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DLLWSD Dian-078

DLLWSD 100A Pulse Arc Spot Welder Kit User Manual

Model: Dian-078

Introduction

This manual provides instructions for the safe and effective use of the DLLWSD 100A Pulse Arc Spot Welder Kit. This precision welding tool is designed for permanent jewelry applications, including seamless rings, bracelets, chains, and delicate jewelry joints ranging from 0.5mm to 4mm in caliber. It is suitable for welding gold, silver, platinum, and stainless steel.

Please read this manual thoroughly before operation to ensure proper setup, safe usage, and optimal performance.

Important Safety Information

- Always wear appropriate personal protective equipment (PPE), including welding goggles or a welding helmet, gloves, and protective clothing, to prevent eye and skin injury from arc flash and sparks.
- Ensure the work area is well-ventilated to avoid inhaling welding fumes.
- Do not operate the welder near flammable materials.
- Ensure proper grounding of the unit.
- Keep children and unauthorized personnel away from the welding area.
- This device is not suitable for welding thick metal bars or for drilling applications.

Package Contents

Verify that all components are present in your kit:

- 100A Pulse Arc Spot Welder Unit
- Welding Handle with Stand
- Foot Pedal
- Power Cord
- 10 Tungsten Steel Welding Pins
- 4 Copper Collets (various sizes)
- Ground Clamp (Negative Circuit Interface Cable)
- Argon Gas Interface (optional, if included)
- Fuses (including one spare)

- Welding Goggles (if included)
- Pliers (if included)
- Hex Wrenches (if included)

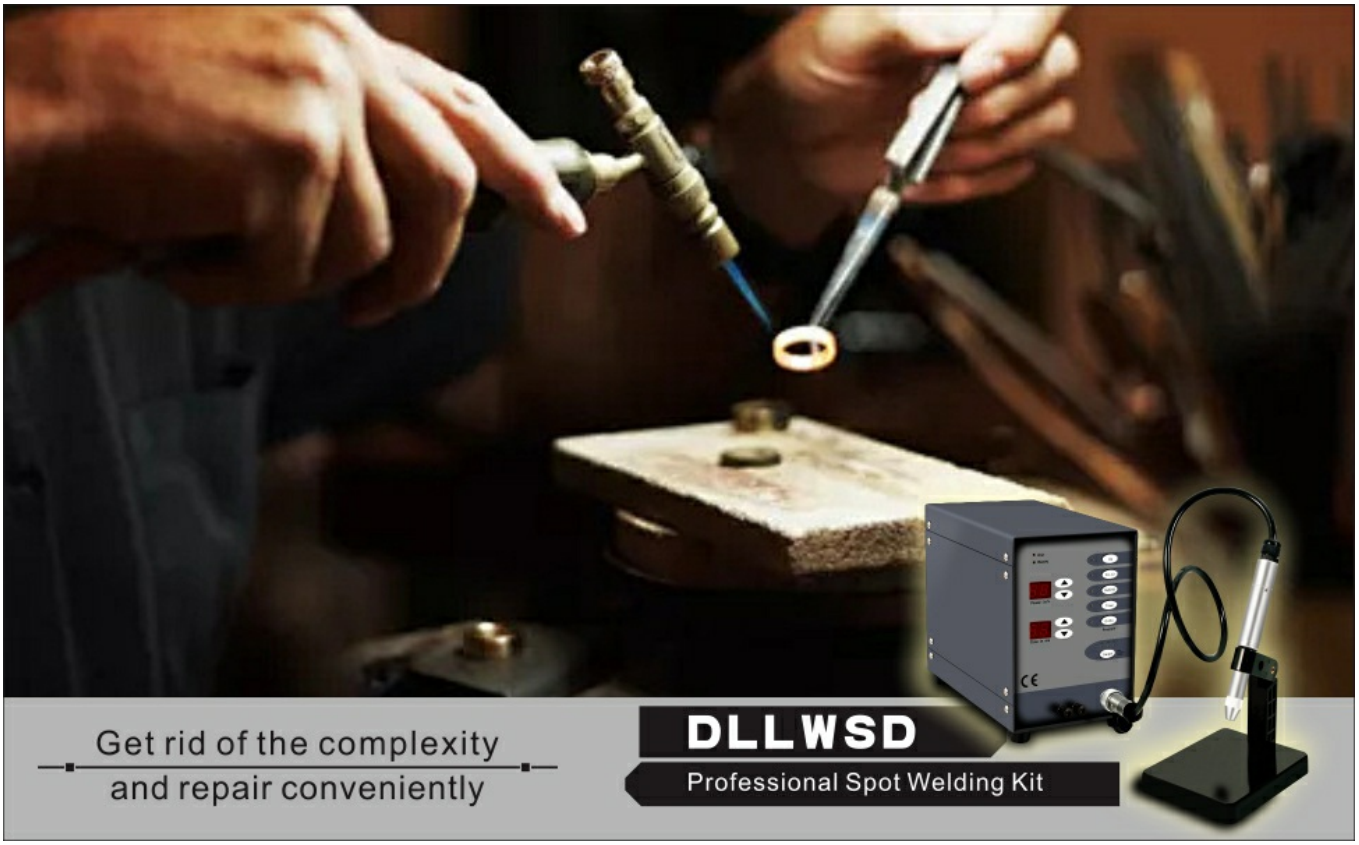


Image: Overview of the DLLWSD Professional Spot Welding Kit components, including the main unit, welding handle, foot pedal, tungsten needles, copper collets, and various accessories.

Setup

1. **Placement:** Place the welder unit on a stable, flat, and non-flammable surface. Ensure adequate space for ventilation around the unit.
2. **Power Connection:** Connect the power cord to the power connector on the back of the welder unit, then plug it into a standard 110V, 60Hz electrical outlet.

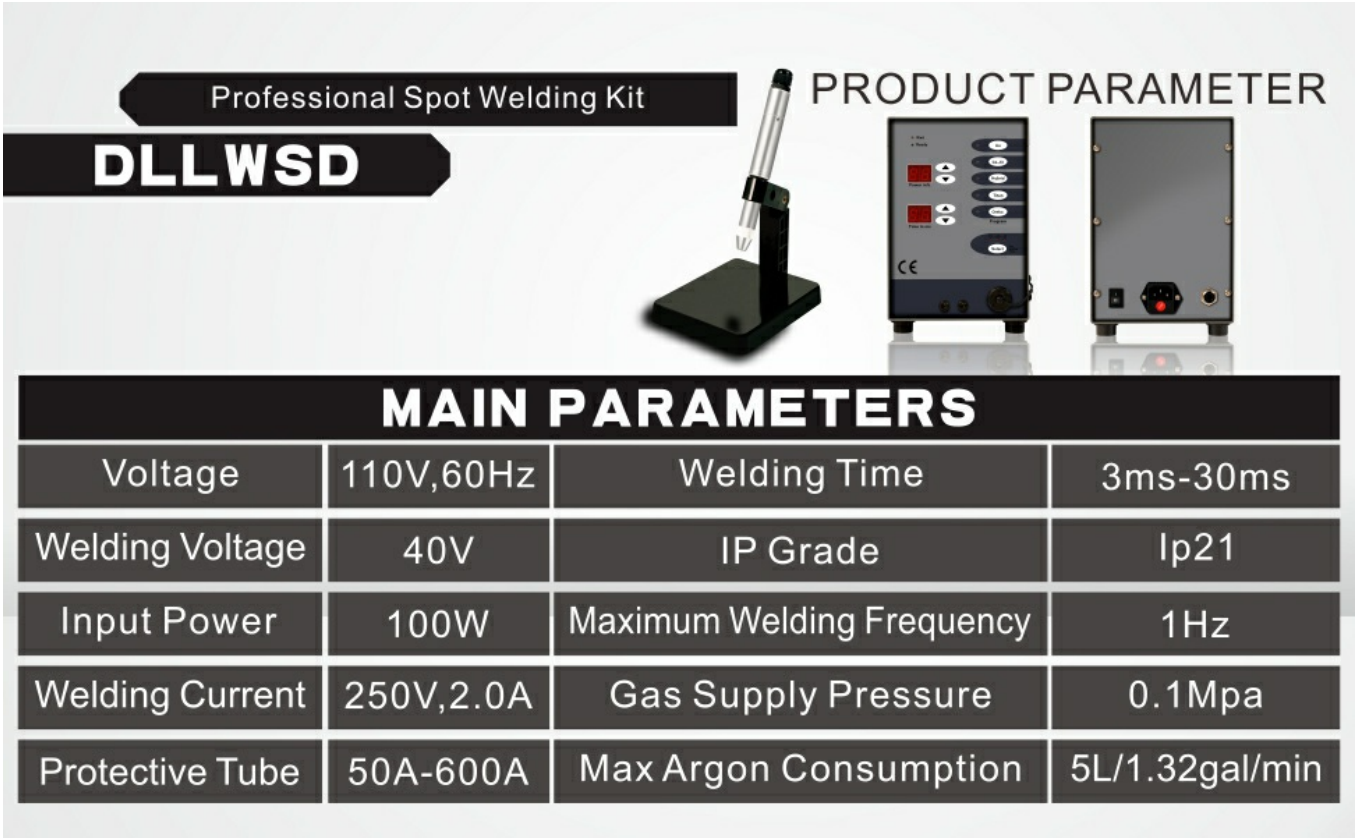


Image: Rear view of the welding machine showing the power switch, power connector, and 6mm argon gas interface.

3. **Welding Handle and Ground Clamp Connection:** Connect the welding handle cable to the "Welding Handle Interface" port on the front of the unit. Connect the ground clamp cable (Negative Circuit Interface) to the corresponding port.
4. **Foot Pedal Connection:** Connect the foot pedal cable to its designated port on the unit.
5. **Tungsten Needle Preparation:** Before first use, sharpen the tip of a tungsten steel welding pin with a grinder for optimal precision. Insert the sharpened pin into a copper collet of the appropriate size, ensuring the tip faces outward. Securely fasten it into the welding handle.

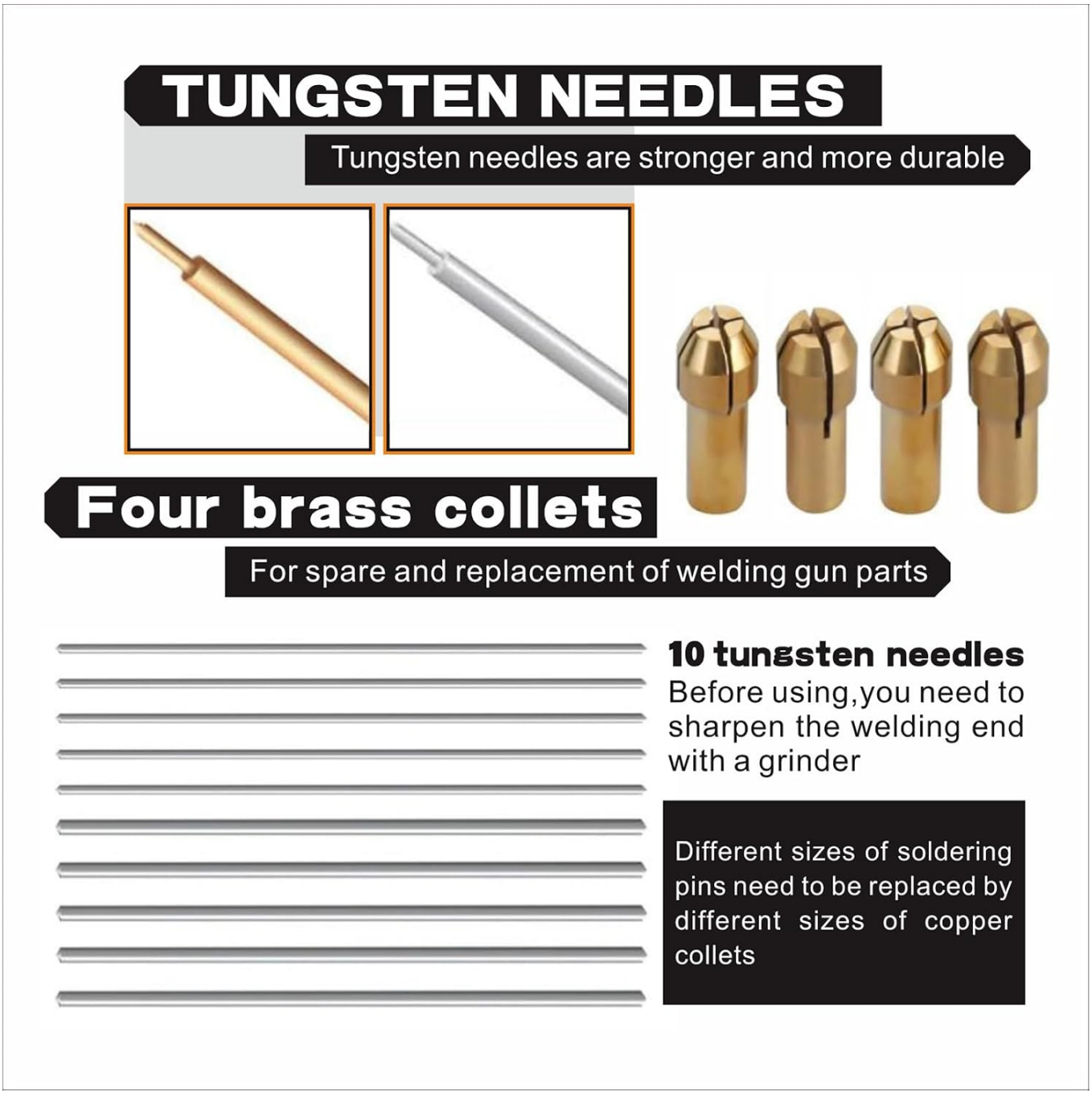


Image: Close-up of tungsten needles and various sizes of copper collets. The text indicates that tungsten needles are stronger and more durable, and that the welding end should be sharpened with a grinder before use.

6. **Argon Gas Connection (Optional):** If using argon gas for enhanced weld quality, connect the argon gas supply to the 6mm argon gas interface on the back of the unit. Ensure the gas supply pressure is set to 0.1 MPa.

Operation

The DLLWSD 100A Pulse Arc Spot Welder operates using pulse arc spot welding technology.

1. **Power On:** Flip the power switch on the back of the unit to the "ON" position. The display will illuminate.
2. **Parameter Adjustment:**
   - Use the "Welding Power Adjustment" controls to set the desired welding power (in %).
   - Use the "Welding Time Adjustment" controls to set the welding time (in ms).
   - Adjust these settings based on the type and thickness of the metal being welded. Refer to the control panel image for specific button locations.



Image: Detailed view of the welder's control panel, showing indicators for "Charging Waiting" and "Welding Ready", digital displays for "Welding Power" and "Welding Time", and buttons for adjusting these parameters. Also visible are program selection buttons for Gold (Au), Cobalt-Chromium Alloy (Co-Cr), Mixed (Hybrid), Pure Titanium (Titan), and Orthodontic (Ortho), along with a "Select" button for adjusting bleed time.

3. **Workpiece Preparation:** Ensure the workpiece is clean and free of oils or contaminants. Securely attach the ground clamp to the workpiece or a conductive surface connected to it.
4. **Positioning:** Position the workpiece stably and close to the welding needle. The welding diameter range is 0.5mm to 1.3mm.



Image: A user performing a precise weld on a piece of jewelry using the spot welder. The image also shows examples of before and after welding for jewelry repair, metal repair, and orthodontics.

5. **Welding:** While wearing protective eyewear, press the foot pedal to initiate the weld. A brief arc will form, creating a strong, seamless joint. Release the foot pedal immediately after the weld.
6. **Inspection:** Inspect the weld for quality. Adjust power and time settings as needed for optimal results.

Applications

This welder is ideal for:

- Permanent jewelry welding (bracelets, chains, rings)
- Jewelry repair (gold, silver, platinum, stainless steel)
- Eyeglass frame repair
- Orthodontic applications
- Welding small metal parts



Image: Examples of applications for the spot welder, including eyeglass repair, jewelry repair, and orthodontics.

Note: This welder is not designed for welding thick metal bars or for drilling. It is also not suitable for multi-shaped and complex jewelry that cannot be easily positioned.

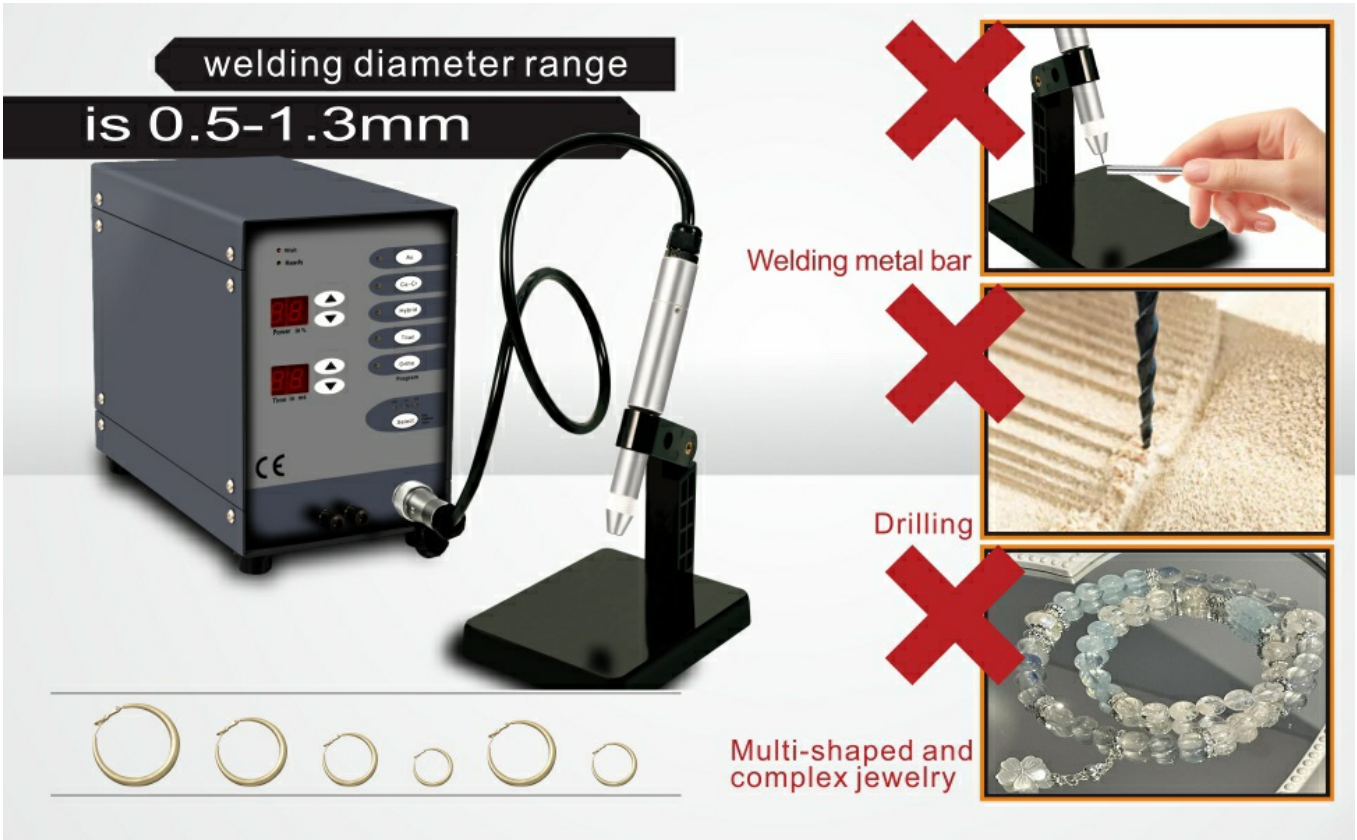


Image: Illustrates the recommended welding diameter range of 0.5-1.3mm and explicitly shows examples of unsuitable applications such as welding metal bars, drilling, and complex jewelry.

MAINTENANCE

- **Tungsten Needle Sharpening:** Regularly sharpen the tungsten welding pins with a grinder to maintain a fine tip for

precise welds. Replace pins when they become too short or damaged.

- **Collet Replacement:** Replace copper collets if they become worn or damaged. Use the correct size collet for the tungsten pin.
- **Cleaning:** Keep the welding area and the unit clean and free of metal dust and debris. Use a soft, dry cloth for cleaning.
- **Fuse Replacement:** The unit includes spare fuses. If the unit fails to power on, check and replace the fuse located near the power connector on the back of the unit.

Troubleshooting

- **No Power:**
  - Ensure the power cord is securely plugged into both the unit and the electrical outlet.
  - Check the power switch is in the "ON" position.
  - Inspect and replace the fuse if blown.
- **Poor Weld Quality / Inconsistent Welds:**
  - Ensure the workpiece is stable and in close contact with the welding needle.
  - Verify the tungsten needle is sharp and properly installed.
  - Adjust the welding power and time settings according to the metal type and thickness. Experiment with small adjustments.
  - Ensure the ground clamp has a secure connection to the workpiece.
  - If using argon gas, check the gas flow and connections.
- **Excessive Sparks / Carbon Buildup:**
  - This can indicate incorrect power settings or an improperly sharpened/worn tungsten needle. Adjust settings and check the needle.
  - Ensure the workpiece is clean.
  - Consider using argon gas if not already, as it can help reduce oxidation and carbon buildup.

Specifications

Feature	Specification
Brand	DLLWSD
Model Number	Dian-078
Power Source	Corded Electric
Input Voltage	110V, 60Hz
Welding Voltage	40V
Input Power	100W
Welding Current	250V, 2.0A
Welding Time	3ms-30ms

Maximum Welding Frequency	1Hz
IP Grade	Ip21
Protective Tube	50A-600A
Gas Supply Pressure	0.1Mpa
Max Argon Consumption	5L/1.32gal/min
Item Weight	14.5 pounds
Item Dimensions	11.65 x 8.6 x 5.9 inches

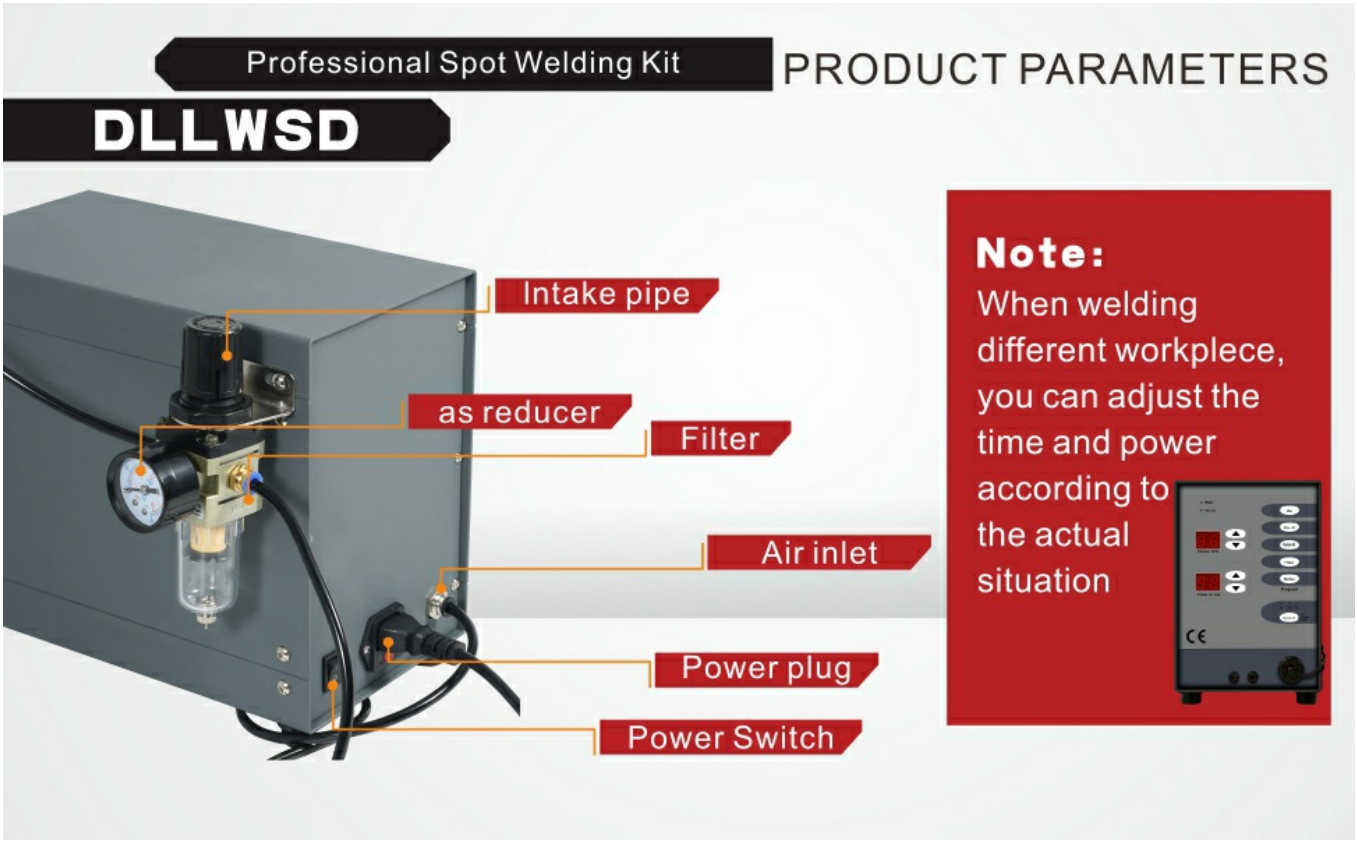


Image: A table summarizing the main technical parameters of the DLLWSD Professional Spot Welding Kit, including voltage, welding time, input power, and gas consumption.

Video Demonstration

Watch this video for a visual guide on connecting the welding handle and power cord.

Your browser does not support the video tag.

Video: A demonstration showing the connection of the welding handle interface and the negative circuit interface, followed by plugging in the power cord to the welding machine.

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