Einhell BT-GW 190 D

Einhell BT-GW 190 D Welding Machine User Manual

Model: BT-GW 190 D | Brand: Einhell

1. Introduction

This manual provides essential information for the safe and efficient operation, setup, and maintenance of your Einhell BT-GW 190 D protective gas welding machine. Please read these instructions carefully before using the device for the first time. Keep this manual in a safe place for future reference.
The Einhell BT-GW 190 D is a professional industrial welding machine designed for welding various steels using the MAG (Metal Active Gas) process. It offers flexible application possibilities and robust performance.

2. Safety Instructions

WARNING: Welding operations can be dangerous. Always follow safety precautions to prevent injury or damage.

- Always wear appropriate personal protective equipment (PPE), including a welding helmet, gloves, protective clothing, and safety shoes.
- Ensure adequate ventilation in the work area to disperse welding fumes.
- Protect bystanders from arc rays and hot metal.
- This welding machine is not intended for use in residential areas with a public low-voltage power supply.
- Never touch live electrical parts.
- Ensure the welding machine is properly grounded.
- Do not operate the machine in damp or wet conditions.
- In case of thermal overload, the machine will automatically shut down. Allow it to cool down before resuming operation.

Image: Warning sign indicating that the industrial welder is not designed for use in residential areas with a public low-voltage supply system.

Image: Icon representing thermal overload protection, featuring a thermometer and an exclamation mark, indicating the machine's safety feature against overheating.

3. Product Overview

The Einhell BT-GW 190 D is a robust and mobile welding machine designed for industrial use. It features a professional gas-cooled torch, a ground clamp, and a control panel for precise adjustments.

Image: The Einhell BT-GW 190 D MIG welding machine, showing the complete unit with the welding torch, ground clamp, and gas pressure regulator.

Controls and Indicators

The front panel of the welding machine includes various controls for adjusting welding parameters and indicators for operational status.

Image: A close-up view of the Einhell BT-GW 190 D control panel, highlighting the adjustment knobs for welding current and wire feed speed, along with status indicators and transport wheels.

- **Welding Current Adjustment:** A multi-level switch to set the welding current (25-160 A, max. 190 A).
- **Wire Feed Speed Control:** A continuously adjustable knob for precise wire feed speed.
- **Power Indicator:** Light indicating the machine is powered on.
- **Thermal Overload Indicator:** Light that illuminates if the machine overheats, activating the thermal protection.

4. Setup

4.1 Unpacking and Assembly

Carefully unpack all components. The welding machine comes with 4 stable transport wheels for easy mobility. Attach these wheels as per the instructions provided in the separate assembly guide (if applicable).

4.2 Power Connection

The Einhell BT-GW 190 D can operate on both 230 V (single-phase) and 400 V (three-phase) power supplies. Ensure

your power source matches the machine's requirements and that the appropriate plug and adapter are used.

Image: A power adapter cable, typically used to convert a 400V CEE industrial plug to a standard 230V Schuko plug, allowing flexible power connections.

4.3 Gas Bottle Connection

Connect a protective gas cylinder (e.g., CO2 or Argon/CO2 mix for MAG welding) to the machine. Use the provided pressure reducer to regulate the gas flow.

Image: A gas pressure regulator equipped with two gauges, used to monitor and control the pressure and flow rate of protective gas from a cylinder during welding.

Secure the gas bottle to the welding machine using the robust chain provided to prevent it from tipping over.

Image: A robust metal chain securely fastening a gas bottle to the side of the welding machine, ensuring stability and safety during operation and transport.

4.4 Wire Spool Installation

Install the appropriate welding wire spool (0.6 to 1.0 mm diameter) into the machine. The continuously adjustable two-roller wire feed system ensures smooth and consistent wire delivery.

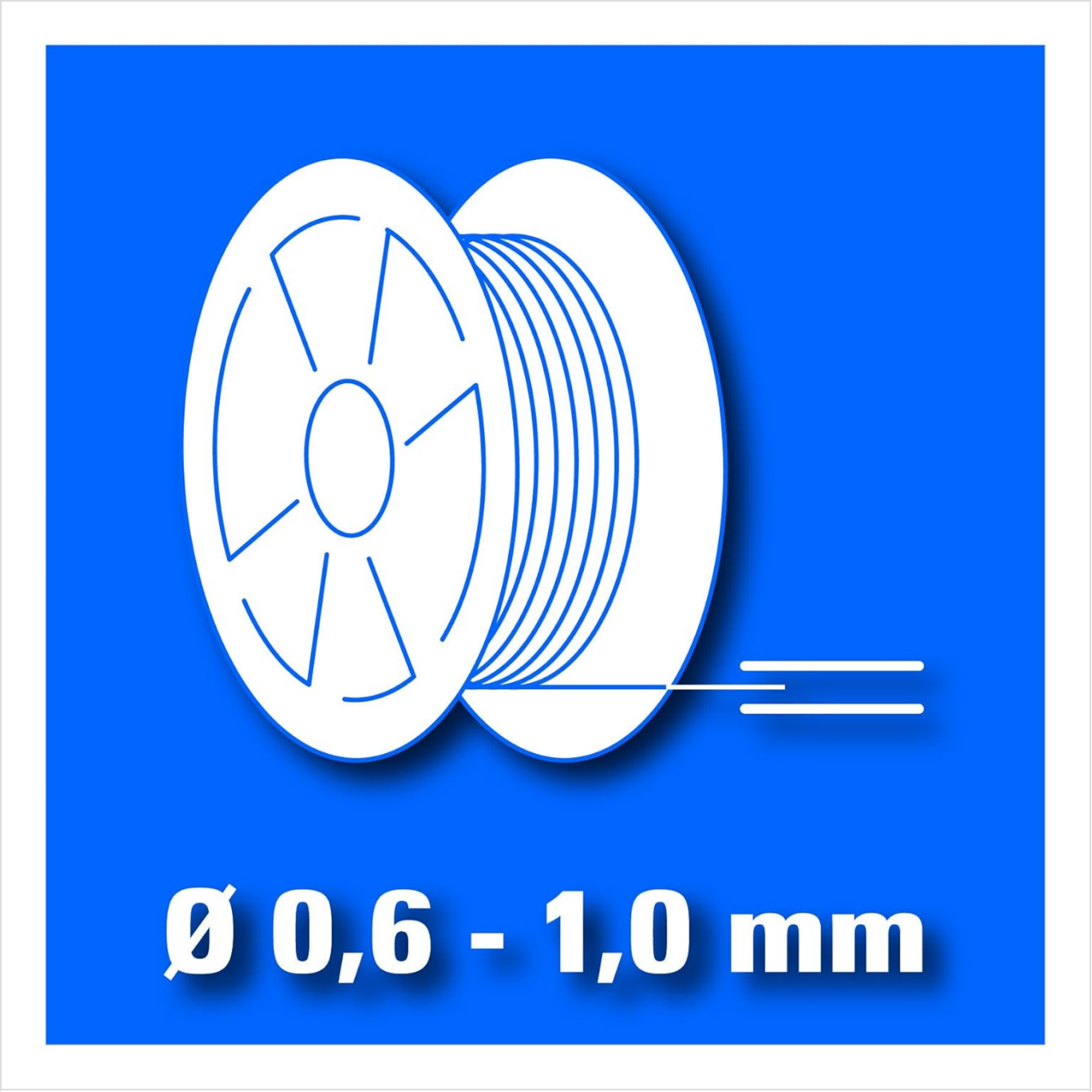

Image: Graphic illustrating the compatible welding wire diameter range of 0.6 to 1.0 mm for the machine.

5. Operating Instructions

5.1 Powering On/Off

Connect the machine to the power supply and switch it on using the main power switch. The power indicator light will illuminate.

5.2 Adjusting Welding Parameters

Set the welding current using the 6-level adjustment switch. The welding intensity can be precisely adjusted from 25 A to 160 A (maximum 190 A) to match the material thickness and type.

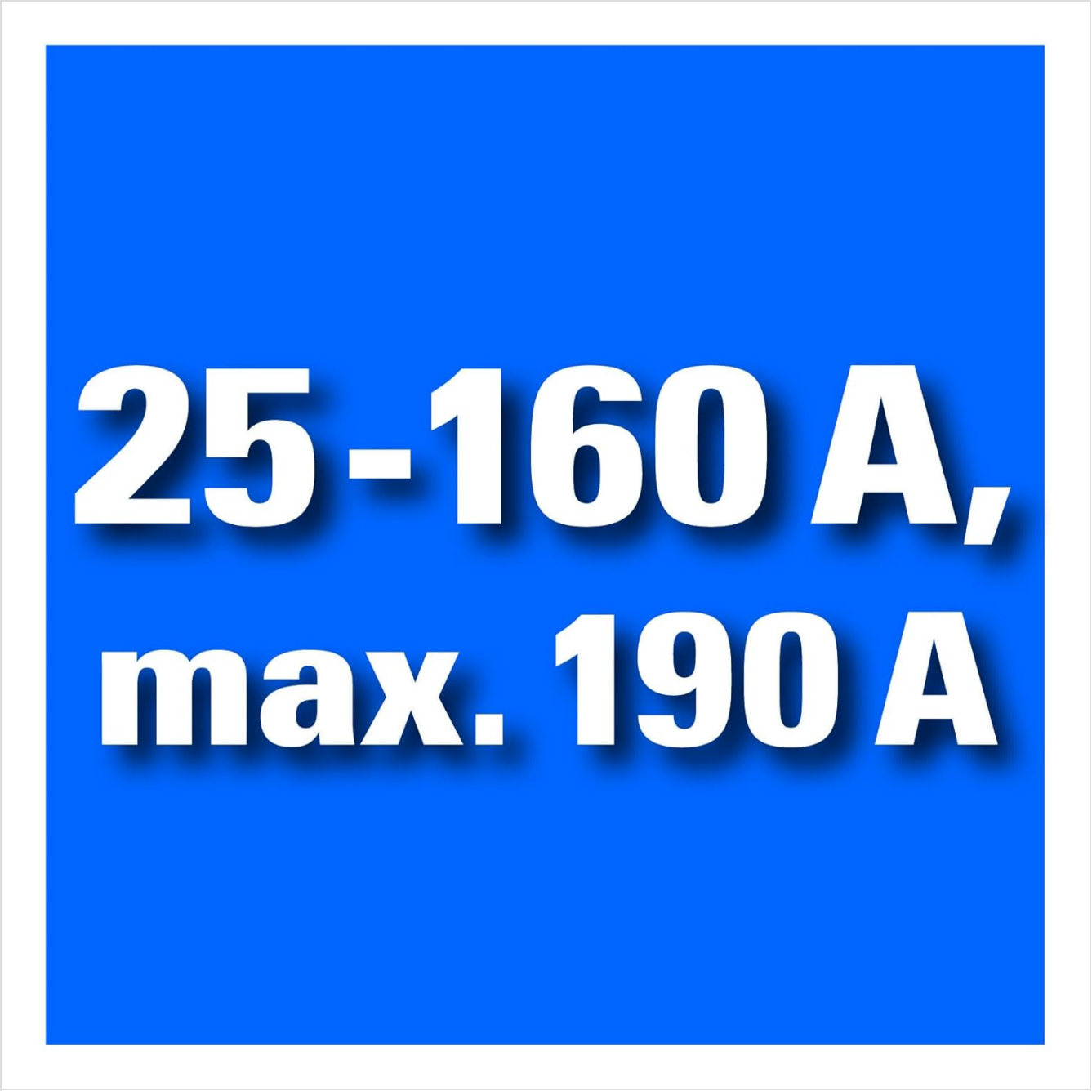

Image: Graphic displaying the welding current range of the machine, from 25 A to 160 A, with a maximum output of 190 A.

Adjust the wire feed speed using the dedicated knob. Proper wire feed speed is crucial for stable arc and quality welds.

5.3 Welding Process (MAG)

Ensure the workpiece is clean and properly grounded. Position the welding torch and initiate the arc. Maintain a consistent travel speed and arc length for optimal results. Always use the welding shield for eye and face protection.

Image: A handheld welding shield, an essential piece of personal protective equipment for protecting the eyes and face from intense light, heat, and sparks during welding.

6. Maintenance

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

- **Cleaning:** Keep the machine clean and free from dust and metal particles. Use compressed air to clean the cooling vents regularly.
- **Torch and Cables:** Inspect the welding torch, ground clamp, and all cables for damage or wear before each use. Replace any damaged components immediately.
- **Wire Feed System:** Periodically check the wire feed rollers for wear and cleanliness. Ensure the wire guide tube is clear.
- **Cooling System:** The efficient forced fan cooling system helps dissipate heat. Ensure the fan intake and exhaust are not obstructed.

7. Troubleshooting

If you encounter issues with your Einhell BT-GW 190 D, refer to the following common problems and solutions:

- **No Power:** Check the power cable connection, main switch, and circuit breaker. Ensure the correct voltage supply (230V or 400V) is used.
- **No Arc:** Ensure the ground clamp is securely attached to the workpiece. Check the welding torch connection and the wire feed.
- **Thermal Overload Indicator On:** The machine has overheated. Turn off the machine and allow it to cool down for at least 15-20 minutes. Ensure proper ventilation around the machine.
- **Irregular Wire Feed:** Check the wire spool for tangles or damage. Ensure the wire feed rollers are clean and correctly tensioned. Verify the wire diameter matches the roller groove.
- **Poor Weld Quality:** Adjust welding current and wire feed speed. Ensure proper gas flow and check for gas leaks. Clean the workpiece thoroughly.

8. Specifications

Feature	Specification
Power Supply Voltage	230 V 1~/400 V 1~, 50 Hz
Fuse	16 A
Welding Current (I2)	25-160 A (max. 190 A)
Welding Current Regulation	6 levels (230V), 6 levels (400V)
Max. Wire Spool Capacity	5 kg
Welding Wire Diameter	0.6 to 1.0 mm
Wire Feed	Continuously adjustable two-roller feed
No-load Voltage (U0)	41 V
Product Weight	38.1 kg
Package Dimensions	70.8 x 48 x 34 cm
Cooling System	Efficient forced fan cooling
Safety Features	Thermal overload protection with indicator light
Mobility	4 stable transport wheels
Gas Bottle Security	Robust chain for attachment

9. Warranty and Support

For warranty information, technical support, or spare parts, please contact your authorized Einhell dealer or the manufacturer's customer service. Keep your purchase receipt as proof of purchase.