

# INSTRUCTION MANUAL FOR WIRE FEEDER

**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

### NOISE



This machine does not directly produce noise exceeding 80dB. The plasma cutting/welding procedure may produce noise levels beyond said limit; users must therefore implement all precautions required by law.

### 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 DESCRIPTION

### 2.1 SPECIFICATIONS

This manual has been prepared for the purpose of educating personnel assigned to install, operate and service the welding machine.

**The purchaser should address any complaints for losses or damage to the vector. Please indicate the article and serial number whenever requesting information about the welding machine.**

## 3 INSTALLATION

- Only skilled personnel should install the machine .
- All connections must be carried out according to current regulations, and in full observance of safety laws.

### 3.1 PLACEMENT

Unpack the wire feeder and place it above the welding machine, using the flexible rotating cylinder provided.

At the first start stage the operator must select the article he wants to use.


Once the generator has been connected to the carriage by means of the connector, the machine can be started.

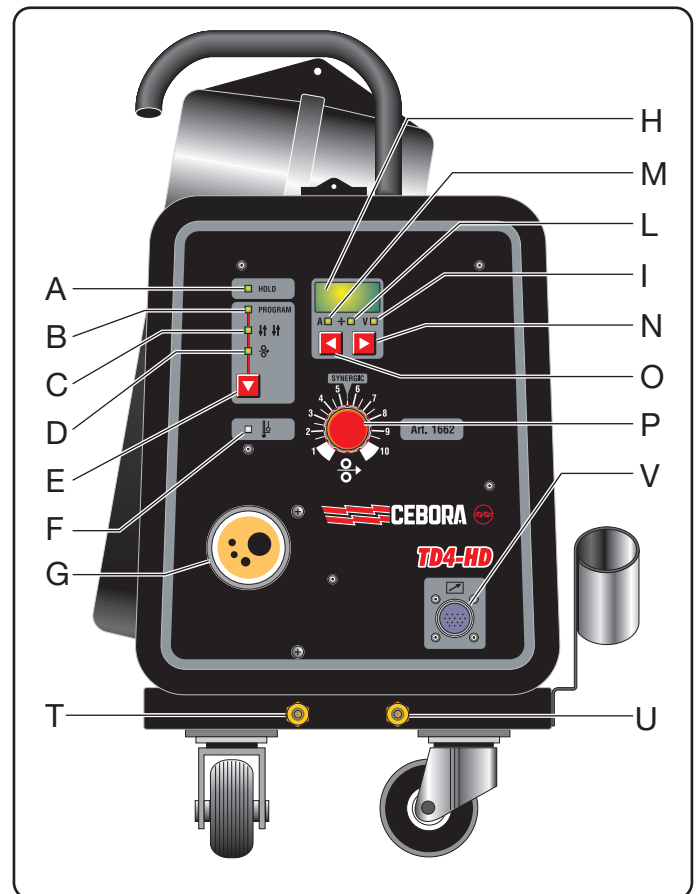
The screen **H** of the wire feed carriage shows 3 flashing lines; to select just push one of the 2 push-buttons **N** or **O** to display the welder article you want to use.

## 4 DESCRIPTION OF CONTROLS


### 4.1 CONTROLS ON THE FRONT OF THE MACHINE.

#### A- Green LED.

 Signals that the display **H** shows the current or voltage value measured during welding. To display one of the two values, simply press one of the two selection keys **N** or **O**.

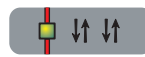


#### B- Green LED.

 Signals that the display **H** shows the program number being used.

Check the instructions posted inside the mobile side panel for the diameter, wire type and gas corresponding to the program number displayed. The figure on the display **H** is always preceded by the letter **P**.

#### C- Green LED.

 Signals that the welding machine is in 4-stage automatic mode.


When the LED is off the welding machine is in 2-stage manual mode. Use the selection keys **N** and **O** to select manual or automatic mode. The display **H** will show the message 2t when the machine is in 2-stage manual mode, or 4t when it is in 4-stage automatic mode.

If the welding machine is set to 2-stage manual mode, welding begins when the button is pressed, and stops when it is released.

If the welding machine is set to 4-stage automatic mode, press the torch trigger to begin welding;

you may release the trigger once the procedure has begun. Press and release the trigger again to stop welding. This setting is suitable for long-term welding, where the welder may tire of holding down the torch trigger.

#### D - green wire feed test LED.

 It signals that wire feeding function is active. To feed wire simply press the torch trigger and adjust the output speed using the potentiometer **P**. If the Push-Pull welding torch is used the output speed is adjusted by means of the up-down triggers on the welding torch grip. When the **H** LED is lit, the display shows the speed in meters per minute.

Three seconds after the operator releases the button, the function is automatically deactivated and the LED shuts off.

#### E - Selection key.



Pressing this key causes the LEDs **B**, **C**, **D** to light in sequence.

In the submenu activated by the keys **N** and **O**, select the functions: spot-welding (E), jog(F), burn-back, soft start speed, post gas and soft start time.

#### F- Yellow LED.



Lights when the thermostat or safety button or cooling unit interrupt operation of the welding machine.

#### G - Central adapter.



This is where the welding torch is to be connected.

#### H - Display.



• When the machine is switched on, for a few seconds the display shows first the letter **F** alongside a number, which identifies the firmware, version then the letter **P** next to a number identifying the welding program in use.

• Using the manual program **00** before welding the display shows the wire speed expressed in meters per minute; during welding it shows the current or voltage.

• If one of the synergic programs is being used, before welding it displays the previously saved current or voltage or the recommended thickness. During welding it displays the current or voltage measured during welding.

• When the LED **C** is selected, it displays the manual (2T) or automatic (4T) mode. When the LED **D** is selected, it displays the meters per minute.

• Before welding, within the submenu the machine displays: the spot welding time, pause time, burn-back time, soft start speed, post gas time, soft start time, manual (2T) or automatic (4T) welding mode, the meters per minute of the wire feed function and the speed set on the motor of the PULL 2010.

#### I - Green LED.



Indicates that the value shown on the display is a voltage.

#### - Green LED.



Indicates that the value shown on the display is the recommended thickness.

#### M - Green LED.



Indicates that the value shown on the display is a current.

#### N and O - Keys.



When the LED **A** is lit the display **H** shows the current or voltage values selected by the keys.

When the LED **B** is lit the display **H** shows the number of the program selected via the keys. When the selection is complete, the LED and display remain lit for 5 seconds

When the LED **C** is lit, the display **H** indicates whether the

machine is in 2T manual or 4T automatic mode, which may be selected using the keys. When the selection is complete, the LED and display remain lit for 5 seconds.

By using the 2 selector switches **R** and **S** from within any synergic program, pressing one of the 2 keys toggles the LEDs **I**, **L**, **M**, and display **H** alternates displaying the current, recommended thickness and voltage. This function is useful when you need to know in advance at what current, voltage or thickness you wish to weld.

Pressing the 2 keys simultaneously for at least 5 seconds causes us to enter the sub-menu, where we find the following functions that may be selected via the key **E**:

#### 1 - Spot welding time.

When this function is selected the display **H** shows the letter (E). Using one of the 2 keys you may adjust the spot welding or working time, which may range from 0.3 to 5 seconds. Setting the time to 0 disables the function. The function is active only while welding.

#### 2 - Pause time of the jog function.

When this function is selected the display **H** shows the letter (F). Using one of the 2 keys you may adjust the pause time between welding segments, which may range from 0.3 to 5 seconds. Setting the time to 0 disables the function. The function is active only while welding, and if any spot welding or working time is active.

#### 3 - Burn-back.

When this function is selected the display **H** shows the letter (b). Using one of the 2 keys you may adjust the time for which the wire continues to be output from the welding torch after the operator has released the button. This time ranges from 0 to 600 milliseconds.

#### 4 - Soft start (speed).

When this function is selected the display **H** shows the letter (A).

Changes the wire speed from the one set; this speed remains active for the time governed by the Soft Start function (time).

The speed may be adjusted using the 2 keys **N** and **O** from 10% to a maximum of 150% of the set welding speed. This function, combined with the soft start function (time), serves to improve arc striking.

#### 5 - Soft Start (time).

When this function is selected the display **H** shows the letter (d).

Adjusts the time for which the soft start speed remains active. This function, combined with the soft start function (speed), serves to improve arc striking.

Using the 2 keys **N** and **O**, the soft start time may be adjusted from 0 to 1 second.

#### 6- Speed set on the motor of the PULL 2010.

Adjusting the two keys **O** and **N** varies the speed of the PULL 2010 from -9 to +9 compared to the set value. This function maximizes wire advancement, putting the wire feeder motor of the welding machine in step with the motor of the PULL 2010.

The value shown on the display **H** is preceded by the letter (H).

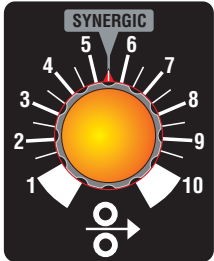
## 7 - Post gas.

When this function is selected the display H shows the letter (P).

Using the two keys **N** and **O**, it is possible to adjust the gas flow after welding to between 0 and 10 seconds.

This function is especially useful when welding stainless steel and aluminum.

## P- Setting knob.



When using any synergic program, the knob indicator must be set to the label SYNERGIC. When a synergic program is selected, the display **H** shows the set current.

This current corresponds to a given speed. If you wish to correct this speed, simply turn the knob clockwise to increase or counter-clockwise to decrease.

Changes in wire speed are always indicated on the display **H** by a current.

When the program 00 (manual) is in use, adjusts the wire speed from 0 to 20 meters per minute.

The display **H** shows the meters per minute.

## T - Quick-fitting socket.



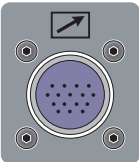
This fitting must be connected to the red water hose leaving the welding torch.

## U - Quick-fitting socket.



This fitting must be connected to the blue water hose leaving the welding torch.

## V- 10-pin connector.



This connector must be connected to the 10-pin patch connector of the PULL 2010 torch.

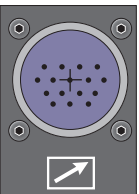
## 4.2 CONTROLS ON THE WIRE FEEDER REAR PANEL

### Q - Gas hose fitting

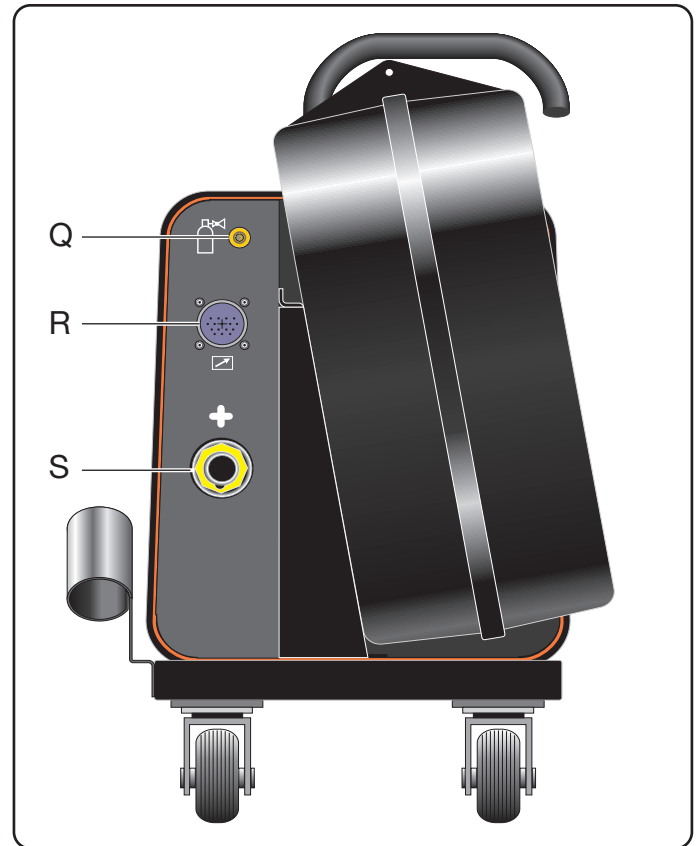


For extension gas hoses.

### R - 14-pin socket connector



For 14-pin plug connector.



### S - Socket



For extension power supply plug.

## 5 START-UP

Assemble the welding torch on the central adapter (**A**).

Make sure that the wire diameter corresponds to the one indicated on the wire feed roller, and load the wire reel. Make sure that the welding wire passes through the groove in the roller.

Before connecting the generator power cable, make sure that the supply voltage corresponds to that of the welding machine, and that the earth socket functions properly.

Turn on the generator.

Remove the tapered gas nozzle.

Unscrew the contact tip.

Press the torch trigger and release it only when the welding wire comes out.

Welding wire can cause puncture wounds.

Never aim the torch at parts of the body when loading the welding wire.

Screw the contact tip back on, making sure that the hole diameter corresponds to the wire used.

Slide the tapered gas welding nozzle back on.

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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.

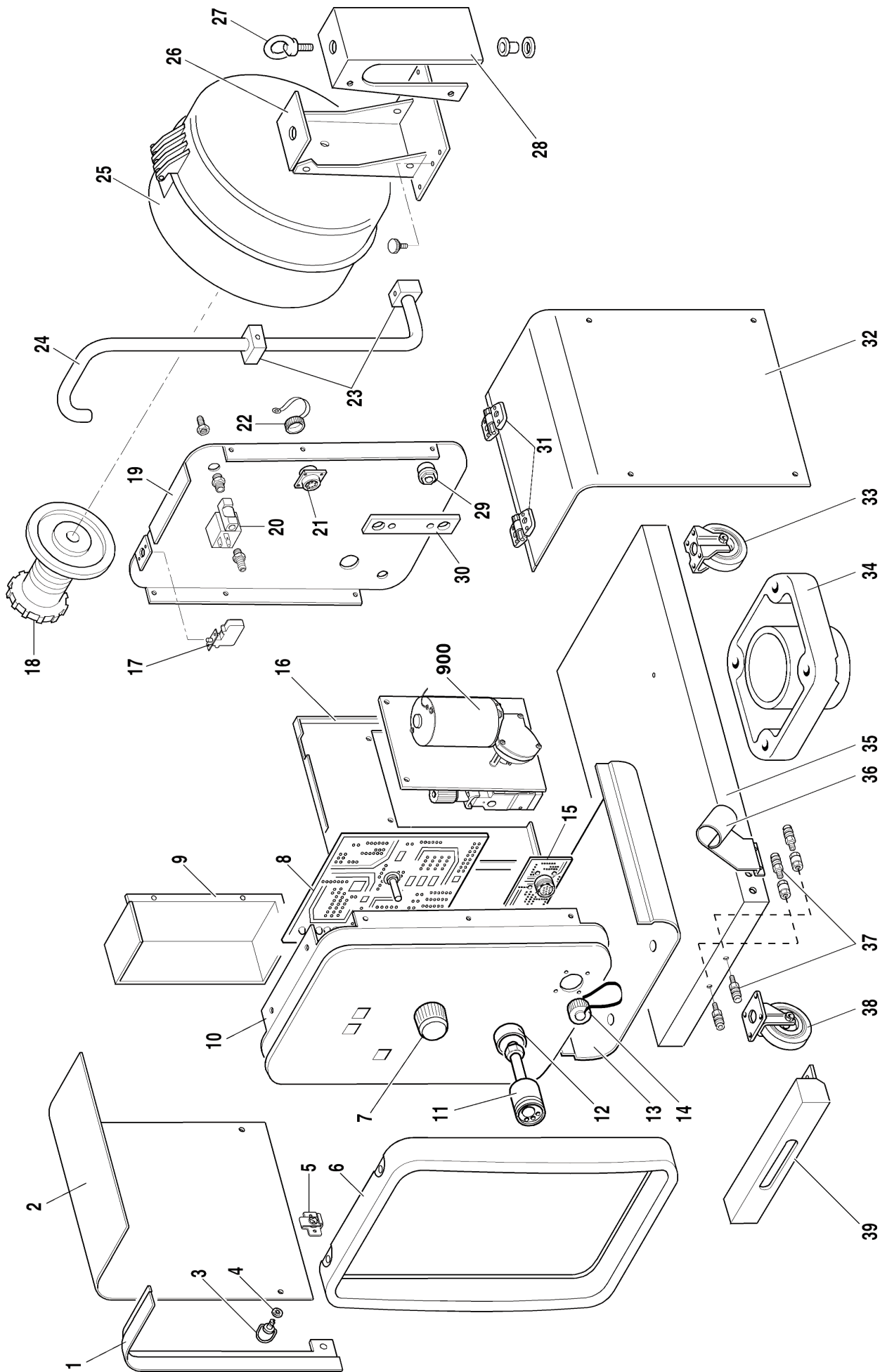
TÄMÄ OSA ON TARKOITETTU AINOASTAAN AMMATTITAITOISELLE HENKILÖKUNNALLE.

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.

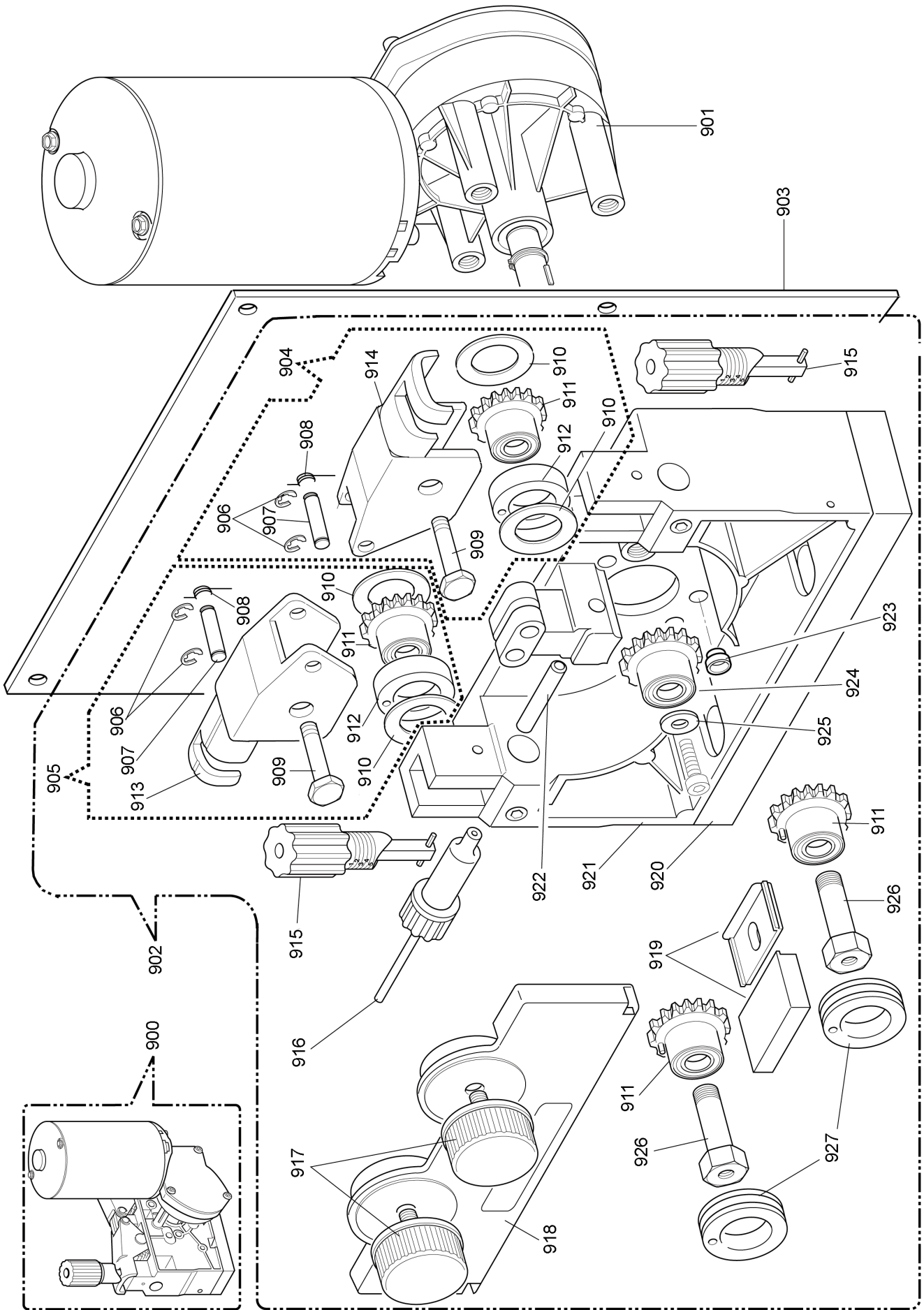


pos	DESCRIZIONE	DESCRIPTION
01	LATERALE SINISTRO	LEFT SIDE PANEL
02	LATERALE MOBILE	HINGED SIDE PANEL
03	BLOCCAGGIO	LOCKING DEVICE
04	ROSETTA	WASCHER
05	CHIUSURA	CLOSING
06	CORNICE	FRAME
07	MANOPOLA	KNOB
08	CIRCUITO DI CONTROLLO	CONTROL CIRCUIT
09	PROTEZIONE	PROTECTION
10	PANNELLO ANTERIORE	FRONT PANEL
11	CORPO ADATTATORE	ADAPTOR BODY
12	FLANGIA ADATTATORE	ADAPTOR FLANGE
13	FASCIONE INFERIORE	LOWER HOUSING
14	TAPPO	CAP
15	CIRCUITO PUSH-PULL	PUSH-PULL CIRCUIT
16	PIANO INTERMEDIO	INSIDE BAFFLE
17	PULSANTE	SWITCH
18	SUPPORTO BOBINA	COIL SUPPORT
19	PANNELLO POSTERIORE	BACK PANEL
20	ELETTROVALVOLA	SOLENOID VALVE

pos	DESCRIZIONE	DESCRIPTION
21	CONNETTORE + CAVO	CONNECTOR + CABLE
22	TAPPO	CAP
23	BLOCCAGGIO	LOCKING DEVICE
24	MANICO	HANDLE
25	COPERTURA	COVER
26	SUPPORTO BOBINA	COIL SUPPORT
27	GOLFARA	EYEBOLT
28	RINFORZO	REINFORCEMENT
29	SPINA	PLUG
30	SHUNT COMPLETO	COMPLETE SHUNT
31	CERNIERA	HINGE
32	LATERALE DESTRO	RIGHT SIDE PANEL
33	RUOTA FISSA	FIXED WHEEL
34	SUPPORTO GIREVOLE	SWIVELLING SUPPORT
35	FONDO	BOTTOM
36	SUPPORTO TORCIA	TORCH SUPPORT
37	RACCORDO	FITTING
38	RUOTA PIROETTANTE	SWIVELING WHEEL
39	PROTEZIONE	PROTECTION
900	MOTORIDUTTORE COMPLETO	COMPLETE WIRE FEED MOTOR

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
900	MOTORIDUTTORE COMPLETO	COMPLETE WIRE FEED MOTOR
901	MOTORIDUTTORE	WIRE FEED MOTOR
902	TRAINAFILO COMPLETO	COMPLETE WIRE FEED
903	ISOLAMENTO	INSULATION
904	PREMIRULLO DESTRO COMPLETO	COMPLETE RIGHT ROLLER PRESSER
905	PREMIRULLO SINISTRO COMPLETO	COMPLETE LEFT ROLLER PRESSER
906	ANELLO ELASTICO	SNAP RING
907	PERNO	PIN
908	MOLLA	SPRING
909	PERNO PREMIRULLO	DRIVE ROLL PIN
910	RASAMENTO	SHIM
911	INGRANAGGIO	GEAR
912	RULLO PREMIFILO	WIRE PRESSING ROLLER
913	SUPPORTO PREMIRULLO SINISTRO	LEFT ROLLER PRESSER SUPPORT

pos	DESCRIZIONE	DESCRIPTION
914	SUPPORTO PREMIRULLO DESTRO	RIGHT ROLLER PRESSER SUPPORT
915	BLOCCAGGIO GRADUATO	ADJUSTMENT KNOB
916	GUIDAFILO	WIRE DRIVE PIPE ASSY
917	POMELLO	KNOB
918	PROTEZIONE	PROTECTION
919	ISOLANTE COMPLETO	INSULATION ASSY
920	DISTANZIALE	SPACER
921	CORPO TRAINAFILO	WIRE FEED BODY
922	CANNETTA GUIDAFILO	WIRE INLET GUIDE
923	DISTANZIALE	SPACER
924	INGRANAGGIO	GEAR
925	BLOCCAGGIO	LOCKING DEVICE
926	PERNO	PIN
927	RULLO TRAINAFILO	WIRE FEED ROLLER



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



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