ANDELI MCT-416 PLUS

ANDELI MCT-416 PLUS Multiprocess Welder & Plasma Cutter User Manual

Model: MCT-416 PLUS | Brand: ANDELI

1. Introduction

The ANDELI MCT-416 PLUS is a versatile 5-in-1 multifunction welding and plasma cutting machine designed for a wide range of applications, from professional fabrication to DIY projects. It supports Lift TIG, Flux MIG, Gas MIG, Stick Welding, and Plasma Cutting. This manual provides essential information for safe and effective operation, maintenance, and troubleshooting.

Image: The Andeli MCT-416 PLUS Multiprocess Welder and Plasma Cutter, shown with various included accessories such as torches, clamps, and consumables, highlighting its comprehensive kit.

2. Setup

2.1 Included Components

The MCT-416 PLUS comes as a complete ready-to-use kit, weighing approximately 45.1 pounds (28.22lb compact unit) with dimensions of 19.29"x8.86"x13.39".

- ANDELI plasma cutter welder (1 unit)
- Ground clamp (1 unit)
- MIG torch (3m) (1 unit)
- Gas pipe (3m) (1 unit)
- Nozzles (20 units)
- Nozzle shields (2 units)
- Cutting torch (4m) (1 unit)
- Tips (10 units)

- Electrodes (10 units)
- Pneumatic joints (2 units)
- Hose barbs (2 units)
- MMA electrode holder (3m) (1 unit)
- Teflon tape (1 unit)
- Oil-water separator (1 unit)
- Hose clamps (2 units)
- Flux-cored wire (1 unit)

2.2 Power Connection

The unit supports dual-voltage operation (110V/220V). Use the appropriate power cable and adapter for your power supply. For small operations, 110V can be used. For industrial operations, 220V is recommended for full performance.

Image: The Andeli MCT-416 PLUS unit illustrating its dual voltage capability, showing 110V for small operations and 220V for industrial operations.

2.3 Torch Connections

Properly connect the desired torch for your welding or cutting task. The machine features dedicated ports for MMA, Lift TIG, CUT (Plasma),

MIG/MAG, and Flux MIG. Ensure all connections are secure before operation.

Image: A series of diagrams illustrating how to connect different welding and cutting torches (MMA, Lift TIG, CUT, MIG/MAG, Flux MIG) to the machine's front panel.

3. Operating Modes

The MCT-416 PLUS features a smart LED interface with a rotary dial for effortless control and parameter selection.

Image: A close-up view of the large HD LED display on the Andeli MCT-416 PLUS, showing the digital readouts and control buttons for adjusting welding

parameters.

3.1 Stick Welding (MMA)

For Stick welding, select the MMA mode. Adjust the amperage using the rotary dial. This mode is straightforward with minimal additional settings.

Your browser does not support the video tag.

Video: A demonstration of the Andeli MCT-416 PLUS performing stick welding, showing the ease of use and the resulting weld. The video also highlights the simple interface for adjusting amperage in stick mode.

3.2 MIG Welding (Flux/Gas)

The MIG mode (including Flux MIG and Gas MIG) offers synergy settings where power and wire speed are automatically matched. You can also manually adjust voltage and wire speed independently. Select your gas type (CO2 or Mixed Gas) or Flux for flux-cored wire. Choose between 2T (trigger-on-release) or 4T (trigger-on/off) operation, or Spot welding for quick tacks.

Image: A close-up shot of the MIG welding process in action, showing sparks and molten metal.

3.3 Lift TIG Welding

For Lift TIG, a separate TIG torch is required (not included). This mode provides constant electricity, and the arc is initiated by touching the electrode to the metal and then lifting it. There is no foot pedal control for amperage in this mode.

Image: A close-up view of the Lift TIG welding process, highlighting the precise arc and clean weld.

3.4 Plasma Cutting (CUT)

The Plasma Cutter mode allows for clean cuts up to 8mm (0.31") and a maximum thickness of 12mm (0.47"). You can adjust the cutting amperage and control the pre-flow and post-flow of air. An external air compressor is required for plasma cutting operations. Ensure the air compressor is on a separate circuit to avoid power issues.

Image: A close-up shot of the plasma cutting process, showing the intense arc and sparks as metal is cut.

Your browser does not support the video tag.

Video: A demonstration of the Andeli MCT-416 PLUS performing plasma cutting, showcasing its cutting capability and the interface for adjusting air flow and power.

4. Applications

The versatile 5-in-1 functionality of the MCT-416 PLUS makes it suitable for a wide range of metalworking applications, including:

- Steel fabrication
- Equipment repairs
- Angle Iron work
- Square Tube projects
- Stainless Steel applications
- Steel Shed construction
- Working with Steel Plate
- Railing fabrication
- Iron Door repairs
- Creating Metal Baskets
- Building Metal Shelves

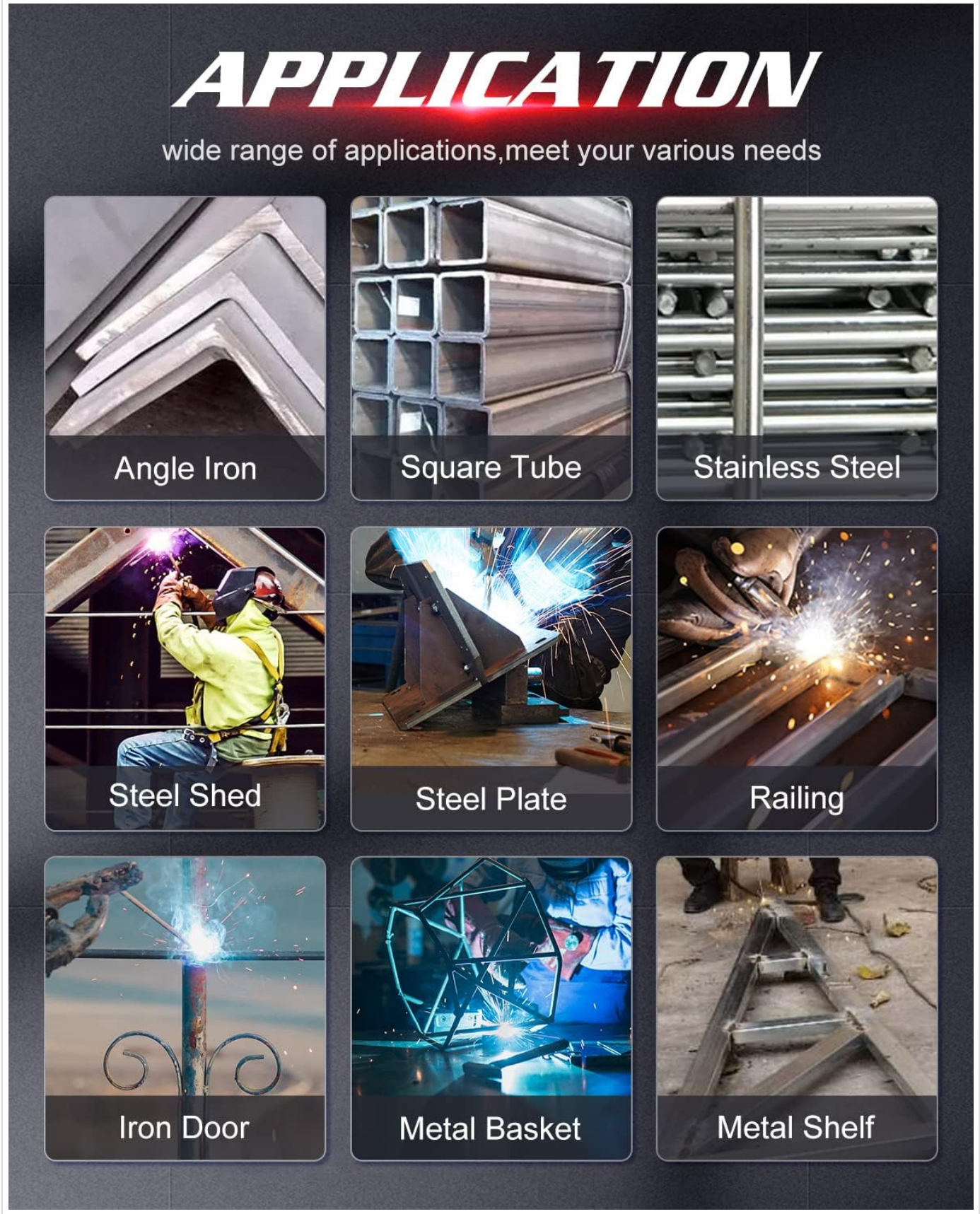

Image: A collage of images demonstrating various applications of the multiprocess welder, including different metal types and fabricated structures.

5. Specifications

Feature	110V Specifications	220V Specifications
Power Supply Voltage (V)	110±10%	220±15%

Feature	110V Specifications	220V Specifications
Frequency (Hz)	50/60	50/60
Power Factor	0.73	0.73
Efficiency (%)	77	77
No-Load Voltage (V)	53 (MIG/TIG/MMA), 290 (CUT)	53 (MIG/TIG/MMA), 290 (CUT)
Rated Input Power (KW)	3.9 (MIG), 2.9 (TIG), 3.9 (MMA), 3.6 (CUT)	5.7 (MIG), 4.2 (TIG), 7 (MMA), 6.2 (CUT)
Rated Input Current (A)	35 (MIG), 26 (TIG), 35.5 (MMA), 33 (CUT)	26 (MIG), 19 (TIG), 32 (MMA), 28 (CUT)
Welding Current Range (A)	50-120 (MIG), 10-120 (TIG), 10-100 (MMA), 20-25 (CUT)	50-160 (MIG), 10-160 (TIG), 10-160 (MMA), 20-40 (CUT)
Duty Cycle (% 40°C 10min)	20%: 120 (MIG/TIG), 100 (MMA), 25 (CUT) 60%: 70 (MIG/TIG), 58 (MMA), 14 (CUT) 100%: 54 (MIG/TIG), 45 (MMA), 11 (CUT)	20%: 160 (MIG/TIG/MMA), 40 (CUT) 60%: 92 (MIG/TIG/MMA), 33 (CUT) 100%: 72 (MIG/TIG/MMA), 18 (CUT)
Per-Flow Time (S)	/ (MIG/TIG/MMA), 0-1.0 (CUT)	/ (MIG/TIG/MMA), 0-1.0 (CUT)
Post-Flow Time (S)	/ (MIG/TIG/MMA), 0.1-5.0 (CUT)	/ (MIG/TIG/MMA), 0.1-5.0 (CUT)
Cutting Thickness (MM)	8	18
Protection Class	IP21S	IP21S
Insulation Class	H	H
Cooling	Air Cooling	Air Cooling
Dimension (MM)	490x225x340	490x225x340
Net Weight (KG)	12.8	12.8

Table: Detailed technical specifications for the Andeli MCT-416 PLUS, showing parameters for both 110V and 220V operation across different functions.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your ANDELI Multiprocess Welder. Keep the unit clean and free from dust and debris. Periodically check all cables and connections for wear or damage. Ensure proper air filtration for plasma cutting to prevent moisture buildup.

7. Troubleshooting

If you encounter issues, first check all power and gas/air connections. Ensure the correct mode is selected on the LED interface and parameters are set appropriately for your material and task. For plasma cutting, verify your air compressor is providing sufficient, clean air and is on a separate electrical circuit if possible to avoid tripping breakers.

8. Warranty & Support

The ANDELI MCT-416 PLUS is backed by a 2-year warranty and lifetime technical support. Free replacement parts are available, and 24-hour customer service is provided to ensure risk-free ownership.

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Question

Example: How do I reset this device or fix this error?

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