



**PIATTAFORME AEREE SEMOVENTI
SELF-PROPELLED WORK-PLATFORMS
PLATES-FORMES DE TRAVAIL AUTOMOTRICES
SELBSTFAHRENDE HUBARBEITSBÜHNEN
PLATAFORMAS ELEVADORAS AUTOPROPULSADAS
ZELFRIJDENDE HOOGWERKERS
SJÄLVGÅENDE ARBETSPLATTFORMAR
SAMOKRETNE RADNE PLATFORME**

**“A” SERIES
A10 A12 A13 J**



**USE AND MAINTENANCE MANUAL
- ENGLISH -**

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Tigieffe thanks you for purchasing a product of its range, and invites you to read this manual. Here you can find all the necessary information for a correct use of the purchased machine; therefore, you are advised to follow the instructions carefully and to read the manual thoroughly. The manual should be kept in a suitable place where no damage can occur to it. The content of this manual may be modified without prior notice and further obligations in order to add changes and improvements to the units already delivered. No reproduction or translation may take place without the written permission of the owner.

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1. INTRODUCTION

This Use and Maintenance Manual provides general instructions concerning the complete range of units indicated on the cover. Therefore the description of their components, as well as control and safety systems, may include parts not present on your unit since supplied on request or not available. In order to keep pace with the technical development **AIRO-Tigieffe s.r.l.** reserves the right to modify the product and/or the use and maintenance manual at any time without updating the units already delivered.

1.1 Legal aspects

1.1.1 Delivery of the unit

Within EU (European Union) member countries the machine is delivered complete with:

- Use and Maintenance manual in your language;
- CE mark applied on the unit;
- CE conformity declaration.

It is to be noted that the Use and Maintenance Manual is an integral part of the machine and a copy of this, together with copies of the documents certifying that the periodical checks have been carried out, must be kept on board in its suitable container. In the event of a transfer of property the machine must always be provided with its use and maintenance manual.

1.1.2 Declaration of commissioning, first inspection, further periodical inspections and transfers of ownership

The legal obligations of the owner of the machine vary according to the country of commissioning. It is therefore recommended to inquire about the procedures in force in your country from the boards responsible for industrial safety. This manual contains a final section called "Check register" for a better filing of documents and recording of any modifications.

1.1.2.1 Declaration of commissioning and first inspection

In ITALY the owner of the Aerial Platform must notify the use of the unit to the local competent ISPESL (National Institute for the prevention of accidents at the workplace) and submit it to periodical compulsory inspections. The first one of these inspections is carried out by ISPESL, while the following ones by the territorial inspection boards (ASL/USL or ARPA). The inspections are on a payment basis and the machine owner will be charged for them. For these inspections, the territorial inspection boards (ASL/USL or ARPA) and ISPESL can be supported by authorized public or private subjects. The authorized private subjects acquire the qualification of responsables of the public service and refer directly to the public structure that controls this function.

To declare the commissioning of the unit in Italy, send the form that is supplied together with other documents upon machine delivery, by registered letter with advice of receipt.

Within one year of the declaration, ISPESL will assign a Serial Number and during the First Inspection will issue a "Check booklet" indicating only the detectable data of the machine already in use or inferable from the relative User Manual. Afterwards ISPESL will send a copy of the same booklet to the territorial inspection boards (ASL/USL or ARPA) which will carry out the further periodical mandatory inspections (every year).

1.1.2.2 Further periodical inspections

Yearly inspections are compulsory. In Italy the owner of the Aerial Platform must apply for a periodical inspection by sending a registered letter to the local competent inspection board (ASL/USL or ARPA) at least twenty days before the expiry of the year from the last inspection.

NB: If a machine without a valid control document should be moved in an area outside the competence of the usual inspection board, the owner of the machine must ask the inspection board, competent for the new territory where the machine is to be used, for the annual inspection.

1.1.2.3 Transfers of Ownership

In case of transfer of ownership (in Italy) the new owner of the Aerial Platform must notify the ownership of the unit to the local competent inspection board (ASL/USL or ARPA) by enclosing a copy of:

- Conformity declaration issued by the manufacturer;
- Declaration of commissioning carried out by the first owner.

-

1.2 Intended use

The machine described in this use and maintenance manual is a self-propelled aerial platform intended for lifting persons and materials (equipment and building materials) in order to carry out maintenance, installation, cleaning, painting, de-painting, sand-blasting, welding operations, etc.

The max. capacity allowed (which varies according to the model – see paragraph “Technical features”) is divided as follows:

- 80 Kg for each person on board;
- 40 Kg for equipment;
- the remaining load is represented by the material being worked.

In any case NEVER exceed the maximum capacity allowed as indicated in paragraph "Technical features".

All loads must be positioned inside the basket. Do not lift loads (even if complying with the maximum capacity allowed) hanging from the platform or lifting structure.

Do not carry large-sized panels since they increase the resistance to wind force thus causing the machine to overturn.

While de-placing the unit with lifted platform do not load horizontal loads onto the platform (the operators on board must not pull ropes, wires, etc.).

A load limiter interrupts the operation of the unit if the load on the platform exceeds by 25% the rated load (see chapter "general use instructions").

The unit cannot be used in areas where road vehicles operate. Always surround the working area by means of suitable signs when the unit is used in public areas.

Do not use the machine to tow trucks or other vehicles.

1.3 Description of the unit

The machine described in this use and maintenance manual is a self-propelled aerial platform equipped with:

- motorized chassis equipped with wheels;
- hydraulically driven rotating turret;
- articulated boom operated by hydraulic cylinders (the number of articulations and cylinders varies according to machine model);
- operator platform (the max. capacity varies according to the model - see chapter "Technical features").

The chassis is motorised to allow the machine to move (see "General use instructions"). On two-driving wheel models the chassis is equipped with two rear driving wheels and two front idle steering wheels. On four-driving wheel models the chassis is equipped with two rear driving wheels and two front driving and steering wheels. All driving wheels are

equipped with hydraulic parking brakes, positive logic type (when drive controls are released brakes are automatically activated).

The hydraulic cylinders which move the articulated structure (except for the basket cylinder rotation and boom inclination sensor cylinder) are provided with over-centre valves directly flanged on the same. These devices allow the booms to remain in position even if one of the supply tubes accidentally breaks.

The platform is equipped with guard-rails and toe-boards of a prescribed height (the height of the guard-rails is ≥ 1100 mm; the height of the toe-boards is ≥ 150 mm).

1.4 Control stations

The machine is equipped with two control stations:

- at platform for normal use of the unit;
- at turret (or at ground) for emergency controls to recover or stop the unit in emergency situations. The on-ground control post is also equipped with a key-selector to select the control post and to start the unit.

1.5 Power supply

The machines can be powered by:

- an electric-hydraulic system composed of rechargeable accumulators and electric pump;
- a heat engine (Diesel engine models are identified by the abbreviation "-D"; petrol engine models are identified by the abbreviation "-B");
- a bi-fuel (electric/thermic) system (bi-fuel Electric/Diesel models are identified by the abbreviation "ED"; bi-fuel Electric/Petrol models are identified by the abbreviation "EB").

In any case both the hydraulic and the electric systems are equipped with all necessary protections (see electric and hydraulic circuit diagrams annexed to this manual).



**Do not use the machine for purposes different from those it was intended for.
If disposal of the unit is necessary, comply with current local regulations.**

1.6 Identification

In order to identify the machine, when spare parts and service are required, always mention the information given in the serial number plate. Should this plate (as well as the various stickers applied on the unit) be lost or illegible, it is to be replaced as soon as possible. In order to identify the machine when no plate is available the serial number is also stamped on the chassis. To locate the plate and the stamp of the serial number, see the following picture. The main data of the machine to which this book refers are indicated in the following boxes:

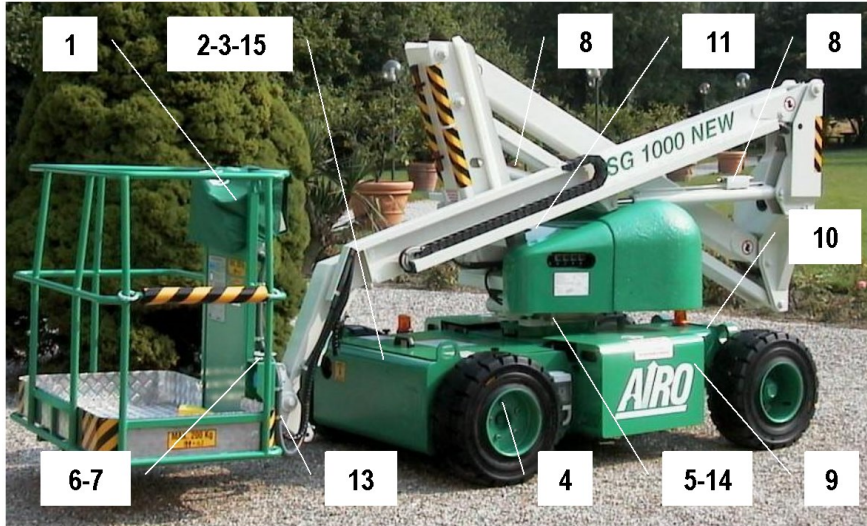
Model.....	Chassis:.....	Year:.....
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Fig.1

1.7 Location of main components

Below is a diagram showing the machine and its components.



- 1) Control panel;
- 2) Electric central unit;
- 3) Hydraulic central unit;
- 4) Hydraulic drive motors;
- 5) Turret rotation hydraulic motor;
- 6) 220V socket;
- 7) Bubble level for visual check of machine levelling;
- 8) Lifting cylinders;
- 9) Battery;
- 10) Power steering;
- 11) Inclinator;
- 12) Heat engine fuel tank;
- 13) Load limiter;
- 14) Turntable;
- 15) Control device for electric system isolation (electric machines –E and electro/diesel ED only).

Fig.2

2 TECHNICAL FEATURES OF STANDARD MACHINES

DESCRIPTION	A10 E	A12 E	A12 EB	A12 ED	A13 JE	A13 JED
Max. working height - m -	9,9	12	12	12	13.1	13.1
Max. walking surface height - m -	7.9	10	10	10	11.1	11.1
Max. outreach from turntable centre - m -	4.5	6.3	6.3	6.3	8.1	8.1
Turret rotation (not continuous) - degrees -	360	360	360	360	360	360
Platform rotation - degrees -	140 (OPT)	140 (OPT)	140 (OPT)	140 (OPT)	140	140
Max. platform dimensions - mm -	800x1360	800x1360	800x1360	800x1360	800x1360	800x1360
Max. capacity - Kg -	200 (*)	200 (*)	200 (*)	200 (*)	200 (*)	200(*)
Max. No. of people on platform	2	2	2	2	2	2
Machine weight (unloaded) - Kg -	3000	3900 (*)	4120 (*)	4140 (*)	5400 (*)	5640 (*)
Max. load on each wheel - Kg -	1360	1740	1830	1840	2380	
Volume - m ³ -	12.4	11.9	11.9	11.9	14.9	14.9
Max. hydraulic pressure - bar -	210	210	210	210	230	210
Tyre dimensions - mm -	Ø 584x324	Ø 584x324	Ø 584x324	Ø 584x324	Ø 584x324	Ø 584x324
Tyre type	23x10-12	23x10-12	23x10-12	23x10-12	23x10-12	23x10-12
Max. operating temperature - °C -	+50°	+50°	+50°	+50°	+50°	+50°
Min. operating temperature - °C -	-5°	-5°	-5°	-5°	-5°	-5°
<i>Stability limits:</i>						
Longitudinal inclination - degrees -	2°	2°	2°	2°	4°	4°
Transversal inclination - degrees -	2°	2°	2°	2°	4°	4°
Max. wind force (**) - m/s -	12.5	12.5	12.5	12.5	12.5	12.5
Battery power						
Battery voltage and capacity - V/Ah -	48/325	48/325	48/325	48/325	48/325	48/325
Battery weight - Kg -	2 x 220	2 x 220	2 x 220	2 x 220	2 x 220	2 x 220
Single-phase battery charger - V/A -	48/40	48/40	48/40	48/40	48/40	48/40
Max. power absorbed by battery charger - A -	15	15	15	15	15	15
Max. capacity - KW -	4.5	4.5	4.5	4.5	4.5	4.5
Power voltage motor 1 - V -	48	48	48	48	48	48
Max. absorbed current - A -	160	160	160	160	160	160
Max. drive speed - m/s -	1.1	1.1	1.1	1.1	1.1	1.1
Min. drive speed - m/s -	0.2	0.2	0.2	0.2	0.2	0.2
Oil tank capacity - l -	40	40	40	40	40	40
Max. gradeability - % -	25	25	25	25	25	25
Petrol engine (model EB)						
Engine type	---	---	KOHLER CH15	---	---	---
Max. engine power - kW -	---	---	11.2	---	---	---
Starter battery - V/Ah -	---	---	12/55	---	---	---
Max. drive speed - m/s -	---	---	1.1	---	---	---
Min. drive speed - m/s -	---	---	0.2	---	---	---
Oil tank capacity - l -	---	---	67	---	---	---
Petrol tank capacity - l -	---	---	5	---	---	---
Max. gradeability - % -	---	---	25	---	---	---

DESCRIPTION	A10 E	A12 E	A12 EB	A12 ED	A13 JE	A13 JED
Diesel engine (model ED)						
Diesel engine type	----	----	----	HATZ 1B40	----	HATZ 1B40
Max. engine power - KW -	----	----	----	6.6	----	6.6
Starter battery - V/Ah -	----	----	----	12/55	----	12/55
Max. drive speed - m/s -	----	----	----	1.1	----	1.1
Min. drive speed - m/s -	----	----	----	0.2	----	0.2
Oil tank capacity - l -	----	----	----	67	----	67
Diesel oil tank capacity - l -	----	----	----	5	----	5
Max. gradeability - % -	----	----	----	25	----	25

(*) In some cases different limits can be fixed. It is recommended to comply with the data shown on the machine plate.

(**) Wind speeds higher or equal to 12.5 m/s indicate that the machines can also be used outside; Wind speeds equal to 0 m/s indicate that the machines can be used INSIDE ONLY.

Noise tests have been carried out under the most unfavourable conditions to study the effects on the operator.

- ELECTRICAL MODELS: The level of acoustic pressure weighed (A) at work places does not exceed 70dB(A).
- MODELS WITH HEAT ENGINE: The level of acoustic pressure weighed (A) at work places does not exceed 107dB(A); the level of acoustic pressure at ground control station does not exceed 87dB(A); the level of acoustic pressure at platform control station does not exceed 87dB(A).

As to vibrations in ordinary working conditions:

- - the rms. value weighed according to acceleration frequency relevant to the upper limbs is lower than 2.5 m/sec² ;
- - the rms. value weighed according to acceleration frequency relevant to the body is lower than 0.5 m/sec² .

3 SAFETY PRECAUTIONS

3.1 Power supply

The electric and hydraulic circuits are provided with safety devices, calibrated and sealed by the manufacturer.



Do not tamper with and modify the calibration of any component of the electric and hydraulic system.

3.2 Work and maintenance rules

- Always wear personal protective clothes according to current regulations concerning industrial health and safety (in particular, helmet and safety harness are COMPULSORY. See picture below).
- The machine must be used only in areas well lit up, checking that the ground is flat and firm. The machine may not be used if the lighting conditions are not sufficient.
- Do not use the thermic power (Diesel or Petrol engine) indoors or in insufficiently ventilated areas.
- Before using the machine check its integrity and conservation state.
- During maintenance operations do not dispose of any waste materials in the environment, but comply with current regulations.
- Do not carry out any service or maintenance operations when the machine is connected to the power supply. Follow the instructions given in the following paragraphs.
- For the maintenance of the heat engine (Diesel or Petrol engine) supplement the instructions given in this manual with those given in the heat engine manual.
- Do not approach the electric and hydraulic system components with sources of heat or flames.
- The platform is intended for people carriage; therefore, it is necessary to comply with the current local regulations relevant to this class of machines.
- Do not increase the max. allowed height by means of scaffolds, ladders or other.
- Do not use the machine as a crane.
- Do not use the machine as a hoist and/or lift.
- Protect the unit (in particular the platform control switchboard) and the operator when working in adverse environmental conditions (painting, de-painting, sand-blasting, washing, etc.).
- It is forbidden to the unit in case of severe weather conditions (rainstorms with wind exceeding the limit speed indicated in chapter "Technical features").
- In the event of rain or in parking condition always protect the on-platform control panel by means of the specially provided cap.
- Do not use the machine in areas where risks of fire or explosion exist.
- Do not use pressurized water jets (high-pressure cleaners) to wash the machine.



Fig.3

3.3 Safety rules

3.3.1 General



Only adults, after carefully reading this manual, are allowed to use the machine.

Use the machine at a distance of at least 5 metres from high-tension lines (in any case not in proximity to live elements).



Use the machine according to the capacity values indicated in the technical features section. The max. No. of people allowed on the platform and the capacity are specified on the identification plate.

It is absolutely forbidden to load persons, tools and building materials on the platform when it is not in access position.

Do NOT use the framework of the platform or any of its elements for grounding connection while welding on platform.

It is the machine owner and/or safety manager's responsibility to check that the operators have been thoroughly trained in the use of the machine.

It is the machine owner and/or safety manager's responsibility to check that the maintenance and repair operations are carried out by skilled personnel.

3.3.2 Handling



Before any movement make sure that the machine plugs are disconnected from the power source. Always check the cable position during handling if the machine is powered with a 220V electric pump.

In order to avoid any instability, use the machine on regular and firm grounds. Before lifting the platform check the platform level through the spirit level which is located on the platform. To prevent the machine from overturning, comply with the max. gradeability values indicated in the technical features section under paragraph "Stability limits". However, movements on inclined grounds are to be carried out with the utmost caution.

As soon as the platform is lifted (the tolerance varies according to the model) the safety drive speed is automatically activated.

Drive the unit with lifted platform only on flat grounds, verifying the absence of holes or steps on the floor and bearing in mind the overall dimensions of the unit.

While driving the unit with lifted platform the operators are not allowed to place horizontal loads onto the platform (operators on board must not pull ropes, wires, etc.).

The machine must not be used directly for road transport. Do not use it for material transport (see paragraph 1.2 "Intended use").

Check that in the operating area there are not obstacles or other dangerous elements.

Pay particular attention to the area above the machine during lifting to avoid any crushing and collisions.

Mind your hands throughout machine operation. The driver should keep his hands as shown in picture A or B, while operators on board should keep their hands as shown in picture C.

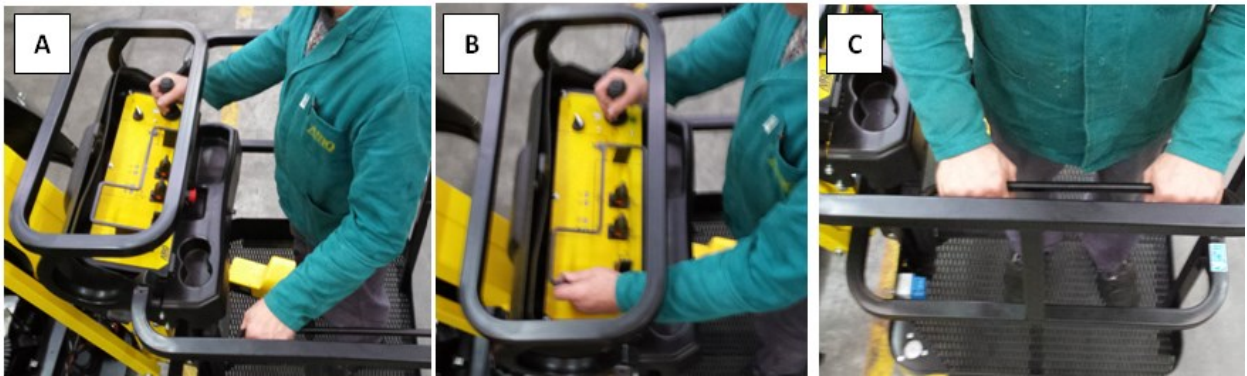


Fig.4

3.3.3 Operating procedures



The machine is equipped with a load-on-platform control system stopping the platform in case of overloading. Platform operation can be resumed only after removing the exceeding load. Should the audible warning device and the red light located on the platform control panel turn on, then the machine is overloaded (see paragraph relevant to general use instructions). Remove the exceeding load before starting operations again.

The machine is equipped with a chassis inclination control system disabling lifting operations in case of unstable positioning. Working operations can be resumed only after placing the machine in a steady position. Should the audible device and the red light on the platform control panel turn on, the machine is not correctly positioned (see paragraphs relevant to general use instructions). Bring it to safety rest position before starting operations again.

Electric power machines are equipped with a device controlling the electric system isolation. In case of isolation loss or remote switch fault, such device (located on the chassis or on the turret – see paragraph "Location of main components") brings the machine to a complete halt and signals the fault by means of a continuous hissing sound.

Do not lean over the platform guard-rails. Avoid severe weather conditions and, in particular, windy days.

During operations in public areas surround the working area by means of barriers or other suitable signs.

Do not use the thermic power (Diesel or Petrol engine) indoors or in insufficiently ventilated areas.

Make sure that no people, apart from the operator, are in the area where the machine is operating. While moving the platform, the operator on board should pay particular attention to avoid any contact with the personnel on the ground.

Lift the platform only if the machine is resting on solid and horizontal surfaces.

Drive the machine with lifted platform only if the ground is solid and horizontal.

After each work session, always take the key out of the control panel and keep it in a safe place to prevent unauthorized people from using the machine.

Always place working tools in a steady position to prevent them from falling and hurting the operators on the ground.

3.3.4 Wind speed according to Beaufort table.

You can use the table below for a simple assessment of the wind speed. We remember that the max. limit for each machine model is indicated in the table TECHNICAL FEATURES OF STANDARD MACHINES.



The machines for which the max. wind limit is 0 m/s must be used indoors only. These machines cannot be used outdoors even with no wind.

Beaufort Number	Wind speed (km/h)	Wind speed (m/s)	Description	Sea conditions	Land conditions
0	0	<0.28	Calm	Flat	Calm. Smoke rises vertically.
1	1-6	0.28-1.7	Light air	Ripples without crests.	Wind motion visible in smoke.
2	7-11	1.7-3	Light Breeze	Small wavelets. Crests of glassy appearance, not breaking.	Wind felt on exposed skin. Leaves rustle.
3	12-19	3-5.3	Gentle breeze	Large wavelets. Crests begin to break; scattered whitecaps.	Leaves and smaller twigs in constant motion.
4	20-29	5.3-8	Moderate breeze	Small waves.	Dust and loose paper raised. Small branches begin to move.
5	30-39	8.3-10.8	Fresh breeze	Moderate (1.2 m) longer waves. Some foam and spray.	Smaller trees sway.
6	40-50	10.8-13.9	Strong breeze	Large waves with foam crests and some spray.	Large branches in motion. Whistling heard in overhead wires. Umbrella use becomes difficult.
7	51-62	13.9-17.2	Near gale / moderate gale	Sea heaps up and foam begins to streak.	Whole trees in motion. Effort needed to walk against the wind.
8	63-75	17.2-20.9	Fresh gale	Moderately high waves with breaking crests forming spindrift. Streaks of foam.	Twigs broken from trees. Cars veer on road.
9	76-87	20.9-24.2	Strong gale	High waves (6-7 m) with dense foam. Wave crests start to roll over. Considerable spray.	Larger branches break off trees, construction/temporary signs and barricades blown over, damage to circus tents and canopies.
10	88-102	24.2-28.4	Whole gale / Storm	Very high waves. The sea surface is white and there is considerable tumbling. Visibility is reduced.	Trees broken off or uprooted, saplings bent and/or deformed, poorly attached asphalt shingles and shingles in poor condition peel off roofs.
11	103-117	28.4-32.5	Violent storm	Exceptionally high waves.	Widespread vegetation damage, minor damage to most roof shingles/surfaces, gravel may be blown from flat roofs.
12	>117	>32.5	Hurricane	Huge waves. Air filled with foam and spray. Sea completely white with driving spray. Visibility greatly reduced.	Considerable and widespread damage to vegetation, a few windows broken, structural damage to mobile homes and poorly constructed sheds and barns.

- From the following pictures you can locate the action range of the platform while the chassis is kept in a fixed position. Watch these pictures carefully in order to position the chassis so as to avoid any contacts with obstacles present in the action range.

A10

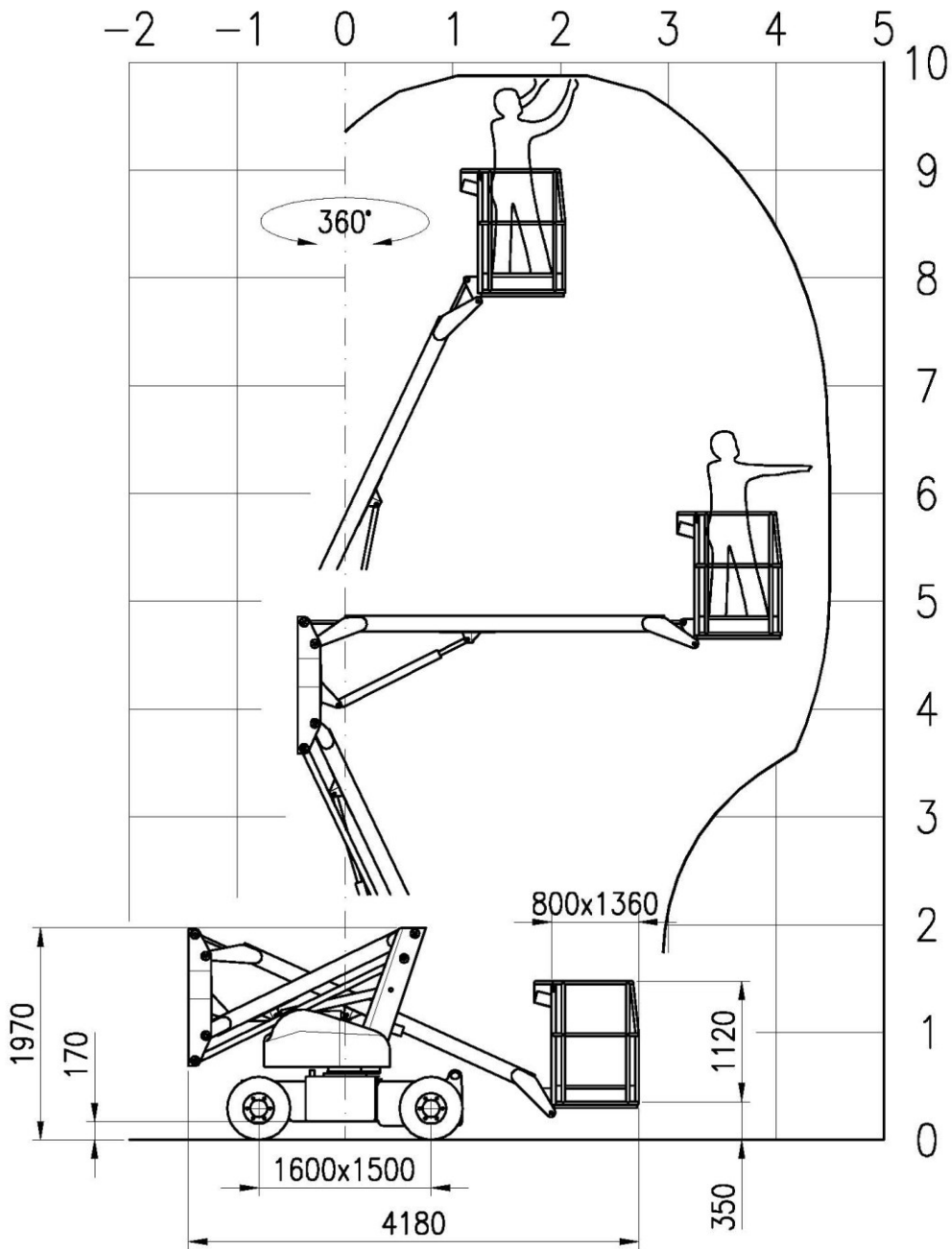


FIG. 5

A12 E A12 EB A12 ED

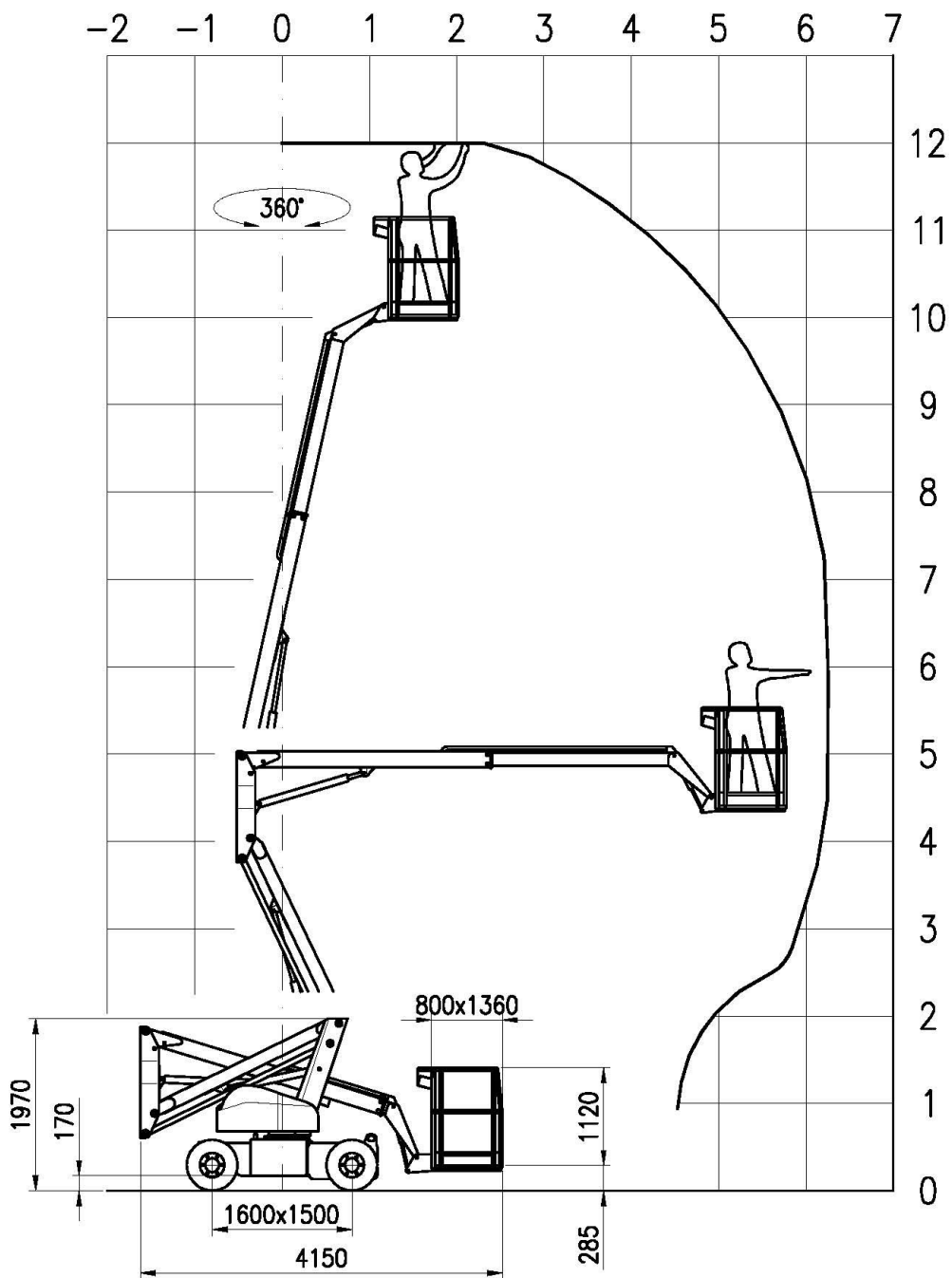


FIG. 6

A13 JE

A13 JED

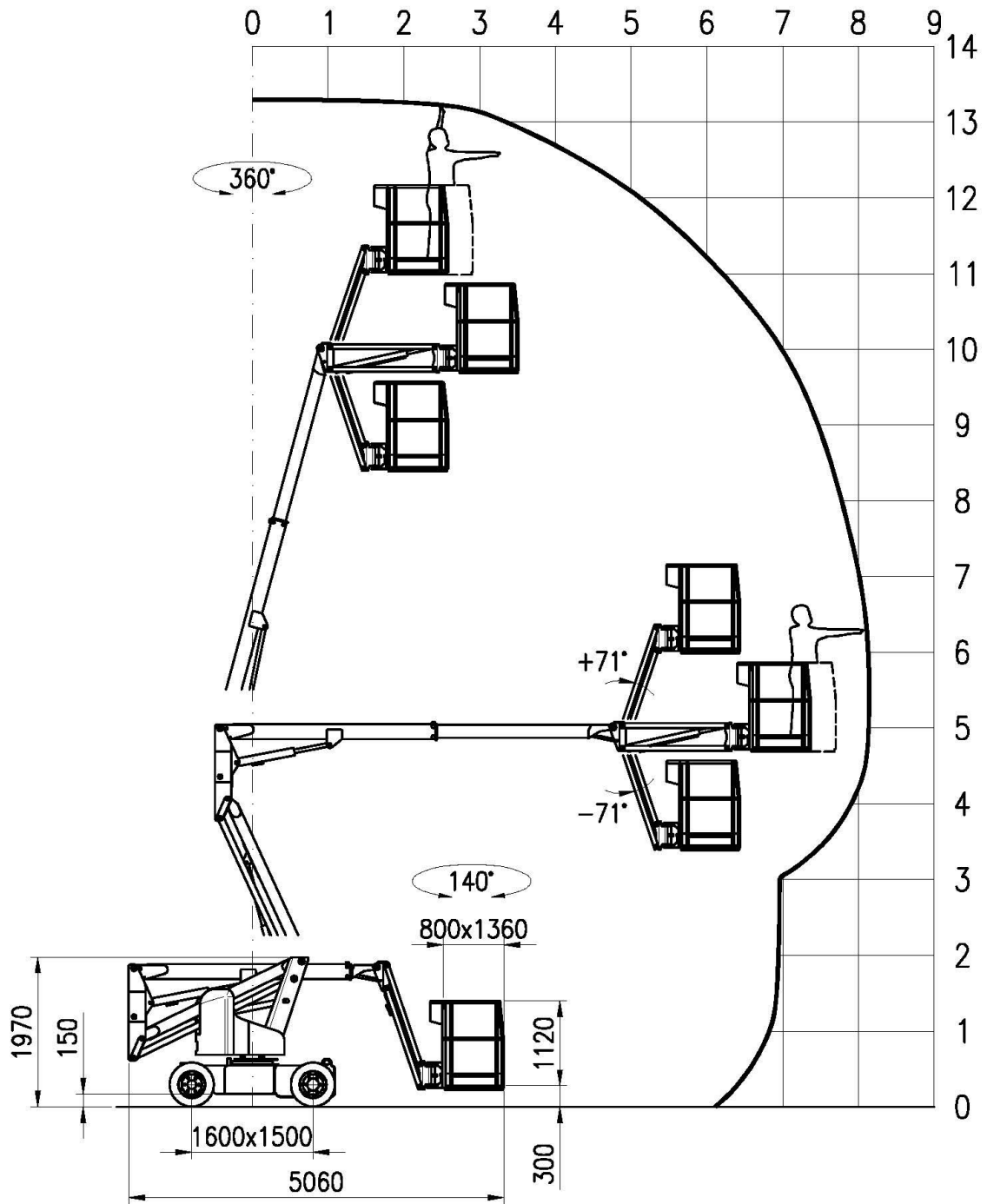


FIG. 7

4 INSTALLATION AND PRELIMINARY CHECKS

The machine is supplied completely assembled, therefore it can perform all functions in full safety as provided for by the manufacturer. No preliminary operation is required. To unload the machine, follow the instructions in paragraph "handling and carrying".

Place the machine onto a firm ground and with a gradeability lower than the max. allowed (see technical features "Stability limits"). The machine is equipped with platform bubble level for visual check and an inclinometer on the chassis (or turret) to always check machine levelling, both transversal and longitudinal.

Before using the machine read the instructions given in this manual and the concise instructions indicated on the platform plate.

Before starting any operations verify the integrity of the unit (by means of a visual check) and read the plates indicating the operating limits.

4.1 Before using the machine

Before using the machine the operator must always check visually that:

- the battery is completely charged;
- the oil level lies between the min. and max. value (with lowered platform);
- the machine carries out all operations in safety;
- the wheels and drive engines are properly fixed;
- the wheels are in good condition;
- the guardrails are fixed to the platform and the self-closing gates are present;
- the structure does not show clear faults (check welding of lifting structure);
- the instructions plates are perfectly readable;
- the controls are perfectly efficient both at platform and at emergency ground control station, including the "dead-man" system.

5 GENERAL USE INSTRUCTIONS

Before using the machine read this chapter thoroughly.

5.1 Platform control panel

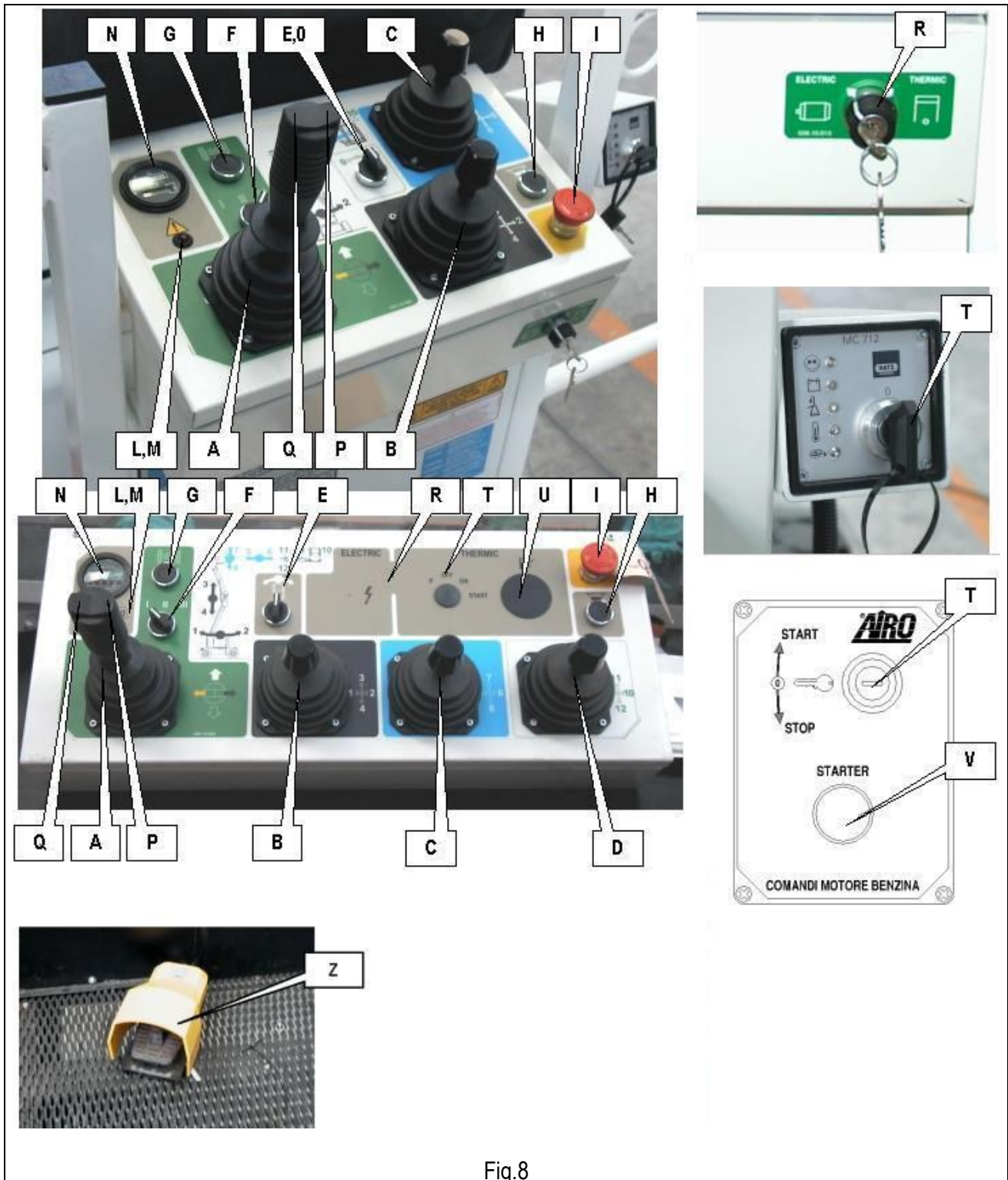


Fig.8

- A) Drive proportional joystick control
- B) Proportional joystick control
- C) Proportional joystick control
- D) Proportional joystick control
- E) Platform level switch
- F) Drive speed selector
- G) "Differential locking" button
- H) Manual horn
- I) Emergency brake (STOP)
- L) Fault warning light
- M) Overload warning light
- N) Voltmeter
- O) Platform rotation switch
- P) Right steering button
- Q) Left steering button
- R) Electric/Thermic power key selector
- T) Heat engine starting key
- U) Fuel level gauge
- V) Starter button
- Z) "Dead-man" pedal

All movements (except for platform rotation and platform level compensation) are controlled by proportional joystick /levers; it is therefore possible to adjust movement speed by means of the relative controls. To avoid sudden shakes during movements, it is advisable to operate the proportional joystick controls gradually.

For safety reasons, to operate the machine, it is necessary to press the platform "dead-man" pedal Z. If the "dead-man" pedal is accidentally released while the machine is operating, the movement is immediately stopped.



Follow exclusively the instructions given in the next paragraphs and the safety rules described both hereafter and in the previous paragraphs. Read the next paragraphs carefully in order to properly understand the on/off procedures as well as all operations and their correct use.



Before any movement, verify the presence of people in close proximity to the machine and, in any case, proceed with the utmost caution.

5.1.1 Drive and steering

5.1.1.1 Drive

To drive the machine it is necessary to carry out the following operations in sequence:

- a) press the “dead-man” pedal located on the platform;
- b) set the proportional joystick control **A** forward for forward drive or backward for reverse drive.



ATTENTION!!

Drive and steering controls can take place at the same time but they are interlocked with the platform movement controls (lifting/lowering/rotation).

With platform lowered (booms down, telescopic boom in, jib at a height between +10° and –70°) it is possible to select different drive speeds by means of the speed selector **F**.

NOTES: To achieve maximum drive speed, set the speed selector (**F**) to position (III°) , hold down the differential locking button (**G**) and press down the proportional joystick (**A**).

To operate on high ascending or descending slopes (e.g. while loading/unloading the machine onto/from a truck) and get the minimum speed, set the speed selector (**E**) to position (I°).

With platform lifted the safety drive speed is automatically activated.

ATTENTION!! The differential locking press-button (**G**) is to be used by the operator to drive the unit on uneven grounds, should one of the driving wheels be lifted and absorb the whole traction power. It is absolutely forbidden to hold down the press-button while steering and when drive is started.



IT IS FORBIDDEN to drive the unit when the platform is lifted unless the ground is flat and sufficiently firm.



Before any movement, verify the presence of people in close proximity to the machine and, in any case, proceed with the utmost caution.

5.1.1.2 Steering

To steer, press the buttons **P**, **Q** located on the drive proportional joystick control (press the right button for right steering and vice versa). Also the steering control is enabled by the “dead-man” pedal.



ATTENTION!!

Drive and steering controls can take place at the same time but they are interlocked with the platform movement controls (lifting/lowering/rotation).

With platform lifted the safety drive speed is automatically activated.

5.1.2 Platform positioning

To carry out all movements other than drive, use proportional joysticks **B**, **C**, **D** and switches **E** and **O**.

To achieve the movement it is necessary to carry out the following operations in sequence:

- a) press the “dead-man” pedal on the platform;
- b) operate the proportional joystick or the desired switch by moving it in the direction shown by the serigraphy on the control panel.

NOTE: before activating the proportional joystick control or the desired switch the “dead-man” pedal must be pressed.

Release the “dead-man” pedal and the manoeuvre will be immediately stopped.

5.1.2.1 Scissors lifting/lowering (first boom)

To lift/lower the scissors (first boom), use the proportional joystick **B**.

Set the proportional joystick **B** to position **3** to lift the scissors, or to position **4** to lower the scissors.

5.1.2.2 Second boom lifting/lowering

To lift / lower the second boom, use the proportional joystick **C**.

Set the proportional joystick **C** to position **7** to lift, or to position **8** to lower the second boom.

5.1.2.3 Jib lifting/lowering (A13 J)

To lift/lower the JIB, use the proportional joystick **D**.

Set the proportional joystick **D** to position **11** to lift the jib, or to position **12** to lower the jib.

5.1.2.4 Telescopic boom extraction/retraction

To extend / retract the telescopic boom, use the proportional joystick **C**.

Set the proportional joystick **C** to position **6** for extraction or to position **5** for retraction.

5.1.2.5 Turret orientation (rotation)

To carry out the turret orientation (rotation), use the proportional joystick **B**.

Set the proportional joystick **B** to position **2** to rotate the turret to the right, or to position **1** to rotate it to the left.



Before carrying out this manoeuvre make sure that the mechanical lock device of the turret – if any - be deactivated (see chapter 6 “handling and transport”).

5.1.2.6 Platform rotation

5.1.2.6.1 Platform rotation A10 and A12 (OPTIONAL)

To rotate the platform, use the switch **O**. Set the switch **O** to the right for right rotation or to the left for left rotation. The operation occurs at fixed speed (ON-OFF control).

5.1.2.6.2 Platform rotation A13 J

To rotate the platform, use the proportional joystick **D**. Set the proportional joystick **D** to position **10** for right rotation, or to position **9** for left rotation. The operation occurs at fixed speed (ON-OFF control).

5.1.2.7 Platform levelling

The platform is automatically levelled. Should it be necessary to reset the correct level, use switch **E**. Operate the switch **E** as indicated by the serigraphy.



Attention!! This operation can be carried out only when booms are completely lowered. No result is achieved if these operations are carried out when the platform is lifted.

5.1.3 Other functions of the platform control panel

5.1.3.1 Selection of electric/thermic propulsion (models “EB”, “ED”) (R)

On dual propulsion models (electric/thermic) the type of propulsion can be selected using the key selector T. Set it to position **Electric** to use the electric (battery) propulsion; set it to position **Thermic** to use the thermic propulsion (Diesel or Petrol).

5.1.3.2 Heat engine starting key (models “EB”, “ED”) (T)

It is for starting the heat engine (Diesel or Petrol) in bi-energy models (ED” and “EB”).

- In **START** or **1** position it enables starting;
- In **STOP** or **0** position it stops the heat engine.

5.1.3.3 Manual horn (H)

It warns that the machine is moving. It is manually operated by means of the press-button H.

5.1.3.4 Emergency STOP button (I)

By pressing button I all control functions are interrupted. Normal functions are enabled by rotating the button of 1/4 turn clockwise.

5.1.3.5 Fault warning light (L)

This warning light warns that:

- the machine is not perfectly levelled. After a few seconds from the light switching on, an audible warning device goes off and lifting (as well as drive if platform is lifted) can no longer be carried out. To resume machine operation, it is necessary to lower the platform completely and to position the machine on an even ground to ensure its stability;
- a fault is present. At the same time an audible alarm goes off and the machine cannot be operated. Faults stopping the machine can be of different types; e.g. faulty joystick, fault in the main electronic board, fault in the power supply, etc.



ATTENTION! The activation of this indicator warns of a dangerous situation since the machine has reached a dangerous inclination level for the machine stability. When the chassis inclination exceeds the allowed value, to prevent increasing the overturn risk, the operator on the platform is recommended to retract the telescopic boom first and to lower it as the last operation.

5.1.3.6 Overload warning light (M)

When this light is off it means that the platform is overloaded (the load exceeds by 25% the rated load). After a few seconds from the light switching on, an audible alarm goes off and:

- If the platform is lifted, the machine is completely locked;
- If the platform is lowered all driving/steering operations are still possible but lifting/rotation are prevented.

Remove the overload before using the machine again.



**ATTENTION! The activation of this indicator is a synonym of danger since the load at platform is exceeding or no load control is active upon signalling.
For adjustment or activation in emergency situations read the MAINTENANCE chapter.**

5.1.3.7 Voltmeter (N)

The voltmeter is available on electric power models and bi-energy models ("ED" and "EB").

5.1.3.7.1 Standard voltmeter

It indicates the charge level of the battery. The charge level of the battery is to be carried out when the machine is powered but no movement is being performed. If all the red leds are lit, battery charge is approximately 100%. If only the first two leds are lit, battery charge is 25% and batteries must be recharged. Do not use the machine if, under the above-mentioned conditions, only the first two leds are lit. However, battery should be recharged daily, either at night or during long work intervals.



Fig.9

5.1.3.7.2 Optional voltmeter

It indicates the charge level of the battery. In normal working conditions the green leds are lit. Should the red leds light up, the battery has reached the minimum charge level (approximately 20%). In this condition platform lifting is automatically disabled. The battery must be immediately recharged. However, battery should be recharged daily, either at night or during long work intervals.

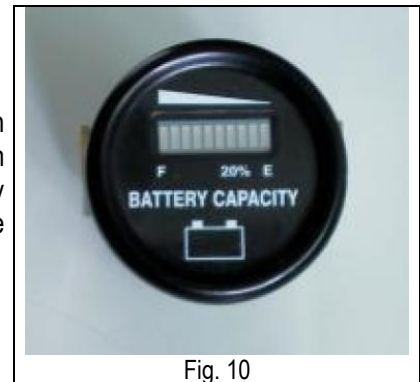


Fig. 10

5.1.3.8 Fuel level indicator (OPTIONAL for models "ED" and "EB")

The fuel level indicator is available on request for Diesel power models ("D"), and bi-fuel models ("ED", "EB"). It indicates the level of fuel inside the tank. It is normally not equipped with a low fuel warning light, therefore it is recommended to top-up fuel in the tank as soon as the indicator is close to zero. For topping up, see the instructions given in this manual.

5.2 Ground control station and electric central unit

The ground control station is to be used to:

- turn the machine on/off;
- select the control station (ground or platform);
- operate the platform in emergency cases;
- display some operating parameters (working hours; Diesel engine operational faults; battery charger operation; etc.).

The electric power unit on the ground contains the main electronic boards necessary to operate the machine and to carry out safety checks.



Access to the electric central unit is allowed to specialized personnel only for maintenance and/or repair purposes. Access the electric central unit only after the machine has been disconnected from any power sources (battery, 220V or 380V).

5.2.1 Ground control station

The ground control station is located on the rotating turret (see paragraph "Location of main components").



Use the ground controls only in emergency situations to allow the platform to be recovered. IT IS FORBIDDEN to use the ground control station as a workstation when personnel is on the platform.

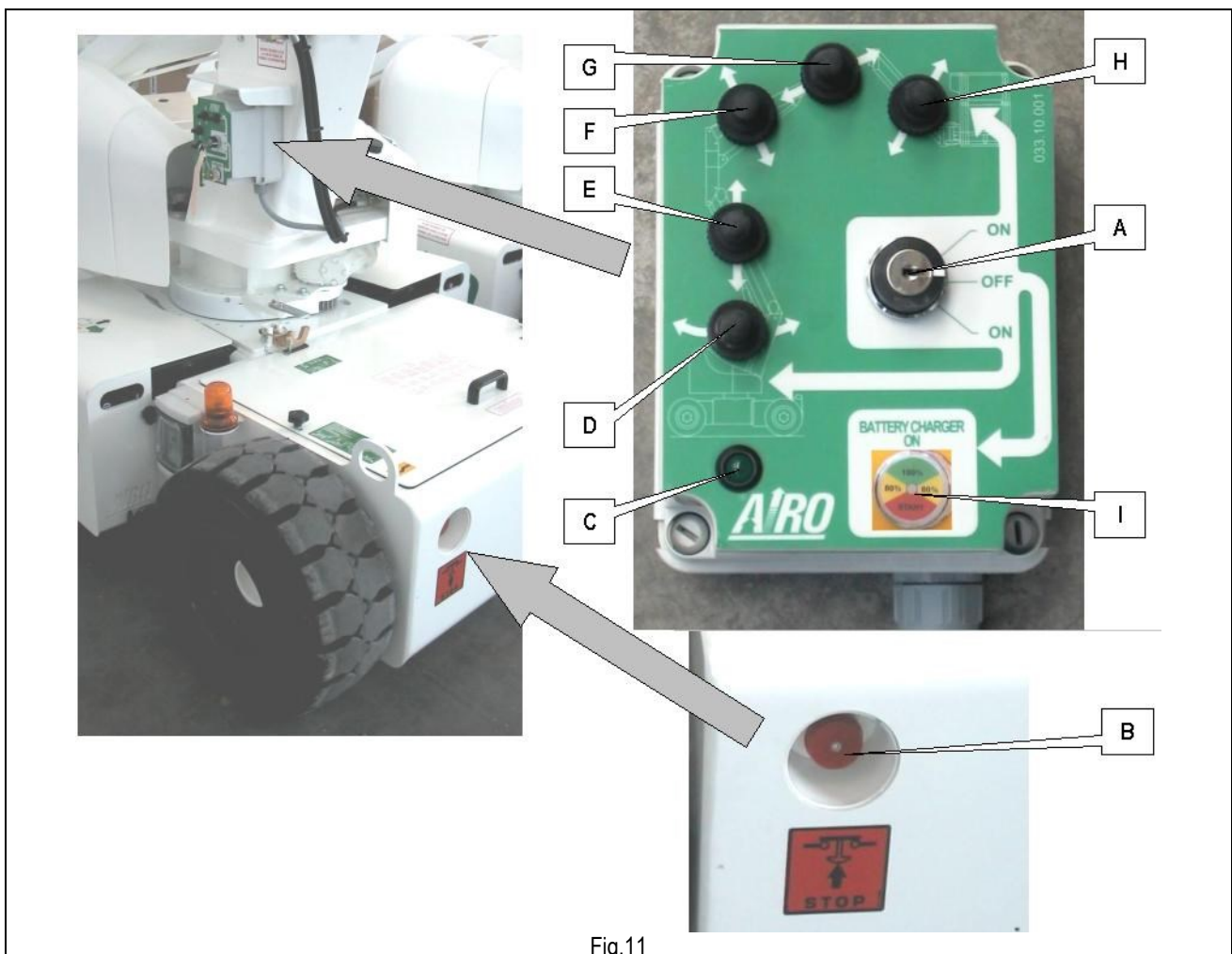


Fig.11

- A) On-off key and control station selector (ground/platform).
- B) Emergency stop button.
- C) Warning light: machine on.
- D) TURRET ROTATION lever.
- E) SCISSORS LIFTING/LOWERING lever.
- F) BOOM LIFTING/LOWERING lever.
- G) TELESCOPIC BOOM OUT/IN lever.
- H) JIB LIFTING/LOWERING lever.
- I) Battery charger warning light.



The key must be given to authorized personnel. Keep a duplicate key in a safe place.

5.2.1.1 On-off key and control station selector

The on-off key located on the ground control station is used to:

- turn on the machine by selecting one of the two control stations:
 - platform controls enabled with key switch set to “platform” position. Stable key position with possibility to extract the key;
 - ground controls enabled (for emergency operations) with key switch set to “turret” position. Position while action is being carried out. When the key is released the machine is turned off.
- turn off the control circuits by turning it to off;
- turn on the battery charger by turning it to off (models “E” and “ED”).

5.2.1.2 Emergency stop button

By pressing this button the machine (as well as the heat engine on models “D”, “ED” and “EB”) is completely stopped due to battery disconnection (opening of electric power circuit); by pulling the same button to the outside, the machine can be turned on by means of the on-off key (see chapter 5.2.1.1).

5.2.1.3 Warning light: machine on

The green light is on with machine on with ground controls only.

5.2.1.4 Platform control levers

The various levers shown in the figure allow the platform to be operated. According to the various signs the corresponding movements are activated. These controls can be operated only if the on-off key is set to ON downwards (ground control station selected). We shall also remind you that the ground controls are to be used to operate the platform only in emergency situations and must not be used for any other purposes.



Use the ground controls only in emergency situations to allow the platform to be recovered. IT IS FORBIDDEN to use the ground control station as a workstation when personnel is on the platform.

5.2.1.5 Battery charger light

Electric power and bi-fuel models (“E”, “ED” and “EB”), equipped with a built-in high frequency battery charger, are provided with this warning light indicating the operation of the battery charger (for more detailed information read the paragraph: “Battery charge”).

5.2.2 Electric power unit on the ground

The electric power unit on the ground is placed on the chassis (see paragraph “Location of main components”).

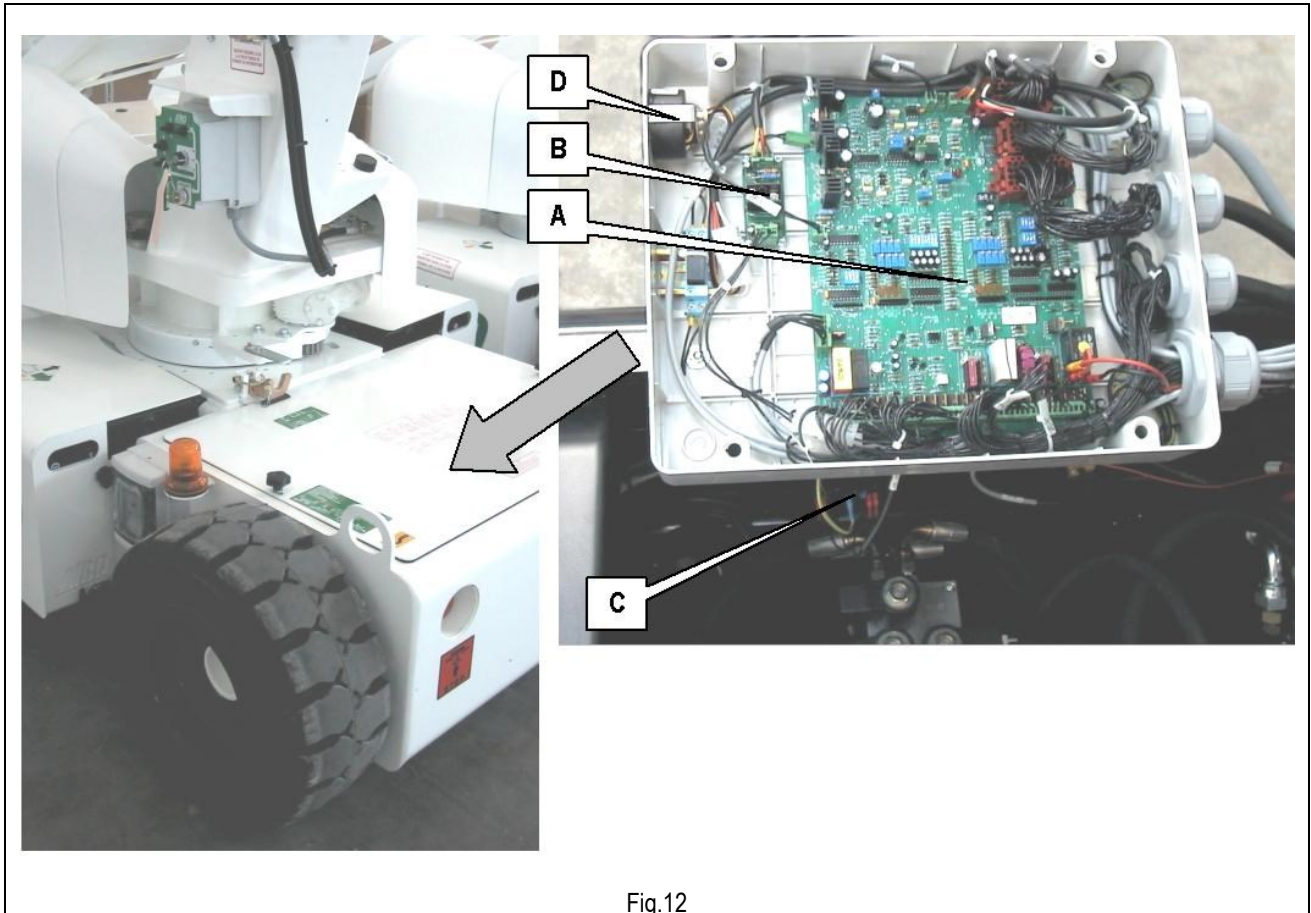


Fig.12

The electric power unit contains:

- A) Main control board.
- B) Inclinometer circuit power electronic board.
- C) Control device for electric system isolation (electric models only).
- D) Hour-meter.



Access to the electric central unit is allowed to specialized personnel only for maintenance and/or repair purposes. Access the electric central unit only after the machine has been disconnected from any power sources (battery, 220V or 380V).

5.3 Platform access



To get on the platform use only the access equipment the platform is provided with.

To get on the platform, lift the bar and get on board. Check that, once you are on the platform, the bar falls down closing the access.



It is absolutely forbidden to block the closing bar so as to keep the platform access door open.

With the ground controls (see paragraph "Ground control station..") it is possible, operating the boom, to lower the height of access to the platform for a better access to the platform itself.

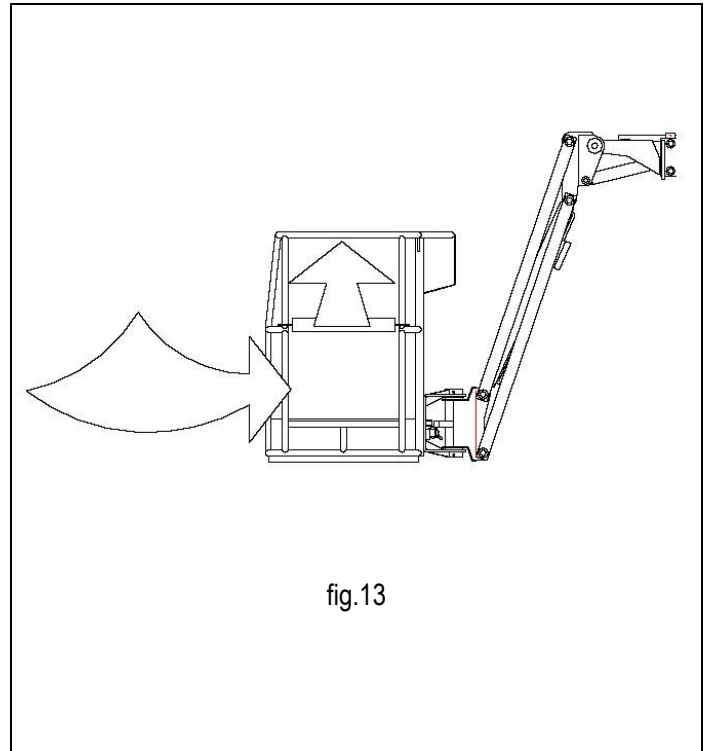


fig.13

5.4 Start-up

To start the machine the operator shall:

- release the Stop button on the ground control station;
- turn the on-off key on the ground control station to "platform" position;
- remove the starting key and keep it in a safe place or hand it over to a person in charge on ground, properly informed of the use of the emergency controls;
- get onto the platform;
- release the stop button on the platform control panel (see previous paragraphs);

For electric-powered machines, at this point the various functions can be performed by following the instructions given in the previous paragraphs.

On dual propulsion models (Electric/Diesel) (models "ED" or "EB"), it is necessary to select the power supply type by means of the selector. If you wish to use the electric propulsion once this option has been selected the operator can start performing the various functions by following the instructions given in the previous paragraphs. If you wish to use the thermic propulsion read the next paragraphs to start the heat engine.

5.4.1 Diesel engine start-up ("ED" models)

By turning the starting key on the platform control panel:

- to **STOP** or **O** position the Diesel engine is off (models "D" and "ED");
- in **START** or **1** position the engine starts.



Do not insist on the starting position for longer than 3 seconds. In the event of failed start, check the fuel level by means of the relevant indicator and read the use and maintenance manual of the engine. Do not try to start the engine if it is already running. This operation may cause the pinion of the starter to break (under normal conditions the control system blocks this operation). In the event of operational faults, check the engine warning lights and read the Use and maintenance manual of the engine and call the authorized technical support.

NOTES: The Diesel engine can be started only if the dead-man pedal is not pressed.

5.4.2 Petrol motor start-up (“EB” models)

For the operation of the machine with petrol engine, first of all it is necessary to open the red supply tap under the fuel tank.

To start you have to:

- With cold engine:

turn the starting key in **START** or **1** position and simultaneously press the STARTER button, holding it down even after starting for about 10 seconds.

- With hot engine:

turn the starting key in **START** or **1** position and simultaneously press the STARTER button, releasing it immediately after starting.



Before starting visually check the fuel level in the tank with engine cold and off and, if necessary, top up avoiding to dirty the engine. In the event of small fuel leakage, clean the engine thoroughly. Do not top up when the engine is hot and/or running. Risk of fire and explosion.

Do not insist on the starting position for longer than 3 seconds. In the event of failed start, check the fuel level by means of the relevant indicator and read the use and maintenance manual of the engine.

Do not try to start the engine if it is already running. This operation may cause the pinion of the starter to break (under normal conditions the control system blocks this operation).

In the event of operational faults, check the engine warning lights and read the Use and Maintenance manual of the engine and, if necessary, call the authorized technical support.

NOTES: The engine can be started only if the dead-man pedal is not pressed.

5.5 Machine stop

5.5.1 Normal stop

In normal operating conditions:

- by releasing the controls the operation is stopped. Stop occurs within a time limit set in the factory, which guarantees smooth braking.
- by releasing the “dead-man” pedal located on the platform, the operation is immediately stopped. In the event of an immediate stop, braking is sudden.

5.5.2 Emergency stop

Should it be necessary, the operator may immediately stop all machine functions from both platform and ground control station.

From the platform control station:

- by pressing the push-button on the control panel the machine is stopped;
- by releasing the “dead-man” pedal, the operation is immediately stopped. Due to the immediate stop, braking is sudden.

From the ground control station:

- By pressing the power stop button, thus cutting out machine power (power circuit cut-out).

To resume the operations:

From the platform control station:

- Turn the stop button of 1/4 turn clockwise;

From the ground control station:

- Pull the power circuit push-button to the outside - until it locks in position - to power the unit again.

5.5.3 Diesel engine stop (“ED” models)

In order to stop the Diesel engine:

- 1) From the platform control station:
 - Turn the starting switch to **STOP** or **0** position.
 - Otherwise, press the push-button.
- 2) From the ground control station:
 - turn the on-off key switch to **OFF** position.



Do not stop the engine when the r.p.m. is high. Before stopping the engine wait until the r.p.m. is at the lowest.

5.5.4 Petrol engine stop (“EB” models)

In order to stop the petrol engine:

- 3) From the platform control station:
 - turn the starting switch to **STOP** or **0** position.
 - otherwise, press the push-button.
- 4) From the ground control station:
 - turn the on-off key switch to **OFF** position.



Do not stop the engine when the r.p.m. is high. Before stopping the engine wait until the r.p.m. is at the lowest.

5.6 Emergency manual controls



This function is to be used only in emergency situations when no motive power is available.

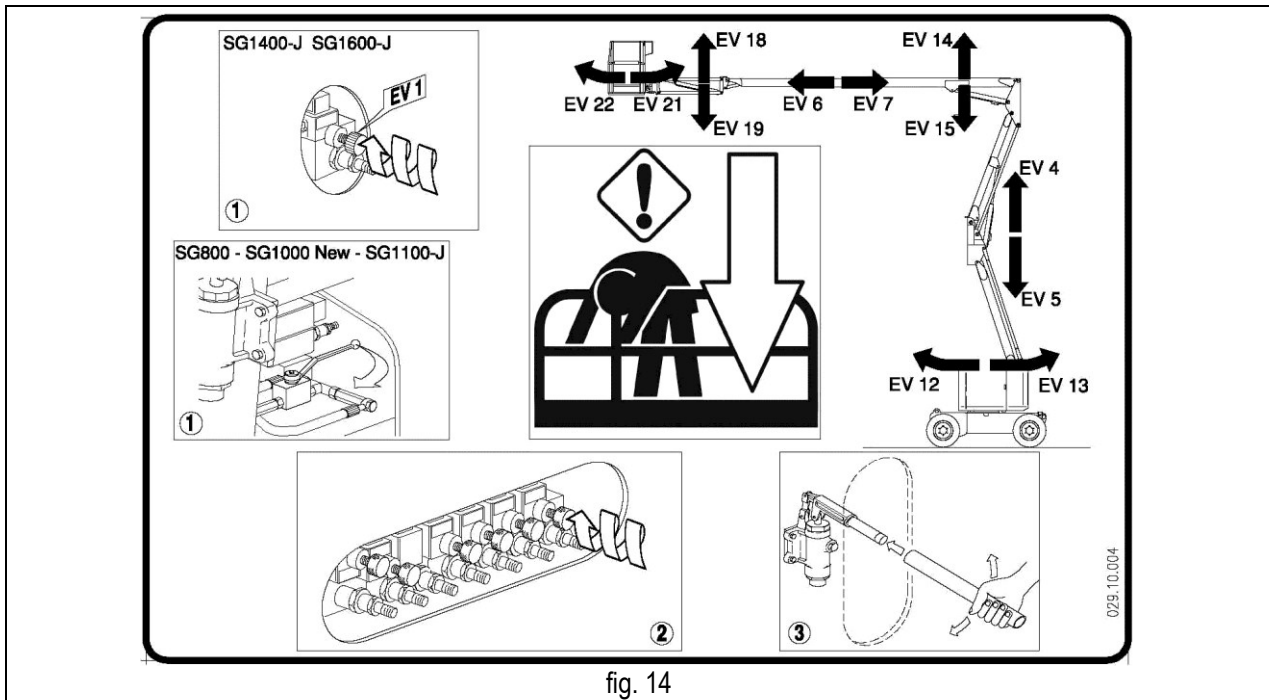


fig. 14

In case of fault in the electric or hydraulic system, carry out the following emergency procedures:

- 1) Turn (or screw) the tap **A** completely;
- 2) Insert the specially provided lever on the manual pump handle;
- 3) Screw the knurled knob of the solenoid valve corresponding to the desired movement;
- 4) Activate the emergency pump;
- 5) Check the correct execution of this procedure.

Electric valves and relevant movements:

- EV5= Scissors lowering;
- EV6= Telescopic boom extraction;
- EV7= Telescopic boom retraction;
- EV12= Turret right rotation;
- EV13= Turret left rotation;
- EV15= Boom lowering;
- EV18= Jib lifting;
- EV19= Jib lowering;
- EV21= Platform right rotation;
- EV22= Platform left rotation;

ATTENTION: THE EMERGENCY CONTROL CAN BE INTERRUPTED AT ANY MOMENT BY RELEASING THE KNOB OR BY STOPPING THE PUMP.



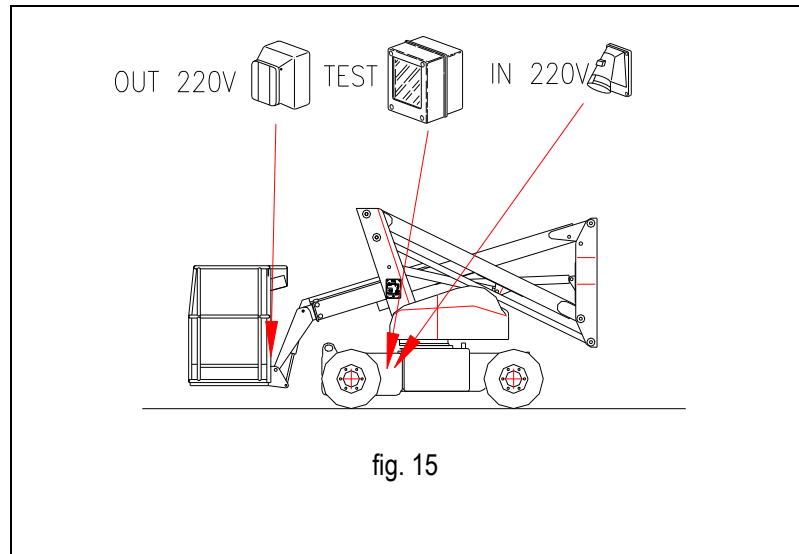
Once this emergency manoeuvre has been carried out, the knurled knobs and the tap must be set to their initial position again in order to resume the operations (in normal position the knobs are completely unscrewed).

5.7 Socket for electric tool connection and battery charger powering

The platform is equipped with a socket (220-230V AC) enabling the operator to connect the electric tools necessary to carry out his operations and to power the battery charger. To activate the electric line (see picture aside) introduce a cable into the 220-230V Ac. 50 Hz socket and set the earth-leakage circuit breaker switch, close to the socket, to ON position. It is advisable to check the earth-leakage circuit breaker by means of the specially provided TEST button.

The plugs and sockets equipped on standard machines comply with EEC standards and can therefore be used in EU member countries.

On request the machine can be equipped with plugs and sockets in compliance with local standards or with particular needs.



5.8 Fuel level and re-fuelling (models “ED”, “EB”)

Before using the thermic propulsion (Diesel or Petrol engine) check the fuel level in the tank.

For those machines that are not equipped with a level gauge on the platform control station, this operation should be carried out by visually checking the fuel level after unscrewing the filling cap; for the other machines it is possible to check the level directly through the level gauge on the platform control station.

- Before starting the working session, when the motor is off and sufficiently cool, visually check the fuel level.
- Keep the fuel tank and the engine clean.

For petrol engines (models “EB”) use only **Unleaded Petrol with Octane Number >87**.

5.9 End of work

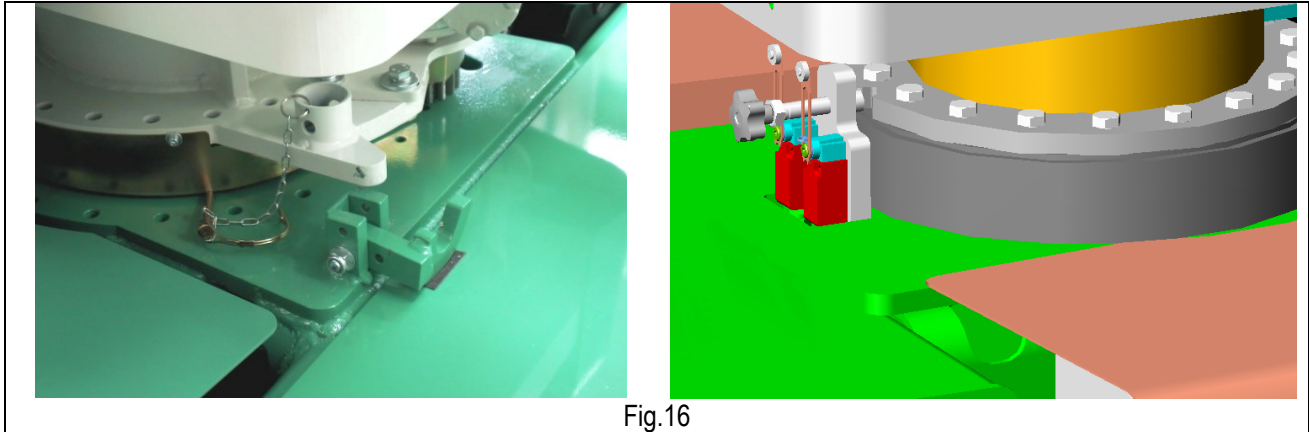
After stopping the machine according to the instructions given in the previous paragraphs, you are advised to:

- always set the machine to rest position;
- press the Stop button on the ground control station;
- remove the keys from the control panel to prevent unauthorized people from using the machine;
- recharge the battery according to the instructions given in section "Maintenance".

6 HANDLING AND CARRYING

6.1 Handling

Before using the machine, make sure that the mechanical lock device of the turret is disabled (see figures below).



To handle the machine in normal operating conditions follow the instructions given in chapter "GENERAL USE INSTRUCTIONS" under paragraph "Drive and steering".

When the platform is completely lowered (or within a given height according to specific needs and further to checks) the machine can be handled (i.e. drive can be performed) at different speeds to be freely selected by the user. When platform is lifted and exceeds a certain height, the machines can translate at the reduced speed (automatically) up to the maximum height.



ATTENTION! Drive with lifted platform may be subject to different restrictions according to the country where the machine is used. Find out about the legislative limits concerning this manoeuvre from the bodies of Health and Safety at work.

It is absolutely forbidden to drive the unit when the platform is lifted unless the ground is horizontal, flat and steady.

Check that there are no holes or steps on the floor and bear in mind machine overall dimensions.

Before any movement, verify the presence of people in close proximity to the machine and, in any case, proceed with the utmost caution.

Before any movement make sure that the machine plugs are disconnected from the power source.

Before steering and driving the unit, check the actual position of the rotating turret (see the relevant stickers on the chassis) so as to achieve the correct movement direction.

While de-placing the unit with lifted platform it is not allowed to load horizontal loads onto the platform (the operators on board must not pull ropes, wires, etc.).

6.2 Carrying

In order to carry the machine to the various working sites, follow the instructions given below.

Considering the large dimensions of some models, before carrying, it is recommended to inquire about the overall dimension limits for road transport in force in your country.



Before carrying the machine, turn it off and remove the keys from the control panels. No people are allowed in proximity to or on the machine to avoid any risks deriving from sudden movements. For safety reasons never lift or tow the machine by means of its booms or platform. Loading operations are to be carried out on a flat surface with a suitable capacity, after setting the platform to rest position.

To carry the machine the operator shall load it onto a vehicle either:

- 1) **By means of loading ramps and translation controls** located on the platform to load it directly onto the vehicle (if ramp slope is within the gradeability described in paragraph "TECHNICAL FEATURES" and capacity is adequate to weight) according to the instructions given in paragraph "GENERAL USE INSTRUCTION" under paragraph "Drive and steering" for correct operation of drive controls. During the loading operation following this system, it is advisable to lift the jib (if present- see picture aside) to prevent the machine from hitting the ground. Pay attention not to load other booms during this operation to prevent the emergency microswitches from being activated, which in case of inclined machine disable all the manoeuvres except the lowering ones. If the slope exceeds the gradeability, the machine is to be towed by means of a windlass only if the operator on the platform simultaneously activates the drive control to release the parking brakes.

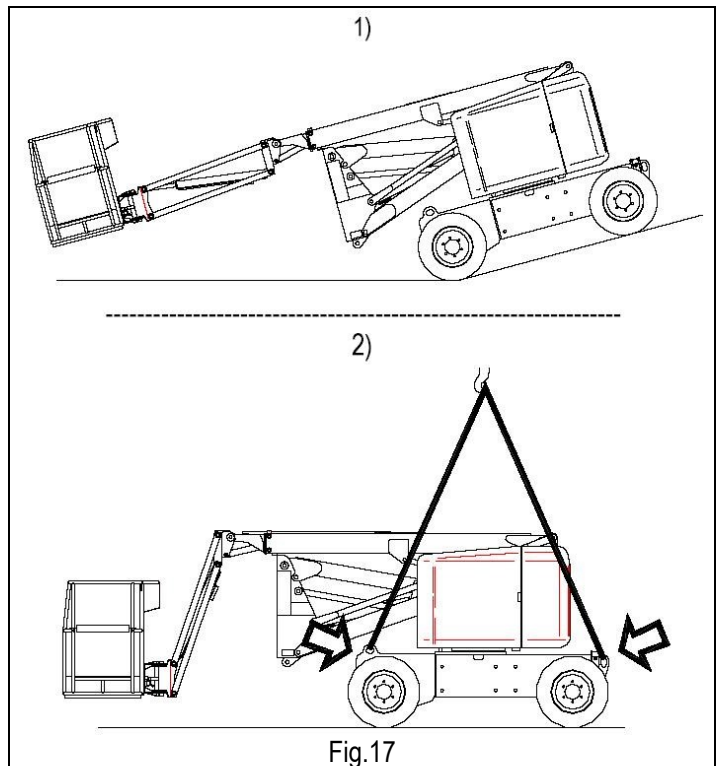


Fig.17

- 2) **by means of hooks and steel ropes** (with safety factor = 5, see machine weight in Technical features) connected to the provided holes as indicated in the picture aside;
- 3) **by means of a lift truck** of a suitable capacity (see machine weight in table "Technical features" at the beginning of this manual) equipped with forks having at least the same length as the machine width. Insert the forks as indicated by the stickers on the machine. Should these stickers be not available, it is ABSOLUTELY FORBIDDEN to lift the machine by means of a lift truck. Lifting the unit by means of a lift truck is a dangerous operation, which must be carried out by qualified operators only.



After placing the machine onto the carrying vehicle, fasten it by means of the same holes used for lifting.

Lock the turret with the mechanical blocking safety device as specified in the following figure.

To avoid breaking the platform overload controller, thus causing the machine to stop, **DO NOT fix the machine to the vehicle base by tying the platform (any model) or the last lifting boom.**

Before carrying the unit check the stability grade.

Do not use the machine to tow other vehicles.

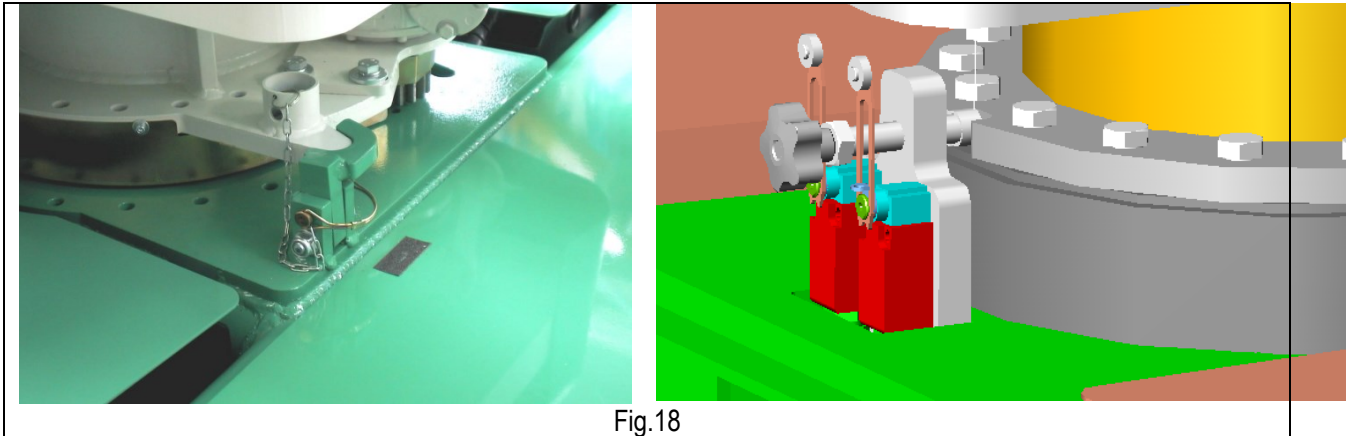


Fig.18

6.3 Emergency towing

In the event of a fault, carry out the following operations to tow the machine:

- 1) Hook the machine to the provided holes;
- 2) Completely screw the threaded dowels at the centre of the drive reduction gears by means of a 6 mm hexagonal wrench;
- 3) Tow at a very slow speed (remember that when the machine is being towed, brakes are out of order).

To resume the normal operation, set back the machine to initial conditions.

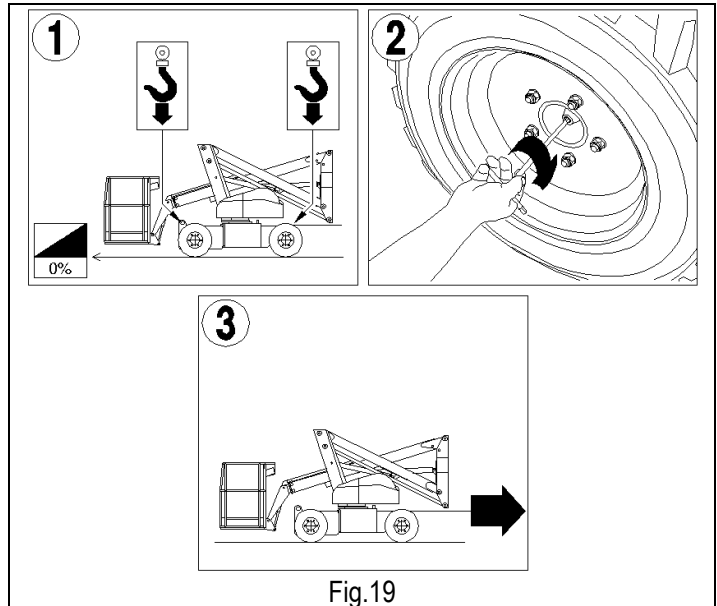


Fig.19



Tow at a very slow speed (remember that when the machine is being towed, brakes are out of order).
Tow only on a flat ground.

7 MAINTENANCE



Always carry out maintenance operations when the machine is still, after having removed the key from the control panel, and with the platform in rest position.

Carry out only the maintenance and adjustment operations described in this user manual. In emergency situations (e.g. breakdown, tyres replacement) contact Our Technical Support.

Repairs and maintenance operations are to be carried out by trained personnel only.

During interventions, check that the machine is completely blocked. Before carrying out maintenance operations inside the lifting equipment, check that this is off-line in order to avoid accidental lowering of the booms.

Remove the battery cables and provide batteries with a suitable protection during welding operations.

Carry out maintenance operations on the heat engine only when it is not running and sufficiently cool (except for those operations, such as oil change, which must be performed when the engine is hot). Risk of burns in contact with hot parts.

Do not use petrol or other flammable materials to clean the heat engine.

For maintenance operations on the heat engine, read the manufacturer's manual of the heat engine supplied on machine purchase.

In case of replacement, use original spare parts only.

Disconnect the 220V AC and/or 380V AC sockets, if any.

ATTENTION! NEVER MODIFY OR TAMPER WITH MACHINE PARTS TO IMPROVE THE MACHINE PERFORMANCE AS THIS MAY AFFECT ITS SAFE OPERATION.

7.1 Machine cleaning

To clean the machine use non-pressurized water jets after properly protecting the following parts:

- the control stations (both platform and ground);
- the electric central unit and all electric boxes in general;
- the electric motors.



Do not use pressurized water jets (high-pressure cleaners) to clean the machine.

After washing the machine, always:

- dry the machine;
- check integrity of plates and stickers;
- lubricate the articulated joints equipped with greaser.

7.2 General maintenance

The table below indicates the main maintenance operations and their frequency. The machine is equipped with a service hour-meter.

Operation	Frequency
Screw tightening as indicated in paragraph "Various adjustments"	After the first 10 working hours
Oil level check in hydraulic tank	After the first 10 working hours
Drive and rotation reduction gear oil change	After the first 100 working hours
Turret rotation clearance adjustment (where possible)	After the first 100 working hours
Battery state (charge and liquid level)	Every day
Deformation of tubes and cables	Every week
Heat engine fixing on elastic supports	Every month
Oil level check in hydraulic tank	Every month
Articulated joints and sliding blocks greasing	Every month
Stickers and code plates	Every month
Platform rotation clearance adjustment	Every six months
Operation check of dead-man pedal	Every six months
Screw tightening as indicated in paragraph "Various adjustments"	Every year
Periodic operation check and structure visual check	Every year
Turret rotation clearance adjustment (where possible)	Every year
Operation check and adjustment of the turret inclinometer	Every year
Operation check and adjustment of platform overload controller	Every year
Operation check of Microswitches M1	Every year
Brake system operation check	Every year
Suction / discharge filter cleaning	Every two years
Drive and rotation reduction gear oil change	Every two years
Total oil change in hydraulic tank	Every two years



DIESEL (D) AND ELECTRIC-DIESEL (ED) MODELS. As it is possible to install different types of Diesel engines, refer to the instructions manual of the engine manufacturer for all maintenance operations.

7.2.1 Various adjustments

Check the conditions of the following components and, if necessary, tighten:

- 1) Wheel screws;
- 2) Traction motor fixing screws;
- 3) Steering cylinder fixing screws;
- 4) Fixing screws of steering hub pins;
- 5) Basket fixing screws;
- 6) Hydraulic fittings;
- 7) Safety dowels of boom pins;
- 8) Rotation reduction gear fixing screws;
- 9) Elastic supports of heat engine.

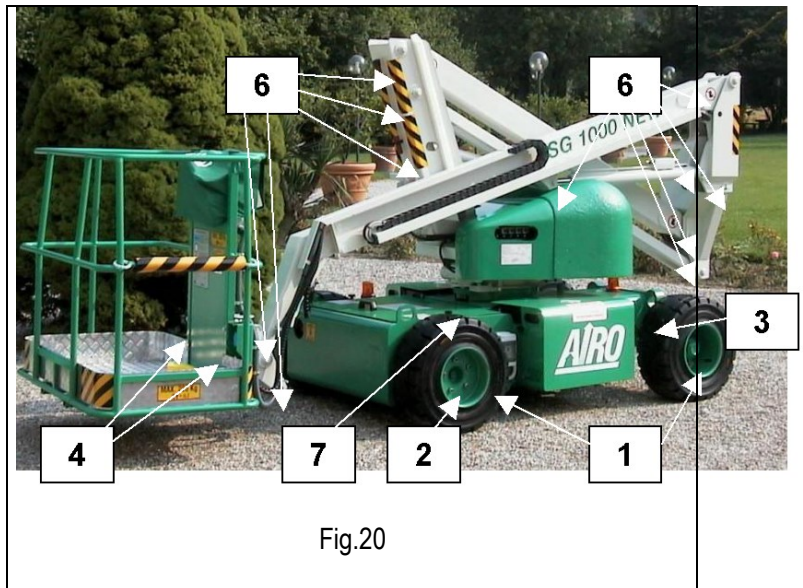


Fig.20

TORQUE WRENCH SETTING (S.I. thread, normal pitch)						
Class	8.8 (8G)		10.9 (10K)		12.9 (12K)	
Diameter	kgm	Nm	kgm	Nm	kgm	Nm
M4	0.28	2.8	0.39	3.9	0.49	4.9
M5	0.55	5.5	0.78	7.8	0.93	9.3
M6	0.96	9.6	1.30	13.0	1.60	16.0
M8	2.30	23.0	3.30	33.0	3.90	39.0
M10	4.60	46.0	6.50	65.0	7.80	78.0
M12	8.0	80.0	11.0	110	14.0	140
M14	13.0	130	18.0	180	22.0	220
M16	19.0	190	27.0	270	33.0	330
M18	27.0	270	38.0	380	45.0	450
M20	38.0	380	53.0	530	64.0	640
M22	51.0	510	72.0	720	86.0	860
M24	65.0	650	92.0	920	110	1100

7.2.2 Greasing

Grease all articulated joints at least every month.

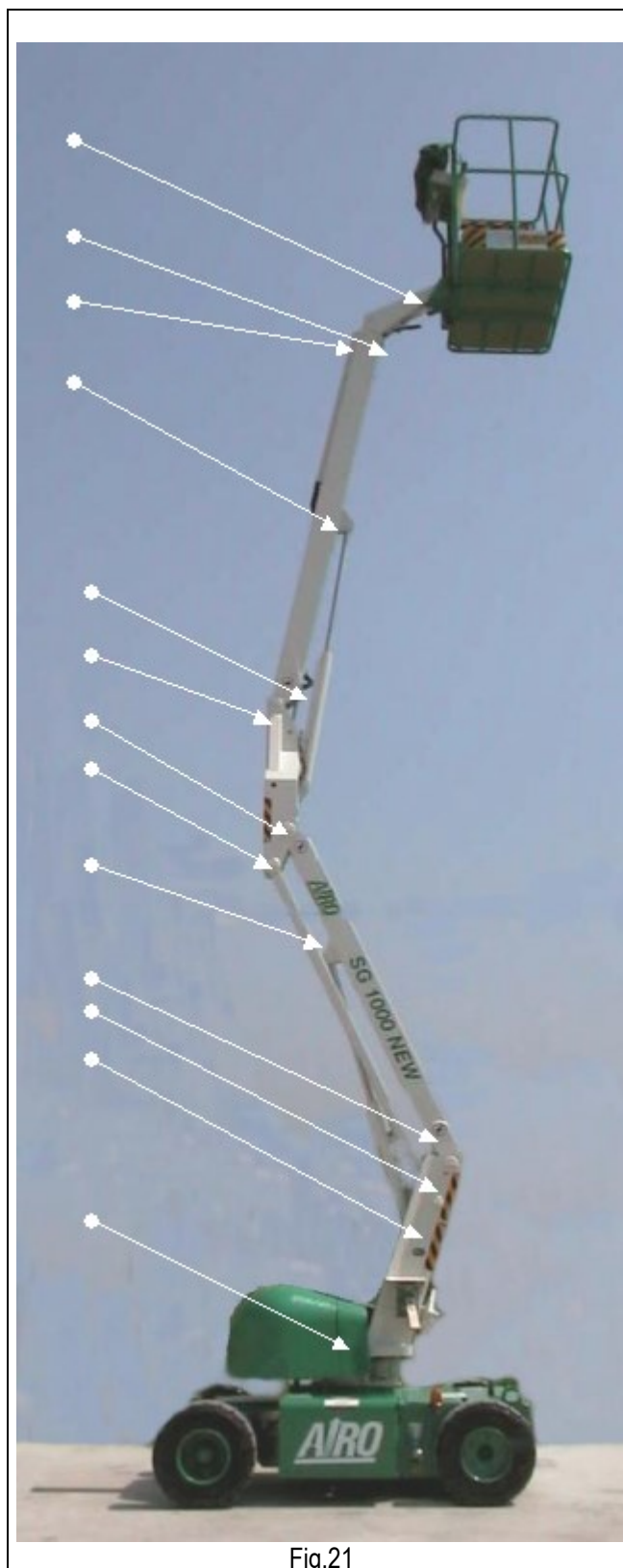
Moreover, remember to grease the articulated joint in the following cases:

- after washing the machine;
- before using the machine again after a long time-interval;
- after using the machine in adverse environmental conditions (high humidity levels; presence of dust; coastal areas, etc).

Grease all points indicated in the picture aside (and all articulated joints equipped with greaser) with grease type:

ESSO BEACON-EP2

or similar.



7.2.3 Hydraulic circuit oil level check and change

Check the level periodically by means of the provided cap (detail **A** in the picture aside) equipped with a dipstick, always make sure that the level lies between the max. and min. values; if necessary, top up until the max. level is reached.

To empty the oil tank, place a container under cap **B** (under the turret) and unscrew it.

The oil tank capacity, which varies according to the models, is indicated in the table at page 44.

Do not dispose of used oil in the environment. Comply with the current local standards.

Use only the types of oil indicated in the table at page 44.

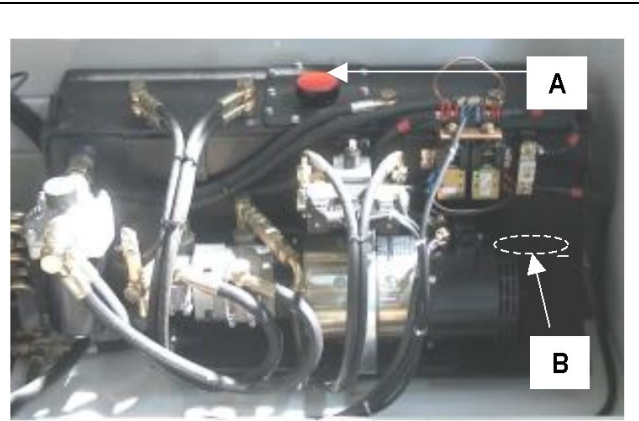


Fig.22

7.2.4 Suction filter replacement

The suction filter is fixed to the tank and is equipped with a clogging indicator to indicate when the filtering cartridge is to be replaced. During normal operation, the visual indicator is in the green zone. When the indicator is in the red zone, the filtering cartridge is to be replaced. The filtering cartridge should be replaced at least every two years.

To replace the suction filter installed outside the tank (see figure):

- stop the machine by pressing the push-button of the ground control station;
- remove the cover (**A**) of the filter unscrewing the four hexagonal nuts (**B**) (13mm wrench) keeping one hand under the cup (**C**) of the filter to prevent it from detaching;
- extract the cup with the cartridge (**D**);
- remove the cartridge (**D**) and check its condition;
- if necessary, clean the filter by means of compressed air paying attention not to alter the filtering surface. Otherwise replace the cartridge;
- fit the new cartridge paying attention to the correct positioning of the retaining spring (**F**) and place the bowl containing a small amount of oil.

It is to be noted that the bowl containing the filtering cartridge is full of oil. Therefore during these operations a quantity of oil may leak out. In this case remove the oil by means of cloths or the outlet holes by placing a suitable container under it.

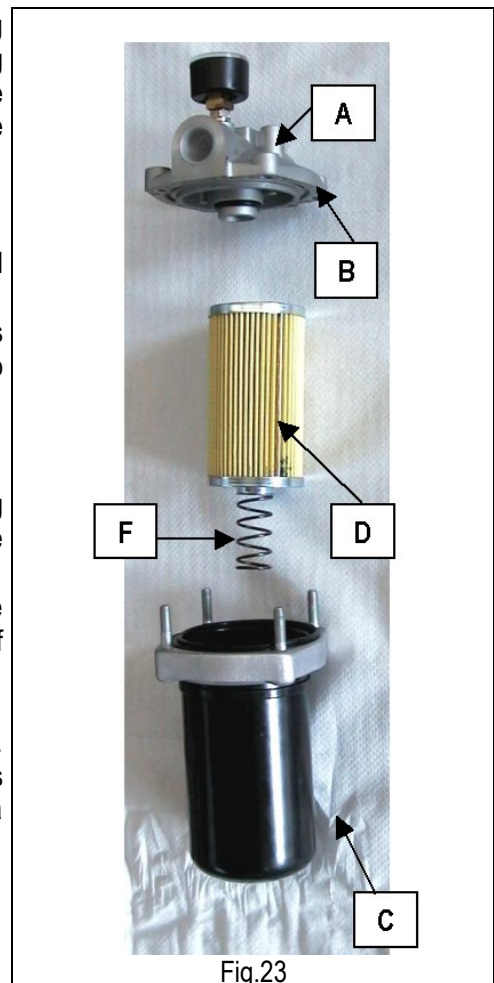


Fig.23

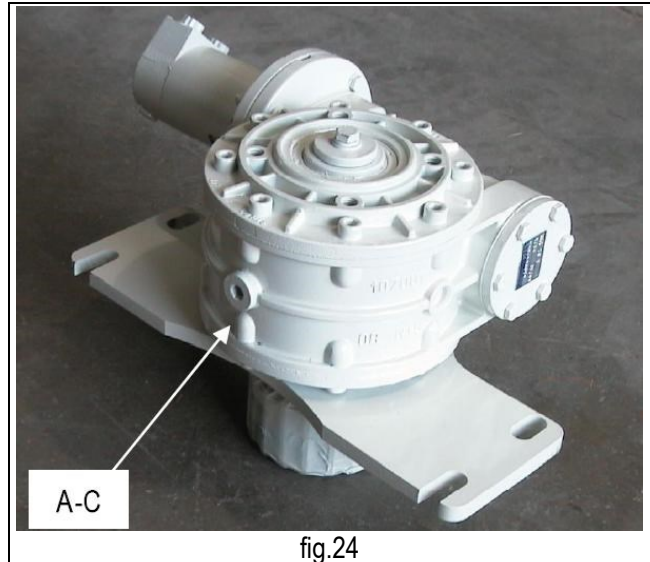
Replace the filters using only original accessories available at our Technical Support.
Do not re-use used oil and do not leave it in the environment, but dispose of in compliance with local standards in force.
Once the filters have been replaced (or cleaned), check the hydraulic oil level in the tank.

7.2.5 Turret rotation reduction gear oil level check and change (traditional rotation system)

The oil level should be checked every two years.
Check the level by means of cap (A). Oil check must be carried out when the oil is hot. The level is correct when the reduction gear body is full of oil up to the cap limit.
Should a lubricant volume higher than 10% be topped up, check that there is no oil leakage in the system. Do not mix different types of oil, of the same or of different brands. Do not mix mineral oils and synthetic oils.

The oil must be changed the first time after 50-100 working hours, and afterwards after every 2500 working hours or at least every two years. Depending on the actual operating conditions, these intervals may be varied for each single case. While changing the oil it is advisable to wash the internal part of the crankcase with a fluid recommended by the lubricant producer. To avoid sludge deposits, the oil must be changed when the reduction gear is hot.

To change the oil unscrew cap (A), and place a container of a 2-litre capacity under it.
Empty the reduction gear body completely, clean it as described above and then fill it up to the limit level of the cap through the same hole (for max. capacity see table at page 44).



NOTE: the oil type to be used is indicated in the table at page 45.

7.2.6 Traction reduction gear oil level check and change

The oil level should be checked every two years. Place the machine so as to have the two caps (A and B) in the position shown in the picture aside (in a few cases it is necessary to remove the driving wheels to access the a.m. caps). Check the level by means of cap (A). Oil check must be carried out when the oil is hot. The level is correct when the reduction gear body is full of oil up to the cap limit (A). Should a lubricant volume higher than 10% be topped up, check that there is no oil leakage in the system. Do not mix different types of oil, of the same or of different brands. Do not mix mineral oils and synthetic oils. The oil must be changed the first time after 50-100 working hours, and afterwards after every 2500 working hours or at least every two years. Depending on the actual operating conditions, these intervals may be varied for each single case. While changing the oil it is advisable to wash the internal part of the crankcase with a fluid recommended by the lubricant producer. To avoid sludge deposits, the oil must be changed when the reduction gear is hot. To change the oil unscrew cap B, and place a container of a 2-litre capacity under it. Empty the reduction gear body completely, clean it as described above and then fill it up to the limit level of cap A through the same hole (for max. capacity see following table).

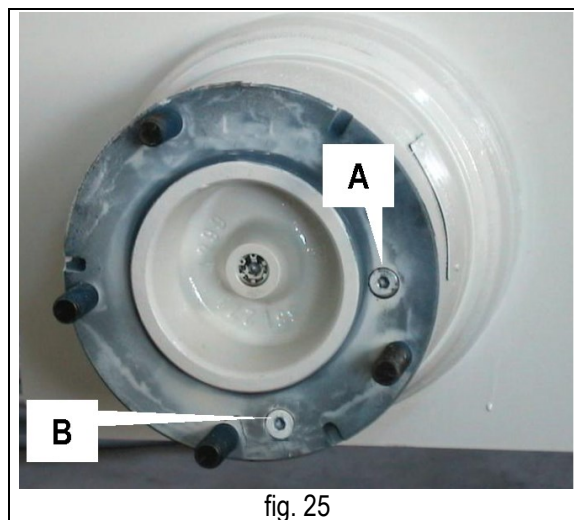


fig. 25

HYDRAULIC SYSTEM OIL		
BRAND	TYPE	REQUIRED QUANTITY
ESSO	Invarol EP46	40 litres
AGIP	Arnica 45	
ELF	Hydrelf DS46	
SHELL	Tellus SX46	
BP	Energol SHF46	
TEXACO	Rando NDZ46	

HYDRAULIC SYSTEM OIL			
BRAND	TYPE	REQUIRED QUANTITY	
		Turret rotation (Traditional rotation)	Drive
ESSO	Compressor Oil LG 150	0.7 litres	1 litre
AGIP	Blasia S 220		
CASTROL	Alpha SN 6		
IP	Telesia Oil 150		

7.2.7 Turret rotation clearance adjustment (traditional rotation system)

On machines equipped with traditional rotation system (turntable + pinion + reduction gear) check the coupling between the rotation pinion and the turntable every six months. In normal operating conditions, the coupling clearance must be minimum. Otherwise, adjust according to the following instructions:

- On the tooth wheel locate the most ovalized area, usually identified by three painted teeth, while rotating the turret. The area where the three teeth of the crown are painted is the correct position where you can adjust the clearance.
- Unscrew the four screws (A) which fix the reduction gear support to the turret;
- Manually push the reduction gear to slightly press the pinion towards the crown so that pinion and crown engage with the lowest clearance;
- Fix the reduction gear support with the four screws (A).

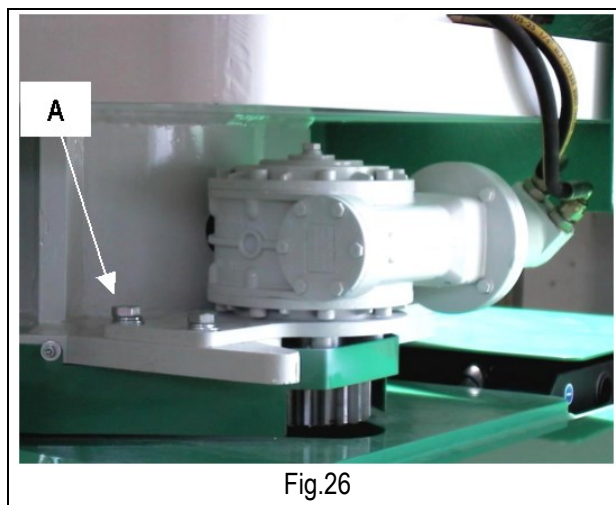


Fig.26



ATTENTION!! THE ENGAGEMENT BETWEEN THE PINION AND CROWN SHOULD OCCUR IN THE INDICATED AREA (PAINTED TEETH) TO AVOID ANY RADIAL LOADS ON THE OUTPUT SHAFT AND BEARING.

AS THIS OPERATION IS VERY IMPORTANT IT IS TO BE CARRIED OUT BY SPECIALIZED TECHNICIANS ONLY.

CALL THE TECHNICAL SUPPORT

7.2.8 Telescopic boom sliding blocks clearance adjustment

Check the wear of the telescopic boom sliding blocks every year.

The correct clearance between the blocks of the boom is 0.5-1 mm; in case of higher clearance tighten the sliding blocks as follows:

- Unscrew the dowel A;
- Screw the sliding block B with a seeger wrench until the above mentioned clearance is reached.

AS THIS OPERATION IS VERY IMPORTANT IT IS TO BE CARRIED OUT BY SPECIALIZED TECHNICIANS ONLY.

CALL THE TECHNICAL SUPPORT

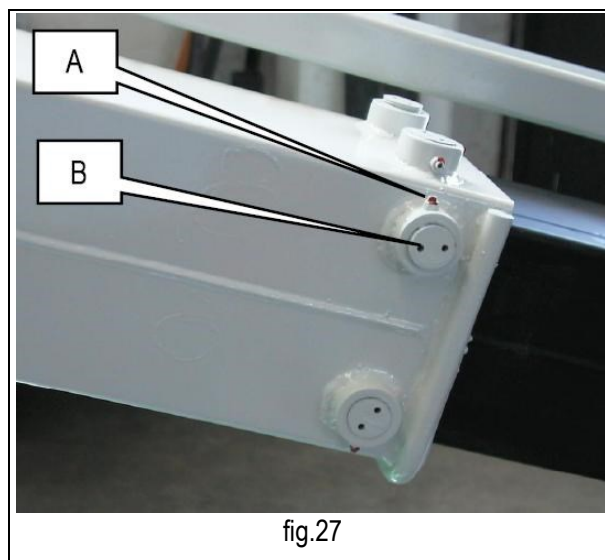
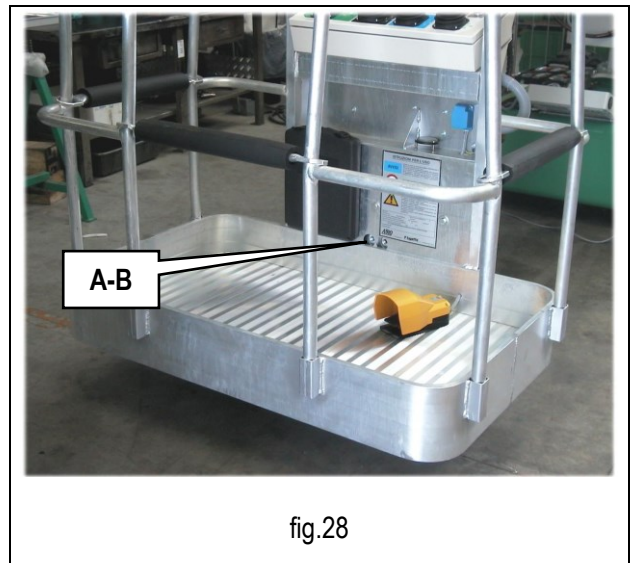


fig.27

7.2.9 Platform rotation clearance adjustment

Check the coupling between the rack and platform rotation pinion every six months. In normal operating conditions, the coupling clearance must be minimum. Otherwise, adjust according to the following instructions:

- Remove (if necessary) the document holder on the platform so as to access the adjusting screws;
- Release the two locking counter-nuts (**A**) by means of a 17 mm socket wrench;
- Adjust the clearance by screwing the two screws (**B**) that push on the nylon sliding blocks;
- Lock the adjusting screws using the locking counter-nuts;
- When the operation is complete, verify the correct functioning.



CALL THE TECHNICAL SUPPORT

7.2.10 Inclinometer adjustment

The inclinometer (see figure aside) does not require any adjustment since it is calibrated in the factory before the machine is delivered.

This device controls the chassis inclination and when inclined over the allowed value:

- it disables lifting when the platform exceeds a given height (varying according to model);
- it disables drive when the platform exceeds a given height (varying according to model);
- it warns the operator of the instability condition by means of an audible warning device and a warning light located on the platform (see “General use instructions”).

Adjustment is required only if the device is to be replaced.

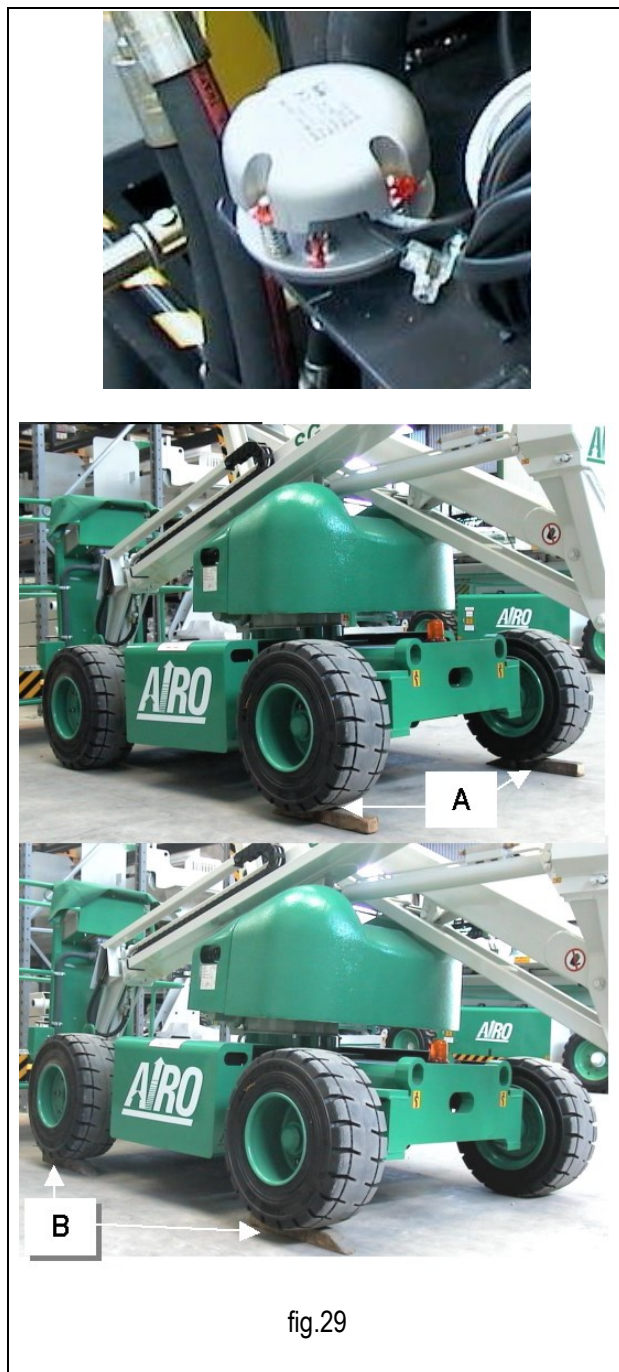
The inclinometer checks the inclination with respect to the two axes (X; Y). On machine models with the same transversal and longitudinal inclination limits, the control is carried out with reference to one axis only (X-axis).

To check the inclinometer operation according to the longitudinal axis (generally X-axis):

- using the controls of the control panel set the machine so as to place a shim of dimension **(A+10 mm)** under the two rear or front wheels (see following table);
- wait three seconds (intervention delay set at factory) until the danger red light and the audible platform device turn on;
- with platform lowered (booms down, and jib at a height between $+10^\circ$ and -70°) all manoeuvres are still possible;
- lifting one of the booms and/or lifting the jib over 10° with respect to the horizontal axis, the machine control system locks the lifting and drive controls.

To adjust the inclinometer according to the transversal axis (normally Y-axis):

- using the controls of the control panel set the machine so as to place a shim of dimension **(B+10 mm)** under the two side right or left wheels (see following table);
- wait three seconds (intervention delay set at factory) until the danger red light and the audible platform device turn on;
- with platform lowered (booms down, and jib at a height between $+10^\circ$ and -70°) all manoeuvres are still possible;
- lifting one of the booms and/or lifting the jib over 10° with respect to the horizontal axis, the machine control system locks the lifting and drive controls.





ATTENTION! Usually the inclinometer does need to be adjusted. The equipment necessary for the replacement and adjustment of this component is such that these operations should be carried out by skilled personnel.

CALL THE TECHNICAL SUPPORT

MODELS		
SHIMS	A10 A12	A13 J
A [mm]	55	110
B [mm]	45	90



ATTENTION! The dimensions of shims A and B refer to max. allowed inclination as indicated in table "TECHNICAL FEATURES". To be used during the inclinometer calibration.

7.2.11 Adjustment of the overload controller (load cell)

The AIRO self-propelled articulated boom aerial platforms are equipped with a sophisticated system controlling the platform overload.

Normally the overload controller does not require any adjustment, since it is calibrated in the factory before the machine is delivered.

This device checks the load on the platform and:

- it disables all movements if the platform is overloaded by 25% compared to the rated load;
- it warns the user of the overload condition by means of the audible warning device and the platform warning light (see “General use instructions”).
- by removing the exceeding load, the machine can be operated again.

The overload controller consists of:

- deformation transducer (A) (load cell) of different type depending on the machine model, and placed in different positions depending on the machine model;
- electronic board (B) for the device calibration located inside the platform control panel;
- electronic board (C) to power the device and by-pass in case of emergency, located inside the control panel on the platform.

Device operation check:

- when the platform is completely lowered load a charge evenly distributed equal to the normal load allowed by the platform (see paragraph “Technical features”). In this condition all manoeuvres should be possible both from platform and ground control station;
- when the platform is completely lowered add to the rated load an overload of 30% of the rated load. In this condition the red light and the audible device turn on (see “General use rules”) but all manoeuvres are still possible;
- lift one the booms until you activate one of the microswitches for boom control (remember that the jib activates its own microswitch when it exceeds a height of 10° with respect to the horizontal axis);
- the alarm condition stops the machine completely. To operate the machine again, remove the excessive load.

The calibration of the system is necessary:

- in case of replacement of one of the items composing the system;
- when, following an excessive overload or a collision, without the excessive load the danger condition is signalled anyway.

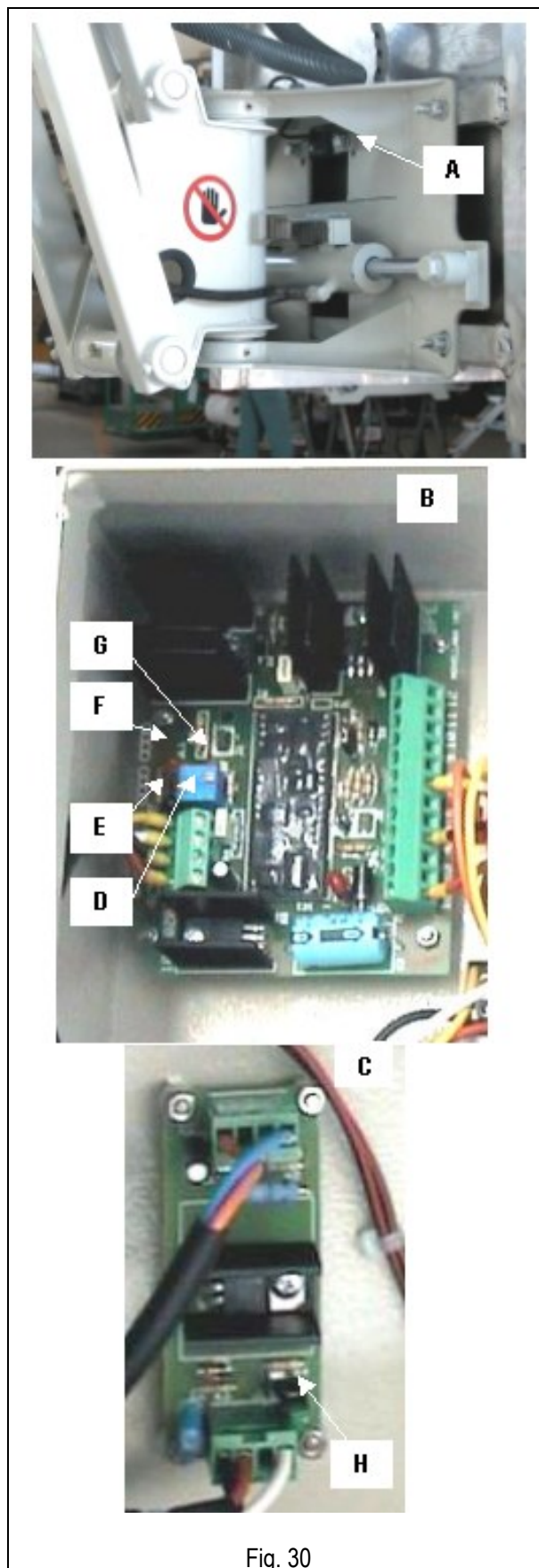


Fig. 30

To calibrate the device:

- open the platform control panel and locate the electronic boards **(B)** and **(C)**;
- on the furthestmost part of the platform overhang place a load equal to 125% of the rated load;
- screw in the adjusting screw **(G)** until the red alarm led **(F)** lights up; in this condition the audible alarm of the control panel turns on and the machine can no longer be operated;
- make sure that, without the 25% overload, the red led **(F)** and the audible device turn off;
- check that whit only the rated load the alarm condition does not occur in any of the platform positions (platform down, up, driving, rotated);
- once setting is complete close the control panel on the platform.

In case of fault and impossibility to calibrate the device, a by-pass of the system is possible by moving the “jumper” (H) into “By-pass” position. ATTENTION!! THIS OPERATION IS ALLOWED ONLY FOR EMERGENCY HANDLING OF THE UNIT. DO NOT USE THE MACHINE IF THE OVERLOAD CONTROLLER IS NOT EFFICIENT. THIS OPERATION IS ALLOWED ONLY FOR EMERGENCY HANDLING OF THE UNIT. DO NOT USE THE MACHINE IF THE OVERLOAD CONTROLLER IS NOT EFFICIENT.



ATTENTION!

Calibration is to be carried out by skilled personnel. This operation may not be performed by the operator.

7.2.12 Operation check of microswitches M1

The lifting booms are controlled by microswitches:

- M1A on the scissors;
- M1B on the boom;
- M1C on the Jib;

The functions of the microswitches M1A- M1B- M1C are the following:

with platform not in rest position (at least one of the microswitches M1A-M1B-M1C is activated):

- the safety drive speed is automatically activated;
- if the chassis is inclined over the max. allowed inclination the controls for lifting and drive are inhibited;
- the compensation control for platform levelling is automatically activated;
- when the platform is overloaded ALL operations until removal of overload are inhibited.

Once a year check the working conditions of the microswitches M1....

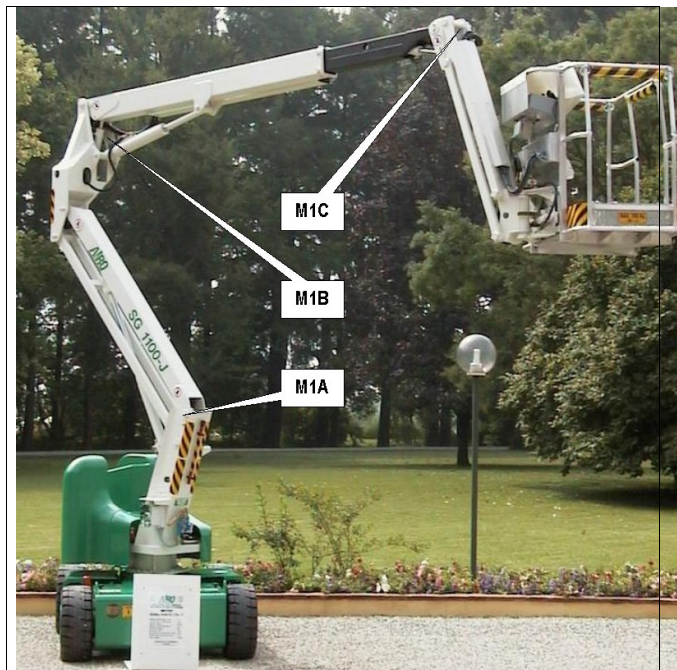


Fig.31

7.2.13 Operation check of dead-man pedal safety system

The platform dead-man pedal is for enabling the operation controls of the machine from the platform control station. Pressing the dead-man pedal the operation controls of the machine are activated.

On “EB” and “ED” models the heat engine start-up is prevented if the pedal is pressed.

7.2.14 Starter battery for models “EB” and “ED”

The starter battery is only for starting the heat engine; the control circuits are powered by the drive batteries.

7.2.14.1 Starter battery maintenance

The starter battery does not require any maintenance operation.

- Keep terminals clean by removing any oxidation residues;
- Check correct terminal tightening.

7.2.14.2 Starter battery recharge

Starter batteries do not require any recharge.

During normal operation of the Diesel engine an alternator recharges the battery.

7.2.15 “DRIVE” battery

The battery is one of the most important elements of the machine. It is recommended to keep it in an efficient condition to increase its useful life, to avoid faults and to reduce the management costs of the machine.

7.2.15.1 General instructions for DRIVE battery

- Charge the battery in airy rooms and open the caps to allow the outflow of gas.
- Do not approach the battery with flames. Risk of explosion due to the formation of explosive gases.
- Do not carry out temporary or irregular electric connections.
- The terminals must be tightened and without deposits. The cables must be provided with a good insulation.
- Keep the battery cleaned, dry and free of oxidation products by using antistatic cloths.
- Do not place tools or any other metal object on the battery.
- Check that the electrolyte level is 5-7 mm higher than the splashguard level.
- During charging operations check that the electrolyte temperature is not higher than 45°C max.
- If the machine is equipped with an automatic topping up device, follow the instructions described in the battery user manual carefully.

7.2.15.2 DRIVE battery maintenance

- In normal operating conditions, water topping up is to be carried out every week.
- Top up using distilled or demineralised water.
- Top up after battery charging. The electrolyte level must be 5-7 mm higher than the splashguard level.
- For machines equipped with automatic topping up device, follow the instructions given in the battery user manual.
- Battery discharge must be stopped when 80% of the battery rated capacity has been used. An excessive and prolonged discharge irreversibly damages the battery.
- Battery charge is to be carried out according to the instructions given in the next paragraphs.
- Keep caps and connections covered and dry. A careful cleaning allows electric insulation protection, good operation and useful life of the battery.
- In case of faulty operations due to the battery, avoid any direct intervention and call the Customer Service.
- When the machine is not being used the batteries will run down automatically (automatic decharge). To avoid the battery operation from being compromised it is necessary to charge it at least once a month. This has to be done even if the density values of the electrolyte are high.
- During the use of the heat engine (models EB” and “ED”) over long periods, the control system of the machine absorbs current from the drive battery. To avoid the battery operation from being compromised it is necessary to charge it at least once a month. This has to be done even if the density values of the electrolyte are high.
- To limit automatic battery decharge during periods of inactivity store the machine in environments with temperatures lower than a 30°C.

7.2.15.3 Battery charger: DRIVE battery recharge



Explosive gas is originated during battery charging process; therefore, charging must take place in airy rooms where no risks of fire and explosion exist and in the presence of fire extinguishers.

ATTENTION!! After charging, when the battery charger is still connected, the electrolyte density values should range from 1,260 to 1,270 g/l (at 25°C).

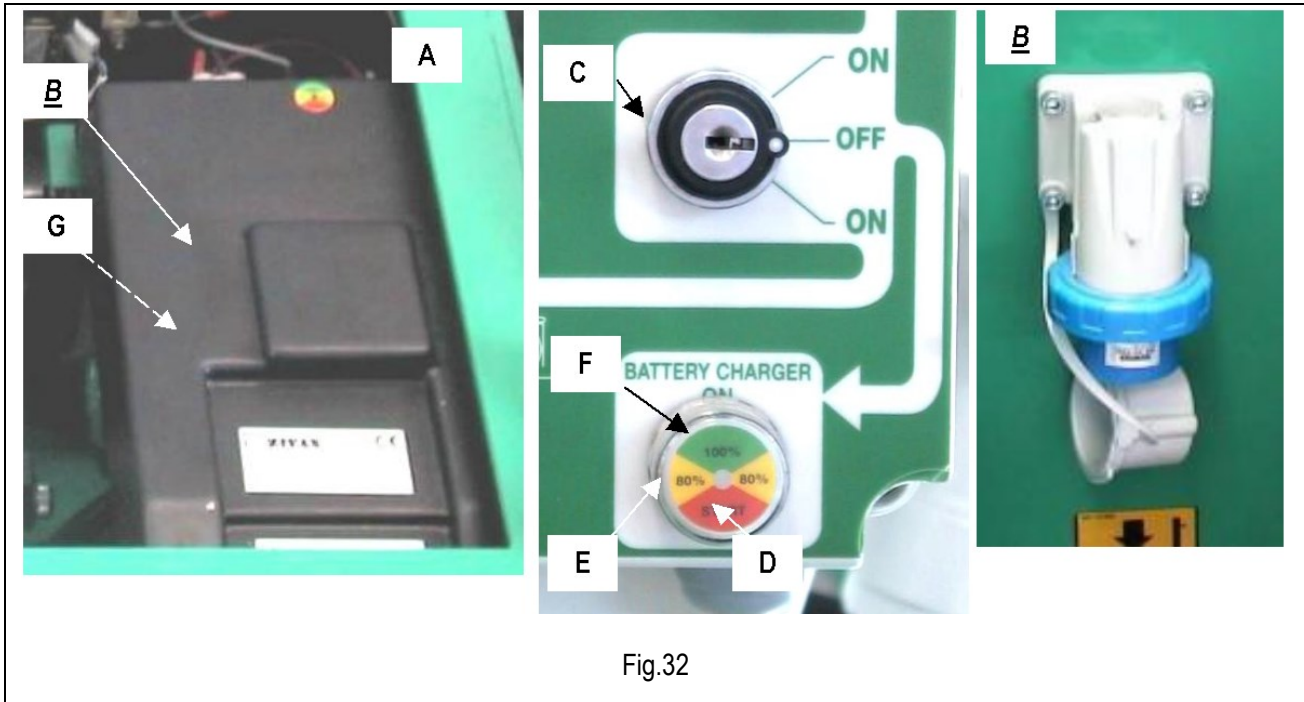


Fig.32

- A Battery charger
- B Single phase wall plug
- C On-off switch
- D Red led charge check indicator (Start)
- E Yellow led charge check indicator (80%)
- F Green led charge check indicator (100%)
- G Internal fuse

To use the battery charger follow this procedure:

- connect the battery charger by means of plug **B** to a 220V/230V 50Hz/60Hz socket, equipped with all protections according to the current standards in force and check that the earth-leakage circuit breaker switch is in ON position;
- set the on-off switch **C** located on the on-ground control post to OFF position (machine off), checking the battery charger connection by means of led **D** (if it is on, connection is on-line);
- If led **E** (yellow) lights up, battery charger is approximately 80%;
- If led **F** (green) lights up, battery charge is over. The battery charger automatically turns off;

To disconnect 220V power supply two alternatives are possible:

- Disconnect the 220V socket from plug **B** located on the chassis;
- Start the machine with switch **C** in Start position (the battery charger is automatically disconnected).



ATTENTION!
At the end of recharge remove the battery charger supply cord before starting machine operations.

7.2.15.4 Battery charger: fault report

An intermittent audible signalling and the flashing LED on the battery charger indicator described in the previous paragraph indicate that a warning situation has occurred:

Signalling	Alarm type	Problem description and troubleshooting
Audible signalling + flashing RED	Battery presence	Battery is disconnected or faulty (check connection and the rated voltage of the battery).
Audible signalling + flashing YELLOW	Thermal probe	Thermal probe is disconnected during charging or outside working range (check probe connection and measure battery temperature).
Audible signalling + flashing GREEN	Timeout	Phase 1 and/or Phase 2 of duration higher than the max. allowed value (check battery capacity).
Audible signalling + flashing RED-YELLOW	Battery Current	Loss of output current control (fault in control logic).
Audible signalling + flashing RED-GREEN	Battery Voltage	Loss of output voltage control (battery disconnected or fault in the control logic).
Audible signalling + flashing RED-YELLOW-GREEN	Thermal	Overtemperature of semiconductors (check the fan operation).



ATTENTION!

In presence of alarm the battery charger stops the current delivery.

7.2.16 Battery replacement



Replace the old batteries only with models of the same voltage, capacity, dimensions and weight. Batteries must be approved by the manufacturer.

AS THIS OPERATION IS VERY IMPORTANT IT IS TO BE CARRIED OUT BY SPECIALIZED TECHNICIANS ONLY.

CALL THE TECHNICAL SUPPORT

8 MARKS AND CERTIFICATIONS

The models of self-propelled aerial platform described in this manual were subject to the CE type test according to the EEC Directive 2006/42/EC.

The certification was issued by:

<p>ICE Spa Via Garibaldi, 20 40011 Anzola Emilia – BO (Italia)</p>	
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Test carrying out is shown by the above plate with CE mark applied on the machine and by the declaration of conformity enclosed in this user manual.

9 CONTROL REGISTER

This register is to be considered an integral part of the equipment and must accompany the machine for its entire life until its final disposal.

The register is provided for the notation, according to the proposed format, of the following events that regard the life of the machine:

- Periodic obligatory inspections (copy of documents to be filed) under the care of the agency responsible for checking it (in Italy, the ASL / USL / ARPA).
- Obligatory periodic inspections to verify the structure, proper machine functioning and the protection and safety systems. Such inspections are the responsibility of the safety manager of the company that owns the machine and must occur with **ANNUAL** frequency.
- Transfers of Ownership. In Italy, the purchaser must notify the ISPESL department responsible that the installation of the machine has occurred.
- Extraordinary maintenance work and replacement of important elements of the machine.

REQUIRED PERIODIC INSPECTIONS BY THE OWNER

<i>CHECK</i>		<i>DESCRIPTION OF OPERATIONS TO BE PERFORMED</i>	
◆ Visual check		Check the integrity of the guardrails; of any access stairs; rust; state of the tyres; oil leaks; locking pins on the structure.	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			
◆ Various adjustments		See chapter 7.2.1	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			

REQUIRED PERIODIC INSPECTIONS BY THE OWNER

<i>CHECK</i>		<i>DESCRIPTION OF OPERATIONS TO BE PERFORMED</i>	
♦ Deformation of tubes and cables		Most of all, check at junction points that tubes and cables do not show any evident defects.	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			
♦ Greasing (monthly operation; confirm that it was carried out at least once a year)		♦ See chapter 7.2.2	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			

REQUIRED PERIODIC INSPECTIONS BY THE OWNER

CHECK		DESCRIPTION OF OPERATIONS TO BE PERFORMED	
◆ Stickers and Plates check (monthly operation; confirm that it was carried out at least once a year)		Check the legibility of the aluminium plate on the platform where the main instructions are summarised; that the capacity stickers are on the platform and that they are legible; that the stickers on the ground and platform control stations are legible.	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			
◆ Total oil change in hydraulic tank and traction and turret rotation reduction gears (EVERY TWO YEARS)		See chapters 7.2.3, 7.2.5, 7.2.6	
	Date	Observations	Signature + Stamp
2° Year			
4° Year			
6° Year			
8° Year			
10° Year			

REQUIRED PERIODIC INSPECTIONS BY THE OWNER

<i>CHECK</i>		<i>DESCRIPTION OF OPERATIONS TO BE PERFORMED</i>	
◆ Hydraulic filter cleaning / replacing (EVERY TWO YEARS)		See chapter 7.2.4	
	Date	Observations	Signature + Stamp
2° Year			
4° Year			
6° Year			
8° Year			
10° Year			
◆ Turret rotation clearance adjustment		◆ See chapter 7.2.7	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			

REQUIRED PERIODIC INSPECTIONS BY THE OWNER

<i>CHECK</i>		<i>DESCRIPTION OF OPERATIONS TO BE PERFORMED</i>	
◆ Telescopic boom sliding blocks clearance adjustment		◆ See chapter 7.2.8	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			
◆ Platform rotation clearance adjustment		◆ See chapter 7.2.9	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			

REQUIRED PERIODIC INSPECTIONS BY THE OWNER

<i>CHECK</i>		<i>DESCRIPTION OF OPERATIONS TO BE PERFORMED</i>	
◆ Operation check of the turret inclinometer		◆ See chapter 7.2.10	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			
◆ Platform overload controller check		◆ See chapter 7.2.11	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			

REQUIRED PERIODIC INSPECTIONS BY THE OWNER

<i>CHECK</i>		<i>DESCRIPTION OF OPERATIONS TO BE PERFORMED</i>	
♦ Operation check of microswitches M1		♦ See chapter 7.2.12	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			
♦ Operation check of dead-man pedal safety system		See chapter 7.2.13	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			

REQUIRED PERIODIC INSPECTIONS BY THE OWNER

<i>CHECK</i>		<i>DESCRIPTION OF OPERATIONS TO BE PERFORMED</i>	
◆ Battery condition (Electric models -E)		See chapter 7.2.15	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			
10 Braking system efficiency check		Going down a ramp with max. slope indicated in chapter technical features, at the lowest speed, the machine should be able to stop, upon release of the joystick, in a space of less than 1.5 meters	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			

REQUIRED PERIODIC INSPECTIONS BY THE OWNER

CHECK		DESCRIPTION OF OPERATIONS TO BE PERFORMED	
11 Emergency manual controls check		◆ See chapter 5.6	
	Date	Observations	Signature + Stamp
1° Year			
2° Year			
3° Year			
4° Year			
5° Year			
6° Year			
7° Year			
8° Year			
9° Year			
10° Year			

TRANSFERS OF OWNERSHIP

FIRST OWNER

Company	Date	Model	Serial Number	Date of Delivery

AIRO – Tigieffe S.r.l.

SUBSEQUENT TRANSFERS OF OWNERSHIP

Company	Date

We affirm that, as of the date quoted above, the technical, dimensional and functional characteristics of this machine were in conformance with what was originally required and that any changes have been recorded in this register.

The Seller

The Purchaser

SUBSEQUENT TRANSFERS OF OWNERSHIP

Company	Date

We affirm that, as of the date quoted above, the technical, dimensional and functional characteristics of this machine were in conformance with what was originally required and that any changes have been recorded in this register.

The Seller

The Purchaser

SUBSEQUENT TRANSFERS OF OWNERSHIP

Company	Date

We affirm that, as of the date quoted above, the technical, dimensional and functional characteristics of this machine were in conformance with what was originally required and that any changes have been recorded in this register.

The Seller

The Purchaser

IMPORTANT BREAKDOWNS

DATE	Description of Breakdown	Solution

Spare Parts Used		Description
Code	Quantity	

Service

Safety Manager

DATE	Description of Breakdown	Solution

Spare Parts Used		Description
Code	Quantity	

Service

Safety Manager

IMPORTANT BREAKDOWNS

DATE	Description of Breakdown	Solution

Spare Parts Used		Description
Code	Quantity	

Service

Safety Manager

DATE	Description of Breakdown	Solution

Spare Parts Used		Description
Code	Quantity	

Service

Safety Manager

IMPORTANT BREAKDOWNS

DATE	Description of Breakdown	Solution

Spare Parts Used		Description
Code	Quantity	

Service

Safety Manager

DATE	Description of Breakdown	Solution

Spare Parts Used		Description
Code	Quantity	

Service

Safety Manager

IMPORTANT BREAKDOWNS

DATE	Description of Breakdown	Solution

Spare Parts Used		Description
Code	Quantity	

Service

Safety Manager

DATE	Description of Breakdown	Solution

Spare Parts Used		Description
Code	Quantity	

Service

Safety Manager

IMPORTANT BREAKDOWNS

DATE	Description of Breakdown	Solution

Spare Parts Used		Description
Code	Quantity	

Service

Safety Manager

DATE	Description of Breakdown	Solution

Spare Parts Used		Description
Code	Quantity	

Service

Safety Manager

SCHEMI ELETTRICI – WIRING DIAGRAMS - SCHEMA ELECTRIQUE - ESQUEMA ELÉCTRICO – SCHALTPLAN - ELEKTRISCH SCHEMA – ЭЛЕКТРИЧЕСКАЯ СХЕМА

	023.08.015	023.08.016	023.08.021	024.08.005	024.08.008	029.08.005	033.08.002
SG800	X	X	X				
SG1000 NEW	X	X	X				
SG1000 NEW E/D	X	X	X		X		
SG1000 NEW E/B	X	X	X	X			
SG1100-J	X		X			X	X
SG1100-J E/D			X		X	X	X
	023.08.015	023.08.016	023.08.021	024.08.005	024.08.008	029.08.005	033.08.002

SCHEMI IDRAULICI – HYDRAULIC SYSTEM - SCHEMA HYDRAULIQUE - ESQUEMA HDRAULICO – PLAN HYDRAULIKANLAGE - HIDRAULISCH SCHEMA – ГИДРАВЛИЧЕСКАЯ СХЕМА

	023.07.023	024.07.005	033.07.001
SG800	X		
SG1000 NEW		X	
SG1000 NEW E/D		X	
SG1000 NEW E/B		X	
SG1100-J			X
SG1100-J E/D			X
	023.07.023	024.07.005	033.07.001

SCHEMA ELETTRICO MACCHINE STANDARD

SG 800 SG 1000 NEW SG1100-J

EV1	REGOLATORE PROPORZIONALE
EV2	ELETTROVALVOLA TRAZIONE AVANTI
EV3	ELETTROVALVOLA TRAZIONE INDIETRO
EV4	ELETTROVALVOLA SOLLEVAMENTO PRIMO BRACCIO
EV5	ELETTROVALVOLA DISCESA PRIMO BRACCIO
EV6	ELETTROVALVOLA SFILO BRACCIO (SOLO SG 1000 NEW)
EV7	ELETTROVALVOLA RIENTRO BRACCIO (SOLO SG 1000 NEW)
EV8	ELETTROVALVOLA STERZO DESTRA
EV9	ELETTROVALVOLA STERZO SINISTRA
EV10	ELETTROVALVOLA SERIE-PARALLELO TRAZIONE
EV11	ELETTROVALVOLA DI BY-PASS (SOLO E/D)
EV12	ELETTROVALVOLA ROTAZIONE DESTRA TORRETTA
EV13	ELETTROVALVOLA ROTAZIONE SINISTRA TORRETTA
EV14	ELETTROVALVOLA SOLLEVAMENTO SECONDO BRACCIO
EV15	ELETTROVALVOLA DISCESA SECONDO BRACCIO
EV16	ELETTROVALVOLA LIVELLAMENTO CESTELLO AVANTI
EV17	ELETTROVALVOLA LIVELLAMENTO CESTELLO INDIETRO
EV20	ELETTROVALVOLA SCAMBIO CILINDRATA MOTORI TRAZIONE
EV21	ELETTROVALVOLA ROTAZIONE CESTELLO A SINISTRA (OPTIONAL)
EV22	ELETTROVALVOLA ROTAZIONE CESTELLO A DESTRA (OPTIONAL)
SW1	INTERRUTTORE ACCENSIONE MACCHINA / SELEZIONE POSTO DI COMANDO
SW2	INTERRUTTORE SALITA/DISCESA PRIMO BRACCIO (DA TERRA)
SW3	INTERRUTTORE SALITA/DISCESA SECONDO BRACCIO (DA TERRA)
SW5	INTERRUTTORE ROTAZIONE TORRETTA (DA TERRA)
SW16	INTERRUTTORE SFILO/RIENTRO BRACCIO TELESCOPICO (DA TERRA)
SW20	SELETORE VELOCITA' TRAZIONE
SP1	PULSANTE STOP CIRCUITO DI POTENZA
SP2	PULSANTE STOP EMERGENZA
SP3	PULSANTE CLAXON
TLR	TELERUTTORE MOTORE ELETTRICO
TLR1	TELERUTTORE DI SICUREZZA
EP	ELETTROPOMPA (48V 4500W)
F1	FUSIBILE ELETTROPOMPA -160A-
FR	FUSIBILE CARICABATTERIA (48V 40A)
AV1	AVVISATORE ACUSTICO MOVIMENTI
AV2	AVVISATORE ACUSTICO ALLARME
M1A	MICROINT. ABILITAZIONE INCLINOMETRO E INSERIMENTO VELOCITA' DI SICUREZZA IN TRAZIONE
M1B	MICROINT. ABILITAZIONE INCLINOMETRO E INSERIMENTO VELOCITA' DI SICUREZZA IN TRAZIONE
M1C	MICROINT. ABILITAZIONE INCLINOMETRO E INSERIMENTO VELOCITA' DI SICUREZZA IN TRAZIONE
M1S	MICROINT. STOP TRAZIONE
M2A	FINECORSO ROTAZIONE DESTRA TORRETTA
M2B	FINECORSO ROTAZIONE SINISTRA TORRETTA
M3A	FINECORSO SOLLEVAMENTO
M3B	FINECORSO SOLLEVAMENTO
M3C	FINECORSO SOLLEVAMENTO
M4A	FINECORSO SFILO BRACCIO TELESCOPICO
M4B	FINECORSO RIENTRO BRACCIO TELESCOPICO
M6	MICROINTERRUTTORE
PR1	PRESSOSTATO
PR2	PRESSOSTATO
PR3	PRESSOSTATO
GRF	GIROFARI
HC	CONTAORE
V	VOLTMETRO 48V
J1	JOYSTICK MONOASSE TRAZIONE
J2-J4	JOYSTICK BI-ASSE SOLLEVAMENTO PRIMO BRACCIO / ROTAZIONE TORRETTA
J3-J6	JOYSTICK BI-ASSE SOLLEVAMENTO SECONDO BRACCIO / SFILO TELESCOPICO
J5	INTERRUTTORE ROTAZIONE PIATTAFORMA

J7	INTERRUTTORE LIVELLAMENTO MANUALE PIATTAFORMA
SW6	INTERRUTTORE STERZO
SP9	INTERRUTTORE SERIE/PARALLELO TRAZIONE
BT	BATTERIA 48V 350Ah
KL	CLAXON
AM	INCLINOMETRO
L1	SPIA MACCHINA ACCESA
L2	SPIA MACCHINA INSTABILE
PUP	PEDALE "UOMO PRESENTE"
TD	TRASDUTTORE DI DEFORMAZIONE
LLD001	SCHEDA CONTROLLO TRASDUTTORE DI DEFORMAZIONE
RCB	RELE' ACCENSIONE CARICABATTERIA

LEGENDA TRIMMERS

P18	TERZA VELOCITA' TRAZIONE
P19	"BIAS" MOVIMENTI
P22	"BIAS" TRAZIONE
P17	SEGNALE COMANDI DA TERRA
P23	NON TOCCARE
P21	RAMPA "UP"
P20	RAMPA "DOWN"

SETTAGGIO DIP SWITCH SU SCHEDA

SW1	ITALIA	ESTERO
1	ON	ON
2	ON	OFF
3	/	/
4	OFF	ON
SW2		
1	OFF	
2	ON	
3	ON	
4	OFF	
SW3		
1	OFF	
2	OFF	
3	/	
4	OFF	
5	OFF	
6	/	
7	/	
SW4		
1	OFF	
2	OFF	
3	OFF	
4	/	

WIRING DIAGRAM - STANDARD MACHINES

SG 800 SG 1000 NEW SG 1100-J

EV1	PROPORTIONAL ADJUSTER
EV2	SOLENOID VALVE, TRACTION FORWARD
EV3	SOLENOID VALVE, TRACTION BACKWARD
EV4	SOLENOID VALVE, FIRST ARM LIFTING
EV5	SOLENOID VALVE, FIRST ARM LOWERING
EV6	SOLENOID VALVE, ARM EXTRACTION (ONLY SG 1000 NEW)
EV7	SOLENOID VALVE, ARM RETRACTION (ONLY SG 1000 NEW)
EV8	SOLENOID VALVE, RIGHT STEERING
EV9	SOLENOID VALVE, LEFT STEERING
EV10	SOLENOID VALVE, SERIES-PARALLEL TRACTION
EV11	SOLENOID BYPASS VALVE (ONLY E/D)
EV12	SOLENOID VALVE, TURRET RIGHT ROTATION
EV13	SOLENOID VALVE, TURRET LEFT ROTATION
EV14	SOLENOID VALVE, SECOND ARM LIFTING
EV15	SOLENOID VALVE, SECOND ARM LOWERING
EV16	SOLENOID VALVE, FORWARD BASKET LEVELLING
EV17	SOLENOID VALVE, BACKWARD BASKET LEVELLING
EV20	SOLENOID VALVE, TRACTION MOTOR PISTON DISPLACEMENT EXCHANGE
EV21	SOLENOID VALVE, BASKET LEFT ROTATION (OPTIONAL)
EV22	SOLENOID VALVE, BASKET RIGHT ROTATION (OPTIONAL)
SW1	SWITCH, MACHINE START / CONTROL POST SELECTION
SW2	SWITCH, FIRST ARM LIFTING/LOWERING (FROM GROUND)
SW3	SWITCH, SECOND ARM LIFTING/LOWERING (FROM GROUND)
SW5	SWITCH, TURRET ROTATION (FROM GROUND)
SW16	SWITCH, TELESCOPIC ARM EXTRACTION/RETRACTION (FROM GROUND)
SW20	TRACTION SPEED SELECTOR
SP1	POWER CIRCUIT STOP BUTTON
SP2	EMERGENCY STOP BUTTON
SP3	HORN BUTTON
TLR	ELECTRIC MOTOR REMOTE CONTROL SWITCH
TLR1	SAFETY REMOTE CONTROL SWITCH
EP	ELECTRIC PUMP (48V 4500W)
F1	ELECTRIC PUMP FUSE -160A-
FR	BATTERY CHARGER FUSE (48V 40A)
AV1	MOVEMENT ALARM
AV2	ALARM
M1A	MICRO-SWITCH, INCLINOMETER AND TRACTION SAFETY SPEED ENABLED
M1B	MICRO-SWITCH, INCLINOMETER AND SAFETY TRACTION SPEED ENABLED
M1C	MICRO-SWITCH, INCLINOMETER AND SAFETY TRACTION SPEED ENABLED
M1S	MICRO-SWITCH, TRACTION STOP
M2A	LIMIT SWITCH, TURRET RIGHT ROTATION
M2B	LIMIT SWITCH, TURRET LEFT ROTATION
M3A	LIMIT SWITCH, LIFTING
M3B	LIMIT SWITCH, LIFTING
M3C	LIMIT SWITCH, LIFTING
M4A	LIMIT SWITCH, TELESCOPIC ARM EXTRACTION
M4B	LIMIT SWITCH, TELESCOPIC ARM RETRACTION
M6	MICRO-SWITCH
PR1	PRESSURE SWITCH
PR2	PRESSURE SWITCH
PR3	PRESSURE SWITCH
GRF	ROTATING BEACONS
HC	HOUR-METER
V	VOLTMETER 48V
J1	JOYSTICK, TRACTION SINGLE-AXLE
J2-J4	JOYSTICK, FIRST ARM LIFTING / TURRET ROTATION TWO-AXLE
J3-J6	JOYSTICK, SECOND ARM LIFTING / TELESCOPIC ARM EXTRACTION TWO-AXLE
J5	SWITCH, PLATFORM ROTATION
J7	SWITCH, PLATFORM MANUAL LEVELLING

SW6	SWITCH, STEERING
SP9	SWITCH, SERIES/PARALLEL TRACTION
BT	BATTERY 48V 350Ah
KL	HORN
AM	INCLINOMETER
L1	WARNING LIGHT: MACHINE "ON"
L2	WARNING LIGHT: MACHINE NOT STABLE
PUP	"DEAD-MAN CONTROL" PEDAL
TD	DEFORMATION TRANSDUCER
LLD001	DEFORMATION TRANSDUCER CONTROL CARD
RCB	BATTERY CHARGER STARTING RELAY

TRIMMER LEGEND

P18	TRACTION THIRD SPEED
P19	MOVEMENT "BIAS"
P22	TRACTION "BIAS"
P17	SIGNAL, CONTROL FROM GROUND
P23	DO NOT TOUCH
P21	"UP" RAMP
P20	"DOWN" RAMP

BOARD DEEP SWITCH SETTING

SW1	ITALY	EXPORT	SW3	
1	ON	ON	1	OFF
2	ON	OFF	2	OFF
3	/	/	3	/
4	OFF	ON	4	OFF
			5	OFF
			6	/
			7	/

SW2		SW4	
1	OFF	1	OFF
2	ON	2	OFF
3	ON	3	OFF
4	OFF	4	/

SCHEMA ELECTRIQUE MACHINES STANDARDS

SG 800 SG 1000 NEW SG 1100-J

EV1	REGULATEUR PROPORTIONNEL
EV2	ELECTROVANNE TRACTION AVANT
EV3	ELECTROVANNE TRACTION ARRIERE
EV4	ELECTROVANNE SOULEVEMENT PREMIER BRAS
EV5	ELECTROVANNE DESCENTE PREMIER BRAS
EV6	ELECTROVANNE COULISSEMENT BRAS (SEULEMENT SG 1000 NEW)
EV7	ELECTROVANNE RENTREE BRAS (SEULEMENT SG 1000 NEW)
EV8	ELECTROVANNE DIRECTION DROITE
EV9	ELECTROVANNE DIRECTION GAUCHE
EV10	ELECTROVANNE SERIELLE-PARALLELE TRACTION
EV11	ELECTROVANNE DE BY-PASS (SEULEMENT E/D)
EV12	ELECTROVANNE ROTATION DROITE TOUR
EV13	ELECTROVANNE ROTATION GAUCHE TOUR
EV14	ELECTROVANNE SOULEVEMENT SECOND BRAS
EV15	ELECTROVANNE DESCENTE SECOND BRAS
EV16	ELECTROVANNE NIVELLEMENT PANIER AVANT
EV17	ELECTROVANNE NIVELLEMENT PANIER ARRIERE
EV20	ELECTROVANNE CHANGEMENT CYLINDREE MOTEURS TRACTION
EV21	ELECTROVANNE ROTATION PANIER A GAUCHE (OPTIONNELLE)
EV22	ELECTROVANNE ROTATION PANIER A DROITE (OPTIONNELLE)
SW1	INTERRUPTEUR ALLUMAGE MACHINE / SELECTION POSTE DE COMMANDE
SW2	INTERRUPTEUR MONTEE/DESCENTE PREMIER BRAS (A PARTIR DE TERRE)
SW3	INTERRUPTEUR MONTEE/DESCENTE SECOND BRAS (A PARTIR DE TERRE)
SW5	INTERRUPTEUR ROTATION TOUR (A PARTIR DE TERRE)
SW16	INTERRUPTEUR COULISSEMENT/RENTREE BRAS TELESCOPIQUE (A PARTIR DE TERRE)
SW20	SELECTEUR VITESSE TRACTION
SP1	BOUTON STOP CIRCUIT D'ALIMENTATION
SP2	BOUTON STOP URGENCE
SP3	BOUTON KLAXON
TLR	TELERUPTEUR MOTEUR ELECTRIQUE
TLR1	TELERUPTEUR DE SECURITE
EP	ELECTRO-POMPE (48V 4500W)
F1	FUSIBLE ELECTRO-POMPE -160A-
FR	FUSIBLE CHARGEUR BATTERIE (48V 40A)
AV1	AVERTISSEUR SONORE MOUVEMENTS
AV2	AVERTISSEUR SONORE ALARMES
M1A	MICROINT. HABILITATION INCLINOMETRE ET ENCLENCHEMENT VITESSE DE SECURITE EN TRACTION
M1B	MICROINT. HABILITATION INCLINOMETRE ET ENCLENCHEMENT VITESSE DE SECURITE EN TRACTION
M1C	MICROINT. HABILITATION INCLINOMETRE ET ENCLENCHEMENT VITESSE DE SECURITE EN TRACTION
M1S	MICROINT. STOP TRACTION
M2A	FIN DE COURSE ROTATION DROITE TOUR
M2B	FIN DE COURSE ROTATION GAUCHE TOUR
M3A	FIN DE COURSE SOULEVEMENT
M3B	FIN DE COURSE SOULEVEMENT
M3C	FIN DE COURSE SOULEVEMENT
M4A	FIN DE COURSE COULISSEMENT BRAS TELESCOPIQUE
M4B	FIN DE COURSE RENTREE BRAS TELESCOPIQUE
M6	MICROINTERRUPTEUR
PR1	MANO-CONTACT
PR2	MANO-CONTACT
PR3	MANO-CONTACT
GRF	AVERTISSEUR LUMINEUX TOURNANT
HC	COMPTE-HEURES
V	VOLTMETRE 48V
J1	MANCHE A BALAI MONO-AXE TRACTION
J2-J4	MANCHE A BALAI BI-AXE SOULEVEMENT PREMIER BRAS / ROTATION TOUR
J3-J6	MANCHE A BALAI BI-AXE SOULEVEMENT SECOND BRAS / COULISSEMENT TELESCOPIQUE
J5	INTERRUPTEUR ROTATION PLATE-FORME
J7	INTERRUPTEUR NIVELLEMENT MANUEL PLATE-FORME

SW6	INTERRUPTEUR DIRECTION
SP9	INTERRUPTEUR SERIEL/PARALLELE TRACTION
BT	BATTERIE 48V 350Ah
KL	KLAXON
AM	INCLINOMETRE
L1	TEMOIN MACHINE ALLUMEE
L2	TEMOIN MACHINE INSTABLE
PUP	PEDALE "HOMME PRESENT "
TD	TRANSDUCTEUR DE DEFORMATION
LLD001	CARTE DE CONTROLE TRANSDUCTEUR DE DEFORMATION
RCB	RELAIS ALLUMAGE CHARGEUR BATTERIE

LEGENDE TRIMMERS

P18	TROISIEME VITESSE TRACTION
P19	"BIAS" MOUVEMENTS
P22	"BIAS" TRACTION
P17	SIGNAL COMMANDES A PARTIR DE TERRE
P23	NE PAS TOUCHER
P21	RAMPE "UP"
P20	RAMPE "DOWN"

REGLAGE MICROINTERRUPTEURS SUR CARTE

SW1	ITALIE	ETRANGER	SW3	
1	ON	ON	1	OFF
2	ON	OFF	2	OFF
3	/	/	3	/
4	OFF	ON	4	OFF
			5	OFF
			6	/
			7	/

SW2		SW4	
1	OFF	1	OFF
2	ON	2	OFF
3	ON	3	OFF
4	OFF	4	/

SCHALTPLAN STANDARDMASCHINEN

SG 800 SG 1000 NEW SG 1100-J

EV1	PROPORTIONALER REGLER
EV2	ELEKTROVENTIL FAHREN NACH VORNE
EV3	ELEKTROVENTIL FAHREN NACH HINTEN
EV4	ELEKTROVENTIL ANHEBUNG ERSTER AUSLEGER
EV5	ELEKTROVENTIL ABSENKUNG ERSTER AUSLEGER
EV6	ELEKTROVENTIL AUSLEGER AUSZIEHEN (NUR SG 1000 NEW)
EV7	ELEKTROVENTIL AUSLEGER EINZIEHEN (NUR SG 1000 NEW)
EV8	ELEKTROVENTIL LENKUNG RECHTS
EV9	ELEKTROVENTIL LENKUNG LINKS
EV10	ELEKTROVENTIL, REIHENPARALLEL, FAHREN
EV11	BYPASS-ELEKTROVENTIL (NUR E/D)
EV12	ELEKTROVENTIL TURMDREHUNG RECHTS
EV13	ELEKTROVENTIL TURMDREHUNG LINKS
EV14	ELEKTROVENTIL ANHEBUNG ZWEITER AUSLEGER
EV15	ELEKTROVENTIL ABSENKUNG ZWEITER AUSLEGER
EV16	ELEKTROVENTIL KORBWAAGRECHTSTELLUNG VORWÄRTS
EV17	ELEKTROVENTIL KORBWAAGRECHTSTELLUNG RÜCKWÄRTS
EV20	ELEKTROVENTIL HUBRAUMWECHSEL FAHRMOTOREN
EV21	ELEKTROVENTIL KORBDREHUNG NACH LINKS (OPTION)
EV22	ELEKTROVENTIL KORBDREHUNG NACH RECHTS (OPTION)
SW1	SCHALTER MASCHINENEINSCHALTUNG / STEUERPLATZWahl
SW2	SCHALTER ANHEBUNG/ABSENKUNG ERSTER AUSLEGER (VOM BODEN AUS)
SW3	SCHALTER ANHEBUNG/ABSENKUNG ZWEITER AUSLEGER (VOM BODEN AUS)
SW5	SCHALTER TURMDREHUNG (VOM BODEN AUS)
SW16	SCHALTER AUSZIEHEN/EINZIEHEN TELESKOP AUSLEGER (VOM BODEN AUS)
SW20	FAHRGESCHWINDIGKEITS-WAHLSCHALTER
SP1	STOPKNOPF LEISTUNGSKREIS
SP2	NOTSTOPKNOPF
SP3	HUPENKNOPF
TLR	FERNSCHALTER ELEKTROMOTOR
TLR1	SICHERHEITSFERNSCHALTER
EP	ELEKTROPUMPE (48V 4500W)
F1	SCHMELZSICHERUNG ELEKTROPUMPE -160A-
FR	SCHMELZSICHERUNG LADEGERÄT (48V 40A)
AV1	AKUSTIKANZEIGE BEWEGUNGEN
AV2	AKUSTIKANZEIGE ALARM
M1A	MIKROSCHALTER BEFÄHIGUNG INKLINOMETER UND EINSCHALTUNG DER SICHERHEITSGESCHWINDIGKEIT BEIM FAHREN
M1B	MIKROSCHALTER BEFÄHIGUNG INKLINOMETER UND EINSCHALTUNG DER SICHERHEITSGESCHWINDIGKEIT BEIM FAHREN
M1C	MIKROSCHALTER BEFÄHIGUNG INKLINOMETER UND EINSCHALTUNG DER SICHERHEITSGESCHWINDIGKEIT BEIM FAHREN
M1S	MIKROSCHALTER STOP FAHREN
M2A	ENDSCHALTER TURMDREHUNG RECHTS
M2B	ENDSCHALTER TURMDREHUNG LINKS
M3A	ENDSCHALTER ANHEBUNG
M3B	ENDSCHALTER ANHEBUNG
M3C	ENDSCHALTER ANHEBUNG
M4A	ENDSCHALTER AUSZIEHEN TELESKOP AUSLEGER
M4B	ENDSCHALTER EINZIEHEN TELESKOP AUSLEGER
M6	MIKROSCHALTER
PR1	DRUCKWÄCHTER
PR2	DRUCKWÄCHTER
PR3	DRUCKWÄCHTER
GRF	RUNDUMLEUCHTEN
HC	STUNDENZÄHLER
V	SPANNUNGSMESSER 48V
J1	STEUERKNÜPPEL, EINE ACHSE, FAHREN
J2-J4	STEUERKNÜPPEL, ZWEI ACHSEN, ANHEBUNG ERSTER AUSLEGER /TURMDREHUNG

J3-J6	STEUERKNÜPPEL, ZWEI ACHSEN, ZWEITER AUSLEGER / AUSZIEHEN TELESKOP AUSLEGER
J5	SCHALTER PLATTFORMDREHUNG
J7	SCHALTER MANUELLE PLATTFORM-WAAGRECHTSTELLUNG
SW6	SCHALTER LENKUNG
SP9	SCHALTER, REIHENPARALLEL, FAHREN
BT	BATTERIE 48V 350Ah
KL	HUPE
AM	INKLINOMETER
L1	KONTROLLAMPE MASCHINE EINGESCHALTET
L2	KONTROLLAMPE MASCHINE NICHT STANDFEST
PUP	PEDAL "MENSCH VORHANDEN"
TD	UMFORMER
LLD001	KONTROLLPLATINE UMFORMER
RCB	RELAIS LADEGERÄTEINSCHALTUNG

TRIMMERVERZEICHNIS

P18	DRITTE FAHRGESCHWINDIGKEIT
P19	"BIAS" BEWEGUNGEN
P22	"BIAS" FAHREN
P17	SIGNAL BODENSTEUERUNGEN
P23	NICHT BERÜHREN
P21	RAMPE "UP"
P20	RAMPE "DOWN"

EINSTELLUNG DIP SWITCH AUF DER PLATINE

SW1	ITALIEN	AUSLAND	SW3	
1	ON	ON	1	OFF
2	ON	OFF	2	OFF
3	/	/	3	/
4	OFF	ON	4	OFF
			5	OFF
			6	/
			7	/

SW2		SW4	
1	OFF	1	OFF
2	ON	2	OFF
3	ON	3	OFF
4	OFF	4	/

ESQUEMA ALÁMBRICO MÁQUINAS STANDARD

SG 800 SG 1000 NEW SG 1100-J

EV1	REGULADOR PROPORCIONAL
EV2	ELECTROVÁLVULA TRACCIÓN ADELANTE
EV3	ELECTROVÁLVULA TRACCIÓN ATRÁS
EV4	ELECTROVÁLVULA ELEVACIÓN PRIMER BRAZO
EV5	ELECTROVÁLVULA DESCENSO PRIMER BRAZO
EV6	ELECTROVÁLVULA EXTENSIÓN BRAZO (SÓLO SG 1000 NEW)
EV7	ELECTROVÁLVULA RETORNO BRAZO (SÓLO SG 1000 NEW)
EV8	ELECTROVÁLVULA DIRECCIÓN DERECHA
EV9	ELECTROVÁLVULA DIRECCIÓN IZQUIERDA
EV10	ELECTROVÁLVULA SERIE – PARALELO TRACCIÓN
EV11	ELECTROVÁLVULA DE BY-PASS (SÓLO E/D)
EV12	ELECTROVÁLVULA ROTACIÓN DERECHA TORRETA
EV13	ELECTROVÁLVULA ROTACIÓN IZQUIERDA TORRETA
EV14	ELECTROVÁLVULA ELEVACIÓN SEGUNDO BRAZO
EV15	ELECTROVÁLVULA DESCENSO SEGUNDO BRAZO
EV16	ELECTROVÁLVULA NIVELACIÓN CESTA ADELANTE
EV17	ELECTROVÁLVULA NIVELACIÓN CESTA ATRÁS
EV20	ELECTROVÁLVULA CAMBIO CILINDRADA MOTORES TRACCIÓN
EV21	ELECTROVÁLVULA ROTACIÓN CESTA A LA IZQUIERDA (OPCIONAL)
EV22	ELECTROVÁLVULA ROTACIÓN CESTA A LA DERECHA (OPCIONAL)
SW1	INTERRUPTOR ENCENDIDO MÁQUINA / SELECCIÓN PUESTO DE MANDO
SW2	INTERRUPTOR SUBIDA/DESCENSO PRIMER BRAZO (DESDE TIERRA)
SW3	INTERRUPTOR SUBIDA/DESCENSO SEGUNDO BRAZO (DESDE TIERRA)
SW5	INTERRUPTOR ROTACIÓN TORRETA (DESDE TIERRA)
SW16	INTERRUPTOR EXTENSIÓN/RETORNO BRAZO TELESCÓPICO (DESDE TIERRA)
SW20	SELECTOR VELOCIDAD TRACCIÓN
SP1	PULSADOR STOP CIRCUITO DE POTENCIA
SP2	PULSADOR STOP EMERGENCIA
SP3	PULSADOR CLAXON
TLR	TELERRUPTOR MOTOR ELÉCTRICO
TLR1	TELERRUPTOR DE SEGURIDAD
EP	ELECTROBOMBA (48V 4500W)
F1	FUSIBLE ELECTROBOMBA -160A-
FR	FUSIBLE CARGADOR DE BATERÍA (48V 40A)
AV1	AVISADOR ACÚSTICO MOVIMIENTOS
AV2	AVISADOR ACÚSTICO ALARMA
M1A	MICROINTERRUPTOR HABILITACIÓN INCLINÓMETRO E INTRODUCCIÓN VELOCIDAD DE SEGURIDAD EN TRACCIÓN
M1B	MICROINTERRUPTOR HABILITACIÓN INCLINÓMETRO E INTRODUCCIÓN VELOCIDAD DE SEGURIDAD EN TRACCIÓN
M1C	MICROINTERRUPTOR HABILITACIÓN INCLINÓMETRO E INTRODUCCIÓN VELOCIDAD DE SEGURIDAD EN TRACCIÓN
M1S	MICROINTERRUPTOR STOP TRACCIÓN
M2A	TOPE ROTACIÓN DERECHA TORRETA
M2B	TOPE ROTACIÓN IZQUIERDA TORRETA
M3A	TOPE ELEVACIÓN
M3B	TOPE ELEVACIÓN
M3C	TOPE ELEVACIÓN
M4A	TOPE EXTENSIÓN BRAZO TELESCÓPICO
M4B	TOPE RETORNO BRAZO TELESCÓPICO
M6	MICROINTERRUPTOR
PR1	PRESÓSTATO
PR2	PRESÓSTATO
PR3	PRESÓSTATO
GRF	MOVIMIENTO FAROS
HC	CUENTAHORAS
V	VOLTÍMETRO 48V
J1	PALANCA DE MANDO DE UN EJE TRACCIÓN
J2-J4	PALANCA DE MANDO DE DOS EJES ELEVACIÓN PRIMER BRAZO / ROTACIÓN TORRETA

J3-J6	PALANCA DE MANDO DE DOS EJES ELEVACIÓN SEGUNDO BRAZO / EXTENSIÓN TELESCÓPICA
J5	INTERRUPTOR ROTACIÓN PLATAFORMA
J7	INTERRUPTOR NIVELACIÓN MANUAL PLATAFORMA
SW6	INTERRUPTOR DIRECCIÓN
SP9	INTERRUPTOR SERIE/PARALELO TRACCIÓN
BT	BATERÍA 48V 350Ah
KL	CLAXON
AM	INCLINÓMETRO
L1	LUZ TESTIGO MÁQUINA ENCENDIDA
L2	LUZ TESTIGO MÁQUINA INESTABLE
PUP	PEDAL "HOMBRE PRESENTE"
TD	TRANSDUCTOR DE DEFORMACIÓN
LLD001	TARJETA CONTROL TRANSDUCTOR DE DEFORMACIÓN
RCB	RELÉ ENCENDIDO CARGADOR DE BATERÍA

NOTA TRIMMERS

P18	TERCERA VELOCIDAD TRACCIÓN
P19	"BIAS" MOVIMIENTOS
P22	"BIAS" TRACCIÓN
P17	SEÑAL MANDOS DESDE TIERRA
P23	NO TOCAR
P21	RAMPA "UP"
P20	RAMPA "DOWN"

AJUSTE DIP SWITCH EN TARJETA

SW1			ITALIA		EXTRAN-JERO		SW3	
1		ON		ON			1	OFF
2		ON		OFF			2	OFF
3		/		/			3	/
4		OFF		ON			4	OFF
							5	OFF
							6	/
							7	/

SW2		SW4	
1	OFF	1	OFF
2	ON	2	OFF
3	ON	3	OFF
4	OFF	4	/

ELEKTRISCH SCHEMA STANDAARD MACHINES

SG 800 SG 1000 NEW SG 1100-J

EV1	PROPORTIONELE REGELAAR
EV2	ELEKTROMAGNETISCHE KLEP VOORUIT RIJDEN (VOORWAARTSE TRACTIE)
EV3	ELEKTROMAGNETISCHE KLEP ACHTERUIT RIJDEN (ACHTERWAARTSE TRACTIE)
EV4	ELEKTROMAGNETISCHE KLEP EERSTE ARM HEFFEN
EV5	ELEKTROMAGNETISCHE KLEP EERSTE ARM ZAKKEN
EV6	ELEKTROMAGNETISCHE KLEP ARM UITSCHUIVEN (GELDT ALLEEN VOOR DE SG 1000 NEW)
EV7	ELEKTROMAGNETISCHE KLEP ARM INSCHUIVEN (GELDT ALLEEN VOOR DE SG 1000 NEW)
EV8	ELEKTROMAGNETISCHE KLEP STUURBEWEGING NAAR RECHTS
EV9	ELEKTROMAGNETISCHE KLEP STUURBEWEGING NAAR LINKS
EV10	ELEKTROMAGNETISCHE KLEP SERIE-PARALLEL RIJDEN (TRACTIE)
EV11	ELEKTROMAGNETISCHE OMLOOPKLEP (GELDT ALLEEN VOOR DE E/D)
EV12	ELEKTROMAGNETISCHE KLEP DRAAIING BOVENBOUW NAAR RECHTS
EV13	ELEKTROMAGNETISCHE KLEP DRAAIING BOVENBOUW NAAR LINKS
EV14	ELEKTROMAGNETISCHE KLEP TWEEDE ARM HEFFEN
EV15	ELEKTROMAGNETISCHE KLEP TWEEDE ARM ZAKKEN
EV16	ELEKTROMAGNETISCHE KLEP KOOI VOORWAARTS HORIZONTAAL ZETTEN
EV17	ELEKTROMAGNETISCHE KLEP KOOI ACHTERWAARTS HORIZONTAAL ZETTEN
EV20	ELEKTROMAGNETISCHE KLEP WISSELING CILINDERINHOUD RIJMOTOREN (TRACTIEMOTOREN)
EV21	ELEKTROMAGNETISCHE KLEP DRAAIING KOOI NAAR LINKS (OPTIE)
EV22	ELEKTROMAGNETISCHE KLEP DRAAIING KOOI NAAR RECHTS (OPTIE)
SW1	SCHAKELAAR INSCHAKELING MACHINE / KEUZE BEDIENINGSPPOST
SW2	SCHAKELAAR HEFFEN/ZAKKEN EERSTE ARM (VANAF DE GROND)
SW3	SCHAKELAAR HEFFEN/ZAKKEN TWEEDE ARM (VANAF DE GROND)
SW5	SCHAKELAAR DRAAIING BOVENBOUW (VANAF DE GROND)
SW16	SCHAKELAAR TELESCOOPARM UIT-/INSCHUIVEN (VANAF DE GROND)
SW20	KEUZESCHAKELAAR RIJSNELHEID (TRACTIESNELHEID)
SP1	STOPKNOP VERMOGENSSTROOMKRING
SP2	NOODSTOPKNOP
SP3	KNOP CLAXON
TLR	AFSTANDSSCHAKELAAR ELEKTROMOTOR
TLR1	VEILIGHEIDSAFSTANDSSCHAKELAAR
EP	ELEKTRISCHE POMP (48V 4500W)
F1	ZEKERING ELEKTRISCHE POMP -160A-
FR	ZEKERING ACCULADER (48V 40A)
AV1	AKOESTISCHE MELDER BEWEGINGEN
AV2	AKOESTISCHE MELDER ALARMTOESTANDEN
M1A	MICROSCHAKELAAR VRIJGAVE HELLINGMETER EN INSTELLING VEILIGHEIDSSNELHEID TIJDENS RIJDEN (TRACTIE)
M1B	MICROSCHAKELAAR VRIJGAVE HELLINGMETER EN INSTELLING VEILIGHEIDSSNELHEID TIJDENS RIJDEN (TRACTIE)
M1C	MICROSCHAKELAAR VRIJGAVE HELLINGMETER EN INSTELLING VEILIGHEIDSSNELHEID TIJDENS RIJDEN (TRACTIE)
M1S	MICROSCHAKELAAR STOP RIJDEN (TRACTIE)
M2A	EINDSCHAKELAAR DRAAIING BOVENBOUW NAAR RECHTS
M2B	EINDSCHAKELAAR DRAAIING BOVENBOUW NAAR LINKS
M3A	EINDSCHAKELAAR HEFFEN
M3B	EINDSCHAKELAAR HEFFEN
M3C	EINDSCHAKELAAR HEFFEN
M4A	EINDSCHAKELAAR TELESCOOPARM UITSCHUIVEN
M4B	EINDSCHAKELAAR TELESCOOPARM INSCHUIVEN
M6	MICROSCHAKELAAR
PR1	DRUKVERSCHILSCHAKELAAR
PR2	DRUKVERSCHILSCHAKELAAR
PR3	DRUKVERSCHILSCHAKELAAR
GRF	DRAAIBARE LAMPEN
HC	URENTELLER
V	VOLTMETER 48V
J1	JOYSTICK ENKELASSIG RIJDEN (TRACTIE)
J2-J4	JOYSTICK DUBBELASSIG HEFFEN EERSTE ARM / DRAAIING BOVENBOUW

J3-J6	JOYSTICK DUBBELASSIG HEFFEN TWEEDE ARM / TELESKOOPARM UITSCHUIVEN
J5	SCHAKELAAR DRAAIING PLATFORM
J7	SCHAKELAAR PLATFORM HANDMATIG HORIZONTAAL ZETTEN
SW6	SCHAKELAAR STUREN
SP9	SCHAKELAAR SERIE/PARALLEL RIJDEN (TRACTIE)
BT	ACCU 48V 350Ah
KL	CLAXON
AM	HELLINGMETER
L1	WAARSCHUWINGSLAMPJE MACHINE INGESCHAKELD
L2	WAARSCHUWINGSLAMPJE MACHINE INSTABIEL
PUP	PEDAAL "MAN AANWEZIG"
TD	VERVORMINGSTRANSDUCTOR
LLD001	CONTROLEKAART VERVORMINGSTRANSDUCTOR
RCB	RELAIS INSCHAKELING ACCULADER

LEGENDE TRIMMERS

P18	DERDE RIJSNELHEID (TRACTIESNELHEID)
P19	"BIAS" BEWEGINGEN
P22	"BIAS" RIJDEN (TRACTIE)
P17	SIGNAAL BEDIENINGSELEMENTEN VANAF DE GROND
P23	NIET AANKOMEN
P21	"UP" HELLING
P20	"DOWN" HELLING

INSTELLING DIP SWITCHES OP KAART

SW1	ITALIË	BUITENLAND	SW3	
1	ON	ON	1	OFF
2	ON	OFF	2	OFF
3	/	/	3	/
4	OFF	ON	4	OFF
			5	OFF
			6	/
			7	/

SW2		SW4	
1	OFF	1	OFF
2	ON	2	OFF
3	ON	3	OFF
4	OFF	4	/

ЭЛЕКТРИЧЕСКАЯ СХЕМА СТАНДАРТНЫХ МАШИН SG 800 SG 1000 NEW SG1100-J

EV1	ПРОПОРЦИОНАЛЬНЫЙ РЕГУЛЯТОР
EV2	ЭЛЕКТРОКЛАПАН ТЯГИ ВПЕРЕД
EV3	ЭЛЕКТРОКЛАПАН ТЯГИ НАЗАД
EV4	ЭЛЕКТРОКЛАПАН ПОДЪЕМА ПЕРВОГО ЗВЕНА СТРЕЛЫ
EV5	ЭЛЕКТРОКЛАПАН СПУСКА ПЕРВОГО ЗВЕНА СТРЕЛЫ
EV6	ЭЛЕКТРОКЛАПАН ВЫДВИЖЕНИЯ СТРЕЛЫ (ТОЛЬКО SG 1000 NEW)
EV7	ЭЛЕКТРОКЛАПАН ВОЗВРАЩЕНИЯ СТРЕЛЫ (ТОЛЬКО SG 1000 NEW)
EV8	ЭЛЕКТРОКЛАПАН ПОВОРОТА НАПРАВО
EV9	ЭЛЕКТРОКЛАПАН ПОВОРОТА НАЛЕВО
EV10	ЭЛЕКТРОКЛАПАН СЕРИЙНО-ПАРАЛЛЕЛЬНОГО ТЯГОВОГО ДВИЖЕНИЯ
EV11	ЭЛЕКТРОКЛАПАН DI BY-PASS (ТОЛЬКО E/D)
EV12	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ БАШНИ НАПРАВО
EV13	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ БАШНИ НАЛЕВО
EV14	ЭЛЕКТРОКЛАПАН ПОДЪЕМА ВТОРОГО ЗВЕНА СТРЕЛЫ
EV15	ЭЛЕКТРОКЛАПАН СПУСКА ВТОРОГО ЗВЕНА СТРЕЛЫ
EV16	ЭЛЕКТРОКЛАПАН ВЫРАВНИВАНИЯ КОРЗИНЫ ВПЕРЕД
EV17	ЭЛЕКТРОКЛАПАН ВЫРАВНИВАНИЯ КОРЗИНЫ НАЗАД
EV20	ЭЛЕКТРОКЛАПАН ЦИЛИНДРИЧЕСКОЙ КОРОБКИ ПЕРЕДАЧ ДВИГАТЕЛЕЙ ТЯГИ
EV21	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ КОРЗИНЫ НАЛЕВО (ОПЦИЯ)
EV22	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ КОРЗИНЫ НАПРАВО (ОПЦИЯ)
SW1	ВЫКЛЮЧАТЕЛЬ ВКЛЮЧЕНИЯ МАШИНЫ / ВЫБОР ПУЛЬТА УПРАВЛЕНИЯ
SW2	ВЫКЛЮЧАТЕЛЬ ПОДЪЕМ/СПУСК ПЕРВОГО ЗВЕНА СТРЕЛЫ (С ЗЕМЛИ)
SW3	ВЫКЛЮЧАТЕЛЬ ПОДЪЕМ/СПУСК ВТОРОГО ЗВЕНА СТРЕЛЫ (С ЗЕМЛИ)
SW5	ВЫКЛЮЧАТЕЛЬ ВРАЩЕНИЯ БАШНИ (С ЗЕМЛИ)
SW16	ВЫКЛЮЧАТЕЛЬ ВЫДВИЖЕНИЕ/ВОЗВРАЩЕНИЕ ТЕЛЕСКОПИЧЕСКОЙ СТРЕЛЫ (С ЗЕМЛИ)
SW20	ПЕРЕКЛЮЧАТЕЛЬ ТЯГОВОЙ СКОРОСТИ
SP1	КНОПКА СТОП СИЛОВОЙ ЦЕПИ
SP2	АВАРИЙНАЯ КНОПКА СТОП
SP3	КНОПКА КЛАКСОНА
TLR	ДИСТАНЦИОННЫЙ ВЫКЛЮЧАТЕЛЬ ЭЛЕКТРОДВИГАТЕЛЯ
TLR1	БЕЗОПАСНЫЙ ДИСТАНЦИОННЫЙ ВЫКЛЮЧАТЕЛЬ
EP	ЭЛЕКТРОНАСОС (48В 4500Вт)
F1	ПРЕДОХРАНИТЕЛЬ ЭЛЕКТРОНАСОСА -160А-
FR	ПРЕДОХРАНИТЕЛЬ ЗАРЯДНОГО УСТРОЙСТВА (48В 40А)
AV1	ЗВУКОВОЙ СИГНАЛИЗАТОР ДВИЖЕНИЙ
AV2	ЗВУКОВОЙ СИГНАЛИЗАТОР ОПАСНОСТИ
M1A	МИКРОВЫКЛ. ГОТОВНОСТИ УКЛОНОМЕРА И ВКЛЮЧЕНИЯ БЕЗОПАСНОЙ ТЯГОВОЙ СКОРОСТИ
M1B	МИКРОВЫКЛ. ГОТОВНОСТИ УКЛОНОМЕРА И ВКЛЮЧЕНИЯ БЕЗОПАСНОЙ ТЯГОВОЙ СКОРОСТИ
M1C	МИКРОВЫКЛ. ГОТОВНОСТИ УКЛОНОМЕРА И ВКЛЮЧЕНИЯ БЕЗОПАСНОЙ ТЯГОВОЙ СКОРОСТИ
M1S	МИКРОВЫКЛЮЧАТЕЛЬ СТОП ТЯГИ
M2A	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ВРАЩЕНИЯ БАШНИ НАПРАВО
M2B	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ВРАЩЕНИЯ БАШНИ НАЛЕВО
M3A	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ПОДЪЕМА
M3B	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ПОДЪЕМА
M3C	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ПОДЪЕМА
M4A	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ВЫДВИЖЕНИЯ ТЕЛЕСКОПИЧЕСКОЙ СТРЕЛЫ
M4B	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ВОЗВРАЩЕНИЯ ТЕЛЕСКОПИЧЕСКОЙ СТРЕЛЫ
M6	МИКРОВЫКЛЮЧАТЕЛЬ
PR1	УРОВЕНЬ ДАВЛЕНИЯ
PR2	УРОВЕНЬ ДАВЛЕНИЯ
PR3	УРОВЕНЬ ДАВЛЕНИЯ
GRF	ПРОБЛЕСКОВЫЕ МАЯКИ
HC	СЧЕТЧИК МОТОЧАСОВ
V	ВОЛЬТМЕТР 48В
J1	ОДНООСНЫЙ ДЖОЙСТИК ТЯГИ
J2-J4	ДВУОСНЫЙ ДЖОЙСТИК ПОДЪЕМА ПЕРВОГО ЗВЕНА СТРЕЛЫ / ВРАЩЕНИЯ БАШНИ
J3-J6	ДВУОСНЫЙ ДЖОЙСТИК ПОДЪЕМА ВТОРОГО ЗВЕНА СТРЕЛЫ / ТЕЛЕСК. ВЫДВИЖЕНИЯ
J5	ВЫКЛЮЧАТЕЛЬ ВРАЩЕНИЯ ПЛАТФОРМЫ
J7	ВЫКЛЮЧАТЕЛЬ РУЧНОГО ВЫРАВНИВАНИЯ ПЛАТФОРМЫ
SW6	ВЫКЛЮЧАТЕЛЬ ПОВОРОТА
SP9	СЕРИЙНО- ПАРАЛЛЕЛЬНЫЙ ВЫКЛЮЧАТЕЛЬ ТЯГИ
BT	АККУМУЛЯТОР 48В 350Ачас
KL	КЛАКСОН

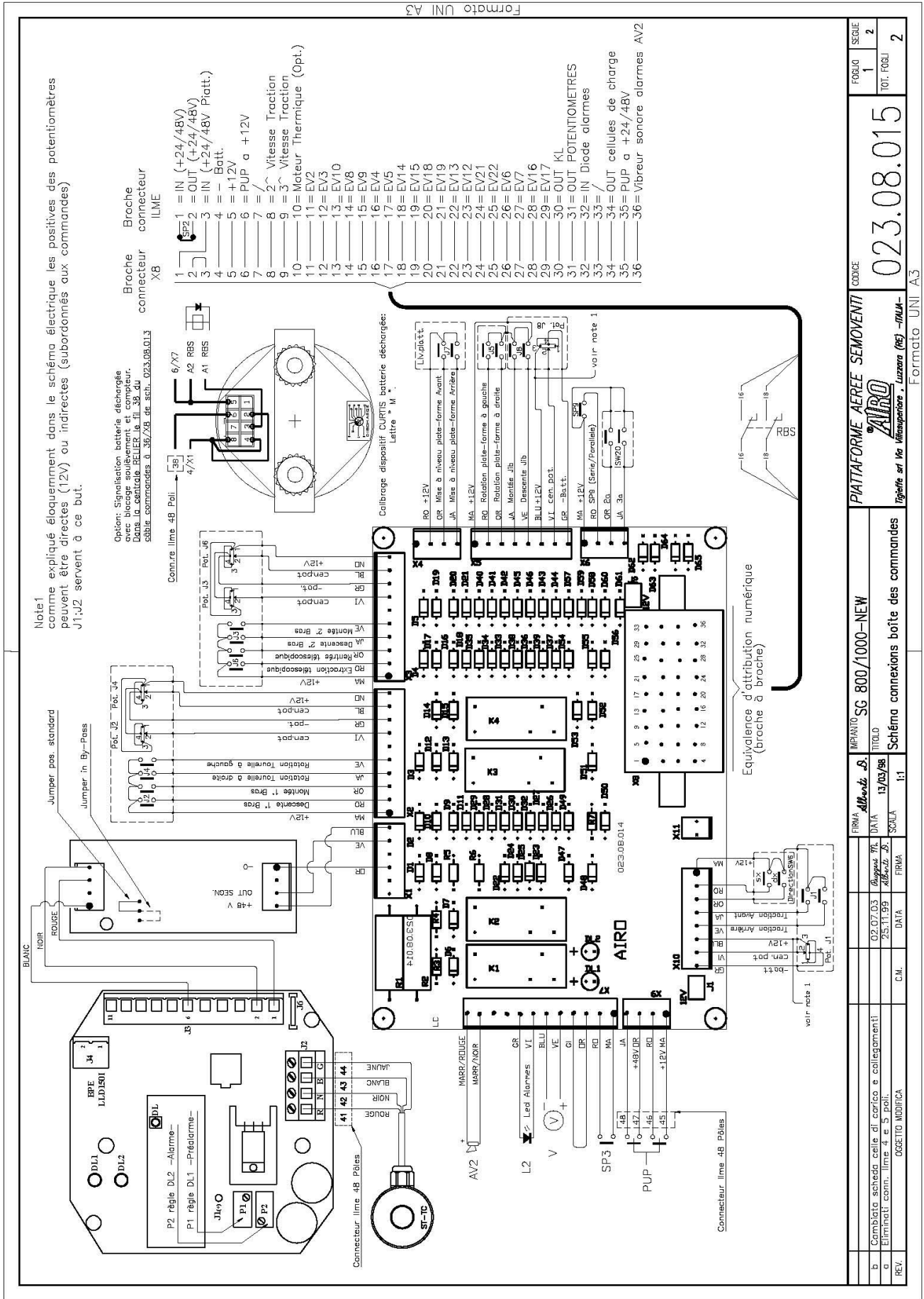
AM	УКЛОНОМЕР
L1	ИНДИКАТОР ВКЛЮЧЕННОЙ МАШИНЫ
L2	ИНДИКАТОР НЕСТАБИЛЬНОСТИ МАШИНЫ
PUP	ПЕДАЛЬ «ОПЕРАТОР НА МЕСТЕ»
TD	ДЕФОРМАЦИОННЫЙ ПРЕОБРАЗОВАТЕЛЬ
LLD001	ПЛАТА КОНТРОЛЯ ДЕФОРМАЦИОННОГО ПРЕОБРАЗОВАТЕЛЯ
RCB	РЕЛЕ ВКЛЮЧЕНИЯ ЗАРЯДНОГО УСТРОЙСТВА

СПЕЦИФИКАЦИЯ ТРИММЕРОВ

P18	ТРЕТЬЯ ТЯГОВАЯ СКОРОСТЬ
P19	“BIAS” ПЕРЕДВИЖЕНИЯ
P22	“BIAS” ТЯГА
P17	СИГНАЛ УПРАВЛЕНИЯ С ЗЕМЛИ
P23	НЕ ТРОГАТЬ
P21	РАМПА “UP”
P20	РАМПА “DOWN”

РАЗВОДКА DEEP SWITCH НА ПЛАТЕ

SW1	ИТАЛИЯ	ЗАГРАНИЦА
1	ON	ON
2	ON	OFF
3	/	/
4	OFF	ON
SW2		
1	OFF	
2	ON	
3	ON	
4	OFF	
SW3		
1	OFF	
2	OFF	
3	/	
4	OFF	
5	OFF	
6	/	
7	/	
SW4		
1	OFF	
2	OFF	
3	OFF	
4	/	



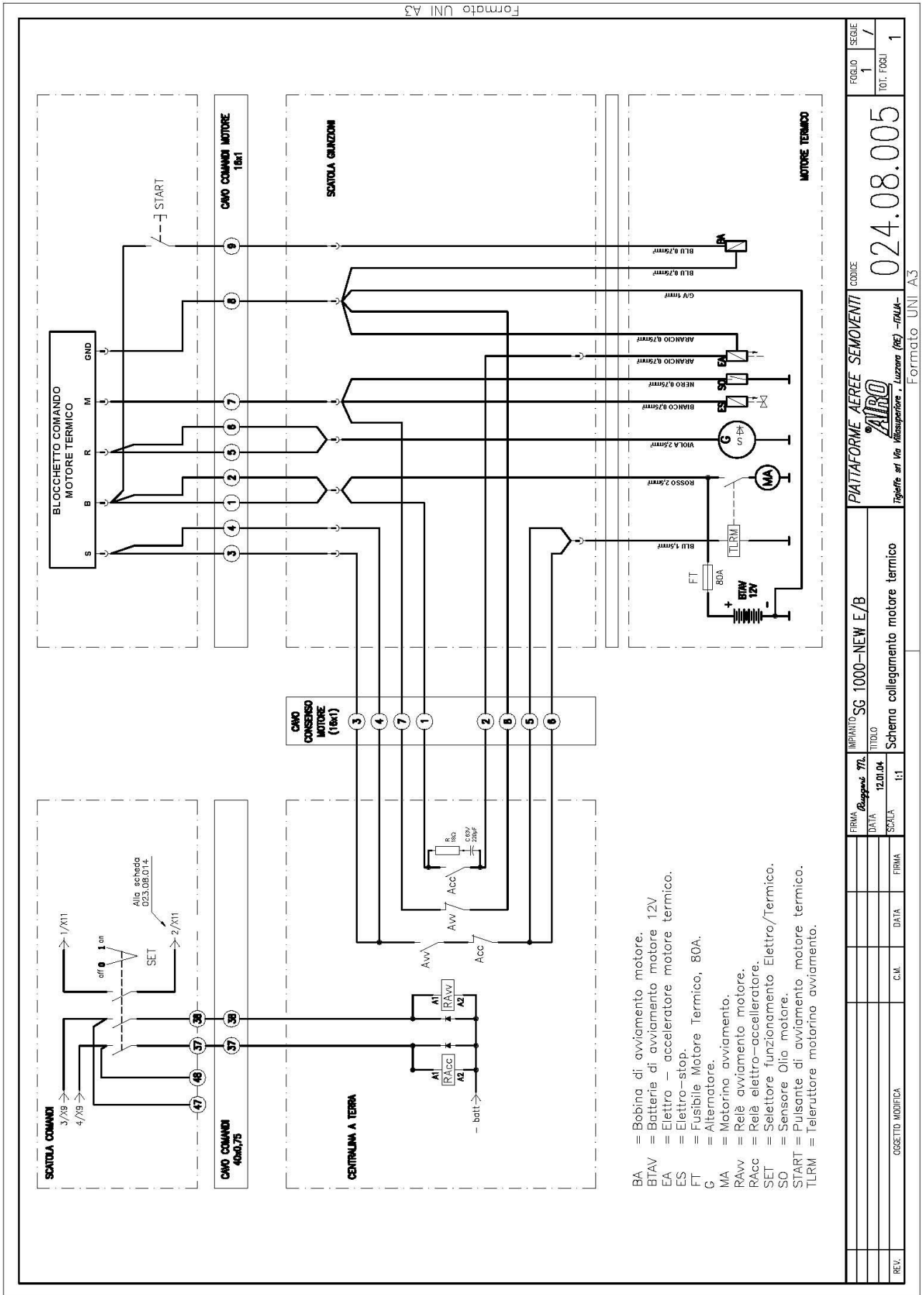
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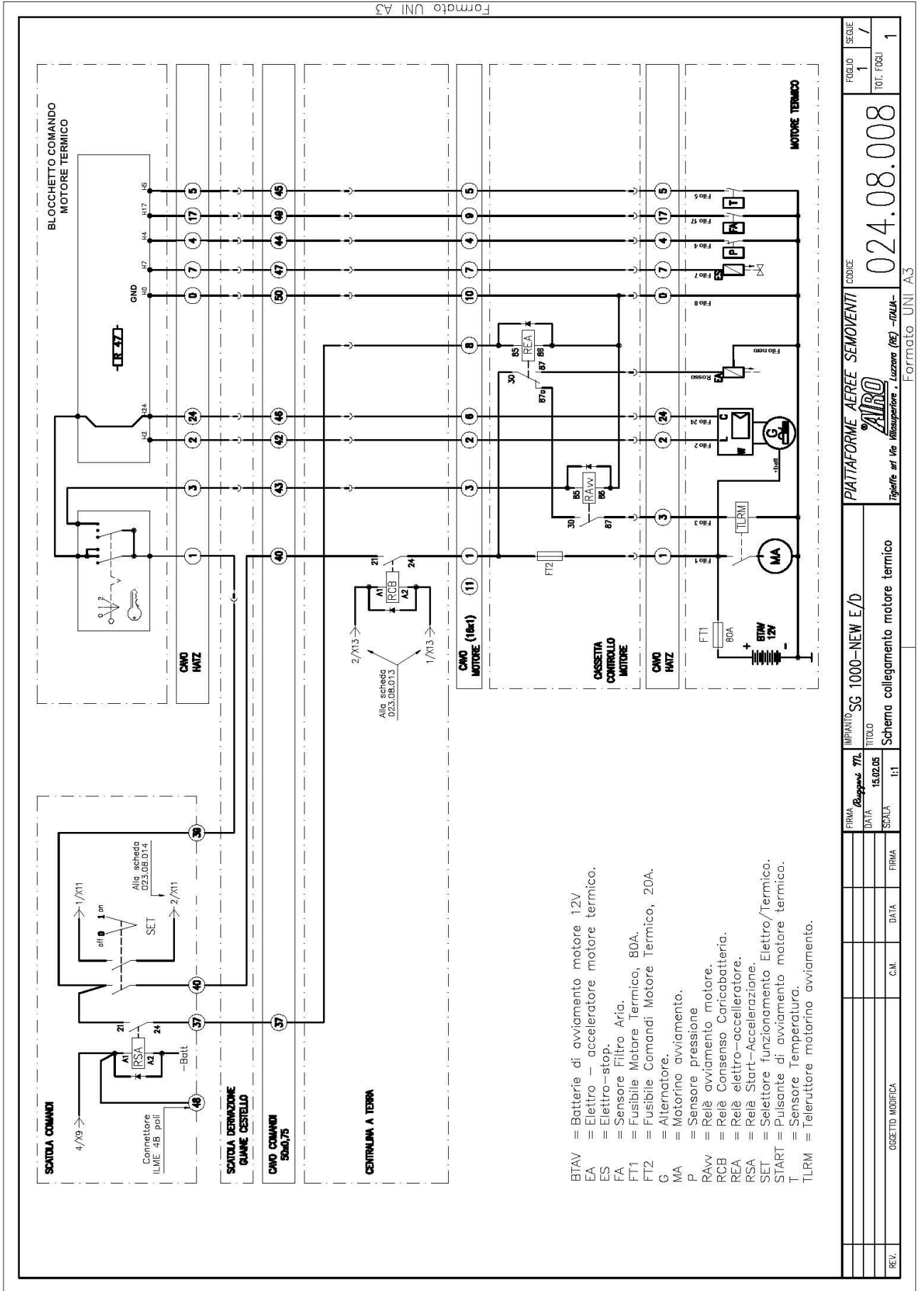
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TOT. FOLII	2		

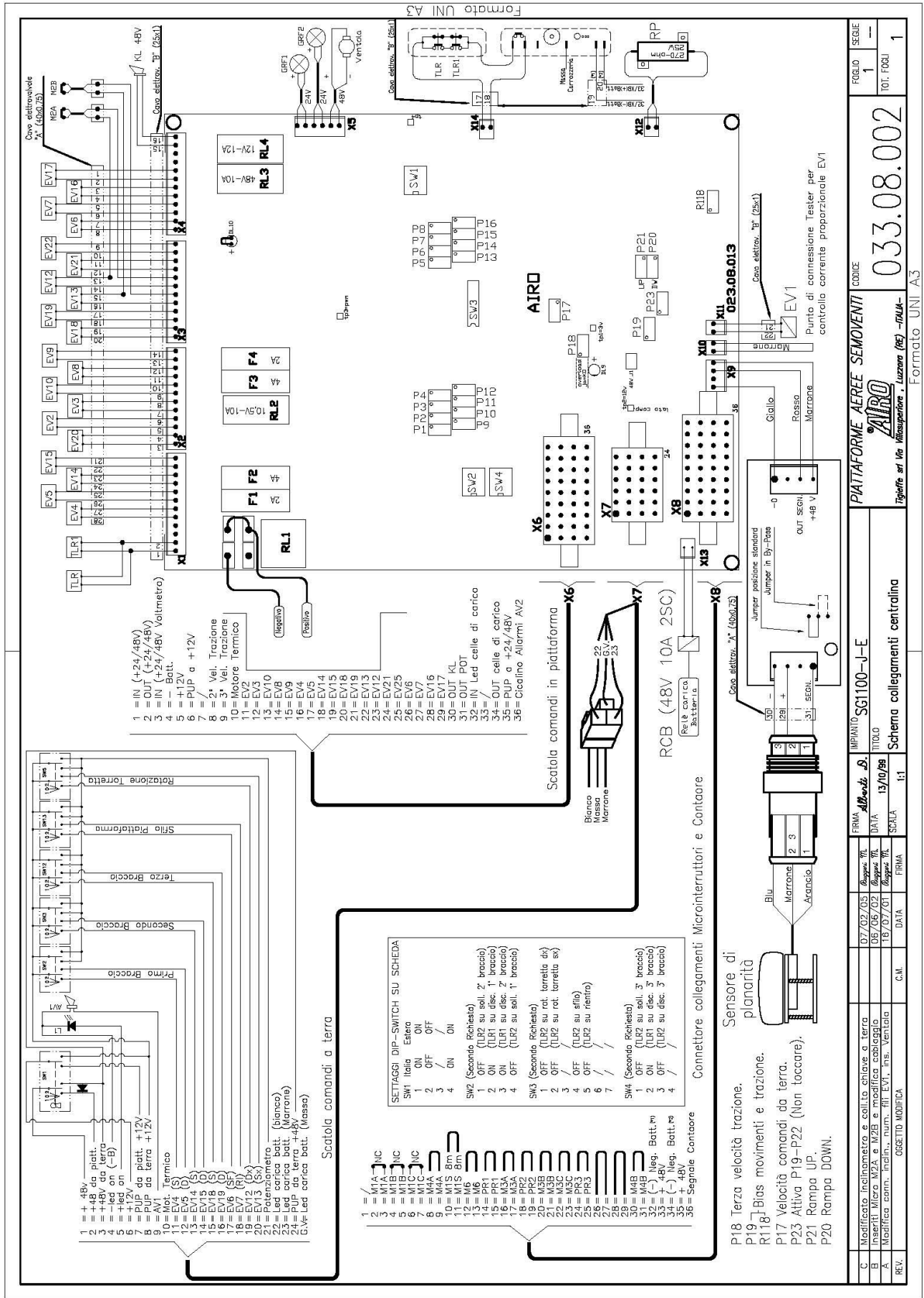
023.08.015

PIATTAFORME AEREE SEMOVENTI
AIRO
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SCHEMA IDRAULICO MACCHINE STANDARD

SG 800 SG 1000 New SG1100-J

EV1	REGOLATORE PROPORZIONALE
EV2	ELETTROVALVOLA TRAZIONE AVANTI
EV3	ELETTROVALVOLA TRAZIONE INDIETRO
EV4	ELETTROVALVOLA SOLLEVAMENTO PANTOGRAFO
EV5	ELETTROVALVOLA DISCESA PANTOGRAFO
EV6	ELETTROVALVOLA SFILO BRACCIO
EV7	ELETTROVALVOLA RIENTRO BRACCIO
EV8	ELETTROVALVOLA STERZO DESTRA
EV9	ELETTROVALVOLA STERZO SINISTRA
EV10	ELETTROVALVOLA SERIE-PARALLELO TRAZIONE
EV11	ELETTROVALVOLA BY-PASS (SOLO E/B)
EV12	ELETTROVALVOLA ROTAZIONE DESTRA TORRETTA
EV13	ELETTROVALVOLA ROTAZIONE SINISTRA TORRETTA
EV14	ELETTROVALVOLA SOLLEVAMENTO BRACCIO
EV15	ELETTROVALVOLA DISCESA BRACCIO
EV16	ELETTROVALVOLA LIVELLAMENTO CESTELLO AVANTI
EV17	ELETTROVALVOLA LIVELLAMENTO CESTELLO INDIETRO
EV18	ELETTROVALVOLA ROTAZIONE DX PIATTAFORMA
EV19	ELETTROVALVOLA ROTAZIONE SX PIATTAFORMA
EV20	ELETTROVALVOLA SCAMBIO CILINDRATA MOTORI TRAZIONE
M	MOTORE ELETTRICO
MT	MOTEUR TERMICO (SOLO E/B)
1	SERBATOIO IDRAULICO
2	POMPA STERZO
3	POMPA PRINCIPALE
4	FILTRO IN ASPIRAZIONE
5	POMPA MANUALE DI EMERGENZA
6	VALVOLA UNIDIREZIONALE
7	TAPPO DI CARICO E SFIATO
8	BLOCCO IDRAULICO REGOLATORE PROPORZIONALE
9	RUBINETTO DI EMERGENZA
10	ATTACCO MANOMETRO
11	BLOCCO IDRAULICO STERZO
12	BLOCCO IDRAULICO SCAMBIO CILINDRATA
13	CILINDRO STERZO
14	PIASTRA TRAZIONE
15	STROZZATORE UNIDIREZIONALE
16	GRUPPO ELETTRODISTRIBUTORE
17	VALVOLA OVER-CENTER
18	CILINDRO SOLLEVAMENTO PRIMO BRACCIO
19	MOTORE ROTAZIONE TORRETTA
20	CILINDRO SOLLEVAMENTO SECONDO BRACCIO
21	CILINDRO LIVELLAMENTO PIATTAFORMA (SG1000NEW)
22	CILINDRO SFILO BRACCIO TELESCOPICO (SG1000NEW)
23	CILINDRO SENSORE (SG1000NEW)
24	SERBATOIO SUPPLEMENTARE
25	CILINDRO ROTAZIONE CESTELLO
26	CILINDRO JIB
27	VALVOLA DI MASSIMA E UNIDIREZIONALE

HYDRAULIC SYSTEM DIAGRAM FOR STANDARD MACHINES

SG 800 SG 1000 New SG 1100-J

EV1	PROPORTIONAL CONTROL ELECTRIC VALVE
EV2	FORWARD TRACTION ELECTRIC VALVE
EV3	REVERSE TRACTION ELECTRIC VALVE
EV4	PANTOGRAPH LIFTING ELECTRIC VALVE
EV5	PANTOGRAPH LOWERING ELECTRIC VALVE
EV6	TELESCOPIC ARM EXTENSION ELECTRIC VALVE
EV7	TELESCOPIC ARM RETRACTION ELECTRIC VALVE
EV8	RIGHT STEERING ELECTRIC VALVE
EV9	LEFT STEERING ELECTRIC VALVE
EV10	SERIES-PARALLEL TRACTION ELECTRIC VALVE
EV11	BY-PASS VALVE (ONLY E/B)
EV12	RIGHT TURRET ROTATION ELECTRIC VALVE
EV13	LEFT TURRET ROTATION ELECTRIC VALVE
EV14	TELESCOPIC ARM LIFTING ELECTRIC VALVE
EV15	TELESCOPIC ARM LOWERING ELECTRIC VALVE
EV16	CAGE FRONT-LEVELLING ELECTRIC VALVE
EV17	CAGE BACK-LEVELLING ELECTRIC VALVE
EV18	RIGHT CAGE ROTATION ELECTRIC VALVE
EV19	LEFT CAGE ROTATION ELECTRIC VALVE
EV20	HYDRAULIC MOTOR DISPLACEMENT CHANGE SOLENOID VALVE
M	ELECTRIC MOTOR
MT	THERMIC ENGINE (ONLY E/B)
1	HYDRAULIC TANK
2	STEERING PUMP
3	MAIN PUMP
4	FILTER
5	MANUALLY OPERATED EMERGENCY PUMP
6	ONE-WAY VALVE
7	FILLING AND SPIRACULAR PLUG
8	HYDRAULIC BLOCK PROPORTIONAL CONTROL
9	EMERGENCY COCK
10	MANOMETER CONNECTION
11	STEERING HYDRAULIC BLOCK
12	HYDRAULIC BLOCK DISPLACEMENT CHANGE
13	STEERING CYLINDER
14	TRACTION PLATE
15	ONE-WAY FLOW REGULATOR
16	ELECTRODISTRIBUTOR UNIT
17	OVER-CENTER VALVE
18	FIRST ARM LIFTING CYLINDER
19	TURRET ROTATION MOTOR
20	SECOND ARM LIFTING CYLINDER
21	PLATFORM LEVELLING CYLINDER (SG1000NEW)
22	TELESCOPIC ARM EXTENSION CYLINDER (SG1000NEW)
23	SENSOR CYLINDER (SG1000NEW)
24	ADDITIONAL TANK
25	CAGE ROTATION CYLINDER
26	JIB CYLINDER
27	UNIDIRECTIONAL RELIEF VALVE

SCHÉMA HYDRAULIQUE DE BASE

SG 800 SG 1000 New SG 1100-J

EV1	REGULATEUR PROPORTIONNEL
EV2	ELECTROVANNE DE TRACTION AVANT
EV3	ELECTROVANNE DE TRACTION ARRIERE
EV4	ELECTROVANNE DE SOULEVEMENT PREMIER BRAS
EV5	ELECTROVANNE DE DESCENTE PREMIER BRAS
EV6	ELECTROVANNE D'EXTRACTION BRAS
EV7	ELECTROVANNE DE RETOUR BRAS
EV8	ELECTROVANNE DE DIRECTION DROITE
EV9	ELECTROVANNE DE DIRECTION GAUCHE
EV10	ELECTROVANNE DE SERIE-PARALLELE TRACTION
EV11	ELECTROVANNE DE BY-PASS (SEULEMENT E/B)
EV12	ELECTROVANNE DE ROTATION TOURELLE A DROITE
EV13	ELECTROVANNE DE ROTATION TOURELLE A GAUCHE
EV14	ELECTROVANNE DE SOULEVEMENT BRAS
EV15	ELECTROVANNE DE DESCENTE BRAS
EV16	ELECTROVANNE DE MISE A NIVEAU NACELLE AVANT (SG1000NEW)
EV17	ELECTROVANNE DE MISE A NIVEAU NACELLE ARRIERE (SG1000NEW)
EV18	ELECTROVANNE DE ROTATION NACELLE A DROITE
EV19	ELECTROVANNE DE ROTATION NACELLE A GAUCHE
EV20	ELECTROVANNE COMMANDE CYLINDREE MOTEURS TRACTION
M	MOTEUR ELECTRIQUE
MT	MOTEUR THERMIQUE (SEULEMENT E/B)
1	RESERVOIR HYDRAULIQUE
2	POMPE COMMANDE BRAQUAGE
3	POMPE PRINCIPALE
4	FILTRE EN ASPIRATION
5	POMPE MANUELLE D'URGENCE
6	SOUPAPE
7	BOUCHON DE REMPLISSAGE HUILE - RENIFLARD AIR
8	ELECTRODISTRIBUTEUR REGULATEUR PROPORTIONNEL
9	ROBINET ENTRAÎNEMENT POMPE MANUEL
10	JONCTION MANOMETRE
11	ELECTRODISTRIBUTEUR BRAQUAGE
12	ELECTRODISTRIBUTEUR COMMANDE CYLINDREE MOTEURS TRACTION
13	VERIN BRAQUAGE
14	PLAQUE TRACTION
15	SOUPAPE
16	ELECTRODISTRIBUTEUR MOUVEMENTS
17	VALVE OVER - CENTER
18	VERIN LEVAGE PREMIER BRAS
19	MOTEUR ROTATION TOURELLE
20	VERIN LEVAGE DEUXIEME BRAS
21	VERIN COMMANDE NIVEAU NACELLE (SG1000NEW)
22	VERIN ALLONGEMENT BRAS TELESCOPIQUE (SG1000NEW)
23	VERIN CONTROLE NIVEAU NACELLE
24	RÉSERVOIR SUPPLÉMENTAIRE
25	VERIN ROTATION NACELLE
26	VERIN JIB
27	SOUPAPE DE SÉCURITÉ ET UNIDIRECTIONNELLE

PLAN HYDRAULIKANLAGE STANDARDMASCHINEN

SG 800 SG 1000 New SG 1100-J

EV1	PROPORTIONAL REGLER
EV2	ELEKTROVENTIL VORWÄRTSFAHREN
EV3	ELEKTROVENTIL RÜCKWÄRTSFAHREN
EV4	ELEKTROVENTIL AUSLEGERHOCHGANG (1°)
EV5	ELEKTROVENTIL AUSLEGERABSSENKUNG (1°)
EV6	ELEKTROVENTIL AUSLEGER AUSZIEHEN
EV7	ELEKTROVENTIL AUSLEGER EINZIEHEN
EV8	ELEKTROVENTIL LENKUNG RECHTS
EV9	ELEKTROVENTIL LENKUNG LINKS
EV10	REIHEN-PARALLEL-ELEKTROVENTIL FAHREN
EV11	BYPASS-ELEKTROVENTIL (NUR E/B)
EV12	ELEKTROVENTIL TURMDREHUNG RECHTS
EV13	ELEKTROVENTIL TURMDREHUNG LINKS
EV14	ELEKTROVENTIL AUSLEGERHOCHGANG (2°)
EV15	ELEKTROVENTIL AUSLEGERABSSENKUNG (2°)
EV16	ELEKTROVENTIL KORBAUSGLEICH VORNE (SG1000NEW)
EV17	ELEKTROVENTIL KORBAUSGLEICH HINTEN (SG1000NEW)
EV18	ELEKTROVENTIL KORBDREHUNG RECHTS
EV19	ELEKTROVENTIL KORBDREHUNG LINKS
EV20	ELEKTROVENTIL HUBRAUMWECHSEL FAHRMOTOREN
M	ELEKTRO MOTOR
MT	WARMEMOTOR (NUR E/B)
1	HYDRAULISCHER TANK
2	LENKUNGSPUMPE
3	PUMPE
4	SAUGFILTER
5	MANUELLE NOTPUMPE
6	VENTIL
7	OELFUELL - ENTLUEFTUNGSSTOEPSSEL
8	ELEKTROVERTEILER PROPORTIONAL REGLER
9	ARMATUR BETAETIGUNG MANUELLE PUMPE
10	MANOMETERANSCHLUSS
11	ELEKTROVERTEILER LENKUNG
12	ELEKTROVERTEILER HUBRAUMWECHSEL FAHRMOTOREN
13	LENKZYLINDER
14	ANTRIEBSPLATTE
15	VENTIL
16	ELEKTROVERTEILER BEWEGUNGEN
17	VENTIL OVER - CENTER
18	ZYLINDER AUSLEGERHOCHGANG (1°)
19	GETRIEBSMOTOR TURMDREHUNG
20	ZYLINDER AUSLEGERHOCHGANG (2°)
21	ZYLINDER KORBAUSGLEICH (SG1000NEW)
22	TELESKOP AUSLEGER AUSZIEH ZYLINDER (SG1000NEW)
23	ZYLINDER SENSOR KORBAUSGLEICH
24	ZUSATZTANK
25	ZYLINDER KORBAUSDREHUNG
26	ZYLINDER JIB
27	RÜCKSCHLAGS- UND EINRICHTUNGSVENTIL

ESQUEMA HIDRÁULICO MÁQUINAS STANDARD

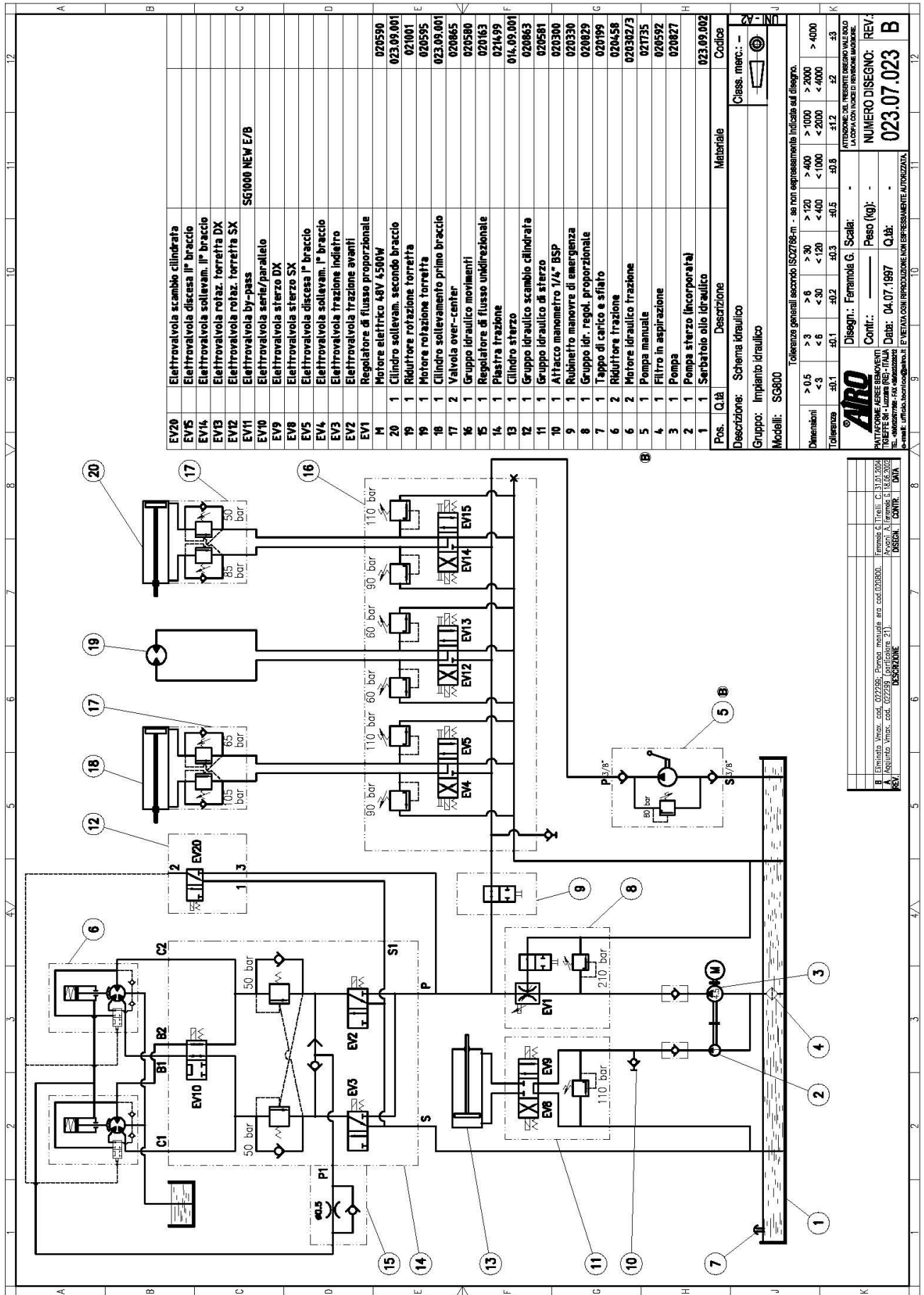
SG 800 SG 1000 New SG 1100-J

EV1	REGULADOR PROPORCIONAL
EV2	ELECTROVÁLVULA TRACCIÓN ADELANTE
EV3	ELECTROVÁLVULA TRACCIÓN ATRÁS
EV4	ELECTROVÁLVULA ELEVACIÓN PRIMER BRAZO
EV5	ELECTROVÁLVULA DESCENSO PRIMER BRAZO
EV6	ELECTROVÁLVULA EXTENSIÓN BRAZO
EV7	ELECTROVÁLVULA RETORNO BRAZO
EV8	ELECTROVÁLVULA DIRECCIÓN DERECHA
EV9	ELECTROVÁLVULA DIRECCIÓN IZQUIERDA
EV10	ELETTROVALVOLA SERIE-PARALLELO TRAZIONE
EV11	ELECTROVÁLVULA BY-PASS (SOLO E/B)
EV12	ELECTROVÁLVULA ROTACIÓN DERECHA TORRE
EV13	ELECTROVÁLVULA ROTACIÓN IZQUIERDA TORRE
EV14	ELECTROVÁLVULA ELEVACIÓN SEGUNDO BRAZO
EV15	ELECTROVÁLVULA DESCENSO SEGUNDO BRAZO
EV16	ELECTROVÁLVULA NIVELACIÓN CESTO ADELANTE
EV17	ELECTROVÁLVULA NIVELACIÓN CESTO ATRÁS
EV18	ELECTROVÁLVULA ROTACIÓN CESTO DERECHA
EV19	ELECTROVÁLVULA ROTACIÓN CESTO IZQUIERDA
EV20	ELECTROVÁLVULA CAMBIO EMBOLADA MOTORES TRACCIÓN
M	MOTOR ELÉCTRICO
MT	MOTO
1	SERBATOIO IDRAULICO
2	BOMBA DIRECCION
3	BOMBA PRINCIPAL
4	FILTROS EN ASPIRACIÓN
5	BOMBA MANUAL DE EMERGENCIA
6	VÁLVULA UNIDIRECCIONAL
7	TAPÓN DE GARGA ACEITE - SALIDA DE AIRE
8	ELECTRODISTRIBUIDOR REGULADOR PROPORCIONAL
9	GRIFO DE EMERGENCIA
10	CONEXIÓN MANÓMETRO
11	ELECTRODISTRIBUIDOR DIRECCIÓN
12	ELECTRODISTRIBUIDOR CAMBIO EMBOLADA MOTORES TRACCIÓN
13	CILINDRO DIRECCIÓN
14	ELECTRODISTRIBUIDOR TRACCIÓN
15	REGULADOR DE FLUJO UNIDIRECCIONAL
16	ELECTRODISTRIBUIDOR DE MOVIMIENTOS
17	VÁLVULA OVER - CENTER
18	CILINDRO ELEVACIÓN PRIMER BRAZO
19	MOTOR ROTACIÓN TORRETA
20	CILINDRO ELEVACIÓN SEGUNDO BRAZO
21	CILINDRO NIVELACIÓN PLATAFORMA (SG1000NEW)
22	CILINDRO EXTENSIÓN BRAZO TELESCOPICO (SG1000NEW)
23	CILINDRO SENSOR (SG1000NEW)
24	TANQUE SUPLEMENTARIO
25	CILINDRO EXTENSIÓN BRAZO TELESCÓPICO
26	CILINDRO JIB
27	VÁLVULA DE SEGURIDAD Y UNIDIRECCIONAL

ГИДРАВЛИЧЕСКАЯ СХЕМА СТАНДАРТНЫХ МАШИН

SG 800 SG 1000 New SG1100-J

EV1	ПРОПОРЦИОНАЛЬНЫЙ РЕГУЛЯТОР
EV2	ЭЛЕКТРОКЛАПАН ТЯГИ ВПЕРЕД
EV3	ЭЛЕКТРОКЛАПАН ТЯГИ НАЗАД
EV4	ЭЛЕКТРОКЛАПАН ПОДЪЕМА ПАНТОГРАФА
EV5	ЭЛЕКТРОКЛАПАН СПУСКА ПАНТОГРАФА
EV6	ЭЛЕКТРОКЛАПАН ВЫДВИЖЕНИЯ СТРЕЛЫ
EV7	ЭЛЕКТРОКЛАПАН ВОЗВРАЩЕНИЯ СТРЕЛЫ
EV8	ЭЛЕКТРОКЛАПАН ПОВОРОТА НАПРАВО
EV9	ЭЛЕКТРОКЛАПАН ПОВОРОТА НАЛЕВО
EV10	ЭЛЕКТРОКЛАПАН СЕРИЙНО-ПАРАЛЛЕЛЬНОГО ТЯГОВОГО ДВИЖЕНИЯ
EV11	ЭЛЕКТРОКЛАПАН DI BY-PASS (ТОЛЬКО E/D)
EV12	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ БАШНИ НАПРАВО
EV13	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ БАШНИ НАЛЕВО
EV14	ЭЛЕКТРОКЛАПАН ПОДЪЕМА СТРЕЛЫ
EV15	ЭЛЕКТРОКЛАПАН СПУСКА СТРЕЛЫ
EV16	ЭЛЕКТРОКЛАПАН ВЫРАВНИВАНИЯ КОРЗИНЫ ВПЕРЕД
EV17	ЭЛЕКТРОКЛАПАН ВЫРАВНИВАНИЯ КОРЗИНЫ НАЗАД
EV18	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ DX ПЛАТФОРМЫ
EV19	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ SX ПЛАТФОРМЫ
EV20	ЭЛЕКТРОКЛАПАН ЦИЛИНДРИЧЕСКОЙ КОРОБКИ ПЕРЕДАЧ ДВИГАТЕЛЕЙ ТЯГИ
M	ЭЛЕКТРОДВИГАТЕЛЬ
MT	ТЕПЛОВОЙ ДВИГАТЕЛЬ (ТОЛЬКО E/V)
1	ГИДРАВЛИЧЕСКИЙ РЕЗЕРВУАР
2	НАСОС ПОВОРОТА
3	ГЛАВНЫЙ НАСОС
4	ВСАСЫВАЮЩИЙ ФИЛЬТР
5	АВАРИЙНЫЙ РУЧНОЙ НАСОС
6	ОДНОНАПРАВЛЕННЫЙ КЛАПАН
7	ПРОБКА ЗАПОЛНЕНИЯ И ОТДУШИНЫ
8	ГИДРАВЛИЧЕСКИЙ БЛОК ПРОПОРЦИОНАЛЬНОГО РЕГУЛЯТОРА
9	АВАРИЙНЫЙ КРАН
10	ШТЕПСЕЛЬНАЯ ВИЛКА МАНОМЕТРА
11	ГИДРАВЛИЧЕСКИЙ БЛОК ПОВОРОТА
12	ГИДРАВЛИЧЕСКИЙ БЛОК ЦИЛИНДРИЧЕСКОЙ КОРОБКИ ПЕРЕДАЧ
13	ЦИЛИНДР ПОВОРОТА
14	ПЛИТА ТЯГИ
15	СУЖАТЕЛЬ ОДНОНАПРАВЛЕННЫЙ
16	ГРУППА ЭЛЕКТРОРАСПРЕДЕЛИТЕЛЕЙ
17	КЛАПАН OVER-CENTER
18	ЦИЛИНДР ПОДЪЕМА ПЕРВОГО ЗВЕНА СТРЕЛЫ
19	ДВИГАТЕЛЬ ВРАЩЕНИЯ БАШНИ
20	ЦИЛИНДР ПОДЪЕМА ПЕРВОГО ЗВЕНА СТРЕЛЫ
21	ЦИЛИНДР ВЫРАВНИВАНИЯ ПЛАТФОРМЫ (SG1000NEW)
22	ЦИЛИНДР ВЫДВИЖЕНИЯ ТЕЛЕСКОПИЧЕСКОЙ СТРЕЛЫ (SG1000NEW)
23	ЦИЛИНДР ДАТЧИКА (SG1000NEW)
24	ДОПОЛНИТЕЛЬНЫЙ РЕЗЕРВУАР
25	ЦИЛИНДР ВРАЩЕНИЯ КОРЗИНЫ
26	ЦИЛИНДР J1B
27	МАКСИМАЛЬНЫЙ И ОДНОНАПРАВЛЕННЫЙ КЛАПАН



Pos.	Q.tà	Descrizione	Materiale	Codice
EV20	1	Elettrovalvola scambio cilindrata		
EV5	1	Elettrovalvola discesa 1° braccio		
EV14	1	Elettrovalvola sollevam. 1° braccio		
EV8	1	Elettrovalvola rotaz. torretta DX		
EV2	1	Elettrovalvola rotaz. torretta SX		
EV11	1	Elettrovalvola by-pass		
EV10	1	Elettrovalvola serie/parallelo		
EV9	1	Elettrovalvola sterzo DX		
EV8	1	Elettrovalvola sterzo SX		
EV5	1	Elettrovalvola discesa 1° braccio		
EV4	1	Elettrovalvola sollevam. 1° braccio		
EV3	1	Elettrovalvola trazione indietro		
EV2	1	Elettrovalvola trazione avanti		
EV1	1	Regolatore di flusso proporzionale		
M	1	Motore elettrico 48V 4500W		020590
20	1	Cilindro sollevam. secondo braccio		023.09.001
19	1	Riduttore rotazione torretta		021001
19	1	Motore rotazione torretta		020595
18	1	Cilindro sollevamento primo braccio		023.09.001
17	2	Valvola over-center		020865
16	1	Gruppo idraulico movimenti		020580
15	1	Regolatore di flusso unidirezionale		020163
14	1	Piastra trazione		0214.99
13	1	Cilindro sterzo		014.09.001
12	1	Gruppo idraulico scambio cilindrata		020863
11	1	Gruppo idraulico di sterzo		020581
10	1	Attacco manometro 1/4" BSP		020300
9	1	Rubinetto manovre di emergenza		020330
8	1	Gruppo idr. regol. proporzionale		020829
7	1	Tappo di carico e sfiato		020199
6	2	Motore idraulico trazione		020458
5	1	Pompa manuale		020302/3
4	1	Filtro in aspirazione		021735
3	1	Pompa		020592
2	1	Pompa sterzo (incorporata)		020827
1	1	Sarbacchio olio idraulico		023.09.002

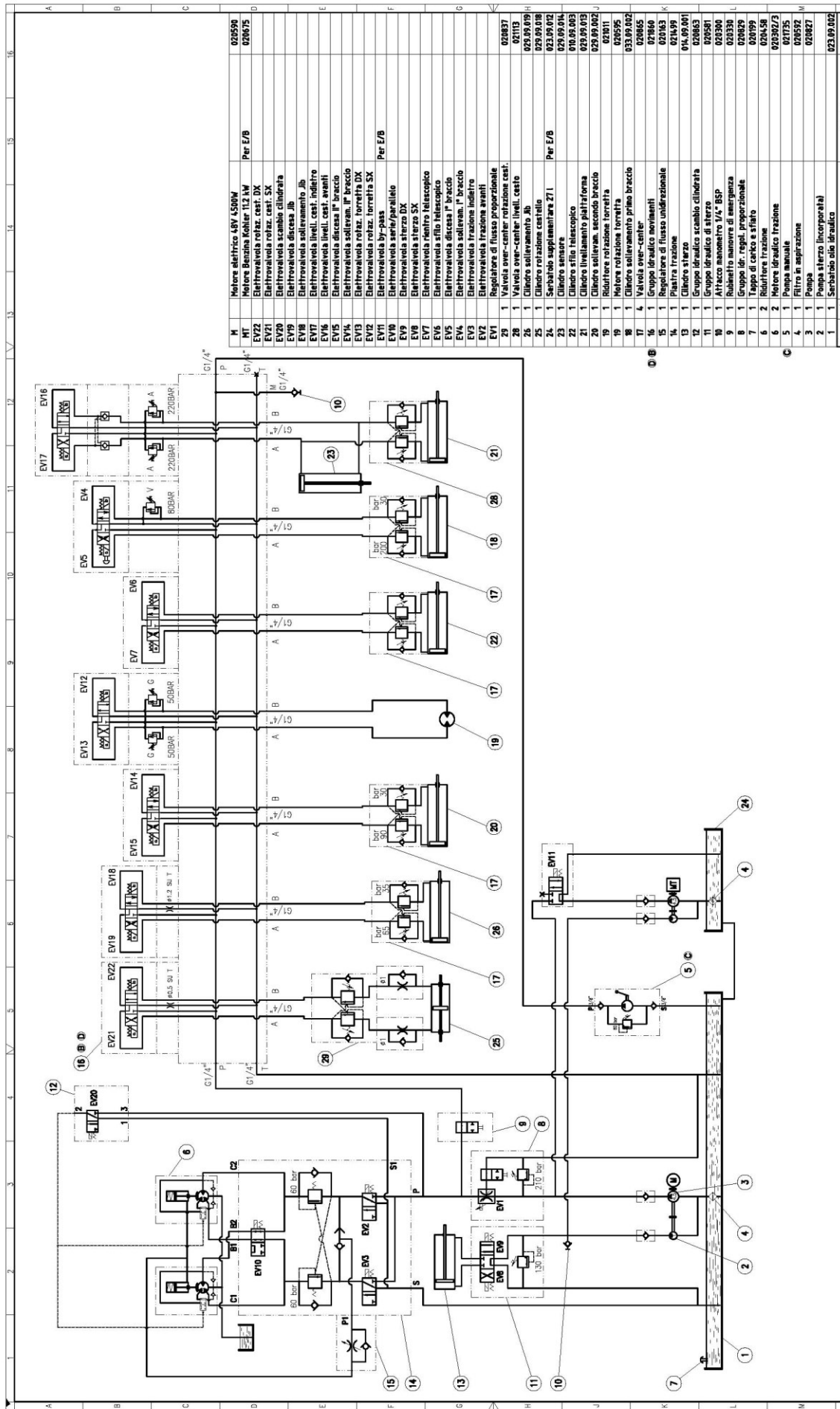
Descrizione:	Schema idraulico	Class. merc.: -
Gruppo: Impianto idraulico		
Modelli: SG800		

Tolleranze generali secondo ISO2768-mt - se non espressamente indicato sul disegno.			
Dimensioni	> 0.5	> 3	> 6
	< 3	< 6	< 30
	< 30	< 120	> 120
	< 120	< 400	> 400
	< 400	< 1000	> 1000
	< 1000	< 2000	> 2000
	< 2000	< 4000	> 4000
	< 4000	> 4000	> 4000
Tolleranza	+0.1	+0.1	+0.2
	+0.1	+0.2	+0.3
	+0.5	+0.8	+1.2
	+1.2	+2	+3

Disegni:	Ferramola G. Scali:	Peso (kg):	NUMERO DISEGNO: REV.4
Contr.:			023.07.023
Date:	04.07.1997	Q.tà:	

ATTENZIONE: IL PRESENTE DESENIO VALE SOLO LA COPIA CON I NOME DI REVISIONE INADDERE.

REV.	DESCRIZIONE	DESIGN.	DATA
1	Disegno	DM	
2	Disegno	DM	
3	Disegno	DM	
4	Disegno	DM	
5	Disegno	DM	
6	Disegno	DM	
7	Disegno	DM	
8	Disegno	DM	
9	Disegno	DM	
10	Disegno	DM	
11	Disegno	DM	
12	Disegno	DM	
13	Disegno	DM	
14	Disegno	DM	
15	Disegno	DM	
16	Disegno	DM	
17	Disegno	DM	
18	Disegno	DM	
19	Disegno	DM	
20	Disegno	DM	



M	Descrizione	Per E/B	020590
HT	Motore elettrico 48V 4500W		020675
EV22	Motore Benzina Kohler 112 kW		
EV21	Elettrovalvola rotoz. centr. DX		
EV20	Elettrovalvola rotoz. centr. SX		
EV19	Elettrovalvola scambio cilindrica		
EV18	Elettrovalvola dicesca JB		
EV17	Elettrovalvola dicesca JB		
EV16	Elettrovalvola livell. centr. sinistro		
EV15	Elettrovalvola livell. centr. destro		
EV14	Elettrovalvola dicesca 1° braccio		
EV13	Elettrovalvola sollevam. 1° braccio		
EV12	Elettrovalvola rotoz. torretta DX		
EV11	Elettrovalvola rotoz. torretta SX		
EV10	Elettrovalvola by-pass		
EV09	Elettrovalvola serie/parallelo		
EV08	Elettrovalvola sterzo SX		
EV07	Elettrovalvola sterzo SX		
EV06	Elettrovalvola rientro telescopico		
EV05	Elettrovalvola sfilo telescopico		
EV04	Elettrovalvola dicesca 1° braccio		
EV03	Elettrovalvola sollevam. 1° braccio		
EV02	Elettrovalvola trazione indietro		
EV01	Elettrovalvola trazione avanti		
29	Regolatore di flusso proporzionale		
28	1 Valvola over-center livell. cesto		
27	1 Cilindro sollevamento cilindrico		
26	1 Cilindro sollevamento cilindrico		
25	1 Cilindro sollevamento cilindrico		
24	1 Subdopo supplementare 271		
23	1 Cilindro scatto telescopico		
22	1 Cilindro scatto telescopico		
21	1 Cilindro sollevamento spallafornace		
20	1 Cilindro sollevamento secondo braccio		
19	1 Riduttore rotazione torretta		
18	1 Motore rotazione torretta		
17	4 Cilindro sollevamento primo braccio		
16	1 Valvola over-center		
15	1 Gruppo idraulico movimenti		
14	1 Regolatore di flusso unidirezionale		
13	1 Piastra trazione		
12	1 Cilindro sterzo		
11	1 Gruppo idraulico scambio cilindrica		
10	1 Gruppo idraulico di sterzo		
9	1 Rubinetto manovra 1/4" BSP		
8	1 Gruppo dir. reggil. proporzionale		
7	1 Gruppo di carico e sfilato		
6	1 Motore trazione		
5	1 Motore idraulico trazione		
4	1 Filtro in aspirazione		
3	1 Pompa		
2	1 Pompa sterzo (incorporata)		
1	1 Serbatoio olio idraulico		

Descrizione:	Sistema Idraulico
Gruppo:	Impianto Idraulico
Modello:	SR10K-1
Dimensioni:	Tolleranza generale secondo ISO2768-m - se non espressamente indicata sul disegno.
Entrata:	±0,5 ±0,3 ±0,1
Uscita:	±0,5 ±0,3 ±0,1
Design:	Ferrarello G
Scale:	
Numero Disegno:	033.07.001
REV:	D

0. Distributore, sistema idraulico, codice 020590
 1. Distributore, sistema idraulico, codice 020675
 2. Distributore, sistema idraulico, codice 020675
 3. Distributore, sistema idraulico, codice 020675
 4. Distributore, sistema idraulico, codice 020675
 5. Distributore, sistema idraulico, codice 020675
 6. Distributore, sistema idraulico, codice 020675
 7. Distributore, sistema idraulico, codice 020675
 8. Distributore, sistema idraulico, codice 020675
 9. Distributore, sistema idraulico, codice 020675
 10. Distributore, sistema idraulico, codice 020675
 11. Distributore, sistema idraulico, codice 020675
 12. Distributore, sistema idraulico, codice 020675
 13. Distributore, sistema idraulico, codice 020675
 14. Distributore, sistema idraulico, codice 020675
 15. Distributore, sistema idraulico, codice 020675
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 17. Distributore, sistema idraulico, codice 020675
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 22. Distributore, sistema idraulico, codice 020675
 23. Distributore, sistema idraulico, codice 020675
 24. Distributore, sistema idraulico, codice 020675
 25. Distributore, sistema idraulico, codice 020675
 26. Distributore, sistema idraulico, codice 020675
 27. Distributore, sistema idraulico, codice 020675
 28. Distributore, sistema idraulico, codice 020675
 29. Distributore, sistema idraulico, codice 020675



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Dichiarazione originale	Original Declaration	Déclaration Originale	Originalerklärung	Declaración Original	Оригинальная декларация
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Piattaforma di Lavoro Elevabile
 Mobile Elevating Work Platform
 Plates-forme Elévatrice Mobiles de Personnel
 Fahrbare Hubarbeitsbühnen
 Plataforma Elevadora Móvil de Personal
 Платформа для высотного работ

Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Памы	Anno - Year - Année Baujahr - Ano - Год
A10 E	XXXXXXXXXX	XXXXXXXXXX

Al quale questa dichiarazione si riferisce è conforme alle direttive 2006/42/CE, 2014/30/CE, 2005/88/CE e al modello certificato da:	To which this declaration refers is in compliance with the directives 2006/42/CE, 2014/30/CE, 2005/88/CE and with the model certified by:	Faisant l'objet de la présente déclaration est conforme aux directives 2006/42/CE, 2014/30/CE, 2005/88/CE et au modèle certifié par	Auf das sich die vorliegende Erklärung bezieht, den 2006/42/CE, 2014/30/CE, 2005/88/CE Richtlinien und dem von:	Al cual esta declaración se refiere cumple las directivas 2006/42/CE, 2014/30/CE, 2005/88/CE y el modelo certificado por:	К которой это заявление относится, соответствует директивами 2006/42/CE, 2014/30/CE, 2005/88/CE и сертифицированной модели из:
--	---	---	---	---	--

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N. di identificazione 0303

con il seguente numero di certificazione:	with the following certification number:	avec le numéro de certification suivant:	Zertifizierten Modell mit folgender Zertifizierungsnummer:	con el siguiente número de certificación:	со следующим сертифицированным номером:
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N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5807

e alle norme seguenti:	and with the following standards:	et aux normes suivantes:	die Erklärung entspricht den folgenden Normen:	y a las siguientes normas:	и со следующими нормами:
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EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

Il firmatario di questa dichiarazione di conformità è autorizzato a costituire il Fascicolo Tecnico.	The signatory of this conformity declaration is authorized to set up the Technical File.	Le signataire de cette déclaration de conformité est autorisé à constituer le Dossier Technique.	Der Unterzeichner dieser Konformitätserklärung ist autorisiert, das technische Unterlagen abzufassen.	El firmante de esta declaración de conformidad está autorizado a crear el Expediente Técnico.	Лицо, подписавшее это заявление о соответствии, уполномочено составить техническую документацию оборудования.
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Luzzara (RE), data-date-date-Datum-fecha-Дата

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 Wang Kai

(Il legale rappresentante - The legal representative)





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Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Памы	Anno - Year - Année Baujahr - Ano - Год
A12 E	XXXXXXXXXX	XXXXXXXXXX

Al quale questa dichiarazione si riferisce è conforme alle direttive 2006/42/CE, 2014/30/CE, 2005/88/CE e al modello certificato da:	To which this declaration refers is in compliance with the directives 2006/42/CE, 2014/30/CE, 2005/88/CE and with the model certified by:	Faisant l'objet de la présente déclaration est conforme aux directives 2006/42/CE, 2014/30/CE, 2005/88/CE et au modèle certifié par	Auf das sich die vorliegende Erklärung bezieht, den 2006/42/CE, 2014/30/CE, 2005/88/CE Richtlinien und dem von:	Al cual esta declaración se refiere cumple las directivas 2006/42/CE, 2014/30/CE, 2005/88/CE y el modelo certificado por:	К которой это заявление относится, соответствует директивами 2006/42/CE, 2014/30/CE, 2005/88/CE и сертифицированной модели из:
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M.0303.15.5807

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EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

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Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Памы	Anno - Year - Année Baujahr - Ano - Год
A12 EB	XXXXXXXXXX	XXXXXXXXXX

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M.0303.15.5808

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EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

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Piattaforma di Lavoro Elevabile
 Mobile Elevating Work Platform
 Plates-forme Elévatrice Mobiles de Personnel
 Fahrbare Hubarbeitsbühnen
 Plataforma Elevadora Móvil de Personal
 Платформа для высотного работ

Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Памы	Anno - Year - Année Baujahr - Ano - Год
A12 ED	XXXXXXXXXX	XXXXXXXXXX

Al quale questa dichiarazione si riferisce è conforme alle direttive 2006/42/CE, 2014/30/CE, 2005/88/CE e al modello certificato da:	To which this declaration refers is in compliance with the directives 2006/42/CE, 2014/30/CE, 2005/88/CE and with the model certified by:	Faisant l'objet de la présente déclaration est conforme aux directives 2006/42/CE, 2014/30/CE, 2005/88/CE et au modèle certifié par	Auf das sich die vorliegende Erklärung bezieht, den 2006/42/CE, 2014/30/CE, 2005/88/CE Richtlinien und dem von:	Al cual esta declaración se refiere cumple las directivas 2006/42/CE, 2014/30/CE, 2005/88/CE y el modelo certificado por:	К которой это заявление относится, соответствует директивами 2006/42/CE, 2014/30/CE, 2005/88/CE и сертифицированной модели из:
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ICE Spa Via Garibaldi, 20 40011 Anzola Emilia - BO (Italia)

N. di identificazione 0303

con il seguente numero di certificazione:	with the following certification number:	avec le numéro de certification suivant:	Zertifizierten Modell mit folgender Zertifizierungsnummer:	con el siguiente número de certificación:	со следующим сертифицированным номером:
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N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5809

e alle norme seguenti:	and with the following standards:	et aux normes suivantes:	die Erklärung entspricht den folgenden Normen:	y a las siguientes normas:	и со следующими нормами:
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EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

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Luzzara (RE), data-date-date-Datum-fecha-Дата

.....
 Wang Kai

(Il legale rappresentante - The legal representative)



AIRO È UNA DIVISIONE TIGIEFFE SRL - VIA VILLA SUPERIORE, 82 -42045 LUZZARA (RE)
 TEL. +39 0522 977365 FAX +39 0522 977015

DICHIARAZIONE CE DI CONFORMITA' - CE DECLARATION OF CONFORMITY - DECLARATION CE DE CONFORMITE' - EG KONFORMITÄTSEKTLÄRUNG - DECLARACION CE DE CONFORMIDAD- ЗАЯВЛЕНИЕ О КОНФОРМНОСТИ ЕС 2006/42/CE

Dichiarazione originale	Original Declaration	Déclaration Originale	Originalerklärung	Declaración Original	Оригинальная декларация
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Noi - We - Nous - Wir - Nosotros - мы

Tigieffe s.r.l. - Via Villa Superiore N.° 82 - Luzzara (Reggio Emilia) - ITALIA

Dichiaro sotto la nostra esclusiva responsabilità che il prodotto:	Declare under our exclusive responsibility that the product:	Declarons sous notre responsabilité exclusive que le produit:	Erklären hiermit unter Übernahme der vollen Verantwortung für diese Erklärung, daß das Produkt:	Declaramos bajo nuestra exclusiva responsabilidad que el producto:	Под нашу исключительную ответственность заявляем, что изделие:
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A13 JE	XXXXXXXXXX	XXXXXXXXXX

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ICE Spa Via Garibaldi, 20 40011 Anzola Emilia - BO (Italia)

N. di identificazione 0303

con il seguente numero di certificazione:	with the following certification number:	avec le numéro de certification suivant:	Zertifizierten Modell mit folgender Zertifizierungsnummer:	con el siguiente número de certificación:	со следующим сертифицированным номером:
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N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5810

e alle norme seguenti:	and with the following standards:	et aux normes suivantes:	die Erklärung entspricht den folgenden Normen:	y a las siguientes normas:	и со следующими нормами:
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EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

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Luzzara (RE), data-date-date-Datum-fecha-Дата

.....
 Wang Kai

(Il legale rappresentante - The legal representative)



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Noi - We - Nous - Wir - Nosotros - мы

Tigieffe s.r.l. - Via Villa Superiore N.° 82 - Luzzara (Reggio Emilia) - ITALIA

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A13 JED	XXXXXXXXXX	XXXXXXXXXX

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**ICE Spa Via Garibaldi, 20 40011 Anzola Emilia - BO (Italia)
 N. di identificazione 0303**

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M.0303.15.5811

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EN 280 :2001 EN ISO 12100:2010 EN ISO 60204-1:2006

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Luzzara (RE), data-date-date-Datum-fecha-Дата

Wang Kai

(Il legale rappresentante - The legal representative)



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A12 E Ex	XXXXXXXXXX	XXXXXXXXXX

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N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5807

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Luzzara (RE), data-date-date-Datum-fecha-Дата

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 Wang Kai

(Il legale rappresentante - The legal representative)



AIRO is a division of **TIGIEFFE SRL**

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WEB: www.airo.com – e-mail: info@airo.com

SCHEMI ELETTRICI – WIRING DIAGRAMS - SCHEMA ELECTRIQUE - ESQUEMA ELÉCTRICO – SCHALTPLAN - ELEKTRISCH SCHEMA – ЭЛЕКТРИЧЕСКАЯ СХЕМА

	023.08.015	023.08.016	023.08.021	024.08.005	024.08.008	029.08.005	033.08.002
SG800	X	X	X				
SG1000 NEW	X	X	X				
SG1000 NEW E/D	X	X	X		X		
SG1000 NEW E/B	X	X	X	X			
SG1100-J	X		X			X	X
SG1100-J E/D			X		X	X	X
	023.08.015	023.08.016	023.08.021	024.08.005	024.08.008	029.08.005	033.08.002

SCHEMI IDRAULICI – HYDRAULIC SYSTEM - SCHEMA HYDRAULIQUE - ESQUEMA HDRAULICO – PLAN HYDRAULIKANLAGE - HIDRAULISCH SCHEMA – ГИДРАВЛИЧЕСКАЯ СХЕМА

	023.07.023	024.07.005	033.07.001
SG800	X		
SG1000 NEW		X	
SG1000 NEW E/D		X	
SG1000 NEW E/B		X	
SG1100-J			X
SG1100-J E/D			X
	023.07.023	024.07.005	033.07.001

SCHEMA ELETTRICO MACCHINE STANDARD

SG 800 SG 1000 NEW SG1100-J

EV1	REGOLATORE PROPORZIONALE
EV2	ELETTROVALVOLA TRAZIONE AVANTI
EV3	ELETTROVALVOLA TRAZIONE INDIETRO
EV4	ELETTROVALVOLA SOLLEVAMENTO PRIMO BRACCIO
EV5	ELETTROVALVOLA DISCESA PRIMO BRACCIO
EV6	ELETTROVALVOLA SFILO BRACCIO (SOLO SG 1000 NEW)
EV7	ELETTROVALVOLA RIENTRO BRACCIO (SOLO SG 1000 NEW)
EV8	ELETTROVALVOLA STERZO DESTRA
EV9	ELETTROVALVOLA STERZO SINISTRA
EV10	ELETTROVALVOLA SERIE-PARALLELO TRAZIONE
EV11	ELETTROVALVOLA DI BY-PASS (SOLO E/D)
EV12	ELETTROVALVOLA ROTAZIONE DESTRA TORRETTA
EV13	ELETTROVALVOLA ROTAZIONE SINISTRA TORRETTA
EV14	ELETTROVALVOLA SOLLEVAMENTO SECONDO BRACCIO
EV15	ELETTROVALVOLA DISCESA SECONDO BRACCIO
EV16	ELETTROVALVOLA LIVELLAMENTO CESTELLO AVANTI
EV17	ELETTROVALVOLA LIVELLAMENTO CESTELLO INDIETRO
EV20	ELETTROVALVOLA SCAMBIO CILINDRATA MOTORI TRAZIONE
EV21	ELETTROVALVOLA ROTAZIONE CESTELLO A SINISTRA (OPTIONAL)
EV22	ELETTROVALVOLA ROTAZIONE CESTELLO A DESTRA (OPTIONAL)
SW1	INTERRUTTORE ACCENSIONE MACCHINA / SELEZIONE POSTO DI COMANDO
SW2	INTERRUTTORE SALITA/DISCESA PRIMO BRACCIO (DA TERRA)
SW3	INTERRUTTORE SALITA/DISCESA SECONDO BRACCIO (DA TERRA)
SW5	INTERRUTTORE ROTAZIONE TORRETTA (DA TERRA)
SW16	INTERRUTTORE SFILO/RIENTRO BRACCIO TELESCOPICO (DA TERRA)
SW20	SELETORE VELOCITA' TRAZIONE
SP1	PULSANTE STOP CIRCUITO DI POTENZA
SP2	PULSANTE STOP EMERGENZA
SP3	PULSANTE CLAXON
TLR	TELERUTTORE MOTORE ELETTRICO
TLR1	TELERUTTORE DI SICUREZZA
EP	ELETTROPOMPA (48V 4500W)
F1	FUSIBILE ELETTROPOMPA -160A-
FR	FUSIBILE CARICABATTERIA (48V 40A)
AV1	AVVISATORE ACUSTICO MOVIMENTI
AV2	AVVISATORE ACUSTICO ALLARME
M1A	MICROINT. ABILITAZIONE INCLINOMETRO E INSERIMENTO VELOCITA' DI SICUREZZA IN TRAZIONE
M1B	MICROINT. ABILITAZIONE INCLINOMETRO E INSERIMENTO VELOCITA' DI SICUREZZA IN TRAZIONE
M1C	MICROINT. ABILITAZIONE INCLINOMETRO E INSERIMENTO VELOCITA' DI SICUREZZA IN TRAZIONE
M1S	MICROINT. STOP TRAZIONE
M2A	FINECORSO ROTAZIONE DESTRA TORRETTA
M2B	FINECORSO ROTAZIONE SINISTRA TORRETTA
M3A	FINECORSO SOLLEVAMENTO
M3B	FINECORSO SOLLEVAMENTO
M3C	FINECORSO SOLLEVAMENTO
M4A	FINECORSO SFILO BRACCIO TELESCOPICO
M4B	FINECORSO RIENTRO BRACCIO TELESCOPICO
M6	MICROINTERRUTTORE
PR1	PRESSOSTATO
PR2	PRESSOSTATO
PR3	PRESSOSTATO
GRF	GIROFARI
HC	CONTAORE
V	VOLTMETRO 48V
J1	JOYSTICK MONOASSE TRAZIONE
J2-J4	JOYSTICK BI-ASSE SOLLEVAMENTO PRIMO BRACCIO / ROTAZIONE TORRETTA
J3-J6	JOYSTICK BI-ASSE SOLLEVAMENTO SECONDO BRACCIO / SFILO TELESCOPICO
J5	INTERRUTTORE ROTAZIONE PIATTAFORMA

J7	INTERRUTTORE LIVELLAMENTO MANUALE PIATTAFORMA
SW6	INTERRUTTORE STERZO
SP9	INTERRUTTORE SERIE/PARALLELO TRAZIONE
BT	BATTERIA 48V 350Ah
KL	CLAXON
AM	INCLINOMETRO
L1	SPIA MACCHINA ACCESA
L2	SPIA MACCHINA INSTABILE
PUP	PEDALE "UOMO PRESENTE"
TD	TRASDUTTORE DI DEFORMAZIONE
LLD001	SCHEDA CONTROLLO TRASDUTTORE DI DEFORMAZIONE
RCB	RELE' ACCENSIONE CARICABATTERIA

LEGENDA TRIMMERS

P18	TERZA VELOCITA' TRAZIONE
P19	"BIAS" MOVIMENTI
P22	"BIAS" TRAZIONE
P17	SEGNALE COMANDI DA TERRA
P23	NON TOCCARE
P21	RAMPA "UP"
P20	RAMPA "DOWN"

SETTAGGIO DIP SWITCH SU SCHEDA

SW1	ITALIA	ESTERO
1	ON	ON
2	ON	OFF
3	/	/
4	OFF	ON
SW2		
1	OFF	
2	ON	
3	ON	
4	OFF	
SW3		
1	OFF	
2	OFF	
3	/	
4	OFF	
5	OFF	
6	/	
7	/	
SW4		
1	OFF	
2	OFF	
3	OFF	
4	/	

WIRING DIAGRAM - STANDARD MACHINES

SG 800 SG 1000 NEW SG 1100-J

EV1	PROPORTIONAL ADJUSTER
EV2	SOLENOID VALVE, TRACTION FORWARD
EV3	SOLENOID VALVE, TRACTION BACKWARD
EV4	SOLENOID VALVE, FIRST ARM LIFTING
EV5	SOLENOID VALVE, FIRST ARM LOWERING
EV6	SOLENOID VALVE, ARM EXTRACTION (ONLY SG 1000 NEW)
EV7	SOLENOID VALVE, ARM RETRACTION (ONLY SG 1000 NEW)
EV8	SOLENOID VALVE, RIGHT STEERING
EV9	SOLENOID VALVE, LEFT STEERING
EV10	SOLENOID VALVE, SERIES-PARALLEL TRACTION
EV11	SOLENOID BYPASS VALVE (ONLY E/D)
EV12	SOLENOID VALVE, TURRET RIGHT ROTATION
EV13	SOLENOID VALVE, TURRET LEFT ROTATION
EV14	SOLENOID VALVE, SECOND ARM LIFTING
EV15	SOLENOID VALVE, SECOND ARM LOWERING
EV16	SOLENOID VALVE, FORWARD BASKET LEVELLING
EV17	SOLENOID VALVE, BACKWARD BASKET LEVELLING
EV20	SOLENOID VALVE, TRACTION MOTOR PISTON DISPLACEMENT EXCHANGE
EV21	SOLENOID VALVE, BASKET LEFT ROTATION (OPTIONAL)
EV22	SOLENOID VALVE, BASKET RIGHT ROTATION (OPTIONAL)
SW1	SWITCH, MACHINE START / CONTROL POST SELECTION
SW2	SWITCH, FIRST ARM LIFTING/LOWERING (FROM GROUND)
SW3	SWITCH, SECOND ARM LIFTING/LOWERING (FROM GROUND)
SW5	SWITCH, TURRET ROTATION (FROM GROUND)
SW16	SWITCH, TELESCOPIC ARM EXTRACTION/RETRACTION (FROM GROUND)
SW20	TRACTION SPEED SELECTOR
SP1	POWER CIRCUIT STOP BUTTON
SP2	EMERGENCY STOP BUTTON
SP3	HORN BUTTON
TLR	ELECTRIC MOTOR REMOTE CONTROL SWITCH
TLR1	SAFETY REMOTE CONTROL SWITCH
EP	ELECTRIC PUMP (48V 4500W)
F1	ELECTRIC PUMP FUSE -160A-
FR	BATTERY CHARGER FUSE (48V 40A)
AV1	MOVEMENT ALARM
AV2	ALARM
M1A	MICRO-SWITCH, INCLINOMETER AND TRACTION SAFETY SPEED ENABLED
M1B	MICRO-SWITCH, INCLINOMETER AND SAFETY TRACTION SPEED ENABLED
M1C	MICRO-SWITCH, INCLINOMETER AND SAFETY TRACTION SPEED ENABLED
M1S	MICRO-SWITCH, TRACTION STOP
M2A	LIMIT SWITCH, TURRET RIGHT ROTATION
M2B	LIMIT SWITCH, TURRET LEFT ROTATION
M3A	LIMIT SWITCH, LIFTING
M3B	LIMIT SWITCH, LIFTING
M3C	LIMIT SWITCH, LIFTING
M4A	LIMIT SWITCH, TELESCOPIC ARM EXTRACTION
M4B	LIMIT SWITCH, TELESCOPIC ARM RETRACTION
M6	MICRO-SWITCH
PR1	PRESSURE SWITCH
PR2	PRESSURE SWITCH
PR3	PRESSURE SWITCH
GRF	ROTATING BEACONS
HC	HOUR-METER
V	VOLTMETER 48V
J1	JOYSTICK, TRACTION SINGLE-AXLE
J2-J4	JOYSTICK, FIRST ARM LIFTING / TURRET ROTATION TWO-AXLE
J3-J6	JOYSTICK, SECOND ARM LIFTING / TELESCOPIC ARM EXTRACTION TWO-AXLE
J5	SWITCH, PLATFORM ROTATION
J7	SWITCH, PLATFORM MANUAL LEVELLING

SW6	SWITCH, STEERING
SP9	SWITCH, SERIES/PARALLEL TRACTION
BT	BATTERY 48V 350Ah
KL	HORN
AM	INCLINOMETER
L1	WARNING LIGHT: MACHINE "ON"
L2	WARNING LIGHT: MACHINE NOT STABLE
PUP	"DEAD-MAN CONTROL" PEDAL
TD	DEFORMATION TRANSDUCER
LLD001	DEFORMATION TRANSDUCER CONTROL CARD
RCB	BATTERY CHARGER STARTING RELAY

TRIMMER LEGEND

P18	TRACTION THIRD SPEED
P19	MOVEMENT "BIAS"
P22	TRACTION "BIAS"
P17	SIGNAL, CONTROL FROM GROUND
P23	DO NOT TOUCH
P21	"UP" RAMP
P20	"DOWN" RAMP

BOARD DEEP SWITCH SETTING

SW1	ITALY	EXPORT	SW3	
1	ON	ON	1	OFF
2	ON	OFF	2	OFF
3	/	/	3	/
4	OFF	ON	4	OFF
			5	OFF
			6	/
			7	/

SW2		SW4	
1	OFF	1	OFF
2	ON	2	OFF
3	ON	3	OFF
4	OFF	4	/

SCHEMA ELECTRIQUE MACHINES STANDARDS

SG 800 SG 1000 NEW SG 1100-J

EV1	REGULATEUR PROPORTIONNEL
EV2	ELECTROVANNE TRACTION AVANT
EV3	ELECTROVANNE TRACTION ARRIERE
EV4	ELECTROVANNE SOULEVEMENT PREMIER BRAS
EV5	ELECTROVANNE DESCENTE PREMIER BRAS
EV6	ELECTROVANNE COULISSEMENT BRAS (SEULEMENT SG 1000 NEW)
EV7	ELECTROVANNE RENTREE BRAS (SEULEMENT SG 1000 NEW)
EV8	ELECTROVANNE DIRECTION DROITE
EV9	ELECTROVANNE DIRECTION GAUCHE
EV10	ELECTROVANNE SERIELLE-PARALLELE TRACTION
EV11	ELECTROVANNE DE BY-PASS (SEULEMENT E/D)
EV12	ELECTROVANNE ROTATION DROITE TOUR
EV13	ELECTROVANNE ROTATION GAUCHE TOUR
EV14	ELECTROVANNE SOULEVEMENT SECOND BRAS
EV15	ELECTROVANNE DESCENTE SECOND BRAS
EV16	ELECTROVANNE NIVELLEMENT PANIER AVANT
EV17	ELECTROVANNE NIVELLEMENT PANIER ARRIERE
EV20	ELECTROVANNE CHANGEMENT CYLINDREE MOTEURS TRACTION
EV21	ELECTROVANNE ROTATION PANIER A GAUCHE (OPTIONNELLE)
EV22	ELECTROVANNE ROTATION PANIER A DROITE (OPTIONNELLE)
SW1	INTERRUPTEUR ALLUMAGE MACHINE / SELECTION POSTE DE COMMANDE
SW2	INTERRUPTEUR MONTEE/DESCENTE PREMIER BRAS (A PARTIR DE TERRE)
SW3	INTERRUPTEUR MONTEE/DESCENTE SECOND BRAS (A PARTIR DE TERRE)
SW5	INTERRUPTEUR ROTATION TOUR (A PARTIR DE TERRE)
SW16	INTERRUPTEUR COULISSEMENT/RENTREE BRAS TELESCOPIQUE (A PARTIR DE TERRE)
SW20	SELECTEUR VITESSE TRACTION
SP1	BOUTON STOP CIRCUIT D'ALIMENTATION
SP2	BOUTON STOP URGENCE
SP3	BOUTON KLAXON
TLR	TELERUPTEUR MOTEUR ELECTRIQUE
TLR1	TELERUPTEUR DE SECURITE
EP	ELECTRO-POMPE (48V 4500W)
F1	FUSIBLE ELECTRO-POMPE -160A-
FR	FUSIBLE CHARGEUR BATTERIE (48V 40A)
AV1	AVERTISSEUR SONORE MOUVEMENTS
AV2	AVERTISSEUR SONORE ALARMES
M1A	MICROINT. HABILITATION INCLINOMETRE ET ENCLENCHEMENT VITESSE DE SECURITE EN TRACTION
M1B	MICROINT. HABILITATION INCLINOMETRE ET ENCLENCHEMENT VITESSE DE SECURITE EN TRACTION
M1C	MICROINT. HABILITATION INCLINOMETRE ET ENCLENCHEMENT VITESSE DE SECURITE EN TRACTION
M1S	MICROINT. STOP TRACTION
M2A	FIN DE COURSE ROTATION DROITE TOUR
M2B	FIN DE COURSE ROTATION GAUCHE TOUR
M3A	FIN DE COURSE SOULEVEMENT
M3B	FIN DE COURSE SOULEVEMENT
M3C	FIN DE COURSE SOULEVEMENT
M4A	FIN DE COURSE COULISSEMENT BRAS TELESCOPIQUE
M4B	FIN DE COURSE RENTREE BRAS TELESCOPIQUE
M6	MICROINTERRUPTEUR
PR1	MANO-CONTACT
PR2	MANO-CONTACT
PR3	MANO-CONTACT
GRF	AVERTISSEUR LUMINEUX TOURNANT
HC	COMPTE-HEURES
V	VOLTMETRE 48V
J1	MANCHE A BALAI MONO-AXE TRACTION
J2-J4	MANCHE A BALAI BI-AXE SOULEVEMENT PREMIER BRAS / ROTATION TOUR
J3-J6	MANCHE A BALAI BI-AXE SOULEVEMENT SECOND BRAS / COULISSEMENT TELESCOPIQUE
J5	INTERRUPTEUR ROTATION PLATE-FORME
J7	INTERRUPTEUR NIVELLEMENT MANUEL PLATE-FORME

SW6	INTERRUPTEUR DIRECTION
SP9	INTERRUPTEUR SERIEL/PARALLELE TRACTION
BT	BATTERIE 48V 350Ah
KL	KLAXON
AM	INCLINOMETRE
L1	TEMOIN MACHINE ALLUMEE
L2	TEMOIN MACHINE INSTABLE
PUP	PEDALE "HOMME PRESENT "
TD	TRANSDUCTEUR DE DEFORMATION
LLD001	CARTE DE CONTROLE TRANSDUCTEUR DE DEFORMATION
RCB	RELAIS ALLUMAGE CHARGEUR BATTERIE

LEGENDE TRIMMERS

P18	TROISIEME VITESSE TRACTION
P19	"BIAS" MOUVEMENTS
P22	"BIAS" TRACTION
P17	SIGNAL COMMANDES A PARTIR DE TERRE
P23	NE PAS TOUCHER
P21	RAMPE "UP"
P20	RAMPE "DOWN"

REGLAGE MICROINTERRUPTEURS SUR CARTE

SW1	ITALIE	ETRANGER	SW3	
1	ON	ON	1	OFF
2	ON	OFF	2	OFF
3	/	/	3	/
4	OFF	ON	4	OFF
			5	OFF
			6	/
			7	/

SW2		SW4	
1	OFF	1	OFF
2	ON	2	OFF
3	ON	3	OFF
4	OFF	4	/

SCHALTPLAN STANDARDMASCHINEN

SG 800 SG 1000 NEW SG 1100-J

EV1	PROPORTIONALER REGLER
EV2	ELEKTROVENTIL FAHREN NACH VORNE
EV3	ELEKTROVENTIL FAHREN NACH HINTEN
EV4	ELEKTROVENTIL ANHEBUNG ERSTER AUSLEGER
EV5	ELEKTROVENTIL ABSENKUNG ERSTER AUSLEGER
EV6	ELEKTROVENTIL AUSLEGER AUSZIEHEN (NUR SG 1000 NEW)
EV7	ELEKTROVENTIL AUSLEGER EINZIEHEN (NUR SG 1000 NEW)
EV8	ELEKTROVENTIL LENKUNG RECHTS
EV9	ELEKTROVENTIL LENKUNG LINKS
EV10	ELEKTROVENTIL, REIHENPARALLEL, FAHREN
EV11	BYPASS-ELEKTROVENTIL (NUR E/D)
EV12	ELEKTROVENTIL TURMDREHUNG RECHTS
EV13	ELEKTROVENTIL TURMDREHUNG LINKS
EV14	ELEKTROVENTIL ANHEBUNG ZWEITER AUSLEGER
EV15	ELEKTROVENTIL ABSENKUNG ZWEITER AUSLEGER
EV16	ELEKTROVENTIL KORBWAAGRECHTSTELLUNG VORWÄRTS
EV17	ELEKTROVENTIL KORBWAAGRECHTSTELLUNG RÜCKWÄRTS
EV20	ELEKTROVENTIL HUBRAUMWECHSEL FAHRMOTOREN
EV21	ELEKTROVENTIL KORBDREHUNG NACH LINKS (OPTION)
EV22	ELEKTROVENTIL KORBDREHUNG NACH RECHTS (OPTION)
SW1	SCHALTER MASCHINENEINSCHALTUNG / STEUERPLATZWahl
SW2	SCHALTER ANHEBUNG/ABSENKUNG ERSTER AUSLEGER (VOM BODEN AUS)
SW3	SCHALTER ANHEBUNG/ABSENKUNG ZWEITER AUSLEGER (VOM BODEN AUS)
SW5	SCHALTER TURMDREHUNG (VOM BODEN AUS)
SW16	SCHALTER AUSZIEHEN/EINZIEHEN TELESKOP AUSLEGER (VOM BODEN AUS)
SW20	FAHRGESCHWINDIGKEITS-WAHLSCHALTER
SP1	STOPKNOPF LEISTUNGSKREIS
SP2	NOTSTOPKNOPF
SP3	HUPENKNOPF
TLR	FERNSCHALTER ELEKTROMOTOR
TLR1	SICHERHEITSFERNSCHALTER
EP	ELEKTROPUMPE (48V 4500W)
F1	SCHMELZSICHERUNG ELEKTROPUMPE -160A-
FR	SCHMELZSICHERUNG LADEGERÄT (48V 40A)
AV1	AKUSTIKANZEIGE BEWEGUNGEN
AV2	AKUSTIKANZEIGE ALARM
M1A	MIKROSCHALTER BEFÄHIGUNG INKLINOMETER UND EINSCHALTUNG DER SICHERHEITSGESCHWINDIGKEIT BEIM FAHREN
M1B	MIKROSCHALTER BEFÄHIGUNG INKLINOMETER UND EINSCHALTUNG DER SICHERHEITSGESCHWINDIGKEIT BEIM FAHREN
M1C	MIKROSCHALTER BEFÄHIGUNG INKLINOMETER UND EINSCHALTUNG DER SICHERHEITSGESCHWINDIGKEIT BEIM FAHREN
M1S	MIKROSCHALTER STOP FAHREN
M2A	ENDSCHALTER TURMDREHUNG RECHTS
M2B	ENDSCHALTER TURMDREHUNG LINKS
M3A	ENDSCHALTER ANHEBUNG
M3B	ENDSCHALTER ANHEBUNG
M3C	ENDSCHALTER ANHEBUNG
M4A	ENDSCHALTER AUSZIEHEN TELESKOP AUSLEGER
M4B	ENDSCHALTER EINZIEHEN TELESKOP AUSLEGER
M6	MIKROSCHALTER
PR1	DRUCKWÄCHTER
PR2	DRUCKWÄCHTER
PR3	DRUCKWÄCHTER
GRF	RUNDUMLEUCHTEN
HC	STUNDENZÄHLER
V	SPANNUNGSMESSER 48V
J1	STEUERKNÜPPEL, EINE ACHSE, FAHREN
J2-J4	STEUERKNÜPPEL, ZWEI ACHSEN, ANHEBUNG ERSTER AUSLEGER /TURMDREHUNG

J3-J6	STEUERKNÜPPEL, ZWEI ACHSEN, ZWEITER AUSLEGER / AUSZIEHEN TELESKOP AUSLEGER
J5	SCHALTER PLATTFORMDREHUNG
J7	SCHALTER MANUELLE PLATTFORM-WAAGRECHTSTELLUNG
SW6	SCHALTER LENKUNG
SP9	SCHALTER, REIHENPARALLEL, FAHREN
BT	BATTERIE 48V 350Ah
KL	HUPE
AM	INKLINOMETER
L1	KONTROLLAMPE MASCHINE EINGESCHALTET
L2	KONTROLLAMPE MASCHINE NICHT STANDFEST
PUP	PEDAL "MENSCH VORHANDEN"
TD	UMFORMER
LLD001	KONTROLLPLATINE UMFORMER
RCB	RELAIS LADEGERÄTEEINSCHALTUNG

TRIMMERVERZEICHNIS

P18	DRITTE FAHRGESCHWINDIGKEIT
P19	"BIAS" BEWEGUNGEN
P22	"BIAS" FAHREN
P17	SIGNAL BODENSTEUERUNGEN
P23	NICHT BERÜHREN
P21	RAMPE "UP"
P20	RAMPE "DOWN"

EINSTELLUNG DIP SWITCH AUF DER PLATINE

SW1	ITALIEN	AUSLAND	SW3	
1	ON	ON	1	OFF
2	ON	OFF	2	OFF
3	/	/	3	/
4	OFF	ON	4	OFF
			5	OFF
			6	/
			7	/

SW2		SW4	
1	OFF	1	OFF
2	ON	2	OFF
3	ON	3	OFF
4	OFF	4	/

ESQUEMA ALÁMBRICO MÁQUINAS STANDARD

SG 800 SG 1000 NEW SG 1100-J

EV1	REGULADOR PROPORCIONAL
EV2	ELECTROVÁLVULA TRACCIÓN ADELANTE
EV3	ELECTROVÁLVULA TRACCIÓN ATRÁS
EV4	ELECTROVÁLVULA ELEVACIÓN PRIMER BRAZO
EV5	ELECTROVÁLVULA DESCENSO PRIMER BRAZO
EV6	ELECTROVÁLVULA EXTENSIÓN BRAZO (SÓLO SG 1000 NEW)
EV7	ELECTROVÁLVULA RETORNO BRAZO (SÓLO SG 1000 NEW)
EV8	ELECTROVÁLVULA DIRECCIÓN DERECHA
EV9	ELECTROVÁLVULA DIRECCIÓN IZQUIERDA
EV10	ELECTROVÁLVULA SERIE – PARALELO TRACCIÓN
EV11	ELECTROVÁLVULA DE BY-PASS (SÓLO E/D)
EV12	ELECTROVÁLVULA ROTACIÓN DERECHA TORRETA
EV13	ELECTROVÁLVULA ROTACIÓN IZQUIERDA TORRETA
EV14	ELECTROVÁLVULA ELEVACIÓN SEGUNDO BRAZO
EV15	ELECTROVÁLVULA DESCENSO SEGUNDO BRAZO
EV16	ELECTROVÁLVULA NIVELACIÓN CESTA ADELANTE
EV17	ELECTROVÁLVULA NIVELACIÓN CESTA ATRÁS
EV20	ELECTROVÁLVULA CAMBIO CILINDRADA MOTORES TRACCIÓN
EV21	ELECTROVÁLVULA ROTACIÓN CESTA A LA IZQUIERDA (OPCIONAL)
EV22	ELECTROVÁLVULA ROTACIÓN CESTA A LA DERECHA (OPCIONAL)
SW1	INTERRUPTOR ENCENDIDO MÁQUINA / SELECCIÓN PUESTO DE MANDO
SW2	INTERRUPTOR SUBIDA/DESCENSO PRIMER BRAZO (DESDE TIERRA)
SW3	INTERRUPTOR SUBIDA/DESCENSO SEGUNDO BRAZO (DESDE TIERRA)
SW5	INTERRUPTOR ROTACIÓN TORRETA (DESDE TIERRA)
SW16	INTERRUPTOR EXTENSIÓN/RETORNO BRAZO TELESCÓPICO (DESDE TIERRA)
SW20	SELECTOR VELOCIDAD TRACCIÓN
SP1	PULSADOR STOP CIRCUITO DE POTENCIA
SP2	PULSADOR STOP EMERGENCIA
SP3	PULSADOR CLAXON
TLR	TELERRUPTOR MOTOR ELÉCTRICO
TLR1	TELERRUPTOR DE SEGURIDAD
EP	ELECTROBOMBA (48V 4500W)
F1	FUSIBLE ELECTROBOMBA -160A-
FR	FUSIBLE CARGADOR DE BATERÍA (48V 40A)
AV1	AVISADOR ACÚSTICO MOVIMIENTOS
AV2	AVISADOR ACÚSTICO ALARMA
M1A	MICROINTERRUPTOR HABILITACIÓN INCLINÓMETRO E INTRODUCCIÓN VELOCIDAD DE SEGURIDAD EN TRACCIÓN
M1B	MICROINTERRUPTOR HABILITACIÓN INCLINÓMETRO E INTRODUCCIÓN VELOCIDAD DE SEGURIDAD EN TRACCIÓN
M1C	MICROINTERRUPTOR HABILITACIÓN INCLINÓMETRO E INTRODUCCIÓN VELOCIDAD DE SEGURIDAD EN TRACCIÓN
M1S	MICROINTERRUPTOR STOP TRACCIÓN
M2A	TOPE ROTACIÓN DERECHA TORRETA
M2B	TOPE ROTACIÓN IZQUIERDA TORRETA
M3A	TOPE ELEVACIÓN
M3B	TOPE ELEVACIÓN
M3C	TOPE ELEVACIÓN
M4A	TOPE EXTENSIÓN BRAZO TELESCÓPICO
M4B	TOPE RETORNO BRAZO TELESCÓPICO
M6	MICROINTERRUPTOR
PR1	PRESÓSTATO
PR2	PRESÓSTATO
PR3	PRESÓSTATO
GRF	MOVIMIENTO FAROS
HC	CUENTAHORAS
V	VOLTÍMETRO 48V
J1	PALANCA DE MANDO DE UN EJE TRACCIÓN
J2-J4	PALANCA DE MANDO DE DOS EJES ELEVACIÓN PRIMER BRAZO / ROTACIÓN TORRETA

J3-J6	PALANCA DE MANDO DE DOS EJES ELEVACIÓN SEGUNDO BRAZO / EXTENSIÓN TELESCÓPICA
J5	INTERRUPTOR ROTACIÓN PLATAFORMA
J7	INTERRUPTOR NIVELACIÓN MANUAL PLATAFORMA
SW6	INTERRUPTOR DIRECCIÓN
SP9	INTERRUPTOR SERIE/PARALELO TRACCIÓN
BT	BATERÍA 48V 350Ah
KL	CLAXON
AM	INCLINÓMETRO
L1	LUZ TESTIGO MÁQUINA ENCENDIDA
L2	LUZ TESTIGO MÁQUINA INESTABLE
PUP	PEDAL "HOMBRE PRESENTE"
TD	TRANSDUCTOR DE DEFORMACIÓN
LLD001	TARJETA CONTROL TRANSDUCTOR DE DEFORMACIÓN
RCB	RELÉ ENCENDIDO CARGADOR DE BATERÍA

NOTA TRIMMERS

P18	TERCERA VELOCIDAD TRACCIÓN
P19	"BIAS" MOVIMIENTOS
P22	"BIAS" TRACCIÓN
P17	SEÑAL MANDOS DESDE TIERRA
P23	NO TOCAR
P21	RAMPA "UP"
P20	RAMPA "DOWN"

AJUSTE DIP SWITCH EN TARJETA

SW1			ITALIA		EXTRAN-JERO		SW3		
1			ON		ON		1		OFF
2			ON		OFF		2		OFF
3			/		/		3		/
4			OFF		ON		4		OFF
							5		OFF
							6		/
							7		/

SW2		SW4	
1	OFF	1	OFF
2	ON	2	OFF
3	ON	3	OFF
4	OFF	4	/

ELEKTRISCH SCHEMA STANDAARD MACHINES

SG 800 SG 1000 NEW SG 1100-J

EV1	PROPORTIONELE REGELAAR
EV2	ELEKTROMAGNETISCHE KLEP VOORUIT RIJDEN (VOORWAARTSE TRACTIE)
EV3	ELEKTROMAGNETISCHE KLEP ACHTERUIT RIJDEN (ACHTERWAARTSE TRACTIE)
EV4	ELEKTROMAGNETISCHE KLEP EERSTE ARM HEFFEN
EV5	ELEKTROMAGNETISCHE KLEP EERSTE ARM ZAKKEN
EV6	ELEKTROMAGNETISCHE KLEP ARM UITSCHUIVEN (GELDT ALLEEN VOOR DE SG 1000 NEW)
EV7	ELEKTROMAGNETISCHE KLEP ARM INSCHUIVEN (GELDT ALLEEN VOOR DE SG 1000 NEW)
EV8	ELEKTROMAGNETISCHE KLEP STUURBEWEGING NAAR RECHTS
EV9	ELEKTROMAGNETISCHE KLEP STUURBEWEGING NAAR LINKS
EV10	ELEKTROMAGNETISCHE KLEP SERIE-PARALLEL RIJDEN (TRACTIE)
EV11	ELEKTROMAGNETISCHE OMLOOPKLEP (GELDT ALLEEN VOOR DE E/D)
EV12	ELEKTROMAGNETISCHE KLEP DRAAIING BOVENBOUW NAAR RECHTS
EV13	ELEKTROMAGNETISCHE KLEP DRAAIING BOVENBOUW NAAR LINKS
EV14	ELEKTROMAGNETISCHE KLEP TWEEDE ARM HEFFEN
EV15	ELEKTROMAGNETISCHE KLEP TWEEDE ARM ZAKKEN
EV16	ELEKTROMAGNETISCHE KLEP KOOI VOORWAARTS HORIZONTAAL ZETTEN
EV17	ELEKTROMAGNETISCHE KLEP KOOI ACHTERWAARTS HORIZONTAAL ZETTEN
EV20	ELEKTROMAGNETISCHE KLEP WISSELING CILINDERINHOUD RIJMOTOREN (TRACTIEMOTOREN)
EV21	ELEKTROMAGNETISCHE KLEP DRAAIING KOOI NAAR LINKS (OPTIE)
EV22	ELEKTROMAGNETISCHE KLEP DRAAIING KOOI NAAR RECHTS (OPTIE)
SW1	SCHAKELAAR INSCHAKELING MACHINE / KEUZE BEDIENINGSPPOST
SW2	SCHAKELAAR HEFFEN/ZAKKEN EERSTE ARM (VANAF DE GROND)
SW3	SCHAKELAAR HEFFEN/ZAKKEN TWEEDE ARM (VANAF DE GROND)
SW5	SCHAKELAAR DRAAIING BOVENBOUW (VANAF DE GROND)
SW16	SCHAKELAAR TELESCOOPARM UIT-/INSCHUIVEN (VANAF DE GROND)
SW20	KEUZESCHAKELAAR RIJSNELHEID (TRACTIESNELHEID)
SP1	STOPKNOP VERMOGENSSTROOMKRING
SP2	NOODSTOPKNOP
SP3	KNOP CLAXON
TLR	AFSTANDSSCHAKELAAR ELEKTROMOTOR
TLR1	VEILIGHEIDSAFSTANDSSCHAKELAAR
EP	ELEKTRISCHE POMP (48V 4500W)
F1	ZEKERING ELEKTRISCHE POMP -160A-
FR	ZEKERING ACCULADER (48V 40A)
AV1	AKOESTISCHE MELDER BEWEGINGEN
AV2	AKOESTISCHE MELDER ALARMTOESTANDEN
M1A	MICROSCHAKELAAR VRIJGAVE HELLINGMETER EN INSTELLING VEILIGHEIDSSNELHEID TIJDENS RIJDEN (TRACTIE)
M1B	MICROSCHAKELAAR VRIJGAVE HELLINGMETER EN INSTELLING VEILIGHEIDSSNELHEID TIJDENS RIJDEN (TRACTIE)
M1C	MICROSCHAKELAAR VRIJGAVE HELLINGMETER EN INSTELLING VEILIGHEIDSSNELHEID TIJDENS RIJDEN (TRACTIE)
M1S	MICROSCHAKELAAR STOP RIJDEN (TRACTIE)
M2A	EINDSCHAKELAAR DRAAIING BOVENBOUW NAAR RECHTS
M2B	EINDSCHAKELAAR DRAAIING BOVENBOUW NAAR LINKS
M3A	EINDSCHAKELAAR HEFFEN
M3B	EINDSCHAKELAAR HEFFEN
M3C	EINDSCHAKELAAR HEFFEN
M4A	EINDSCHAKELAAR TELESCOOPARM UITSCHUIVEN
M4B	EINDSCHAKELAAR TELESCOOPARM INSCHUIVEN
M6	MICROSCHAKELAAR
PR1	DRUKVERSCHILSCHAKELAAR
PR2	DRUKVERSCHILSCHAKELAAR
PR3	DRUKVERSCHILSCHAKELAAR
GRF	DRAAIBARE LAMPEN
HC	URENTELLER
V	VOLTMETER 48V
J1	JOYSTICK ENKELASSIG RIJDEN (TRACTIE)
J2-J4	JOYSTICK DUBBELASSIG HEFFEN EERSTE ARM / DRAAIING BOVENBOUW

J3-J6	JOYSTICK DUBBELASSIG HEFFEN TWEEDE ARM / TELESKOOPARM UITSCHUIVEN
J5	SCHAKELAAR DRAAIING PLATFORM
J7	SCHAKELAAR PLATFORM HANDMATIG HORIZONTAAL ZETTEN
SW6	SCHAKELAAR STUREN
SP9	SCHAKELAAR SERIE/PARALLEL RIJDEN (TRACTIE)
BT	ACCU 48V 350Ah
KL	CLAXON
AM	HELLINGMETER
L1	WAARSCHUWINGSLAMPJE MACHINE INGESCHAKELD
L2	WAARSCHUWINGSLAMPJE MACHINE INSTABIEL
PUP	PEDAAL "MAN AANWEZIG"
TD	VERVORMINGSTRANSDUCTOR
LLD001	CONTROLEKAART VERVORMINGSTRANSDUCTOR
RCB	RELAIS INSCHAKELING ACCULADER

LEGENDE TRIMMERS

P18	DERDE RIJSNELHEID (TRACTIESNELHEID)
P19	"BIAS" BEWEGINGEN
P22	"BIAS" RIJDEN (TRACTIE)
P17	SIGNAAL BEDIENINGSELEMENTEN VANAF DE GROND
P23	NIET AANKOMEN
P21	"UP" HELLING
P20	"DOWN" HELLING

INSTELLING DIP SWITCHES OP KAART

SW1	ITALIË	BUITENLAND	SW3	
1	ON	ON	1	OFF
2	ON	OFF	2	OFF
3	/	/	3	/
4	OFF	ON	4	OFF
			5	OFF
			6	/
			7	/

SW2		SW4	
1	OFF	1	OFF
2	ON	2	OFF
3	ON	3	OFF
4	OFF	4	/

ЭЛЕКТРИЧЕСКАЯ СХЕМА СТАНДАРТНЫХ МАШИН SG 800 SG 1000 NEW SG1100-J

EV1	ПРОПОРЦИОНАЛЬНЫЙ РЕГУЛЯТОР
EV2	ЭЛЕКТРОКЛАПАН ТЯГИ ВПЕРЕД
EV3	ЭЛЕКТРОКЛАПАН ТЯГИ НАЗАД
EV4	ЭЛЕКТРОКЛАПАН ПОДЪЕМА ПЕРВОГО ЗВЕНА СТРЕЛЫ
EV5	ЭЛЕКТРОКЛАПАН СПУСКА ПЕРВОГО ЗВЕНА СТРЕЛЫ
EV6	ЭЛЕКТРОКЛАПАН ВЫДВИЖЕНИЯ СТРЕЛЫ (ТОЛЬКО SG 1000 NEW)
EV7	ЭЛЕКТРОКЛАПАН ВОЗВРАЩЕНИЯ СТРЕЛЫ (ТОЛЬКО SG 1000 NEW)
EV8	ЭЛЕКТРОКЛАПАН ПОВОРОТА НАПРАВО
EV9	ЭЛЕКТРОКЛАПАН ПОВОРОТА НАЛЕВО
EV10	ЭЛЕКТРОКЛАПАН СЕРИЙНО-ПАРАЛЛЕЛЬНОГО ТЯГОВОГО ДВИЖЕНИЯ
EV11	ЭЛЕКТРОКЛАПАН DI BY-PASS (ТОЛЬКО E/D)
EV12	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ БАШНИ НАПРАВО
EV13	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ БАШНИ НАЛЕВО
EV14	ЭЛЕКТРОКЛАПАН ПОДЪЕМА ВТОРОГО ЗВЕНА СТРЕЛЫ
EV15	ЭЛЕКТРОКЛАПАН СПУСКА ВТОРОГО ЗВЕНА СТРЕЛЫ
EV16	ЭЛЕКТРОКЛАПАН ВЫРАВНИВАНИЯ КОРЗИНЫ ВПЕРЕД
EV17	ЭЛЕКТРОКЛАПАН ВЫРАВНИВАНИЯ КОРЗИНЫ НАЗАД
EV20	ЭЛЕКТРОКЛАПАН ЦИЛИНДРИЧЕСКОЙ КОРОБКИ ПЕРЕДАЧ ДВИГАТЕЛЕЙ ТЯГИ
EV21	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ КОРЗИНЫ НАЛЕВО (ОПЦИЯ)
EV22	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ КОРЗИНЫ НАПРАВО (ОПЦИЯ)
SW1	ВЫКЛЮЧАТЕЛЬ ВКЛЮЧЕНИЯ МАШИНЫ / ВЫБОР ПУЛЬТА УПРАВЛЕНИЯ
SW2	ВЫКЛЮЧАТЕЛЬ ПОДЪЕМ/СПУСК ПЕРВОГО ЗВЕНА СТРЕЛЫ (С ЗЕМЛИ)
SW3	ВЫКЛЮЧАТЕЛЬ ПОДЪЕМ/СПУСК ВТОРОГО ЗВЕНА СТРЕЛЫ (С ЗЕМЛИ)
SW5	ВЫКЛЮЧАТЕЛЬ ВРАЩЕНИЯ БАШНИ (С ЗЕМЛИ)
SW16	ВЫКЛЮЧАТЕЛЬ ВЫДВИЖЕНИЕ/ВОЗВРАЩЕНИЕ ТЕЛЕСКОПИЧЕСКОЙ СТРЕЛЫ (С ЗЕМЛИ)
SW20	ПЕРЕКЛЮЧАТЕЛЬ ТЯГОВОЙ СКОРОСТИ
SP1	КНОПКА СТОП СИЛОВОЙ ЦЕПИ
SP2	АВАРИЙНАЯ КНОПКА СТОП
SP3	КНОПКА КЛАКСОНА
TLR	ДИСТАНЦИОННЫЙ ВЫКЛЮЧАТЕЛЬ ЭЛЕКТРОДВИГАТЕЛЯ
TLR1	БЕЗОПАСНЫЙ ДИСТАНЦИОННЫЙ ВЫКЛЮЧАТЕЛЬ
EP	ЭЛЕКТРОНАСОС (48В 4500Вт)
F1	ПРЕДОХРАНИТЕЛЬ ЭЛЕКТРОНАСОСА -160А-
FR	ПРЕДОХРАНИТЕЛЬ ЗАРЯДНОГО УСТРОЙСТВА (48В 40А)
AV1	ЗВУКОВОЙ СИГНАЛИЗАТОР ДВИЖЕНИЙ
AV2	ЗВУКОВОЙ СИГНАЛИЗАТОР ОПАСНОСТИ
M1A	МИКРОВЫКЛ. ГОТОВНОСТИ УКЛОНОМЕРА И ВКЛЮЧЕНИЯ БЕЗОПАСНОЙ ТЯГОВОЙ СКОРОСТИ
M1B	МИКРОВЫКЛ. ГОТОВНОСТИ УКЛОНОМЕРА И ВКЛЮЧЕНИЯ БЕЗОПАСНОЙ ТЯГОВОЙ СКОРОСТИ
M1C	МИКРОВЫКЛ. ГОТОВНОСТИ УКЛОНОМЕРА И ВКЛЮЧЕНИЯ БЕЗОПАСНОЙ ТЯГОВОЙ СКОРОСТИ
M1S	МИКРОВЫКЛЮЧАТЕЛЬ СТОП ТЯГИ
M2A	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ВРАЩЕНИЯ БАШНИ НАПРАВО
M2B	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ВРАЩЕНИЯ БАШНИ НАЛЕВО
M3A	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ПОДЪЕМА
M3B	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ПОДЪЕМА
M3C	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ПОДЪЕМА
M4A	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ВЫДВИЖЕНИЯ ТЕЛЕСКОПИЧЕСКОЙ СТРЕЛЫ
M4B	КОНЦЕВОЙ ВЫКЛЮЧАТЕЛЬ ВОЗВРАЩЕНИЯ ТЕЛЕСКОПИЧЕСКОЙ СТРЕЛЫ
M6	МИКРОВЫКЛЮЧАТЕЛЬ
PR1	УРОВЕНЬ ДАВЛЕНИЯ
PR2	УРОВЕНЬ ДАВЛЕНИЯ
PR3	УРОВЕНЬ ДАВЛЕНИЯ
GRF	ПРОБЛЕСКОВЫЕ МАЯКИ
HC	СЧЕТЧИК МОТОЧАСОВ
V	ВОЛЬТМЕТР 48В
J1	ОДНООСНЫЙ ДЖОЙСТИК ТЯГИ
J2-J4	ДВУОСНЫЙ ДЖОЙСТИК ПОДЪЕМА ПЕРВОГО ЗВЕНА СТРЕЛЫ / ВРАЩЕНИЯ БАШНИ
J3-J6	ДВУОСНЫЙ ДЖОЙСТИК ПОДЪЕМА ВТОРОГО ЗВЕНА СТРЕЛЫ / ТЕЛЕСК. ВЫДВИЖЕНИЯ
J5	ВЫКЛЮЧАТЕЛЬ ВРАЩЕНИЯ ПЛАТФОРМЫ
J7	ВЫКЛЮЧАТЕЛЬ РУЧНОГО ВЫРАВНИВАНИЯ ПЛАТФОРМЫ
SW6	ВЫКЛЮЧАТЕЛЬ ПОВОРОТА
SP9	СЕРИЙНО- ПАРАЛЛЕЛЬНЫЙ ВЫКЛЮЧАТЕЛЬ ТЯГИ
BT	АККУМУЛЯТОР 48В 350Ачас
KL	КЛАКСОН

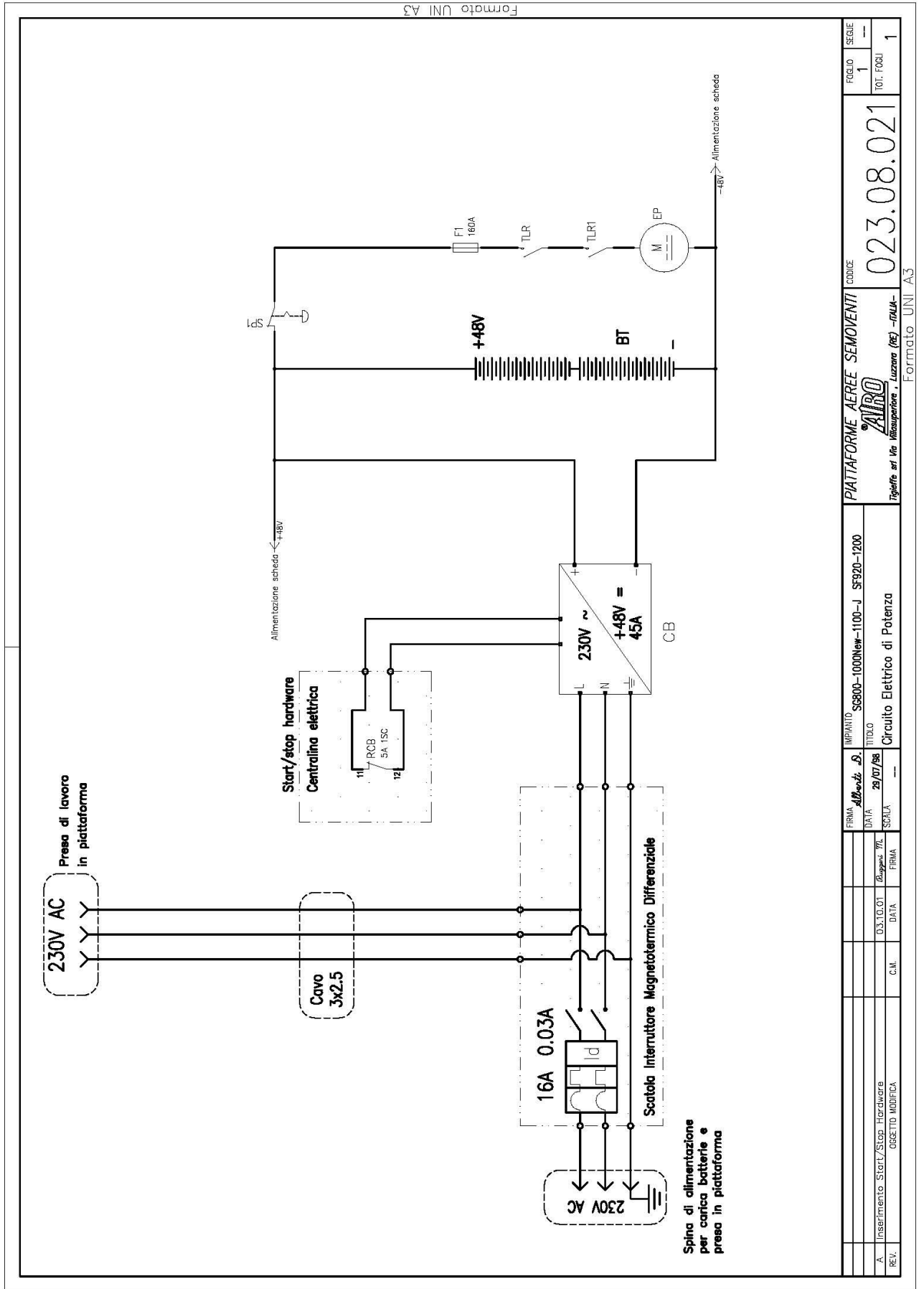
AM	УКЛОНОМЕР
L1	ИНДИКАТОР ВКЛЮЧЕННОЙ МАШИНЫ
L2	ИНДИКАТОР НЕСТАБИЛЬНОСТИ МАШИНЫ
PUP	ПЕДАЛЬ «ОПЕРАТОР НА МЕСТЕ»
TD	ДЕФОРМАЦИОННЫЙ ПРЕОБРАЗОВАТЕЛЬ
LLD001	ПЛАТА КОНТРОЛЯ ДЕФОРМАЦИОННОГО ПРЕОБРАЗОВАТЕЛЯ
RCB	РЕЛЕ ВКЛЮЧЕНИЯ ЗАРЯДНОГО УСТРОЙСТВА

СПЕЦИФИКАЦИЯ ТРИММЕРОВ

P18	ТРЕТЬЯ ТЯГОВАЯ СКОРОСТЬ
P19	“BIAS” ПЕРЕДВИЖЕНИЯ
P22	“BIAS” ТЯГА
P17	СИГНАЛ УПРАВЛЕНИЯ С ЗЕМЛИ
P23	НЕ ТРОГАТЬ
P21	РАМПА “UP”
P20	РАМПА “DOWN”

РАЗВОДКА DEEP SWITCH НА ПЛАТЕ

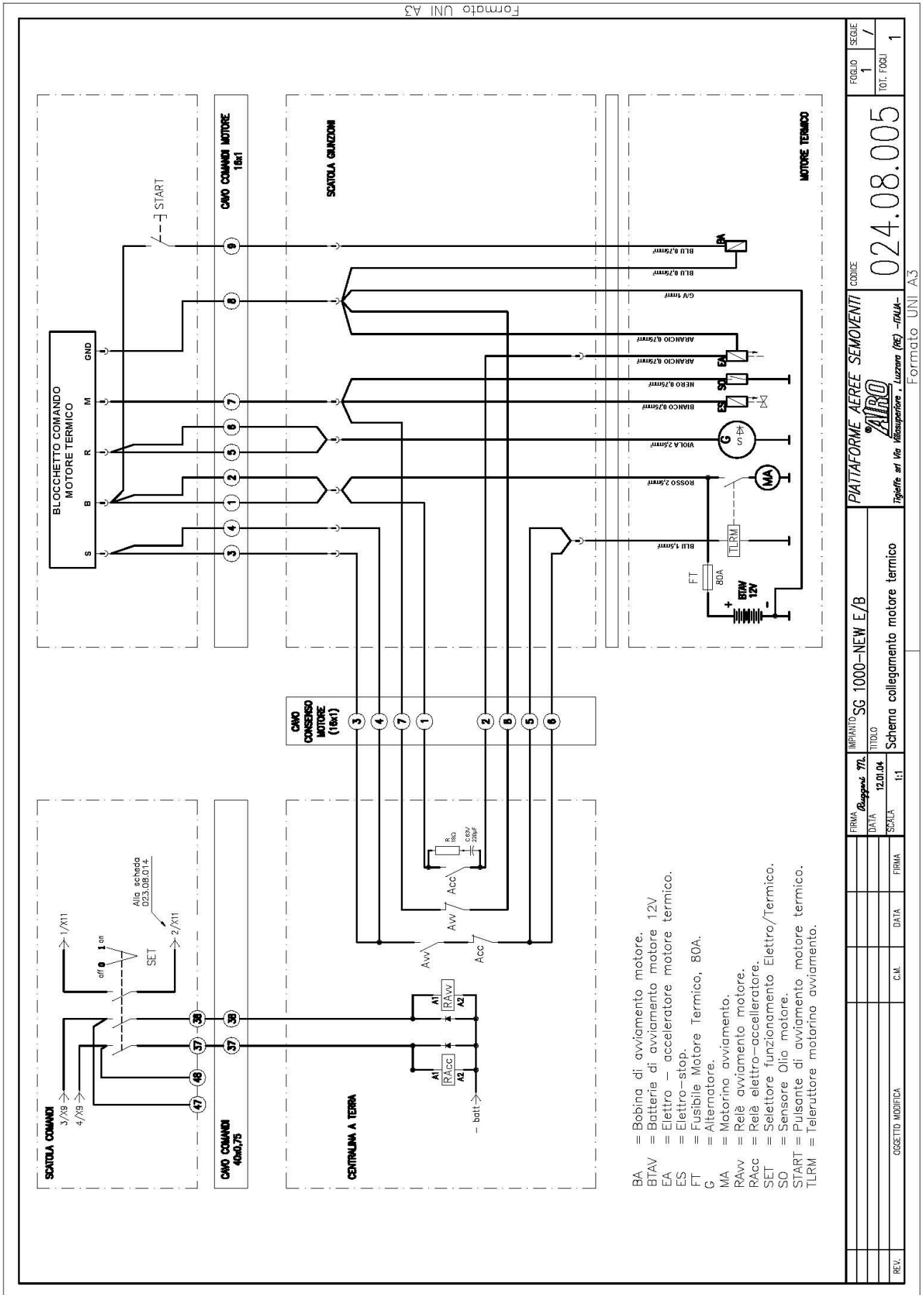
SW1	ИТАЛИЯ	ЗАГРАНИЦА
1	ON	ON
2	ON	OFF
3	/	/
4	OFF	ON
SW2		
1	OFF	
2	ON	
3	ON	
4	OFF	
SW3		
1	OFF	
2	OFF	
3	/	
4	OFF	
5	OFF	
6	/	
7	/	
SW4		
1	OFF	
2	OFF	
3	OFF	
4	/	

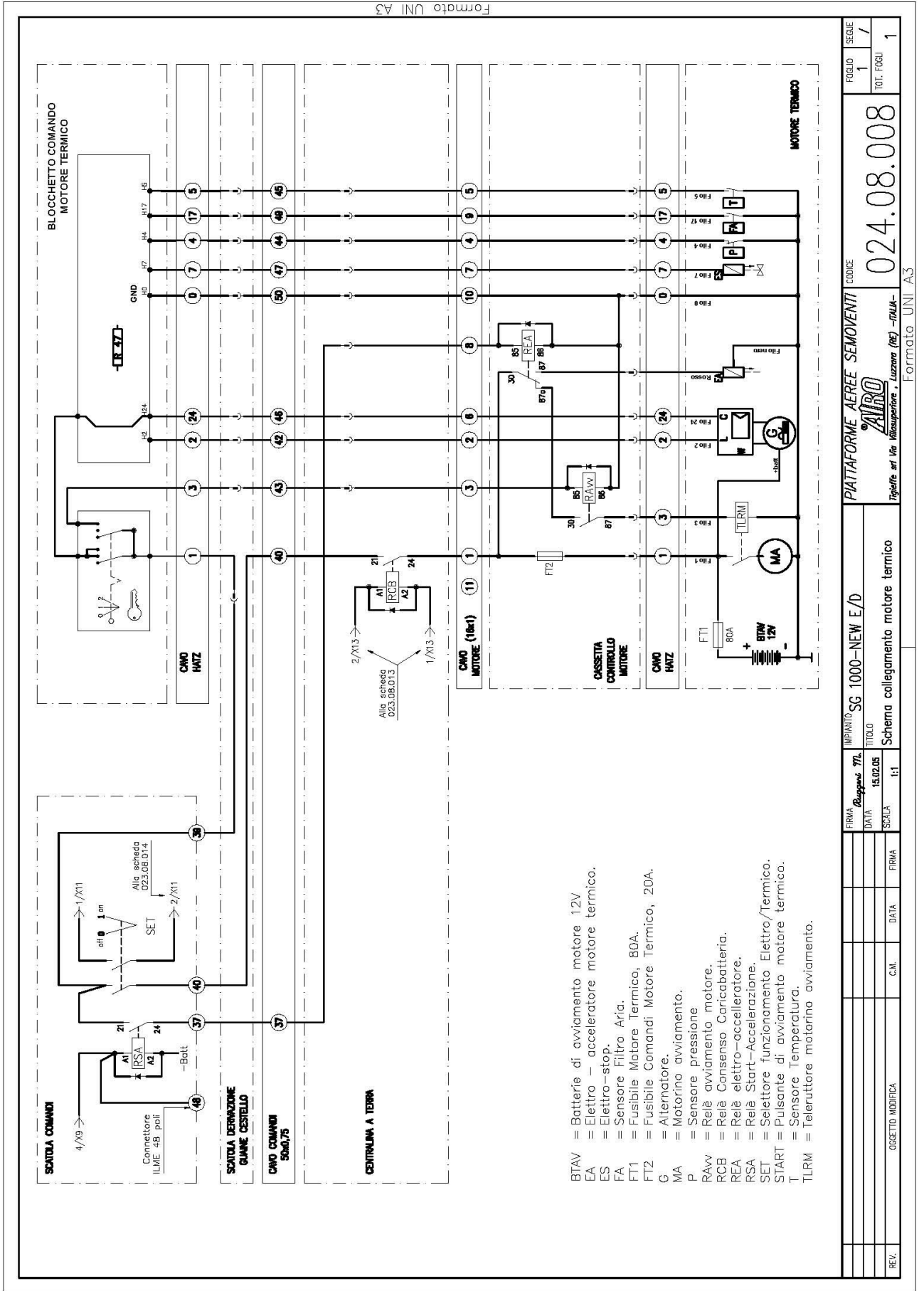


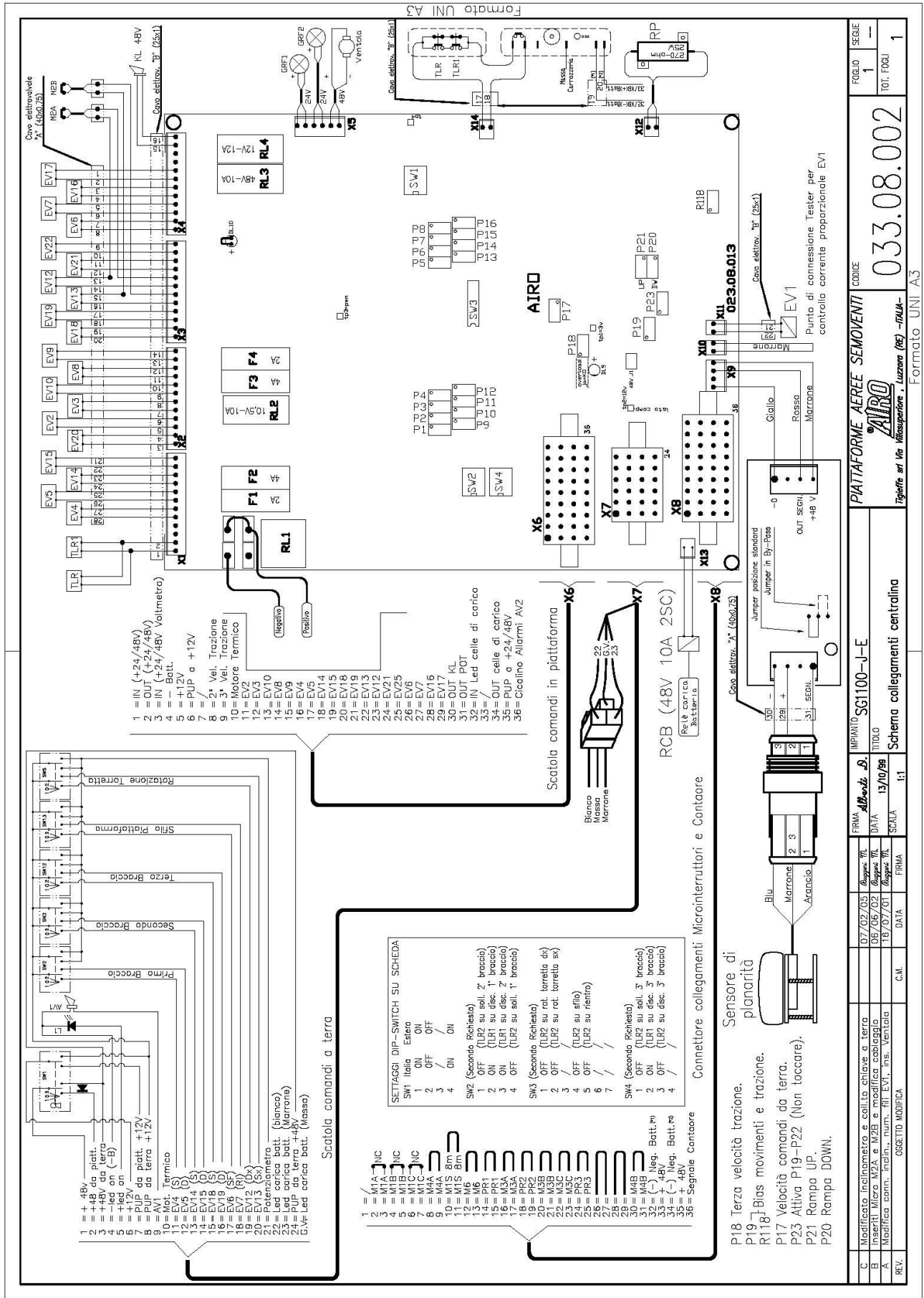
Formato UNI A3

REVISIONE	03.10.01	DATA	03.10.01	PROGETTO	Start/Stop Hardware
REVISIONE		DATA		OGGETTO	MODIFICA
C.M.		DATA		FRMA	
FRMA	Albergo S.	DATA	29/07/98	SCALA	
IMPIANTO	SG800-1000New-1100-J	SF920-1200			
TITOLO	Circuito Elettrico di Potenza				
PIATTAFORME AEREE SEMOVENTI					
AIRO					
Tipografie art Via Manzanarone, Lucena (CS) - ITALIA -					
FOGLIO	1	SECCIE		CODICE	023.08.021
TOT. FOGLI	1				

Formato UNI A3







REV.	OGGETTO MODIFICA	C.M.	DATA	FIRMA	SCALA	1:1
A	Modifica conn. inf. ins. Ventola		16/07/01	Diagn. M.		
B	Inseriti Mifera M2A e M2B e modifica cablaggio		05/06/02	Diagn. M.		
C	Modificato inclinometro e colla chiave a terra		07/02/05	Diagn. M.		
FIRMA Alberdi B.		DATA 13/10/99		IMPIANTO SG1100-J-E		
TITOLO Schema collegamenti centralina						
Riferite ad Uno Velosuperiore - Luzana (RE) - ITALIA						
PIATTAFORME AEREE SEMOVENTI CODICE 033.08.002						
Foglio 1						SERIE ---
Toti Fogli 1						

SCHEMA IDRAULICO MACCHINE STANDARD

SG 800 SG 1000 New SG1100-J

EV1	REGOLATORE PROPORZIONALE
EV2	ELETTROVALVOLA TRAZIONE AVANTI
EV3	ELETTROVALVOLA TRAZIONE INDIETRO
EV4	ELETTROVALVOLA SOLLEVAMENTO PANTOGRAFO
EV5	ELETTROVALVOLA DISCESA PANTOGRAFO
EV6	ELETTROVALVOLA SFILO BRACCIO
EV7	ELETTROVALVOLA RIENTRO BRACCIO
EV8	ELETTROVALVOLA STERZO DESTRA
EV9	ELETTROVALVOLA STERZO SINISTRA
EV10	ELETTROVALVOLA SERIE-PARALLELO TRAZIONE
EV11	ELETTROVALVOLA BY-PASS (SOLO E/B)
EV12	ELETTROVALVOLA ROTAZIONE DESTRA TORRETTA
EV13	ELETTROVALVOLA ROTAZIONE SINISTRA TORRETTA
EV14	ELETTROVALVOLA SOLLEVAMENTO BRACCIO
EV15	ELETTROVALVOLA DISCESA BRACCIO
EV16	ELETTROVALVOLA LIVELLAMENTO CESTELLO AVANTI
EV17	ELETTROVALVOLA LIVELLAMENTO CESTELLO INDIETRO
EV18	ELETTROVALVOLA ROTAZIONE DX PIATTAFORMA
EV19	ELETTROVALVOLA ROTAZIONE SX PIATTAFORMA
EV20	ELETTROVALVOLA SCAMBIO CILINDRATA MOTORI TRAZIONE
M	MOTORE ELETTRICO
MT	MOTEUR TERMICO (SOLO E/B)
1	SERBATOIO IDRAULICO
2	POMPA STERZO
3	POMPA PRINCIPALE
4	FILTRO IN ASPIRAZIONE
5	POMPA MANUALE DI EMERGENZA
6	VALVOLA UNIDIREZIONALE
7	TAPPO DI CARICO E SFIATO
8	BLOCCO IDRAULICO REGOLATORE PROPORZIONALE
9	RUBINETTO DI EMERGENZA
10	ATTACCO MANOMETRO
11	BLOCCO IDRAULICO STERZO
12	BLOCCO IDRAULICO SCAMBIO CILINDRATA
13	CILINDRO STERZO
14	PIASTRA TRAZIONE
15	STROZZATORE UNIDIREZIONALE
16	GRUPPO ELETTRODISTRIBUTORE
17	VALVOLA OVER-CENTER
18	CILINDRO SOLLEVAMENTO PRIMO BRACCIO
19	MOTORE ROTAZIONE TORRETTA
20	CILINDRO SOLLEVAMENTO SECONDO BRACCIO
21	CILINDRO LIVELLAMENTO PIATTAFORMA (SG1000NEW)
22	CILINDRO SFILO BRACCIO TELESCOPICO (SG1000NEW)
23	CILINDRO SENSORE (SG1000NEW)
24	SERBATOIO SUPPLEMENTARE
25	CILINDRO ROTAZIONE CESTELLO
26	CILINDRO JIB
27	VALVOLA DI MASSIMA E UNIDIREZIONALE

HYDRAULIC SYSTEM DIAGRAM FOR STANDARD MACHINES

SG 800 SG 1000 New SG 1100-J

EV1	PROPORTIONAL CONTROL ELECTRIC VALVE
EV2	FORWARD TRACTION ELECTRIC VALVE
EV3	REVERSE TRACTION ELECTRIC VALVE
EV4	PANTOGRAPH LIFTING ELECTRIC VALVE
EV5	PANTOGRAPH LOWERING ELECTRIC VALVE
EV6	TELESCOPIC ARM EXTENSION ELECTRIC VALVE
EV7	TELESCOPIC ARM RETRACTION ELECTRIC VALVE
EV8	RIGHT STEERING ELECTRIC VALVE
EV9	LEFT STEERING ELECTRIC VALVE
EV10	SERIES-PARALLEL TRACTION ELECTRIC VALVE
EV11	BY-PASS VALVE (ONLY E/B)
EV12	RIGHT TURRET ROTATION ELECTRIC VALVE
EV13	LEFT TURRET ROTATION ELECTRIC VALVE
EV14	TELESCOPIC ARM LIFTING ELECTRIC VALVE
EV15	TELESCOPIC ARM LOWERING ELECTRIC VALVE
EV16	CAGE FRONT-LEVELLING ELECTRIC VALVE
EV17	CAGE BACK-LEVELLING ELECTRIC VALVE
EV18	RIGHT CAGE ROTATION ELECTRIC VALVE
EV19	LEFT CAGE ROTATION ELECTRIC VALVE
EV20	HYDRAULIC MOTOR DISPLACEMENT CHANGE SOLENOID VALVE
M	ELECTRIC MOTOR
MT	THERMIC ENGINE (ONLY E/B)
1	HYDRAULIC TANK
2	STEERING PUMP
3	MAIN PUMP
4	FILTER
5	MANUALLY OPERATED EMERGENCY PUMP
6	ONE-WAY VALVE
7	FILLING AND SPIRACULAR PLUG
8	HYDRAULIC BLOCK PROPORTIONAL CONTROL
9	EMERGENCY COCK
10	MANOMETER CONNECTION
11	STEERING HYDRAULIC BLOCK
12	HYDRAULIC BLOCK DISPLACEMENT CHANGE
13	STEERING CYLINDER
14	TRACTION PLATE
15	ONE-WAY FLOW REGULATOR
16	ELECTRODISTRIBUTOR UNIT
17	OVER-CENTER VALVE
18	FIRST ARM LIFTING CYLINDER
19	TURRET ROTATION MOTOR
20	SECOND ARM LIFTING CYLINDER
21	PLATFORM LEVELLING CYLINDER (SG1000NEW)
22	TELESCOPIC ARM EXTENSION CYLINDER (SG1000NEW)
23	SENSOR CYLINDER (SG1000NEW)
24	ADDITIONAL TANK
25	CAGE ROTATION CYLINDER
26	JIB CYLINDER
27	UNIDIRECTIONAL RELIEF VALVE

SCHÉMA HYDRAULIQUE DE BASE

SG 800 SG 1000 New SG 1100-J

EV1	REGULATEUR PROPORTIONNEL
EV2	ELECTROVANNE DE TRACTION AVANT
EV3	ELECTROVANNE DE TRACTION ARRIERE
EV4	ELECTROVANNE DE SOULEVEMENT PREMIER BRAS
EV5	ELECTROVANNE DE DESCENTE PREMIER BRAS
EV6	ELECTROVANNE D'EXTRACTION BRAS
EV7	ELECTROVANNE DE RETOUR BRAS
EV8	ELECTROVANNE DE DIRECTION DROITE
EV9	ELECTROVANNE DE DIRECTION GAUCHE
EV10	ELECTROVANNE DE SERIE-PARALLELE TRACTION
EV11	ELECTROVANNE DE BY-PASS (SEULEMENT E/B)
EV12	ELECTROVANNE DE ROTATION TOURELLE A DROITE
EV13	ELECTROVANNE DE ROTATION TOURELLE A GAUCHE
EV14	ELECTROVANNE DE SOULEVEMENT BRAS
EV15	ELECTROVANNE DE DESCENTE BRAS
EV16	ELECTROVANNE DE MISE A NIVEAU NACELLE AVANT (SG1000NEW)
EV17	ELECTROVANNE DE MISE A NIVEAU NACELLE ARRIERE (SG1000NEW)
EV18	ELECTROVANNE DE ROTATION NACELLE A DROITE
EV19	ELECTROVANNE DE ROTATION NACELLE A GAUCHE
EV20	ELECTROVANNE COMMANDE CYLINDREE MOTEURS TRACTION
M	MOTEUR ELECTRIQUE
MT	MOTEUR THERMIQUE (SEULEMENT E/B)
1	RESERVOIR HYDRAULIQUE
2	POMPE COMMANDE BRAQUAGE
3	POMPE PRINCIPALE
4	FILTRE EN ASPIRATION
5	POMPE MANUELLE D'URGENCE
6	SOUPAPE
7	BOUCHON DE REMPLISSAGE HUILE - RENIFLARD AIR
8	ELECTRODISTRIBUTEUR REGULATEUR PROPORTIONNEL
9	ROBINET ENTRAÎNEMENT POMPE MANUEL
10	JONCTION MANOMETRE
11	ELECTRODISTRIBUTEUR BRAQUAGE
12	ELECTRODISTRIBUTEUR COMMANDE CYLINDREE MOTEURS TRACTION
13	VERIN BRAQUAGE
14	PLAQUE TRACTION
15	SOUPAPE
16	ELECTRODISTRIBUTEUR MOUVEMENTS
17	VALVE OVER - CENTER
18	VERIN LEVAGE PREMIER BRAS
19	MOTEUR ROTATION TOURELLE
20	VERIN LEVAGE DEUXIEME BRAS
21	VERIN COMMANDE NIVEAU NACELLE (SG1000NEW)
22	VERIN ALLONGEMENT BRAS TELESCOPIQUE (SG1000NEW)
23	VERIN CONTROLE NIVEAU NACELLE
24	RÉSERVOIR SUPPLÉMENTAIRE
25	VERIN ROTATION NACELLE
26	VERIN JIB
27	SOUPAPE DE SÉCURITÉ ET UNIDIRECTIONNELLE

PLAN HYDRAULIKANLAGE STANDARDMASCHINEN

SG 800 SG 1000 New SG 1100-J

EV1	PROPORTIONAL REGLER
EV2	ELEKTROVENTIL VORWÄRTSFAHREN
EV3	ELEKTROVENTIL RÜCKWÄRTSFAHREN
EV4	ELEKTROVENTIL AUSLEGERHOCHGANG (1°)
EV5	ELEKTROVENTIL AUSLEGERABSSENKUNG (1°)
EV6	ELEKTROVENTIL AUSLEGER AUSZIEHEN
EV7	ELEKTROVENTIL AUSLEGER EINZIEHEN
EV8	ELEKTROVENTIL LENKUNG RECHTS
EV9	ELEKTROVENTIL LENKUNG LINKS
EV10	REIHEN-PARALLEL-ELEKTROVENTIL FAHREN
EV11	BYPASS-ELEKTROVENTIL (NUR E/B)
EV12	ELEKTROVENTIL TURMDREHUNG RECHTS
EV13	ELEKTROVENTIL TURMDREHUNG LINKS
EV14	ELEKTROVENTIL AUSLEGERHOCHGANG (2°)
EV15	ELEKTROVENTIL AUSLEGERABSSENKUNG (2°)
EV16	ELEKTROVENTIL KORBAUSGLEICH VORNE (SG1000NEW)
EV17	ELEKTROVENTIL KORBAUSGLEICH HINTEN (SG1000NEW)
EV18	ELEKTROVENTIL KORBDREHUNG RECHTS
EV19	ELEKTROVENTIL KORBDREHUNG LINKS
EV20	ELEKTROVENTIL HUBRAUMWECHSEL FAHRMOTOREN
M	ELEKTRO MOTOR
MT	WARMEMOTOR (NUR E/B)
1	HYDRAULISCHER TANK
2	LENKUNGSPUMPE
3	PUMPE
4	SAUGFILTER
5	MANUELLE NOTPUMPE
6	VENTIL
7	OELFUELL - ENTLUEFTUNGSSTOEPSSEL
8	ELEKTROVERTEILER PROPORTIONAL REGLER
9	ARMATUR BETAETIGUNG MANUELLE PUMPE
10	MANOMETERANSCHLUSS
11	ELEKTROVERTEILER LENKUNG
12	ELEKTROVERTEILER HUBRAUMWECHSEL FAHRMOTOREN
13	LENKZYLINDER
14	ANTRIEBSPLATTE
15	VENTIL
16	ELEKTROVERTEILER BEWEGUNGEN
17	VENTIL OVER - CENTER
18	ZYLINDER AUSLEGERHOCHGANG (1°)
19	GETRIEBSMOTOR TURMDREHUNG
20	ZYLINDER AUSLEGERHOCHGANG (2°)
21	ZYLINDER KORBAUSGLEICH (SG1000NEW)
22	TELESKOP AUSLEGER AUSZIEH ZYLINDER (SG1000NEW)
23	ZYLINDER SENSOR KORBAUSGLEICH
24	ZUSATZTANK
25	ZYLINDER KORBAUSDREHUNG
26	ZYLINDER JIB
27	RÜCKSCHLAGS- UND EINRICHTUNGSVENTIL

ESQUEMA HIDRÁULICO MÁQUINAS STANDARD

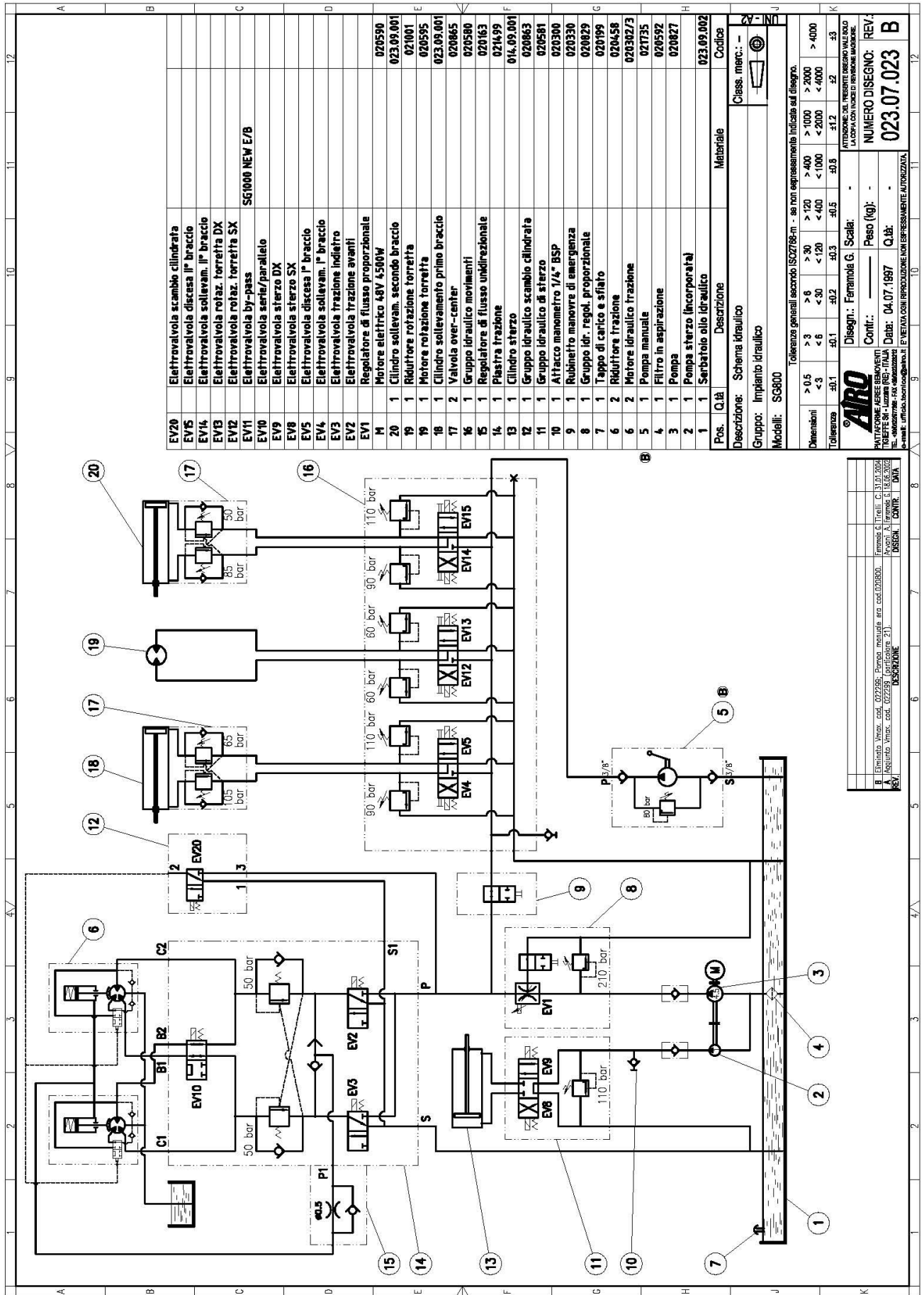
SG 800 SG 1000 New SG 1100-J

EV1	REGULADOR PROPORCIONAL
EV2	ELECTROVÁLVULA TRACCIÓN ADELANTE
EV3	ELECTROVÁLVULA TRACCIÓN ATRÁS
EV4	ELECTROVÁLVULA ELEVACIÓN PRIMER BRAZO
EV5	ELECTROVÁLVULA DESCENSO PRIMER BRAZO
EV6	ELECTROVÁLVULA EXTENSIÓN BRAZO
EV7	ELECTROVÁLVULA RETORNO BRAZO
EV8	ELECTROVÁLVULA DIRECCIÓN DERECHA
EV9	ELECTROVÁLVULA DIRECCIÓN IZQUIERDA
EV10	ELETTROVALVOLA SERIE-PARALLELO TRAZIONE
EV11	ELECTROVÁLVULA BY-PASS (SOLO E/B)
EV12	ELECTROVÁLVULA ROTACIÓN DERECHA TORRE
EV13	ELECTROVÁLVULA ROTACIÓN IZQUIERDA TORRE
EV14	ELECTROVÁLVULA ELEVACIÓN SEGUNDO BRAZO
EV15	ELECTROVÁLVULA DESCENSO SEGUNDO BRAZO
EV16	ELECTROVÁLVULA NIVELACIÓN CESTO ADELANTE
EV17	ELECTROVÁLVULA NIVELACIÓN CESTO ATRÁS
EV18	ELECTROVÁLVULA ROTACIÓN CESTO DERECHA
EV19	ELECTROVÁLVULA ROTACIÓN CESTO IZQUIERDA
EV20	ELECTROVÁLVULA CAMBIO EMBOLADA MOTORES TRACCIÓN
M	MOTOR ELÉCTRICO
MT	MOTO
1	SERBATOIO IDRAULICO
2	BOMBA DIRECCION
3	BOMBA PRINCIPAL
4	FILTROS EN ASPIRACIÓN
5	BOMBA MANUAL DE EMERGENCIA
6	VÁLVULA UNIDIRECCIONAL
7	TAPÓN DE GARGA ACEITE - SALIDA DE AIRE
8	ELECTRODISTRIBUIDOR REGULADOR PROPORCIONAL
9	GRIFO DE EMERGENCIA
10	CONEXIÓN MANÓMETRO
11	ELECTRODISTRIBUIDOR DIRECCIÓN
12	ELECTRODISTRIBUIDOR CAMBIO EMBOLADA MOTORES TRACCIÓN
13	CILINDRO DIRECCIÓN
14	ELECTRODISTRIBUIDOR TRACCIÓN
15	REGULADOR DE FLUJO UNIDIRECCIONAL
16	ELECTRODISTRIBUIDOR DE MOVIMIENTOS
17	VÁLVULA OVER - CENTER
18	CILINDRO ELEVACIÓN PRIMER BRAZO
19	MOTOR ROTACIÓN TORRETA
20	CILINDRO ELEVACIÓN SEGUNDO BRAZO
21	CILINDRO NIVELACIÓN PLATAFORMA (SG1000NEW)
22	CILINDRO EXTENSIÓN BRAZO TELESCOPICO (SG1000NEW)
23	CILINDRO SENSOR (SG1000NEW)
24	TANQUE SUPLEMENTARIO
25	CILINDRO EXTENSIÓN BRAZO TELESCÓPICO
26	CILINDRO JIB
27	VÁLVULA DE SEGURIDAD Y UNIDIRECCIONAL

ГИДРАВЛИЧЕСКАЯ СХЕМА СТАНДАРТНЫХ МАШИН

SG 800 SG 1000 New SG1100-J

EV1	ПРОПОРЦИОНАЛЬНЫЙ РЕГУЛЯТОР
EV2	ЭЛЕКТРОКЛАПАН ТЯГИ ВПЕРЕД
EV3	ЭЛЕКТРОКЛАПАН ТЯГИ НАЗАД
EV4	ЭЛЕКТРОКЛАПАН ПОДЪЕМА ПАНТОГРАФА
EV5	ЭЛЕКТРОКЛАПАН СПУСКА ПАНТОГРАФА
EV6	ЭЛЕКТРОКЛАПАН ВЫДВИЖЕНИЯ СТРЕЛЫ
EV7	ЭЛЕКТРОКЛАПАН ВОЗВРАЩЕНИЯ СТРЕЛЫ
EV8	ЭЛЕКТРОКЛАПАН ПОВОРОТА НАПРАВО
EV9	ЭЛЕКТРОКЛАПАН ПОВОРОТА НАЛЕВО
EV10	ЭЛЕКТРОКЛАПАН СЕРИЙНО-ПАРАЛЛЕЛЬНОГО ТЯГОВОГО ДВИЖЕНИЯ
EV11	ЭЛЕКТРОКЛАПАН DI BY-PASS (ТОЛЬКО E/D)
EV12	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ БАШНИ НАПРАВО
EV13	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ БАШНИ НАЛЕВО
EV14	ЭЛЕКТРОКЛАПАН ПОДЪЕМА СТРЕЛЫ
EV15	ЭЛЕКТРОКЛАПАН СПУСКА СТРЕЛЫ
EV16	ЭЛЕКТРОКЛАПАН ВЫРАВНИВАНИЯ КОРЗИНЫ ВПЕРЕД
EV17	ЭЛЕКТРОКЛАПАН ВЫРАВНИВАНИЯ КОРЗИНЫ НАЗАД
EV18	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ DX ПЛАТФОРМЫ
EV19	ЭЛЕКТРОКЛАПАН ВРАЩЕНИЯ SX ПЛАТФОРМЫ
EV20	ЭЛЕКТРОКЛАПАН ЦИЛИНДРИЧЕСКОЙ КОРОБКИ ПЕРЕДАЧ ДВИГАТЕЛЕЙ ТЯГИ
M	ЭЛЕКТРОДВИГАТЕЛЬ
MT	ТЕПЛОВОЙ ДВИГАТЕЛЬ (ТОЛЬКО E/V)
1	ГИДРАВЛИЧЕСКИЙ РЕЗЕРВУАР
2	НАСОС ПОВОРОТА
3	ГЛАВНЫЙ НАСОС
4	ВСАСЫВАЮЩИЙ ФИЛЬТР
5	АВАРИЙНЫЙ РУЧНОЙ НАСОС
6	ОДНОНАПРАВЛЕННЫЙ КЛАПАН
7	ПРОБКА ЗАПОЛНЕНИЯ И ОТДУШИНЫ
8	ГИДРАВЛИЧЕСКИЙ БЛОК ПРОПОРЦИОНАЛЬНОГО РЕГУЛЯТОРА
9	АВАРИЙНЫЙ КРАН
10	ШТЕПСЕЛЬНАЯ ВИЛКА МАНОМЕТРА
11	ГИДРАВЛИЧЕСКИЙ БЛОК ПОВОРОТА
12	ГИДРАВЛИЧЕСКИЙ БЛОК ЦИЛИНДРИЧЕСКОЙ КОРОБКИ ПЕРЕДАЧ
13	ЦИЛИНДР ПОВОРОТА
14	ПЛИТА ТЯГИ
15	СУЖАТЕЛЬ ОДНОНАПРАВЛЕННЫЙ
16	ГРУППА ЭЛЕКТРОРАСПРЕДЕЛИТЕЛЕЙ
17	КЛАПАН OVER-CENTER
18	ЦИЛИНДР ПОДЪЕМА ПЕРВОГО ЗВЕНА СТРЕЛЫ
19	ДВИГАТЕЛЬ ВРАЩЕНИЯ БАШНИ
20	ЦИЛИНДР ПОДЪЕМА ПЕРВОГО ЗВЕНА СТРЕЛЫ
21	ЦИЛИНДР ВЫРАВНИВАНИЯ ПЛАТФОРМЫ (SG1000NEW)
22	ЦИЛИНДР ВЫДВИЖЕНИЯ ТЕЛЕСКОПИЧЕСКОЙ СТРЕЛЫ (SG1000NEW)
23	ЦИЛИНДР ДАТЧИКА (SG1000NEW)
24	ДОПОЛНИТЕЛЬНЫЙ РЕЗЕРВУАР
25	ЦИЛИНДР ВРАЩЕНИЯ КОРЗИНЫ
26	ЦИЛИНДР J1B
27	МАКСИМАЛЬНЫЙ И ОДНОНАПРАВЛЕННЫЙ КЛАПАН



Dimensioni	> 0.5	> 3	> 6	> 30	> 120	> 400	> 1000	> 2000	> 4000
Tolleranza	+0.1	+0.1	+0.1	+0.2	+0.3	+0.5	+0.8	+1.2	+2
Tolleranza	-0.1	-0.1	-0.1	-0.2	-0.3	-0.5	-0.8	-1.2	-2

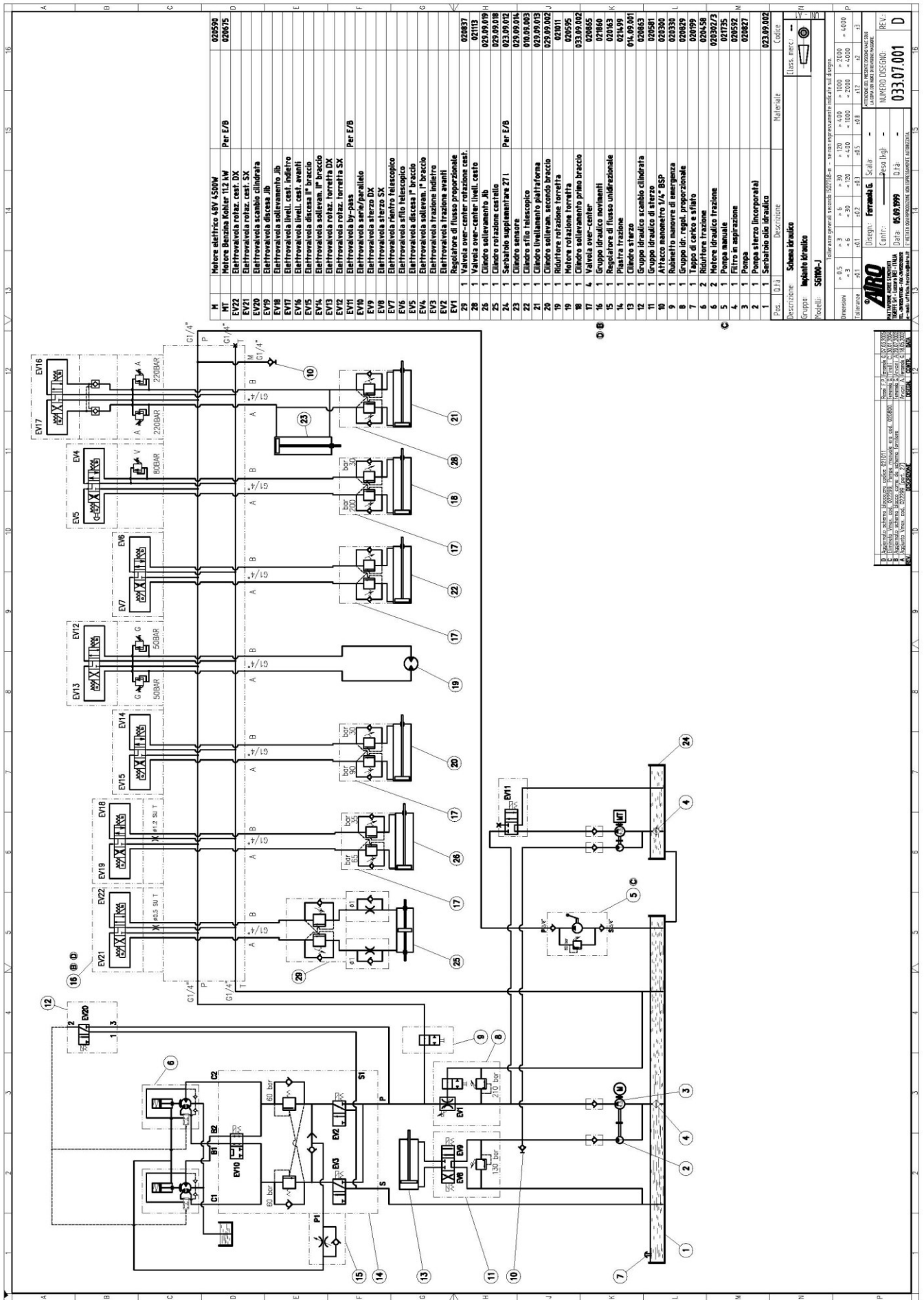
Tolleranze generali secondo ISO2768-mt - se non espressamente indicato sul disegno.

Disegni: Ferramola G. Scala: - - -
 Contr.: - - -
 Peso (kg): -
 Q.tà: -

NUMERO DISEGNO: REV.4
 023.07.023

ATTENZIONE: IL PRESENTE DESENIO VALE SOLO LA COPIA CON I NOME DI REVISIONE INADDERE.

REV.	DESCRIZIONE	DATA	DESIGN.	CONT.	DMA
1	Disegno	04.07.1997			
2	Disegno	04.07.1997			
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94	Disegno	04.07.1997			
95	Disegno	04.07.1997			
96	Disegno	04.07.1997			
97	Disegno	04.07.1997			
98	Disegno	04.07.1997			
99	Disegno	04.07.1997			
100	Disegno	04.07.1997			



M	Descrizione	Per E/B	020590
HT	Motore elettrico 48V 4500W		020675
EV22	Motore Benzina Kohler 112 kW		
EV21	Elettrovalvola rotaz. centr. DX		
EV20	Elettrovalvola rotaz. centr. SX		
EV19	Elettrovalvola scambio cilindrica		
EV18	Elettrovalvola dicesca JB		
EV17	Elettrovalvola dicesca JB		
EV16	Elettrovalvola livell. centr. sinistro		
EV15	Elettrovalvola livell. centr. destro		
EV14	Elettrovalvola dicesca 1° braccio		
EV13	Elettrovalvola sollevam. 1° braccio		
EV12	Elettrovalvola rotaz. torretta DX		
EV11	Elettrovalvola rotaz. torretta SX		
EV10	Elettrovalvola by-pass		
EV09	Elettrovalvola serie/parallelo		
EV08	Elettrovalvola sterzo SX		
EV07	Elettrovalvola sterzo SX		
EV06	Elettrovalvola rientro telescopico		
EV05	Elettrovalvola sfilo telescopico		
EV04	Elettrovalvola dicesca 1° braccio		
EV03	Elettrovalvola sollevam. 1° braccio		
EV02	Elettrovalvola trazione indietro		
EV01	Elettrovalvola trazione avanti		
29	Regolatore di flusso proporzionale		
28	1 Valvola over-center livell. centr.		
27	1 Cilindro rotazione centrale		
26	1 Cilindro sollevamento JB		
25	1 Cilindro sollevamento JB		
24	1 Subalbero supplementare 271		
23	1 Cilindro sfilo telescopico		
22	1 Cilindro sfilo telescopico		
21	1 Cilindro sollevamento spallafornace		
20	1 Cilindro sollevamento secondo braccio		
19	1 Riduttore rotazione torretta		
18	1 Motore rotazione torretta		
17	4 Cilindro sollevamento primo braccio		
16	1 Valvola over-center		
15	1 Gruppo idraulico movimenti		
14	1 Regolatore di flusso unidirezionale		
13	1 Piastra trazione		
12	1 Cilindro sterzo		
11	1 Gruppo idraulico scambio cilindrica		
10	1 Gruppo idraulico di sterzo		
9	1 Rubinetto manovra 1/4" BSP		
8	1 Gruppo dir. reggil. proporzionale		
7	1 Gruppo di carico e sfilato		
6	1 Motore trazione		
5	1 Motore idraulico trazione		
4	1 Filtro in aspirazione		
3	1 Pompa		
2	1 Pompa sterzo (incorporata)		
1	1 Serbatoio olio idraulico		

Pos. D/13	Descrizione	Materiali	023.09.002
	Schema Idraulico		
	Gruppo: Impianto Idraulico		
	Modello: SPMK-1		

Dimensione	± 0,5	± 0,3	± 0,6	± 1,00	± 0,40	± 0,004	± 2,000	± 0,001
Entrata	< 30	< 30	< 30	< 100	< 1000	< 2000	< 4000	< 6000

Design	Scala	Numero Disegno	REV.
Ferrarello G.		033.07.001	D

0. Distribuzione, disegno, progetto, calcolo, 02/01/11
 1. Distribuzione, disegno, progetto, calcolo, 02/01/11
 2. Distribuzione, disegno, progetto, calcolo, 02/01/11
 3. Distribuzione, disegno, progetto, calcolo, 02/01/11
 4. Distribuzione, disegno, progetto, calcolo, 02/01/11
 5. Distribuzione, disegno, progetto, calcolo, 02/01/11
 6. Distribuzione, disegno, progetto, calcolo, 02/01/11
 7. Distribuzione, disegno, progetto, calcolo, 02/01/11
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 11. Distribuzione, disegno, progetto, calcolo, 02/01/11
 12. Distribuzione, disegno, progetto, calcolo, 02/01/11
 13. Distribuzione, disegno, progetto, calcolo, 02/01/11
 14. Distribuzione, disegno, progetto, calcolo, 02/01/11
 15. Distribuzione, disegno, progetto, calcolo, 02/01/11
 16. Distribuzione, disegno, progetto, calcolo, 02/01/11



AIRO È UNA DIVISIONE TIGIEFFE SRL - VIA VILLA SUPERIORE, 82 -42045 LUZZARA (RE)
 TEL. +39 0522 977365 FAX +39 0522 977015

DICHIARAZIONE CE DI CONFORMITA' - CE DECLARATION OF CONFORMITY - DECLARATION CE DE CONFORMITE' - EG KONFORMITÄTSEKTLÄRUNG - DECLARACION CE DE CONFORMIDAD- ЗАЯВЛЕНИЕ О КОНФОРМНОСТИ ЕС 2006/42/CE

Dichiarazione originale	Original Declaration	Déclaration Originale	Originalerklärung	Declaración Original	Оригинальная декларация
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Noi - We - Nous - Wir - Nosotros - мы

Tigieffe s.r.l. - Via Villa Superiore N.° 82 - Luzzara (Reggio Emilia) - ITALIA

Dichiaro sotto la nostra esclusiva responsabilità che il prodotto:	Declare under our exclusive responsibility that the product:	Declarons sous notre responsabilité exclusive que le produit:	Erklären hiermit unter Übernahme der vollen Verantwortung für diese Erklärung, daß das Produkt:	Declaramos bajo nuestra exclusiva responsabilidad que el producto:	Под нашу исключительную ответственность заявляем, что изделие:
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Piattaforma di Lavoro Elevabile
 Mobile Elevating Work Platform
 Plates-forme Elévatrice Mobiles de Personnel
 Fahrbare Hubarbeitsbühnen
 Plataforma Elevadora Móvil de Personal
 Платформа для высотного работ

Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Памы	Anno - Year - Année Baujahr - Ano - Год
A10 E	XXXXXXXXXX	XXXXXXXXXX

Al quale questa dichiarazione si riferisce è conforme alle direttive 2006/42/CE, 2014/30/CE, 2005/88/CE e al modello certificato da:	To which this declaration refers is in compliance with the directives 2006/42/CE, 2014/30/CE, 2005/88/CE and with the model certified by:	Faisant l'objet de la présente déclaration est conforme aux directives 2006/42/CE, 2014/30/CE, 2005/88/CE et au modèle certifié par	Auf das sich die vorliegende Erklärung bezieht, den 2006/42/CE, 2014/30/CE, 2005/88/CE Richtlinien und dem von:	Al cual esta declaración se refiere cumple las directivas 2006/42/CE, 2014/30/CE, 2005/88/CE y el modelo certificado por:	К которой это заявление относится, соответствует директивами 2006/42/CE, 2014/30/CE, 2005/88/CE и сертифицированной модели из:
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ICE Spa Via Garibaldi, 20 40011 Anzola Emilia - BO (Italia)

N. di identificazione 0303

con il seguente numero di certificazione:	with the following certification number:	avec le numéro de certification suivant:	Zertifizierten Modell mit folgender Zertifizierungsnummer:	con el siguiente número de certificación:	со следующим сертифицированным номером:
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N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5807

e alle norme seguenti:	and with the following standards:	et aux normes suivantes:	die Erklärung entspricht den folgenden Normen:	y a las siguientes normas:	и со следующими нормами:
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EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

Il firmatario di questa dichiarazione di conformità è autorizzato a costituire il Fascicolo Tecnico.	The signatory of this conformity declaration is authorized to set up the Technical File.	Le signataire de cette déclaration de conformité est autorisé à constituer le Dossier Technique.	Der Unterzeichner dieser Konformitätserklärung ist autorisiert, das technische Unterlagen abzufassen.	El firmante de esta declaración de conformidad está autorizado a crear el Expediente Técnico.	Лицо, подписавшее это заявление о соответствии, уполномочено составить техническую документацию оборудования.
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Luzzara (RE), data-date-date-Datum-fecha-Дата

.....
 Wang Kai

(Il legale rappresentante - The legal representative)





AIRO È UNA DIVISIONE TIGIEFFE SRL - VIA VILLA SUPERIORE, 82 -42045 LUZZARA (RE)
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DICHIARAZIONE CE DI CONFORMITA' - CE DECLARATION OF CONFORMITY - DECLARATION CE DE CONFORMITE' - EG KONFORMITÄTSEKTLÄRUNG - DECLARACION CE DE CONFORMIDAD- ЗАЯВЛЕНИЕ О КОНФОРМНОСТИ ЕС 2006/42/CE

Dichiarazione originale	Original Declaration	Déclaration Originale	Originalerklärung	Declaración Original	Оригинальная декларация
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Noi - We - Nous - Wir - Nosotros - мы

Tigieffe s.r.l. - Via Villa Superiore N.° 82 - Luzzara (Reggio Emilia) - ITALIA

Dichiaro sotto la nostra esclusiva responsabilità che il prodotto:	Declare under our exclusive responsibility that the product:	Declarons sous notre responsabilité exclusive que le produit:	Erklären hiermit unter Übernahme der vollen Verantwortung für diese Erklärung, daß das Produkt:	Declaramos bajo nuestra exclusiva responsabilidad que el producto:	Под нашу исключительную ответственность заявляем, что изделие:
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Piattaforma di Lavoro Elevabile
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Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Памы	Anno - Year - Année Baujahr - Ano - Год
A12 E	XXXXXXXXXX	XXXXXXXXXX

Al quale questa dichiarazione si riferisce è conforme alle direttive 2006/42/CE, 2014/30/CE, 2005/88/CE e al modello certificato da:	To which this declaration refers is in compliance with the directives 2006/42/CE, 2014/30/CE, 2005/88/CE and with the model certified by:	Faisant l'objet de la présente déclaration est conforme aux directives 2006/42/CE, 2014/30/CE, 2005/88/CE et au modèle certifié par	Auf das sich die vorliegende Erklärung bezieht, den 2006/42/CE, 2014/30/CE, 2005/88/CE Richtlinien und dem von:	Al cual esta declaración se refiere cumple las directivas 2006/42/CE, 2014/30/CE, 2005/88/CE y el modelo certificado por:	К которой это заявление относится, соответствует директивами 2006/42/CE, 2014/30/CE, 2005/88/CE и сертифицированной модели из:
--	---	---	---	---	--

ICE Spa Via Garibaldi, 20 40011 Anzola Emilia - BO (Italia)

N. di identificazione 0303

con il seguente numero di certificazione:	with the following certification number:	avec le numéro de certification suivant:	Zertifizierten Modell mit folgender Zertifizierungsnummer:	con el siguiente número de certificación:	со следующим сертифицированным номером:
---	--	--	--	---	---

N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5807

e alle norme seguenti:	and with the following standards:	et aux normes suivantes:	die Erklärung entspricht den folgenden Normen:	y a las siguientes normas:	и со следующими нормами:
------------------------	-----------------------------------	--------------------------	--	----------------------------	--------------------------

EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

Il firmatario di questa dichiarazione di conformità è autorizzato a costituire il Fascicolo Tecnico.	The signatory of this conformity declaration is authorized to set up the Technical File.	Le signataire de cette déclaration de conformité est autorisé à constituer le Dossier Technique.	Der Unterzeichner dieser Konformitätserklärung ist autorisiert, das technische Unterlagen abzufassen.	El firmante de esta declaración de conformidad está autorizado a crear el Expediente Técnico.	Лицо, подписавшее это заявление о соответствии, уполномочено составить техническую документацию оборудования.
--	--	--	---	---	---

Luzzara (RE), data-date-date-Datum-fecha-Дата

.....
 Wang Kai

(Il legale rappresentante - The legal representative)



AIRO È UNA DIVISIONE TIGIEFFE SRL - VIA VILLA SUPERIORE, 82 -42045 LUZZARA (RE)
 TEL. +39 0522 977365 FAX +39 0522 977015

DICHIARAZIONE CE DI CONFORMITA' - CE DECLARATION OF CONFORMITY - DECLARATION CE DE CONFORMITE' - EG KONFORMITÄTSEKTLÄRUNG - DECLARACION CE DE CONFORMIDAD- ЗАЯВЛЕНИЕ О КОНФОРМНОСТИ ЕС 2006/42/CE

Dichiarazione originale	Original Declaration	Déclaration Originale	Originalerklärung	Declaración Original	Оригинальная декларация
-------------------------	----------------------	-----------------------	-------------------	----------------------	-------------------------

Noi - We - Nous - Wir - Nosotros - мы

Tigieffe s.r.l. - Via Villa Superiore N.° 82 - Luzzara (Reggio Emilia) - ITALIA

Dichiaro sotto la nostra esclusiva responsabilità che il prodotto:	Declare under our exclusive responsibility that the product:	Declarons sous notre responsabilité exclusive que le produit:	Erklären hiermit unter Übernahme der vollen Verantwortung für diese Erklärung, daß das Produkt:	Declaramos bajo nuestra exclusiva responsabilidad que el producto:	Под нашу исключительную ответственность заявляем, что изделие:
Piattaforma di Lavoro Elevabile Mobile Elevating Work Platform Plates-forme Elévatrice Mobiles de Personnel Fahrbare Hubarbeitsbühnen Plataforma Elevadora Móvil de Personal Платформа для высотного работ					

Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Памы	Anno - Year - Année Baujahr - Ano - Год
A12 EB	XXXXXXXXXX	XXXXXXXXXX

Al quale questa dichiarazione si riferisce è conforme alle direttive 2006/42/CE, 2014/30/CE, 2005/88/CE e al modello certificato da:	To which this declaration refers is in compliance with the directives 2006/42/CE, 2014/30/CE, 2005/88/CE and with the model certified by:	Faisant l'objet de la présente déclaration est conforme aux directives 2006/42/CE, 2014/30/CE, 2005/88/CE et au modèle certifié par	Auf das sich die vorliegende Erklärung bezieht, den 2006/42/CE, 2014/30/CE, 2005/88/CE Richtlinien und dem von:	Al cual esta declaración se refiere cumple las directivas 2006/42/CE, 2014/30/CE, 2005/88/CE y el modelo certificado por:	К которой это заявление относится, соответствует директивами 2006/42/CE, 2014/30/CE, 2005/88/CE и сертифицированной модели из:
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ICE Spa Via Garibaldi, 20 40011 Anzola Emilia - BO (Italia)

N. di identificazione 0303

con il seguente numero di certificazione:	with the following certification number:	avec le numéro de certification suivant:	Zertifizierten Modell mit folgender Zertifizierungsnummer:	con el siguiente número de certificación:	со следующим сертифицированным номером:
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N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5808

e alle norme seguenti:	and with the following standards:	et aux normes suivantes:	die Erklärung entspricht den folgenden Normen:	y a las siguientes normas:	и со следующими нормами:
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EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

Il firmatario di questa dichiarazione di conformità è autorizzato a costituire il Fascicolo Tecnico.	The signatory of this conformity declaration is authorized to set up the Technical File.	Le signataire de cette déclaration de conformité est autorisé à constituer le Dossier Technique.	Der Unterzeichner dieser Konformitätserklärung ist autorisiert, das technische Unterlagen abzufassen.	El firmante de esta declaración de conformidad está autorizado a crear el Expediente Técnico.	Лицо, подписавшее это заявление о соответствии, уполномочено составить техническую документацию оборудования.
--	--	--	---	---	---

Luzzara (RE), data-date-date-Datum-fecha-Дата

Wang Kai

(Il legale rappresentante - The legal representative)



AIRO È UNA DIVISIONE TIGIEFFE SRL - VIA VILLA SUPERIORE, 82 -42045 LUZZARA (RE)
 TEL. +39 0522 977365 FAX +39 0522 977015

DICHIARAZIONE CE DI CONFORMITA' - CE DECLARATION OF CONFORMITY - DECLARATION CE DE CONFORMITE' - EG KONFORMITÄTSEKTLÄRUNG - DECLARACION CE DE CONFORMIDAD- ЗАЯВЛЕНИЕ О КОНФОРМНОСТИ ЕС 2006/42/CE

Dichiarazione originale	Original Declaration	Déclaration Originale	Originalerklärung	Declaración Original	Оригинальная декларация
-------------------------	----------------------	-----------------------	-------------------	----------------------	-------------------------

Noi - We - Nous - Wir - Nosotros - мы

Tigieffe s.r.l. - Via Villa Superiore N.° 82 - Luzzara (Reggio Emilia) - ITALIA

Dichiaro sotto la nostra esclusiva responsabilità che il prodotto:	Declare under our exclusive responsibility that the product:	Declarons sous notre responsabilité exclusive que le produit:	Erklären hiermit unter Übernahme der vollen Verantwortung für diese Erklärung, daß das Produkt:	Declaramos bajo nuestra exclusiva responsabilidad que el producto:	Под нашу исключительную ответственность заявляем, что изделие:
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Piattaforma di Lavoro Elevabile
 Mobile Elevating Work Platform
 Plates-forme Elévatrice Mobiles de Personnel
 Fahrbare Hubarbeitsbühnen
 Plataforma Elevadora Móvil de Personal
 Платформа для высотного работ

Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Памы	Anno - Year - Année Baujahr - Ano - Год
A12 ED	XXXXXXXXXX	XXXXXXXXXX

Al quale questa dichiarazione si riferisce è conforme alle direttive 2006/42/CE, 2014/30/CE, 2005/88/CE e al modello certificato da:	To which this declaration refers is in compliance with the directives 2006/42/CE, 2014/30/CE, 2005/88/CE and with the model certified by:	Faisant l'objet de la présente déclaration est conforme aux directives 2006/42/CE, 2014/30/CE, 2005/88/CE et au modèle certifié par	Auf das sich die vorliegende Erklärung bezieht, den 2006/42/CE, 2014/30/CE, 2005/88/CE Richtlinien und dem von:	Al cual esta declaración se refiere cumple las directivas 2006/42/CE, 2014/30/CE, 2005/88/CE y el modelo certificado por:	К которой это заявление относится, соответствует директивами 2006/42/CE, 2014/30/CE, 2005/88/CE и сертифицированной модели из:
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ICE Spa Via Garibaldi, 20 40011 Anzola Emilia - BO (Italia)

N. di identificazione 0303

con il seguente numero di certificazione:	with the following certification number:	avec le numéro de certification suivant:	Zertifizierten Modell mit folgender Zertifizierungsnummer:	con el siguiente número de certificación:	со следующим сертифицированным номером:
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N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5809

e alle norme seguenti:	and with the following standards:	et aux normes suivantes:	die Erklärung entspricht den folgenden Normen:	y a las siguientes normas:	и со следующими нормами:
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EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

Il firmatario di questa dichiarazione di conformità è autorizzato a costituire il Fascicolo Tecnico.	The signatory of this conformity declaration is authorized to set up the Technical File.	Le signataire de cette déclaration de conformité est autorisé à constituer le Dossier Technique.	Der Unterzeichner dieser Konformitätserklärung ist autorisiert, das technische Unterlagen abzufassen.	El firmante de esta declaración de conformidad está autorizado a crear el Expediente Técnico.	Лицо, подписавшее это заявление о соответствии, уполномочено составить техническую документацию оборудования.
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Luzzara (RE), data-date-date-Datum-fecha-Дата

.....
 Wang Kai

(Il legale rappresentante - The legal representative)



AIRO È UNA DIVISIONE TIGIEFFE SRL - VIA VILLA SUPERIORE, 82 -42045 LUZZARA (RE)
 TEL. +39 0522 977365 FAX +39 0522 977015

DICHIARAZIONE CE DI CONFORMITA' - CE DECLARATION OF CONFORMITY - DECLARATION CE DE CONFORMITE' - EG KONFORMITÄTSEKTLÄRUNG - DECLARACION CE DE CONFORMIDAD- ЗАЯВЛЕНИЕ О КОНФОРМНОСТИ ЕС 2006/42/CE

Dichiarazione originale	Original Declaration	Déclaration Originale	Originalerklärung	Declaración Original	Оригинальная декларация
-------------------------	----------------------	-----------------------	-------------------	----------------------	-------------------------

Noi - We - Nous - Wir - Nosotros - мы

Tigieffe s.r.l. - Via Villa Superiore N.° 82 - Luzzara (Reggio Emilia) - ITALIA

Dichiaro sotto la nostra esclusiva responsabilità che il prodotto:	Declare under our exclusive responsibility that the product:	Declarons sous notre responsabilité exclusive que le produit:	Erklären hiermit unter Übernahme der vollen Verantwortung für diese Erklärung, daß das Produkt:	Declaramos bajo nuestra exclusiva responsabilidad que el producto:	Под нашу исключительную ответственность заявляем, что изделие:
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Piattaforma di Lavoro Elevabile
 Mobile Elevating Work Platform
 Plates-forme Elévatrice Mobiles de Personnel
 Fahrbare Hubarbeitsbühnen
 Plataforma Elevadora Móvil de Personal
 Платформа для высотного работ

Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Памы	Anno - Year - Année Baujahr - Ano - Год
A13 JE	XXXXXXXXXX	XXXXXXXXXX

Al quale questa dichiarazione si riferisce è conforme alle direttive 2006/42/CE, 2014/30/CE, 2005/88/CE e al modello certificato da:	To which this declaration refers is in compliance with the directives 2006/42/CE, 2014/30/CE, 2005/88/CE and with the model certified by:	Faisant l'objet de la présente déclaration est conforme aux directives 2006/42/CE, 2014/30/CE, 2005/88/CE et au modèle certifié par	Auf das sich die vorliegende Erklärung bezieht, den 2006/42/CE, 2014/30/CE, 2005/88/CE Richtlinien und dem von:	Al cual esta declaración se refiere cumple las directivas 2006/42/CE, 2014/30/CE, 2005/88/CE y el modelo certificado por:	К которой это заявление относится, соответствует директивами 2006/42/CE, 2014/30/CE, 2005/88/CE и сертифицированной модели из:
--	---	---	---	---	--

ICE Spa Via Garibaldi, 20 40011 Anzola Emilia - BO (Italia)

N. di identificazione 0303

con il seguente numero di certificazione:	with the following certification number:	avec le numéro de certification suivant:	Zertifizierten Modell mit folgender Zertifizierungsnummer:	con el siguiente número de certificación:	со следующим сертифицированным номером:
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N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5810

e alle norme seguenti:	and with the following standards:	et aux normes suivantes:	die Erklärung entspricht den folgenden Normen:	y a las siguientes normas:	и со следующими нормами:
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EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

Il firmatario di questa dichiarazione di conformità è autorizzato a costituire il Fascicolo Tecnico.	The signatory of this conformity declaration is authorized to set up the Technical File.	Le signataire de cette déclaration de conformité est autorisé à constituer le Dossier Technique.	Der Unterzeichner dieser Konformitätserklärung ist autorisiert, das technische Unterlagen abzufassen.	El firmante de esta declaración de conformidad está autorizado a crear el Expediente Técnico.	Лицо, подписавшее это заявление о соответствии, уполномочено составить техническую документацию оборудования.
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Luzzara (RE), data-date-date-Datum-fecha-Дата

.....
 Wang Kai

(Il legale rappresentante - The legal representative)



AIRO È UNA DIVISIONE TIGIEFFE SRL - VIA VILLA SUPERIORE, 82 -42045 LUZZARA (RE)
 TEL. +39 0522 977365 FAX +39 0522 977015

DICHIARAZIONE CE DI CONFORMITA' - CE DECLARATION OF CONFORMITY - DECLARATION CE DE CONFORMITE' - EG KONFORMITÄTSEKTLÄRUNG - DECLARACION CE DE CONFORMIDAD- ЗАЯВЛЕНИЕ О КОНФОРМНОСТИ ЕС 2006/42/CE

Dichiarazione originale	Original Declaration	Déclaration Originale	Originalerklärung	Declaración Original	Оригинальная декларация
-------------------------	----------------------	-----------------------	-------------------	----------------------	-------------------------

Noi - We - Nous - Wir - Nosotros - мы

Tigieffe s.r.l. - Via Villa Superiore N.° 82 - Luzzara (Reggio Emilia) - ITALIA

Dichiaro sotto la nostra esclusiva responsabilità che il prodotto:	Declare under our exclusive responsibility that the product:	Declarons sous notre responsabilité exclusive que le produit:	Erklären hiermit unter Übernahme der vollen Verantwortung für diese Erklärung, daß das Produkt:	Declaramos bajo nuestra exclusiva responsabilidad que el producto:	Под нашу исключительную ответственность заявляем, что изделие:
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Piattaforma di Lavoro Elevabile
 Mobile Elevating Work Platform
 Plates-forme Elévatrice Mobiles de Personnel
 Fahrbare Hubarbeitsbühnen
 Plataforma Elevadora Móvil de Personal
 Платформа для высотного работ

Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Пама	Anno - Year - Année Baujahr - Ano - Год
A13 JED	XXXXXXXXXX	XXXXXXXXXX

Al quale questa dichiarazione si riferisce è conforme alle direttive 2006/42/CE, 2014/30/CE, 2005/88/CE e al modello certificato da:	To which this declaration refers is in compliance with the directives 2006/42/CE, 2014/30/CE, 2005/88/CE and with the model certified by:	Faisant l'objet de la présente déclaration est conforme aux directives 2006/42/CE, 2014/30/CE, 2005/88/CE et au modèle certifié par	Auf das sich die vorliegende Erklärung bezieht, den 2006/42/CE, 2014/30/CE, 2005/88/CE Richtlinien und dem von:	Al cual esta declaración se refiere cumple las directivas 2006/42/CE, 2014/30/CE, 2005/88/CE y el modelo certificado por:	К которой это заявление относится, соответствует директивами 2006/42/CE, 2014/30/CE, 2005/88/CE и сертифицированной модели из:
--	---	---	---	---	--

ICE Spa Via Garibaldi, 20 40011 Anzola Emilia - BO (Italia)

N. di identificazione 0303

con il seguente numero di certificazione:	with the following certification number:	avec le numéro de certification suivant:	Zertifizierten Modell mit folgender Zertifizierungsnummer:	con el siguiente número de certificación:	со следующим сертифицированным номером:
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N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5811

e alle norme seguenti:	and with the following standards:	et aux normes suivantes:	die Erklärung entspricht den folgenden Normen:	y a las siguientes normas:	и со следующими нормами:
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EN 280 :2001 EN ISO 12100:2010 EN ISO 60204-1:2006

Il firmatario di questa dichiarazione di conformità è autorizzato a costituire il Fascicolo Tecnico.	The signatory of this conformity declaration is authorized to set up the Technical File.	Le signataire de cette déclaration de conformité est autorisé à constituer le Dossier Technique.	Der Unterzeichner dieser Konformitätserklärung ist autorisiert, das technische Unterlagen abzufassen.	El firmante de esta declaración de conformidad está autorizado a crear el Expediente Técnico.	Лицо, подписавшее это заявление о соответствии, уполномочено составить техническую документацию оборудования.
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Luzzara (RE), data-date-date-Datum-fecha-Дата

.....
 Wang Kai

(Il legale rappresentante - The legal representative)



AIRO È UNA DIVISIONE TIGIEFFE SRL - VIA VILLA SUPERIORE, 82 -42045 LUZZARA (RE)
 TEL. +39 0522 977365 FAX +39 0522 977015

DICHIARAZIONE CE DI CONFORMITA' - CE DECLARATION OF CONFORMITY - DECLARATION CE DE CONFORMITE' - EG KONFORMITÄTSEKTLÄRUNG - DECLARACION CE DE CONFORMIDAD- ЗАЯВЛЕНИЕ О КОНФОРМНОСТИ ЕС 2006/42/CE

Dichiarazione originale	Original Declaration	Déclaration Originale	Originalerklärung	Declaración Original	Оригинальная декларация
-------------------------	----------------------	-----------------------	-------------------	----------------------	-------------------------

Noi - We - Nous - Wir - Nosotros - мы

Tigieffe s.r.l. - Via Villa Superiore N.° 82 - Luzzara (Reggio Emilia) - ITALIA

Dichiaro sotto la nostra esclusiva responsabilità che il prodotto:	Declare under our exclusive responsibility that the product:	Declarons sous notre responsabilité exclusive que le produit:	Erklären hiermit unter Übernahme der vollen Verantwortung für diese Erklärung, daß das Produkt:	Declaramos bajo nuestra exclusiva responsabilidad que el producto:	Под нашу исключительную ответственность заявляем, что изделие:
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Piattaforma di Lavoro Elevabile
 Mobile Elevating Work Platform
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 Fahrbare Hubarbeitsbühnen
 Plataforma Elevadora Móvil de Personal
 Платформа для высотного работ

Modello - Model - Modèle Typ - Modelo-МОДЕЛЬ	N° Chassis - Chassis No. N° Chassis - Fahrgestellnr - N° Chassis - Номер Рама	Anno - Year - Année Baujahr - Ano - Год
A12 E Ex	XXXXXXXXXX	XXXXXXXXXX

Al quale questa dichiarazione si riferisce è conforme alle direttive 2006/42/CE, 2014/30/CE, 2005/88/CE e al modello certificato da:	To which this declaration refers is in compliance with the directives 2006/42/CE, 2014/30/CE, 2005/88/CE and with the model certified by:	Faisant l'objet de la présente déclaration est conforme aux directives 2006/42/CE, 2014/30/CE, 2005/88/CE et au modèle certifié par	Auf das sich die vorliegende Erklärung bezieht, den 2006/42/CE, 2014/30/CE, 2005/88/CE Richtlinien und dem von:	Al cual esta declaración se refiere cumple las directivas 2006/42/CE, 2014/30/CE, 2005/88/CE y el modelo certificado por:	К которой это заявление относится, соответствует директивами 2006/42/CE, 2014/30/CE, 2005/88/CE и сертифицированной модели из:
--	---	---	---	---	--

ICE Spa Via Garibaldi, 20 40011 Anzola Emilia - BO (Italia)

N. di identificazione 0303

con il seguente numero di certificazione:	with the following certification number:	avec le numéro de certification suivant:	Zertifizierten Modell mit folgender Zertifizierungsnummer:	con el siguiente número de certificación:	со следующим сертифицированным номером:
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N.Certificato - Certificate No. - N° du certificat - Bestätigungnummer - N° de certificado - Номер Сертификата

M.0303.15.5807

e alle norme seguenti:	and with the following standards:	et aux normes suivantes:	die Erklärung entspricht den folgenden Normen:	y a las siguientes normas:	и со следующими нормами:
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EN 280:2013 EN ISO 12100:2010 EN ISO 60204-1:2006

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Luzzara (RE), data-date-date-Datum-fecha-Дата

.....
 Wang Kai

(Il legale rappresentante - The legal representative)