weldcorp

Fusion for the Future

OWNER'S OPERATING MANUAL

MIG/TIG/ARC 240 ELECTRONIC INVERTER INVERTER MULTI PULSE PRO

Fusion for the Future

TABLE OF CONTENTS

Fusion for the Future

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.

Fusion for the Future

INV / MIG / TIG / ARC 240 MULTI PULSE PRO WELDERS

This product is an inverter welding machine, multi-function MMA/TIG LIFT/MIG/MAG/MOG, which can be supplied with single-phase voltage 220V to 240V, 50/60Hz.

It allows the welder to weld:
MMA: rutile, basic, nickel-based (cast iron), special steel, cellulosic electrodes and aluminium.
TIG LIFT: steel and its alloys, copper bronze etc.
MIG: aluminium and its alloys, copper, special and nickel-based and high strength steels.
MAG: low carbon steels, stainless steels.
MOG: flux cored wires, weldable without the aid of the gas.

The machine is equipped with a control function of the power absorbed from the main supply, simply activating a selector key switch on its control panel. The machine has an important design feature due to its modular structure of the power units, which makes it easy to repair.

It has a cylinder trolley which is retractable, a feature that allows you to reduce the space during transport. The user interface consists of two knobs with built-in switch and two displays.

This model is equipped with the pulsed MIG function. For the feeding of the wire during charging of a new spool, a button (positioned near the wire feeder) provides to the advancement of the wire, thus avoiding to press the button of the torch and waste gas until the wire reaches the end of the torch.

This welding machine is for professional use only and is reserved for the industry.

DESCRIPTION OF THE MACHINE

FRONT PANEL

On the front side of the machine are:
1. Control Panel
2. Power selector key, maximum - limited
3. TIG torch connector
4. Euro connector
5. Socket positive '+'
6. Cable GAS / NO GAS
7. Socket negative '-'

REAR PANEL

On the back panel of the machine are:
1. TIG Gas attack
2. MIG Gas attack
3. Power Switch ON / OFF
4. Power supply cable

WARNING: This equipment does not comply with IEG 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

INSTALLATION

Warning: Use all precautions required in the safety general manual before operating the welder, reading carefully the risks associated with the welding process.

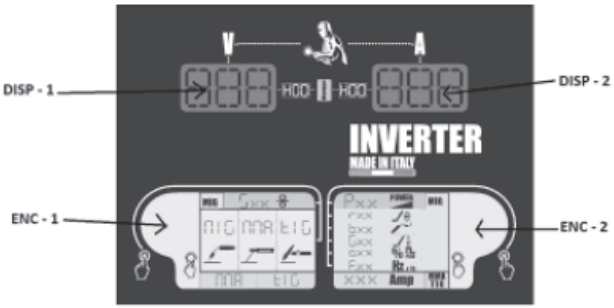
The installation must be made by the trained personnel in compliance to the standard IEC 60974-9 and the current and local legislation. All connections must be made in accordance with the reference standard. To lift the machine, the lifting hole must be applied on the top of the machine. Do not use it to lift the machine at more than 1 meter from the floor.

The input voltage must match the voltage indicated on the technical plate located on the product. The equipment should 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. The machine has an IP 21S protection level.

Mounting and adjusting the gas cylinder: must be placed in the back of the machine and secured with a chain (supplied as accessory). Assemble the pressure reducer and adjust the output pressure of the gas between 5 & 25 litres per minute.

WELDER INFORMATION

The machine functions are controlled by the control panel on the front panel. The panel is composed of two displays, "DISP-1" and "DISP-2" and two knobs, "ENC-1" and "ENC-2", which allow the rotation and the pressure.



To select the type of welding, press "ENC-1" on "DISP-1" will show the type of welding and by turning it you can choose between MMA, TIG and MIG. Stopping the rotation of the knob, the on-board microcontroller automatically selects the type of welding displayed.

Fusion for the Future

WELDER INFORMATION (cont.)

MIG WELDING

Once you have chosen the "MIG" welding, you can set the following parameters:
Wire speed: the parameter is displayed on the "DISP-1" after selecting the "MIG" welding. The value is expressed as a percentage and can be changed by rotating "ENC-1".

Power: automatically appears on the "DISP-2" when choosing "MIG" welding. You can change the value turning "ENC-2". The power value is expressed as a percentage.

During MIG welding, "DISP-1" displays the voltage and "DISP-2" shows the set welding current.

MMA WELDING

Once you have chosen the "MMA" welding, you can adjust the welding current by turning the knob "ENC-2", the value displayed in DISP-2.

TIG WELDING

Once you have chosen the "TIG" welding, you can adjust the welding current by turning the knob "ENC-2", the value displayed in DISP-2.

WELDER INFORMATION (cont.)

The machine allows you to set parameters: Ramp-Up, Burn-Back, Pulse and Frequency.

Ramp-Up: allows you to set how many seconds you want to reach the set speed of the wire. During this time, there will be a gradual increase of the wire speed. To set this parameter, press the knob "ENC-2" until 'r' appear on display "DISP-2", to change the value turn "ENC-2".

Burn-back: adjusts the remaining length of the wire from the end of the welding torch. To set this parameter, press the knob "ENC-2" until 'b' appears on display "DISP-2". Changing the length increases or descreases the time by turning "ENC-2".

Pre-gas: adjusts the opening time of the gas (in seconds) before the arc is striking. To set this parameter, press the knob "ENC-2" until 'g' appears on display "DISP-2", to change the value of the opening time of the gas turn "ENC-2".

Pulse: allows to carry out the welding with lower power in order to avoid the heating of the workpiece, allows a speed of execution of the welding considerably higher than in non-pulsed MIG. Furthermore, these is a drastic reduction of sparks and fumes in welding with a considerable reduction in the time of rework of welded pieces that have, in fact less deformation and an excellent degree of finish. The pulse parameter is adjusted by the knob "ENC-2" (press the knob until you see 'o' on "DISP-2"). The rotation of "ENC-2" allows you to choose between the following values:
0 = no pulse, 5 = 50% power pulse and 10 = 100% power pulse

Frequency: is used to set the frequency at which the pulses are repeated over time. To set this parameter, press "ENC-2" until you see 'f' on "DISP-2". You must choose the "PULSE" for this parameter to be displayed. During set up, if you do not make any changes within 3 seconds, the display "DISP-2" will show the value of the power set "PXX"

Fusion for the Future

WELDER INFORMATION (cont.)

FUNCTION RESET
Turn off the machine, the microprocessor on board stores the last welding settings used. It also possible to reset the welding parameters restoring it to factory settings.

To reset:
1) Turn off the welding machine
2) Hold onto "ENC-1" until the welding machine is on; reset is successful if the display shows "ooo ooo", or retry steps 1-2
3) Release ENC-1

Turning the key on the front panel, you can choose low-power (key position on the word "10A") or the maximum power (key position on the word "MAX")

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 degrees celcius.

Using the machine with proper duty cycle according to the selected welding current prevents overheating. If the machine stops due to overheating, both displays will flash showing "H00" and cannot be possible to weld. You can restart welding as soon as the "H00" signs disappear from the displays.

MACHINE SET UP - MMA / TIG / MIG / MIG ALUMINIUM AND MOG WELDING

Below are shown guidelines to set up the machine for a MMA/TIG/MIG/MIG Aluminium and MOG welding.

ELECTRODE (MMA)

1) Turn off the welding machine
2) Connect the plug of the work clamp to the negative socket "-" and the plug of the electrode holder to the positive socket "+" of the welding machine. Insert the electrode in the electrode holder; the diameter and the type must be chosen in function of the welding current and the thickness and type of workpiece to be welded.
To use the basic or any other special electrode weldable in DC, please always refer to what is stated on the packaging of the electrodes (in Ex. DC+ or DC- or AC/DC +-).
3) Connect the power supply to the power outlet and turn on the welding machine.
4) Select the MMA welding
5) Select the welding current
7) To use various types of electrodes follow the polarity markings on the package containing electrodes.

TIG LIFT

1) Turn off the welding machine.
2) Connect the plug of the work clamp to the power positive socket"+" and the plug of the TIG torch to the negative socket "-" of the welding machine.
3) Connect the work clamp to the work piece.
4) Put the gas cylinder on the rear panel of the welder and fix it with the chain; connect the gas tube cylinder on the rear panel of the machine
5) Connect the torch gas tube on the front panel
6) Connect the power supply plug to the power outlet and turn on the welding machine.
7) Select the TIG welding.
8) Select the welding current.
9) To stop welding, turn off the machine and close the gas valve.

MIG / MAG

1) Turn off the welding machine.
2) Connect the plug of the work clamp to the Negative socket "-" and the plug of the cable GAS I NO GAS (Figure 1.A.4) to the Positive socket "+" on the machine.
3) Insert the plug of the MIG torch in the EURO connector on the front panel

(continue over the next page)

Fusion for the Future

MACHINE SET UP - MMA / TIG / MIG / MIG ALUMINIUM AND MOG WELDING (cont.)

MIG / MAG (continued from previous page)

4) Connect the tube of the gas cylinder on the rear panel of the machine. The gas used is generally a mixture of Argon and C02 (MIX), otherwise only C02. It is recommended to use the Argon for the welding of the aluminum.

5) Open the side mantle, place the wire spool on the paddle wheel (if it there isn't) and insert the wire in the wire feeder.

WARNING: The roller has two grooves: changing the roller, you can choose the appropriate groove according to the diameter of the wire that you want to use. When changing the diameter of the wire is necessary to change both the roller and the contact tip (end part of the torch from which one you can see the wire coming out). Unscrew the gas nozzle and the contact tip to facilitate the passage of the wire.

6) Unroll the torch cable so as to prevent the thread from curling.

7) Stop the roller.

8) Connect the power supply plug to the power outlet and turn on the welding machine.

9) Select MIG welding, press the wire feed button (Figure 3, the button is near the wire feeder) until the wire comes out of the torch, close the side mantle.

MIG WITHOUT GAS (MOG)

1) Turn off the welding machine.

2) Open the side mantle, mount the flux cored wire coil (see "MIG/MAG" use), choose the roller for the flux cored wire.

3) Connect the plug of the work clamp to the Positive socket, "+", and the plug of the cable GAS I NO GAS to the Negative socket, "-".

4) Connect the power supply plug to the power outlet and turn on the welding machine.

5) Select the MIG welding, press the wire feed button until the wire comes out of the torch, close the side mantle.

MIG ALUMINIUM

For MIG welding with aluminum wire it is necessary to set the machine with the KIT FOR ALUMINIUM WELDING. The kit (not included with the machine) includes: Teflon sheath, nipple, o-ring. Proceed as presented in section "MIG/MAG" use. In this case, use pure argon.

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).

TROUBLESHOOTING

FAULT	REASONS	REMEDY
The wire does not move when the drive wheel turns	-) Dirt in liner and/or contact tip -) The clutch regulation, on the wire reel holder, is too tight -) Torch defective	-) Clean inside using air compress -) reduce the pressure -) Check the sheath of the torch
Supply of the Wire : presence of intermittent shots	-) the nozzle contact loose or is defective -) Burns in the contact nozzle -) Dirt on the groove of the drive wheel -) Furrow on the drive wheel-onsumed	-) Replace -) Replace -) Clean -) Replace
Arc off	-) Poor contact between the work clamp and the workpiece	-) Tighten the clamp and check -) Clean or replace the tip and gas nozzles
Weld porous	-) Poor contact between the work clamp and the workpiece -) incorrect torch distance or angle -) Low gas pression -) workpieces wet	-) Clean deposits from the workpiece -) The distance between the torch and the workpiece must be of 5-10 mm; -) The slope not less than 60° to the workpiece. -) Increase the pressure -) Dry the workpiece with a heat gun or another same mode (first, turn off the machine)
The machine suddenly stops working after prolonged use. The displays show H00.	The machine is overheated due to excessive use and thermal protection intervened	Allow machine to cool without turn off it. You will re-start welding as soon as the "H00" signs will disappear from the displays.

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

1800 011 812

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MULTI PULSE PRO 240 WELDER

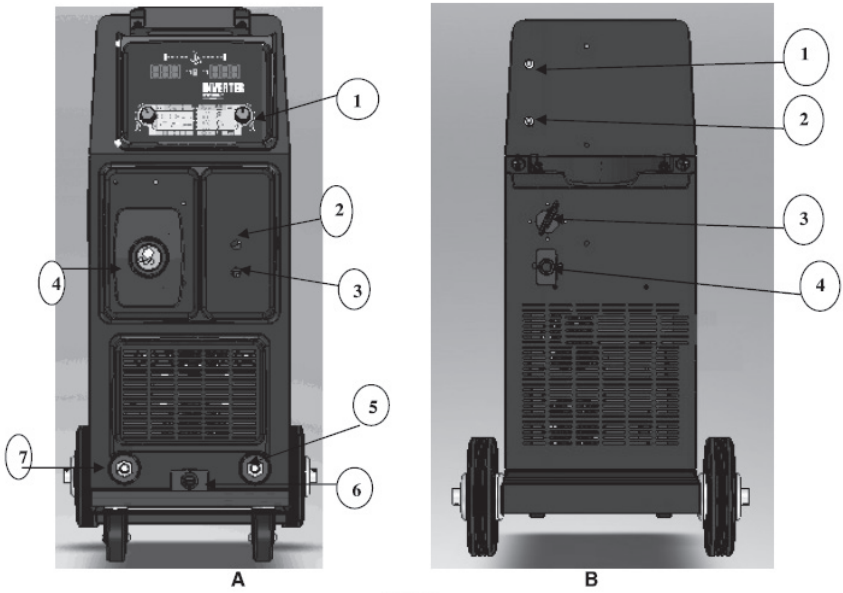


Fig 1

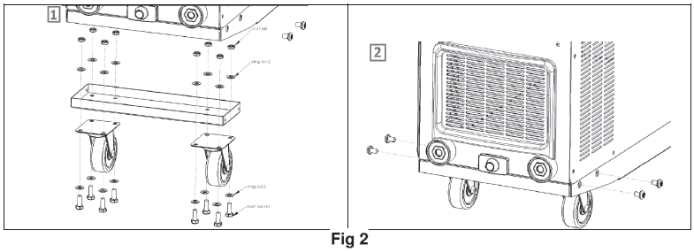


Fig 2

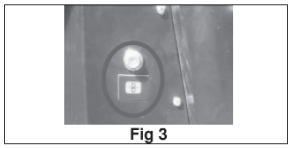
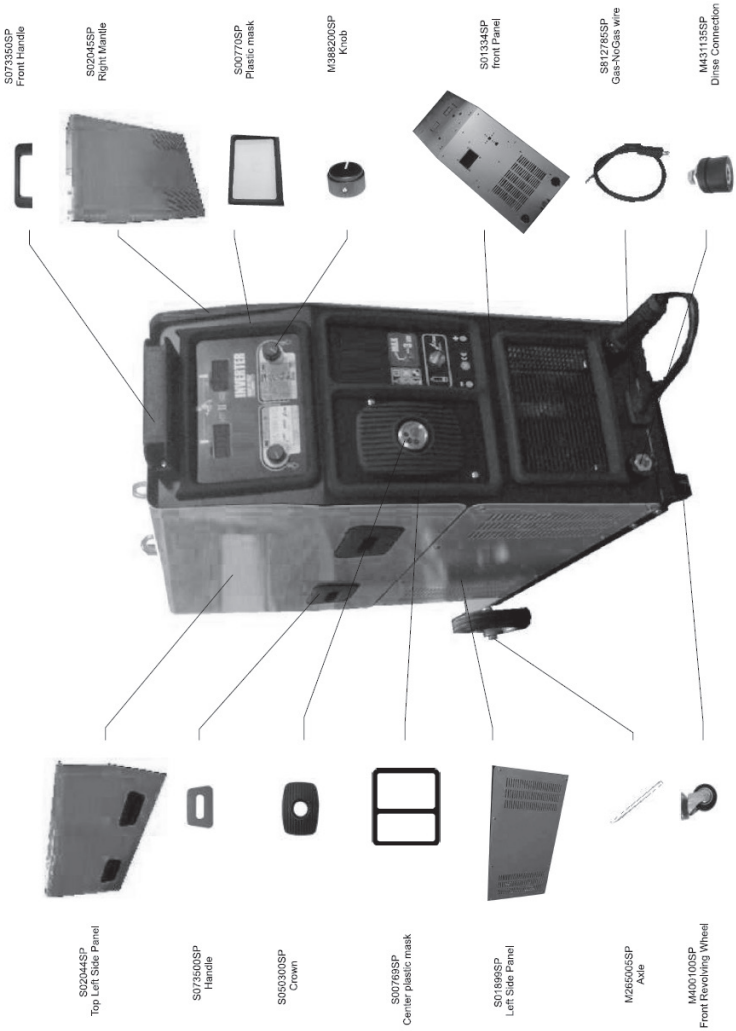


Fig 3

SPARE PARTS LIST - INVERTER MULTI PULSE PRO 240

Product Code: WCM0007



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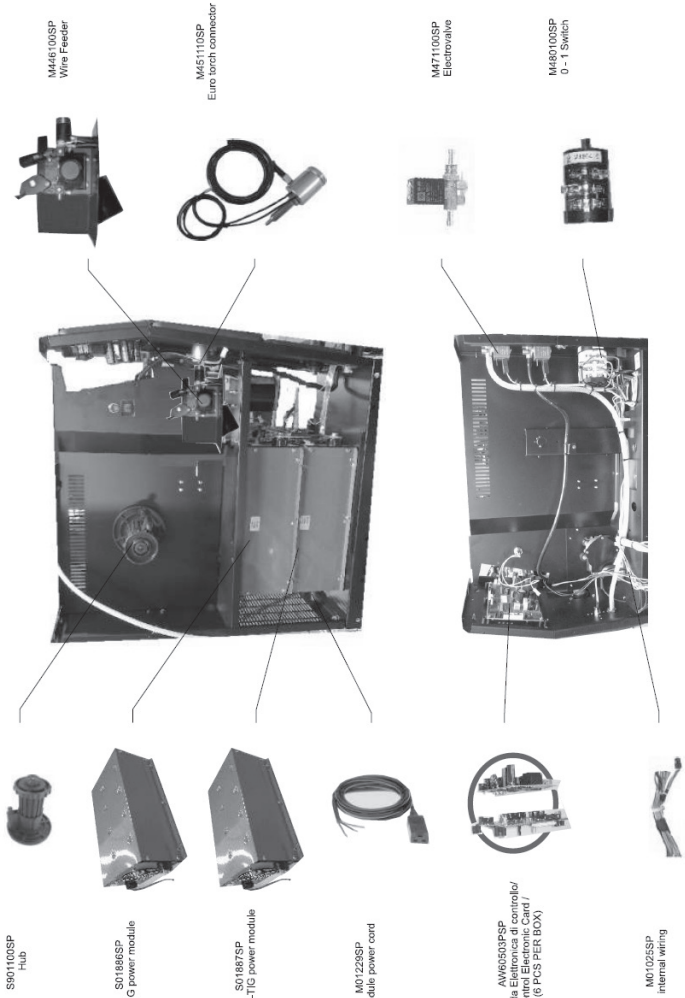

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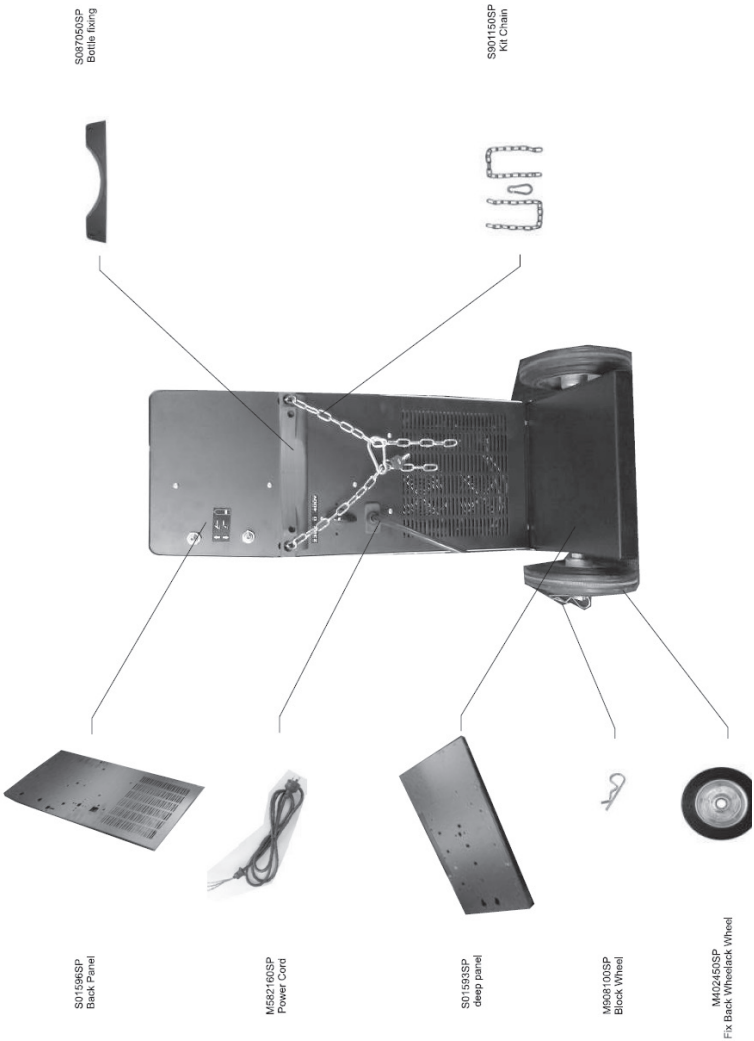

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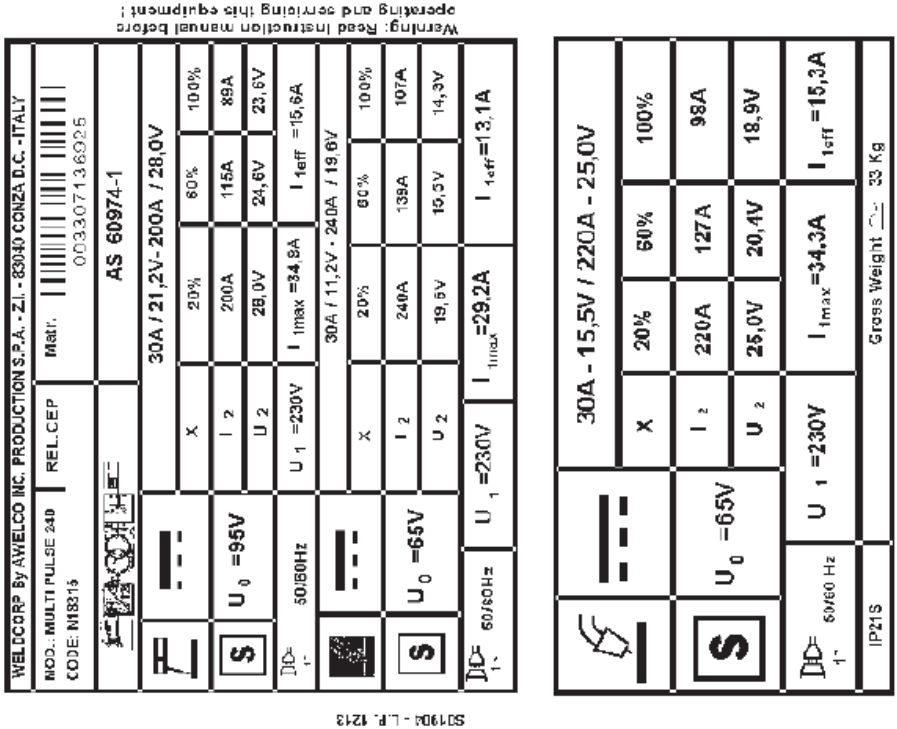
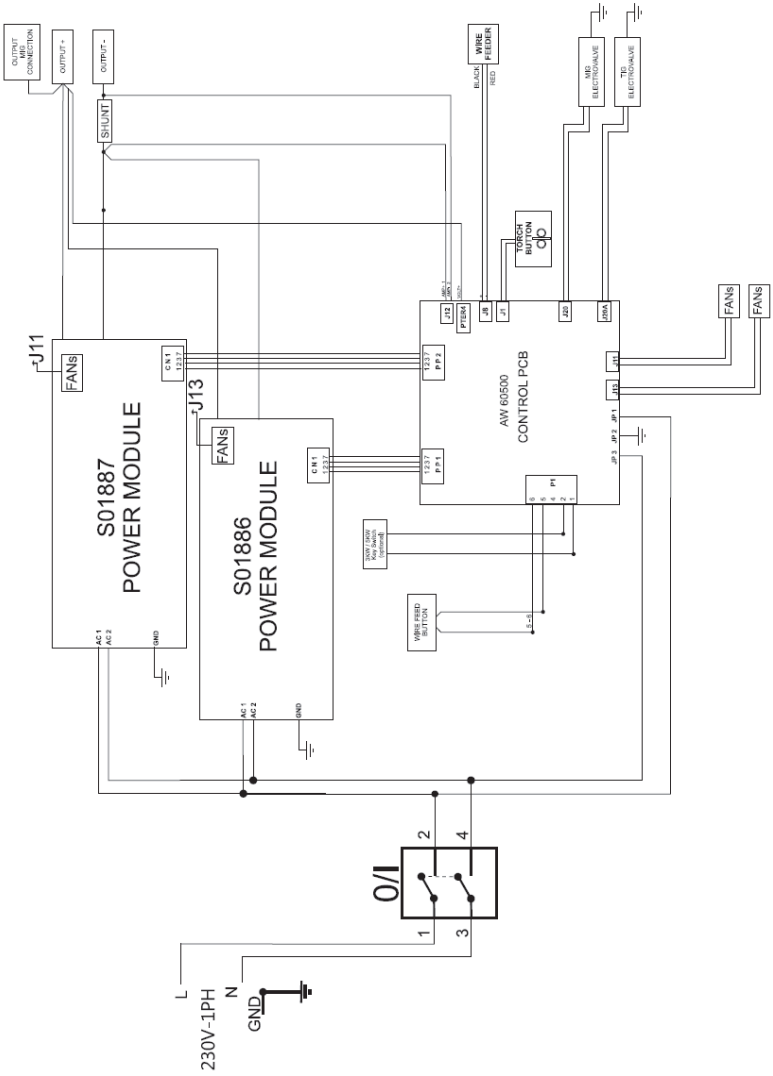
WELDING MACHINE TECHNICAL DATA



P 60% INPUT	V-I characteristic	W x H x L [mm]	CONNECTABLE TO POWER GENERATOR
4,3 kVA(MMA) 3,2 kVA(TIG) 3,4 kVA(MIG)		370 x 730 x 810	MINIMUM POWER OF THE POWER GENERATOR 12 kVA

ELECTRICAL DIAGRAM



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1YEAR WARRANTY

Subject to the warranty conditions below, this Weldcorp product ("the Product") is warranted by ITW Group, a division of ITW Australia 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.

ITW Group, a division of ITW Australia Pty Ltd (ACN 004 235 063)
73C Elizabeth Street
Wetherill Park, New South Wales, 2164
Australia
Ph: 1800 011 812
Email: weldcorp-enq@prager.com.au

WARRANTY FORM

THIS WARRANTY FORM SHOULD BE REAINED 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 001 1812

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ENGLISH - EC-DECLARATION OF CONFORMITY

We declare under our sole responsibility that this product is in conformity with the following standards or standardized documents:

ITW Group, Division of ITW Australia Pty Ltd	
MACHINE DESCRIPTION	INVERTER MMA Welding Machine
Applicable EC Directives:	- Low Voltage Directive CE 2006/95 EC - Electromagnetic Compatibility (EMC) Directive 2004/108 EC
Applicable harmonized Standards:	EN 60974 - 1 AS/NZ 60974.1 : 2006 EN 60974 -10 AS/NZ 60974.6 : 2006 (Clause 5.1 only)
Place:	Conza d. C. (AV) – Italy
Date:	05.06.2013
Title of Signatory:	M. Di Leva - Amministratore

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