rif.24 Figure 2), or when the water level itself triggers the float located inside the recovery tank thus avoiding damage to suction motor.
- 5 The dirty water is discharged by means of the discharge tube (ref.5 Figure 2) which is located at the rear of the washer dryer.

24. TROUBLES, CAUSE AND REMEDIES

The table shows a list of the major machine malfunctionings, proposing the cause and the remedy. The last column shows the type of operator qualified to carry out the operation indicated, where it is reported trained operator it means that the same operation can also be performed by authorized technician.

PROBLEM	CAUSE	REMEDIES	OPERATOR
MACHINE DOES NOT WORK	Batteries disconnected	Provvedere al collegamento delle batterie	Skilled operator
	Fuses blown	It has to be replaced as indicated in paragraph "Fuses replacement"	Authorized technician
THE ENGINE STOPS SUDDENLY	The motor protection circuit breaker has intervened due to overheating	Wait a few minutes before resuming the march in order to cool the engine	Skilled operator
THE WASHING SOLUTION DOES NOT COME OUT	Water filter dirty	Clean or replace as described in paragraph "Water Filter Replacement"	Skilled operator

PROBLEM	CAUSE	REMEDIES	OPERATOR
	Lack of washing solution	Top up the solution in the washing solution tank	Skilled operator
	Clogging solenoid	Proceed to clean the solenoid as described in paragraph "Solenoid valve cleaning"	Skilled operator
ALARMS REPORTED BY LED ON THE BATTERY CHARGER	Please refer to the instructions given in the battery charger	Please refer to the instructions given in the battery charger	Skilled operator
THE FLOOR IS WET AFTER MACHINE PASSAGE	The squeegee is worn	Proceed with the replacement or inversion of the squeegee blade	Skilled operator
NOISY MACHINE	Air intake system	Check the hoses and the vacuum motor	Authorized technician
	Brush damaged	Check wear and rotation of the brush	Skilled operator

25. WARRANTY

As for the warranty of the machine, apply the conditions on the following paragraph WARRANTY RULES validated by the GUARANTEE CERTIFICATE which is issued at the time you purchase your equipment.

25.1 WARRANTY RULES

The company Alberti International Srl guarantees the good quality of the machine components for the duration of the warranty period from the date of purchasing. The warranty has a duration depending on local regulations, if the duration is not explicitly specified has to be understood of 12 months of validity.

The warranty covers and it is limited to the obligation to replace or repair free of all parts subject to defects in material or workmanship ascertained during the time period in which the guarantee is operative; are excluded from the warranty is damage resulting from improper use of the machine, the wear parts, electrical parts, labor and shipping of spare parts under warranty. For the parts not built by Alberti International Srl, the guarantee is limited to what is recognized by its suppliers. The company Alberti International Srl does not recognize a guarantee for all the machines and parts that have been tampered with by the buyer or by others, and whose defects were caused by unskillfulness or inobservance caused because it have not been followed the directions in the operating and maintenance instructions, by the buyer, or on itThe warranty also is not recognized for those machines on which have been carried out applications not approved by the manufacturer. The company Alberti International Srl invites to use exclusively original spare parts and contact an authorized technical service.

The warranty certificate must be completed in its entirety and sent to the address of the company Alberti International Srl no later than 10 days from the date of purchase of the machine.

The inobservance, even partial, of the rules described above, automatically results in the denial of warranty claims; will have no effect and will expire at the meantime the insurance that also covers civil and criminal liability. The guarantee takes effect only if the customer is able to show the coupon of warranty represented on the following page.



Alt Roggentiner Weg 11, 18196 Kessin - Germany

CERTIFICATO DI GARANZIA

WARRANTY CERTIFICATE – COUPON DE GARANTIE – GARANTIESCHEIN – CERTIFICATO DE GARANTIA

Nr. DI SERIE

SERIAL NUMBER – MATRICULE
SERIENNUMMER – MATRICULA

DATA D'ACQUISTO

DATE OF PURCHASE – DATE DE L'ACHAT
AUSLIEFERUNGSDATUM – FECHA DE LA ENTREGA

NOME ED INDIRIZZO DEL COMPRATORE

NAME AND ADDRESS OF PURCHASER – NAME UND ANSCHRIFT DES KAUFER
NOMBRE Y DIRECCION DEL USUARIO

TIMBRO DEL RIVENDITORE

DEALER STAMP – STEMPEL DES HANDLERS
SELLO DEL VENDOR



Alt Roggentiner Weg 11, 18196 Kessin - Germany

CERTIFICATO DI GARANZIA

WARRANTY CERTIFICATE – COUPON DE GARANTIE – GARANTIESCHEIN – CERTIFICATO DE GARANTIA

Nr. DI SERIE

SERIAL NUMBER – MATRICULE
SERIENNUMMER – MATRICULA

DATA DI CONSEGNA

DATE OF PURCHASE – DATE DE L'ACHAT
AUSLIEFERUNGSDATUM – FECHA DE LA ENTREGA

