


INSTRUCTION MANUAL FOR WIRE WELDING MACHINE

IMPORTANT: BEFORE STARTING THE EQUIPMENT, READ THE CONTENTS OF THIS MANUAL, WHICH MUST BE STORED IN A PLACE FAMILIAR TO ALL USERS FOR THE ENTIRE OPERATIVE LIFE-SPAN OF THE MACHINE. THIS EQUIPMENT MUST BE USED SOLELY FOR WELDING OPERATIONS.

1 SAFETY PRECAUTIONS

 WELDING AND ARC CUTTING CAN BE HARMFUL TO YOURSELF AND OTHERS. The user must therefore be educated against the hazards, summarized below, deriving from welding operations. For more detailed information, order the manual code 3.300.758

ELECTRIC AND MAGNETIC FIELDS - May be dangerous.



• Electric current following through any conductor causes localized Electric and Magnetic Fields (EMF). Welding/cutting current creates EMF fields around cables and power sources.

• The magnetic fields created by high currents may affect the operation of pacemakers. Wearers of vital electronic equipment (pacemakers) shall consult their physician before beginning any arc welding, cutting, gouging or spot welding operations.

• Exposure to EMF fields in welding/cutting may have other health effects which are now not known.

• All operators should use the following procedures in order to minimize exposure to EMF fields from the welding/cutting circuit:

- Route the electrode and work cables together
- Secure them with tape when possible.
- Never coil the electrode/torch lead around your body.
- Do not place your body between the electrode/torch lead and work cables. If the electrode/torch lead cable is on your right side, the work cable should also be on your right side.
- Connect the work cable to the workpiece as close as possible to the area being welded/cut.
- Do not work next to welding/cutting power source.

EXPLOSIONS



- Do not weld in the vicinity of containers under pressure, or in the presence of explosive dust, gases or fumes.
- All cylinders and pressure regulators used in welding operations should be handled with care.

ELECTROMAGNETIC COMPATIBILITY.

This machine is manufactured in compliance with the instructions contained in the standard IEC 60974-10 (CL. A), and must be used solely for professional purposes in an industrial environment. There may be potential difficulties in ensuring electromagnetic compatibility in non-industrial environments.

H.F FREQUENCY



- High frequency (H.F.) can interfere with radio navigation, safety services, computers, and communications equipment

- Have only qualified persons familiar with electronic equipment perform this installation.
- The user is responsible for having a qualified electrician promptly correct any interference problem resulting from the installation.
- If notified by the FCC about interference, stop using the equipment at once.
- Have the installation regularly checked and maintained.
- Keep high-frequency source doors and panels tightly shut, keep spark gaps at correct setting, and use grounding and shielding to minimize the possibility of interference.



DISPOSAL OF ELECTRICAL AND ELECTRONIC EQUIPMENT.

Do not dispose of electrical equipment together with normal waste! In observance of European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation in accordance with national law, electrical equipment that has reached the end of its life must be collected separately and returned to an environmentally compatible recycling facility. As the owner of the equipment, you should get information on approved collection systems from our local representative. By applying this European Directive you will improve the environment and human health!

IN CASE OF MALFUNCTIONS, REQUEST ASSISTANCE FROM QUALIFIED PERSONNEL.

1.1 WARNING LABEL

The following numbered text corresponds to the label numbered boxes.

- B. Drive rolls can injure fingers.
- C. Welding wire and drive parts are at welding voltage during operation-keep hands and metal objects away.
- 1 Electric shock from welding electrode or wiring can kill.
 - 1.1 Wear dry insulating gloves. Do not touch electrode with bare hand. Do not wear wet or damaged gloves.
 - 1.2 Protect yourself from electric shock by insulating yourself from work and ground.
 - 1.3 Disconnect input plug or power before working on machine.
- 2 Breathing welding fumes can be hazardous to your health.
 - 2.1 Keep your head out of fumes.
 - 2.2 Use forced ventilation or local exhaust to remove fumes.
 - 2.3 Use ventilating fan to remove fumes.
- 3 Welding sparks can cause explosion or fire.
 - 3.1 Keep flammable materials away from welding.
 - 3.2 Welding sparks can cause fires. Have a fire extinguisher nearby and have a watchperson ready to use it.
 - 3.3 Do not weld on drums or any closed containers.
- 4 Arc rays can burn eyes and injure skin.
 - 4.1 Wear hat and safety glasses. Use ear protection and button shirt collar. Use welding helmet with correct shade of filter. Wear complete body protection.



- 5 Become trained and read the instructions before working on the machine or welding.
- 6 Do not remove or paint over (cover) label.

2 GENERAL DESCRIPTIONS

2.1 SPECIFICATIONS

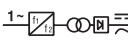
The Sound 2060/MD Star Double Pulse is an equipment suitable for synergic pulsed MIG/MAG, synergic not pulsed MIG/MAG and conventional MIG/MAG welding, developed with inverter technology. The power source is equipped with a 2-roller wire feeder.


This welding machine must not be used to defrost pipes.

2.2 EXPLANATION OF TECHNICAL SPECIFICATIONS

This machine is manufactured according to the following standards: IEC 60974.1 / IEC 60974.10 (CL. A) / IEC 61000-3-11 / IEC 61000-3-12.

N°. Serial number. Must be indicated on any request regarding the welding machine.

 Single-phase static transformer-rectifier frequency converter.

 MIG Suitable for MIG-MAG welding.

U0. Secondary open-circuit voltage.

X. Duty cycle percentage. The duty cycle expresses the percentage of 10 minutes during which the welding machine may run at a certain current without overheating.

I2. Welding current

U2. Secondary voltage with current I2

U1. Rated supply voltage

1~ 50/60Hz 50- or 60-Hz single-phase power supply.

I1 Max Max. absorbed current at the corresponding current I2 and voltage U2.

I1 eff This is the maximum value of the actual current absorbed, considering the duty cycle. This value usually corresponds to the capacity of the fuse (delayed type) to be used as a protection for the equipment.

IP23S Protection rating for the housing.

Grade 3 as the second digit means that this equipment may be stored, but it is not suitable for use outdoors in the rain, unless it is protected.

S Suitable for use in high-risk environments.

NOTE: The welding machine has also been designed for use in environments with a pollution rating of 3. (See IEC 60664).

2.3 PROTECTIONS

2.3.1 Block protection

In the event of a malfunction, a flashing number may appear on the display **AM**, with the following meaning:

52 = Start button pressed during start-up.

53 = start button pressed during thermostat reset.

56 = Extended short-circuit between the welding electrode and the material to be welded.

Shut the machine off and turn it back on. If different numbers appear on the display, contact technical service.

2.3.2 Overload cut-out

This machine is protected by a thermostat, which prevents the machine from operating if the allowable temperatures are exceeded. In these conditions the fan continues to operate and the display **AM** flashes the abbreviation "tH."

3 DESCRIPTION OF POWER SOURCE (Fig. 1)

A – Socket (-): this is where the earth cable is to be connected.



B – Central adapter : Connect the welding torch.

B1 – Central adapter.

This is where the welding torch or the Push-Pull system torch Art. 2003/2009 is to be connected.

C – Connector : For connecting remote controls and the welding control cable **Push-Pull Art. 2003/2009**.

D - Selector switch:

Central adapter **B1** is operated by selecting position () with the selector switch knob, on the contrary, by selecting position () central adapter **B** is operated.

F - Connector : Connector type DB9 (RS232 serial line) to use for updating the microprocessor programs.

L - ON/OFF switch.

M – Power cable.

N – Gas hoses.

O - Fuse holder.

P - Power supply socket.

Q - Pressure switch socket .

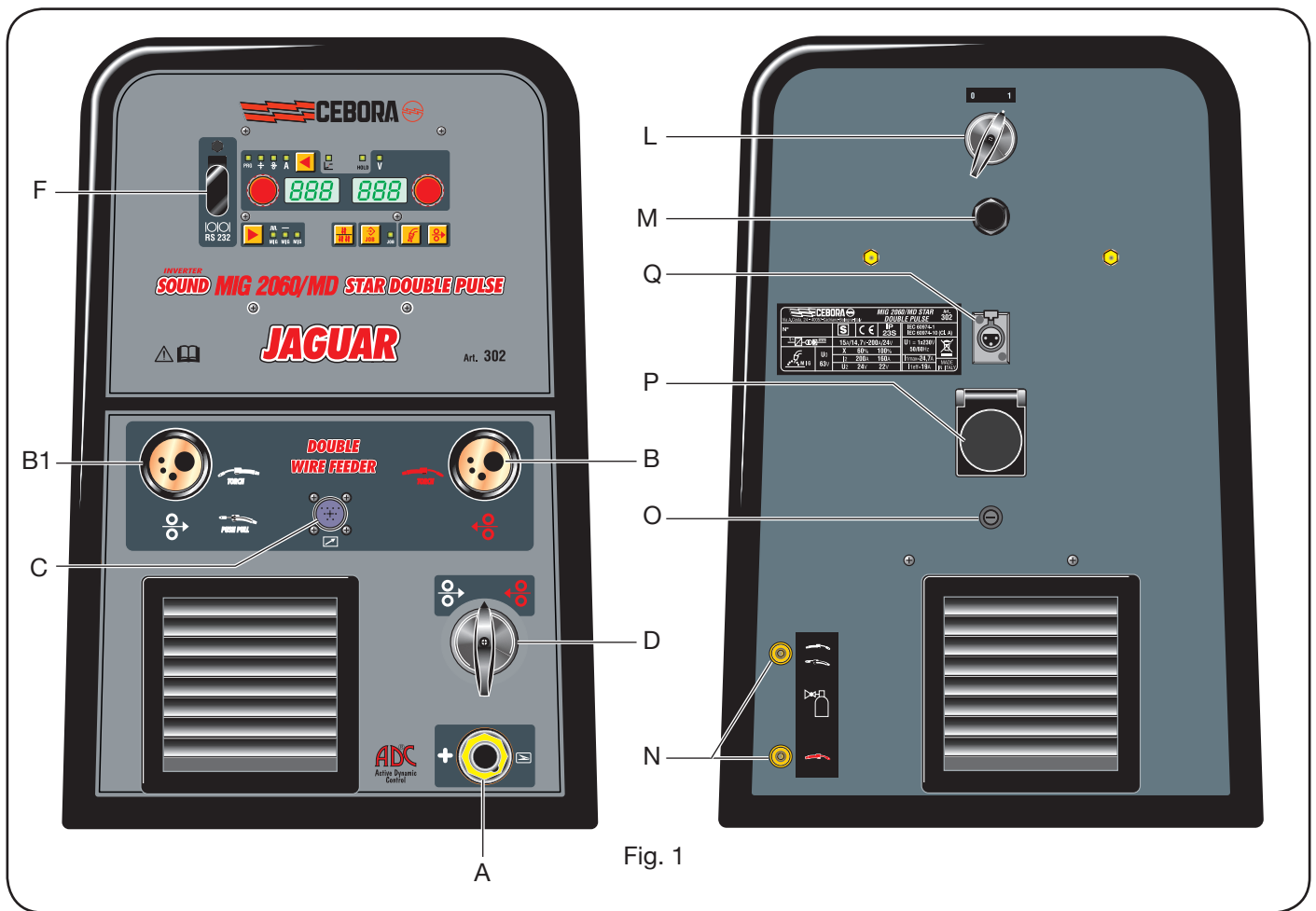


Fig. 1

4 DESCRIPTION OF CONTROL PANEL (Fig. 2)

AE selection key.

Each brief pressure selects the size, adjustable via the **AI** knob. The sizes which can be selected are shown by LEDs **AA/AB/AC/AD**.

LED AA PRG.

Indicates that the display **AL** shows the set program number.

LED AB Thickness.

The **AL** display shows the recommended thickness based on the set current and wire speed. Active only in synergic MIG processes.

LED AC Wire speed.

Indicates that the display **AL** shows the wire speed in welding.

LED AD Current.

Indicates that the display **AL** shows a welding current. During welding always shows the measured current; with the machine at a standstill, if **AG** is OFF, shows the set current.

LED AF - Globular position.

May not be selected. Active in synergic MIG process. When lit, this signals that the pair of values chosen for welding may give unstable arcs and splatters.

LED AG - Hold.

May not be selected. It signals that the values shown on the displays **AL** and **AM** (normally Amperes and Volts) are those used during last welding. Activated at the end of each welding session.

LED AH - Voltage.

In all welding processes, it indicates that the display **AM** shows the re-set welding voltage or, if in combination with LED **AG** lit, the last measured voltage.

Knob AI.

The following values are set: welding current **A**, wire speed (\otimes), thickness ($\frac{+}{-}$), program number **PRG**. In the service functions the following are selected: **TRG, SP, HSA, CrA, PrF, PoF, Acc, bb, L, Dp, PPF, Ito, Fac**.

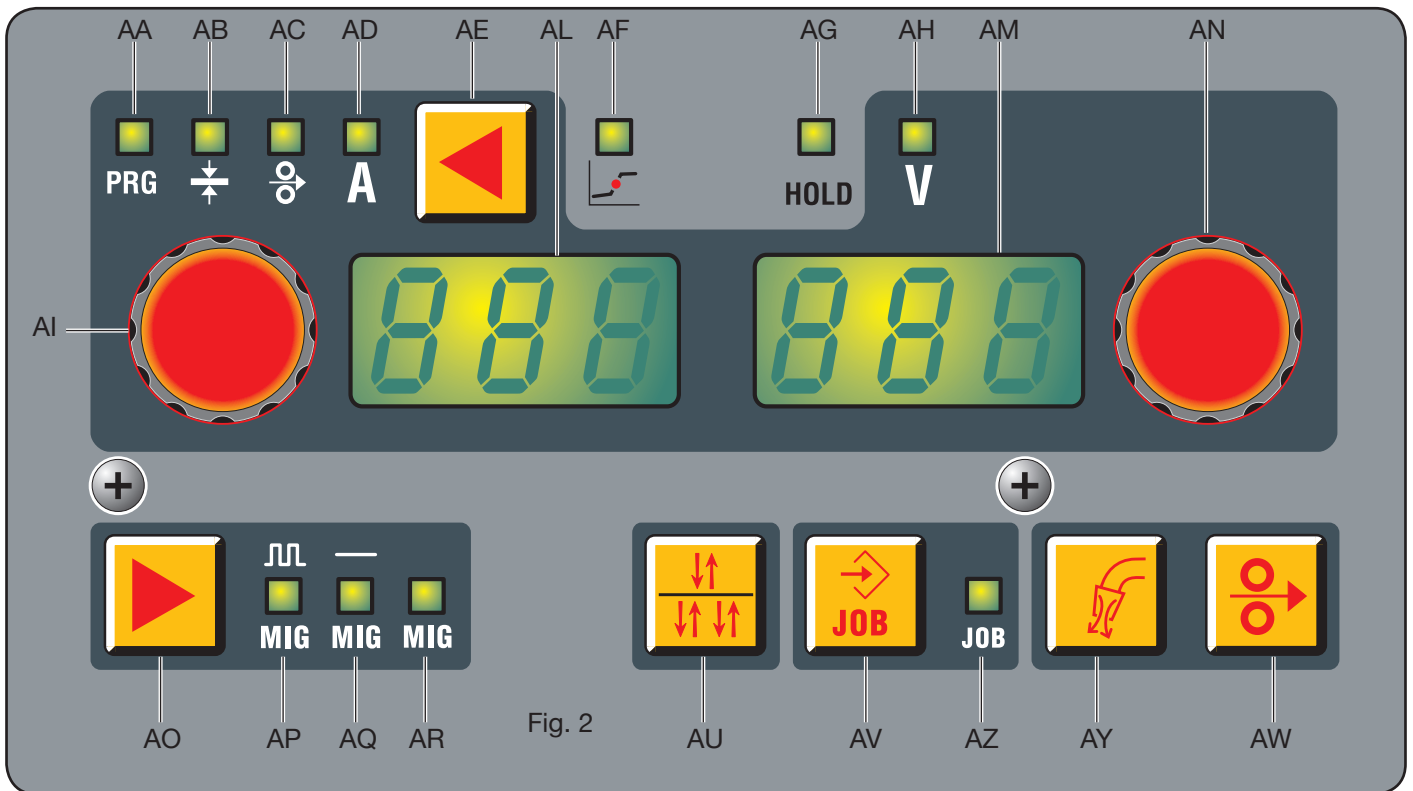
In MIG synergic processes when a value is adjusted the other values are adjusted as well. All these values are shown on the display **AL**.

Knob AN.

The following sizes are set:

In synergic MIG the arc length, in conventional MIG the welding voltage.

Inside the service menu, according to the value set by knob **AI** it selects the set value, the activation or deactivation of the same, or an additional selection to be made inside the function.



Display AL.

In all welding processes, it numerically displays the selections made via the selection key **AE** and adjusted via the knob **AI**.

For the welding current (LED **AD**) it displays the amperes. For the wire speed (LED **AC**) it displays the meters per minute.

For the thickness (LED **AB**) it displays the millimeters.

For (LED **AA**) it displays the set program number.

In the service functions the following are selected: **TRG, SP, HSA, CrA, PrF, PoF, Acc, bb, L, Dp, PPF, Ito, Fac.**

For the parameters within the service functions that are shown on the display **AM**, see the paragraph on **service functions**.

When the machine is in the warning mode, it displays a flashing warning (example: **OPN** if the lateral panel is open. When the machine is in the error mode it displays **Err**.

Display AM.

Displays by the number: in synergic MIG the arc length and in conventional MIG the welding voltage.

For the welding voltage (LED **AH**) it displays the Volts. For the arc length (LED **AHoff**) it displays a number between **9.9** and **+9.9**, **0** being the recommended value.

For the parameters in the MIG service function, that are shown on the display **AM**, see the paragraph on **service functions**.

When the machine is in error mode it displays the corresponding error code between 1 and 99.

Selection key AO.

Each time this key is pressed, the selected process is shown by LED **AP/AQ/AR**.

LED AP Pulsed MIG.

Shows that the selected process is the synergic MIG Pulsed.

LED AQ SYNERGIC MIG.

Shows that the selected process is synergic MIG.

LED AR CONVENTIONAL MIG.

Shows that the selected process is conventional MIG.

Selection key AU.

Each brief pressure selects 2 stages mode (MANUAL) and the 4 stages mode (AUTOMATIC), the selection is shown on the display **AL**.

In the 2 stages mode the machine begins welding when the welding torch trigger is pressed, and stops when released.

In the 4 stages mode to begin welding press and release the welding torch trigger; to interrupt, you must press and release it again.

Selection key AV. (JOB)

Saving and restoring of the stored processes.

To save a working condition (**JOB**), just hold down for at least 3 seconds the key **AV**, the LED **AZ** glows, on the display **AL** the abbreviation **STO** flashes and on display **AM** the number of the first available position flashes. Knob **AN** is used to select the saving position; press again key **AV** until a sound will confirm that it has been saved and the selected number stops flashing.

To restore the saved number just briefly press key **AV** and restore the number by means of knob **AN**. Up to 99 pairs of current/voltage values may be saved.

To delete a saved number, press for at least 3 seconds key **AV**, turn knob **AI** until the display **AL** shows the abbreviation **DEL** and press the key again **AV** for 3 more seconds.

A current/voltage parameter may be restored outside saving for both using or changing it. To restore it press for 3 seconds key **AV**, display by means of knob **AI** the number to be restored and show on display **AL**, with knob **AN** the abbreviation **rcL**; now just press for at least 3 seconds key **AV**.

LED AZ JOB.

Shows that you are inside the saving menu of the saved working points.

Selection key AY.

Gas Test .

When this key is pressed gas starts flowing; to stop it press the key again.

If the second press does not take place the gas output is interrupted after 30 seconds

Selection key AW.

Wire test.

Allows the wire feed with no current or voltage present.

When this key is held down, during the first 5 seconds the wire advances at the speed of 1 meter per minute and then the speed increases up to 8 meters per minute.

When this key is released the motor stops immediately.

5. SERVICE FUNCTIONS.

Press the key **AE**, and hold it down for at least 3 seconds to enter the submenu. Turning the knob **AI** you select the function, shown on the display **AL** and turning the knob **AN** you select the type of operation or the value, shown on the display **AM**. To return to the normal display, press and release the key **AE** immediately.

1- H2O (Cooling unit, optional).

Turning the knob **AN** you select the type of operation:

OFF = shut off, ON C = always on, ON A = automatic start-up.

When the automatic mode is selected the pump begins working immediately at each welding start command and stops 3 minutes after the welding is completed.

At each power source start-up a short pump test takes place for 15 seconds. If an insufficient pressure is detected the machine goes into warning mode and H2O flashes on display **AM**.

If the low pressure condition persists for more than 30 seconds, the pump is deactivated and the machine goes to error mode (ERR 75).

2- TRG.

Choice between **2-** or **4-** stages, **3 levels**, the selection **2t** and **4t** with the selection key **AU**, without entering the service functions.

2t the machine begins welding when the welding torch trigger is pressed, and stops when released. **4t** to begin welding press and release the welding torch trigger; to interrupt, you must press and release it again. **3L** this procedure is active in the synergic processes. Specially

well suited to weld aluminum.

3 currents are available that can be used in welding by means of the welding torch start button. The current and the slope values are set as follows:

SC starting current (Hot Start). With the possibility of adjusting from 1 to 200% of the welding current, a value adjusted using the knob **AN**.

Slo slope. Possibility of adjusting from 1 to 10 seconds.

Defines the connection time between the first current **SC** with the welding current and the second current with the third current **CrC** (crater filler current), a value set by means of knob **AN**.

CrC - «Crater filler» current. With the possibility of adjusting from 1 to 200% of the welding current, a value adjusted using the knob **AN**.

Welding starts at the welding torch button pressure, the named pressure will be the starting pressure **SC**.

This current is kept as long as the welding torch button is held down; when the welding torch trigger is released the first current connects to the welding current, set by means of knob **AI**, and is kept as long as the welding torch button is held down. When the welding torch trigger is pressed again the welding current connects to the third current **CrC** and is kept as long as the welding torch trigger is held down. When the welding torch trigger is released welding stops.

3- SP (spot-welding).

Off/ON activates and disables the spot function.

The spot welding time **tSP** is set from 0.3 to 5 seconds.

The interval between two spots **tIN** is set from 0.3 to 5 seconds.

This function is blocked when function **3L** is activated.

4- HSA (Automatic Hot Start).

This function is blocked when function **3L** is activated and works only with the synergic processes.

Once the function has been enabled using the **AN** knob, the operator may adjust the level of the starting current **SC** (Hot Start), with the possibility of adjusting from 1 to 200% of the welding current, a value adjusted using the knob **AN**.

The duration **tHS** (default 130%) of this current may also be adjusted from 0.1 to 10 seconds. (default 0.5 sec.).

The switching time **Slo** between the **SC** current and the welding current may also be adjusted from 0.1 to 10 seconds. (default 0.5 seconds).

5- CrA (final crater filler).

This function may be selected by means of key **AI** and is working during welding **2t** or **4t** and also in combination with function HSA, if so requested.

After activating function «On» by means of knob **AN**, rotate knob **AI** to display the abbreviations:

Slo = Fitting time between the welding current and the crater filling time. Default 0.5 sec.

Range 0.1 – 10 seconds.

CrC = crater filling time expressed as a percentage of the welding wire speed. Default 60%. Range from 10 to 200%.

Tcr = duration of the filling current time. Default 0.5 sec. Range 0.1 – 10 seconds.

6- PrF (Pre-gas).

The adjustment may range from 0 to 3 seconds.

7- Pof (post-gas).

The adjustment may range from 0 to 30 seconds.

8- Acc (soft-start).

The adjustment may range from 0 to 100%.

It is the wire speed, expressed as a percentage of the speed set for the welding, before the wire touches the workpiece.

This adjustment is important in order to always achieve good starts.

Manufacturer setting «Au»: automatic.

The value can be changed using the knob AN. If, once changed, you wish to return to the original settings, press the key **AV** until the abbreviation «Au» reappears on the display **AM**.

9- BB (Burn-back).

The adjustment may range from 4 to 250ms. Serves to adjust the length of the wire leaving the contact tip after welding. The higher the number, the more the wire burns. Manufacturer setting «Au» automatic.

If, once changed, you wish to return to the original settings, press the key **AV** until the abbreviation «Au» reappears on the display **N**.

10- L (impedance).

The adjustment may range from **-9.9** to **+9.9**. Zero is the number set by the manufacturer: if the number is negative, the impedance decreases and the arc becomes harder; if increased, it becomes softer.

11- dP (Double pulse)

This type of welding varies the current intensity between two levels and may be included in all synergic processes. Before setting, it is necessary to make a short bead to determine the speed closest to the type of welding that you will be doing. This determines the reference speed.

To activate the function proceed as follows:

A)- Activate the function by turning knob **AN** until the abbreviation **On** reappears on the display **AM**.

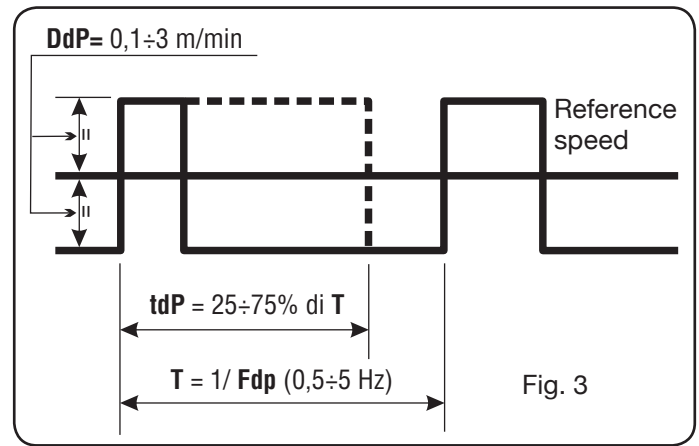
B)- Turn knob **AI** until the abbreviation **FdP** reappears (double pulse frequency) on the display **AL**. The display **AM** reads the abbreviation **OFF**.

Turn the knob **AN** to select the working frequency (adjustment from 0.5 to 5 Hz). The selected value is shown on the display **AM**.

C) Turn knob **AI** until the abbreviation **ddP** (difference in m/min of the double pulse) is displayed.

Turn the knob **AN** to select the meters per minute (range from 0.1 to 3m/min) that will be added to and subtracted from the reference speed (default 1m/min).

D) Turn the knob **AI** until the display shows the the abbreviation **tdP**. This is the duration of the highest wire speed, thus the highest current. It is expressed as a percentage of the time gained from the **Fdp** frequency (see figure 3).



Turn knob **AN** to adjust the percentage. Range between 25 and 75% (default 50%).

E)- Turn knob **AI** until the display shows the abbreviation **AdP** (arc length of the highest current). Range between -9.9 and 9.9% (default 0).

When welding, check that the arc length is the same for both currents; turn the **AN** knob to correct it if necessary. Note: it is possible to weld within the double pulse functions.

Once these adjustments have been made, to return to the control panel normal display briefly press key **AE**.

Should it be necessary to adjust the arc length of the lowest current/lowest speed, adjust the arc length of the reference speed. When the reference speed moves, the previous settings must also be repeated for the new speed.

12- PP (push-pull).

By using Push-Pull torch Art. 2003 function **PPF** (Push Pull Force) is enabled which adjusts the drive torque of the push-pull motor in order to make the wire feed linear. The adjustment may range from 99 to -99 and is done through knob **AN**. Standard adjustment is 0.

13- Ito. (Inching time out).

The purpose is to stop the welding machine if the wire flows after starting with no passage of current.

The wire flow from the welding torch can be adjusted from 5 to 50 centimeters by means of knob **AN**. When this function is restored, it may be activated (**On**) or cut off (**Off**).

14 - qC (Quality Control).

Enables Quality Control function.

Off- Function off.

On- Function on. (For this function please refer to Manual 3300239 concerning Articles: 224.04 and 405.00).

qCO- (output Quality Control).

Selects the output type of quality control reports:

ASC - (ASCII) serial output port, only unformatted text for terminals of the Windows Hiperterminal kind.

PRN- (Printer) serial output port, for printer Art. 405.

15- UtC Time Zone Selection.

Specify a value from -12 to 12 depending on the country where the welding machine will be used (e.g. Italy 1 = +1 h as against UTC)

16 - dSt Legal Time Selection.

(e.g. 0 Winter, 1 Summer)

17- Fac. (factory).

The purpose is to return the welding machine to the original settings provided by the manufacturer. With the function selected, the display **AM** shows **noP** = restores the welding machine to the original settings disregarding the stored programs, **Prg** = deletes all stored programs and **ALL** = restores the welding machine to the original settings.

To save the desired function press the button **AV**, the abbreviation shown on the display **AM** will begin flashing; after a few seconds, a sound will confirm that it has been saved.

6 INSTALLATION

The welding machine must be installed by skilled personnel. All connections must be made in full compliance with current safety laws (See CEI 26-23 - IEC/TS 62081).

6.1 PLACEMENT

The weight of the welding machine is approximately **80 Kg**. Position the unit in an area that ensures good stability, and efficient ventilation so as to prevent metal dust (grinding) from entering.

6.2 ASSEMBLY

Mount the plug on the power cord, being especially careful to connect the yellow/green conductor to the earth pole. Make sure that the supply voltage corresponds to the rated voltage of the welding machine.

Size the protective fuses based on the data listed on the technical specifications plate.

This welding machine has been designed to contemporarily mount 2 welding torches and 2 coils of wire having a diameter of 300mm; this machine cannot weld with the 2 torches at the same time, the torch selection is made by means of selector switch **D**.

The gas cylinder must be equipped with a pressure regulator and a gauge. If the cylinder is placed on the cylinder shelf of the trolley, it must be fastened using the strap provided. Only after positioning the cylinder, connect the outgoing gas hose from the rear panel of the machine to the pressure regulator.

2 gas hoses leave the rear panel, one is used in combination with central adapter **B** and the other one with central adapter **B1**. In order to select the right combination read the plate at its side.

Adjust the gas flow to approximately 8/10 liters/minute

To make sure that the groove of the roller matches the wire diameter used, open the mobile lateral side, remove the cover **CA**, release the wire press roller by means of the pressure adjusting knob **BN**, replace the roller and remount the cover **CA**. (See fig.4).

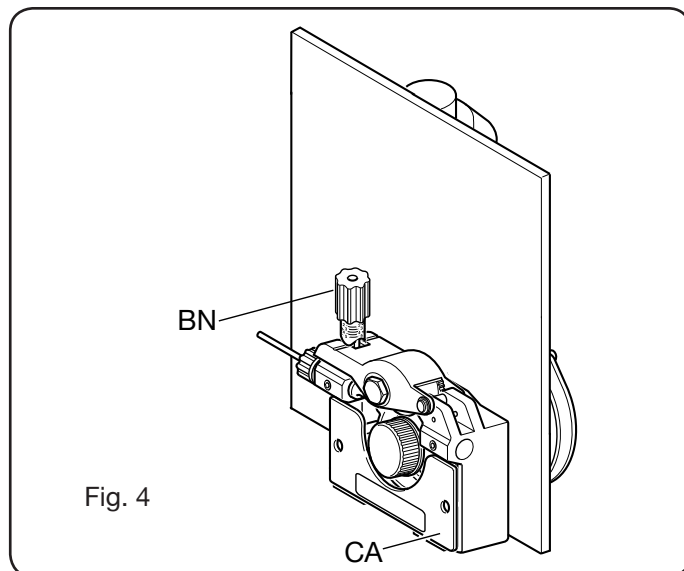


Fig. 4

Mount the wire coil and slip the wire into the feeder and welding torch sheath.

Block the wire press roller with the knob **BN** and adjust the pressure.

Turn on the machine.

Adjust the gas by means of key **AY** and then feed the wire by means of key **AW**.

7 WELDING

Welding **Synergic Pulsed MiG LED AP** on.

Select the **PRG** number based on the wire diameter to be used, the type and quality of the material, and the type of gas, using the instructions located inside the wire feeder compartment.

Set the functions in the submenu according to the instructions under paragraph «**Service functions**».

5.2.3The welding parameters are set by means of knob **AI**. Synergic **MiG Welding LED AQ** on.

Select the **PROG** number based on the wire diameter to be used, the type and quality of the material, and the type of gas, using the instructions located inside the wire feeder compartment.

Set the functions in the submenu according to the instructions under paragraph «**Service functions**».

Adjust the wire speed and the welding voltage using the knob **AI**.

Conventional **MiG Welding LED AR** on.

Select the **PROG** number based on the wire diameter to be used, the type and quality of the material, and the type of gas, using the instructions located inside the wire feeder compartment.

Set the functions in the submenu according to the instructions under paragraph «**Service functions**».

Adjust the wire speed and the welding voltage using the knob **AI** and **AN** respectively.

8 ACCESSORIES

8.1 MIG WELDING TORCH ART. 1242

Air-cooled CEBORA MIG welding torch 280 A 3,5.

8.2 PUSH-PULL UP/DOWN WELDING TORCH, air cooled, ART. 2003 and 2009.

8.3 Cooling unit Art. 1683

8.4 Water-cooled MIG torch Art. 1241

9 MAINTENANCE

Any maintenance operation must be carried out by qualified personnel in compliance with standard CEI 26-29 (IEC 60974-4).

9.1 GENERATOR MAINTENANCE

In the case of maintenance inside the machine, make sure that the switch **L** is in position “O” **and that the power cord is disconnected from the mains.**

Even though the machine is equipped with an automatic condensation drainage device that is tripped each time the air supply is closed, it is good practice to periodically make sure that there is no condensation accumulated in the water trap **J** (fig.1).

It is also necessary to periodically clean the interior of the machine from the accumulated metal dust, using compressed air.

9.2 PRECAUTIONS AFTER REPAIRS.

After making repairs, take care to organize the wiring so that there is secure insulation between the primary and secondary sides of the machine. Do not allow the wires to come into contact with moving parts or those that heat up during operation. Reassemble all clamps as they were on the original machine, to prevent a connection from occurring between the primary and secondary circuits should a wire accidentally break or be disconnected.

Also mount the screws with geared washers as on the original machine.

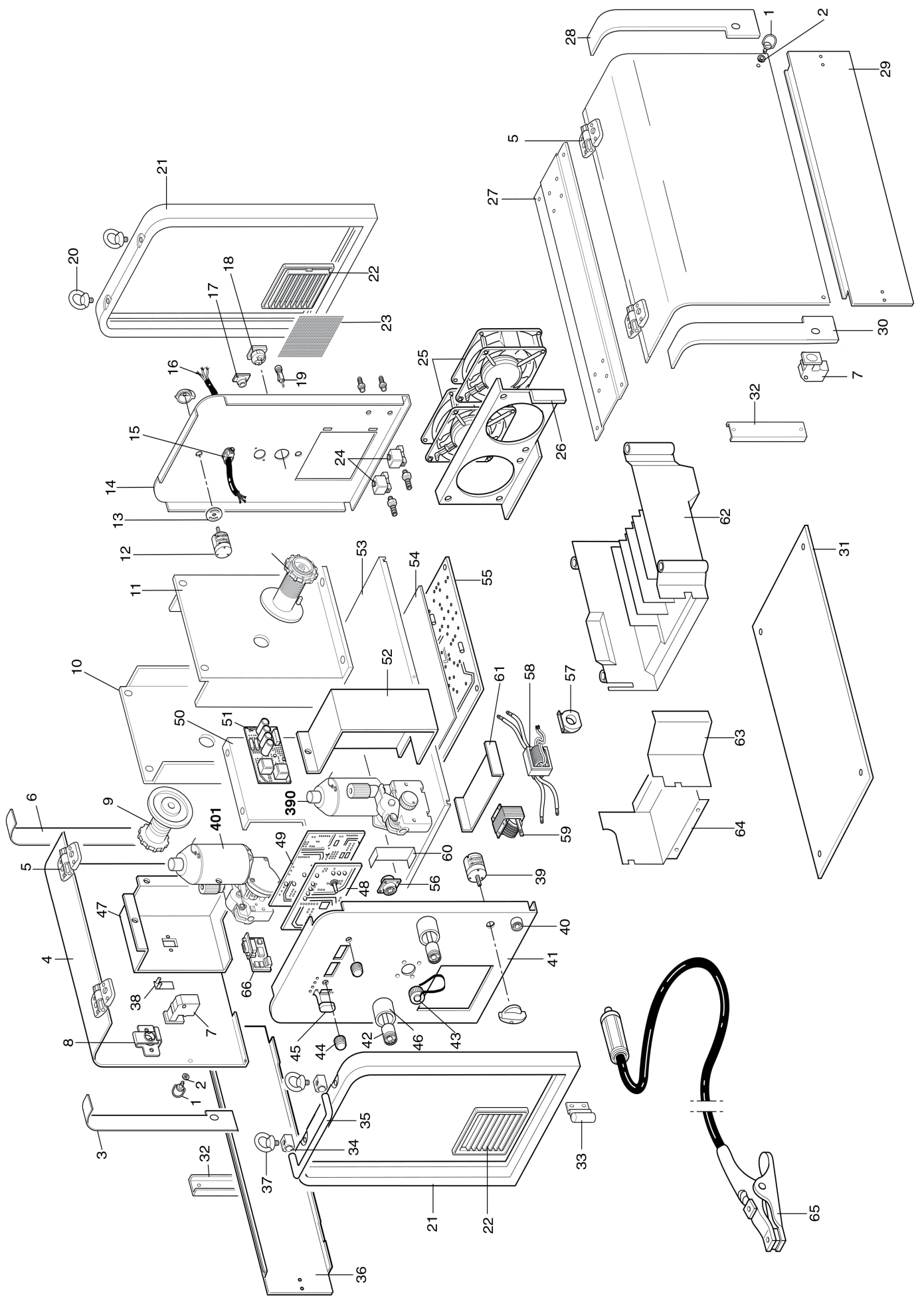
QUESTA PARTE È DESTINATA ESCLUSIVAMENTE AL PERSONALE QUALIFICATO.
THIS PART IS INTENDED SOLELY FOR QUALIFIED PERSONNEL.
DIESER TEIL IST AUSSCHLIEßLICH FÜR DAS FACHPERSONAL BESTIMMT.
CETTE PARTIE EST DESTINEE EXCLUSIVEMENT AU PERSONNEL QUALIFIE.
ESTA PARTE ESTÁ DESTINADA EXCLUSIVAMENTE AL PERSONAL CUALIFICADO.
ESTA PARTE È DEDICADA EXCLUSIVAMENTE AO PESSOAL QUALIFICADO.
TÄMÄ OSA ON TARKOITETTU AINOASTAAN AMMATTITAITOISELLE HENKILÖKUNNALLE.
DETTE AFSNIT HENVENDER SIG UDELUKKENDE TIL KVALIFICERET PERSONALE.
DIT DEEL IS UITSLUITEND BESTEMD VOOR BEVOEGD PERSONEEL.
DENNA DEL ÄR ENDAST AVSEDD FÖR KVALIFICERAD PERSONAL.
ΑΥΤΟ ΤΟ ΤΜΗΜΑ ΠΡΟΟΡΙΖΕΤΑΙ ΑΠΟΚΛΕΙΣΤΙΚΑ ΓΙΑ ΤΟ ΕΙΔΙΚΕΥΜΕΝΟ ΠΡΟΣΩΠΙΚΟ.

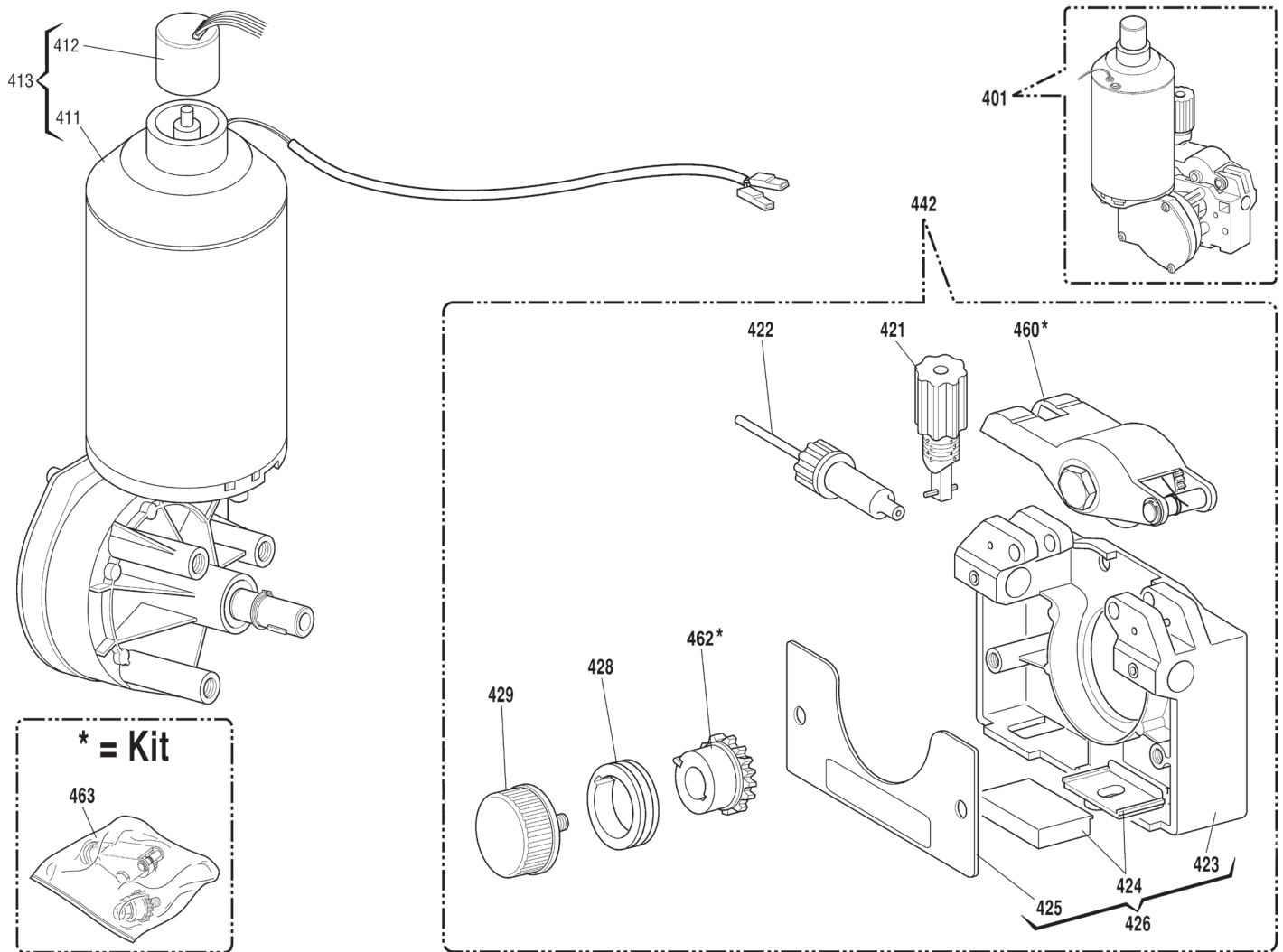
POS	DESCRIZIONE	DESCRIPTION
01	CHIUSURA	CLOSING
02	ROSETTA	WASHER
03	LATERALE FISSO SIN. ANT.	FRONT FIXED LEFT SIDE PANEL
04	LATERALE MOBILE	HINGED SIDE PANEL
05	CERNIERA	HINGE
06	LATERALE FISSO SIN. POST.	BACK FIXED LEFT SIDE PANEL
07	PULSANTE DI SICUREZZA	SECURITY SWITCH
08	CHIUSURA	CLOSING
09	PORTA BOBINA	COIL SUPPORT
10	SUPPORTO BOBINA SX.	LEFT COIL SUPPORT
11	SUPPORTO BOBINA DS.	RIGHT COIL SUPPORT
12	INTERRUTTORE	SWITCH
13	PROTEZIONE	PROTECTION
14	PANNELLO POSTERIORE	REAR PANEL
15	PRESSACAVO	STRAIN RELIEF
16	CAVO RETE	POWER CORD
17	CONNESSIONE PRESSOSTATO	PRESSURE SWITCH CONNECTION
18	PRESSOSTATO	PRESSURE SWITCH
19	PORTAFUSIBILE	FUSE HOLDER
20	GOLFARA	EYEBOLT
21	CORNICE	FRAME
22	PANNELLO ALETTATO	FINNED PANEL
24	ELETTROVALVOLA	SOLENOID VALVE
25	KIT MOTORI CON VENTOLE	MOTOR WITH FAN KIT
26	SUPPORTO MOTORE	MOTOR BRACKET
27	COPERCHIO	COVER
28	LATERALE FISSO DES. POS.	BACK FIXED RIGHT PANEL
29	LATERALE DES. INFERIORE	RIGHT LOWER SIDE PANEL
30	LATERALE FISSO DES. ANT.	FRONT FIXED RIGHT PANEL
31	FONDO	BOTTOM
32	RINFORZO	REINFORCEMENT
33	SUPPORTO TORCIA	TORCH SUPPORT
34	SUPPORTO MANICO	HANDLE SUPPORT

POS	DESCRIZIONE	DESCRIPTION
35	MANICO	HANDLE
36	LATERALE SIN. INFERIORE	LEFT LOWER SIDE PANEL
37	GOLFARA	EYEBOLT
38	TAPPO USB	USB CAP
39	COMMUTATORE	SWITCH
40	PRESA	SOCKET
41	PANNELLO ANTERIORE	FRONT PANEL
42	CORPO ADATTATORE	ADAPTOR BODY
43	TAPPO	CAP
44	MANOPOLA	KNOB
45	PROTEZIONE	PROTECTION
46	GHIERA ADATTATORE	RING NUT
47	PROTEZIONE	PROTECTION
48	CIRCUITO PANNELLO	PANEL CIRCUIT
49	CIRCUITO DI CONTROLLO	CONTROL CIRCUIT
50	PIANO INTERMEDIO	INSIDE BAFFLE
51	CIRCUITO DI CONTROLLO	CONTROL CIRCUIT
52	SUPPORTO SUPERIORE DS.	RIGHT TOP SUPPORT
53	PIANO INTERMEDIO	INSIDE BAFFLE
54	ISOLAMENTO	INSULATION
55	CIRCUITO DI POTENZA	POWER CIRCUIT
56	CONNESSIONE	CONNECTION
57	TRASDUTTORE	TRANSDUCER
58	IMPEDENZA SECONDARIO	SECONDARY IMPEDANCE
59	TRASFORMATORE DI POTENZA	POWER TRANSFORMER
60	PROTEZIONE	PROTECTION
61	RINFORZO TUNNEL	TUNNEL REINFORCEMENT
62	PROTEZIONE SCHEDA	CIRCUIT PROTECTION
63	SUPPORTO TUNNEL	TUNNEL SUPPORT
64	TUNNEL	TUNNEL
65	MASSA + CAVO	CABLE
66	CIRCUITO SERIALE	SERIAL CIRCUIT
390	TRAINAFILO	WIRE FEED UNIT
401	TRAINAFILO	WIRE FEED UNIT

La richiesta di pezzi di ricambio deve indicare sempre: numero di articolo, matricola e data di acquisto della macchina, posizione e quantità del ricambio.

When ordering spare parts please always state the machine item and serial number and its purchase data, the spare part position and the quantity.



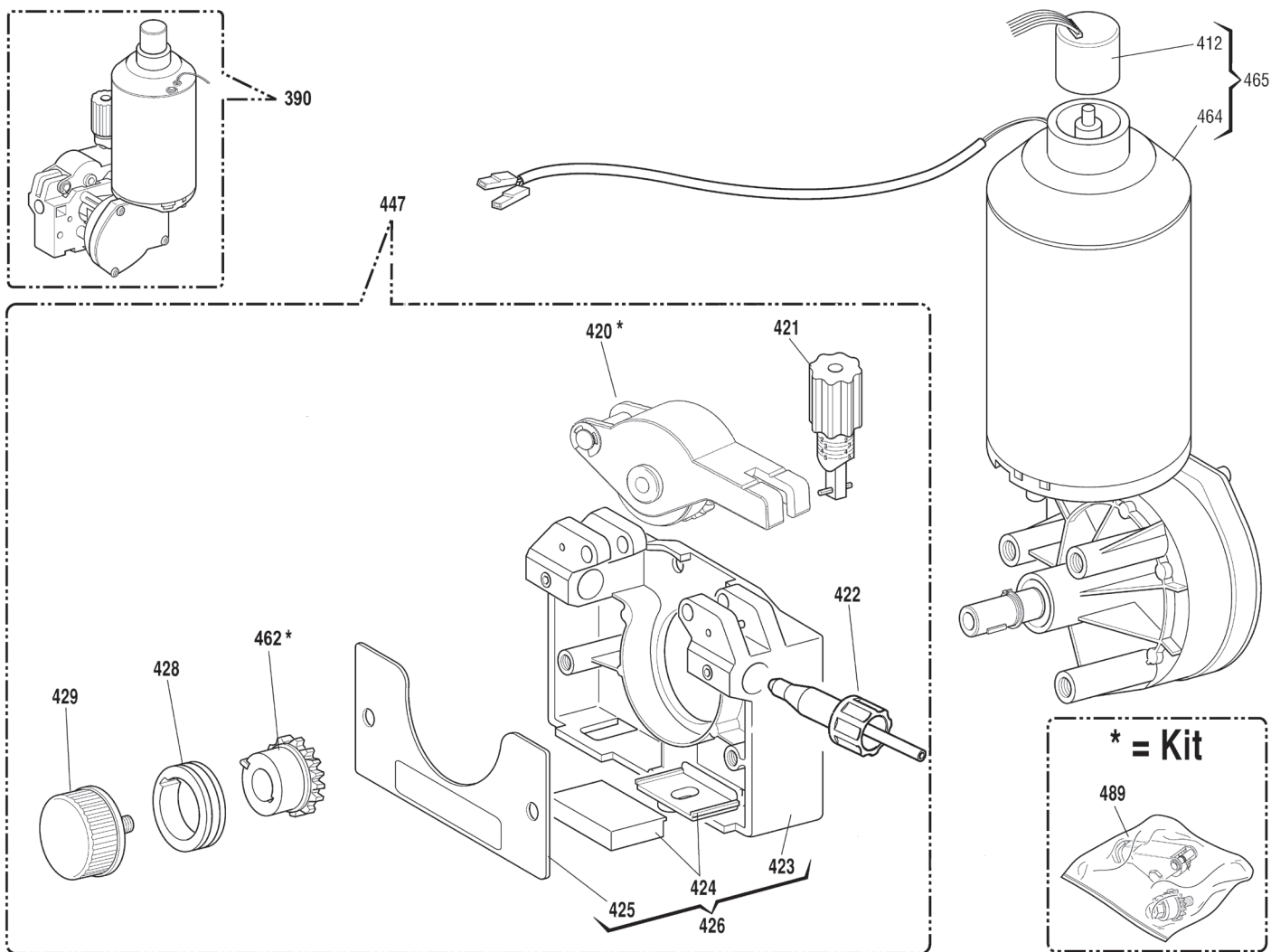


POS	DESCRIZIONE	DESCRIPTION
401	TRAINAFILO	WIRE FEED UNIT
411	MOTORIDUTTORE	WIRE FEED MOTOR
412	ENCODER	ENCODER
413	MOTORIDUTTORE COMPLETO	COMPLETE WIRE FEEDER MOTOR
421	BLOCCAGGIO GRADUATO	ADJUSTMENT KNOB
422	GUIDAFILO	WIRE DRIVE PIPE ASSY
423	CORPO TRAINAFILO	WIRE FEED BODY
424	ISOLANTE COMPLETO	INSULATION ASSY

POS	DESCRIZIONE	DESCRIPTION
425	PROTEZIONE MOTORIDUTTORE	WIRE FEED PROTECTION
426	CORPO TRAINAFILO COMPLETO	COMPLETE WIRE FEED BODY
428	RULLO TRAINAFILO	WIRE FEED ROLLER
429	POMELLO	KNOB
442	GRUPPO TRAINAFILO	WIRE FEED UNIT
460	SUPPORTO PREMIRULLO	ROLLER PRESSER SUPPORT
462	INGRANAGGIO	GEAR
463	KIT INGRANAGGI	GEARS KIT

La richiesta di pezzi di ricambio deve indicare sempre: numero di articolo, matricola e data di acquisto della macchina, posizione e quantità del ricambio.

When ordering spare parts please always state the machine item and serial number and its purchase data, the spare part position and the quantity.



POS	DESCRIZIONE	DESCRIPTION
390	TRAINAFILO DESTRO	RIGHT WIRE FEED UNIT
412	ENCODER	ENCODER
420	SUPPORTO PREMIRULLO	ROLLER PRESSER SUPPORT
421	BLOCCAGGIO GRADUATO	ADJUSTMENT KNOB
422	GUIDAFILO	WIRE DRIVE PIPE ASSY
423	CORPO TRAINAFILO	WIRE FEED BODY
424	ISOLANTE COMPLETO	INSULATION ASSY
425	PROTEZIONE MOTORIDUTTORE	WIRE FEED PROTECTION

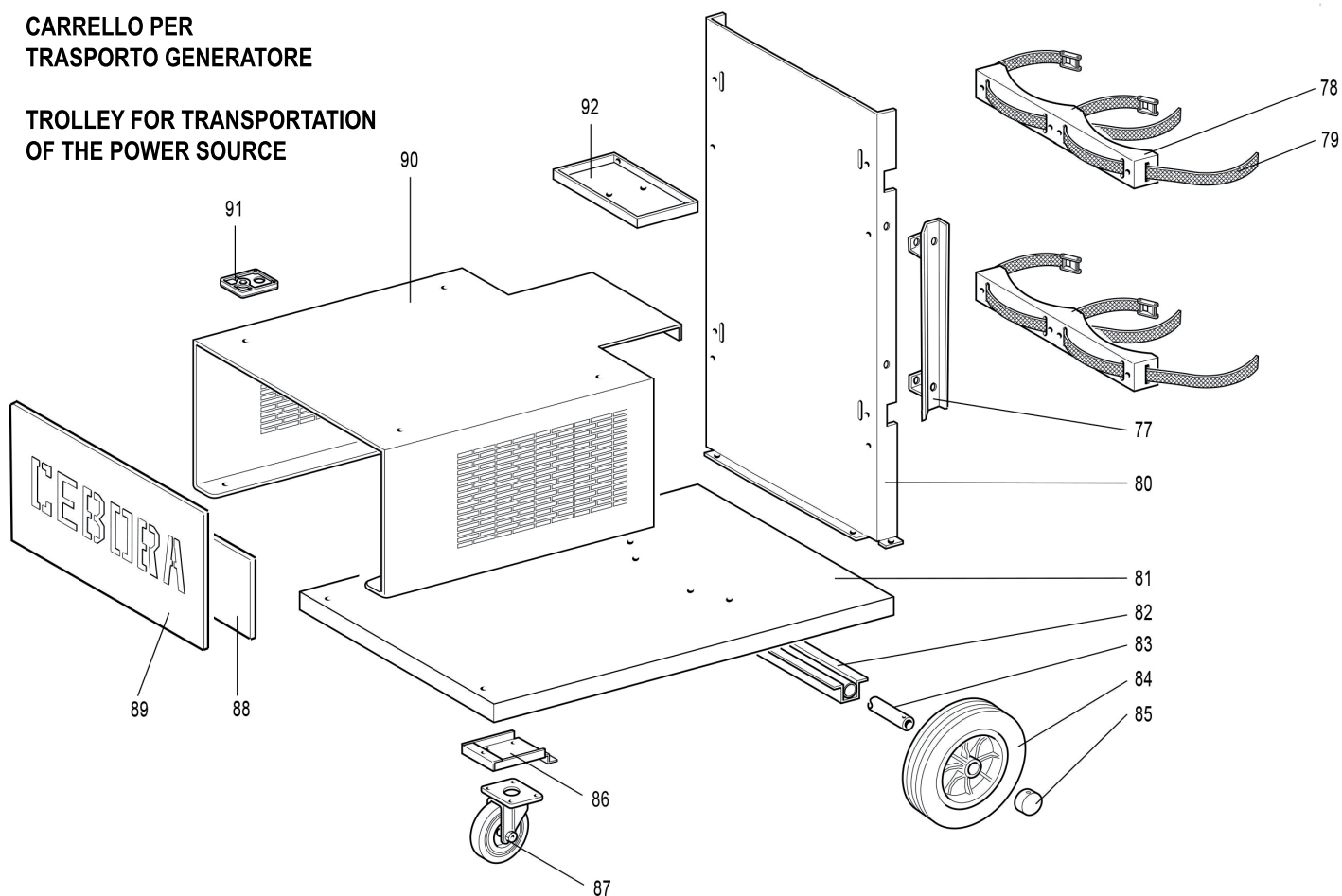
POS	DESCRIZIONE	DESCRIPTION
426	CORPO TRAINAFILO COMPLETO	COMPLETE WIRE FEED BODY
428	RULLO TRAINAFILO	WIRE FEED ROLLER
429	POMELLO	KNOB
447	GRUPPO TRAINAFILO	WIRE FEED UNIT
462	INGRANAGGIO	GEAR
464	MOTORIDUTTORE DESTRO	RIGHT WIRE FEED MOTOR
465	MOTORIDUTTORE DESTRO COMPLETO	COMPLETE RIGHT WIRE FEED MOTOR
489	KIT INGRANAGGI	GEARS KIT

La richiesta di pezzi di ricambio deve indicare sempre: numero di articolo, matricola e data di acquisto della macchina, posizione e quantità del ricambio.

When ordering spare parts please always state the machine item and serial number and its purchase data, the spare part position and the quantity.

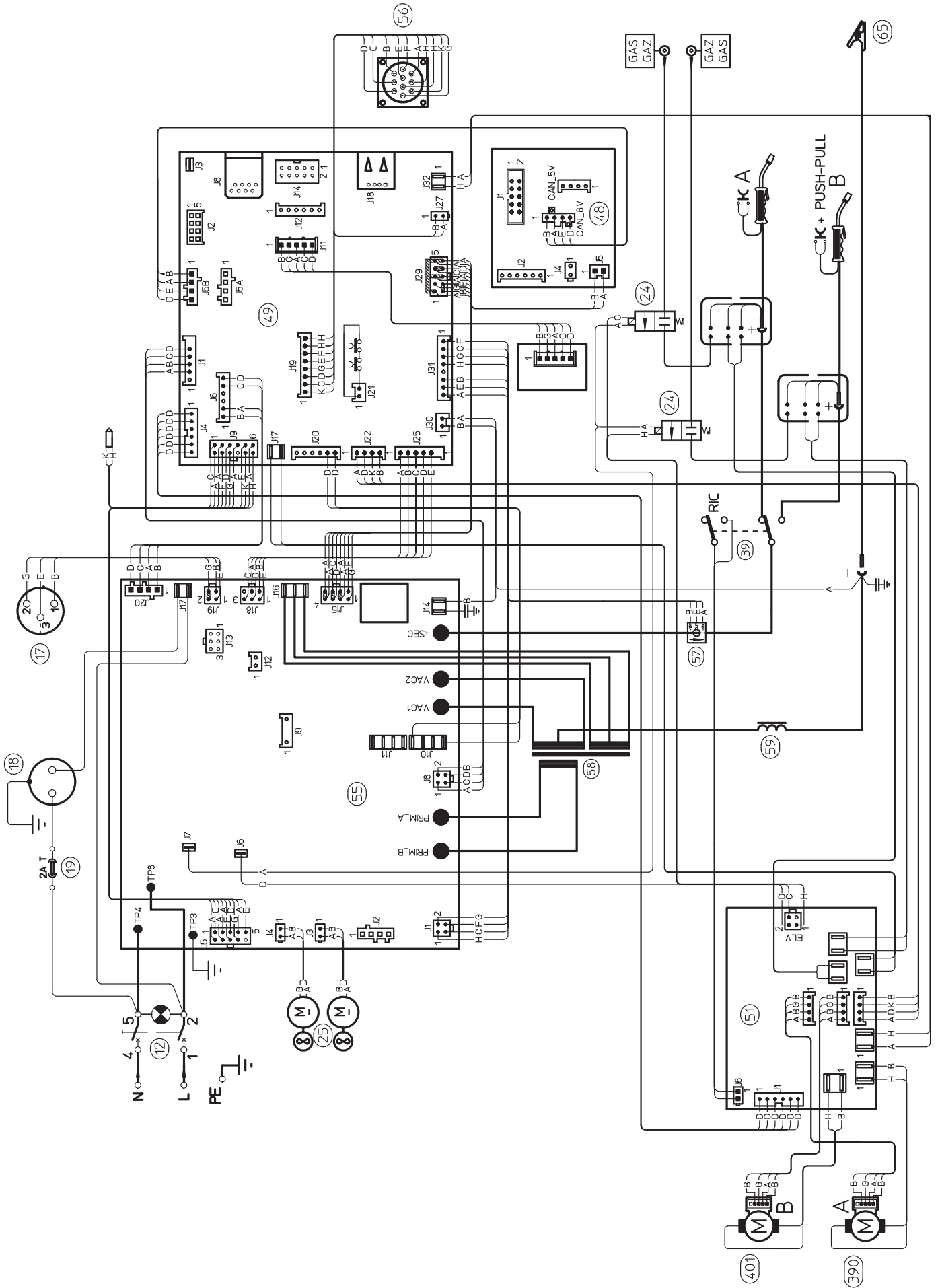
**CARRELLO PER
TRASPORTO GENERATORE**

**TROLLEY FOR TRANSPORTATION
OF THE POWER SOURCE**



POS	DESCRIZIONE	DESCRIPTION
77	SUPPORTO CAVI	CABLES SUPPORT
78	APPOGGIO BOMBOLA	GAS CYLINDER SUPPORT
79	CINGHIA	BELT
80	SUPPORTO BOMBOLA	GAS CYLINDER SUPPORT
81	FONDO	BOTTOM
82	SUPPORTO ASSALE	AXLE SUPPORT
83	ASSALE	AXLE
84	RUOTA FISSA	FIXED WHEEL

POS	DESCRIZIONE	DESCRIPTION
85	TAPPO	CAP
86	SUPPORTO RUOTE	WHEELS SUPPORT
87	RUOTA PIROETTANTE	SWIVELING CASTOR
88	PANNELLO INTERNO	INSIDE PANEL
89	PANNELLO CHIUSURA	LID
90	SUPPORTO GENERATORE	POWER SOURCE SUPPORT
91	APPOGGIO	REST
92	ATTACCO SUPP. BOMBOLA	SUPPORT CONNECTOR



CODIFICA COLORI CABLAGGIO ELETTRICO		WIRING DIAGRAM COLOUR CODE
A	NERO	BLACK
B	ROSSO	RED
C	GRIGIO	GREY
D	BIANCO	WHITE
E	VERDE	GREEN
F	VIOLA	PURPLE
G	GIALLO	YELLOW
H	BLU	BLUE
K	MARRONE	BROWN
J	ARANCIO	ORANGE
I	ROSA	PINK

CODIFICA COLORI CABLAGGIO ELETTRICO		WIRING DIAGRAM COLOUR CODE
L	NEROSA-NERO	PINK-BLACK
M	GRIGIO-VIOLA	GREY-PURPLE
N	BIANCO-VIOLA	WHITE-PURPLE
O	BIANCO-NERO	WHITE-BLACK
P	GRIGIO-BLU	GREY-BLUE
Q	BIANCO-ROSSO	WHITE-RED
R	GRIGIO-ROSSO	GREY-RED
S	BIANCO-BLU	WHITE-BLUE
T	NERO-BLU	BLACK-BLUE
U	GIALLO-VERDE	YELLOW-GREEN
V	AZZURRO	BLUE



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