

weldcorp



Fusion for the Future

OWNER'S OPERATING MANUAL



**WELD AND CUT ARC/TIG
INVERTER PLASMA 30
PLASMA CUTTER
(Tig torch not included)**

weldcorp



Fusion for the Future

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SAFETY INSTRUCTIONS

When using power equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury, including the following. If used correctly, welders pose little risk to the operator; however, care should always be taken to ensure safety and proper performance. Read all owner's operating instructions before attempting to operate any product.



WARNING: PERSONS FITTED WITH ELECTRONIC DEVICES INCLUDING BUT NOT LIMITED TO PACEMAKERS AND HEARING AIDS SHOULD NOT OPERATE ELECTRONIC INVERTER WELDERS

WARNING: CONTACT LENS SHOULD BE REMOVED BEFORE USE

FOR SAFE OPERATION:

- **KEEP THE WORK AREA CLEAN:** Cluttered working areas (indoor and outdoor) invite injuries.
- **CONSIDER THE WORK ENVIRONMENT:** Don't expose power equipment to rain. Don't use welding equipment in damp or wet locations. Keep the work area well lit. Don't use welding equipment in the presence of flammable liquids or gases.
- **GUARD AGAINST ELECTRIC SHOCK:** Avoid body contact the grounded surfaces (e.g. pipes, radiator, and electrical appliances).
- **KEEP CHILDREN AND VISITORS AWAY:** Keep children, infirmed persons and visitors away from the area of operation. Do not let children, infirmed persons or visitors touch equipment or extension cables.
- **STORE IDLE TOOLS:** When power equipment is not in use, keep them in a dry, high or locked area, out of reach of children.
- **SECURE WORK:** Use clamps or a vice whenever possible to secure work.
- **WEAR SAFETY GLASSES:** Always wear safety goggles or other suitable eye protection when using welding equipment .



- **DON'T OVERREACH:** Keep proper footing and balance at all times.
- **DRESS PROPERLY:** DO NOT wear loose clothing or jewellery. They can be caught in moving parts. Wear protective hair covering to cover long hair, and gloves and non-slip footwear is recommended when working outdoors.
- **TAKE CARE OF CABLES:** Never carry welding equipment by the cable and never pull the cable to disconnect it from a socket. Keep cables away from heat, oil and sharp edges. Replace damaged cables.
- **DISCONNECT TOOLS:** Disconnect welding equipment when not in use, before servicing, and when changing accessories such as blades, bits and cutters.
- **AVOID UNINTENTIONAL OPERATION:** Do not carry plugged in welding equipment with a finger on the switch. Be sure that the switch is off when plugging in.
- **OUTDOOR USE EXTENSION CABLES:** When electric power equipment is used outdoors, only use extension cables marked as suitable for outdoor use.
- **STAY ALERT:** Watch what you are doing. Use common sense. Do not operate welders when you are tired or under the influence of alcohol or drugs.
- **CHECK DAMAGED PARTS:** Before using welding equipment, parts that are damaged should be carefully checked to determine that they will operate properly and perform their intended function. Any part that is damaged should be properly repaired or replaced by an authorized service agent. Have defect switches replaced by an authorised repair agent. Do not operate power equipment if it cannot be turned off and on by the switch.
- **REPAIR OF POWER EQUIPMENT BY EXPERTS:** Power equipment is built in accordance with relevant safety authority requirements. The repair of power equipment must only be carried out by experts; non-expert repairs may cause considerable danger for the user and void warranty.

WELD & CUT ARC / TIG WELDER AND PLASMA CUTTER

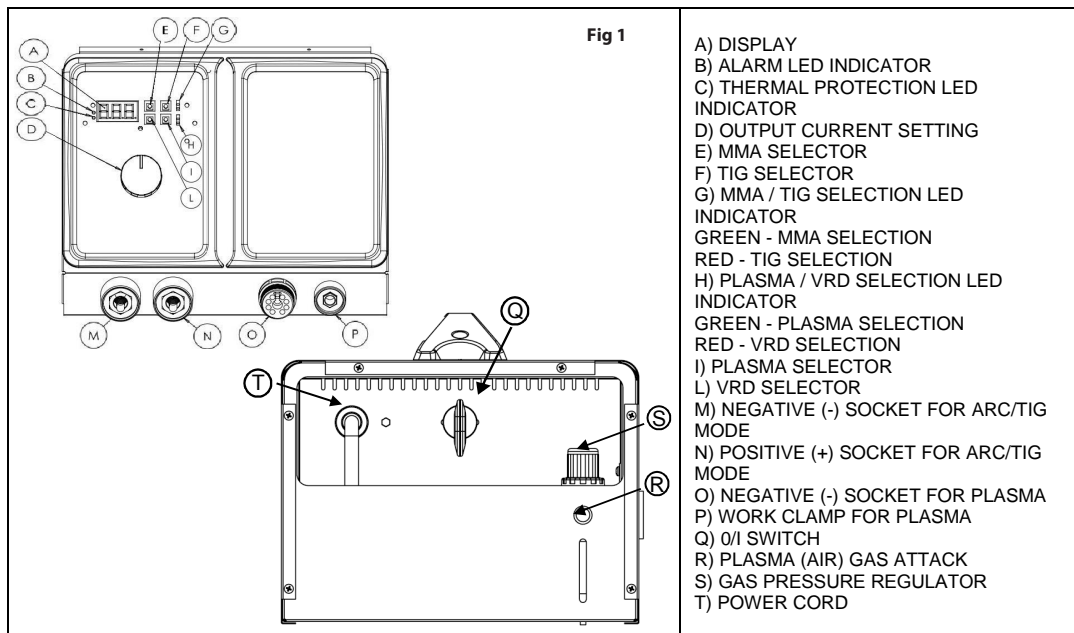
This is a current inverter generator (DC) for plasma cutting with pilot arc ignition and ARC/TIG welding (Tig torch not included). This welder allows cutting of electrical conductive materials (metals and alloys), through the use of gas, usually air, and it allows ARC welding with rutile, basic, stainless steel, cast iron electrodes type and the TIG welding of the most metals except the aluminium alloys.

Thanks to the inverter technology which allows achieving high performances while keeping small size and weight, the machine is portable and easy to handle.

The machine is equipped with the following functions:

- “HOT START”, “ARC FORCE” and “ANTI STICK” (for more details please refer to the GENERAL PART manual included in the package).
- “MEMORY PARAMETERS” - the microprocessor stores the welding parameters set during the last use of the machine allowing automatic recovery each time.
- “VRD” – this function guarantees the voltage on the clamp is not dangerous for the end user.

DESCRIPTION OF THE MACHINE



INSTALLATION

Warning: Use all precautions required in the safety general manual before operating the machine, reading carefully the risks associated with the welding and plasma cutter process. The installation must be made by trained personnel in compliance to the standard IEC 60974-9 and the current and local legislation.

To lift the machine it must be used the handle positioned on the top of the product with the machine in OFF position. The input voltage must match the voltage indicated on the technical plate located on the product. The equipment shall only be used on a supply system that is a single-phase, three-wire system with an earthed neutral. Use the machine on electric system having supply features and power protection that are compatible with the current required for its use. For more details see the information on the plate placed on the machine.

WELDER INFORMATION

The welding types selectable are:

PLASMA CUTTING - refer to Page 5 for Fig 1

- Connect the plug of the plasma torch to the socket of the machine (Fig 1, O).
- Connect the plug of the work clamp to the socket of the machine (Fig 1, P).
- Connect the power supply plug to the power outlet.
- Connect the air supply to the machine (Fig 1, R).
- Adjust the pressure of the air to 3 bar (Fig 1, S).
- Insert the power supply plug into the power outlet and turn on the machine.
- Set Plasma mode (Fig 1, I).
- Connect the work clamp to the work piece to be welded trying to establish a good point of contact between the metal and the clamp, as close as possible to the area to be welded
- Adjust the cutting current (Fig 1, D).
- Start cutting.

ELECTRODE WELDING (ARC/MMA)

- Select the proper electrode polarity (direct or reverse) of the electrode (for more information see the general part of the safety manual and the information on the electrode packaging). Connect the plugs of the work clamp and the electrode holder to the sockets of the machine (Fig 1, M, N) as function of the polarity, rotating the attack in order to ensure a good grip.



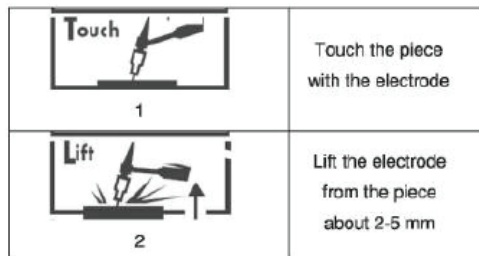
WELDER INFORMATION (cont.)

ELECTRODE WELDING (ARC/MMA) *refer to Page 5 for Fig 1*

- Connect the work clamp to the work piece to be welded trying to establish a good point of contact between the metal and the clamp, as close as possible to the area to be welded, insert the electrode into the electrode holder.
- Select the MMA mode (Fig 1, E).
- Insert the power supply plug into the power outlet and turn on the machine.
- Select the welding current (Fig 1, D) as a function of the type of electrode selected
- Start the welding operation using all the necessary protections for safety
- When the welding is completed, turn off the machine and release the electrode from the electrode holder.

TIG WELDING (Tig torch not included)

- Select the proper electrode polarity (direct or reverse) of the electrode (for more information see the general part of the safety manual and the information on the electrode packaging). Connect the plugs of the work clamp and the electrode holder to the sockets of the machine (Fig 1, N, M) as function of the polarity, rotating the attack in order to ensure a good grip.
- Connect the work clamp to the work piece to be welded trying to establish a good point of contact between the metal and the clamp, as close as possible to the area to be welded
- Connect the torch gas tube to the gas cylinder
- Select the gas flow of the gas cylinder and open the torch valve
- Select the TIG mode (Fig 1, F).
- Select the welding current (Fig 1, D).
- Insert the power supply plug into the power outlet and turn on the machine.
- Use the torch to weld as in the following without a pause between the two phases:



- After welding, turn off the machine and close the gas valve.

WELDER INFORMATION (cont.)

VRD FUNCTION SELECTION

The voltage between the earth clamp and the electrode holder clamp may be dangerous for the user. The VRD function prevents dangerous voltage value between clamps.

The needed voltage for welding is supplied only when the electrode makes contact with the welding part. An acoustic buzzer advises the two phase's transit. When the electrode is removed from the welding part, the equipment returns to protective condition. When the VRD device is on, the start of ARC may be difficult; therefore it is important to make contact with the welding part to turn on the equipment and begin welding.

PROTECTION FROM OVERHEATING

The duty cycle is the fraction or percentage of a ten-minute cycle that a power source may be used without overheating. For example, a welding machine with 150 amp - 30% duty cycle can weld continuously at 150 amps for 3 minutes, and then must cool down during the remaining 7 minutes to prevent overheating, with the ambient temperature of 40°C.

Using the machine with the proper duty cycle according to the selected current allows to prevent overheating. In case of overheating of the machine the yellow LED (Fig 1, C) indicates that the thermal protection is on, you can continue to use the machine when the LED is off.

MAINTENANCE

All maintenance and repairs must be carried out by an authorised repair agent. Any non-authorised repairs will void warranty. Personnel in compliance to the norm (IEC 60974-4).



WARNING: This equipment does not comply with IEC 61000-3-12. If it is connected to a public low voltage system, it is the responsibility of the installer or user of the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment may be connected

MEANING OF THE ERROR MESSAGES ON THE DISPLAY

| Error | Causes | Remedies |
|------------------|---|---|
| OFF or ON | | <ul style="list-style-type: none"> • The machine must be checked by an authorized service center. |
| Hi Air | Air high pressure protection is activated. | <ul style="list-style-type: none"> • Check that the air source is properly connected and that the air pressure is correctly set. • Turn off and unplug the unit from the power line and check that the torch is properly assembled and that the consumables are not damaged. • The protection is automatically reset after 10 seconds and the machine can be used again. |
| Lo Air | Air low pressure protection is activated. | <ul style="list-style-type: none"> • Check that the air source is properly connected and that the air pressure is correctly set. • Turn off and unplug the unit from the power line and check that the torch is properly assembled and that the consumables are not damaged. • The protection is automatically reset after 10 seconds and the machine can be used again. |
| Out | Pilot Arc protection is activated. It occurs when the pilot arc is switched on in the air (without touching the workpiece) and is higher than a preset time or when the earth cable is not correctly connected. | <ul style="list-style-type: none"> • Do not keep the pilot arc lit in the air (without touching the workpiece) not to increase usury of the consumables. • Check the earth cable connection to the machine socket (+) and to the work piece (clamp). |
| C_C | Short circuit protection on the torch is activated. | <ul style="list-style-type: none"> • Check that the air source is properly connected and that the air pressure is correctly set. • Turn off and unplug the unit from the power line and check that the torch is properly assembled and that the consumables are not damaged. • The protection is automatically reset after 10 seconds and the machine can be used again. |
| H00 | Thermal protection is activated. The duty cycle period has been exceeded. | <ul style="list-style-type: none"> • Wait until the cooling cycle has been completed. |

MEANING OF THE ERRORS MESSAGES ON THE DISPLAY (cont.)

| | | |
|------------|--|--|
| OPn | Torch protection is activated. | <ul style="list-style-type: none"> • Turn off and unplug the unit from the power line and check that the torch is properly connected and that the consumables on the torch have been correctly assembled. • The protection is automatically reset when the torch sensor does not reveal any interruption. |
| Err | Multiple errors protection is activated. | <ul style="list-style-type: none"> • Check that the air source is properly connected and that the air pressure is correctly set. • Turn off and unplug the unit from the power line and check that the torch is properly assembled and that the consumables are not damaged. • The error is automatically reset when the machine is turned off. If the error protection come back again, the machine must be checked by an authorized service center. |

TROUBLESHOOTING

| Anomalies | Causes | Remedies |
|--|---|--|
| MMA | | |
| The device does not deliver enough current and the yellow indicator LED of thermal protection lights up. | The thermal protection has turned on. | Wait for the end of the cooling time, around 2 minutes. The indicator led turns off. |
| The device is on but it does not deliver any current. | The cable of the work clamp or electrode holder is not connected to the machine. | Turn off the machine and check the connections. |
| Your unit does not weld correctly. | Polarity error | Check the polarity advised on the electrodes packaging. |
| PLASMA | | |
| Insufficient penetration | <ul style="list-style-type: none"> • High cutting speed • Thickness of the workpiece excessive • Contact between metal and work clamp not adequate; • Worn torch consumables; • Too low Cutting current. | <ul style="list-style-type: none"> • Refer to the cutting table - tab. 2 • Connect the work clamp to the work piece to be welded trying to establish a good point of contact between the metal and the clamp, as close as possible to the area to be welded. • Change the spare parts for the torch. • Increase the set cutting current. |
| Excessive wear on the consumable parts | <ul style="list-style-type: none"> • Source of dirty air and / or with excess oil; • Low air pressure; • Ignition pilot arc without cutting prolonged. | Check and regulate the air pressure in the proper way (tab. 3). |
| pilot arc goes out | <ul style="list-style-type: none"> • Worn torch consumables; • High or low pressure air. | <ul style="list-style-type: none"> • Change the spare parts for the torch. • Check and regulate the air pressure in the proper way (tab. 3). |
| TIG | | |
| Instable arc. | <ul style="list-style-type: none"> • Default coming from the tungsten electrode. • Too important gas flow rate | <ul style="list-style-type: none"> • Use a tungsten electrode with the adequate size. • Reduce gas flow rate |
| The electrode melts | Polarity error | Check the polarity advised on the electrodes packaging |

TROUBLESHOOTING (cont.)

Table for selection of the welding current according to the electrode (unskilled welder)

| Electrode size [mm] | 1,6 | 2,0 | 2,5 | 3,2 | 4.0 |
|---|---------|---------|----------|----------|-----------|
| Rutile AWS E6013 | 25-40 A | 40-70 A | 60-100 A | 85-130 A | 130-170 A |
| Basic AWS E7018 | | 20-50 A | 60-110 A | 90-140 A | 130-190 A |
| Stainless Steel AWS E308 | 20-35 A | 30-60 A | 40-80 A | 70-100 A | 90-140 A |
| Cast Iron AWS E 307 | | | 40-80 A | 70-100 A | 80-140 A |

TAB 1

| Cutting current 30A | Thickness | | Cutting speed | | | | | |
|---------------------|-----------|-------|---------------|----------|-----------------|----------|-----------|----------|
| | | | Mild steel | | Stainless steel | | Aluminium | |
| | mm | in | (m/min) | (ft/min) | (m/min) | (ft/min) | (m/min) | (ft/min) |
| | 1 | 0.039 | 5,2 | 17,060 | 6,2 | 20,341 | 8,2 | 26,903 |
| | 2 | 0.079 | 2,2 | 7,218 | 2,1 | 6,890 | 5,3 | 17,388 |
| | 3 | 0.118 | 1,4 | 4,593 | 1,5 | 4,921 | 2,8 | 9,186 |
| | 4 | 0.157 | 1,1 | 3,609 | 1,1 | 3,609 | 1,8 | 5,906 |
| | 5 | 0.197 | 0,9 | 2,953 | 0,8 | 2,625 | 0,9 | 2,953 |
| | 6 | 0.236 | 0,7 | 2,297 | 0,5 | 1,640 | 0,8 | 2,625 |
| | 8 | 0.315 | 0,4 | 1,312 | 0,4 | 1,312 | 0,6 | 1,969 |
| | 10 | 0.394 | 0,3 | 0,984 | 0,2 | 0,656 | 0,3 | 0,984 |
| | 12 | 0.472 | 0,2 | 0,656 | 0,1 | 0,328 | 0,1 | 0,328 |
| | 15 | 0.591 | 0,1 | 0,328 | - | - | - | - |

TAB 2



TROUBLESHOOTING (cont.)

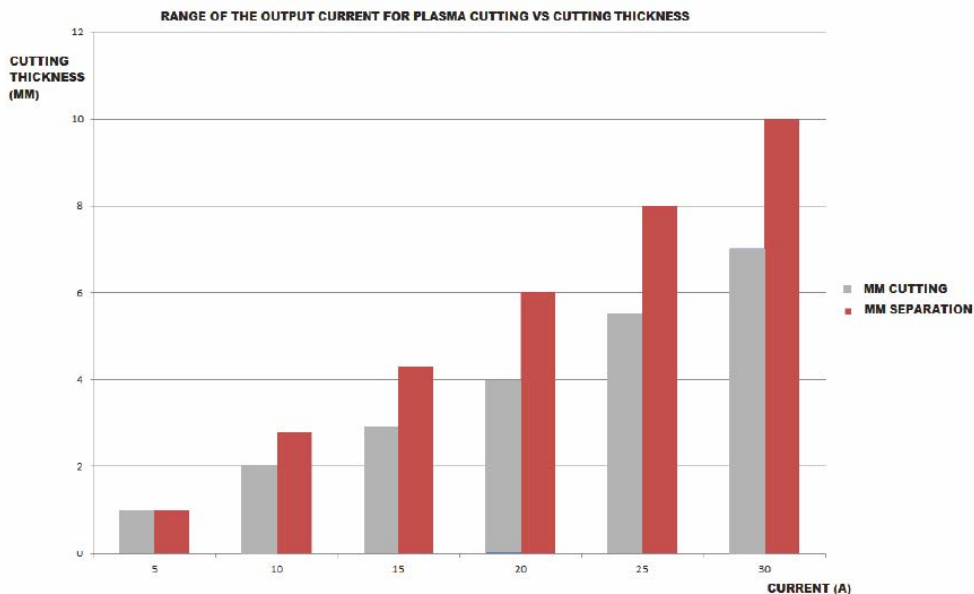


Fig 2

| Power Supply | V-I Characteristic | WxHxL | I2max (A) –X% | Weight (Kg) | Plasma Torch | Air pressure |
|-----------------|--------------------|-------------|--|-------------|--------------|--------------|
| 230V 50/60Hz | FLAT | 320x280x375 | 140A-15% MMA 30A-35% PLASMA 160A-15% TIG | 14 | AW30 | 3,0 bar* |

* The suggested air pressure value may vary due to the capacity (Ltrs.), the power (Hp) of the air compressor and different types of the material to cut. Moreover, please check the air is clean and free of oil.
If, during the cutting operation, is appearing "Lo air" or "Hi air" error messages on the display, increase or decrease the air pressure setting, using the adjustment knob on the gas pressure regulator on the back of the machine.

TAB 3

If you are still having difficulty with your welder, do not hesitate to contact our service team on:

1800 011 812

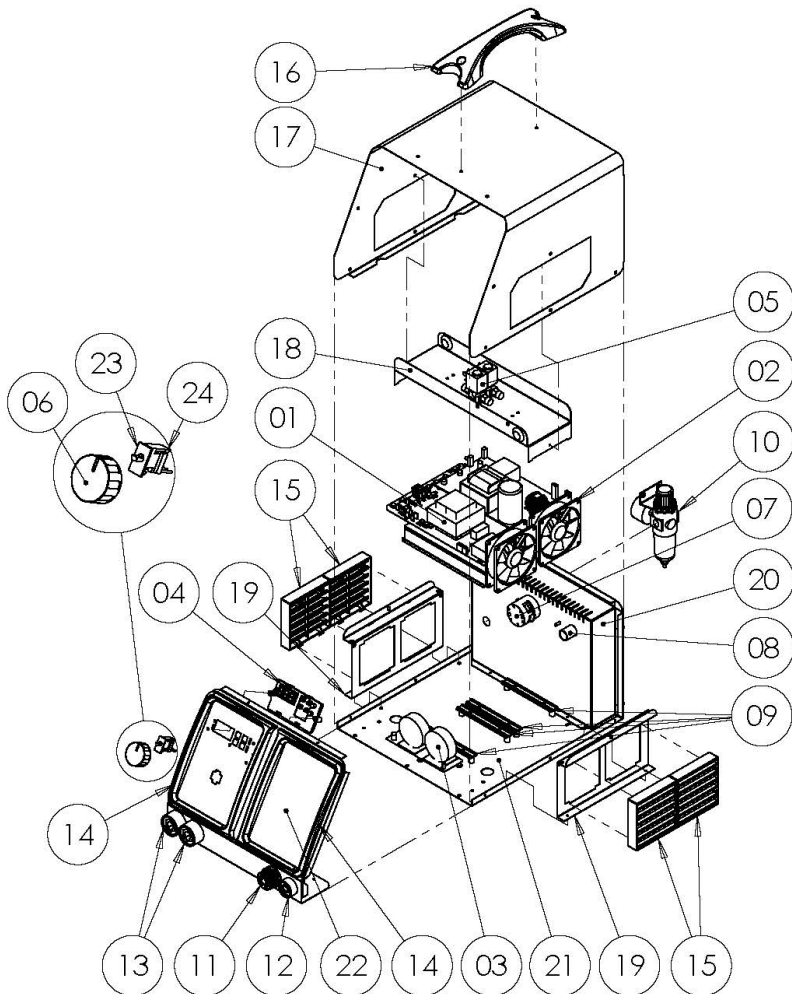


Air Pressure Conversion Table

| Mpa | Bar | Psi |
|------|------|---------|
| 100 | 1.0 | 14.503 |
| 200 | 2.0 | 29.006 |
| 300 | 3.0 | 43.509 |
| 400 | 4.0 | 58.012 |
| 500 | 5.0 | 72.515 |
| 600 | 6.0 | 87.018 |
| 700 | 7.0 | 101.521 |
| 800 | 8.0 | 116.024 |
| 900 | 9.0 | 130.527 |
| 1000 | 10.0 | 145.030 |

SPARE PARTS LIST - INVERTER ARC/TIG/PLASMA CUTTER 30

Product Code: WCPC001

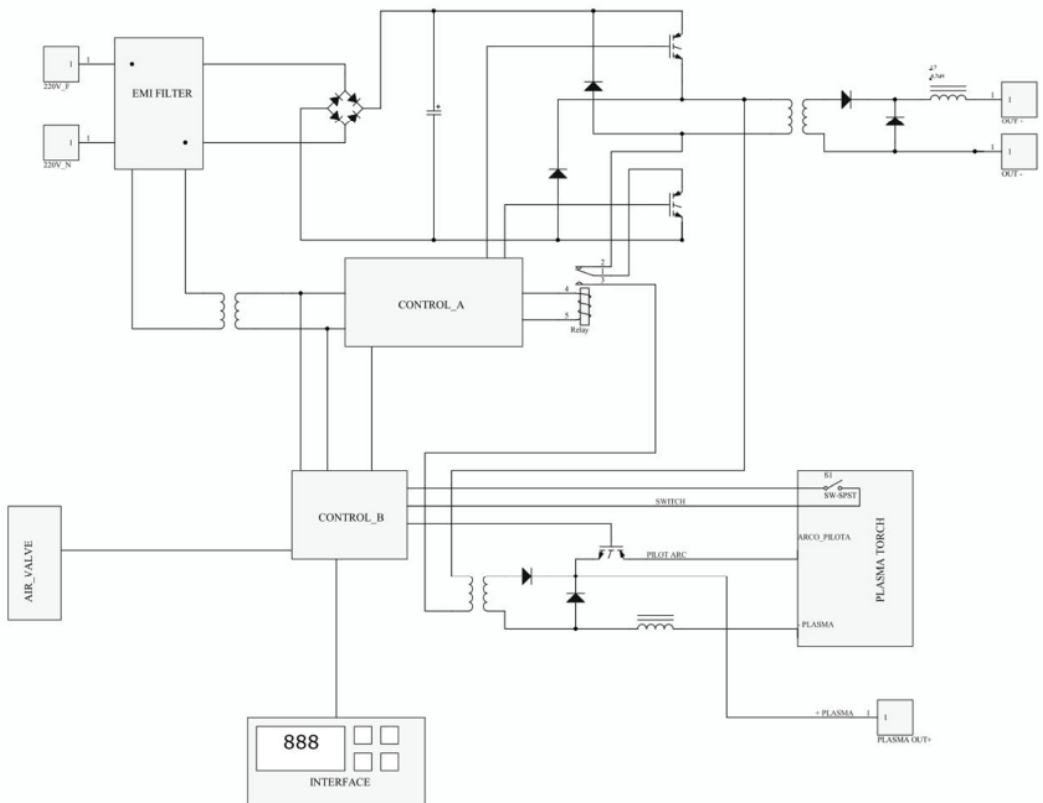


SPARE PARTS LIST - INVERTER ARC/TIG/PLASMA CUTTER 30

Product Code: WCPC001

| No | Desc. | Code |
|----|---|--------------------|
| 1 | Scheda Elettronica / Electronic Card | AW59030PSP |
| 2 | Ventola / Fan | M500251SP |
| 3 | Scheda induttore / Inductor board | AW60130SP |
| 4 | Scheda Elettronica di controllo / Control Electronic Card | AW60242PSP P01 R03 |
| 5 | Elettrovalvola / Solenoid Valve | M01304SP |
| 6 | Manopola / Knob | M01240SP |
| 7 | Interruttore On-Off / On-Off switch | M480100SP |
| 8 | Cordone di alimentazione / Power cord | M581172SP |
| 9 | Supporto pcb / PCB Support | S00765SP |
| 10 | Regolatore di pressione / Gas Pressure regulator | M00155SP |
| 11 | Attacco torcia plasma / Plasma torch connector | M01306SP |
| 12 | Presadinese / Dinse connection | M431125SP |
| 13 | Presadinese / Dinse connection | M431135SP |
| 14 | Frontale in plastica / Plastic front | S00769SP |
| 15 | Griglia di ventilazione / Ventilation grill | S02103SP |
| 16 | Maniglia / Handle | M00960SP |
| 17 | Mantello / Mantle | S02519SP |
| 18 | Supporto elettrovalvola / Solenoid Valves support | S02411SP |
| 19 | Supporto ventole / Fan holder bracket | S02231SP |
| 20 | Pannello posteriore / Rear panel | S02408SP |
| 21 | Fondo / Bottom | S02228SP |
| 22 | Pannello frontale / Front panel | S02226SP |
| 23 | Encoder | M01320SP |

WIRING DIAGRAM





1 YEAR WARRANTY

Subject to the warranty conditions below, this Weldcorp product ("the Product") is warranted by Cyclone Tools Pty Ltd ("the Company") to be free from defects in material or workmanship for a period of 12 months from the date of original purchase ("the Warranty Period").

Under this warranty, the Company will, subject to the conditions below and at the Company's option, repair or replace the Product, or refund the purchase price of the Product, if such a defect becomes apparent during the Warranty Period.

In the event of such a defect, the Product must be returned to the place of purchase, together with proof of purchase. Any handling and transportation (and other expenses) incurred in claiming under this warranty are not covered by this warranty and will not be borne by the Company.

The Company's dealers or agents are not permitted to offer any warranty or guarantee on the Company's behalf in relation to the Product, except as expressly stated in this warranty.

The Company's obligations under this warranty are subject to: (a) the Product having been used in accordance with the Company's directions, instructions and recommendations; (b) the Product having been used under normal conditions and with reasonable care (including in relation to the maintenance of the Product); (c) the Product not having been altered, tampered with or otherwise dealt with by any person in a manner other than as intended in respect of the Product. For the avoidance of doubt, this warranty does not cover damage, malfunction or failure resulting from misuse, neglect, abuse, or where the Product has been used for a purpose for which it was not designed or is not suited, or if repairs, alterations or modifications have been attempted by a person who is not an Authorised Service Agent of the Company. This warranty also does not apply to accidental damage or normal wear and tear.

In addition to other rights and remedies that may be available under law, our goods come with guarantees that cannot be excluded under Australian Consumer Law (for consumers in Australia) and the Consumer Guarantees Act (for consumers in NZ). If you are a consumer in Australia, you are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. If you are consumer in New Zealand, we will comply with our obligations to you under the Consumer Guarantees Act.

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Australia
Ph: 1800 011 812
Email: is.weldcorp-enq@cyclonetools.com



WARRANTY FORM

THIS WARRANTY FORM SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES

For your record and to assist in establishing date of purchase (necessary for in warranty service) please keep your purchase docket and this form completed with the following particulars.

PURCHASED FROM _____

SUBURB _____

DATE _____

MODEL NO. _____

SERIAL NO. _____

Present this form with your original receipt when warranty service is required.

HELPLINE 1800 011 812

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