Operator’s Manual

LINLONG LIMITED
www.weldpro.com
Introduction

This manual contains the description of the hardware and the operating instructions of the equipment. For your safety and that of others, please read this manual carefully.

Attention

Pay attention to the words following the signs below.

<table>
<thead>
<tr>
<th>Sign</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="DANGER" /></td>
<td>The word following this sign means that there is great potential danger, which may cause a major accident, damage or even death, if the instructions are not followed.</td>
</tr>
<tr>
<td><img src="image" alt="WARNING" /></td>
<td>The word following this sign means that there is some potential danger, which may cause bodily injury or property damage, if the instructions are not followed.</td>
</tr>
<tr>
<td><img src="image" alt="ATTENTION" /></td>
<td>The word following this sign means that there is potential risk, which may cause malfunctions and/or breakdowns, if the instructions are not followed.</td>
</tr>
</tbody>
</table>

Edition

The contents of this manual are updated regularly in order to include all product updates. The manual is to be used solely as a user’s guide, except where indicated otherwise. No warranties of any kind, whether expressed or implied are made in relation to the information, descriptions, suggestions or any other content of the manual.

The images of this manual are for reference only. If there is any inconsistency between the image and the actual product, the actual product will govern.
## CONTENTS

1 SAFETY WARNING.................................................................................................................. 4  
2 PRODUCT DESCRIPTION....................................................................................................... 8  
3 TWO YEAR WARRANTY......................................................................................................... 9  
4 TECHNICAL PARAMETERS................................................................................................... 10  
5 INSTRUCTIONS FOR THE INSTALLATION ........................................................................... 11  
6 OPERATING ........................................................................................................................ 12  
   6.1 panel layout .................................................................................................................... 12  
   6.2 Operating instructions ................................................................................................... 13  
   6.3 Welding environment and safety ................................................................................... 13  
   6.4 Troubleshooting during welding ................................................................................. 14  
7 DAILY MAINTENANCE AND CHECKING ............................................................................ 14  
8 TROUBLESHOOTING ....................................................................................................... 16
The safety notes contained in this manual are to ensure correct use of the machinery and to prevent injury to the user or other persons.

The welding machine was designed and manufactured with safety in mind. Please refer to the safety warning contained in the manual to avoid accidents.

The incorrect use of the equipment may cause different injuries, as described below. Please read the user manual carefully to avoid these kind of injuries.

<table>
<thead>
<tr>
<th>Sign</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Symbol]</td>
<td>• Any contact with the electric parts may cause fatal electric shock or burns.</td>
</tr>
</tbody>
</table>
| ![Symbol] | • The gases and fumes are harmful to health.  
• Operation in confined spaces may cause simple asphyxiation. |
| ![Symbol] | • Sparks and hot workpieces after welding may cause fire.  
• Incorrectly connected cables may cause fire.  
• The incomplete connection of the workpiece side circuit may cause fire.  
• Never weld in the presence of tinder, as it may cause explosion.  
• Never weld airtight containers such as valves, pipes etc., as they may break. |
| ![Symbol] | • The arc ray may cause eye inflammation and / or skin burns.  
• Sparks and residue may cause eye and skin burns. |
| ![Symbol] | • Toppling the gas cylinder may cause physical injuries.  
• The misuse of gas cylinders may lead to high-pressure gas leakage and may cause personal injuries. |
| ![Symbol] | • Keep fingers, hair, clothes etc. away from moving parts, such as the fan. |
| ![Symbol] | • Wire shooting out of the welding torch may stab your eyes, face or other exposed body parts. |
| ![Symbol] | • Never stand in front of or under the suspension hook, as it may fail and cause personal injuries. |
DANGER  Please observe the following rules to avoid serious accidents

• Never use the equipment for purposes other than welding.
• Follow related regulations regarding the characteristics of the power source, choice of place, usage of high-pressure gas, storage, configuration, safe-keeping of the workpiece after welding and disposal of waste, etc.
• Non-essential personnel shall not enter the welding area.
• Persons using pacemaker are not allowed near the welding machine or welding area without doctor’s permission. The magnetism created by energizing the welding machine may have a negative effect on the pacemaker.
• The installation, operation, inspection and maintenance of the equipment must be carried out by authorized personnel.
• For your safety, you must understand the contents of the user’s manual.

DANGER  Please observe the following rules to avoid electric shock

• Keep away from any electrical parts.
• The machine and workpiece shall be grounded by authorized personnel.
• Cut off the power before installation or inspection, and restart it 5 minutes after finishing that activity. The capacitor is a rechargeable device. Please ensure it has no voltage before starting again even if the power source is cut off.
• Never use wire with inadequate wire gauge, damaged insulation sleeve or exposed conductor.
• Do ensure the proper isolation of wire connections.
• Never use the device when the enclosure is removed.
• Never use broken or wet insulation gloves.
• Welding screens must be used when working in overhead position.
• Check and maintain the equipment regularly. Do not use the equipment until the faulty parts are fixed.
• Turn off the power when not in use.
• Follow the related national and local standards and regulations when using the AC welding machine in confined spaces or overhead position.

DANGER  Please observe the following instructions to avoid fire, explosions, etc.

• Remove combustible materials from the welding area.
• Keep away from any combustible materials while welding.
• After welding, keep the hot workpiece away from flammable gases.
• Remove all combustible materials when welding in a patio, on the ground or on a wall.
• The work lead of the base metal should be as close to the welding place as possible.
• Never weld installations with gas pipes or airtight valves.
• Keep a fire extinguisher close to the welding area to prevent fire.
**WARNING** The gases and fumes are hazardous to health, please wear personal protective equipment according to regulations

- Wear exhaust equipment and respiratory protective equipment to prevent gas poisoning or choke.
- Use suggested exhaust ventilation system and respiratory protective equipment to prevent injuries or poisoning by gas or dust.
- To prevent oxygen deficiency, air out the gas filled space full of CO2 and argon on the bottom, when operating in trunks, boilers, cabins, etc.
- Request a supervisor’s inspection when operating in confined spaces. Air the room and wear respiratory protective equipment.
- Never operate in degreasing, washing or spraying spaces.
- Use respiratory protective equipment while welding armored steel, as this produces poisonous dust and gases.

**WARNING** The welding arc, sparks, residues and noise are hazardous to health, please wear personal protective equipment

- Eye protection against welding arc is recommended when welding or supervising welding.
- Please wear safety googles.
- Welder’s gloves, welder’s goggles, long sleeve clothes, leather apron, and other standard personal protective equipment must be worn during the welding operation.
- A screen to protect other people against the welding arc must be set in the welding area.

**WARNING** Please observe the following notes to avoid toppling or breaking the gas cylinder

- Use the gas cylinder correctly.
- Use the built-in or recommended gas regulator.
- Read the manual of the gas regulator carefully before using it, and pay attention to the safety notes.
- Secure the gas cylinder with appropriate holder and other related parts.
- Never expose the cylinder to high temperature or direct sunlight.
- Keep your face away from the gas cylinder’s valve when opening it.
- Put on the cap when the cylinder is not in use.
- Never put the welding torch on the gas cylinder. The electrode must not touch the gas cylinder.

**WARNING** Any contact with the rotating parts will cause injury. Please note the following:

- Never use the machine when the enclosure is off.
- The installation, operation, inspection and maintenance of the equipment must be carried out by authorized personnel.
- Keep fingers, hair, clothes etc. away from moving parts, such as the fan.

**WARNING** The end of the wire may cause personal injuries. Please note the following:

- Never look into the conduction hole when checking if the wire feed is normal, as wire shooting out may stab your eyes and face.
- Keep your eyes, face or other uncovered body parts away from the end of the welding torch when feeding the wire manually or when pressing the switch.
ATTENTION  For better work efficiency and power source maintenance, please note the following:

- Take precautions to prevent toppling.
- Never use welding equipment to unfreeze a pipe.
- Lift the power source from side when using a forklift to avoid toppling.
- When using the crane to lift, tie the rope to the ears with an angle smaller than 15° respect to the vertical direction.
- When lifting the welding machine equipped with gas cylinder and wire feeder, disconnect it from the power source and ensure that the machine is in horizontal position. Secure the gas cylinder with a belt or chain when moving it to avoid personal injuries.
- Ensure stability and insulation when lifting the wire feeder by the suspension hook for welding.

ATTENTION  Pay attention to electromagnetic interference

- You may need to take extra preventive measures when the equipment is used in a particular location.
- Before installation, assess the potential issues with the electromagnetism in the welding environment as follows:
  a) Proximity of upper and lower parts of the welding equipment to other nearby power cables, control cables, signal cables and phone cables.
  b) Wireless radiation-emitting products such as devices emitting and receiving TV signals.
  c) Computers and other control equipment.
  d) Protection equipment, etc. equipment to supervise industrial equipment.
  e) Health of personnel affected, such as personnel using pacemaker or audiphone.
  f) Instruments for adjusting and measuring instruments.
  g) Anti-disturb capability of other equipment used. Users should ensure the compatibility of the equipment with the environment, which may require extra preventive measures.
  h) Practical conditions of the welding and other activities.

- Users should observe the following to decrease radiation interference.
  a) Connect the welding equipment to the power supply lines by the power supply cable.
  b) Maintain the welding equipment regularly.
  c) The cables should be short enough to stay close to each other and to the ground.
  d) Ensure the safety of all the metal parts to be welded and other parts nearby.
  e) The workpiece should be properly grounded.
  f) Shield or protect all other cables and equipment to minimize the effect of possible disturbances. In some special cases, the welding equipment may need to be completely shielded.

- Users are responsible for the interference due to welding.
The MMA series welding machines are equipped with the world’s most advanced inverter technology.

The appearance of the inverter arc welding machines is based on the power inverter theory and components. The inverter’s working principle is that the 60Hz power line frequency is transformed to direct current and inverted to a high frequency (33KHz) using a high power IGBT device. After that, a voltage drop is generated and it is transformed to a high-current DC using the Pulse Width Modulation (PWM) technology. Using the power inverter technology, the volume and the weight is substantially reduced and the conversion efficiency is increased by 30%.

Our power supply offers a stronger, more concentrated and more stable arc. When the welding rod and the workpiece get short-circuited, its response is quicker. This means that it is easy to design welds with different dynamic characteristics and that these characteristics can be adjusted to make the arc stronger or softer.

In MMA mode, the machine has inclination characteristics. The welding current, the inrush current and the arc initiation current are established with the same knob synchronously, which translates into superior performance during arc staring, stable power output, and better internal weld quality.

The MMA series welding machines are widely used to weld different materials like carbon steel, stainless steel, metal alloys, copper, non-ferrous metals, etc. They can be used with different types of electrodes, including acidic electrodes, basic electrodes and cellulose electrodes. Compared with other welding machines, they are lighter, handier, easier to install and to use, more efficient and help to save energy. Their conversion rate is over 85%. They can be used for high level welding, fieldworks and indoor operations as well.

Thank you for purchasing our products and we are looking forward to receiving your valuable feedback which will help improving our products and services.

⚠️ WARNING

The machine is mainly used for industrial purposes. It causes radio interference when used indoor. Users must take preventative measures.
All Weldpro welders and plasma cutters are covered under the following specific terms of warranty. All welders and plasma cutters are warrantied to the original purchaser only, when purchased through an authorized seller of Weldpro products for a period of two (2) years from the date of purchase, to be free of manufacturers defect or failure. Proof of purchase and date of purchase paperwork will be required by Weldpro at the time of the claim. Extended warranty coverage may be available for Weldpro welders and plasma cutters at an additional cost. Always check with Weldpro.

The Weldpro warranty is limited to defects, malfunctions or failure of the equipment to operate properly based specifically and solely from manufacturer defects. Any malfunctions from improper use, lack of maintenance, incorrect or insufficient source supply power to the units, shipping damage, and similar failures not related to specific manufacturers defect will not be honored. Weldpro will not be responsible in the event of a product failure, for lost time in operation or use of said product. Rather it will honor solely the product itself only.

Further, the warranty will cover the repair or replacement of the unit in question for the term of the warranty with either a new or a refurbished unit, or in some cases replacement parts of the same model, at the discretion of Weldpro. As a term of the Weldpro warranty, if and when applicable, individual parts are needed, they may be supplied to the customer rather than replacing the entire unit. Situations like this may include, but are not limited to items such as foot pedals, torches, mig wire rollers, feed spools, or any other item Weldpro deems more practical to supply individually.

Weldpro will provide free shipping return of the damaged product due to manufacturers defect for the first 30 days of the warranty term if shipping is within the lower 48 United States. Customers outside this area must check with Weldpro for further shipping instructions. Failures after the initial 30-day period, and due to manufacturers defect, may not enjoy free return shipping.

If it is determined when the product is returned to Weldpro that there is no malfunction, or that the assumed malfunction by the customer was user error, Weldpro may request a shipping fee refund prior to the return of the item to the customer.

Prior to returning any item thought to be malfunctioning or damaged due to manufacturers defect, customers are required to contact Weldpro first, to explain the failure and to obtain a Return Merchandise Authorization number, or the item may not be covered under the terms of this warranty.

Weldpro ships in the USA from third party shippers such as, but not limited to UPS, FedEx, and the USPS. Weldpro is not responsible for damage that occurs during shipping. It is the customer’s responsibility to check the item at the time of delivery.

If a customer receives an item damaged, they must immediately contact both Weldpro and the shipper to document and report the damage as soon as possible, and in no circumstances later than 48 hours after delivery. All shipping and delivery dates are tracked for arrival. Weldpro may require photo image of the damage at their discretion.

Returned items within the first 30 days. Undamaged items in good working condition may be returned within the first 30 days of purchase. In such a case, these items are not eligible for the free return shipping policy associated with items that have manufacturers defects. A restocking fee will be charged for said return of up to 25% on any item returned with a valid RMA number that are undamaged and not covered or subject under the terms of this warranty. The amount of the restocking fee is solely at the discretion of Weldpro and based on the condition of the returned item and its accessory parts and packaging. Further, should Weldpro receive an item in good working condition that has sustained physical damage, Weldpro has the right to refuse acceptance of said returned item completely, and the customer will be responsible for return shipping of the product to them.

Weldpro does not imply or suggest any interpretation of the above warranty beyond what is stated in this print of its terms. Weldpro is not responsible for injury due to improper use of the equipment or failure to heed all of the safety precautions associated with the dangers of welding or cutting metals.

The terms and conditions of the Weldpro warranty are subject to change without notice. Be sure to check the terms of the Weldpro warranty prior to your purchase.
## TECHNICAL PARAMETERS

<table>
<thead>
<tr>
<th>Parameters</th>
<th>MMA160GDsv</th>
<th>MMA200GDsv</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
<td>MMA160GDsv</td>
<td>MMA200GDsv</td>
</tr>
<tr>
<td><strong>Supply voltage (V)</strong></td>
<td>1 phase 115V±15%</td>
<td>1 phase 115V±15%</td>
</tr>
<tr>
<td></td>
<td>1 phase 230V±15%</td>
<td>1 phase 230V±15%</td>
</tr>
<tr>
<td><strong>Frequency (Hz)</strong></td>
<td>60</td>
<td></td>
</tr>
<tr>
<td><strong>Rated input current (A)</strong></td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>40</td>
</tr>
<tr>
<td><strong>Open circuit voltage (V)</strong></td>
<td>65</td>
<td></td>
</tr>
<tr>
<td><strong>Output current (A)</strong></td>
<td>15-160</td>
<td>15-120</td>
</tr>
<tr>
<td></td>
<td>20.6-24.8</td>
<td>20.6-24.8</td>
</tr>
<tr>
<td><strong>Output voltage (V)</strong></td>
<td>MMA:30%60A</td>
<td>MMA:25%60A</td>
</tr>
<tr>
<td></td>
<td>TIG:30%95A</td>
<td>TIG:25%95A</td>
</tr>
<tr>
<td><strong>Duty cycle</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Power factor</strong></td>
<td>&gt;0.73</td>
<td>&gt;0.73</td>
</tr>
<tr>
<td><strong>Efficiency (%)</strong></td>
<td>&gt;80</td>
<td>&gt;80</td>
</tr>
<tr>
<td><strong>Electrode Diameter (in)</strong></td>
<td>1/16-3/32</td>
<td>1/16-3/32</td>
</tr>
<tr>
<td></td>
<td>1/16-1/8</td>
<td>1/16-1/8</td>
</tr>
<tr>
<td><strong>Housing protection class</strong></td>
<td>Ip21</td>
<td></td>
</tr>
<tr>
<td><strong>Insulation class</strong></td>
<td>F</td>
<td></td>
</tr>
<tr>
<td><strong>Cooling method</strong></td>
<td>Forced Air Fan</td>
<td></td>
</tr>
<tr>
<td><strong>Weight (lb)</strong></td>
<td>12</td>
<td>17.4</td>
</tr>
<tr>
<td><strong>Dimensions (in)</strong></td>
<td>11.8x5.4x10.4</td>
<td>15.7x6.7x12.4</td>
</tr>
</tbody>
</table>
INSTRUCTIONS FOR THE INSTALLATION

The welding machine is equipped with an input voltage compensation device. This device allows the machine to work without interruption when the input voltage fluctuates ±15% with respect to the nominal voltage. When using a long cable in order to reduce the voltage drop, a cable with big cross section area is suggested. If the cable is too long, this will affect the arc starting performance and other system functions, we suggest to use the recommended length.

1. Ensure that the intake of the machine is not covered or blocked to avoid malfunction of the cooling system.
2. Use a grounding cable with a cross sectional are of at least 10AWG to connect the housing with the ground. To do so, connect the grounding interface to the back to the grounding device, or ensure that the grounding end of the power interface has been connected to ground securely and independently. For better security, both solutions can be used at the same time.

Installation process

a. Ensure that the cord with both the electrode holder, and work clamp dinse connectors are properly connected. Connect the quick connector to the "-" socket of the machine and tighten clockwise.

b. Connect the dinse connector of the cord with the electrode holder to the "+" socket of the machine for standard stick (MMA) welding. Tighten clockwise. Connect the dinse connector of the work clamp to the "-" socket of the machine for standard stick welding (MMA) and tighten clockwise. Pay attention to the terminals of the connection. The DC welders can be connected two different ways. Electrode positive: the electrode holder connects to the "+" terminal and the workpiece clamp to the "-" one. Electrode negative: the electrode holder connects to the "-" terminal, the workpiece clamp to the "+" one. These settings must be selected according to the work carried out. Improperly secured connections can lead to an unstable or no arc. Clean shiny metal is necessary at the work area and ground areas. Clean your metal. The electrode positive connection should be used for (mma) welding with basic electrodes. Check welding rod manufacturer specs for proper polarity. When TIG welding with the optional TIG torch and cable assembly available through Weldpro, your TIG torch should always be connected to the minus connection on the welder, electrode negative.

Installation drawing for the MMA160GDsv/MMA200GDsv (MMA)
1 panel layout

- Front panel

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>VRD indicator</td>
</tr>
<tr>
<td>2</td>
<td>FAULT indicator</td>
</tr>
<tr>
<td>3</td>
<td>Current adjustment knob</td>
</tr>
<tr>
<td>4</td>
<td>MMA indicator</td>
</tr>
<tr>
<td>5</td>
<td>TIG indicator</td>
</tr>
<tr>
<td>6</td>
<td>MODE switch</td>
</tr>
</tbody>
</table>

Press MODE button for 5 seconds to control VRD function open and close

- Back panel

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Power supply input</td>
</tr>
<tr>
<td>2</td>
<td>Power switch</td>
</tr>
<tr>
<td>3</td>
<td>Persiennes</td>
</tr>
</tbody>
</table>

The images shown here are indicative only. The actual product may differ.
2 Operating instructions

1. Turn on the power switch, the power indicator light comes up and the fan starts running.
2. Set the welding current according to the requirements of the welding work.
3. Usually, the necessary welding current for the electrode welding is as follows:

<table>
<thead>
<tr>
<th>Specification</th>
<th>3/32&quot;</th>
<th>1/8&quot;</th>
<th>5/32&quot;</th>
<th>3/16&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current</td>
<td>70-100A</td>
<td>110-140A</td>
<td>170-220A</td>
<td>230-280A</td>
</tr>
</tbody>
</table>

3 Welding environment and safety

- **Welding environment**
  
  a) The welding should be carried out in dry surroundings, with an air humidity level of maximum 90%.
  
  b) The temperature must be between 14 and 104 degrees Fahrenheit.
  
  c) Avoid using the equipment under direct sunlight and rain. Avoid any contact with water.
  
  d) Do not use the machine in environments polluted with dust or corrosive gases.
  
  e) MIG welding should not be carried out in areas with rapid airflow.

- **Safety**

  Our machine is equipped with surge, overcurrent and overheat protection. In case the input voltage, the output current or the internal temperature of the machine exceeds the standard values, the machine stops automatically. The excessive use with, for example high voltage, may damage the machine. Please pay attention to the following points.
  
  a) **Ensure adequate ventilation!**
    The welding machines work with high current. Natural air flow is not sufficient to cool down the internal components. For this reason, the machines have fans to provide stable operation.
    The exhaust shutter must never be blocked or covered. Keep a distance of 11.8" between the machine and other objects. Ensure a well ventilated work area to ensure the best possible performance and the longest possible lifetime.
  
  b) **Do not overload!**
    Never exceed the maximum allowable current (according to the duty cycle chosen). Make sure that the welding current is never higher than the allowable range. The overcurrent shortens the lifetime of the machine and may damage it.
  
  c) **Avoid surging!**
    The input voltage is to be found on the technical data sheet. The automatic voltage compensation circuit will prevent from exceeding the allowable range. If the input voltage is too high, that may damage the components. Use with care.
  
  d) **Before operation, ensure that the machine is grounded**
    There is a grounding screw on the back side of the cutting machine. To avoid electric leakage and static electricity, ensure that the enclosure is connected to the ground with a cable, which has a cross sectional area of at least 6mm² (10 AWG).
4 Troubleshooting during welding

The below listed occurrences may happen due to the accessories used, the welding material, the environment or the power supply. Improve the working environment to prevent these issues.

- **Difficult arc starting. The arc is constantly interrupted:**
  a) Check if the grounding clamp is properly connected to the workpiece.
  b) Check if all connectors are connected properly.

- **The output current does not reach the nominal value:**

  The deviations from the nominal supply voltage may cause that the output current does not match its pre-established value. When the supply voltage is lower than its nominal value, the maximum output current may be lower than its nominal value, too.

- **The output current does not reach the nominal value:**

  There may be the following reasons for this situation:
  a) The voltage of the electrical network has changed.
  b) The electrical network or other electrical installation generate strong interference.

---

**DAILY MAINTENANCE AND CHECKING**

- **Daily maintenance**
  
a) Remove dust regularly with a dry compressed air. If the welding machine is used in an environment with heavy smoke and/or polluted air, the dust must be removed at least once a month.
  b) Revise the internal connections and ensure a perfect contact (especially plugs and sockets). Fasten any loose connections. If they are oxidized, remove it with sandpaper and connect again.
  c) Prevent water from entering the machine and the machine from getting wet. If so, air dry it. Measure the insulation with a megohmmeter to make sure it’s safe to use the machine.
  d) If the machine is not in use for a prolonged period of time, put it in its original package and store it in a dry place.
  e) The wire feeder’s electric carbon brush must be sharpened, and its wire guide must be cleaned after each 300 hours of operation. Rinse the speed reducer, apply 2# Molybdenum disulfide lubricant on the turbine, pivot rod and bearing.

---

**WARNING**

The power must be cut off completely before starting any repair or maintenance. Make sure that the power supply cable is disconnected before you open the housing.
### WELDING MACHINE

<table>
<thead>
<tr>
<th>Component</th>
<th>To check</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation control board</td>
<td>• Operation, conversion and switch installation.</td>
<td>May result in unstable arc and poor wire supply.</td>
</tr>
<tr>
<td></td>
<td>• Check the status of the power indicator light.</td>
<td></td>
</tr>
<tr>
<td>Cooling fan</td>
<td>• Check if the fan works properly, and if the sound emitted by the fan is as usual.</td>
<td>Clean the residue, find out the reason of the problem and correct it.</td>
</tr>
<tr>
<td>Electrical components</td>
<td>• Check for any unusual discharge and/or noise when you switch on the machine.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Check if there is any odor emitted when the machine is on.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Check if the housing of the machine changes color or heats up.</td>
<td></td>
</tr>
<tr>
<td>External parts</td>
<td>• Check if the wire supply tube is damaged or its connector is loose.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Check if the housing and other connection parts are loose.</td>
<td></td>
</tr>
</tbody>
</table>

### CABLES

<table>
<thead>
<tr>
<th>Component</th>
<th>To check</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output cable</td>
<td>• The insulation is worn down.</td>
<td>For your safety and to ensure a stable welding, select the appropriate method to carry out the inspection, according to the workplace.</td>
</tr>
<tr>
<td></td>
<td>• The cable connector is naked (damaged insulation) or loose (primary point between the power supply and the cable)</td>
<td>• Standard daily inspection.</td>
</tr>
<tr>
<td>Input cable</td>
<td>• Check if the electrical outlet and the plug are connected properly.</td>
<td>• Thorough and deep inspection in set intervals.</td>
</tr>
<tr>
<td></td>
<td>• Check if the connector of the input cable is connected properly.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Ensure that the input cable is not worn down and that the conductor is not exposed.</td>
<td></td>
</tr>
<tr>
<td>Grounding cable</td>
<td>• Check if the ground cable connecting to the workpiece is not broken and ensure that it’s connected properly.</td>
<td>Carry out daily inspection to extend the lifetime of the machine and to guarantee security.</td>
</tr>
</tbody>
</table>
### TROUBLESHOOTING

**Note:** The following operations must be carried out by a qualified electrician with valid certifications. Before maintenance, you are suggested to contact a local dealer to verify said qualification.

<table>
<thead>
<tr>
<th>Fault description</th>
<th>Measures to take</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The meter shows nothing. The fan does not rotate. There is no welding output</td>
<td>1. Check if the power switch is on. 2. Check if the power cord has current. 3. Check if the silicone bridge is damaged. 4. Malfunction of the supplementary power source located on the control board. (contact your dealer)</td>
</tr>
<tr>
<td>2. The meter works properly. The fan works properly. There is no welding output</td>
<td>1. Check if all connectors of the machine are well connected. 2. There is a short circuit or a malfunction in the connection of the output terminal. 3. The control cable of the welding torch is broken or the switch is damaged. 4. The control circuit is damaged (contact your dealer).</td>
</tr>
<tr>
<td>3. The meter works properly. The fan works properly. The indicator lights function abnormally</td>
<td>1. The overcurrent protection may be activated. Turn off the power switch and restart the machine. 2. The overheat protection may be activated. Wait 2-3 minutes until the machine starts working again. Do not turn off the power supply. 3. There may be a malfunction in the inverter circuit (contact your dealer).</td>
</tr>
</tbody>
</table>