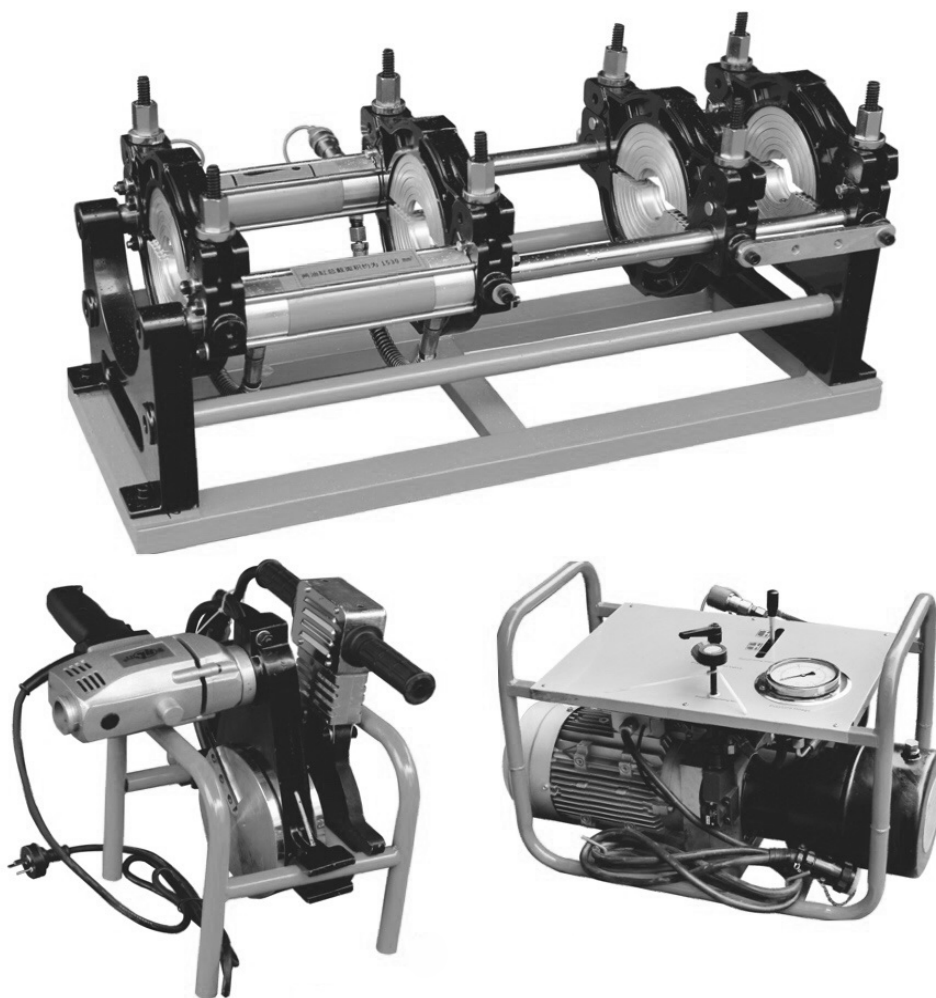


Model: EWELDP005

HDPE BUTT FUSION HYDRAULIC PIPE WELDING MACHINE

OPERATING INSTRUCTIONS / USER MANUAL



Please read all safety regulations and operating instructions carefully before using this equipment. Retain these safety guidelines and instructions for future reference.



2025

E&OE Please Note that details and specifications contained herein, are correct at the time of publishing. Adendorff reserve the right to change specifications at any time without prior notice.

IMPORTANT SAFETY INFORMATION

Thank you for purchasing this quality product. Our goal is to help you achieve the best results from your new equipment while ensuring safe operation.

This manual contains essential information regarding the operation, safety warnings, precautions, maintenance, cleaning procedures, parts list, and assembly diagram. Please read it carefully before use.

It is important to keep this manual along with your invoice for future reference. Write the invoice number on the inside of the front cover and store both the manual and the invoice in a safe, dry place.

This manual should be considered a permanent part of the product and must remain with it if the product is resold.

Your safety and the safety of others are very important.

This manual contains important safety messages — please read and follow them carefully.

Safety messages warn you about potential hazards that could cause injury to you or others.

Each message is preceded by a safety alert symbol (!) and one of the following words: DANGER, WARNING, or CAUTION.

Here's what they mean:

DANGER: You WILL be killed or seriously injured if you do not follow the instructions.

WARNING: You CAN be killed or seriously injured if you do not follow the instructions.

CAUTION: You CAN be injured if you do not follow the instructions.

SAFETY PRECAUTIONS

- Always reduce hydraulic pressure to the minimum when using the milling machine.
- Perform cutting slowly to prevent overloading the machine.
- Follow welding standards provided by either national regulations or the pipe manufacturer.
- Improper operation that damages equipment or affects weld quality is the operator's responsibility.

GUARANTEE/WARRANTY – (CARRY IN)

This product is covered by a warranty against manufacturing defects for a period of 12 months from the date of purchase. Please ensure you retain your receipt, as proof of purchase will be required when making a warranty claim.

Warranty Exclusions

The warranty will be void if the product:

- Has been abused, misused, or tampered with.
- Has not been used for the intended purpose.
- Was not installed correctly.

GUARANTEE/WARRANTY – (CARRY IN)

- Was used with an incorrect power supply or voltage.
- Was used with an undersized or unsuitable compressor (where applicable).
- If you are unsure of the correct product selection, please consult with one of our trained sales staff for guidance.

End User Responsibility

To qualify for warranty coverage, the end user must ensure that:

- The product is installed correctly, using a suitable voltage supply with the correct current rating.
- The product is regularly inspected and maintained according to the maintenance schedule provided in the user manual.

Warranty Limitations

The following are not covered by this warranty:

- Negligence or improper use.
- Wear and tear parts.
- Consumable parts.
- Accidental damage.
- Misuse, abuse, or modifications.
- Lack of maintenance.
- Improper wiring.
- Unauthorized repairs.
- Damage caused by lightning or power surges.
- Failures caused by contaminated fuels, oils, or coolants (where applicable).
- Products used in a manner contrary to the provided instruction manual.
- Products operated on incorrect power sources, including batteries.

What the Warranty Does Not Cover

Under this warranty, we are not responsible for:

- Transportation fees for sending the product to/from the warranty centre.
- Any incidental, consequential, or indirect damages resulting from defects in materials or workmanship.
- Any delays in repair or replacement of defective parts.

As a reminder, transportation costs to/from the warranty centre remain the customer's responsibility.

Labour charges for overtime, holiday, or emergency work.

Satisfaction Guarantee and Returns

If you are not fully satisfied with the product, you may return the unused product for a full refund under the following conditions:

The product must be in its original packaging.

The product must be returned within 10 days from the date of purchase.

The original invoice must accompany the return.

Additional Terms

Adendorff Machinery Mart reserves the right to charge a packaging fee for any product returned without its original packaging.

Refunds, returns, exchanges, and cancellations will be handled in accordance with the Consumer Protection Act (CPA) regulations.

If the product was purchased for a specific purpose based on advice from a salesperson and is found unsuitable for that purpose, a handling fee may apply, depending on the product's condition, in line with our internal policy.

All repairs performed under this warranty carry a 3-month repair warranty.

As a reminder, transportation costs to/from the warranty centre remain the customer's responsibility.

PRODUCT STRUCTURE

The MAC AFRIC Hydraulic Welding Machine is made up of several key components:

- **Machine Frame:** This includes the main body, with four seating positions, adjustable clamps, hydraulic cylinders, and hydraulic connection components.
- **Milling Machine:** Consists of a motor, housing, cutting head, and blades.
- **Hydraulic Power Unit:** This contains the motor, oil tank, gear pump, pressure regulating valve, pressure relief valve, reversing valve, limit switch, and electrical control box.
- **Control Box:** Equipped with a temperature controller, programmable timer (adjustable for different pipe sizes), aviation plug, and leakage protection circuit breaker.
- **Heating Plate:** Features a non-stick surface with intelligent temperature control and constant temperature maintenance. Temperature can be adjusted based on working conditions.
- **Toolbox:** Designed to store the milling machine, heating plate, adjustable clamps, and other tools for convenience.

TECHNICAL SPECIFICATIONS

| | |
|--------------------------------|-----------------------|
| Model | EWELDP005 |
| Heatin Board Power | 2.8KW |
| Hydraulic Station Power | 0.55KW |
| Milling Cutter Power | 1.3KW |
| Voltage | 230V / 50-60Hz |
| Working Range | 90-250mm |
| Working Temperature | 270° |

| MODEL | WELDED PIPE SIZE (MM) | POWER SUPPLY | TOTAL POWER | HEATING PLATE TEMPERATURE | HYDRAULIC OIL | WORKING TEMP. RANGE |
|------------|-----------------------|--------------|-------------|---------------------------|---------------|---------------------|
| 63 - 160 | 63 - 160mm | 220V/380V | 2.45kW | 225°C ± 5°C | 46# | -5°C - 45°C |
| 63 - 200 | 63 - 200mm | 220V/380V | 3.05kW | 225°C ± 5°C | 46# | -5°C - 45°C |
| 90 - 250 | 90 - 250mm | 220V/380V | 3.9kW | 225°C ± 5°C | 46# | -5°C - 45°C |
| 160 - 315 | 160 - 315mm | 220V/380V | 4.25kW | 225°C ± 5°C | 46# | -5°C - 45°C |
| 280 - 450 | 280 - 450mm | 220V/380V | 8kW | 225°C ± 5°C | 46# | -5°C - 45°C |
| 400 - 630 | 400 - 630mm | 220V/380V | 11kW | 225°C ± 5°C | 46# | -5°C - 45°C |
| 630 - 800 | 630 - 800mm | 220V/380V | 14kW | 225°C ± 5°C | 46# | -5°C - 45°C |
| 800 - 1000 | 800 - 1000mm | 220V/380V | 19kW | 225°C ± 5°C | 46# | -5°C - 45°C |

For full terms and conditions of our guarantee please visit our website:
www.adendorff.co.za

WELDING PROCEDURES

1. Open the hydraulic oil tank vent screw.
2. Connect the power supply. If using three-phase power, test the milling machine to confirm proper rotation before starting the hydraulic system. (Incorrect rotation can damage the gear pump.)
3. Set the temperature controller to the required welding temperature (factory default: 220°C).
4. Install the correct size clamps for the pipe.
5. Connect the hydraulic hoses and gradually adjust the pressure regulating valve until the system pressure reaches 3-5 MPa.
6. Use the milling machine to prepare the pipe ends. Adjust milling pressure to the minimum setting to avoid excessive force (pressure depends on pipe size, thickness, and material).
7. Once milling is complete, position the heating plate between the pipe ends. Apply pressure to press the pipe ends against the heating plate until a bead of 1.5 to 2 mm forms.
8. Hold this position for approximately 5 minutes to allow proper heat absorption.
9. After heating, quickly remove the heating plate and press the pipe ends together to form the weld.
Maintain pressure until a uniform bead of around 3 mm forms.
10. Hold the joint under pressure for about 15 minutes to allow cooling.
11. After cooling, release the clamps and remove the welded pipe. Clean the heating plate with a soft cotton cloth.

RECOMMENDED WELDING PARAMETERS

| PIPE WALL THICKNESS | FLANGE HEIGHT | FLANGE PRESSURE | HEAT ABSORPTION | HEAT STRESS | SWITCHING TIME (SEC) | RISE TIME (SEC) | WELDING PRESSURE | COOLING TIME (MIN) |
|---------------------|---------------|-----------------|-----------------|-------------|----------------------|-----------------|------------------|--------------------|
| 0 - 4.5 | 0.5 mm | 0.15 MPa | 45 | ≤ 0.02 | 5 | 5 | 0.15 ± 0.1 MPa | 6 |
| 4.5 - 7 | 1.0 mm | 0.15 MPa | 45 - 70 | ≤ 0.02 | 4 - 6 | 5 - 6 | 0.15 ± 0.1 MPa | 6 - 10 |
| 7 - 12 | 1.5 mm | 0.15 MPa | 70 - 120 | ≤ 0.02 | 6 - 8 | 6 - 8 | 0.15 ± 0.1 MPa | 10 - 16 |
| 12 - 19 | 2.0 mm | 0.15 MPa | 120 - 190 | ≤ 0.02 | 8 - 10 | 8 - 11 | 0.15 ± 0.1 MPa | 16 - 24 |
| 19 - 26 | 2.5 mm | 0.15 MPa | 190 - 260 | ≤ 0.02 | 10 - 12 | 11 - 14 | 0.15 ± 0.1 MPa | 24 - 32 |
| 26 - 37 | 3.0 mm | 0.15 MPa | 260 - 370 | ≤ 0.02 | 12 - 16 | 14 - 19 | 0.15 ± 0.1 MPa | 32 - 45 |
| 37 - 50 | 3.5 mm | 0.15 MPa | 370 - 500 | ≤ 0.02 | 16 - 20 | 19 - 25 | 0.15 ± 0.1 MPa | 45 - 60 |
| 50 - 70 | 4.0 mm | 0.15 MPa | 500 - 700 | ≤ 0.02 | 20 - 25 | 25 - 35 | 0.15 ± 0.1 MPa | 60 - 80 |

TEMPERATURE CONTROLLER & TIMER SETTINGS

1. Set the temperature controller to the desired welding temperature (default: 220°C).
2. To set the timer: press the SET button to reset the display, then use the "+" or "-" buttons to set the desired time (factory default: 5-10 minutes).

TROUBLESHOOTING GUIDE

Heating Plate Not Heating:

- Check plug alignment and condition.
- Confirm the power supply and voltage match the machine.
- For three-phase power, check wiring to the neutral line.

No Pressure on Gauge:

- Check for correct motor rotation.
- Ensure sufficient hydraulic oil.
- Confirm ambient temperature is within working range.
- Inspect hoses and valves for blockages. Operate manual valves to clear trapped air.

Circuit Breaker Tripping:

- Contact a qualified electrician or the supplier.

SAFETY WARNING

1. Always reduce hydraulic pressure to the minimum when using the milling machine.
2. Perform cutting slowly to prevent overloading the machine.
3. Follow welding standards provided by either national regulations or the pipe manufacturer.
4. Improper operation that damages equipment or affects weld quality is the operator's responsibility.

SUPPLIED BY
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