

# **SEMI-AUTOMATIC WELDING POWER SOURCE**

**Power Source**

## **CROS ARC 301S**

**Wire feeder**

## **WF 4R**

**OPERATING AND MAINTENANCE INSTRUCTIONS**

## CONFORMITY DECLARATION



The machines described in this manual, the power source CROS ARC 301S and WF4, must be used solely for professional purposes in an industrial environment and they are manufactured in compliance with the instructions contained in the harmonized standard EN50199 (electromagnetic compatibility) and EN60974-1, EN60974-7 and EN60974-10.

Nigel Nixon

A handwritten signature in black ink, appearing to read 'Nigel Nixon', is placed over a faint rectangular stamp.

**Chief executive office**

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## INITIAL WARNING

**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. EMC DECLARATION

This machine described in this manual, namely CROS ARC 301S is manufactured in compliance with the instructions contained in the harmonized standard EN50199 and EN60974-10 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.**

**IN CASE OF MALFUNCTIONS, REQUEST ASSISTANCE FROM QUALIFIED PERSONNEL.**

#### 1.1 RAEE Norm



The symbol on the product or on its packaging indicates that this product must not be disposed of with other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste from electrical and electronic equipment's. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protect human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

## 2. 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.  
**ELECTRIC SHOCK – May be fatal.**



Install and earth the welding machine according to the applicable regulations. Do not touch live electrical parts or electrodes with bare skin, gloves or wet clothing. Isolate yourselves from both the earth and the workpiece. Make sure your working position is safe. Make sure that the supply voltage matches the voltage indicated on the specifications plate of the welding machine and mount a plug with adequate capacity for the supply cable.

**FUMES & GASES - May be hazardous to your health.**



Keep your head away from fumes. Work in the presence of adequate ventilation and use ventilators around the arc to prevent gases from forming in the work area. Welding process must be performed on metal surface thoroughly cleaned from rust or paint, to avoid production of harmful fumes. The parts degreased with solvent must be dried before welding

**ARC RAYS - May injure the eyes and burn the skin.**



Protect your eyes with welding masks fitted with filtered lenses and protect your body with appropriate safety garments. Wear closed, non-flammable protective clothing, without pocket or turned up trousers. Never look at the arc without correct protection to the eyes. Wear safety glasses with the side shields to protect from flying particles. Protect others by installing adequate shields or curtains.

**RISK OF FIRE AND BURNS**



Sparks (sprays) may cause fires and burn the skin; you should therefore make sure there are no flammable materials in the area and wear appropriate protective garments. Keep an approved fire extinguisher of the proper size and type in the working area. Do not weld on container that may have held combustibles

**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.  
Protect your hearing from loud noise, wear protective ear plugs and/or ear muffs

**PACE MAKER**



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

**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.

## SHIELDING GAS

- Use the correct shielding gas for the welding process
- be sure that the regulator/flowmeter mounted on the cylinder is working well
- Secure the cylinder on the power source with the chain given with the equipment and remember to keep away the cylinder from any source of heat.

## WELDING FEATURES

MIG-MAG welding is a semi-automatic welding process in which the electrode is a special steel wire, with a copper coating, and shielding is obtained from an active gas (CO<sub>2</sub> and argon + oxygen mixtures). This method is used primarily to weld common steels and low alloy steels. The wire can be solid like common wires or cored, like a sheath containing material like the one used for the coating of electrodes.

The semi-automatic welding equipment consists of:

- a direct current power source (welding machine);
- a wire feeder;
- a torch with a cable
- a gas cylinder with regulator and flowmeter
- optional devices

During the semi-automatic process, the torch is carried manually by the operator over the joint, while the wire melts to form the weld bead.

In order to obtain satisfactory results, in conformity with all safety standards, the operator should have a good knowledge of following:

- 1 - *Wire melting process;*
- 2 - *Welding parameter adjustment (current/voltage)*
- 3 - *Arc striking;*
- 4 - *Welding performance;*
- 5 - *Crater filling*
- 6 - *Breaking the arc.*

### **1- WIRE MELTING PROCESS**

The two mentioning (transfer) modes of the metal droplets from the wire to the weld puddle are SPRAY-ARC and SHORT-ARC.

- SPRAY-ARC TRANSFER: spray transfer is used only for flat position, for butt fusion with sections over 4 mm thick and for fillet welds in order to obtain flat beads with thick sections. The wire tip should be kept deeper inside the gun opening, the higher the arc voltage s (in practice, 5 - 10 mm).
- SHORT ARC TRANSFER: it is used in every welding position, joining thin sections, for the first pass between grooves, to join improperly prepared edges, to prevent and decrease weld deformations. The wire tip usually sticks out from the nozzle, and the stick out is greater with thinner wires and lower voltages.

The choice between these two welding methods depends on the voltage and current set and on the wire diameter.

### **2- WELDING PARAMETERS ADJUSTMENTS**

After the preliminary steps have been performed (the equipment has been plugged-in according to the instructions given above, the gas cylinder has been opened and regulated, wire has been fed from the torch), the wire speed must then be set to the selected current, the proper arc

voltage must be set and ground cable (previously secured to the work piece) must be inserted in the proper negative terminal as an excessive reactance (for instance "full" instead of "all") could prevent a regular arc striking (spatter formations, over heated wires, arc blows, etc). The wire must be cut so that the stick-out distance from the wire tip ranges from:

- 8 ÷ 10 mm for 0.8 mm wire
- 10 ÷ 12 mm for 1.0 mm wire
- 12 ÷ 15 mm for 1.2 mm wire

The current necessary for welding is directly dependent upon the wire feed speed. If the wire feed speed is increased, the current is also increased, whereas the arc length is shortened. Vice versa, the arc length increases if the current is decreased.

### **3 - ARC STRIKING**

The wire gets electrically hot only when the operator presses the pushbutton of the torch. To strike the arc, touch the workpiece with the wire and press the pushbutton.

### **4 - WELD PERFORMANCE**

The following points should be always dealt with carefully in any case:

- i** - position of the torch **ii** - arc blow **iii** - excessive penetration of the edges in butt joints.
- i** - When the position of the torch is incorrect, you can have an excessive spatter which can be highly dangerous as the particles are hot.
- ii** - The arc blow, which is a deflection of the arc caused by the electromagnetic fields around the arc, can also produce spatter. This happens mainly with fillet welding, at the edges of the weld bead and inside corners. To correct the arc blow problem, the voltage should be reduced. You could also modify the connection point of the ground clamp and the torch angle in the opposite direction from the arc deflection.
- iii** - In butt welding of thin layers and during the first pas between grooves, there is the risk of an excessive penetration, in which the molten metal may fall under the work piece, thus being extremely dangerous.  
For these welding's, it is therefore recommended to use the SHORT ARC transfer mode rather the SPRAY ARC.

### **5- CRATER FILLING**

At the end of the welding operation, it is advisable to stop the travel long enough to fill the crater before breaking the arc.

### **6 - BREAKING THE ARC**

Any operator working with wire welding equipment in shielded atmosphere should keep in mind the following points:

- Make sure that the unit is unplugged before changing the inductance (ground);
- At the end of your work, unplug the unit, close the valve of the gas cylinder and loosen the adjustment knob

REMEMBER: The current necessary for welding is directly dependent upon the wire feed sped. If the wire feed is increased, the current is also increased, whereas the arc length is shortened. Vice versa, the arc length increases if the current is decreased

|                                                                                                 |
|-------------------------------------------------------------------------------------------------|
| <b>WARNING: Do not weld with bare arms or any exposed skin to avoid burns due to radiations</b> |
|-------------------------------------------------------------------------------------------------|

## **PART B: CROS ARC WELDING MACHINES INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS**

### **TECNICAL SPECIFICATION AND PERFORMANCE ADVANTAGES**

The power sources are the result of a long-range experience in the design and in the practical application of welding machines, and the outcome of the most recent technological advancements. They are particularly designed for semiautomatic welding procedure with solid and core wired, in a gas shielded environment. They can be used to weld carbon, alloyed and stainless steel, to weld aluminium and copper alloys and other weldable alloys, irrespective of its composition, as long as correspondent wire with a diameter compatible with the settable welding current, is available.

| <b>TECHNICAL SPECIFICATION</b>  |                 | <b>CROS ARC MIG 301S</b> |
|---------------------------------|-----------------|--------------------------|
| <b>Mains</b>                    |                 |                          |
| Single phase input voltage      | V               | 230                      |
| Frequency                       | Hz              | 50                       |
| Current ED 50%                  | A               | 32                       |
| Current ED 100%                 | A               | 20                       |
| Cos phi (150 A)                 |                 | 0,85                     |
| Line fuse                       | A               | T32                      |
| Input cable                     | mm <sup>2</sup> | 3 x 4                    |
| <b>MIG Welding</b>              |                 |                          |
| Welding current range           | A               | 40 ÷ 270                 |
| Voltage steps                   |                 | 12                       |
| Welding voltage range           | V               | 16 ÷ 27.5                |
| Open circuit voltage            | V               | 45.5                     |
| Welding current at 50% of duty  | A               | 250                      |
| Welding current at 100% of duty | A               | 180                      |
| Welding cable                   | mm <sup>2</sup> | 35                       |
| <b>Construction</b>             |                 |                          |
| Degree of protection            |                 | IP 21S                   |
| Insulation class                |                 | H                        |
| Method of cooling               |                 | AF                       |
| Weight (with wire feeder)       | Kg              | 90                       |
| Dimensions (with wire feeder)   | cm              | 41 x 86 x 85             |

CROS ARC 301S Power source

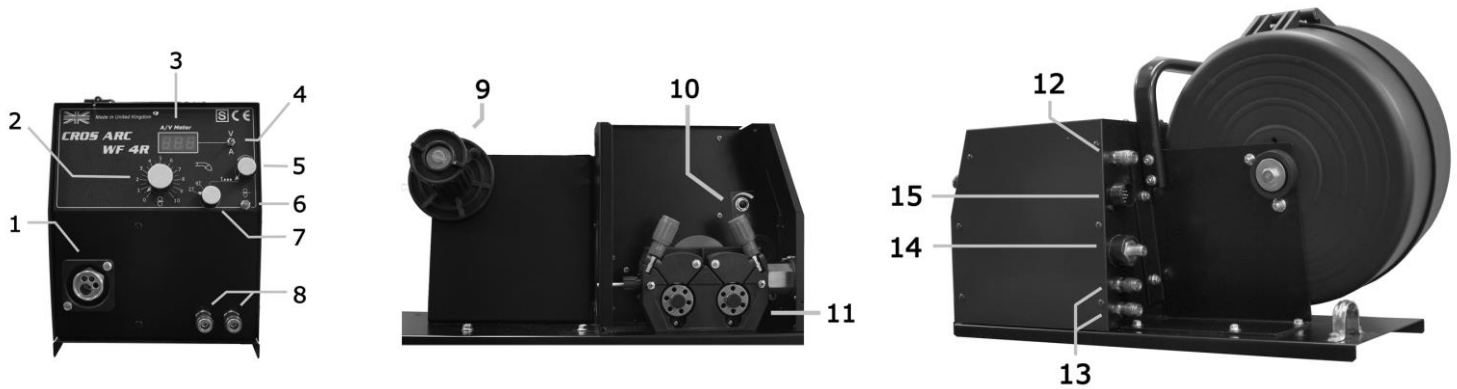


DESCRIPTION

| Item. | Description                                                                                                                                                 |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Fuse T8 A                                                                                                                                                   |
| 2     | <i>Thermal failure lamp</i> : this lamp signals thermal cut-out intervention that protects the power supply against overloads or when the fan doesn't work. |
| 3     | Fuse T4 A                                                                                                                                                   |
| 4     | <i>System power-on signal lamp</i> : <i>this lamp signals on/off state of machine</i> and indicates that the system is ready to operate.                    |
| 5     | Fuse 2A                                                                                                                                                     |
| 6     | Main ON/OFF switch                                                                                                                                          |
| 7     | <i>Main welding voltage adjusting switch</i> : it supplies power to the system and selects the welding arc voltage                                          |
| 8     | Negative terminals                                                                                                                                          |
| 9     | Positive welding terminal                                                                                                                                   |
| 10    | Multipin female connector                                                                                                                                   |
| 11    | Gas hose output                                                                                                                                             |



## CROS ARC WF 4R Wirefeeder



| Item. | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Gun connector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2     | Wirefeeder motor speed potentiometer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3     | Digital A/V meter with Amper/Volt switch.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4     | A/V meter selector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 5     | Spot time potentiometer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 6     | Wire inching push button                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 7     | Function selector: this switch enables welding operating modes. <ul style="list-style-type: none"> <li>- <u>Continuous 2-cycle welding</u>: in this position the system welds without any interruptions while the torch toggle is kept pressed, and stop when released.</li> <li>- <u>Continuous 4-cycle welding</u>: in this position the system welds, without any interruptions, in the following modes: <ul style="list-style-type: none"> <li>1 - Torch toggle pressed: supply of shielding gas (pre-gas).</li> <li>2 - Torch toggle released: wire motor start &amp; Welding</li> <li>3 - Torch toggle pressed: gas delivery (post-gas) &amp; Welding stops</li> </ul> </li> <li>- <u>Spot welding</u>: together with potentiometer 5 (spot time) enable spot welding mode</li> </ul> |
| 8     | Water in-out quick connector for water cooled torch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 9     | Spool holder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 10    | Burn-back potentiometer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 11    | Wire feeder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 12    | Shielding gas input                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 13    | Quick water in-out fitting (from power source)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 14    | Positive terminal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 15    | 14 Pin amphenol socket                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## DESCRIPTION

Suitcase CROS ARC WF 4R is a low voltage wire feeder with 24 Vac input. The feeder operates with CROS ARC 301S and is designated for MIG/MAG welding processes. On request, the wire feeder suitcase could also be supplied with wheels kit. Electrical connection is provided by a cable assembly connected to the sockets placed on the rear panel of the feeder and on the front panel of the source.

| Technical specifications |       | CROS ARC WF 4R |
|--------------------------|-------|----------------|
| Wire spool dimension     | mm    | 200 ÷ 300      |
| Steel wire sizes         | mm    | 0.6 - 1.2      |
| Aluminium sizes          | mm    | 1.0 - 1.2      |
| <b>Feed motor</b>        |       |                |
| Voltage range            | Vdc   | 24             |
| Power max                | W     | 75             |
| Diameter roll            | mm    | 37             |
| Revolutions per minute   | r.p.m | 220            |
| Wirefeed speed           | m/min | 2 ÷ 24,0       |
| Number of feed rolls     | n°    | 4              |
| Number of rolls geared   | n°    | 2              |

## INSTALLATION OF WELDING MACHINES

When lifting the power supply unit use hoists with adequate lifting capacity with respect to the weight of the power supply unit itself. When fork lifts are used make sure that the forks go completely under the power supply unit.

Inadequate air circulation can cause overloads and may damage the power supply unit.

Do not place filters or other objects near the cooling-air vents in the power supply unit.

Keep the power supply unit at least 500 mm away from walls.

## CONNECTIONS TO ELECTRIC MAINS

The connection to the line of the CROS ARC welding machines is done by means of multipoles cable: the **green/yellow** cable is used for the ground connection. The cross section of the lead depends on the input voltage and on the power source. The cable must be fitted with a standard multipole plug which will be inserted in a receptacle connected to the general line; a multipole switch with slow blow fuses must be mounted before the receptacle.

**WARNING:** Never operate the power supply without its cover panels properly in place. Failure to do so can harm person and damage the machine itself. Welding system operating efficiency is impaired when it works in dusty, dirty or very damp surroundings, or where there are corrosive vapours in the air or in extreme temperature conditions ( $40 < T < -10$ ).

Make sure that the supply voltage is correct. Connect the four-pole power cable, supplied with the welding system, to the electric plug.

**WARNING:** It is mandatory to connect the green/yellow cable to the ground system in the electric mains. Never connect power cables to the ground terminal.  
Never connect the yellow/green ground cable to the power supply terminals.

Remount the plug and insert it into the electric mains outlet.

## INSTALLATION FOR MIG WELDING OPERATION

For the connection of the various parts of the equipment in the MiG/mag welding, the following procedure must be observed:

1. Mount the shielding gas cylinder fitted with a regulator flowmeter on the bottle plate of the source and fasten it with the chain supplied with the equipment.
2. Connect the wire feeder to the regulator flowmeter mounted on the gas cylinder by means of the gas hose.
3. Be sure that the pressure reductor is close, then open gas bottle valve.
4. Connect a negative terminal, located on the lower part of the front panel, to the work piece, by means of the ground cable with a ground clamp.
5. Insert in the torch cable the liner cut to the appropriate size.
6. Plug the torch connector in the source and then lock it by turning the ring (only for S version).
7. Mount the wire spool on its support. Release the upper roll of the feeder; insert the wire in the guide and the on the lower roll which will be appropriate to the size of the wire used. Insert the wire in the wire

feeder torch cable connector and then lock it with the flat upper roll. Adjust the pressure of the wire by using the appropriate knob, according to the type and diameter of the wire user, in such a way that, when braking with the hand, the rolls slide before the wire gets locked.

8. Slowly draw out 5 cm approx. of wire from the torch by pressing the appropriate button.
9. Mount the tip on the torch according to the wire diameter and type and to the torch neck. A silicone spray should be used to protect tip and nozzle from the welding spatters.
10. Connect the wire feeder to the power source between the current cable and torch command cable plugged in connect on front panel

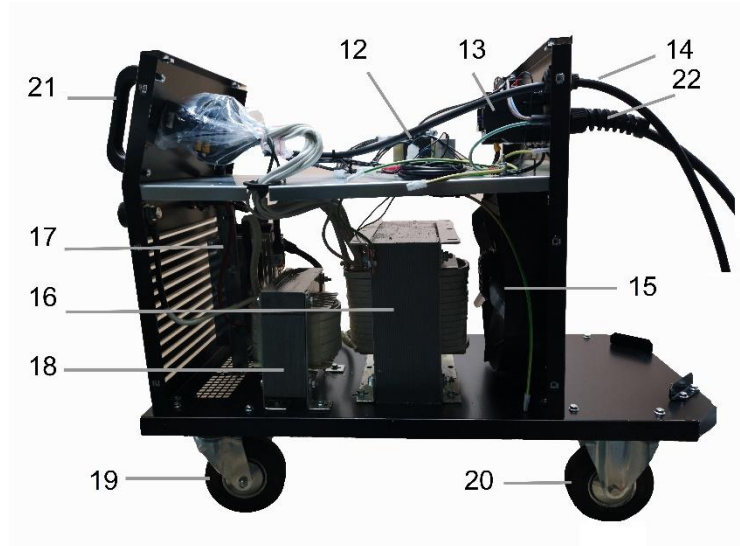
## MAINTENANCE

### MOST COMMON WELDING DEFECTS

| DEFECT                             | CAUSE                                                                                                                                                                                                               | REMEDY                                                                                                                                               |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| POROSITY<br>(INTERNAL OR EXTERNAL) | Wire with insufficient Si-Mn                                                                                                                                                                                        | Change reel of wire                                                                                                                                  |
|                                    | Shielding gas failure due to:<br>- insufficient flow;<br>- gas cylinder empty;<br>- defective flowmeter;<br>- defective solenoid valve;<br>- Nozzle and/or outflow holes clogged;<br>- drafts;<br>- dirty workpiece | Set at 10-15 l/min<br>Change the cylinder<br>Replace the faulty parts.<br><br>Blow out with compressed air<br><br>Screen worksite<br>Clean carefully |
| CRACKS                             | Improper torch position (too inclined).                                                                                                                                                                             | Welding parameters must be set properly, and work piece must be carefully prepared.                                                                  |
| POOR AESTHETICS                    | Current too low.<br>Voltage too high.<br>Pass speed too high.<br>Poorly prepared joint.                                                                                                                             | Increase wire speed and voltage<br>Go slower.<br>Increase angle and distance between edges                                                           |
| SIDE INCLUSIONS                    | Low inductance.<br>Wire too speed.<br>Current too high.                                                                                                                                                             | Adjust welding parameter                                                                                                                             |
| EXCESS SPATTER                     | Nozzle clogged.<br>Torch too slanted<br>Wrong voltage setting parameters                                                                                                                                            | Clean nozzle.<br>Ease the slope.<br>Check welding                                                                                                    |
| BAD LOOK                           | Wrong voltage setting parameters.<br>Wrong inductance plug.<br>Wire or electrode rusty.                                                                                                                             | Check welding<br>Change plug<br>Change wire or electrode                                                                                             |

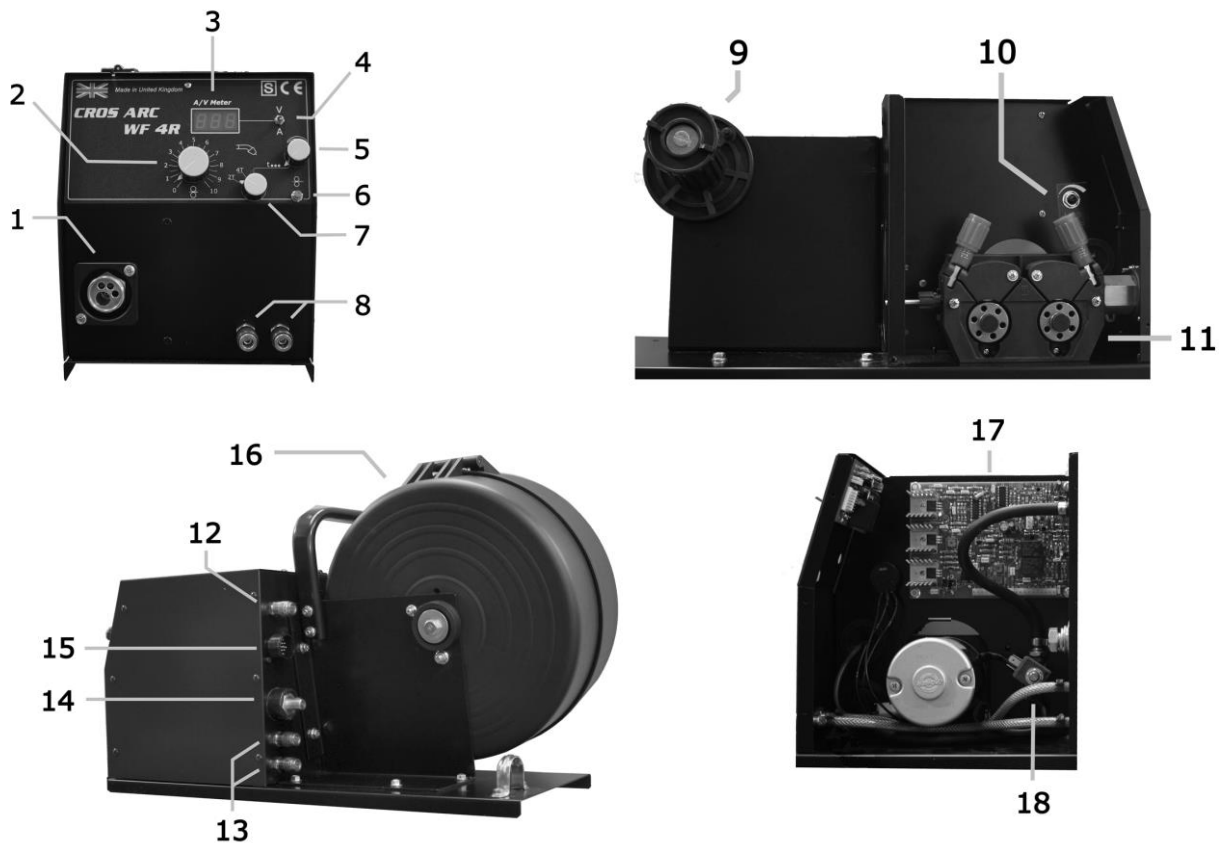
## SPARE LIST

### CROS ARC 301S



| CROS ARC 301S |     |                                   |          |
|---------------|-----|-----------------------------------|----------|
| POS.          | QTY | DESCRIPTION                       | Code.    |
| 1             | 1   | FUSE HOLDER                       | 1592006  |
|               | 1   | FUSE T8A                          | 1352005  |
| 2             | 1   | OVERTEMPERATURE SIGNAL LAMP       | 1416002  |
| 3             | 1   | FUSE HOLDER                       | 1592006  |
|               | 1   | FUSE T4A                          | 1352004  |
| 4             | 1   | SIGNAL LAMP ON/OFF                | 1416003  |
| 5             | 1   | FUSE HOLDER                       | 1592006  |
|               | 1   | FUSE 2A                           | 1352008  |
| 6             | 1   | LINE ON-OFF SWITCH                | 1400018  |
| 7             | 1   | 12 POSITION VOLTAGE SWITCH        | 1080017  |
| 8             | 1   | NEGATIVE WELDING TERMINAL ( - ve) | MMA 1063 |
| 9             | 1   | POSITIVE WELDING TERMINAL ( +ve ) | MMA 1063 |
| 10            | 1   | MULTIPINS FEMALE CONNECTOR        | 1128010  |
| 11            | 1   | GAS HOSE OUTLET                   | 1016009  |
| 12            | 1   | AUXILIARY TRANSFORMER             | 1896014  |
| 13            | 1   | CONTACTOR 24VAC                   | 1832001  |
| 14            | 1   | GAS HOSE                          | GAS3064  |
| 15            | 1   | FAN MOTOR                         | 1512005  |
| 16            | 1   | MAIN TRANSFORMER                  | 3960044  |
| 17            | 1   | RECTIFIER                         | 1672018  |
| 18            | 1   | INDUCTOR                          | 3720022  |
| 19            | 2   | FRONT WHEEL                       | 1752006  |
| 20            | 2   | REAR WHEEL                        | 1752010  |
| 21            | 2   | HANDLE                            | 1448002  |
| 22            | 1   | MAINS CABLE                       | MISC0611 |

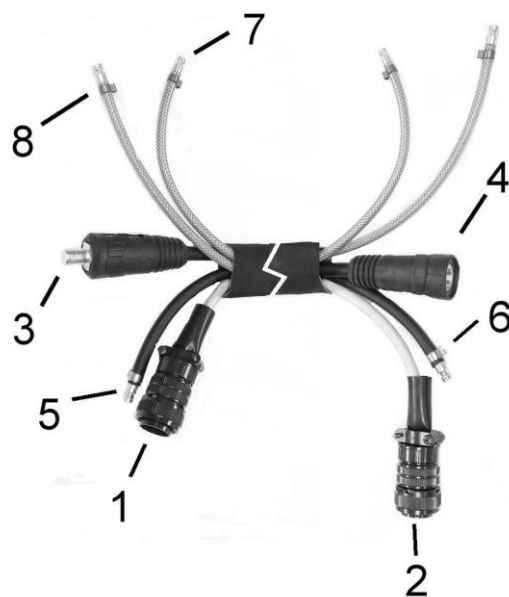
**- CROS ARC WF 4R code 4980041**



| CROS ARC WF 4R |      |                                                    |         |
|----------------|------|----------------------------------------------------|---------|
| Pos.           | Q.ty | Description                                        | Code    |
| 1              | 1    | Euro body capillar tube and hose tail              | 1016007 |
| 2              | 1    | Wire speed potentiometer 1 Kohm                    | 1608009 |
|                | 1    | Knob yellow (big)                                  | 1450002 |
| 3              | 1    | Digital A/V meter                                  | 3800001 |
| 5              | 1    | Spot time potentiometer 100Kohm                    | 1608005 |
|                | 1    | Knob yellow cap                                    | 1450001 |
| 6              | 1    | Wire inch push botton                              | 1640004 |
| 7              | 1    | Rotary switch 2-4-spot time                        | 1080019 |
|                | 1    | Knob yellow cap                                    | 1450001 |
| 9              | 1    | Spool holder                                       | 1032002 |
| 10             | 1    | Burn-back potentiometer 10Kohm                     | 1608008 |
| 11             | 1    | Four rolls wirefeeder 75 watt with 0.8-1.0 V rolls | 1850003 |
| 12             | 1    | Quick release coupler neutral                      | 1016009 |
| 13             | 1    | Quick release coupler red                          | 1016012 |
|                | 1    | Quick release coupler blue                         | 1016011 |
| 14             | 1    | Welding panel plug 50mm <sup>2</sup>               |         |
| 15             | 1    | Circular panel plug multipin connector             | 1128011 |
| 16             | 1    | Spool plastic cover (Optional)                     | 2650008 |
| 17             | 1    | Motor control printed board 24Vac                  | 1068014 |
| 18             | 1    | Gas valve                                          | 1272001 |

**- Interconnection cables**

| Q.ty | Description                                        | Code | Version | Note     |
|------|----------------------------------------------------|------|---------|----------|
| 1    | With welding cable 50 mm <sup>2</sup> , L = 3 mt.  |      | Air     | Standard |
| 1    | With welding cable 50 mm <sup>2</sup> , L = 5 mt.  |      | Air     | Optional |
| 1    | With welding cable 50 mm <sup>2</sup> , L = 10 mt. |      | Air     | Optional |

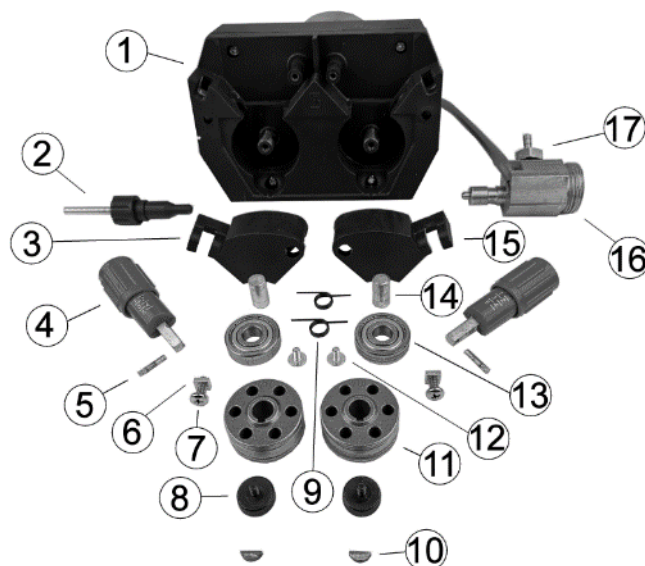


| Pos. | Q.ty | Description                                               | Code    | Version     |
|------|------|-----------------------------------------------------------|---------|-------------|
| 1    | 1    | Circular cable plug multipin connector with cable gland   | 1128013 | Air & water |
| 2    | 1    | Circular cable socket multipin connector with cable gland | 1128012 | Air & water |
| 3    | 1    | Cable welding plug 50 mm <sup>2</sup>                     | 1800005 | Air & water |
| 4    | 1    | Cable welding socket 50 mm <sup>2</sup>                   | 1624005 | Air & water |
| 5    | 2    | Gas hose nipple 6mm tail                                  | 2640007 | Air & water |
| 6    | 2    | Single eared hose clip 9-13 mm                            | 1075001 | Air & water |
| 7    | 4    | Water hose nipple 6mm tail                                | 2640007 | Only Water  |
| 8    | 4    | Single eared hose clip 7-9 mm                             | 1075002 | Only water  |

**Not included on above lists:**

| Qty | Description                                          | Code    |
|-----|------------------------------------------------------|---------|
| 1   | Wheel kit for wirefeeder suitcase                    | 4310001 |
| 1   | Plastic suitcase support (two parts: male + female)  | 1818001 |
| 1   | Earth cable 50 mm <sup>2</sup> with clamp 3 mt. long | 3230003 |

## Wire feeder feed plate



| Pos. | Qty | Description                                     | Code      |
|------|-----|-------------------------------------------------|-----------|
| 1    | 1   | Wire feeder main body with motor 24Vdc - 75watt |           |
| 2    | 1   | Inlet guide                                     |           |
| 3    | 1   | Left pressure arm                               | EP4018015 |
| 4    | 2   | Pressure knob (complete)                        | EP4016008 |
| 5    | 2   | Key                                             | EP6023002 |
| 6    | 2   | Nut M5x8x3mm square                             | EP6011025 |
| 7    | 2   | Screw M5x10                                     |           |
| 8    | 2   | Roll fastening screw M4                         | EP6026011 |
| 9    | 2   | Spring                                          | EP6011032 |
| 10   | 2   | Cotter D. 3x3,7 UNI 6606 (on motor axle)        |           |
| 11   | 2   | Feed Roll 37 mm hard wire 0,6 – 0,8 V           | 2700003   |
| 11a  | 2   | Feed Roll 37 mm hard wire 0,8 – 1,0 V           | 2700004   |
| 11b  | 2   | Feed Roll 37 mm hard wire 1,2 – 1,6 V           | 2700006   |
| 11c  | 2   | Feed Roll 37 mm Alu Wire 0,8 – 1,0 U            | 2700030   |
| 11d  | 2   | Feed Roll 37 mm Alu Wire 1,0 – 1,2 U            | 2700013   |
| 11e  | 2   | Feed Roll 37 mm Alu Wire 1,2 – 1,6 U            | 2700014   |
| 11f  | 2   | Feed Roll 37 mm Flux Wire 1,2 – 1,6 knurled     | 2700011   |
| 12   | 2   | Screw M4x8                                      |           |
| 13   | 2   | Bearing D.10x30x9                               |           |
| 14   | 2   | Shaft                                           |           |
| 15   | 1   | Right pressure arm                              | EP4018014 |
| 16   | 1   | Euro body adapter + capillar tube               | 1016007   |
| 17   | 1   | Hose tail 1/8                                   | 2640001   |

Wiring diagram

