

## SLAB CARRYING TROLLEY

**SC500**

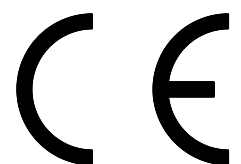
**SC800**



**OWNER'S MANUAL**



ENGLISH



<b>MANUFACTURER</b>
---------------------

For any assistance or request for spare parts, please contact your local dealer or the manufacturer directly by telephoning or writing to:

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## INTRODUCTION

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This instruction manual is addressed to the user of the machine and contains all the information regarding installation, use and maintenance and provides all the necessary information concerning safety.

The instruction manual must be kept near the machine, away from dirt and humidity and always at hand for reference.

This machine is intended exclusively for the specific use for which it is designed. Any other use is considered improper and therefore dangerous. The manufacturer cannot be held responsible for possible damage deriving from improper use due to non-compliance with the safety and operating regulations indicated in this instruction manual.

ACHILLI S.R.L. reserves the right to make changes and improvements to any of the products described in this document without prior notice.



Throughout this instruction manual an exclamation mark in an equilateral triangle is used to point out an important warning to which particular attention must be paid.



This symbol, located on the electronic battery charger, signals dangerous voltage which may be of sufficient intensity to constitute a risk of electric shock.

## INDEX

“CE” DECLARATION OF CONFORMITY .....	Page 1
CHAPTER # 1 INFORMATION AND SAFETY .....	Page 2
1.0 INTENDED USE OF THE SLAB CARRYING TROLLEY .....	Page 2
1.1 CONTRAINDICATIONS .....	Page 2
1.2 MAIN PARTS OF THE SLAB CARRYING TROLLEY .....	Page 3
1.3 RULES ON SAFETY .....	Page 4
1.4 SLAB CARRYING TROLLEY SAFETY SYSTEMS .....	Page 5
1.5 IDENTIFICATION PLATE .....	Page 6
1.6 TECHNICAL DATA .....	Page 6
1.7 NOISE LEVEL .....	Page 7
CHAPTER # 2 INSTALLATION .....	Page 8
2.0 TRANSPORT AND UNPACKING .....	Page 8
2.1 ACCESSORIES .....	Page 8
CHAPTER # 3 SETUP .....	Page 9
3.0 HANDLING .....	Page 9
3.1 STARTING AND STOPPING .....	Page 9
3.2 ELECTRICAL CONNECTION AND USE OF THE BATTERY CHARGER .....	Page 10
3.3 STARTUP .....	Page 11
CHAPTER # 4 MAINTENANCE .....	Page 12
4.0 MAINTENANCE .....	Page 12
CHAPTER # 5 TROUBLESHOOTING .....	Page 14
5.0 TROUBLESHOOTING .....	Page 14
5.1 ASSISTANCE .....	Page 15
CHAPTER # 6 WIRING DIAGRAM AND SPARE PARTS TABLES .....	Page 16
6.0 ELECTRIC COMPONENT LAYOUT .....	Page 16
6.1 WIRING DIAGRAM VERSION LC .....	Page 17
6.2 WIRING DIAGRAM VERSION PC .....	Page 18
6.3 HYDRAULIC DIAGRAM VERSION LC .....	Page 19
6.4 HYDRAULIC DIAGRAM VERSION LC .....	Page 20
6.5 TABLES OF SPARE PARTS .....	Page 21
LIMITED WARRANTY CERTIFICATE .....	Page 30

## CHAPTER # 1 INFORMATION AND SAFETY

### 1.0 INTENDED USE OF THE SLAB CARRYING TROLLEY

This instruction manual refers to the slab carrying trolleys models SC500 and SC800.

The slab carrying trolley is characterized by high robustness and ease of use.

Lifting and positioning of the slab occurs by means of a 12V battery-powered motorised hydraulic system "10" (Fig.1).

The slab carrying trolley is fitted with an electronic battery charger "3" (Fig.1).

The work top is adjustable according to the height of the load. To make moving the slab easier, unidirectional rollers "5" (Fig.1) have been fitted.

Depending on the model, the slab carrying trolley has been designed to lift and transport slabs of marble and granite with a maximum loading capacity of:

Model	Maximum loading capacity
SC500	500 Kg.
SC800	800 Kg.



**ATTENTION: It is prohibited to load slabs weighing more than the maximum loading capacity.**

These machine models are constructed in conformity with the current regulations, and therefore, meet the essential requirements for safety and health protection.

### 1.1 CONTRAINDICATIONS

- The slab carrying trolley cannot be used in any other way than that for which it was designed.
- Do not load slabs whose weight and dimensions are not in proportion to the structure of the slab carrying trolley.
- Any modification which alters the characteristics of the slab carrying trolley must be made by the manufacturer only, who will attest to the conformity. Therefore, any modification or maintenance operation not included in this manual is to be considered unauthorized.
- Do not use the slab carrying trolley on uneven surfaces.

## 1.2 MAIN PARTS OF THE SLAB CARRYING TROLLEY

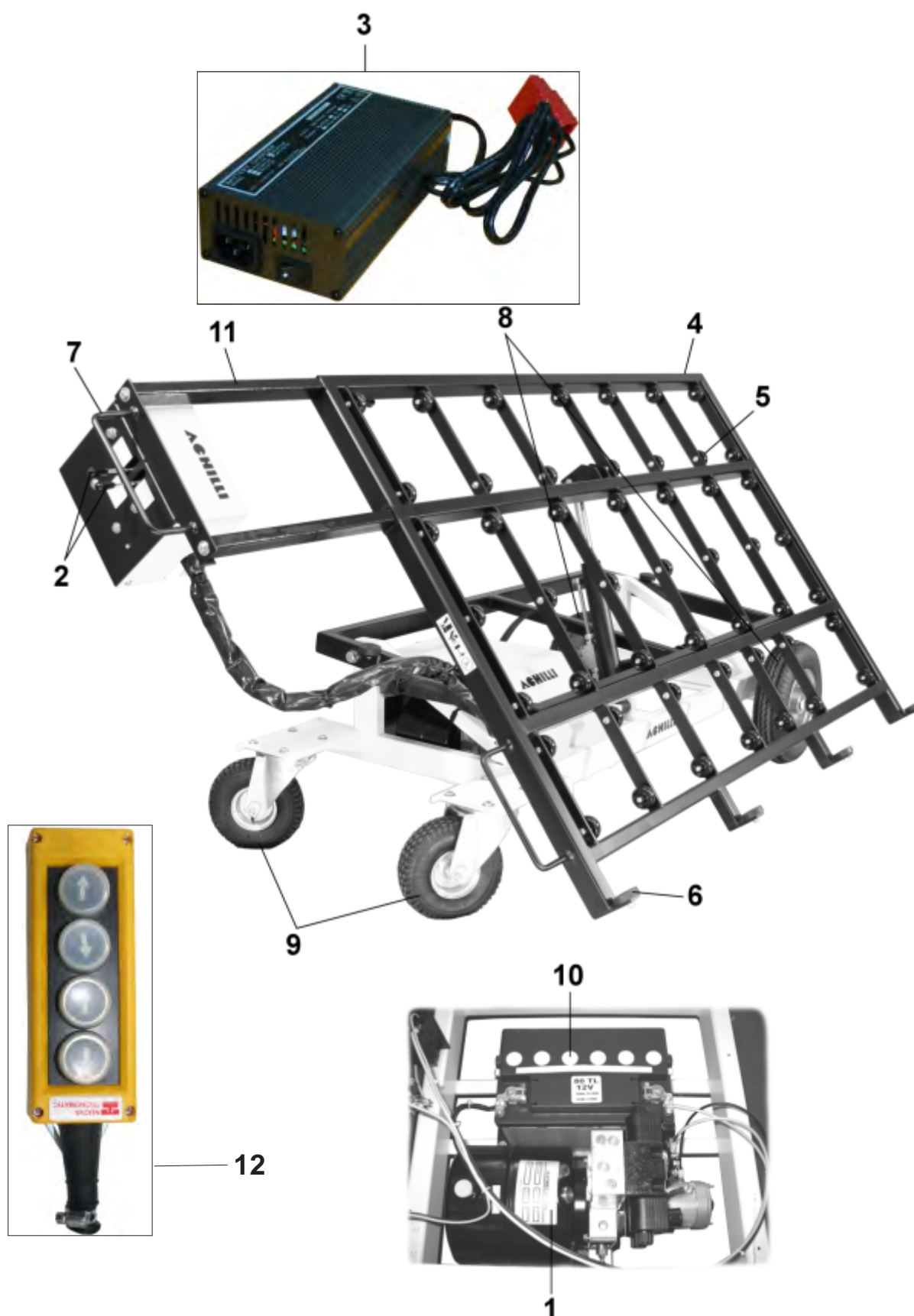


Fig.1

The slab carrying trolley consists of the following main parts (Fig.1):

- 1) Hydraulic control unit
- 2) Control levers (*LC version only*)
- 3) Electronic battery charger
- 4) Work top
- 5) Unidirectional roller
- 6) End stop
- 7) Handle
- 8) Rubber wheel
- 9) Pivoting rubber wheel
- 10) Battery
- 11) Retrievable arm
- 12) Pendant control (*PC version only*)

### 1.3 RULES ON SAFETY

---

- Attentively read this manual before installing the slab carrying trolley and keep it for future reference.
- Clear the working area from any objects which could be a source of danger.
- Always ensure that the floor where the slab carrying trolley is used has sufficient capacity to support the weight and that it allows the necessary stability.
- Use the slab carrying trolley on level floors only.
- Keep the working area clean and ensure sufficient lighting.
- Wear suitable clothing: always wear protective gloves and safety shoes. Take off rings, watches or any jewellery; fasten sleeve cuffs properly.
- Connect the electronic battery charger only when wishing to recharge the battery. Arrange the cables in such a way as to prevent accidental contact with objects (hot, sharp, corrosive) or persons. It is also advisable to unwind them over their entire length.
- Do not recharge the battery with the cables damaged or not in perfect condition.
- Recharge the battery in a sufficiently ventilated room.
- Ensure that the earthing system in the connection to the electric line is efficient.
- Do not lift slabs with dimensions exceeding the size of the work top.
- Before carrying out any maintenance and repair operation, switch off the slab carrying trolley turning the selection switch “QS2” (Fig.5) to position “0”, and disconnect the battery charger from the mains and from the slab carrying trolley (if connected). Also ensure that nobody is in the vicinity of the machine to prevent accidents.
- Check that all the mobile parts of the slab carrying trolley move freely and are undamaged.

- Do not leave the slab carrying trolley unattended and do not permit outsiders or incompetent persons to use it.
- In the event of bad functioning or breakage of the slab carrying trolley, switch it off and contact your dealer or the manufacturer.
- Do not expose the slab carrying trolley to atmospheric agents (rain, sun, humidity, etc.).

When deciding not to use the slab carrying trolley anymore because obsolete or irreparably damaged, place it out of service making it inoperational and free of any danger.

- Turn the selection switch “QS2” (Fig.5) to position “0”, disconnect the electronic battery charger from the mains and from the slab carrying trolley (if connected). Remove the battery and drain the hydraulic oil from the hydraulic control unit, collecting it in the special containers so as not to pollute the environment.
- Seal the trolley in robust packaging and dispose of it in conformity with the regulations in force, turning to local organisations dealing in such operations.

**The slab carrying trolley is made up of the following materials:**

Iron	Fe
Aluminium	Al
Polyamide	PA
Copper	Cu
Lead	Pb
Sulphuric acid	H <sub>2</sub> SO <sub>4</sub>
Hydraulic oil	



## 1.4 SLAB CARRYING TROLLEY SAFETY SYSTEMS

The slab carrying trolley is equipped with the following protection devices:

**MAXIMUM PRESSURE VALVE:** a mechanical device which interrupts functioning of the hydraulic system when the oil pressure exceeds the safety level.

The electric equipment of the trolley is in conformity with **CEI EN 60204/1** regulations, thus the operator is protected against electric shock from direct or indirect contacts. Moreover, the hydraulic control unit is powered at low voltage of 12 V DC.

**PROTECTION AGAINST DIRECT CONTACTS:** the electric wires are covered with insulating material.

**DEVICE FOR WORK TOP ADJUSTMENT:** an electric device stops functioning of the hydraulic control unit preventing the slab from tilting when the two control levers/buttons are pushed upwards and the work top is already in horizontal position.

**ELECTRONIC BATTERY CHARGER:** an electronic device which signals, by means of warning lights, the power on and the recharging phase.



## 1.5 IDENTIFICATION PLATE

The identification plate of the slab carrying trolley is located on the base frame (see Fig.2) and carries the following data:

- A) Trolley model
- B) Serial number
- C) Power
- D) Voltage
- E) Current absorption
- F) CE marking
- G) Year of construction
- H) Weight
- I) Max. loading capacity

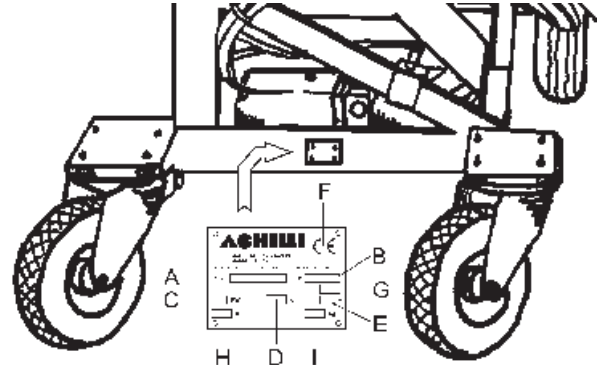


Fig.2

NOTE: Each time the manufacturer is contacted, it is indispensable to indicate the serial number and the trolley model specified on the identification plate.

## 1.6 TECHNICAL DATA

### Battery

Voltage .....	12 V DC
Current .....	80 A/h

### Hydraulic control unit

Power .....	0.7 Kw
Voltage .....	12 V DC
Current .....	60 A
Piston displacement .....	0.5 cc.
Pressure .....	65 bar
Type of oil .....	ISO 32

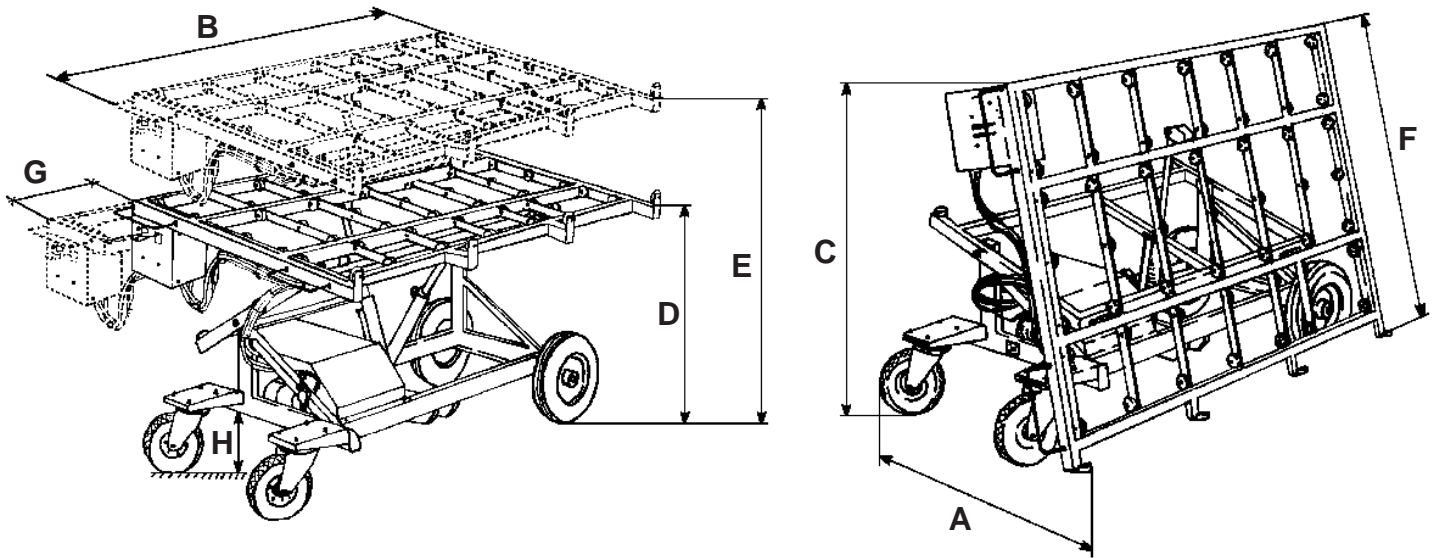
### Electronic battery charger .....

Single-phase

Power .....	0.3 Kw
Voltage .....	230 V~
Frequency .....	50/60 Hz

- Net weight of the trolley SC500 ..... 270 Kg.
- Shipping dimensions with packaging SC500 (WxLxH) ..... 1300x2130x850 mm.
- Net weight of the trolley SC800 ..... 510 Kg.
- Shipping dimensions with packaging SC800 (WxLxH) ..... 1620x2740x850 mm.
- Pendant control cable length ..... 800 mm.

## OVERALL DIMENSIONS AND ADJUSTMENT:



Model	A	B	C	D	E	F	G	H
SC500	1150	2120	1400	650	960	1380	550	200
SC800	1470	2731	1750	650	960	1730	550	200

NOTE: Dimensions expressed in mm.

## 1.7 NOISE LEVEL

Noise measurement in conformity with UNI EN ISO 4871 regulations:

Acoustic pressure level at operator station ..... empty 70 dB(A)

Acoustic pressure level at operator station ..... loaded 72 dB(A)

Since the noise level values are below 80 dB(A), it is not obligatory to use headsets to protect hearing.

## CHAPTER # 2 INSTALLATION

### 2.0 TRANSPORT AND UNPACKING



**WARNING:** Take the following precautions for lifting the slab carrying trolley:

- Adopt all the necessary measures to ensure maximum stability of means and loads.
- Announce and signal the manoeuvres in advance.
- Avoid passing the suspended load over persons or places where possible dropping of the load may constitute a danger.

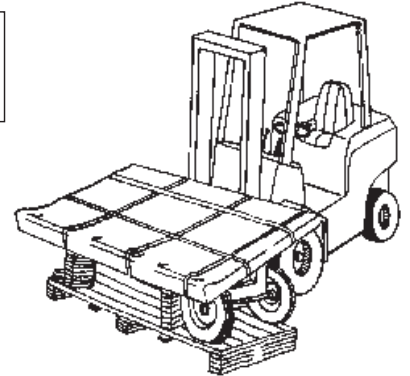


Fig.3



**WARNING:** It is obligatory to use a lift truck to transport the slab carrying trolley (Fig.3).

The slab carrying trolley may be packed in 2 different ways:

- A) Fixed on a wooden pallet.
- B) In a wooden crate.

Check that the packaging is undamaged, visually inspecting that there is no evident damage suffered during transport, then unpack the slab carrying trolley.



**WARNING:** Remove the packaging elements which may be a source of danger.

### 2.1 ACCESSORIES

Check that all the accessories are provided with the machine:

- A) No.10/13 double open-ended wrench (Fig.3/a).
- B) Instruction manual (Fig.3/b).
- C) Electronic battery charger (Fig.3/c).



Fig.3/a



Fig.3/b

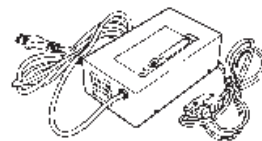


Fig.3/c

## CHAPTER # 3 SETUP

### 3.0 HANDLING



#### **WARNING: Handling precautions:**

- Before moving the slab carrying trolley turn the selection switch “QS2” (Fig.5) to “0” and disconnect the battery charger “3” (Fig.1) from the mains and from the slab carrying trolley (if connected).
- Move the slab carrying trolley on level floors only.
- Be extremely careful to safeguard the integrity of all the parts of the slab carrying trolley, especially where the two control levers/pendant control “2” (Fig.1) are located.

The slab carrying trolley has four rubber wheels of which two are pivoting “9” (Fig.1) to facilitate movement even on not perfectly smooth surfaces.

### 3.1 STARTING AND STOPPING

- Position the selector switch “QS2” (Fig.5) on “1” to connect the battery “10” (Fig.1) to the electrical system of the slab carrying trolley.

#### LC VERSION

- operate the two control levers “2” (Fig.1) to lift or lower the slab.
- the hydraulic control unit “1” (Fig.1) is stopped by letting the control levers “2” return to their rest position.

#### PC VERSION

- operate the four control buttons (Fig.6b) of the pendant to lift or lower the slab.
- the hydraulic control unit “1” (Fig.1) is stopped by letting the control buttons of the pendant “12” return to their rest position.

During lifting of the slab, when the work top “4” (Fig.1) reaches the horizontal position, a protection device locks functioning of the slab carrying trolley. To release it:

- lower the right lever “B” (Fig.6a) (*LC version*).
- hold the “D” button (Fig.6b) (*PC version*).



#### **ATTENTION: During lifting of the slab it is prohibited to move the slab carrying trolley.**

- When finished using the trolley, position the selector switch “QS2” (Fig.5) on “0”.

### 3.2 ELECTRICAL CONNECTION AND USE OF THE BATTERY CHARGER



**WARNING:** Any intervention on the electrical system of the slab carrying trolley must be carried out by a qualified technician in conformity with CEI EN 60204/1 regulations.

Check that the mains to which the slab carrying trolley will be connected for recharging the battery "10" (Fig.1) has characteristics in conformity with the regulations in force regarding electrical installations, and that it satisfies the technical data specified in Par.1.6.

The power supply line must be fitted with the following protection devices:

Differential switch which acts in case of leakage to earth.

Magnetothermal switch or fuses which act in case of a short-circuit.

- Should the use of extensions be indispensable, only use watertight-type extensions in conformity with the safety regulations in force and with a cross-section of at least 1.5 mm<sup>2</sup>.
- Ensure that the selection switch "QS2" (Fig.5) is on zero.
- Connect the electronic battery charger "3" (Fig.1) to the slab carrying trolley by means of the plug "G" (Fig.4) and subsequently connect it to the mains by means of the plug "H".

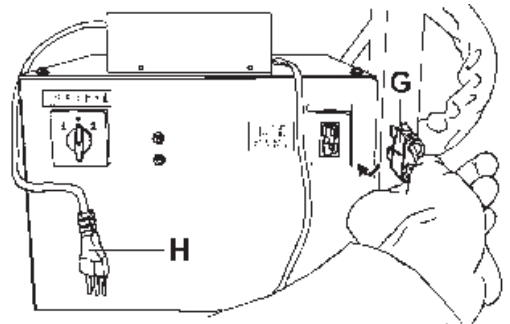


Fig.4

A RED pilot light will come on inside the electronic batter charger signalling its proper functioning.

- Turn the selection switch "QS2" (Fig.5) to "2" to start the battery "10" (Fig.1) recharging cycle. In this condition the ORANGE and RED pilot lights are on.

When the recharging cycle has been completed, the ORANGE pilot light became GREEN.

- Do not let the battery "10" (Fig.1) go completely flat. It is good practice to recharge it each time it starts going flat, i.e. when noticing a drop in power of the hydraulic control unit "1".
- Recharge the battery in case of deciding not to use the slab carrying trolley for a long time.

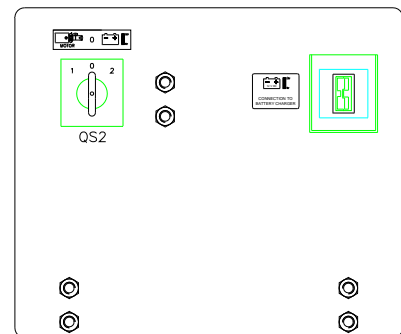


Fig.5

It is recommended not to interrupt the battery recharging cycle.

*NOTE: An increase in temperature in both the battery and the electronic battery charger is normal during the recharging phase.*



**ATTENTION:** Never allow the battery to go completely flat, since this could deteriorate its internal elements.

### 3.3 STARTUP



**WARNING:** Before starting the slab carrying trolley, ensure that it is on a leveled floor. On the work top "4" (Fig.1) and in the surrounding area there must not be any objects which might be a source of danger or which in some way could hinder operations.

- Check that the battery recharging cycle has been completed.
- Check that the selection switch "QS2" is positioned on "1".

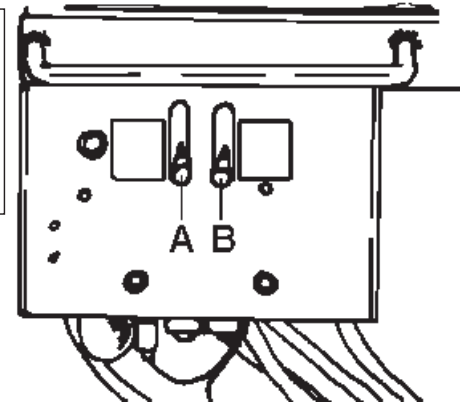


Fig.6a

#### LC VERSION

- To load the slab, operate the two control levers "A" and "B" (Fig.6a) until the work top stands vertically (see Fig.7).
- When the slab has been loaded, lower the control lever "A" until the movement stops; this is the suitable position for handling the slab.

#### PC VERSION

- To load the slab, operate the four control buttons of the pendant (Fig.6b) until the work top stands vertically (see Fig.7).
- When the slab has been loaded, hold the "C" button until the movement stops; this is the suitable position for handling the slab.
- The work top may be set horizontally at a variable height.
- Align the work top "4" (Fig.1) with the preselected work table and move the slab sideways letting it slide on the unidirectional rollers "5".

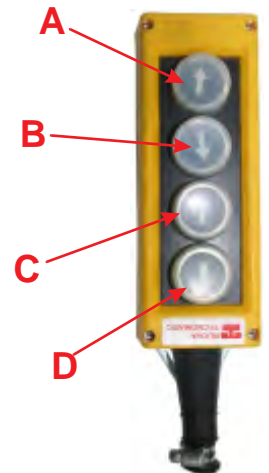


Fig.6b

It is possible to extract the retrievable arm "E" (Fig.7) to simplify the command operations, if a big-size slab was placed on the work top. No. 2 knobs set under the extraction guides of the arm permit its sliding/locking position.



**ATTENTION:** During lifting of the slab it is prohibited to move the slab carrying trolley.

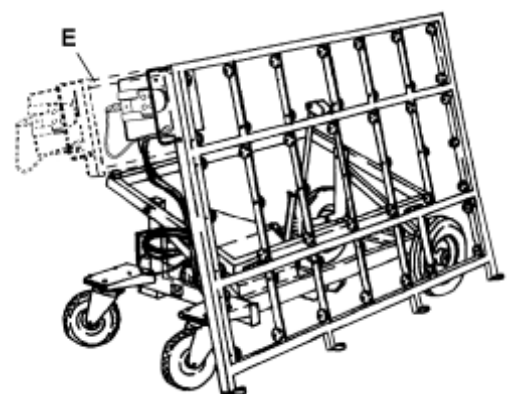


Fig.7

## CHAPTER # 4 MAINTENANCE

### 4.0 MAINTENANCE



**WARNING:** Before starting any maintenance or cleaning operation of the slab carrying trolley, set the selection switch “QS2” (Fig.5) to zero and disconnect the electronic battery charger “3” (Fig.1) from the mains and from the slab carrying trolley (if connected).

The slab carrying trolley has been designed and constructed in such a way as to reduce any type of maintenance to a minimum. However, it is very important to clean the trolley at the end of each working day, thus obtaining better efficiency and a longer life of the slab carrying trolley.

Always remember that general cleaning of the slab carrying trolley (in particular the work top) and the surrounding floor area represents an important safety factor.

Check that the pressure of the fixed rubber wheels “8” (Fig.1) is about 6 Atm, while the pivoting wheels “9” must have a pressure of about 3.5 Atm.

Periodically have the electrical system of the slab carrying trolley checked by a qualified technician and check good functioning of the electronic battery charger “3” (Fig.1).

Periodically check that the joints of the slab carrying trolley are in a good state.

Remove the protection cover and check that the acid level inside the battery “10” (Fig.1) has not fallen to below the minimum level. If necessary, remove the caps and add distilled water. If the battery discharges quickly, it means that it needs to be replaced since its internal elements have worn out.

Check good functioning of the work top adjusting device. To recalibrate the system, remove the cover “E” (Fig.8) and slacken the two nuts securing proximity sensor “D”. Define the correct position of the proximity sensor by moving it backwards and forwards until it locks functioning of the slab carrying trolley when the work top reaches the horizontal position. Lock the sensor position by tightening the two nuts. It is important that the work top stops at a position lower by about 20 mm. on the side of the end-stops “6” (Fig.1) as shown in Fig.9.



Fig.8

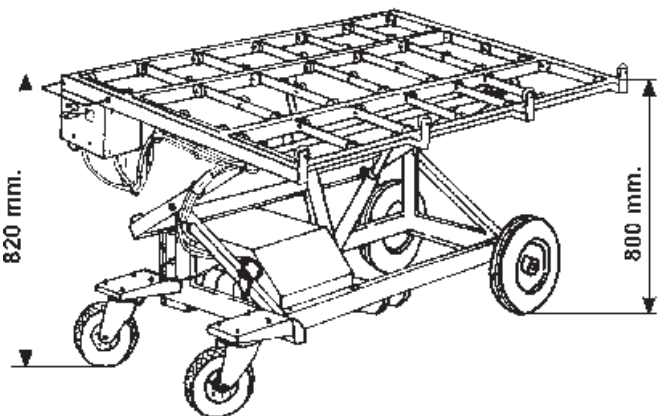


Fig.9

Periodically check the hydraulic oil level in the hydraulic control unit "1" (Fig.1) as follows:

- Remove the protection cover.
- Unscrew the cap "F" (Fig.10) of the hydraulic control unit tank.
- Lower the two hydraulic cylinders of the work top right to the bottom.
- Check that the hydraulic oil fills the tank.
- Top up with hydraulic oil type ISO 32
- Do not use toxic or inflammable substances to clean the trolley.
- Daily clean all the parts of the trolley, especially the unidirectional rollers "5" (Fig.1) and the hydraulic cylinders.



**ATTENTION: Do not use jets of water to clean the trolley**

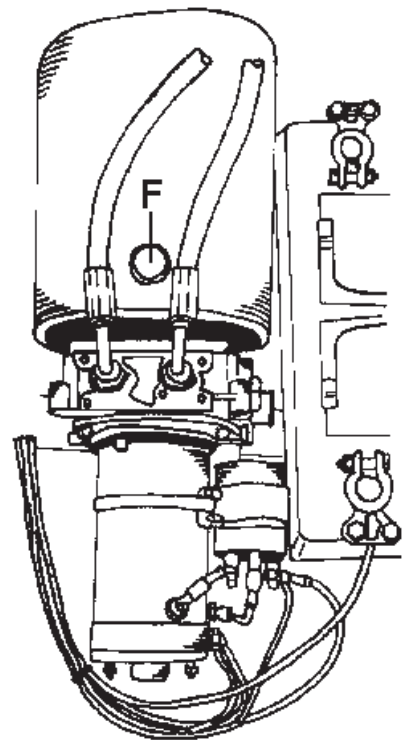


Fig.10

- Dry the slab carrying trolley.



## CHAPTER # 5 TROUBLESHOOTING

### 5.0 TROUBLESHOOTING

<b><u>PROBLEM</u></b>	<b><u>CAUSE</u></b>	<b><u>REMEDY</u></b>
The slab carrying trolley does not work.	The battery "10" (Fig.1) is flat.	Recharge the battery (see Par.3.2).
	The selector switch "QS2" (Fig.5) is positioned on "0" or "2".	Turn the selector switch "QS2" to "1".
	The fuse "F1" (Par.6.0) has blown.	Have it replaced by a qualified technician.
	The microswitch "D" (Fig.8) has lost calibration.	Have the microswitch "D" (Fig.8) recalibrated, or if damaged, have it replaced by a qualified technician.
During lifting the trolley loses power and stops.	The battery "10" (Fig.1) has gone flat.	Recharge the battery following the instructions in Par.3.2.
The slab does not lift, but the hydraulic control unit "1" (Fig.1) is actuated.	The maximum pressure valve in the hydraulic control unit "1" (Fig.1) has intervened.	Substitute the slab since its weight exceeds the maximum capacity of the trolley.
	There is a leak in the hydraulic circuit.	Have the hydraulic circuit checked by a qualified technician.
	No oil in the hydraulic control unit "1" (Fig.1).	Top up with hydraulic oil type ISO32 (see Par.4.0).
The battery "10" (Fig.1) does not recharge (red pilot light on and ORANGE/GREEN off).	The electronic battery charger "3" (Fig.1) is disconnected from the slab carrying trolley.	Connect the plug "G" (Fig.4) of the electronic battery charger to the slab carrying trolley.
	The selector switch "QS2" (Fig.5) is in position "1" or "0".	Position the selection switch "QS2" on "2".
	The fuse "F1" (Par.6.0) has blown.	Have it replaced by a qualified technician.
	Battery "10" (Fig.1) damaged.	Replace it, checking its characteristics in Par.1.6.

The battery "10" (Fig.1) does not recharge (the RED pilot light is off).

No electric energy.

Have the electric connection checked and have a qualified technician check the line voltage.

Fault in electronic battery charger.

Contact the manufacturer.

## 5.1 ASSISTANCE

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For any request, necessity or information, the user must communicate the following data to the local dealer or the manufacturer:

Machine model

Serial number

Year of manufacture

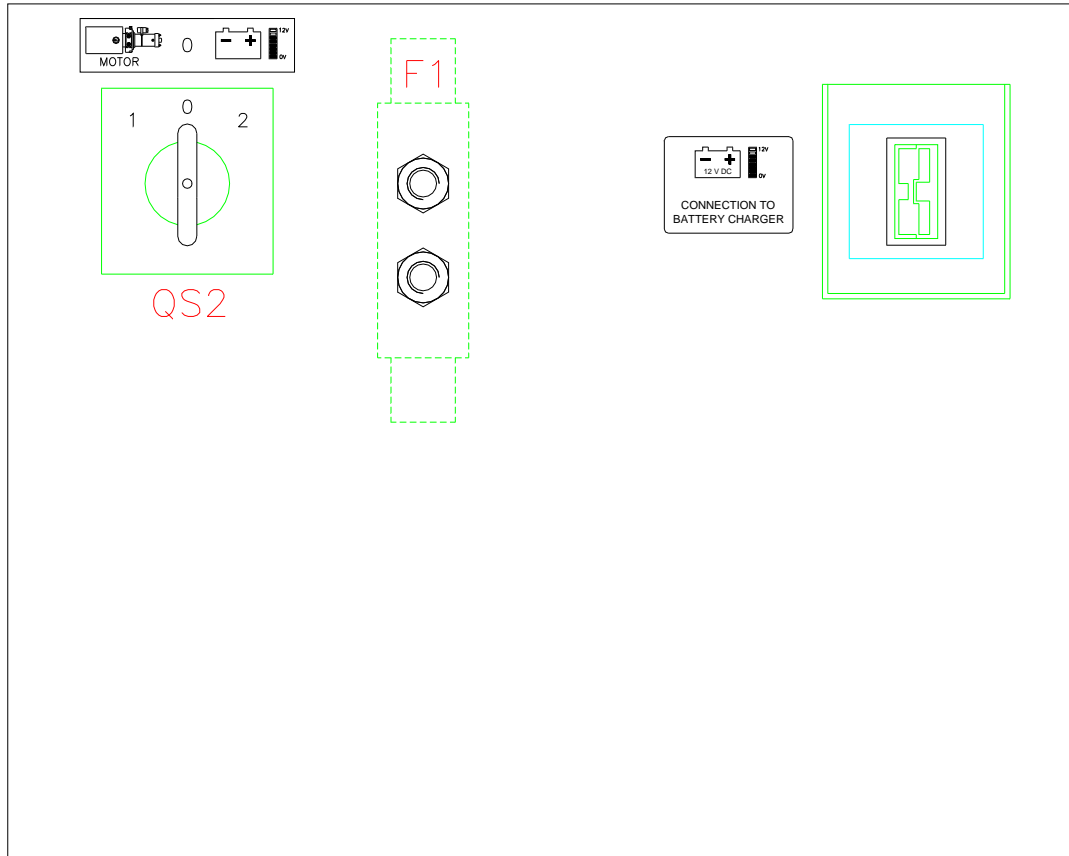
Date of purchase

Approximate number of operating hours

Detailed description of fault.

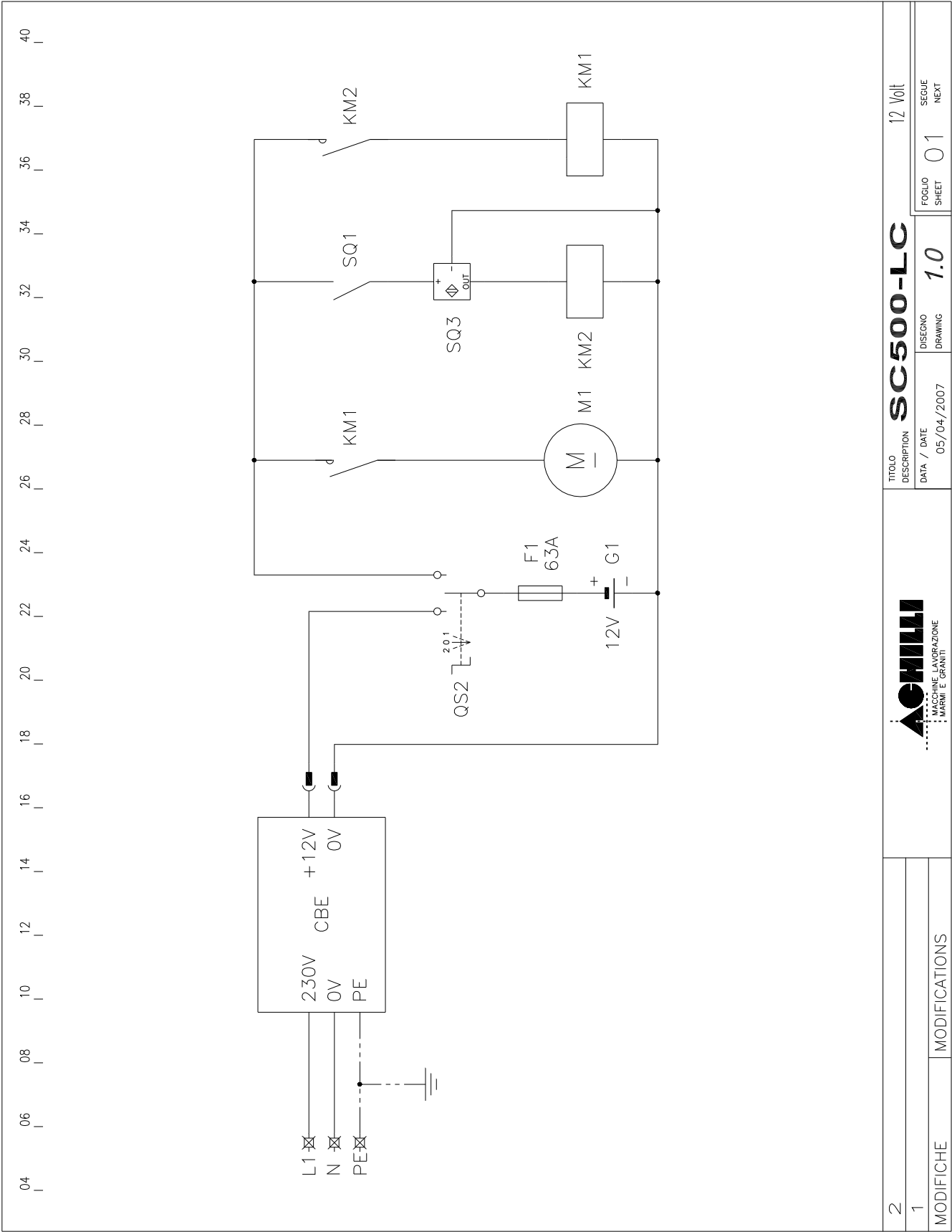
## CHAPTER # 6 WIRING DIAGRAM AND SPARE PARTS TABLES

### 6.0 ELECTRIC COMPONENT LAYOUT

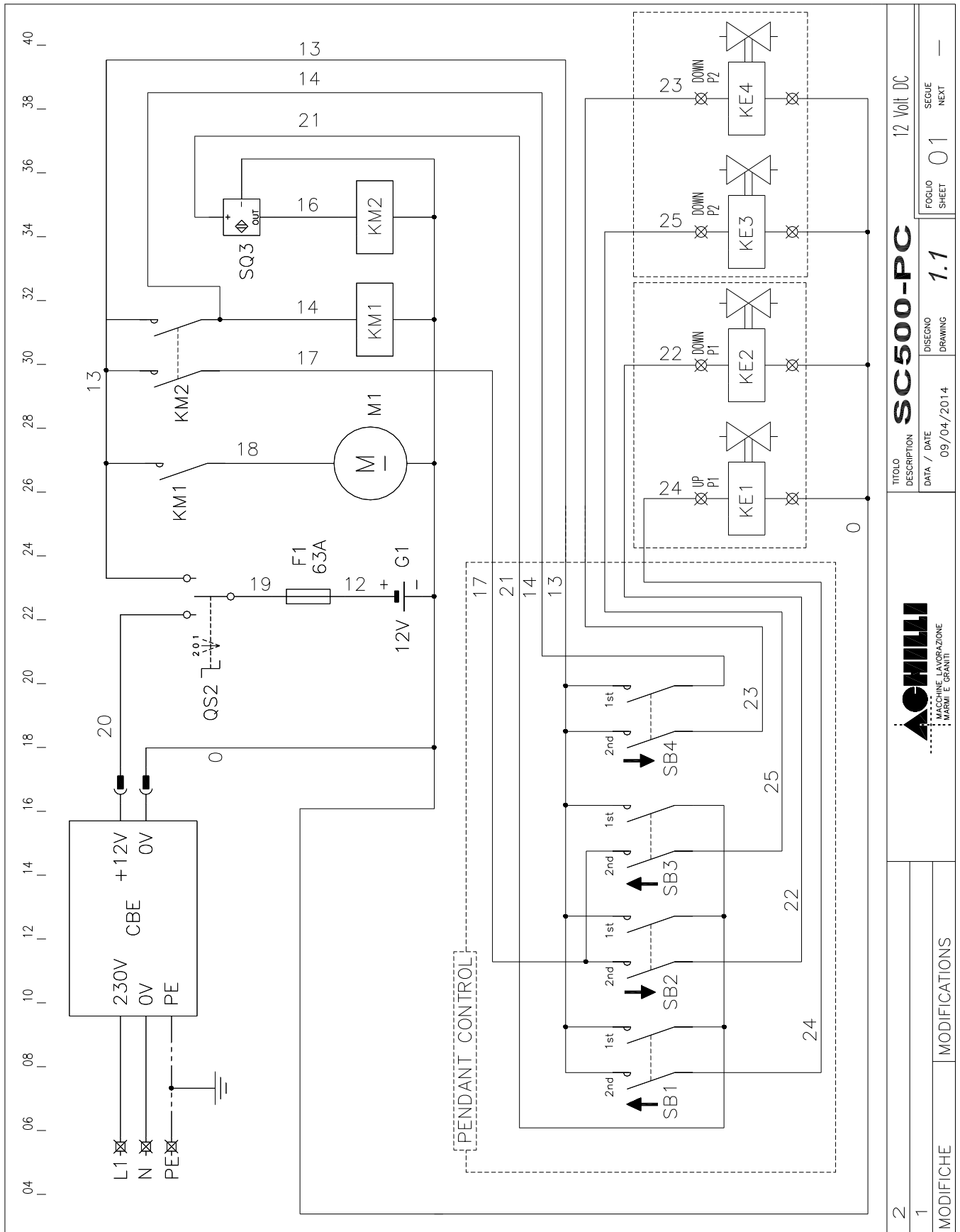


NAME	CODE	DESCRIPTION
CBE	CAR260CEE01	Electronic battery charger
F1	POR260CIE01	Fuse socket
G1	BAT260CEE01	Battery
KM1	TEL260CEE01	Hydraulic control unit relay switch
KM2	REL260VEE01	Control relay
M1	MOT260CME01	Hydraulic control unit motor
QS2	COM260VIE01	Selector switch
SQ1	MIC260CIE02	Microswitch for distributor
SQ3	PRO260CEE01	Proximity sensor
SB1-SB2-SB3-SB4		Pendant control buttons ( <i>PC version</i> )
KE1-KE2-KE3-KE4		Hydraulic electro-valve ( <i>PC version</i> )

6.1 WIRING DIAGRAM VERSION LC



## 6.2 WIRING DIAGRAM VERSION PC



12 Volt DC

SC500-PC

09/04/2014

1.1

01

—

ACHILLI

MACCHINE LAVORAZIONE  
MARM E GRANITI

MODIFICHE

MODIFICATIONS

2

1

MODIFICHE

MODIFICATIONS

2

1

MODIFICHE

MODIFICATIONS

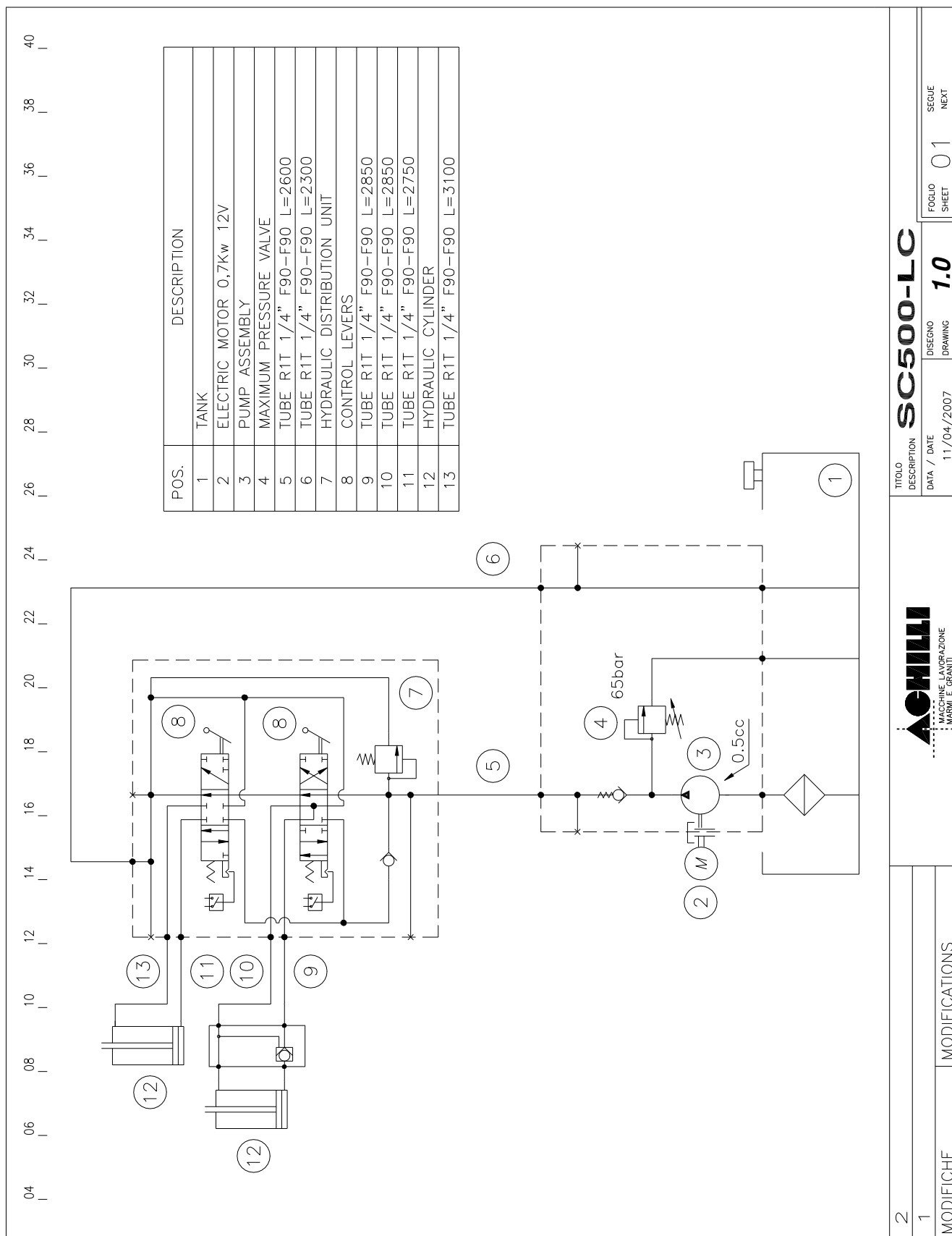
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1

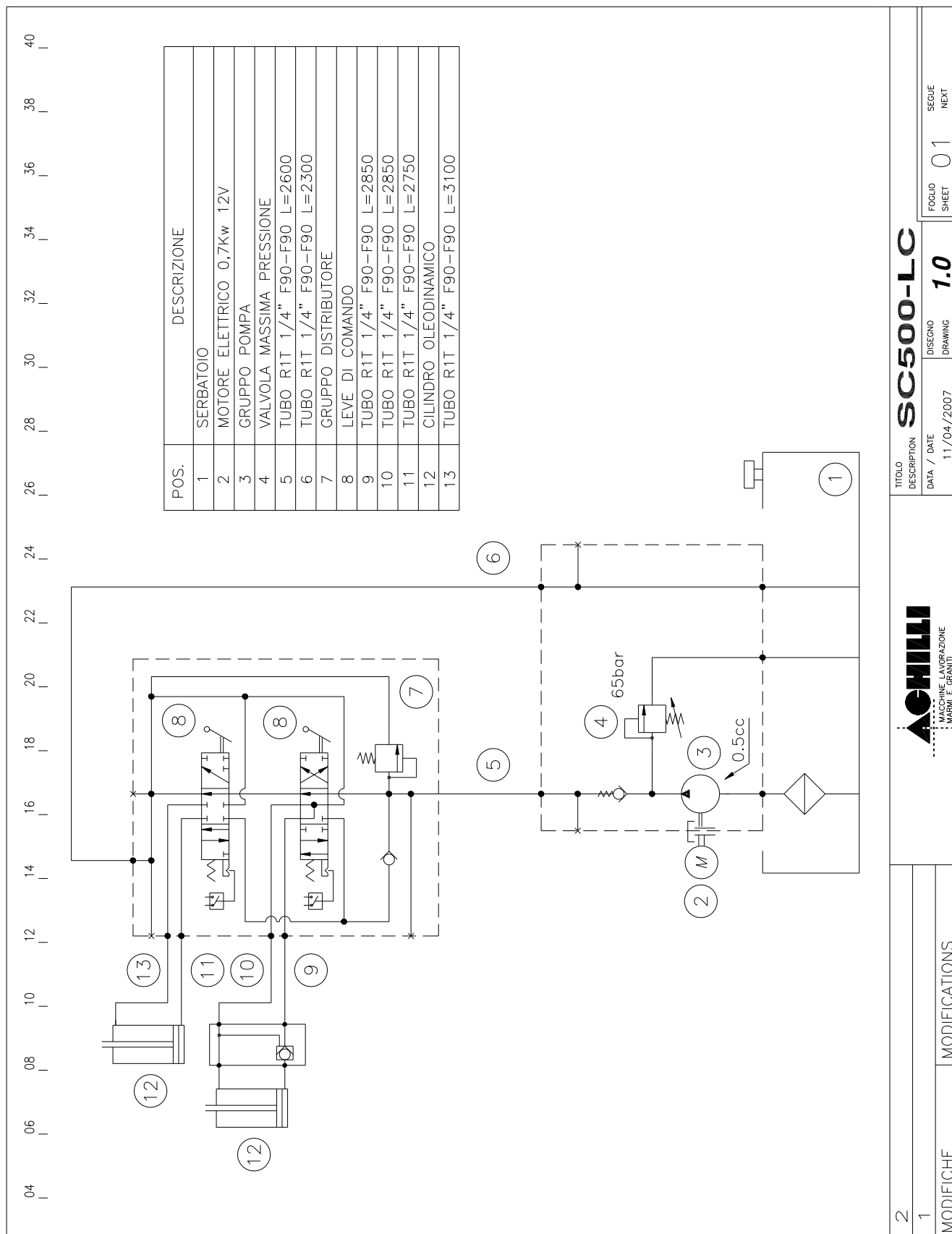
MODIFICHE

MODIFICATIONS

## 6.3 HYDRAULIC DIAGRAM VERSION LC



## 6.4 HYDRAULIC DIAGRAM VERSION LC



**SC500-LC**

TITOLO  
DESCRIPTION  
DATA / DATE  
11/04/2007

DISSEGNO  
DRAWING  
**1.0**

FOLGIO  
SHEET  
01

SEQUE  
NEXT

**ACHILLI**  
MACCHINE LAVORAZIONE  
MARI E GRANTI

MODIFICHE

MODIFICATIONS

2

1

## 6.5 TABLES OF SPARE PARTS

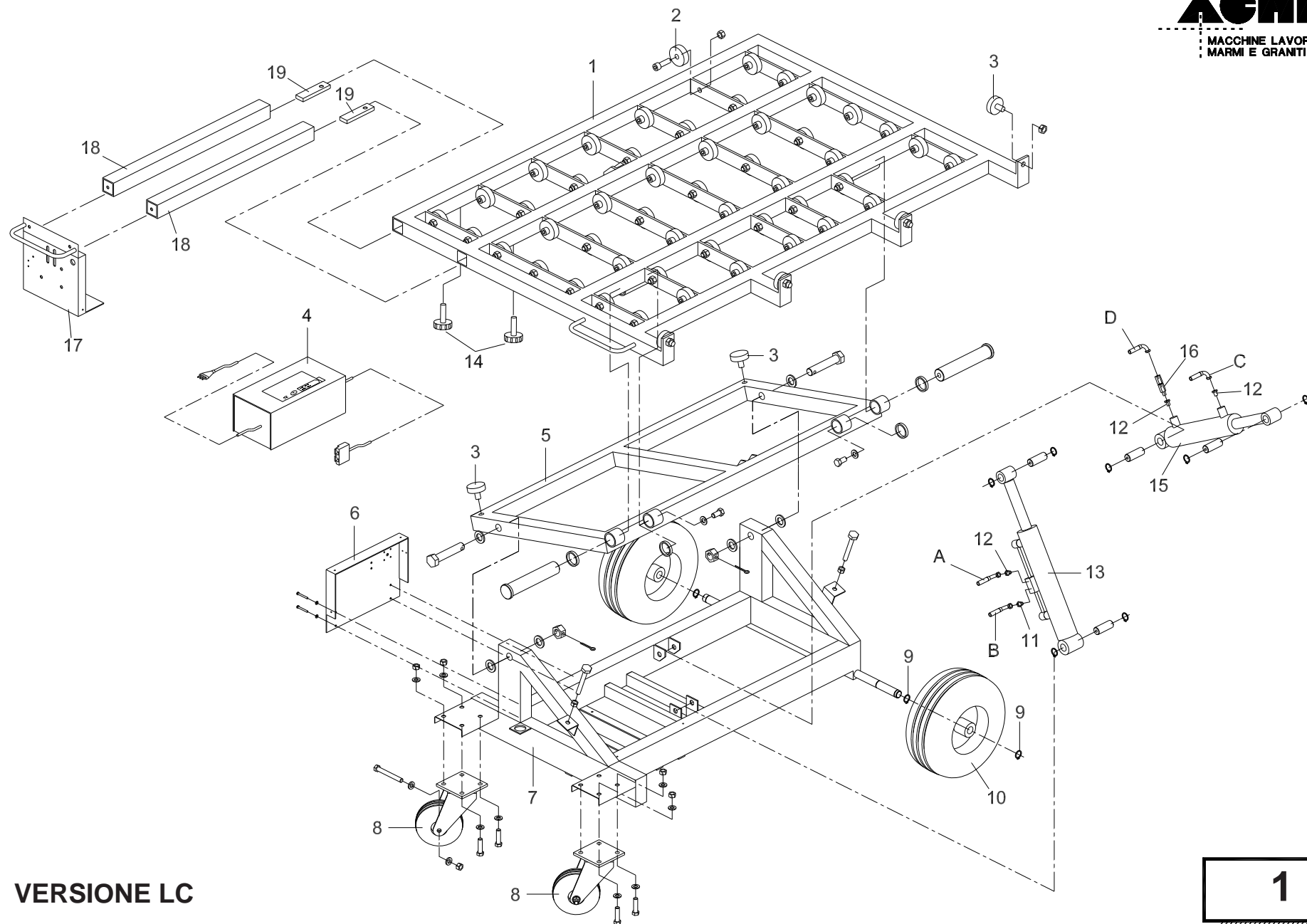
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In the following pages exploded views of the various parts of the machine are illustrated, together with the relevant descriptions.

When requesting spare parts, to avoid possible confusion and misunderstanding, please specify the position number of the part and the number of the table in which it appears, other than the data on the machine identification plate.

The column relative to quantities indicates, for each part, the total of pieces making up the machine in the exploded table.

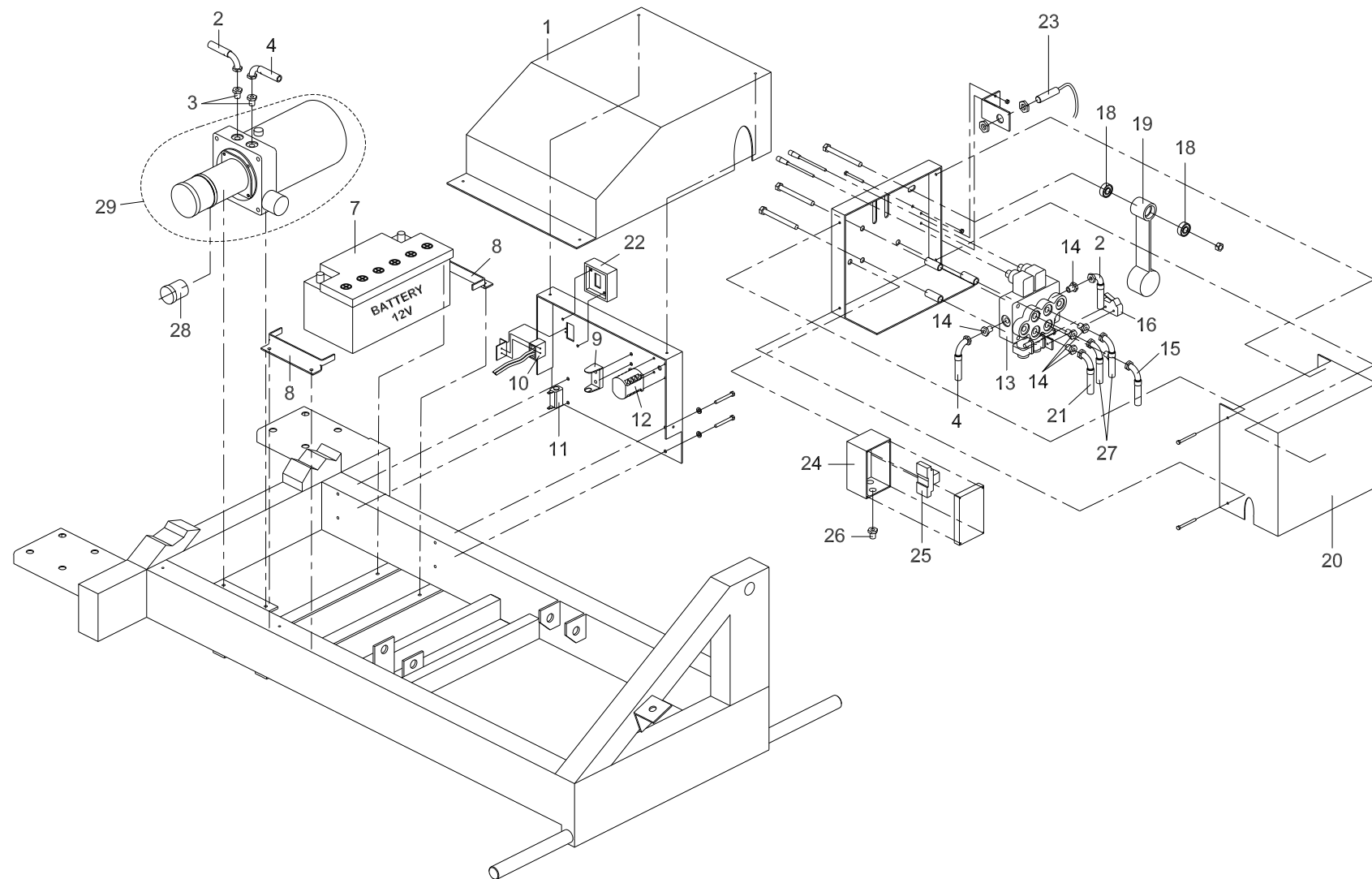




**VERSIONE LC**

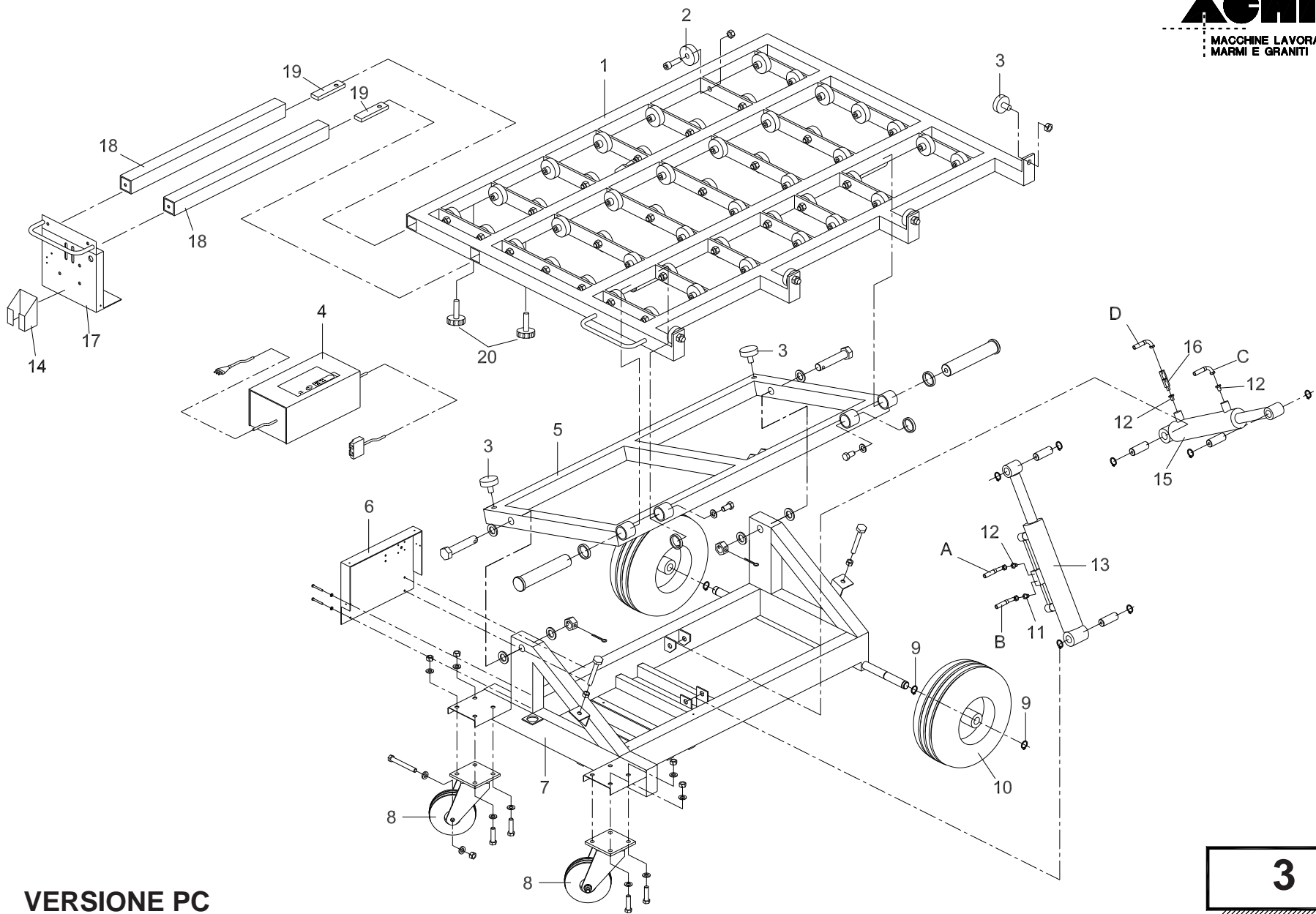
**1**

[illegible]



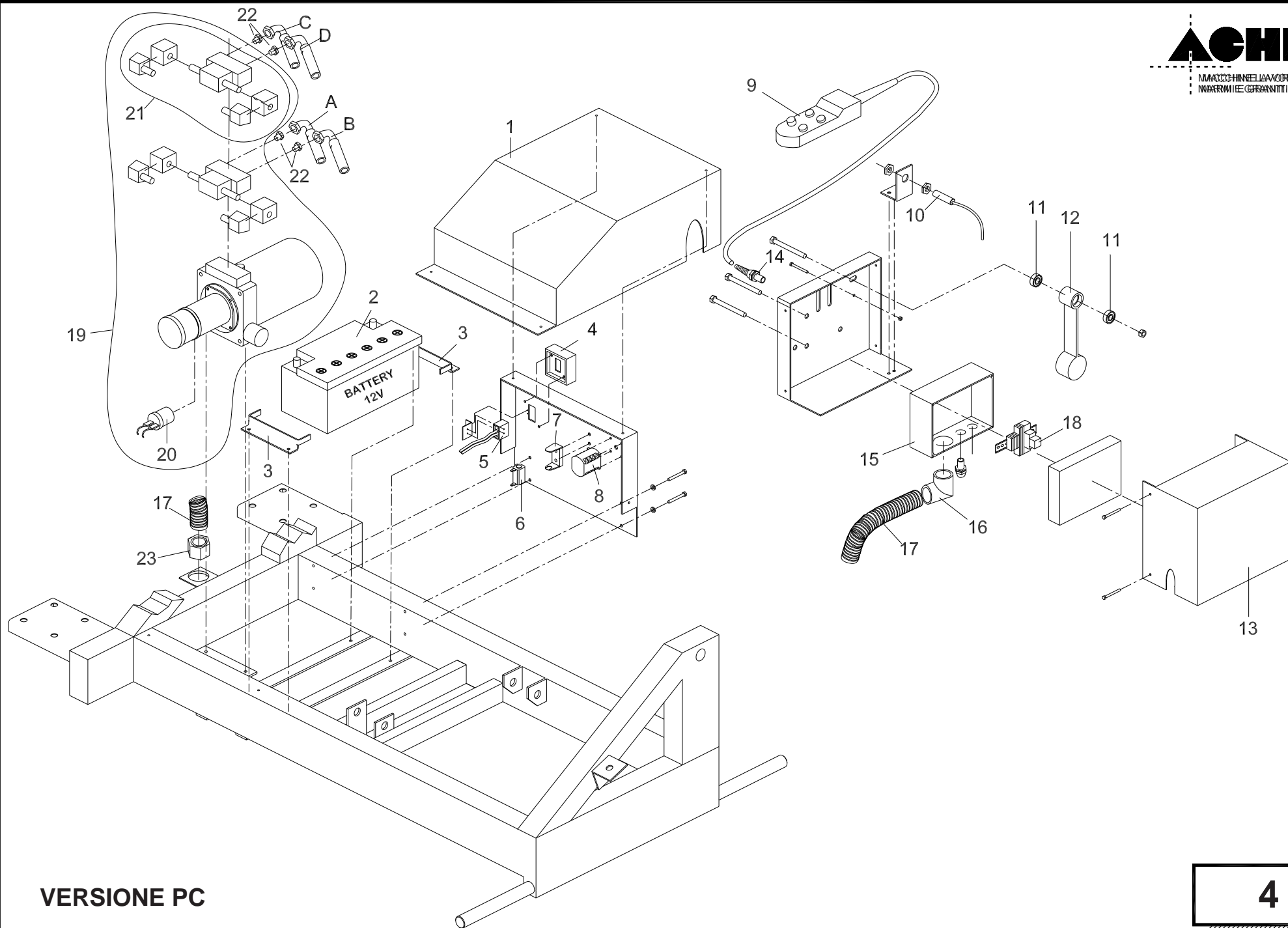
VERSIONE LC

[illegible]



VERSIONE PC

[illegible]



VERSIONE PC

[illegible]