DC INVERTER MMA WELDER

Model: **EWELDS205**

MAC AFRIC®

OPERATING INSTRUCTIONS / USER MANUAL

Please read this manual carefully before use.
Retain it for future reference. Failure to follow safety instructions may result in injury or product damage.

Adendorff machinery mart

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WELCOME TO THE ADENDORFF FAMILY!

We are delighted to have you with us. To ensure you get the best performance from your new product, we kindly advise you to read the instruction manual thoroughly before installation and use. This will help you maximize its potential and ensure a smooth and safe experience.

Thank you for choosing our product. We appreciate your trust and support, and we are confident that it will serve you well. Should you have any questions or require further assistance, please feel free to reach out to us.

IMPORTANT: Please store and save this manual in a safe, dry place for future reference. It contains essential safety, maintenance, and troubleshooting information that may be needed during the product's lifetime.

TECHNICAL DETAILS & SPECIFICATIONS

SPECIFICATION	VALUE
POWER VOLTAGE:	1 PH 230 V
FREQUENCY:	50 Hz
RATED INPUT CURRENT:	41 A
NO-LOAD VOLTAGE:	65 V
OUTPUT CURRENT:	20 - 200 A
RATED OUTPUT VOLTAGE:	20.8 - 28 V
DUTY CYCLE:	25%@200 A, 60%@129 A, 100%@100 A
EFFICIENCY:	85%
POWER FACTOR:	0.7
INGRESS PROTECTION:	IP21S
INSULATION CLASS:	F
WELDING ROD:	1.6 - 5.0 mm

WELDING PARAMETERS TABLE (FOR REFERENCE ONLY):

ELECTRODE DIA. (MM)	RECOMMENDED WELDING CURRENT (A)	RECOMMENDED WELDING VOLTAGE (V)
1.6	44~84	21.76~23.36
2.0	60~100	22.4~24.0
2.5	80~120	23.2~24.8
3.2	108~148	24.32~25.92
4.0	140~180	25.6~27.2
5.0	180~220	27.2~28.8

NOTE:

This table is suitable for common carbon steel welding. For other materials, consult related materials and welding process for reference.

Inspect before each use. Do not use if there are broken, bent, cracked or damaged parts. Any product that appears damaged in any way, or operates abnormally shall be removed from service immediately. If the product has been subjected to a shock load (a load dropped suddenly, unexpectedly upon it), immediately discontinue use until it has been inspected by Adendorff Machinery Mart authorized service center. It is recommended that an annual inspection be done by qualified personnel. Labels and Operator's Manuals are available from manufacturer.

This device is intended to be used to weld metals. This device is not intended, designed or engineered to be used for any other purpose.

SAFETY WARNINGS

WARNING!

Read and save all safety warnings and instructions carefully. Failure to follow these warnings may result in electric shock, fire, or serious injury. Keep all warnings and instructions for future reference.

ELECTRICAL SHOCK

The welders can produce a shock that can cause injury or death. Touching electrically live parts can cause fatal shocks and severe burns. While welding, all metal components connected to the wire are electrically hot. Poor ground connections are a hazard, so secure the ground lead before welding.

- Wear dry protective apparel: coat, shirt, gloves and insulated footwear.
- Insulate yourself from the work piece. Avoid contacting the work piece or ground.
- Do not attempt to repair or maintain the welder while the power is on.
- Inspect all cables and cords for any exposed wire and replace immediately if found.
- Use only recommended replacement cables and cords.
- Always attach ground clamp to the work piece or work table as close to the weld area as possible.
- Do not touch the welding wire and the ground or grounded work piece at the same time.
- Do not use a welder to thaw frozen pipes.

FUMES AND GASES

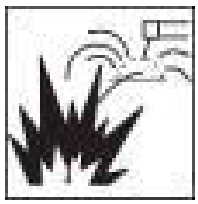
- Fumes emitted from the welding process displace clean air and can result in injury or death.
- Do not breathe in fumes emitted by the welding process. Make sure your breathing air is clean and safe.
- Work only in a well-ventilated area or use a ventilation device to remove welding fumes from the environment where you will be working.
- Do not weld on coated materials (galvanized, cadmium plated or containing zinc, mercury or barium). They will emit harmful fumes that are dangerous to breathe. If necessary use a ventilator, respirator with air supply or remove the coating from the material in the weld area.
- The fumes emitted from some metals when heated are extremely toxic. Refer to the material safety data sheet for the manufacturer's instructions.
- Do not weld near materials that will emit toxic fumes when heated. Vapors from cleaners, sprays and degreasers can be highly toxic when heated.

UV AND IR ARC RAYS

The welding arc produces ultraviolet (UV) and infrared (IR) rays that can cause injury to your eyes and skin. Do not look at the welding arc without proper eye protection.

- Always use a helmet that covers your full face from the neck to top of head and to the back of each ear. Use a lens that meets standards and safety glasses.
- Cover all bare skin areas exposed to the arc with protective clothing and shoes. Flame-retardant cloth or leather shirts, coats, pants or coveralls are available for protection.
- Use screens or other barriers to protect other people from the arc rays emitted from your welding.
- Warn people in your welding area when you are going to strike arc so they can protect themselves.

FIRE HAZARDS



- Do not weld on containers or pipes that contain or have had flammable, gaseous or liquid combustibles in them. Welding creates sparks and heat that can ignite flammable and explosive materials.
- Do not operate any electric arc welder in areas where flammable or explosive materials are present.
- Remove all flammable materials within 35 feet of the welding arc. If removal is not tightly cover them with reproof covers.
- Take precautions to ensure that flying sparks do not cause fires or explosions in hidden areas, cracks or areas you cannot see.
- Keep a fire extinguisher close by in case of fire.
- Wear garments that are oil-free with no pockets or cuffs that will collect sparks.
- Do not have on your person any items that are combustible, such as lighters or matches.
- Keep work lead connected as close to the weld area as possible to prevent any unknown, unintended paths of electrical current from causing electrical shock and fire hazards.
- Wear protective apparel at all times: safety glasses or shield, welder's hat and ear plugs to keep sparks out of ears and hair.

HOT MATERIALS

Welded materials are hot and can cause severe burns if handled improperly.

- Do not touch welded materials with bare hands until it has had time to cool down.

SPARKS / FLYING DEBRIS

- Welding creates hot sparks that can cause injury. Chipping slag off welds create flying debris.
- Wear protective apparel at all times: safety glasses or shield, welder's hat and ear plugs to keep sparks out of ears and hair.

ELECTROMAGNETIC FIELD

- Electromagnetic fields can interfere with various electrical and electronic devices.
- Consult your doctor before using any electric arc welder or cutting device.
- Keep people with pacemakers away from your welding area when welding.
- Do not wrap cable around your body while welding.
- Wrap MIG gun and ground cable together whenever possible.
- Keep MIG gun and ground cables on the same side of your body.

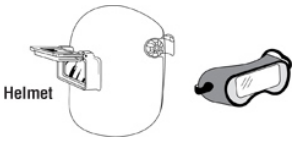
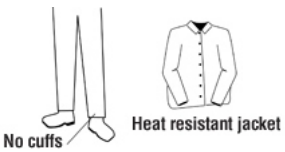
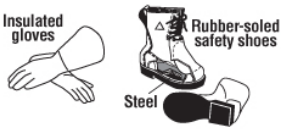
SHIELDING GAS CYLINDERS CAN EXPLODE

- High pressure cylinders can explode if damaged, so treat them carefully.
- Never expose cylinders to high heat, sparks, open flames, mechanical shocks or arcs.
- Do not touch cylinder with MIG gun.
- Do not weld on the cylinder.
- Always secure cylinder upright to a cart or stationary object.
- Keep cylinders away from welding or electrical circuits.
- Use the proper regulators, gas hose and fittings for the specific application.
- Do not look into the valve when opening it.
- Use protective cylinder cap whenever possible.

MOVING PARTS DANGER

- Keep yourself away from moving parts such as fan.
- All doors, panels, covers and other protective devices should be closed during operation.

PPE REQUIREMENTS

BODY PART	EQUIPMENT	ILLUSTRATION	REASON
Eyes and face	Welding helmet, hand shield, or goggles		Protects from: • radiation • flying particles, debris • hot slag, sparks • intense light • irritation and chemical burns Wear fire resistant head coverings under the helmet where appropriate
Lungs (breathing)	Respirators		Protects against: • fumes and oxides
Exposed skin (other than feet, hands, and head)	Fire/Flame resistant clothing and aprons		Protects against: • heat, fires • burns • radiation Notes: pants should not have cuffs, shirts should have flaps over pockets or be taped closed
Ears - hearing	Ear muffs, ear plugs	 Ear protection	Protects against: • noise Use fire resistant ear muffs where sparks or splatter may enter the ear, rather than plugs.
Feet and hands	Boots, gloves		Protects against: • electric shock • heat • burns • fires

OPERATING ENVIRONMENT REQUIREMENTS

- Welding should be carried out in dry environment with its humidity of 90% or less.
- The temperature of the working environment should be between -10 to 40 degree celsius.
- Avoid welding in the open air unless sheltered from sunlight and rain. Keep it dry anytime and do not place it on wet ground or in puddles.
- Avoid welding in dusty area or environment with corrosive chemical gas.
- Gas shielded arc welding should be operated in environment without strong airflow.

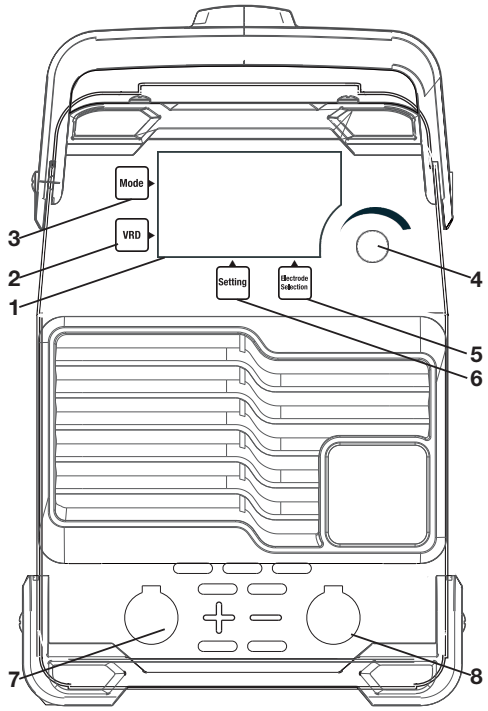
PACKAGE CONTENTS

LIST OF CONTENTS:

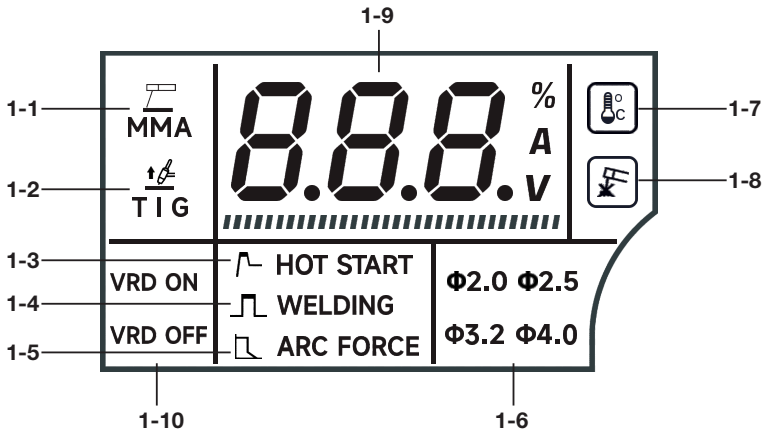
- DC Inverter MMA Welder X1
- Welding cable with electrode holder X1
- Grounding cable with earth clamp X1
- Hammer & brush X1
- Hand-held face shield X1

CONTROL PANEL INTRODUCTION

FRONT PANEL



LED SCREEN



1. LED SCREEN:

1-1: MMA MODE 1-2: LIFT TIG MODE 1-3: HOT START 1-4: WELDING CURRENT 1-5: ARC FORCE
1-6: DISPLAY ELECTRODES DIA.: The preset electrodes dia. is referring to related current range.
1-7: OVERHEAT PROTECTION 1-8: ANTI STICK ALERT
1-9: DISPLAY WELDING CURRENT(A), HOT START/ARC FORCE(%), INPUT VOLTAGE MODE(V).
1-10: VRD ON/OFF DISPLAY

2. VRD SWITCH:

Turn on or off the VRD function. VRD function automatically reduces the high no-load voltage to a safe level, when it is not in use.

3. MODE SELECTOR:

Set the working mode at MMA or LIFT TIG.

4. ADJUSTING KNOB:

Press to select electrode size under “EASY WELD” mode. Rotate to adjust values.

5. EASY WELD FUNCTION SWITCH:

Turn on or turn off “EASY WELD” mode. Under “EASY WELD” mode, the current will be fixed within an optimized range according to the chosen electrode size.

6. SETTING BUTTON:

Enter the settings of welding parameters such as HOT START, WELDING CURRENT and ARC FORCE.

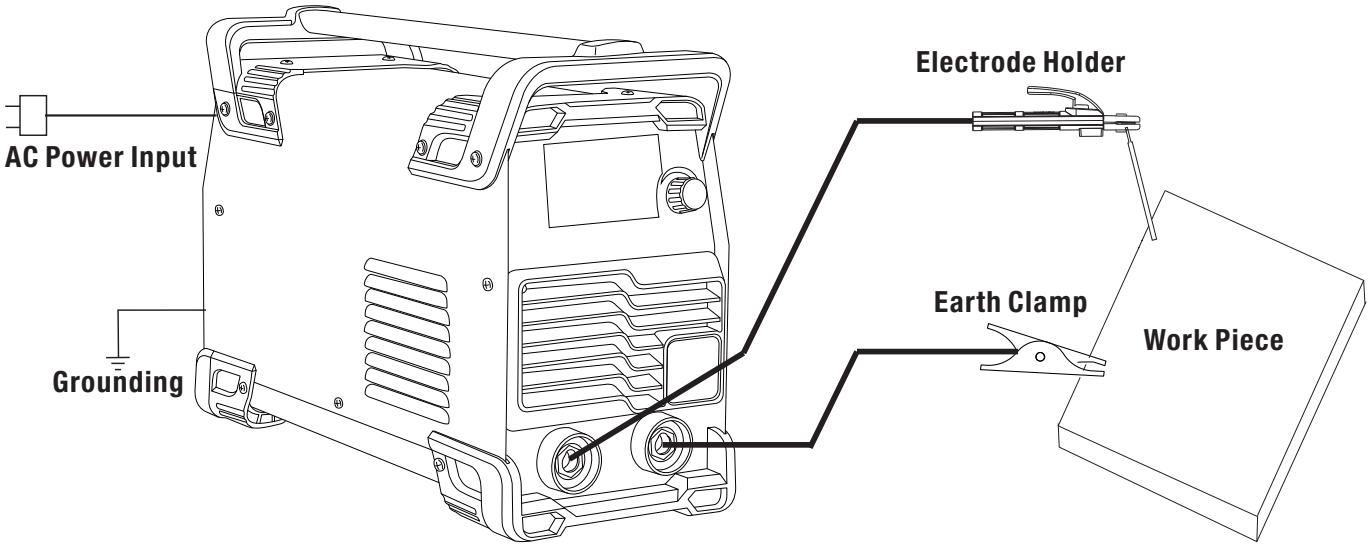
7. POSITIVE OUTPUT CONNECTOR:

Connect with earth clamp when using rutile rods, connect with electrode holder when using basic rods.

8. NEGATIVE OUTPUT CONNECTOR:

Connect with electrode holder when using rutile rods, connect with earth clamp when using basic rods.

OPERATING INSTRUCTIONS



NOTE:

Please install the machine strictly according to the following steps.
Turn off the power supply switch before any electric connection operation.
The protection class of this machine is IP21S, so avoid using it in rain..

INSTALLATION METHOD:

1. A primary power supply cable is required for this welding machine. Connect the power supply cable to the rated input power.
2. The primary cable should be tightly connected to the correct socket to avoid oxidization.
3. Check whether the voltage value varies in acceptable range with a multi-meter.
4. Insert the cable plug with electrode holder into the "+" socket on the front panel of the welding machine and tighten it clockwise.
5. Insert the cable plug with work clamp into the "-" socket on the front panel of the welding machine, and tighten it clockwise.
6. Ground connection is needed for safety purpose.

The connection as mentioned above in step 4 and 5 is DCEP connection. Operator can choose DCEN connection according to work piece and electrode application requirement. Generally, DCEP connection is recommended for basic electrode, while no special requirement for rutile electrode.

OPERATION METHOD:

1. Turn on the power switch and the LED screen would show up. Now, it shows the preset welding current, and the fan is working. The welder is in normal working status.
2. Users could select suitable welding current according to the working plate's thickness, electrodes diameters, etc.
3. Clamp the working plate with the earth clamp.
4. Put the electrode to the electrode holder and get it well clamped, then scratch the arc to start welding.

MAINTENANCE & SERVICE INTERVALS

CAUTION:

- Avoid harmful substances: Do not use petrol, diesel, benzene, thinner, alcohol, or similar substances to clean. These chemicals can cause discoloration, deformation, or cracks in the machine's materials.
- Check periodically whether inner circuit connection is in good condition (esp. plugs). Tighten the loose connection.
- Clean the dust periodically with dry and clean compressed air. If welding environment with heavy smoke and pollution, the machine should be cleaned daily. The pressure of compressed air should be at a proper level in order to avoid the small parts inside the machine to be damaged.
- Check periodically whether the insulation covers of all cables is in good condition. If there is any dilapidation, rewrap it or replace it.

NOTE:

- **Authorized repairs only:** To ensure product safety and reliability, all repairs, maintenance, or adjustments should be performed exclusively by Adendorff Machinery Mart Authorized Service Centers.
- **Use genuine parts:** Always use Adendorff Machinery Mart-approved replacement parts to maintain the machine's performance and warranty coverage.

STORAGE INSTRUCTIONS

- **Keep the machine stored in a dry, level area,** away from dampness, moisture, and rainfall.
- Allow the machine to cool down completely before storing.
- Ensure the machine is clean and dry before storage.
- Store the machine in a position where it cannot be accidentally stepped on or moved, especially to reach higher items.

DO NOT:

- Do not store the machine near an ignition source, such as a wood stove, gas or electric heater, or any appliance with a pilot light.
- Do not stack heavy or other items on top of the machine during storage.

IMPORTANT:

- Store the machine out of reach of children or individuals unfamiliar with its operation.
- Avoid direct sunlight or extreme temperatures. Store the machine indoors or in a safe, frost-free area.

TROUBLESHOOTING

The following operation requires sufficient professional knowledge on electric aspect and comprehensive safety knowledge. Operators should be holders of valid qualification certificates which can prove their skills and knowledge.

Make sure the input power is cut off from the electricity utility before uncovering the machine.

Please seek professional servicing from an Adendorff Machinery Mart Authorized Service Centers to avoid further damage or safety hazards.

PHENOMENA	ANALYSIS	SOLUTIONS
Yellow indicator or abnormal indicator is on	Voltage is too high (>15%), or too low (<15%).	Switch off power source; Check the main supply; Restart welder when power recovers to normal status.
	Bad power ventilation lead to over-heat protection.	Improve the ventilation condition.
	Surrounding temperature is too high.	Wait until the machine cools down. It will automatically recover when the temperature is low enough.
	Using over the rated duty cycle.	Wait until the machine cools down. It will automatically recover when the temperature is low enough.
Cooling Fan is not working or turning very slowly	Switch is broken.	Replace the switch.
	Fan is broken.	Replace or repair the fan.
	Wire is broken or fall off.	Check the connection.
Arc is not stable and splash is large	Too thin power cable causes the power instability.	Check the power cable.
	The input voltage is too low.	Increase the input voltage.
Arc is not able to be striked.	Earth clamp cable is damaged.	Replace the earth clamp cable.
	Work piece has too much greasy dirty or rusty stain.	Clean the greasy dirty or rusty stain.
	Using over the rated duty cycle.	Wait until the machine cools down. It will automatically recover when the temperature is low enough.
Others		Please contact with our company.

DISPOSAL GUIDELINES

When disposing of welding machine and plasma cutters, always follow local regulations and environmental guidelines.

Please do not throw it in regular trash; instead, take it to an authorized e-waste recycling facility or a community hazardous waste disposal event.

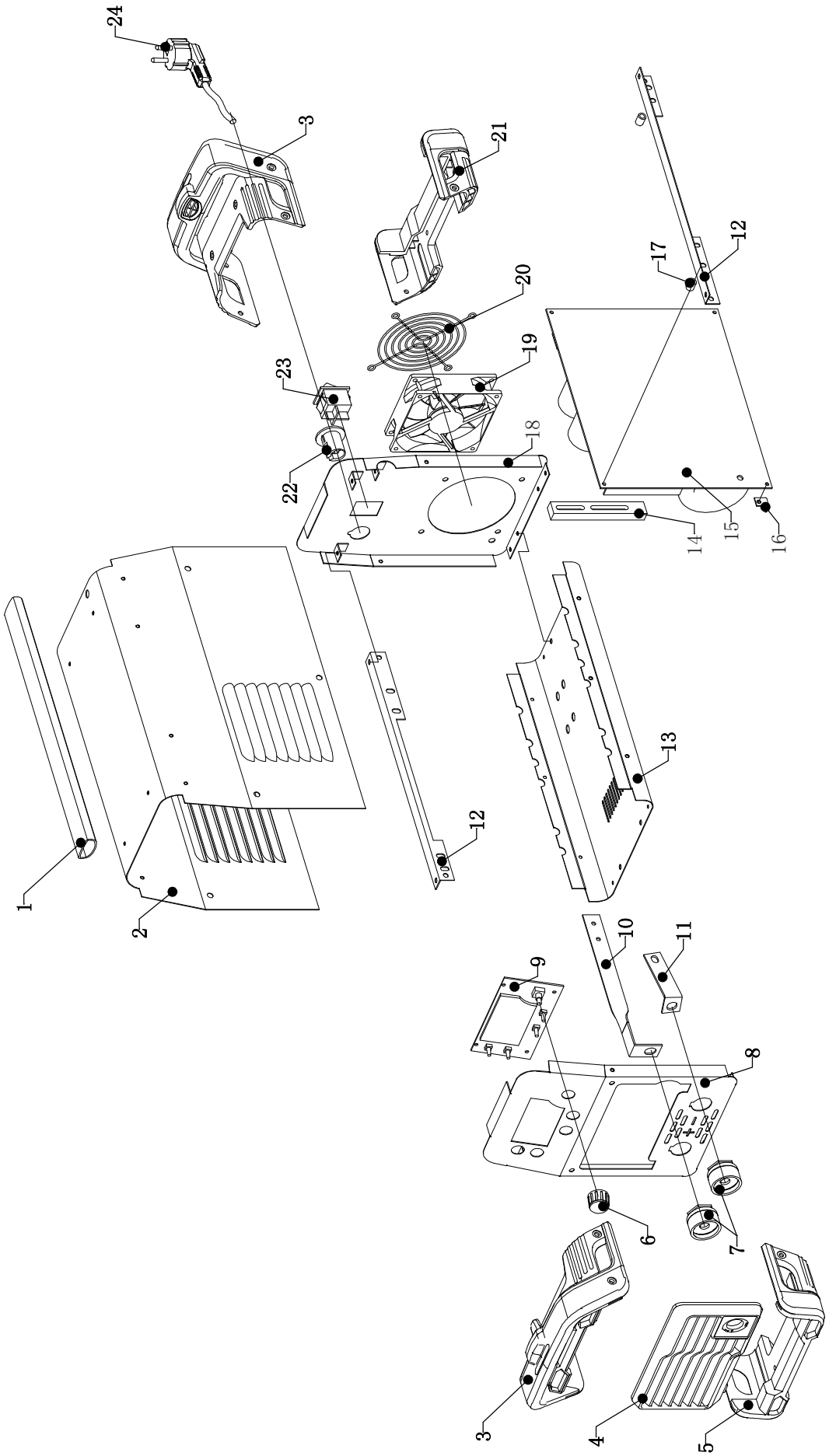
Always erase any personal data stored in smart tools and ensure components are safely handled to prevent environmental contamination or injury.

OPTIONAL ACCESSORIES

- Lift TIG Torch

PARTS LIST & EXPLODED DIAGRAMS

PART NUMBER	DESCRIPTION
1	Handle
2	Metal Case Cover
3	Upper Plastic Panel
4	Middle Front Plastic Panel
5	Lower Front Plastic Panel
6	Control Knob
7	Quick Connectors - Female
8	Metal Front Panel
9	LED Display Board
10	Main Board Connector L
11	Main Board Connector S
12	Horizontal Beam
13	Metal Case Bottom
14	Vertical Beam
15	Main Board
16	Board Fixer
17	Screw & Nut
18	Metal Rear Panel
19	Fan
20	Fan Net
21	Lower Rear Plastic Panel
22	Cable Locker
23	Power Switch
24	Power Cord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CERTIFICATION AND COMPLIANCE INFORMATION

CERTIFICATION SUMMARY

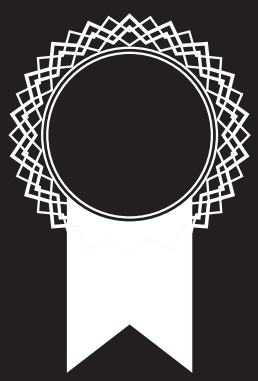
ITEM	DETAIL
DIRECTIVE	2014/35/EU (LOW VOLTAGE)
CERTIFICATE NUMBER	3N240330.ZJMUN00
CERTIFYING BODY	ENTE CERTIFICAZIONE MACCHINE
ISSUE DATE	30 MARCH 2024
MARKING	CE

APPLIED STANDARDS

STANDARD	DESCRIPTION
EN IEC 60974-1	Arc welding equipment - Part 1: Welding power sources

ADDITIONAL NOTES

- Repairs of flameproof joints must follow manufacturer specifications.



CUSTOMER SUPPORT – REPAIRS & WARRANTY

WARRANTY PERIOD

- This product is warranted for 12 months from the date of purchase by the first user.

COVERAGE

- The warranty covers all material or production flaws, with exceptions:
- Parts subject to normal wear (e.g., cables, plugs)
- Accessories (e.g., welding torch nozzles, tips)

EXCLUSIONS

The warranty does not cover damage or defects from:

- Maltreatment, accidents, or alterations
- Inappropriate or negligent use of the machine
- Overloading, fluid permeation, excessive dust, or intentional damage
- Non-compliance with manual instructions, inexpert assembly, lightning, or incorrect voltage

LIABILITY

- Adendorff Machinery Mart disclaims liability for bodily injury resulting from improper machine use.

REPAIRS

- All Warranty repairs must be conducted by an authorized Adendorff Machinery Mart repair center. All stores have in-house service technicians.

TRANSPORTATION COSTS

- Transportation costs for service are the customer's responsibility unless otherwise agreed in writing.

WARRANTY CLAIMS

- All Warranty claims do not extend or restart the warranty period.
- Claims may be rejected if purchase cannot be verified or if product maintenance is found to be lacking.
- A 3-month (Three Months) warranty applies to any repairs performed.

MAINTENANCE AND PROOF OF PURCHASE

- Maintain the product as instructed (e.g., clean dust).
- Retain the purchase receipt as proof of purchase date.

SERVICE & REPAIR CONTACT INSTRUCTIONS

RETURN CONDITIONS

- **Return the product intact, in clean condition, and in its original blow-molded case (if applicable), along with proof of purchase.**

1. LOCATE YOUR NEAREST BRANCH

Visit our website at www.adendorff.co.za and use the Store Locator to find the nearest branch to you.

2. PREPARE PRODUCT DETAILS

Before contacting or visiting a branch, please have the following information ready:

- **Product name and model number**
- **Proof of purchase (invoice or receipt)**
- **A brief description of the issue or fault**

3. CONTACT OR VISIT THE BRANCH

Phone: Call your nearest Adendorff Machinery Mart branch directly for repair intake or service queries.
In Person: Bring the product to the branch for assessment. Ensure it is clean and safely packed for transport.

4. WARRANTY REPAIRS

If your item is still under warranty, repairs will be handled according to the warranty terms. Ensure you bring the original receipt with the product.

5. OUT-OF-WARRANTY REPAIRS

For items no longer under warranty, a quotation will be provided for approval before any work begins.
Note: Repairs may take several business days depending on parts availability and workshop load. You will be contacted once your item is ready for collection.

For full warranty details, visit www.adendorff.co.za. For assistance, contact the national call centre at 011 434 7000.

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