weldcorp

Fusion for the Future

OWNER'S OPERATING MANUAL

INVERTER TIG PRO 170
ELECTRONIC INVERTER ARC/TIG WELDER

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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.

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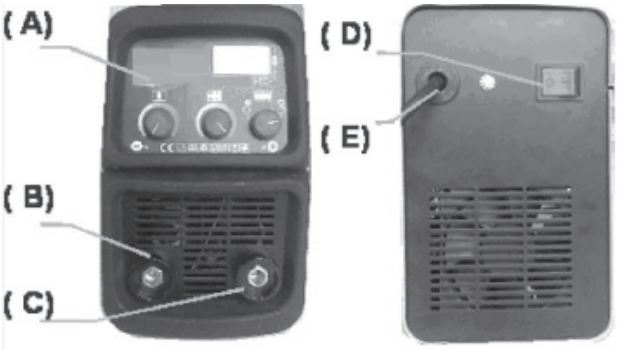
INVERTER TIG PRO WELDERS

This device is a current inverter generator (DC) suitable for welding electrode MMA and TIG LIFT. Thanks to the inverter technology which allows to achieve high performance and low size and weight, the welder is portable and easy to handle.

The device is suitable for welding with coated electrodes (rutile, basic, stainless steel and cast iron) and TIG LIFT welding for many metals except aluminium and alloys. It is a single phase 230V 50/60Hz and can be connected to power generators having power equal to or higher than that value reported in Page 10.

The machine is equipped with the following functions:

- "MAINS ANALYSIS" - when turns on, the machine performs a series of tests to analyze the mains supply.
- "HOT START", "ARC FORCE" and "ANTI STICK" functions.
- "MEMORY PARAMETERS" - the microprocessor stores the welding parameters set during the last use of the machine allowing automatic recovery at each turn on.
- "VOICE SYNTHESIZER" - it is equipped with a voice synthesizer (the language is selectable at start), that helps the user during its use.
- "ADJUSTMENT PARAMETERS" - the machine is able to self-adjust its welding parameters configuration after the user selection.



A Control panel
B Negative pole (-)
C Positive pole (+)
D ON-OFF switch
E Power cord

INVERTER TIG PRO WELDERS (cont.)

CONTROL PANEL

DISPLAY : Digital display

LED TERM : This LED indicates if the machine goes on thermal protection

AMP : the knob regulates the welding current

MENU the Knob selects the ELECTRODE and MMA or TIG welding

POT : the knob regulates the VOICE volume

MENU ACCESS

Pushing the knob "MENU", it is possible to select the MMA or TIG welding. The display will show the corresponding selection. Setting the MMA welding, turning the knob "MENU", it is possible to select the type and diameter of the electrode or the manual mode. The display will show the corresponding selection.

ELECTRODE SELECTION (MMA)

Once you have selected the type and diameter of the electrode, the onboard microcontroller self adjusts the configuration by selecting the corresponding value of the current to obtain the best welding. The display shows, first, the electrode selected and then, the current self-regulated.

Rutile electrode selection

Basic electrode selection

Stainless steel electrode selection

Cast iron electrode selection

where for example rX.X is the rutile electrode with diameter X.X

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INVERTER TIG PRO WELDERS (cont.)

MANUAL SELECTION

When the manual mode is selected, the display will show "Man"; the selfregulation of welding current is disabled. The user can select the desired setting of the welding current and the type/diameter of the electrode.

TIG SELECTION

Pushing the knob "MENU", it is possible to select the TIG welding. The display will show "TIG". Turning the knob "AMP" it is possible to choose the desired welding current.

MAINS ANALYSIS

At each turn on, the machine analyzes the electrical network checking the supply voltage (SAFETY POWER) and the grounding system (SAFETY USER).

SAFETY USER

At each turn on, the machine scans the electrical grid to check if the system is equipped with grounding system. The outcome of the verification is stored on its internal memory. The purpose is to ensure the user safety . In case of negative outcome, the user will push the knob "MENU" to continue using the welding machine. The event will be stored in the memory and the data can be retrieved from a service centre.

SAFETY POWER

At each turn on, the machine performs the check of the supply voltage.
When the voltage supply is less than 1 BOV, the machine go in protection mode and it won't weld until the voltage supply is not within the allowed limits, the display will show "LO".

When the voltage supply is greater than 250V, the machine go in protection mode and it won't weld until the voltage supply is not within the allowed limits, the display will show "HI".

INVERTER TIG PRO WELDERS (cont.)

VOICE GUIDE

The machine is equipped with a voice synthesizer that accompanies the user during use. For selecting the language, if it was not previously set at factory, perform the following step at first turn on of the machine - when the display shows the desired language, push the knob "MENU". The correspondence between language and the display is as follows:

- "IT_" - ITALIAN
- "EN_" - ENGLISH
- "ES_" - SPANISH (optional)
- "RU_" - RUSSIAN (optional)
- "De_" - GERMAN (optional)
- "FR_" - FRENCH (optional)

RESET (LANGUAGE AND WELDING PARAMETERS)

If the user wants to re-select the language and return to factory settings, perform the following steps:

- Turn off the welding machine;
- Simultaneously push the knob "MENU" and turn on the welding machine. The display will show "coo" if successful
- Release the knob MENU. The display will scroll the selectable languages.
- Select the desired language by pushing "MENU"

AUTO ADJUSTMENT PARAMETERS

The machine is able to self-adjust its welding parameters according to the user selection:

- When selecting the type and diameter of the electrode, the onboard microcontroller sets the value of the welding current;
- When selecting the value of the welding current, the onboard microcontroller sets the diameter of the electrode of the type previously selected.

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INSTALLATION

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

To lift the machine you must use the handle positioned on top of the product with the machine in OFF position and the welding cable disconnected. 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 nameplate affixed to the machine. The machine has an IP21 S protection level.

OPERATION

HOW TO USE IT

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

ELECTRODE MMA

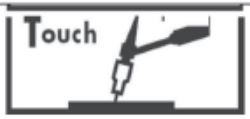
• Select the proper electrode polarity (direct or reverse) of the electrode (for more information see the general part of the safety manual and the information on the electrode packaging). Connect the plugs of the work clamp and the electrode holder to the sockets of the machine as function of the polarity, rotating the attack in order to ensure a good grip.
• Connect the work clamp to the metal structure 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.
• Connect the power supply plug to the power outlet and turn on the welding machine by placing the on I oft switch to position I.
• Select the electrode or the MANUAL MODE
• Start the welding operation using all necessary protections to security.
• After completing the welding, turn off the welder and remove the electrode from the electrode holder.

OPERATION (cont.)

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

TIG LIFT

• Select the proper polarity (direct or reverse) in relation to the type of material to be welded (for more information see the general part of the safety manual). Connect the plugs of the work clamp and the torch to the sockets of the machine (Fig 1, B and C) as function of the polarity, rotating the attack in order to ensure a good grip.
• Connect the work clamp to the metal structure 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 pressure reducer connected to the gas cylinder (for more information consult the safety manual included in the packaging).
• Connect the power supply plug to the power outlet and turn on the welding machine by placing the on I oft switch (Fig 1, D) to position I.
• Select the TIG welding (Fig 2 knob "MENU").
• Turn the knob (Fig 2, "AMP") in the position corresponding to the desired current .
• Regulate the cylinder gas flow with the pressure reducer and then open the torch valve.
• Use the torch to weld as in the following without a pause between the two phases:

 1	Touch the piece with the electrode
 2	Lift the electrode from the piece about 2-5 mm

- To stop welding, turn off the machine and close the gas valve

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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 welding current allows to prevent overheating. If the machine is used for hard work cycle, the thermal protection device will protect the machine from overheating. In case of overheating of the machine the "LED TERM" will come on, and the display will show "HOO". It is possible to start the welding again once the LED is off and the word "HOO" is no longer on the display.

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

TROUBLESHOOTING		
Anomalies	**Causes**	**Remedies**
The device does not deliver any current and the yellow indicator LED of thermal protection lights up.	The welder thermal protection has turned on.	Wait for the end of the cooling time, around 2 minutes but don't turn off the machine. The indicator LED turns off.
The device is on but, it does not deliver any current.	The welding connectors aren't connected to the welding 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.
E10	There is no grounding system (the system is dangerous)	to continue, push the knob MENU
E11	There is no memory card	bring the machine in a service center
TIG		
Instable arc	-)Default coming from the tungsten electrode -)Too important gas flow rate	-) 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.

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

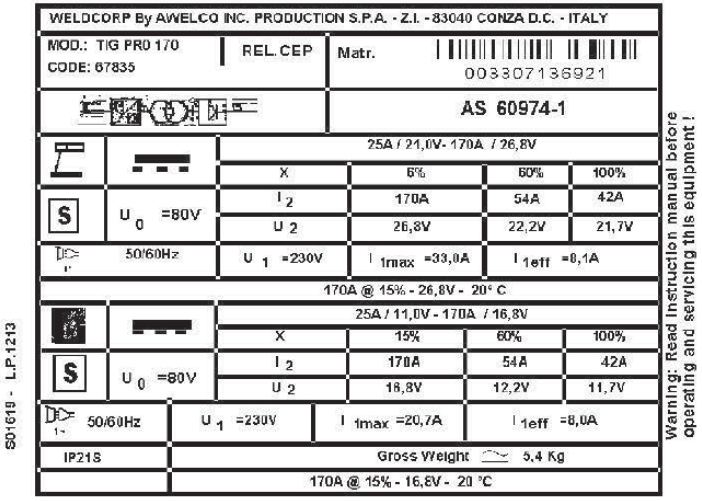
1800 011 812

WELDING INFORMATION

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	5,0
Rutile AWS E6013	30-55 A	45-70 A	50-100 A	80-130 A	120-170 A	150-250A
Basic AWS E7018	50-75 A	60-100 A	70-120 a	110–150 A	140-200 A	190-260 A
Stainless Steel AWS E308	25-35 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	90-170 A
Cellulosic Aws E6010	20-45 A	30-60 A	40-80 A	70-120 A	140-200 A	190-260 A

WELDING MACHINE TECHNICAL DATA



P 60% INPUT	V-I characteristic	W x H x L [mm]	CONNECTABLE TO POWER GENERATOR MINIMUM POWER OF THE POWER GENERATOR 11,4 kVA
4,1 kVA(MMA) 2,4 kVA(TIG)		140 x 280 x 340	

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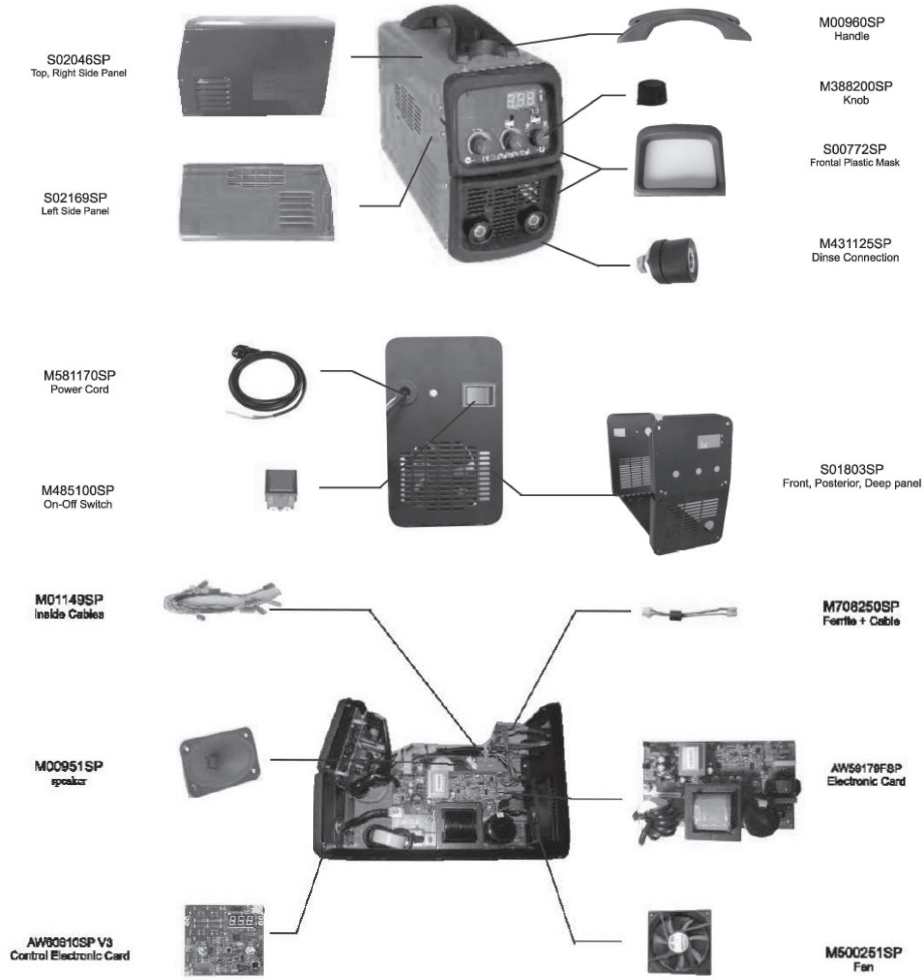
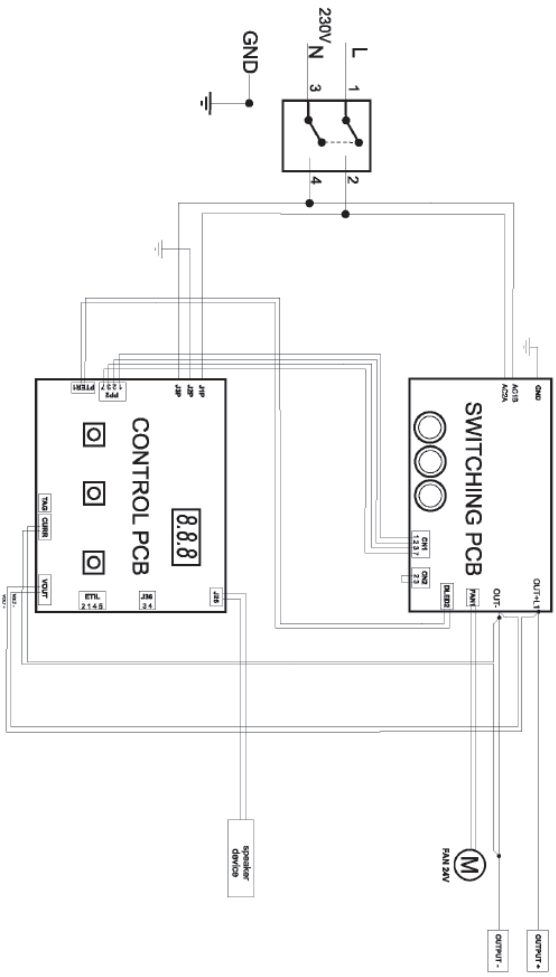
SPARE PARTS LIST - INVERTER TIG PRO 170

Product Code: WCI0007



WIRING 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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