



JASIC®

EVO2.0



Operator Manual

LC-40



Your new product



Jasic.co.uk

Thank you for selecting this Jasic EVO 20 product.

This product manual has been designed to ensure that you get the most from your new product. Please ensure that you are fully conversant with the information provided paying particular attention to the safety precautions. The information will help protect yourself and others against the potential hazards that you may come across.

Please ensure that you carry out daily and periodic maintenance checks to ensure years of reliable and trouble free operation.

Please call your Jasic distributor in the unlikely event of a problem occurring. Please record below the details from your product as these will be required for warranty purposes and to ensure you get the correct information should you require assistance or spare parts.

Date purchased _____

From where _____

Serial number _____

(The serial number is normally located on the top or underside of the machine and will begin with AA)

For further information on your Jasic product warranty registration please visit:

www.jasic-warranty.co.uk

Disclaimer

Whilst every effort has been made to ensure that the information contained within this manual is complete and accurate, no liability can be accepted for any errors or omissions.

Please Note:

- Products are subject to continual development and may be subject to change without notice.
- Regularly check our product pages at www.jasic.co.uk for revision updated operating manuals.
- No part of this manual may be copied or reproduced by any means without the written permission of Wilkinson Star Limited.
- Use this accessory manual in conjunction with the ET-300P & ET-300PACDC operating manuals.

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Please Note:

For further information regarding the LC-40 water cooler, please see the Jasic EVO ET-300P and ET-300P ACDC operating manuals.

SAFETY INSTRUCTIONS



These general safety norms cover both arc welding machines and plasma cutting machines unless otherwise noted. The user is responsible for installing and operating the equipment in accordance with the enclosed instructions.

It is important that users of this equipment protect themselves and others from harm, or even death. The equipment must only be used for the purpose it was designed for. Using it in any other way could result in damage or injury and in breach of the safety rules.

Only suitably trained and competent persons should operate the equipment.

Pacemaker wearers should consult their doctor prior to using this equipment.

PPE and workplace safety equipment must be compatible for the application of the work involved.

Always carry out a risk assessment before carrying out any welding or cutting activity.

General electrical safety



The equipment should be installed by a qualified person and in accordance with current standards in operation.

It is the users responsibility to ensure that the equipment is connected to a suitable power supply. Consult your utility supplier if required.

Do not use the equipment with the covers removed. Do not touch live electrical parts or parts which are electrically charged. Turn off all equipment when not in use.

In the case of abnormal behaviour of the equipment, the equipment should be checked by a suitably qualified service engineer.

If earth bonding of the work piece is required, bond it directly with a separate cable with a current carrying capacity capable of carrying the maximum capacity of the machine current.

Cables (both primary supply and welding) should be regularly checked for damage and overheating.

Never use worn, damaged, under sized or poorly jointed cables.

Insulate yourself from work and earth using dry insulating mats or covers big enough to prevent any physical contact.

Never touch the electrode if you are in contact with the work piece return.

Do not wrap cables over your body.

Ensure that you take additional safety precautions when you are welding in electrically hazardous conditions such as damp environments, wearing wet clothing and metal structures.

Try to avoid welding in cramped or restricted positions.

Ensure that the equipment is well maintained. Repair or replace damaged or defective parts immediately.

Carry out any regular maintenance in accordance with the manufacturers instructions.

The EMC classification of this product is class A in accordance with electromagnetic compatibility standards CISPR 11 and IEC 60974-10 and therefore the product is designed to be used in industrial environments only.

WARNING: This class A equipment is not intended for use in residential locations where the electrical power is provided by a public low-voltage supply system. In those locations it may be difficult to ensure the electromagnetic compatibility due to conducted and radiated disturbances.

General operating safety



Never carry the equipment or suspend it by the carrying strap or handles during welding.

Never pull or lift the machine by the welding torch or other cables.

Always use the correct lift points or handles. Always use the transport under gear as recommended by the manufacturer.

Never lift a machine with the gas cylinder mounted on it.

If the operating environment is classified as dangerous, only use S-marked welding equipment with a safe idle voltage level. Such environments may be for example: humid, hot or restricted accessibility spaces.

SAFETY INSTRUCTION

Materials and their disposal



Welding equipment is manufactured with BSI published standards meeting CE requirements for materials which do not contain any toxic or poisonous materials dangerous to the operator. Do not dispose of the equipment with normal waste.



The European Directive 2012/19/EU on Waste Electrical and Electronic Equipment states that electrical equipment that has reached its end of life must be collected separately and returned to an environmentally compatible recycling facility for disposal.

For more detailed information please refer to the HSE website www.hse.gov.uk

PACKAGE CONTENTS AND UNPACKING

Supplied within your new Jasic EVO product package will be the following items with each model.

Use care when unpacking the contents and ensure all items are present and not damaged.

If damage is noted or items are missing, please contact the supplier in the first instance and before installing or using the product.

Record the product model, serial numbers (if applicable) and purchase date in the information section found on the inside front page of this operating manual.

Jasic EVO LC-40 Water Cooler (C0S2)

Only to be used with the Jasic EVO ET-300P and ET-300P ACDC TIG welding machines.



Please Note:

Package contents may vary depending on country location and package part number purchased.

SAFETY PRECAUTIONS

General safety



The following operations require sufficient professional knowledge on electrical aspects and comprehensive safety knowledge. Make sure the input cable of the machine is disconnected from the electricity supply and wait for 5 minutes before removing the machine covers.

Description of symbols



Warning! Read the Manual



WEEE tag

Product Overview

The Jasic LC-40 water cooler adopts vertical duct, 18 waterway heat exchanger as well as a high quality heat resistant water pump that features high lift, small caliber and large flow, and meets the cooling requirements of Jasic TIG water cooled welding equipment.

Performance Features

This slimline, light weight water cooler is designed to be used with the Jasic EVO ACDC TIG 3phase range of machines. Featuring low noise with stable coolant flow, this product can meet the cooling requirements for our Jasic TIG welding equipment and TIG torches.

This product offers stable cooling with inbuilt energy-saving and environmental features.

Technical parameters

Item	Unit	Parameter
Jasic EVO LC-40 Water Cooler (CO ₂)	-	-
Rated input voltage	V	Single-phase AC 400V 15% 50/60Hz
Rated input power	W	AC 400 V @ 140w
Rated input current (I _{max})	A	0.4
Maximum pressure (P _{max})	MPa	0.48
Maximum flow rate	L/min	5
Rated cooling power (P _{1L/MIN})	KW	1.5 (1L/min)
Protection class	-	IP23S
Executive standard	-	EN IEC 60974-2 / BS EN IEC60974-2
Coolant	-	Deionized water or anti-freeze type mixed liquid
Coolant tank volume	Litre	6.5 Ltr.
Operating ambient temperature	°C	Mixed liquid, pure water: 7 ~ 40 Anti-freezing solution: -20 ~ 55
Noise	db	<70
Machine dimensions	mm	600 x 217 x 283
Packaging dimension	mm	630 x 255 x 315
Weight	Kg	14

Please Note:

For further information for the LC-40, please consult the ET-300P & ET-300P ACDC operating manuals.

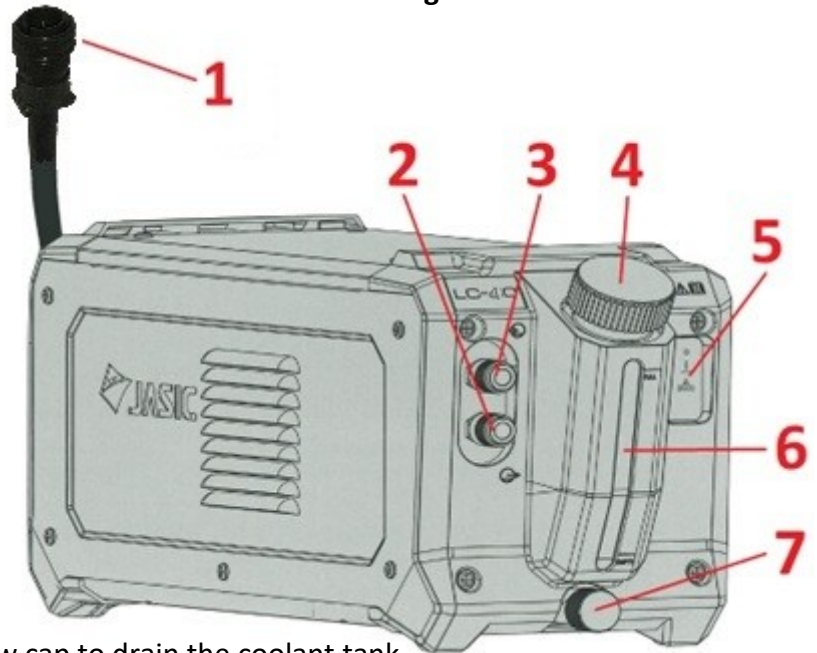
GENERAL INFORMATION



The following operations require sufficient professional knowledge on electrical aspects and comprehensive safety knowledge. Make sure the input cable of the machine is disconnected from the electricity supply and wait for 5 minutes before removing the machine covers.

Jasic LC-40 water cooler

1. Power and control plug and cable
2. Water outlet: (cold) connect the blue TIG torch supply water hose to this connector
3. Water return: (hot) connect the red TIG torch return water hose to this connector
4. Filler cap for coolant, remove to fill water/coolant tank
5. LC-40 Cooler indicators
 - Top - Power LED
 - Middle - Flow warning LED
 - Bottom - Overheat warning LED
6. Coolant min and max level indicator *
7. Coolant drain plug cap, remove this screw cap to drain the coolant tank.



* Typically 5ltr of coolant will take fill to the max level line.

Please Note: Fitted to the water cooler rear panel is a panel mounted control fuse, rated 400V 5amps.

Water (coolant) level:

The coolant level should always be maintained and should never drop below the minimum level line, overheating of the TIG torch will occur if the level is low and damage may be caused.

Do not over fill the water tank with coolant.

- Please ensure to add coolant when the input cable is disconnected from the power supply.
- The two filter screen in the water filling cap (note 4, as above) cannot be removed.
If unfiltered coolant is added, impurities may block the waterway system and consequently the machine or TIG torch may be damaged.

Coolant drainage:

Coolant can be drained easily by un-screwing and removing the front drain plug (item No 7) above.

Precautions

1. Please ensure the mains input power is correctly rated and consistent to the welding machine before use, under rated or incorrect power may damage the machine.
2. There should be no obstacles within 3cm of the water coolers vents. Ensure good ventilation of the machine.
3. Please ensure the water coolers and welding machines ground wire is connected to ground.
4. Please add clean, pure and anti-corrosive coolant. Coolant containing impurities or corrosive substances may damage the machine or the TIG torch and cause leakage and abnormalities. Welding machine coolant is recommended.
5. This machine should not be used when the air contains a lot of acid, alkali and salt.

Please Note:

For further info on the LC-40 water cooler, consult the ET-300P & ET300P ACDC Operating manuals.

GENERAL INFORMATION



The following operation requires sufficient professional knowledge on electric aspects and comprehensive safety knowledge. Make sure the input cable of the machine is disconnected from the electricity supply and wait for 5 minutes before removing any machine covers.

Packaging, transportation, storage and waste disposal

Transportation requirements

When handling the water cooler, the item should always be handled with care, and should not be dropped or severely impacted. Avoid moisture and rain during transportation.

Storage

Storage temperature: -20°C ~ +60°C

Storage humidity: Relative humidity ≤ 90%

Storage period: 12 months

Storage site: Indoors with no corrosive gas and air circulation

WEEE disposal

Waste disposal

The equipment is manufactured with materials which do not contain any toxic or poisonous materials dangerous to the operator.

When the equipment is scrapped, it should be dismantled separating components according to the type of materials.

Do not dispose of the equipment with normal waste. The European Directive 2002/96/EC and United Kingdom's Directive The Waste Electrical and Electronic Equipment (WEEE) regulations 2013 states that electrical equipment that has reached its end of life must be collected separately and returned to an environmentally compatible recycling facility.

Jasic has a relevant recycling system which is compliant and registered in the UK with the environment agency. Our UK registration reference is WEEMM3813AA.

In order to comply with WEEE regulations outside the UK you should contact your local registered WEEE organisation.

RoHS Compliance Declaration

We herewith confirm, that the above mentioned product does not contain any of the restricted substances as listed in EU Directive 2011/65/EC in concentrations above the limits as specified therein.

Disclaimer:

Please note that this confirmation is given to the best of our present knowledge and belief.

Nothing herein represents and/or may be interpreted as warranty within the meaning of the applicable warranty law.

EC DECLARATION OF CONFORMITY

The Manufacturer or its legal representative Wilkinson Star Limited declares that the equipment listed described below is designed and produced according to the following EU directive:

EMC Directive : 2014/30/EU Electromagnetic Compatibility

LVD Directive : 2014/35/EU Low Voltage Directive

The object of the above defined is compatible with harmonised EU legislation and suitable to the relevant legislation. Has been designed and manufactured in accordance to the following technical regulation:

The measurements made in accordance with the procedures according to the European Council Directive and EN standards:

EN IEC 60974-2:2019 Arc welding equipment - Part 2: Liquid cooling systems

EN ICE 60974-10:2021 Arc welding equipment-Electromagnetic compatibility (EMC) requirements

Any alteration or change to the machines by any unauthorized person makes this declaration invalid.

Wilkinson Star Model
LC-40

Jasic Model
LC-40 (COS2)

MAINTENANCE



The following operation requires sufficient professional knowledge on electric aspects and comprehensive safety knowledge. Make sure the input cable of the machine is disconnected from the electricity supply and wait for 5 minutes before removing the machine covers.

In order to guarantee that the arc welding machine works efficiently and in safety, it must be maintained regularly. Operators should understand the maintenance methods and means of arc welding machine operation. This guide should enable customers to carry out simple examination and safeguarding by one-self, try to reduce the fault rate and repair times of the arc welding machine, so as to lengthen service life of arc welding machines.

<u>Period</u>	<u>Maintenance item</u>
Daily examination	Check the condition of the machine, mains cables, welding cables and connections. Check for any warnings LEDs and machine operation.
Monthly examination	Disconnect from the mains supply and wait for at least 5 minutes before removing the cover. Check internal connections and tighten if required. Clean the inside of the machine with a soft brush and vacuum cleaner. Take care not to remove any cables or cause damage to components. Ensure that ventilation grills are clear. Carefully replace the covers and test the unit. This work should be carried out by a suitably qualified competent person.
Yearly examination	Carry out an annual service to include a safety check in accordance with the manufacturers standard (EN 60974-1). This work should be carried out by a suitably qualified competent person.

TROUBLESHOOTING



The following operation requires sufficient professional knowledge on electric aspects and comprehensive safety knowledge. Make sure the input cable of the machine is disconnected from the electricity supply and wait for 5 minutes before removing any machine covers.

The BELOW chart lists general problems that maybe experienced with the LC-40 water cooler

Symptoms	Reason	Troubleshooting
Pump is not running	The pump is only activated by the welding unit if welding current is flowing	Check settings on the welding power source control panel
	Control cable defective or not plugged in	Check the cooler control cable
	Defective fuse	Check cooler supply
	Air ventilation hole for water tank clogged	Check ventilation hole in filler cap
	The power indicator is not on, the water pump does not work, there is no liquid flowing in the water pipe, and the fan does not rotate.	1. Check whether the power cord is connected correctly. 2. Check whether the fuse is blown. 3. Check and confirm if the input power supply is working. 4. Check whether the main board connectors are loose and tighten them if necessary.
	The power indicator is on, the water pump is not working, there is no liquid flow in the water pipe, the fan is not rotating, and the abnormal water flow indicator is on.	1. Check whether the fan is stuck by foreign objects, clear it if necessary. 2. Check if the main board output is DC24V. If there is no output, replace the main board.
TIG Torch is getting too hot and over heating	The torch is clogged by contamination in the cooling circuit	Check TIG torch water hoses
	Low fluid coolant in coolant tank	Top up coolant
Cooler or hoses burst or pump failure.	The cooling hose may be frozen due to a lack of anti freeze protection.	Have an accredited technical engineer check your product

Please Note:

On first switch on, the flow switch safety circuit is not active for 2 minutes, this is to allow for the water flow to stabilize and remove any air bubbles. After 2 minutes the flow sensing circuit is active and will constantly monitor the water flow rate.

TROUBLESHOOTING



The following operation requires sufficient professional knowledge on electric aspects and comprehensive safety knowledge. Make sure the input cable of the machine is disconnected from the electricity supply and wait for 5 minutes before removing any machine covers.

Symptoms	Reason	Troubleshooting
Fan is not running	The power indicator is on, the water pump is working normally, there is liquid flowing in the water pipe, the fan is not rotating.	<ol style="list-style-type: none"> 1 Check whether the fan is stuck by foreign objects, clear it if necessary. 2. Check if the main board connectors are loose, and tighten them if necessary. 3. Check if the main board output is DC24V. If there is no output, replace the main board. 4. If the fan is not working even though the DC24V power supply is normal, it indicates that the fan is damaged and needs to be replaced.
Low water flow indicator is on.	The power indicator is on, the water pump is working normally, there is liquid flowing in the water pipe, the fan is rotating normally.	<ol style="list-style-type: none"> 1. Check if the internal wires are loose, and tighten them if necessary. 2. If there are impurities in the coolant, they may cause abnormal operation or damage to the water flow meter. Please replace the water flow meter. 3. Check the water flow at the outlet. If the water flow is less than 0.6L/min, check if there is any blockage in the water circuit.
Over temperature indicator warning LED is ON	The power indicator is on, the water pump is working normally, there is liquid flowing in the water pipe, the fan is rotating normally. The abnormal temperature indicator is on.	<ol style="list-style-type: none"> 1. Check whether the application environment exceeds the cooling power. Please do not use the machine in an application environment that exceeds the cooling power. If the water temperature is too high, wait until the temp drops and the abnormal temperature indicator goes out before it can be used again. 2. Check whether the internal wires are loose, and tighten them if necessary. 3. Check if the temperature switch is functioning properly. If the water temp exceeds the high-temp threshold of the temperature switch, the switch will close. If the water temp is below the low temp threshold of the temp switch, the switch will open.
Lack of water in the cooling tank	There is water leakage.	<ol style="list-style-type: none"> 1. If there is water leakage from the connection joint of water pipe, please reconnect and tighten it. 2. If the condenser pipe is corroded and leaking, please replace the condenser and replace the coolant with a non-corrosive one. 3. If the water pump leaks, please replace the water pump. 4. If the water container leaks, please replace the container. 5. If the pulsation dampener leaks, please replace the dampener.

The above chart lists general problems that maybe experienced with the LC-40 water cooler

SCHEMATIC

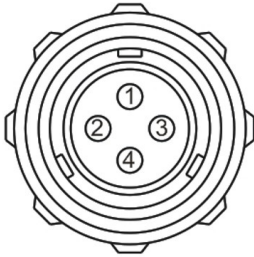


The following operation requires sufficient professional knowledge on electric aspects and comprehensive safety knowledge. Make sure the input cable of the machine is disconnected from the electricity supply and wait for 5 minutes before removing any machine covers.

Water Cooler Connecting Plug

Please Note:

The control plug type may vary depending on power source socket type.



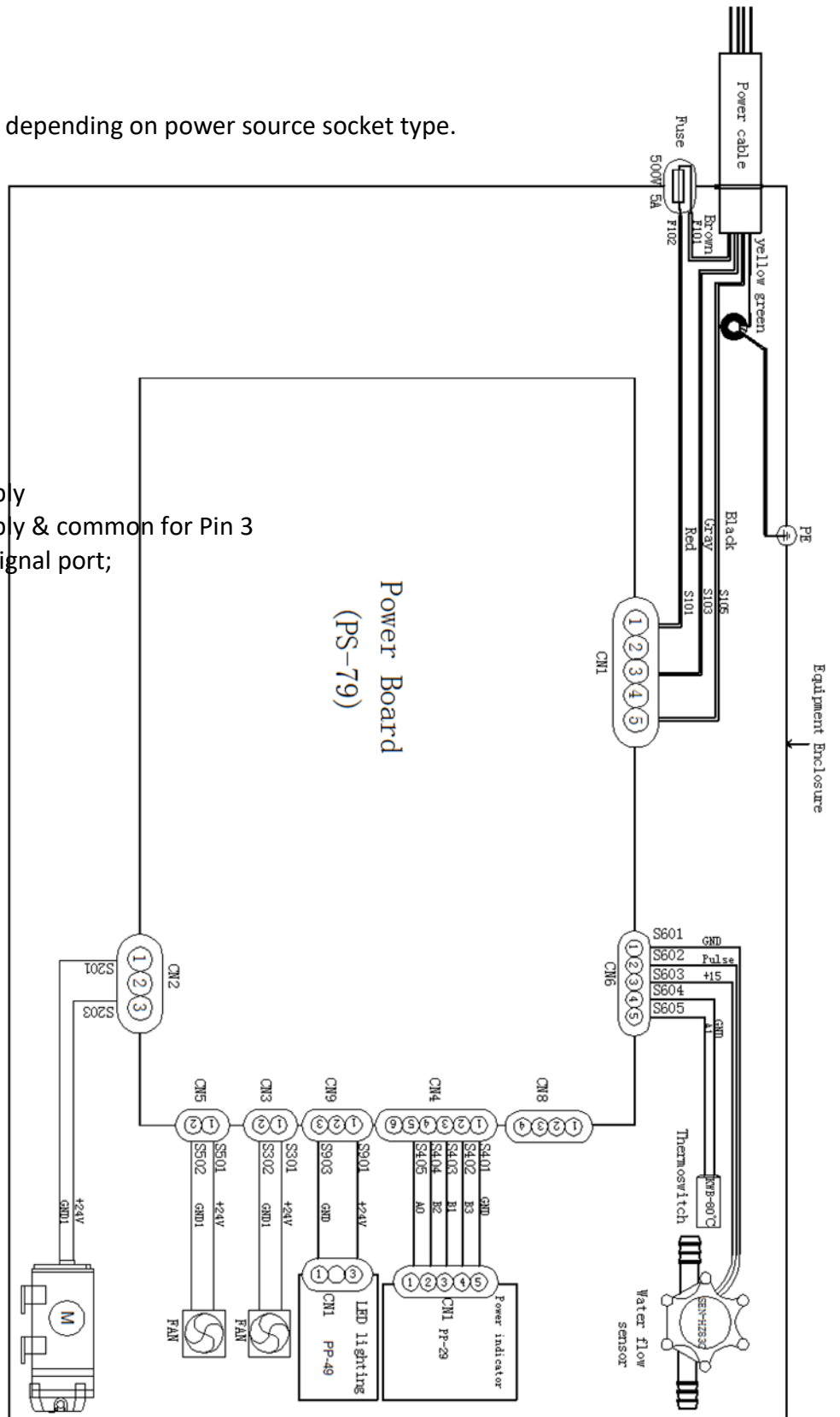
Control plug pins:

Pin 1: Water cooler power supply

Pin 2: Water cooler power supply & common for Pin 3

Pin 3: Water cooler detection signal port;

Pin 4: GND



STATEMENT OF WARRANTY

All new JASIC EVO20 welding, plasma cutters and multi-process machines are sold through our partner Wilkinson Star Limited within the United Kingdom and Ireland shall be warrantied to the original owner, non transferable, against failure due to defective materials or production.

The warranty period is 1 year following the date of purchase and we recommend you register your product online within 28 days of purchase.

The original invoice is documentation for the standard warranty period. The warranty period is based on a single shift pattern.

Defective units shall be repaired or replaced by the company at our workshop. The company may opt to refund the purchase price (less any costs and depreciation due to use and wear).

The company reserves the right to alter the warranty conditions at any time with effect for the future.

A prerequisite for the full warranty is that products are operated in accordance with the operating instructions supplied, observing the relevant installation and any legal requirements recommendations and guidelines and carrying out the maintenance instructions shown in the operator manual. This should be carried out by a suitably qualified competent person.

Warranty claims will only be accepted from authorised Jasic distributors and in the unlikely event of a problem this should be reported to the technical support team to review the claim.

The customer has no claim to loan or replacement products whilst repairs are being performed.

The following falls outside the scope of the warranty:

- Defects due to natural wear and tear
- Failure to observe the operating and maintenance instructions
- Connection to an incorrect or faulty mains supply
- Overloading during use
- Any modifications that are made to the product without the prior written consent
- Software errors due incorrect operation
- Any repairs that are carried out using non-approved spare parts
- Any transport or storage damage
- Direct or indirect damage as well as any loss of earnings are not covered under the warranty
- External damage such as fire or damage due to natural causes e.g. flooding
- Warranty repairs carried out by non-authorised Jasic distributors.

NOTE:

Under the terms of the warranty, welding torches, their consumable parts, wire feed unit drive rolls and guide tubes, work return cables and clamps, electrode holders, connection and extension cables, mains and control leads, plugs, wheels, coolant and accessories are covered with a 3 month warranty.

Jasic shall in no event be responsible for any third party expenses or expenses/costs or any indirect or consequential expenses/costs.

Jasic will submit an invoice for any repair work performed outside the scope of the warranty. A quotation for any non warranty will be raised prior to any repairs being carried out.

The decision about repair or replacement of the defective part(s) is made by Jasic. The replaced part(s) remain(s) Jasic property.

Warranty extends only to the machine, its accessories and parts contained inside. No other warranty is expressed or implied. No warranty is expressed or implied in regards to the fitness of the product for any particular application or use.

If in our judgment you fail, or we suspect that you have failed, to comply with any term or provision of the product warranty terms, we reserve the right to deny you access to our services (or any part thereof).

For further information on Jasic product warranty terms and product warranty registration please visit:

www.jasic.co.uk/warranty-information

www.jasic.co.uk/warranty-registration

NOTES

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NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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