

weldcorp



Fusion for the Future

OWNER'S OPERATING MANUAL



**INVERTER TIG140
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.

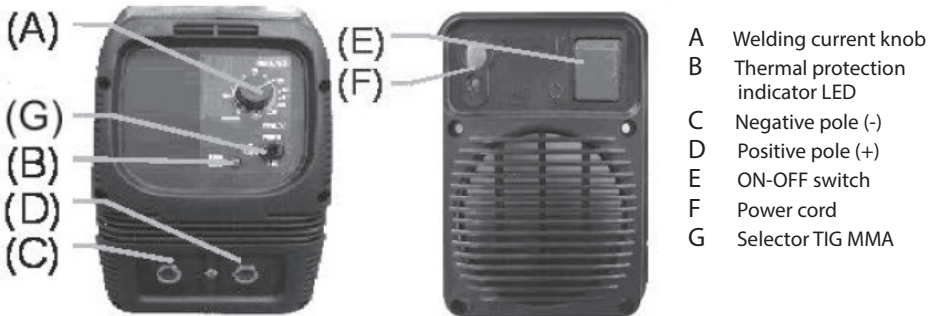


INVERTER WELDERS

The product is a portable, lightweight, single-phase 230V, 60/60Hz welder with inverter technology. It allows MMA welding with all electrodes type and the TIG welding of the most metals except the aluminium alloys.

Can be connected to power generators with power equal to or higher than that reported in the table in Page 9. It is equipped with "HOT START", "ARC FORCE" and "ANTI STICK" functions.

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



INSTALLATION

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.

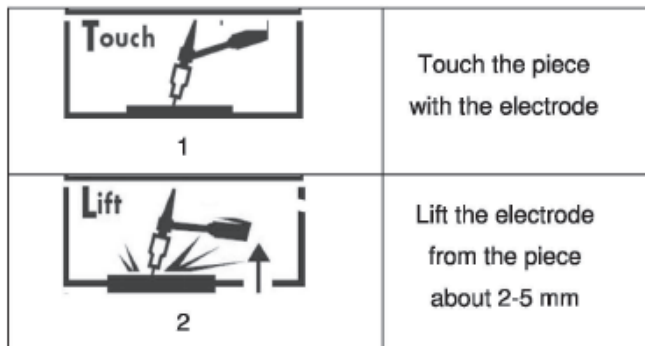
OPERATION

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.

TIG WELDING

- 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, C and D) 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
- Select the welding current
- Insert the power supply plug into the power outlet and turn on the welding machine by pressing the switch (Fig 1, E) to the I position
- Use the torch to weld as in the following without a pause between the two phases:



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



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.

ELECTRODE WELDING (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, C and D) 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, insert the electrode into the electrode holder.
- Insert the power supply plug into the power outlet and turn on the welding machine by pressing the switch (Fig 1, E) to the I position.
- Select the welding current (FIG 1, A) as a function of the type of electrode selected.
- Start the welding operation using all the necessary protections for the security.
- When welding is completed, turn off the machine and release the electrode from the electrode holder

THERMAL PROTECTION

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 yellow LED indicates that the thermal protection is on, it is possible to start welding again once 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).

TROUBLESHOOTING

Anomalies	Causes	Remedies
MMA		
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. 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 welder.	Turn off the machine and check the connections.
Your unit does not weld correctly.	Polarity error	. Check the polarity advised on the electrodes packaging.
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


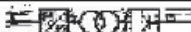








WELDING INFORMATION

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

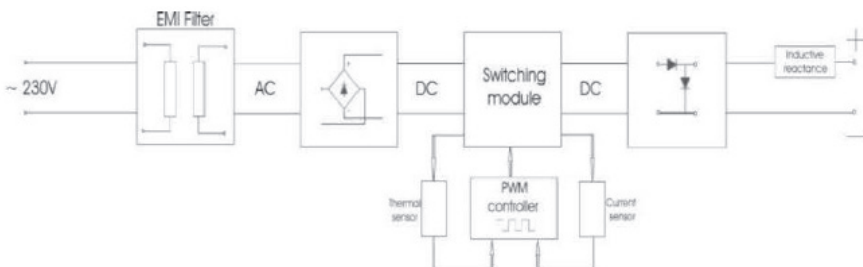
WELDCORP By AWELCO INC. PRODUCTION S.P.A. - Z.L - 83140 CONZA D.C. - ITALY					
MOD.: INVERTER 140		REL. CEP	Matr. 		
CODE: 01561			003307135477		
		AS 60974-1			
		25A / 21,0V - 140A / 25,6V			
	$U_0 = 80V$	X	10%	60%	100%
		I_2	140A	80A	63A
		U_2	25,8V	23,2V	22,5V
	50/60Hz	$U_1 = 230V$	$I_{1max} = 26,0A$	$I_{1eff} = 8,2A$	
		25A / 11,0V - 140A / 15,6V			
	$U_0 = 80V$	X	25%	60%	100%
		I_2	140A	80A	63A
		U_2	15,6V	13,2V	12,5V
	50/60Hz	$U_1 = 230V$	$I_{1max} = 15,8A$	$I_{1eff} = 2,9A$	
IP21S		Weight/peso \approx 4 Kg			

S0198906 - L.P. 1213

Warning: Read instruction manual before operating and servicing this equipment !

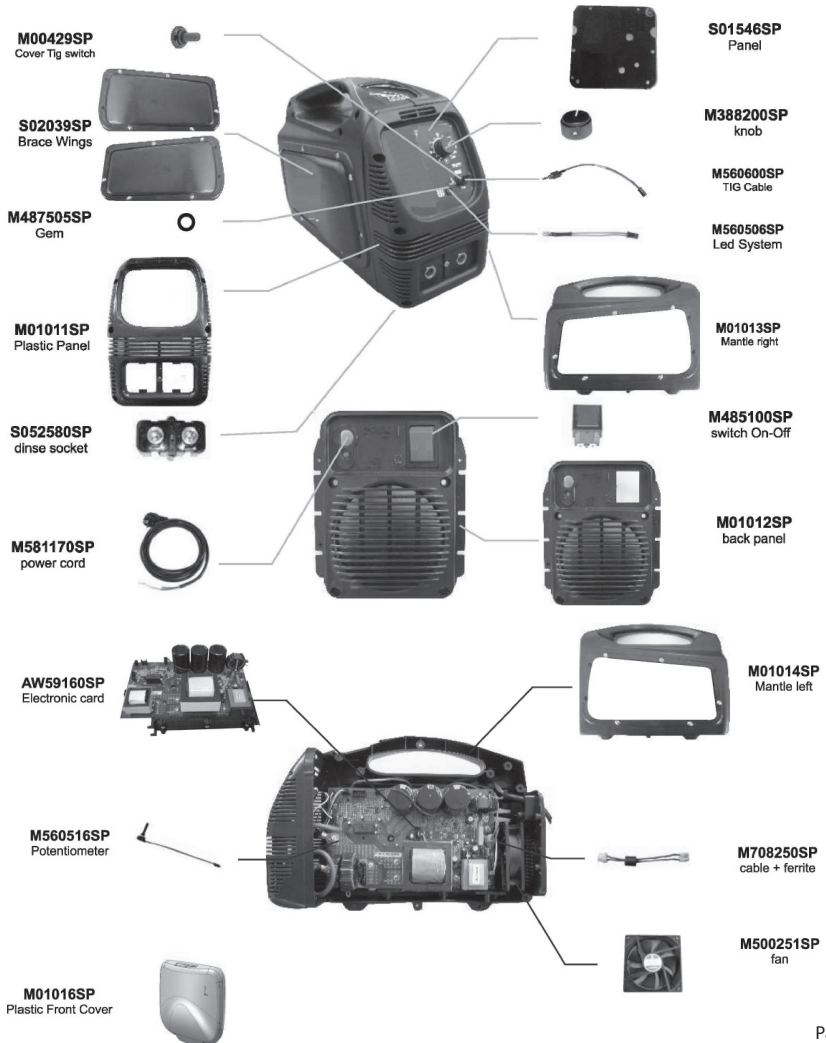
	V-I characteristic	W x H x L [mm]	
3,3 kVA(MMA) 1,9 kVA(TIG)		160 x 250 x 355	MINIMUM POWER OF THE POWER GENERATOR 9,0 kVA

WIRING DIAGRAM



SPARE PARTS LIST - INVERTER 140

Product Code: WCI0005



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1 YEAR 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 *M. Di Leva*

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Fusion for the Future

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