IBELL M200-105

iBELL M200-105 MAG/MMA 2-in-1 Welder Instruction Manual

Model: M200-105

1. Introduction

This manual provides essential information for the safe and effective operation, maintenance, and troubleshooting of your iBELL M200-105 MAG/MMA 2-in-1 Welder. Please read this manual thoroughly before operating the machine to ensure proper usage and to prevent injury or damage.
The iBELL M200-105 is a versatile 2-in-1 welding machine capable of both Manual Metal Arc (MMA) and Metal Active Gas (MAG) welding processes. It features advanced IGBT Inverter technology for efficient and stable welding performance.

2. Safety Instructions

Welding can be dangerous. Always follow safety precautions to prevent electric shock, fire, explosions, and burns. Ensure proper ventilation and wear appropriate personal protective equipment (PPE).

General Safety Precautions:

- Always wear a welding helmet with appropriate shade, safety glasses, welding gloves, and protective clothing.
- Ensure the work area is well-ventilated to avoid inhaling fumes.
- Keep flammable materials away from the welding area.
- Do not weld on containers that have held flammable liquids or gases.
- Ensure the welding machine is properly grounded.
- Disconnect power before performing any maintenance or adjustments.
- The machine features an in-built VRD (Voltage Reduction Device) for added safety.

3. Package Contents

Upon unpacking, verify that all items listed below are present and undamaged:

- iBELL M200-105 Welder Unit

- 3m-cable 16mm² 300A Electrode Holder
- 2m-cable 16mm² 300A Earth Clamp
- 1.9m MAG Torch
- 1 Kg Flux Cored Wire (0.6/0.8/0.9 mm)
- Tungsten Electrode
- Goggles
- Wire Brush



Image: The iBELL M200-105 Welder shown with its complete set of accessories, including the electrode holder, earth clamp, MAG torch, and flux cored wire spool.

4. Product Features

- **Dual Welding Modes:** Operates as both MMA (Manual Metal Arc) and MAG (Metal Active Gas) welder.
- **IGBT Inverter Technology:** High-performance IGBT technology ensures stable arc and efficient power usage.
- **Hot Start:** Provides excellent arc ignition, preventing electrode sticking.
- **Anti-sticking Feature:** Minimizes short circuit current if the electrode sticks to the workpiece.
- **VRD (Voltage Reduction Device):** In-built safety feature to reduce open-circuit voltage.
- **Arc Force:** Improves weld performance on specified electrode sizes.
- **Compact and Portable:** Designed for ease of transport and use.



Image: The iBELL M200-105 Welder showcasing its compact design and the attached MAG torch.

5. Setup

5.1 Power Connection

- Ensure the power switch on the rear of the machine is in the OFF position.
- Connect the power cord to a grounded 220V AC, 50/60Hz power outlet.
- Verify the power source meets the machine's requirements (Input Capacity: 4 kW, Input Current: 23.5 A).



Image: Rear view of the iBELL M200-105 Welder, highlighting the power switch and AC 220V input port.

5.2 Electrode/Torch Connection

- **For MMA Welding:** Connect the electrode holder cable to the positive (+) terminal and the earth clamp cable to the negative (-) terminal on the front panel. Secure connections tightly.
- **For MAG Welding:** Connect the MAG torch cable to the appropriate MAG connection port and the earth clamp cable to the negative (-) terminal.

5.3 Flux Cored Wire Installation (for MAG)

- Open the side panel of the welder to access the wire feed mechanism.
- Mount the 1 Kg flux cored wire spool onto the spindle, ensuring it rotates freely.
- Thread the wire through the guide tube and into the drive rollers. Ensure the wire is seated correctly in the groove of the drive roller.
- Adjust the tension of the drive rollers to prevent slipping or crushing of the wire.

- Feed the wire through the MAG torch liner until it exits the nozzle.



Image: Internal view of the iBELL M200-105 Welder, illustrating the wire spool and the wire feed mechanism for MAG welding.

6. Operating Instructions

6.1 Power On

- After all connections are secure, turn the power switch to the ON position.
- The LED display will illuminate, indicating the machine is ready.

6.2 Mode Selection (MAG/MMA)

- Use the MAG/MMA switch on the front panel to select the desired welding mode.

6.3 Parameter Adjustment

- **Current Adjustment:** Use the Amperage control knob to set the welding current (MMA: 20-140 A, MAG: 40-140 A).

- **Wire Feed Speed (MAG only):** Adjust the wire feed speed control knob to match the current and material thickness.
- Refer to welding charts for recommended settings based on material type and thickness.

6.4 Welding Process

- Ensure the workpiece is clean and properly grounded.
- Position yourself safely and comfortably.
- Initiate the arc (MMA) or pull the trigger (MAG) to begin welding.
- Maintain a consistent arc length and travel speed for optimal results.
- The Hot Start and Anti-sticking features assist in smooth arc initiation and prevent electrode sticking.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your welding machine.

- **Cleaning:** Periodically clean the internal components of the welder using compressed air to remove dust and metal particles. Ensure the machine is unplugged before cleaning.
- **Cable Inspection:** Regularly inspect all cables (power, electrode, earth, torch) for cuts, fraying, or damaged insulation. Replace damaged cables immediately.
- **Torch Maintenance (MAG):** Clean the contact tip and nozzle regularly. Replace worn contact tips and nozzles as needed. Ensure the wire liner is free of kinks and blockages.
- **Electrode Holder/Earth Clamp:** Ensure good electrical contact and clean any buildup.

8. Troubleshooting

Problem	Possible Cause	Solution
No power	Power cord unplugged, circuit breaker tripped, machine switch off.	Check power connection, reset breaker, turn machine ON.
No arc (MMA)	Poor earth connection, incorrect current setting, damp electrode.	Ensure good earth contact, adjust current, use dry electrodes.
Wire not feeding (MAG)	Wire tangled, drive rollers loose, clogged liner, incorrect wire spool.	Check wire spool, adjust drive roller tension, clean liner, ensure correct wire size.
Poor weld quality	Incorrect settings, improper technique, dirty workpiece.	Adjust current/wire speed, practice technique, clean workpiece.

9. Specifications

Parameter	Value
Rated Voltage	220V±15%, 50/60Hz
Input Capacity	4 kW
Input Current	23.5 A

Parameter	Value
No Load Voltage	65 V
MMA Output Current	20-140 A
MAG Output Current	40-140 A
Usable Electrodes (MMA)	1.6 – 3.2 mm
MAG Flux Cored Wire	0.6/0.8/0.9 mm (1kg spool)
Technology	IGBT Inverter
Product Dimensions	44 x 27 x 29.5 cm
Item Weight	9.26 kg



Image: A visual representation of the key specifications for the iBELL M200-105 Welder.

10. Warranty and Support

The iBELL M200-105 Welder comes with a **1-year warranty** from the date of purchase. This warranty covers manufacturing defects and workmanship under normal use.

For warranty claims, technical support, or service inquiries, please contact iBELL customer service. Keep your purchase receipt as proof of purchase.

Manufacturer: TSP TECHNOLOGIES, NINGBO, ZHEJIANG

Importer: HITECH MACHINEREIS AND EQUIPMENTS

© 2025 IBELL. All rights reserved.