

---

I	MANUALE DI ISTRUZIONI PER SALDATRICI A FILO .....	pag. 2
EN	INSTRUCTION MANUAL FOR WIRE WELDING MACHINE .....	page 10
DE	BEDIENUNGSANLEITUNG FÜR LICHTBOGENSCHWEISSMASCHINEN ..	seite 17
FR	MANUEL D'INSTRUCTIONS POUR POSTE A SOUDER A FIL .....	page 23
ES	MANUAL DE INSTRUCCIONES PARA SOLDADORA DE HILO .....	pag. 33
PT	MANUAL DE INSTRUÇÕES PARA MÁQUINA DE SOLDAR A FIO .....	pag. 41
FI	KÄYTTÖOPAS MIG-HITSAUSKONEELLE .....	sivu. 49
DA	INSTRUKTIONSMANUAL FOR SVEJSEAPPARAT TIL TRÅDSVEJSNING	side. 56
NL	GEBRUIKSAANWIJZING VOOR MIG-LASMACHIN .....	pag. 64
SV	INSTRUKTIONSMANUAL FÖR TRÅDSVETS .....	sid. 72
EL	ΟΔΗΓΟΣ ΧΡΗΣΕΩΣ ΓΙΑ ΣΥΣΚΕΥΗ ΣΥΓΚΟΛΛΗΣΗΣ ΜΕ ΝΗΜΑ	σελ. 80

---

Parti di ricambio e schema elettrico  
Spare parts and electrical schematic  
Ersatzteile und Schaltplan  
Pièces détachées et schéma électrique  
Partes de repuesto y esquema eléctrico  
Partes sobressalentes e esquema eléctrico

Varaosat ja sähkökaavio  
Reservedele og elskema  
Reserveonderdelen en elektrisch schema  
Reservdelar och elschema  
Ανταλλακτικά και ηλεκτρικό σχέ-  
διάγραμμα

Pagg. Sid. σελ.: 89 ÷ 93


---



# 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.



**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

The welding machine is a system suitable for synergic MIG/MAG and pulsed synergic MIG/MAG welding, developed with inverter technology.

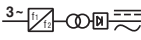
It is equipped with a 2-roller gearmotor.


This welding machine must not be used to defrost pipes.

### 2.1 EXPLANATION OF TECHNICAL SPECIFICATIONS

This machine is manufactured according to the following international standards: IEC 60974-1 / IEC 60974-10 (CL. A) / IEC 61000-3-11 / IEC 61000-3-12 (see note 2).

No. Serial number. Must be indicated on any request regarding the welding machine.

 Three-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 I2 current

U1. Rated supply voltage.

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

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

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 machine may be stored, but it is not suitable for use outdoors in the rain, unless it is protected. Suitable for use in high-risk environments.

**S**

#### NOTES:

1- The equipment has also been designed for use in environments with a pollution rating of 3. (See IEC 60664).

2- This equipment complies with a IEC 61000-3-12 standard provided that the allowed maximum imped-

ance  $Z_{max}$  of the unit is lower or equal to 0.93 at the interface point between the user unit and the mains. The fitter or the unit user are responsible for connecting the unit to a power supply with a maximum allowed system impedance ( $Z_{max}$ ) lower or equal to 0.93.

## 2.2 PROTECTION DEVICES

### 2.2.1 Bloch protection

In case of welding machine malfunction, the display screen **A** will show the message WARNING to identify the type of fault. If this message does not disappear when the machine is switched off and back on, contact the after-sales service.

### 2.2.2 Thermal cutout

This appliance is protected by a thermostat which prevents machine operation whenever acceptable temperatures are exceeded. In these conditions, the fan continues to operate and the display screen **A** shows the message WARNING tH in flashing mode.

### 2.3.3 Positioning on sloping planes.

Since this welding machine is equipped with wheels without brake, do not position it on sloping planes, to prevent machine tilting or uncontrolled movement.

## 3 CONTROLS LOCATED ON FRONT PANEL.

### A – DISPLAY SCREEN.

This displays both the welding parameters and all the welding functions.

### B - KNOB

Selects and adjusts both the welding functions and parameters.

### C – CENTRALIZED COUPLING

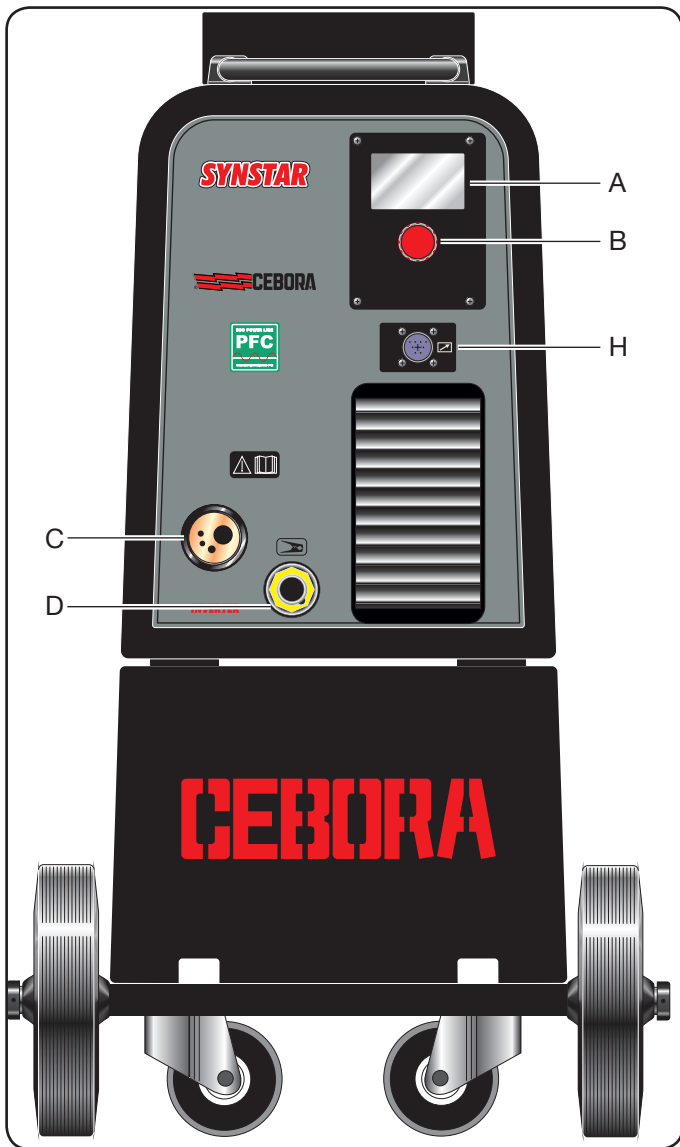
To which the welding torch must be connected.

### D – EARTH LEAD OR SOCKET

Where you must connect the earth cable connector.

### H – CONNECTOR

This is where the control cable of the Push Pull welding torch Art. 2003 or Art. 2010 is connected.



**E – GAS PIPE CONNECTION.**

**F – SWITCH.**

Starts and stops the machine

**G – MAINS CABLE**

**I - FUSE HOLDER.**

**L – SOCKET.**

Socket which receives the power cord from the cooling unit Art.1681 (optional).

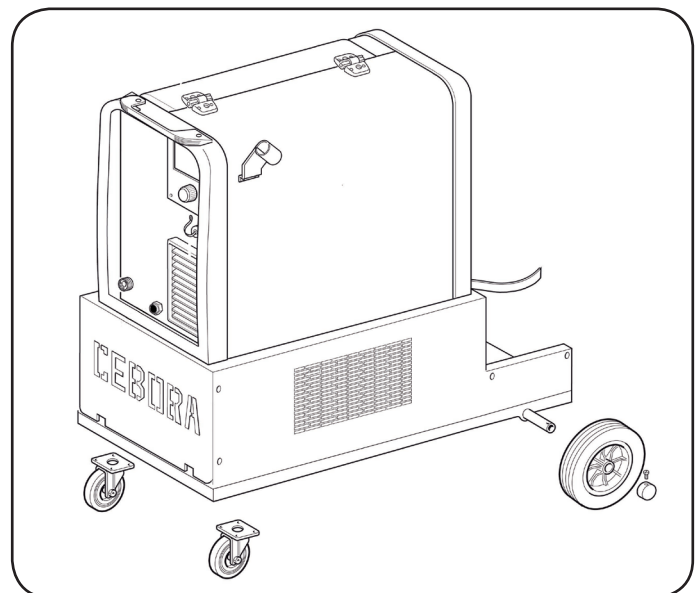
**M – PRESSURE SWITCH CONNECTOR.**

Connector which receives the cable from the pressure switch Art.1681 (optional).

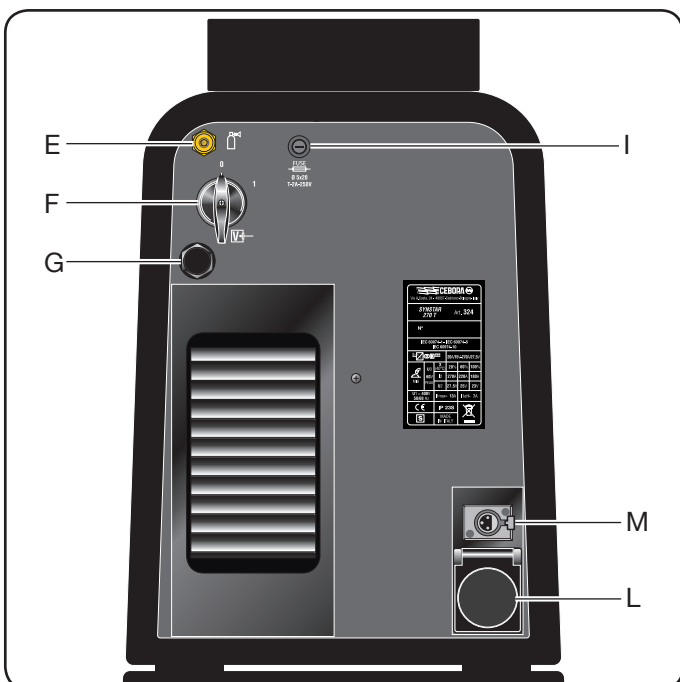
## 5 INSTALLATION AND START-UP

Position the welding machine so as to allow the free circulation of air inside and, as much as possible, prevent metal or other dusts from penetrating.

- The machine must be installed by professional personnel.
- All the connections must be performed in compliance with applicable standards (IEC/CEI EN 60974-9) and with accident-prevention laws.
- Make sure the power supply voltage corresponds to the welding machine rating.
- The protection fuses must be sized according to the details shown on the technical data plate.



## 4 CONTROLS LOCATED ON REAR PANEL.



- Position the cylinder on the support and fix it with the 2 straps; ensure that the straps are secured tightly to the cylinder to prevent dangerous tilting.
- Connect the gas hose to the outlet of the pressure regulator.
- Open the side door.
- Connect the power cord to the socket **D** and through the clamp to the workpiece.
- Connect the earth lead clamp **D** to the piece to be welded.
- Fit the wire coil on the support inside the compartment. The coil must be fitted so that the wire unwinds in an anticlockwise direction.



- Make sure the drive roller is correctly positioned according to the diameter and type of wire used.
- Cut the welding wire with a well-sharpened tool, keeping it between your fingers so that it cannot unwind, insert it inside the pipe exiting from the gear motor and, with the aid of a finger, insert it inside the steel tube until it comes out of the adapter.
- Fit the welding torch.

After fitting the reel and torch, switch on the machine, select the suitable synergic curve, following the instructions given in the service functions (**PROCESS PARAMS**) paragraph. Remove the gas nozzle and unscrew the current nozzle of the torch. Press the torch button until the wire comes out. **BE CAREFUL to keep your face away from the end lance while the wire is coming out**, screw up the current nozzle and fit the gas nozzle.

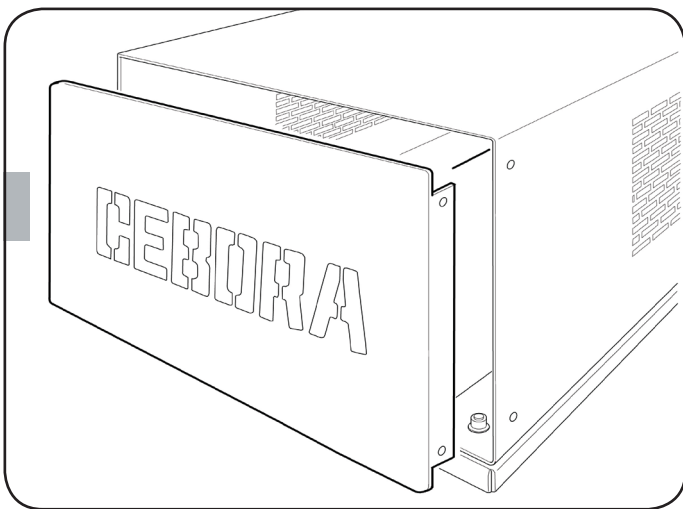
Open the canister adapter and adjust the gas flow to 8 – 10 l/min.

During welding, the display screen **A** displays the actual work current and voltage. The displayed values may be slightly different to those set. This can depend on numerous different factors - type of torch, thickness different to nominal thickness, distance between current nozzle and the material being welded, and the welding speed.

After welding, the current and voltage values remain stored on the display **A**, where letter **H** (HOLD) is displayed. To display the set values, the handle **B** will have to be moved slightly, while, by pushing the torch button without welding, the display screen **A** shows the empty voltage value and a current value of 0.

If, while welding the maximum current and voltage values are exceeded, said values are not stored on the display and the letter **H** (HOLD) is not displayed.

- In order to mount the cooling unit Art.1681 (optional) remove the closing panel (see drawing) and follow the instructions located inside the relevant compartment.



**NOTE** If 0.6mm diameter wires are used the welding torch sheath should be replaced with one of suitable internal diameter.

If the internal diameter of the sheath is too big it does not guarantee smooth wire feeding

## 6 DESCRIPTION OF FUNCTIONS SHOWN ON THE DISPLAY SCREEN A.

### Information

Machine	324
Version	001
Build	Feb 10 2015
Table	001

When the machine is switched on, for a few moments the display screen **A** displays: the article number of the machine, the version and development date of the software, and the release number of the synergic curves.

Immediately after switch-on, the display screen **A** shows: The synergic curve used, the welding mode **2T**, **4T** or **3L**, SPOT function, if active, the wordings PP2003 or PP2010 depending on the torch selected, if a push-pull welding torch is used, the welding process "**SHORT** or **PULSED**", the welding current, the speed of the welding wire in metres/min, the welding voltage and the recommended thickness.

To increase or decrease the welding parameters, simply adjust by means of knob **B**. The values all change together in a **synergic** way.

To change the welding voltage **V**, simply press the knob **B** for less than 2 seconds. The display screen will show (**Arc Length**) an adjustment bar with central 0. The value can be changed by means of the knob **B** from -9.9 to 9.9. To exit from the function, briefly press the knob **B**.

By changing the value, once having exited the sub-menu, alongside the voltage **V**, an arrow will appear turned upwards to indicate a higher adjustment of the set value, while the arrow turned downwards will indicate a lower adjustment.

Fe 0.8mm	Ar 18CO <sub>2</sub>	<b>MIG</b>
2T	PP	
100A	↔	5.7m/m
16.8 V	↕	1.4mm

### Arc Length



Fe 0.8mm	Ar 18CO <sub>2</sub>	<b>MIG</b>
2T	PP	
100A	↔	7.0m/m
21.9 V	↕	2.4mm

### Arc Length



### 6.1 SERVICE FUNCTIONS (PROCESS PARAMS) SHOWN ON THE DISPLAY SCREEN A.

To access these functions, we must start from the main display page and press the knob **B** for at least 2 seconds. To enter the function, simply select it by means of the knob **B** and press it for less than 2 seconds. To return to the main display page, press the knob **B** for at least 2 seconds.

The functions which can be selected are:

- **Synergic curve (Wire Selection).**

To choose the synergic curve, by means of the knob **B**, it is necessary to select and press on the curve presented by the display screen **A**. Simply select the

curve of interest and confirm the choice by pressing the knob **B** for less than 2 seconds.

After pressing the knob **B** return is made to the previous display page (**PROCESS PARAMS**).

Process Params	
Fe 0.8mm	Ar 18CO2
Process	SHORT
Start Mode	2T
Spot	OFF ▼

Wire selection	
Fe 0.6mm	Ar 18CO2 ▲
Fe 0.8mm	Ar 18CO2
Fe 0.9mm	Ar 18CO2
Fe 1.0mm	Ar 18CO2 ▼

• **Process**

Process Params	
Fe 0.8mm	Ar 18CO2
Process	SHORT
Start Mode	2T
Spot	OFF ▼

Process	
SHORT	
PULSED	

Use knob **B** to choose or confirm a welding mode by selecting and pressing **Short** or **Pulsed** for at least 2 seconds.

**Short** indicates that the short synergic welding mode is selected.

**Pulsed** indicates that the pulsed synergic welding mode is selected.

• **Welding mode (Start Mode).**

To choose the welding start mode **2T**, **4T** or **3L**, select one of the 2 modes by means of the knob **B** and press the knob **B** for less than 2 seconds to confirm the choice. This operation always returns us to the previous display page (**PROCESS PARAMS**).

Mode **2T**, the machine starts welding when the torch button is pressed and stops when this is released.

Mode **4T**, to start welding, press and release the torch button. To complete welding, press and release again.

Process	
SHORT	
PULSED	

Start Mode	
2T	
4T	
3L	

Mode **3L** Specially well suited to weld aluminium.

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

**Start Curr**, starting current, adjustable from 10 to 200% of set welding current.

**Slope time**, possibility of adjusting from 0.1 to 10 seconds. Defines the connection time between starting current (**Start Curr**) and welding current and between welding current and crater filler current or crater filling at the welding end (**Crater Curr**). Possibility of adjusting from 10 to 200% of the set welding current.

Welding starts at the welding torch button pressure. The named current will be the starting current **Start Curr**. This current is kept as long as the welding torch button is held down; when the welding torch button is released the starting current connects to the welding current, which is kept as long as the welding torch

button is held down. When the torch trigger is pressed again, the welding current will connect to the crater-filler current (**Crater Curr**) and it will be maintained until the torch button is released.

• **Spot and pause time (Spot).**

If we select the **spot ON** time, the **Spot Time** function appears on the display screen. If we select this, we can adjust it from 0.3 to 25 seconds by means of the adjustment bar. Besides this function, the display screen also shows **Pause Time**. If we select this, by means of the adjustment bar, we can regulate the pause time between one welding point or section and another. The pause time varies between 0 (OFF) and 5 seconds.

To access the **Spot Time** and **Pause Time** functions, press the knob **B** for less than 2 seconds. Adjustment is always made by means of the knob **B**. To confirm, simply press it for less than 2 seconds. Once the choice has been confirmed, return is always made to the display page (**PROCESS PARAMS**).

Process Params	
Fe 0.8mm	Ar 18CO2
Process	SHORT
Start Mode	2T
Spot	OFF ▼

Spot	
OFF	
ON	

Process Params	
Process	SHORT ▲
Start Mode	2T
Spot	ON
Spot Time	1.0s ▼

Spot Time	
1.0s	25.0s
	0.3s

Process Params	
Start Mode	2T ▲
Spot	ON
Spot Time	1.0s
Pause Time	OFF ▼

Pause Time	
0.0s	5.0s
	OFF

• **Inductance**

Adjustment can vary from -9.9 to +9.9. Factory setting is zero. If the figure is negative, the impedance drops and the arc becomes harder, while if it increases, the arc is softer.

To access this function, simply highlight it using the knob **B** and press it for less than 2 seconds. The display screen **A** shows the adjustment bar. The figure can be changed and confirmed by pressing the knob **B** for less than 2 seconds.

Process Params	
Spot	ON ▲
Spot Time	1.0s
Pause Time	OFF
Inductance	0.0 ▼

Inductance	
0.0	MAX
	MIN

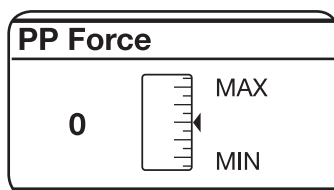
- **PP Force.**

Adjustment can vary from -99 to +99.

By using Push-Pull torch 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. If the set value is modified, the display shows the letters PPF beside the new value.

To access this function, simply highlight it using the knob **B** and press it for less than 2 seconds. The display screen **A** shows the adjustment bar. The figure can be changed and confirmed by pressing the knob **B** for less than 2 seconds.

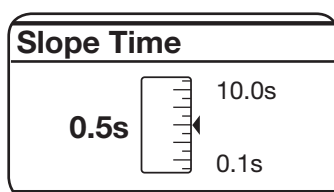
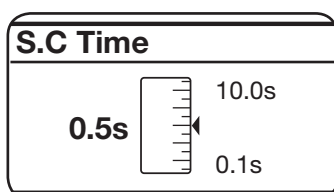
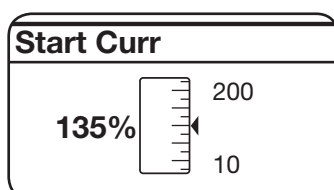
Process Params	
Spot Time	1.0s ▲
Pause Time	OFF
Inductance	0.0
PP Force	0 ▼



- **HSA (Automatic Hot Start).**

This function is blocked when function 3L is activated. Once the function has been enabled, the operator may adjust the starting current (**Start Curr**) from 10 to 200% of the welding current (Default 130%). The duration of this current (**S.C. Time**) may also be adjusted from 0.1 to 10 seconds (default 0,5 sec.). The switching time (**Slope Time**) between the starting current (**Start Curr**) and the welding current may also be adjusted from 0.1 to 10 seconds (default 0.5 seconds.).

Process Params	
HSA	ON ▲
Start Curr.	135%
S.C. Time	0,5s
Slope Time	0,5s ▼



- **CRA (crater filler - final crater filling).**

This function is blocked when function 3L is activated. It is working during welding **2T**, **4T** and also in combination with function **HSA**.

After activating the function, the operator may adjust the connection time (**Slope Time**) between the welding current and the crater filling current (**Crater Curr.**) from 0.1 to 10 seconds (default 0.5 seconds.).

The operator may also adjust the crater filling current (**Crater Curr.**) from 10 to 200% of the welding current (Default 60%).

The time (**C.C. Time**) of the crater filling duration may also be adjusted from 0.1 to 10 seconds (default 0.5 seconds).

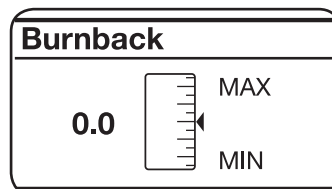
- **AUTO burnback**

The adjustment can vary from -9.9 to +9.9. Its purpose is to adjust the length of the wire coming out of the gas

nozzle after welding. A positive figure corresponds to greater wire burning. Default is Auto.

To access this function, simply highlight it using the knob **B** and press it for less than 2 seconds. The display screen **A** shows the adjustment bar. The figure can be changed and confirmed by pressing the knob **B** for less than 2 seconds.

Process Params	
Pause Time	OFF ▲
Inductance	0.0
PP Force	0
Burnback	AUTO ▼



- **Soft Start AUTO**

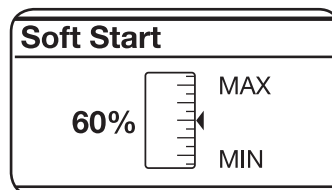
Adjustment can vary from 0 to 100%. This is the wire speed expressed in percentage of the speed set for welding, before the wire touches the piece to be welded.

This adjustment is important to always obtain good starts.

Default is Auto.

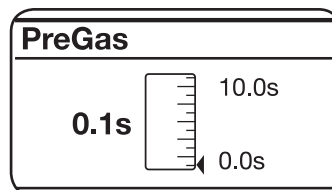
To access this function, simply highlight it using the knob **B** and press it for less than 2 seconds. The display screen **A** shows the adjustment bar. The figure can be changed and confirmed by pressing the knob **B** for less than 2 seconds.

Process Params	
Inductance	0.0 ▲
PP Force	0
Burnback	AUTO
Soft Start	AUTO ▼



- **Pre Gas**

LCD Contrast	
50%	

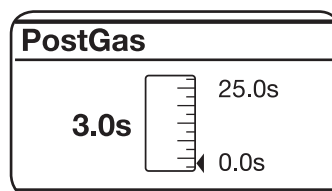


The adjustment can vary from 0 to 10 seconds.

To access this function, simply highlight it using the knob **B** and press it for less than 2 seconds. The display screen **A** shows the adjustment bar. The figure can be changed and confirmed by pressing the knob **B** for less than 2 seconds.

- **Post Gas**

Process Params	
Soft Start	AUTO ▲
PreGas	0.1s
PostGas	3.0s ▼
Water Unit	OFF



The adjustment can vary from 0 to 25 seconds.

To access this function, simply highlight it using the knob **B** and press it for less than 2 seconds. The display screen **A** shows the adjustment bar. The figure can be

changed and confirmed by pressing the knob **B** for less than 2 seconds.

• **Water unit.**

Process Params		Water Unit	
PreGas	0.1s ▲	OFF	
PostGas	3.0s	<b>ON</b>	
Water Unit	OFF	AUTO	
LCD Contrast	50% ▼		

This function allows the setting of the cooling unit start-up. The possible selections are: OFF – ON – AUTO, the default selection is OFF. If "AUTO" is selected, when the machine is switched on, the cooling unit starts, if the torch trigger is not pressed after 30 seconds, it shuts off. By pressing the torch trigger the group starts again and shuts off 3 minutes after releasing the trigger.

• **LCD Contrast**

Process Params		LCD Contrast	
PreGas	0.1s ▲		
PostGas	3.0s		
Water Unit	OFF		
LCD Contrast	50% ▼		

The adjustment may range from 0 to 100%.

This function can be used to increase or decrease the brightness of display screen **A**.

To access this function, simply highlight it using the knob **B** and press it for less than 2 seconds. The display screen **A** shows the adjustment bar. The figure can be changed and confirmed by pressing the knob **B** for less than 2 seconds.

• **Options LOCK**

To access this function, simply highlight it using the knob **B** and press it for less than 2 seconds. The display screen **A** will show a serial number **SN** and **8 zeros**.

The purpose of this function is to unlock all the synergic curves of the pulsed process.

To unlock the curves, instead of the zeros, an alphanumeric code must be entered. This must be requested from your dealer, after indicating the serial number **SN**.

Once the code has been obtained, simply enter it in place of the zeros: each letter or figure entered must be confirmed by briefly pressing the knob **B**. After entering the code, by pressing the knob **B** for more than 2 seconds, all the Pulsed process curves are unlocked and the display screen **A** shows **UNLOCK** alongside the Options function.

Process Params		Options	
PostGas	3.0s ▲	SN: 6C66778811223344	
Water Unit	OFF		
LCD Contrast	50%		
Options	LOCK ▼	0000-0000	

• **Factory OFF**

The purpose is to return the welding machine to the original default settings.

To access the function, simply highlight it using the knob **B**. By pressing this for less than 2 seconds, the display screen **A** shows the words **OFF** and **ALL**. By highlighting the word **ALL** and briefly pressing the knob **B** reset is made and the display screen **A** shows **Factory Done!!** This indicates the reset has been successful. To return to the previous display page, simply press the knob **B** for more than 2 seconds.

Process Params		Factory	
Water Unit	OFF ▲	OFF	
LCD Contrast	50%	<b>ALL</b>	
Options	LOCK		
Factory	OFF		

**NOTE.** For all the functions adjusted by means of the adjustment bar, the initial default value can be reset.

This operation be performed by pressing the knob **B** for more than 2 seconds only once the adjustment bar appears on the display screen **A**.

(Arc Length - Spot Time - 3L- HSA - CRA - Pause Time - Inductance, Burnback – Soft Start - Pre Gas - Post Gas - LCD Contrast).

**7 MAINTENANCE**

**All maintenance jobs must be performed by professional personnel according to the CEI 26-29 (IEC 60974-4) standard.**

**7.1 GENERATOR MAINTENANCE**

In case of maintenance inside the appliance, make sure the switch **F** is in "O" position and that the power supply cable is disconnected from the mains.

Periodically, also clean the inside of the appliance and remove any metal dust using compressed air.

**7.2 HOW TO PROCEED AFTER MAKING REPAIRS.**

After making repairs, always ensure the wires are fully insulated between the primary side and the secondary side of the machine. Avoid the wires coming into contact with moving parts or parts that heat up during operation. Fit all the clamps back as on the original machine so as to avoid any contact between the primary and secondary in case of accidental lead breakage or disconnection. Also fit the screws back on with the toothed washers as on the original machine.



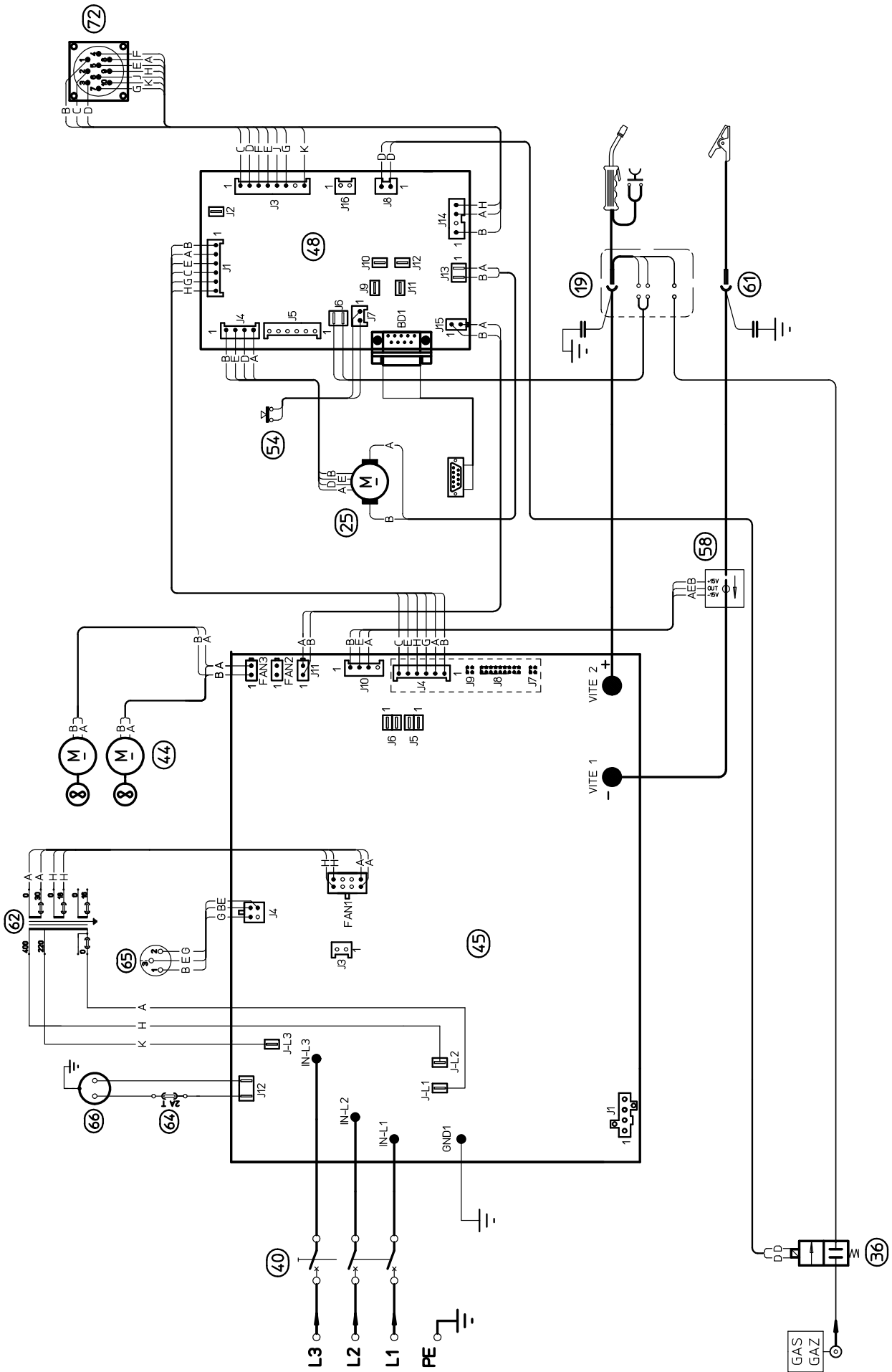
---

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.

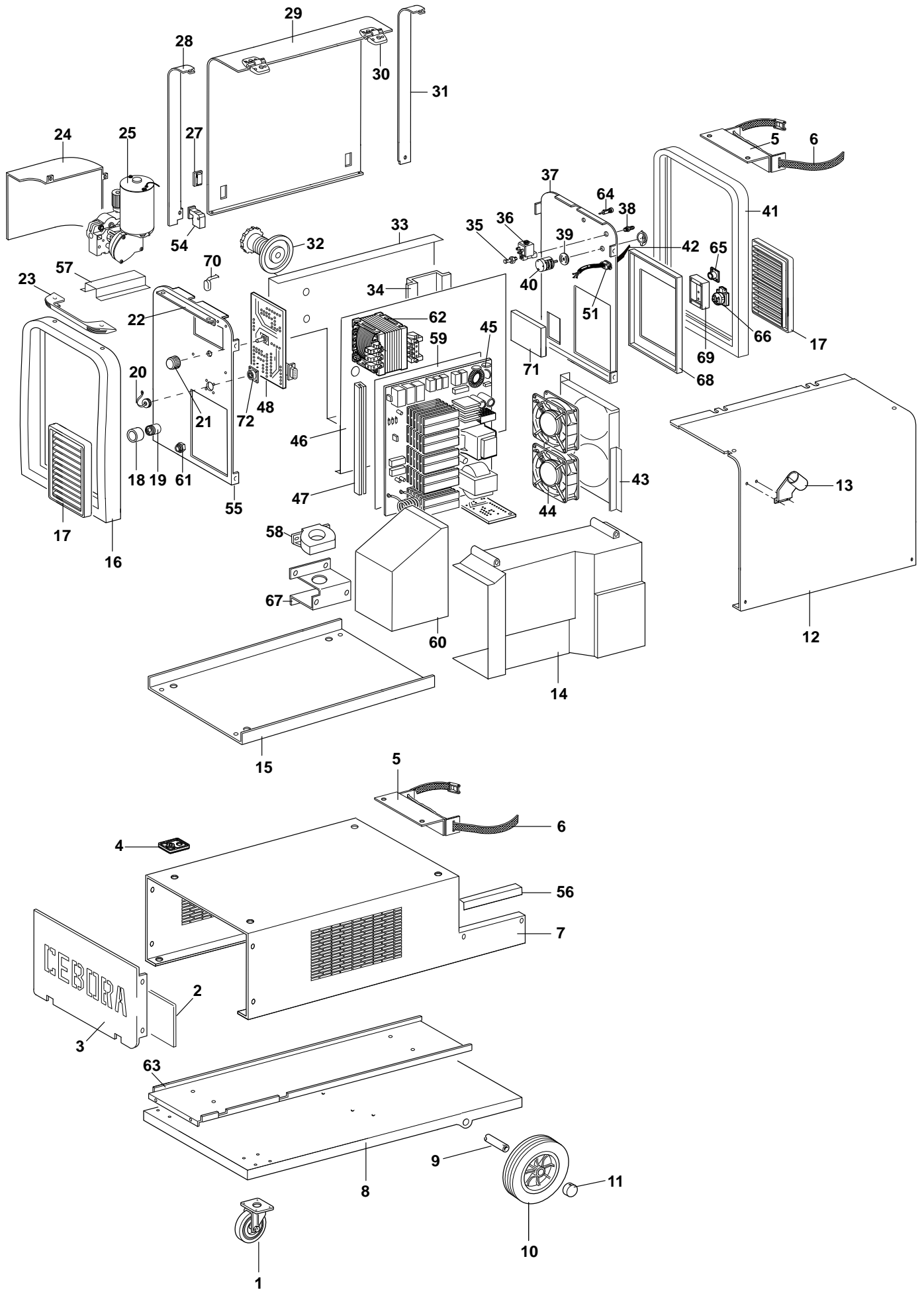
---

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	ROSA-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



ART. 324





## ART. 324

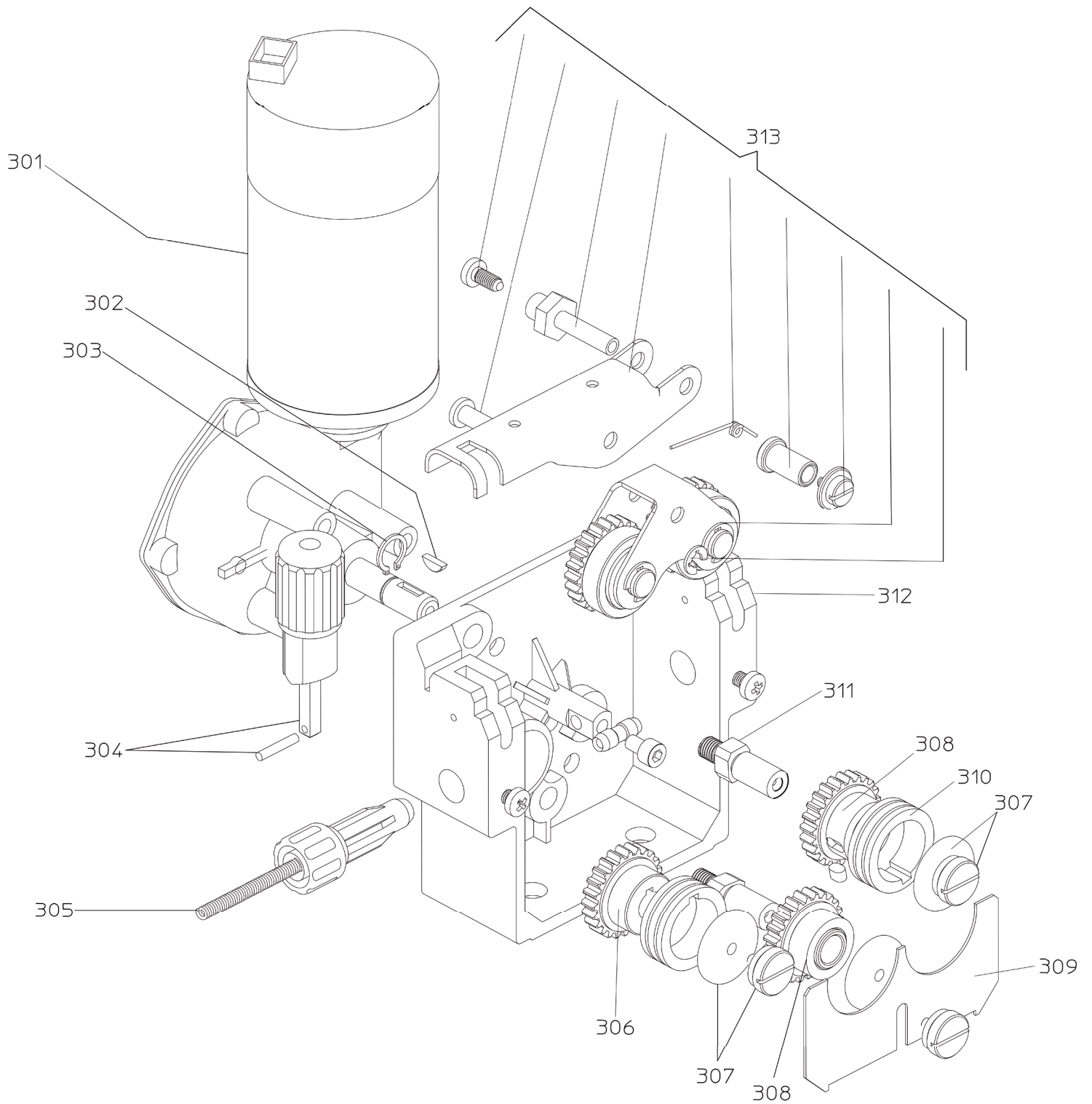
POS	DESCRIZIONE	DESCRIPTION
01	RUOTA PIROETTANTE	SWIVELING WHEEL
02	PANNELLO	PANEL
03	PANNELLO CHIUSURA	LID
04	APPOGGIO	REST
05	APPOGGIO BOMBOLA	GAS CYLINDER SUPPORT
06	CINGHIA	BELT
07	SUPPORTO GENERATORE	POWER SOURCE SUPPORT
08	FONDO	BOTTOM
09	ASSALE	AXLE
10	RUOTA FISSA	FIXED WHEEL
11	TAPPO	CAP
12	LATERALE FISSO	FIXED SIDE PANEL
13	SUPPORTO TORCIA	TORCH SUPPORT
14	COPERTURA	COVER
15	FONDO	BOTTOM
16	CORNICE	FRAME
17	PANNELLO ALETTATO	FINNED PANEL
18	GHIERA ADATTATORE	ADAPTOR PROTECTION
19	CORPO ADATTATORE	ADAPTOR BODY
20	TAPPO	CAP
21	MANOPOLA	KNOB
22	SUPPORTO MANICO	HANDLE SUPPORT
23	MANICO	HANDLE
24	PROTEZIONE MOTORE	MOTOR PROTECTION
25	MOTORIDUTTORE	WIRE FEED MOTOR
27	BLOCCAGGIO	LOCKING
28	LATERALE ANTERIORE SX.	LEFT FRONT SIDE PANEL
29	LATERALE MOBILE	HINGED SIDE PANEL
30	CERNIERA	HINGE
31	LATERALE POSTERIORE SX.	LEFT BACK SIDE PANEL
32	SUPPORTO BOBINA	COIL SUPPORT
33	PIANO INTERMEDIO SX.	LEFT INSIDE BAFFLE
34	SUPPORTO PIANO INTERMEDIO	SUPPORT INSIDE BAFFLE
35	RACCORDO	FITTING

POS	DESCRIZIONE	DESCRIPTION
36	ELETTROVALVOLA	SOLENOID VALVE
37	PANNELLO POSTERIORE	BACK PANEL
38	RACCORDO	FITTING
39	PROTEZIONE COMMUTATORE	SWITCH PROTECTION
40	INTERRUTTORE	SWITCH
41	CORNICE	FRAME
42	CAVO RETE	INPUT CABLE
43	SUPPORTO VENTOLA	FAN SUPPORT
44	KIT MOTOVENTOLE	KIT MOTOR WITH FAN
45	CIRCUITO DI POTENZA	POWER CIRCUIT
46	PIANO INTERMEDIO	INSIDE BAFFLE
47	ISOLAMENTO	INSULATION
48	CIRCUITO DI CONTROLLO	CONTROL CIRCUIT
51	PRESSACAVO	STRAIN RELIEF
54	PULSANTE	SWITCH
55	PANNELLO ANTERIORE	FRONT PANEL
56	RINFORZO	REINFORCEMENT
57	SUPPORTO MOTORE	MOTOR SUPPORT
58	TRASDUTTORE	TRASDUCER
59	ISOLAMENTO	INSULATION
60	CONVOGLIATORE	CONVEYOR
61	PRESA	SOCKET
62	TRASFORMATORE DI SERVIZIO	AUXILIARY TRANSFORMER
63	SUPPORTO	SUPPORT
64	PORTA FUSIBILE	FUSE HOLDER
65	CONNESSIONE PRESSOSTATO	PRESSURE SWITCH CONNECTION
66	PRESA	SOCKET
67	SUPPORTO TRASDUTTORE	TRASDUCER SUPPORT
68	SUPPORTO	SUPPORT
69	SUPPORTO PRESA	SOCKET SUPPORT
70	PROTEZIONE CONNETTORE	CONNECTOR PROTECTION
71	PROTEZIONE	PROTECTION
72	CONNESSIONE PUSH-PULL	PUSH-PULL CONNECTION

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.

MOTORIDUTTORE ART. 5710349  
WIRE FEED MOTOR PART N. 5710349



POS	DESCRIZIONE	DESCRIPTION
301	MOTORIDUTTORE	WIRE FEED MOTOR
302	BLOCCAGGIO	LOCKING
303	ANELLO SEGER	SEGER
304	BLOCCAGGIO GRADUATO	ADJUSTMENT KNOB
305	GUIDAFILO	WIRE DRIVE PIPE ASSY
306	INGRANAGGIO	GEAR
307	VITE ISOLATA	INSULATED SCREW
308	RULLO COMPLETO	COMPLETE GEAR
309	PROTEZIONE	PROTECTION
310-A	RULLO TRAINAFILO .040" - .045" SOLID	WIRE FEED ROLLER .040" - .045" SOLID

POS	DESCRIZIONE	DESCRIPTION
310-B	RULLO TRAINAFILO .023" - .030" SOLID	WIRE FEED ROLLER .023" - .030" SOLID
310-C	RULLO TRAINAFILO .035" - .035" A SOLID - ALUMINIUM	WIRE FEED ROLLER .035" - .035" SOLID - ALUMINIUM
310-D	RULLO TRAINAFILO .030" - .040" ALUMINIUM	WIRE FEED ROLLER .030" - .040" ALUMINIUM
310-E	RULLO TRAINAFILO .045" - 1/16 ALUMINIUM	WIRE FEED ROLLER .045" - 1/16 ALUMINIUM
311	SUPPORTO PREMIRULLO	ROLLER SUPPORT
312	CORPO TRAINAFILO	WIRE FEED BODY
313	GRUPPO BRACCETTO COMPLETO	COMPLETE ROLLER PRESSER SUPPORT

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.



**CEBORA S.p.A** - Via Andrea Costa, 24 - 40057 Cadriano di Granarolo - BOLOGNA - Italy  
Tel. +39.051.765.000 - Fax. +39.051.765.222  
[www.cebora.it](http://www.cebora.it) - e-mail: [cebora@cebora.it](mailto:cebora@cebora.it)