



# 270AMP PROFESSIONAL MIG WELDER WITH BINZEL® EURO TORCH

MODEL NO: **SUPERMIG275.V2**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instructions



Wear a welding helmet



Wear protective gloves



Wear safety footwear



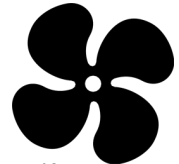
Wear protective clothing



Keep away from rain



Electrical shock hazard



Keep clear of fan



Arc rays can burn eyes and injure skin



Electric shock from welding electrodes can kill



Breathing welding fumes can be hazardous to your health



Electromagnetic fields can cause pacemaker malfunction



Welding sparks can cause explosions or fire



Caution required

## 1. SAFETY

### 1.1. ELECTRICAL SAFETY

- ❑ **WARNING!** It is the user's responsibility to read, understand and comply with the following:

- 1.1.1. You must check all electrical equipment and appliances to ensure they are safe before using. You must inspect power supply leads, plugs and all electrical connections for wear and damage. You must ensure the risk of electric shock is minimised by the installation of appropriate safety devices. An RCCB (Residual Current Circuit Breaker) should be incorporated in the main distribution board. We also recommend that an RCD (Residual Current Device) is used with all electrical products. It is particularly important to use an RCD together with portable products that are plugged into an electrical supply not protected by an RCCB. If in doubt consult a qualified electrician. You may obtain a Residual Current Device by contacting your Sealey stockist. You must also read and understand the following instructions concerning electrical safety.
- 1.1.2. The Electricity At Work Act 1989 requires all portable electrical appliances, if used on business premises, to be tested by a qualified electrician, using a Portable Appliance Tester (PAT), at regular intervals.
- 1.1.3. The Health & Safety at Work Act 1974 makes owners of electrical appliances responsible for the safe condition of the appliance, and the safety of the appliance operator. If in any doubt about electrical safety, contact a qualified electrician.
- 1.1.4. Ensure the insulation on all cables and the product itself is safe before connecting to the mains power supply. See 1.1.1. & 1.1.2. above and use a Portable Appliance Tester (PAT).
- 1.1.5. Ensure that cables are always protected against short circuit and overload.
- 1.1.6. Regularly inspect power supply leads, plugs and all electrical connections for wear and damage. Inspect power connections to ensure that none is loose.

**IMPORTANT:** Ensure the voltage marked on the product is the same as the electrical power supply to be used and check that plugs are fitted with the correct capacity fuse. A 13 amp plug may require a fuse smaller than 13 amps for certain products, see fuse rating at right.

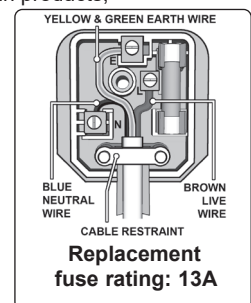
- × **DO NOT** pull or carry the powered appliance by its power supply lead.
- × **DO NOT** pull power plugs from sockets by the power cable.
- × **DO NOT** use worn or damaged leads, plugs or connections. Immediately replace or have repaired by a qualified electrician. A U.K. 3 pin plug must be fitted according to the following instructions. (UK only - see diagram at right).

Ensure the unit is correctly earthed via a three-pin plug.

- Connect the green/yellow earth wire to the earth terminal.
- Connect the brown live wire to live terminal.
- Connect the blue neutral wire to the neutral terminal.

d) After wiring, check that there are no bare wires, that all wires have been correctly connected, that the cable external insulation extends beyond the cable restraint and that the restraint is tight.

- 1.1.7. Cable extension reels. When a cable extension reel is used it should be fully unwound before connection. A cable reel with an RCD fitted is recommended since any product which is plugged into the cable reel will be protected. The section of the cable on the cable reel is important and should be at least 1.5mm<sup>2</sup>, but to be absolutely sure that the capacity of the cable is suitable for this product and for others that may be used in the other output sockets, we recommend the use of 2.5mm<sup>2</sup> section cable.



- ❑ **WARNING!** Be very cautious if using a generator to power the welding set. The generator must be self-regulating and stable with regard to voltage, wave form and frequency. The output must be greater than the power consumption of the welding set. If any of the requirements are not met the electronics within the welding set may be affected.

**NOTE: The use of an unregulated generator may be dangerous and will invalidate the warranty on the welding set.**

- ❑ **WARNING!** The welding set may produce voltage surges in the mains supply which can damage other sensitive equipment (e.g. computers). To prevent this happening, it is recommended that the welding set is connected to a power supply that does not feed any sensitive equipment.

**IMPORTANT!** If using the welding set to it's full capacity, we recommend a 16amp supply. We recommend you discuss the installation of a 16amp industrial round pin plug and socket with your electrician.

## 1.2. GENERAL SAFETY

- ▲ **DANGER! Unplug the welding set from the mains power supply before performing maintenance or service.**

- ✓ Keep the welding set and cables in good working order and condition. Take immediate action to repair or replace damaged parts.
- ✓ Use genuine parts and accessories only. Unapproved parts may be dangerous and will invalidate the warranty.
- ✓ Use an air hose to regularly blow out any dirt from the liner and keep the welding set clean for best and safest performance.
- ✓ Check and spray the gas cup and contact tip regularly with anti-spatter spray, available from your Sealey stockist.
- ✓ Locate the welding set in a suitable work area. Ensure that the area has adequate ventilation as welding fumes are harmful.
- ✓ Keep work area clean, tidy and free from unrelated materials. Also ensure the working area has adequate lighting and that a fire extinguisher is at hand.

- ❑ **WARNING! Use welding head shield to protect eyes and avoid exposing skin to the ultraviolet rays given off by electric arc. Wear safety welding gauntlets.**

- ✓ Remove ill fitting clothing, remove ties, watches, rings and other loose jewellery and contain long hair.
- ✓ Ensure the workpiece is correctly secured before welding.
- ✓ Avoid unintentional contact with the workpiece. Accidental or uncontrolled use of the torch may be dangerous and will wear the nozzle.
- ✓ Keep unauthorised persons away from the work area. Any persons working within the area must wear a protective head shield and gloves.
- ✓ Operators must receive adequate training before using the welding set.
- ✓ Stand correctly keeping a good footing and balance, ensure the floor is not slippery and wear non-slip shoes.
- × **DO NOT** operate the welding set if it or the cables are damaged and **DO NOT** attempt to fit any unapproved torches or other components to the welding set.
- × **DO NOT** get the welding set wet or use in damp or wet locations or areas where there is condensation.
- ▲ **DANGER! DO NOT weld near flammable solids, liquids or gases and DO NOT weld containers or pipes which have held flammable materials. Avoid welding materials which have been cleaned with chlorinated solvents or welding near such solvents.**
- × **DO NOT** stand the welding set on a metal workbench, car bodywork or similar.
- × **DO NOT** touch any live metal parts of the torch or electrode while the welding set is switched on.
- × **DO NOT** pull the welding set by the cable, or the torch. Protect cables from sharp or abrasive items. **DO NOT** bend, strain or stand on cables or leads.
- ✓ Protect from heat. Long lengths of slack must be gathered and neatly coiled. **DO NOT** place cables where they endanger others.
- × **DO NOT** touch the torch or workpiece immediately after welding as they will be very hot. Allow to cool.
- × **DO NOT** operate the welding set while under the influence of drugs, alcohol or intoxicating medication, or if tired.
- ✓ When not in use store the welding set in a safe, dry, childproof area.

## 1.3. VOLTAGE BETWEEN ELECTRODE HOLDERS OR TORCHES

Working with more than one welding machine on a single piece or on pieces that are connected electrically may generate a dangerous amount of no-load voltage between the two electrode holders or torches, the value of which may reach double the allowed limit. Measuring instruments should be used to determine the existence of a risk and suitable precautions taken.

## 1.4. ELECTROMAGNETIC INTERFERENCE

The electromagnetic fields generated by the welding process may interfere with the operation of electrical and electronic equipment. Users of vital electronic and electrical devices such as pacemakers and respirators are advised not to remain in the vicinity of an operating welding set. If in doubt seek medical advice before entering a welding area. Users of such devices should not operate the welding set. This welding set complies with the requirements of the technical standard for the use of this type of product, only and exclusively in industrial environments and for professional purposes. It is not guaranteed to meet electronic compatibility requirements in the home.

## 1.5. GAS SAFETY

- ✓ Store gas cylinders in a vertical position only and ensure that the storage area is correctly secured.
- × **DO NOT** store gas cylinders in areas where the temperature may exceed 50°C.
- × **DO NOT** use direct heat on a cylinder. Always keep gas cylinders cool.
- × **DO NOT** attempt to repair or modify any part of a gas cylinder or valve.
- × **DO NOT** puncture or damage a cylinder.
- × **DO NOT** obscure or remove any official labels on a cylinder.
- ✓ Always check the gas identity before use.
- ✓ Avoid getting gas cylinders oily or greasy.
- × **DO NOT** lift a cylinder by the cap, guard or valve.
- × Always keep caps and guards in place and close valve when not in use.

## 2. INTRODUCTION

Excellent continuous performance on car panel thickness material. Forced-Air Cooling System allows high duty cycle. Binzel® non-live Euro torch reduces accidental arcing and is comfortable in the hand thus ensuring a steadier weld bead. Welds stainless steel and aluminium too. Includes industrial twin gauge gas regulator, contact tip 0.8mm and gas cup.

**IMPORTANT:** These instructions contain the information you require to prepare your welding set for welding, together with a maintenance and a troubleshooting section.

**THESE INSTRUCTIONS ARE NOT INTENDED TO TEACH YOU HOW TO WELD.**

If you have no experience, we recommend that you seek training from an expert source. MIG welding is relatively easy, but does require a steady hand and supervised practice on scrap metal, as it is only with continued practice that you will achieve the desired results.

### 3. SPECIFICATION

Model No: ..... SUPERMIG275.V2  
 Welding Current: ..... 40-270A  
 Wire Capacity: ..... 5-15kg  
 Duty Cycle: ..... 100% @ 112A, 60% @ 146A, 20% @ 255A  
 Cooling System: ..... Forced Air  
 Spot Welding Timer: ..... Yes  
 Gas Type: ..... CO2, Argon, CO2/Argon Mix  
 Torch: ..... 3m Euro Non-Live - BINZEL® MB24  
 Supply: ..... 230V-55A  
 Absorbed Power: ..... 12.6kW  
 Case Size: ..... Extra-Large

### 4. RATING PLATE

Detailed technical data relative to the performance of the machine is located on the back panel.

**NOTE:** The ratings plate detailed below (fig.1) is an example only intended to assist with the explanations of the symbols. To determine the correct technical values of the machine refer to the data plate on your machine and the specification table above.

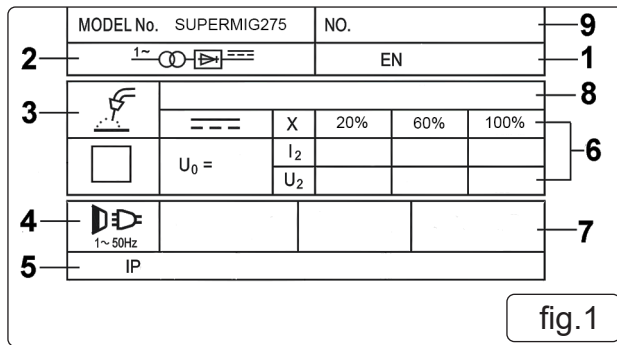


fig.1

|   |   |
|---|---|
| 1 | Relevant standard   |
| 2 | Single phase transformer - rectifier  |
| 3 | Welding with a continuous flow of welding wire  |
| 4 | Single-phase AC supply  |
| 5 | Case protection class   |
| 6 | Output<br>U0: Rated maximum and minimum no load voltage<br>I2,U2: Current and corresponding voltage<br>X: Welding ratio based on a 10 minute cycle<br>20% = 2 minutes welding 8 minutes rest<br>100% = continuous welding |
| 7 | Mains supply<br>U1: Rated supply voltage and frequency<br>I1 max: Maximum current<br>I1eff: Maximum effective current   |
| 8 | Welding current range   |
| 9 | Serial number   |

### 5. CONTENTS

#### 5.1. UNPACKING

5.1.1. Unpack the product and check contents. Take care to ensure safety when removing product from its packaging. Seek assistance from another person as the welding unit is heavy. Should there be any damaged or missing parts contact your supplier immediately.

#### 5.2. CONTENTS

Main Welding Unit.  
 Wire Feed Roller 0.8mm/1.0mm x 1.  
 Torch & Cable with Euro connector.  
 Welding Tip 0.8 and gas cap.  
 Earth Clamp Cable.  
 Industrial Gas Regulator.  
 Gas Bottle Retaining Chain.

### 6. ASSEMBLY

**NOTE:** The welding set is supplied with the wheels and handles fully assembled.

#### 6.1. CONNECT WELDING SET TO THE MAINS POWER SUPPLY

6.1.1. Before making any electrical connections, ensure that the mains voltage and frequency of the supply matches the electrical specification of the welding set as stated on the welding set's rating plate (fig.1).

6.1.2. The welding set must only be connected to a 30 Amp fused power supply as described in section 1.

6.1.3. Refer to the section on electrical safety at the start of these instructions for information on the correct connection of the mains power plug.

#### 6.2. CONNECT TORCH "Euro Connection"

6.2.1. The welding set is fitted with a "Euro Connection" quick release torch. Line up the pins in the torch connector with the appropriate holes in the socket on the front panel connector (fig.2), push in, engage and tighten the locking nut (fig.3).

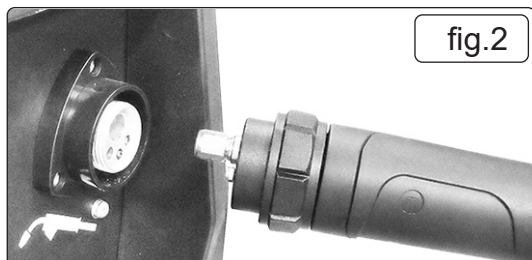


fig.2

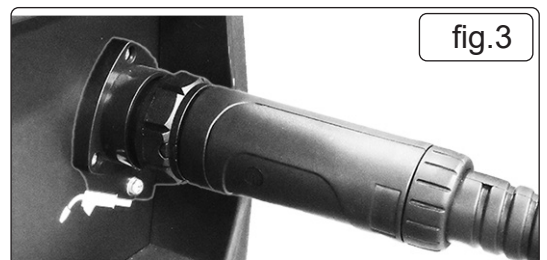
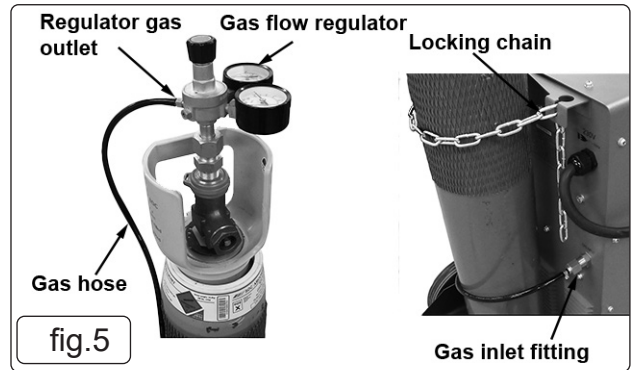
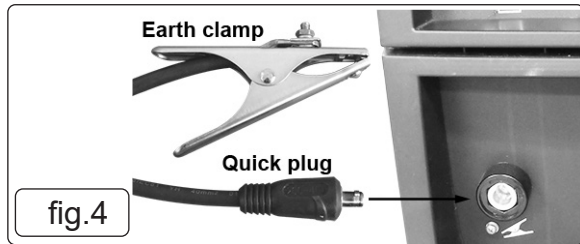


fig.3

### 6.3. CONNECTING THE WELDING CURRENT RETURN CABLE

6.3.1. Firmly attach the earthing clamp (fig.4) to the workpiece, or to a metal support structure, as close as possible to the joint being made.

6.3.2. Insert the quick connector (fig.4) into the earth clamp socket located on the lower front panel.



### 6.4. MOUNT THE GAS CYLINDER

6.4.1. Stand the gas cylinder on the platform at the rear of the welding set and secure with locking chain (fig.5).

**WARNING!** The platform is designed to support bottles up to a maximum weight of 20kg.

### 6.5. FITTING THE FLOW REGULATOR

6.5.1. If using CO2 gas, screw the flow regulator directly into the cylinder, and tighten with correct size spanner (fig.5).

6.5.2. If using argon or argon mixture gas, the supplied "bull nose adaptor" should be fitted to the cylinder and be tightened with correct size spanner, then screw the flow regulator into the "bull nose adaptor", and tighten with correct size spanner (fig.5).

6.5.3. Remove the flow regulator and store in a dry childproof location if the welding set is to be stored for any length of time.

**NOTE:** The supplied flow regulator may differ from that illustrated.

### 6.6. ATTACH THE GAS HOSE

6.6.1. Push the free end of the gas hose fully onto the flow regulator gas outlet connection (fig.5).

6.6.2. Screw the brass fitting onto the gas inlet fitting on the rear of the welding set and tighten with correct size spanner (fig.5).

### 6.7. FITTING A REEL OF WIRE

**WARNING!** Ensure the welding set is unplugged from the mains power.

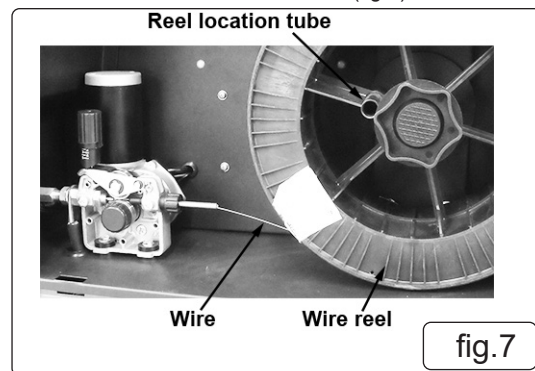
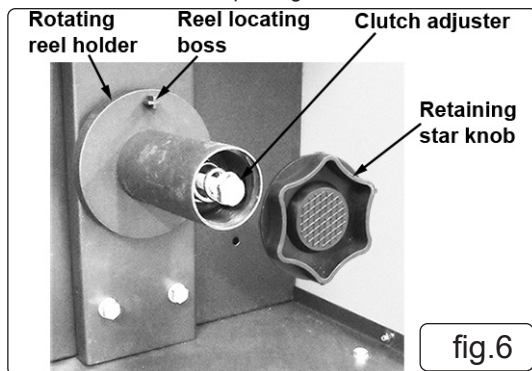
**NOTE:** The wire feed reel holder will accept reels of up to 15kg.

6.7.1. Open the wire feed compartment and unscrew and remove the retaining star knob (fig.6) and place to one side.

6.7.2. Slide the wire reel onto the reel holder (fig.6) and locate the reel location tube on the wire reel with the reel location boss (fig.7) on the reel holder.

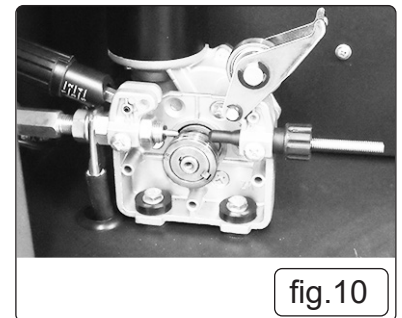
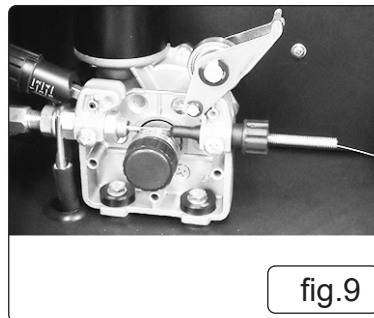
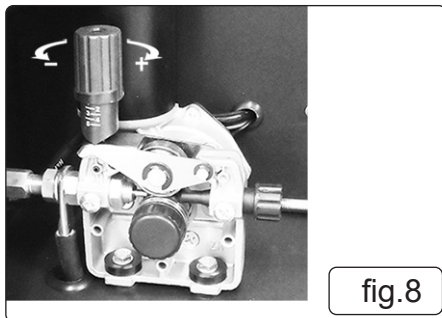
6.7.3. Reattach the retaining star knob and fully tighten (fig.7).

6.7.4. Ensure that the wire is spooling off from the bottom of the wire reel in the direction of the wire drive unit (fig.7).



## 7. FEED WIRE THROUGH TORCH

**WARNING!** Ensure that the wire feed roller, the wire guide hose and the contact tip of the torch correspond to the diameter and type of wire to be used and are fitted correctly.



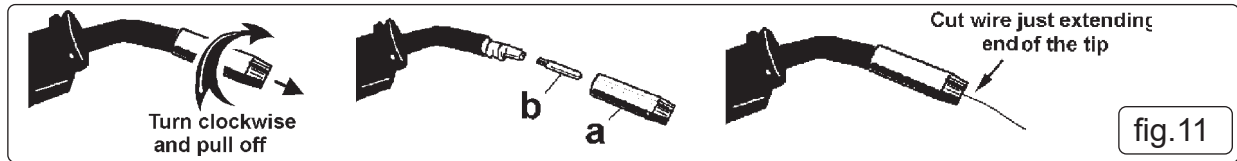
7.1. To access the drive mechanism pull the pressure adjustment knob to the left and allow it to rotate downwards (fig.8). The pressure roller housing will then spring open, rotating to the right (fig.9).

7.1.1. Ensure that the required feed groove ( $\varnothing 0.8\text{mm}$  and  $\varnothing 1.0\text{mm}$  wire) is in line with the wire path. See section 7.4 on how to reverse or change the roller.

7.1.2. Release the wire from the reel and trim off any bent portion and remove any burrs.

- **WARNING!** Prevent the wire from uncoiling by keeping the wire under tension at all times.
- 7.1.3. Straighten 50-100mm of wire and gently push it through the flexible metal sheathed cable (fig.7) over the feed roller groove and then into the torch cable liner.
- 7.1.4. Push down the pressure roller onto the wire feed roller and hold it down then rotate the pressure knob upwards and onto the housing until it snaps into position (fig.8).
- 7.1.5. Rotate the tension knob to a medium pressure setting between 2 and 3.

**NOTE:** Turning the knob clockwise increases the pressure and turning anti-clockwise decreases the pressure (fig.8).



- 7.1.6. Remove the gas cup by turning clockwise and pull it off the end of the torch (fig.11 a).
- **WARNING! DO NOT** turn the gas cup anti-clockwise. This will damage the internal spring.
- 7.1.7. Unscrew the copper contact tip (fig.11 b).
- 7.1.8. Check that the welding set is switched off at position "0" and that the earth clamp is isolated away from the torch tip.
- 7.1.9. Connect the welding set to the mains power supply and set the voltage switch to "1".
- 7.1.10. Set the wire speed control knob to position 5 or 6. Keep the torch cable as straight as possible and press the torch switch and the wire will feed through the torch.
- 7.1.11. When the wire has fully fed through, switch the welding set off and unplug from the mains.
- 7.1.12. Slide the contact tip over the wire and screw back into position.
- 7.1.13. Reattach the gas cup.
- **WARNING! DO NOT** turn the gas cup anti-clockwise. This will damage the internal spring.
- 7.1.14. Cut the wire so that it is just protruding from the gas cup (fig.11).

## 7.2. SETTING THE WIRE TENSION

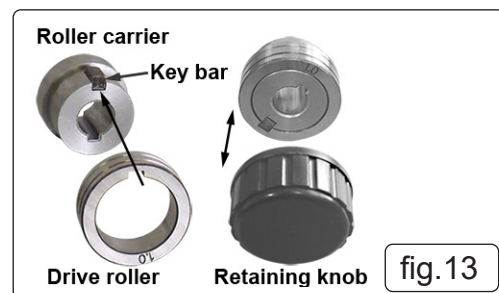
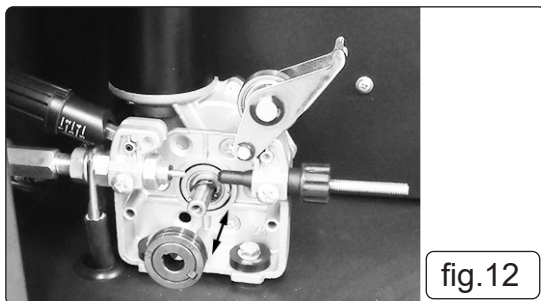
- 7.2.1. Adjust the wire tension by turning the wire tension knob (fig.8). Turn clockwise to increase the tension and anti-clockwise to decrease the tension.
- IMPORTANT:** Too little or too much tension will cause problematic wire feed and poor weld quality.
- 7.2.2. Tension between rollers is checked by slowing down the wire between your gloved fingers. If the top feed rollers skid the tension is correct. Use as low a tension as possible; too high a tension will deform wire and result in a blown fuse on the printed circuit board. Adjust tension by turning the pressure knob (fig.8).

## 7.3. CLUTCH ADJUSTMENT

- NOTE:** It is essential that the clutch is adjusted correctly.
- 7.3.1. Once the wire is fed through the torch, switch on the welding set and set the wire speed to maximum.
- 7.3.2. Depress the torch switch and release quickly. If the spool overruns this indicates that the clutch is too loose.
- 7.3.3. Tighten the clutch nut located in the centre of the wire spool holder with a correct sized spanner (fig.6).
- 7.3.4. Re-test the clutch adjustment, as described above, until the wire stops overrunning.
- × **DO NOT** over tighten the clutch as this will cause wire speed problems and strain the motor.

## 7.4. TURNING/CHANGING THE DRIVE ROLLER

- NOTE:** Ensure that the contact tip, the groove size on the drive wheel and torch liner correspond to the wire diameter being used. Failure to do this could cause the wire to slip and/or bind.
- 7.4.1. Open the wire feed mechanism. See section 7.1.
- 7.4.2. Unscrew and remove the black feed roller retaining knob (fig.10), and put to one side.
- 7.4.3. The roller carrier (fig.13) is keyed to the main drive shaft and the drive roller (fig.13) is keyed to the carrier.
- 7.4.4. With care slide the slide the drive roller off the carrier. Ensure the key bars remain in place (fig.12).
- NOTE:** The size of each wire feed groove is marked on the edge of the roller on the same side as the groove.
- 7.4.5. Reverse or replace the drive roller as required. The required groove should be positioned furthest away from you and be in line with the drive path.
- 7.4.6. Replace the drive roller. Ensure that the keyway's are aligned.
- 7.4.7. Reattach the black feed roller retaining knob and tighten.
- 7.4.8. Close the wire feed mechanism. See section 7.1.4

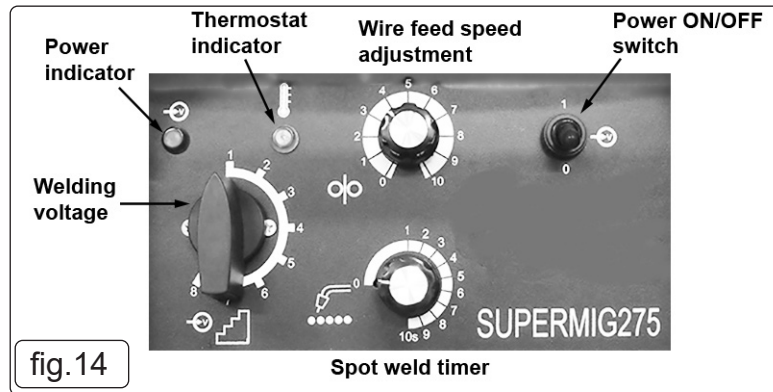


## 7.5. WIRE FEED CONTROL

- 7.5.1. Select the desired wire feed with the 'Wire Feed Control' control located on the front panel of the welding set (fig.14).

## 8. CONTROLS

8.1. Fig 14 illustrates the main panel control for the Supermig 275.



### 8.2. SYSTEM PROTECTION

A thermostat is built into the system to protect against overheating. The indicator light comes on when overheating occurs and cuts off the power supply. It will reset automatically within a few minutes, after cooling down.

### 8.3. SPOT WELDING

8.3.1. Switch the welding set to the SPOT mode position.

8.3.2. Remove the gas cup, see section 7.1.6 and replace it with the spot welding cap (fig.15).

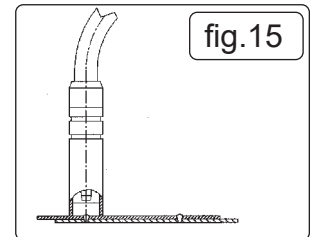
8.3.3. Set the voltage to highest setting (fig.14).

8.3.4. Set the wire speed at almost maximum speed (fig.14).

8.3.5. Turn ON the Spot Weld Timer to the desired time to suit thickness of plate being spot welded (fig.14).

8.3.6. Press the torch button until the spot welding timer cuts in to stop the welding.

8.3.7. Repeat as required.



## 9. MAINTENANCE

### 9.1. WIRE FEED UNIT

9.1.1. Check the wire feed unit at regular intervals. The feed roller wire guide plays an important part in obtaining consistent welding results. Poor wire feed affects welding quality. Clean the rollers weekly removing all dust deposits.

### 9.2. TORCH

9.2.1. Protect the torch cable assembly from mechanical wear. Clean the liner from the machine forwards with compressed air. Replace the liner if it becomes clogged.

### 9.3. FEED ROLLER REPLACEMENT

9.3.1. See section 7.4.

### 9.4. CONTACT TIP

9.4.1. The contact tip is a consumable item and must be replaced when the hole becomes enlarged or oval. The contact tip must be kept free from spatter to ensure an unimpeded flow of gas.

### 9.5. GAS CUP

9.5.1. The gas cup must also be kept clean and free from spatter. Build up of spatter inside the gas cup can cause a short circuit at the contact tip which will result in either the fuse blowing on the printed circuit card, or expensive machine repairs.

To keep the contact tip free from spatter, we recommend the use of Sealey anti-spatter spray (MIG/722307) available from your Sealey stockist.

### 9.6. REPLACING THE LINER

9.6.1. Wind the wire back onto the spool and secure.

9.6.2. Unscrew the torch from the welding set and undo the brass nut.

9.6.3. The liner should now be visible.

9.6.4. Pull the line out and replace with a new one.

## 10. TROUBLESHOOTING

| PROBLEM  | POSSIBLE CAUSE  | REMEDY  |
|--|---|---|
| 1. Power source stops  | Overheating protection activated due to overload  | Protection automatically resets when transformer has cooled (about 15 min)  |
| 2. No weld current   | Rectifier blown   | Replace rectifier   |
| 3. No weld current   | Bad connection between clamp & workpiece<br>Break in earth lead<br>Break in torch lead  | Clean or grind contact surface and weld area<br>Repair or replace earth lead<br>Repair or replace torch lead  |
| 4. Feed motor not working. Lamp is on  | Fuse blown<br>Gear damaged or worn<br>Motor defective   | Replace fuse 1.5 amp<br>Contact service agent<br>Replace motor (Contact service agent)  |
| 5. Wire does not feed. Feed roller rotates   | Pressure roller improperly adjusted<br>Dirt, copper, dust, etc, have collected in torch liner<br><br>Gas cup (Nozzle) or tip defective. Faulty speed control<br>Deformed wire                         | Adjust tension<br>Clean the liner from the machine forward. Use compressed air. If too much dirt, replace the liner<br>Replace gas cup (nozzle) and/or tip<br>Check roller tension and adjust it if necessary   |
| 6. Wire feeds unevenly   | Dirt, etc, in liner<br>Gas cup (Nozzle) or Tip defective<br>Gas cup (Nozzle) spattered<br>Feed roller groove clogged<br>Feed roller groove deformed<br>Pressure roller tension improper               | Clean the liner from the machine forward. Use compressed air<br>Replace gas cup (nozzle) and/or tip<br>Clean or replace gas cup (nozzle)<br>Clean feed roller<br>Replace feed roller<br>Adjust tension  |
| 7. Unstable arc  | Incorrect settings<br>Impurities in weld area<br>Worn or defective gas cup (nozzle)   | Check settings<br>Clean and/or grind workpiece<br>Replace gas cup (nozzle)  |
| 8. Porous weld   | No gas<br>Gas cup clogged<br>Draft blowing away shielding gas<br>Rusty or dirty joints<br>Torch too far from or at wrong angle to work<br><br>Gas leak<br>Dirty Workpiece                             | Open gas cylinder, regulate gas flow<br>Clean or replace cup<br>Screen off welding site or increase gas flow<br>Clean or grind the workpiece<br>The distance from gas cup to workpiece should be 8-10mm<br>Check contact tip and nozzle<br>Check hoses, connections and torch assembly<br>Press the gas cup into correct position   |
| 9. Electrode sticking in gas cup (nozzle)  | Worn or defective gas cup (nozzle)<br>Electrode deformed<br>Wire speed too slow   | Replace gas cup (nozzle)<br>Check roller tension<br>Adjust wire feed rate control   |
| 10. Irregular weld bead  | Torch incorrectly held<br>Wire weaving in weld pool   | Use correct torch angle<br>Check roller tension and adjust as needed  |
| 11. Weld bead too narrow and raised  | Weld current too high<br>Weld speed too low   | Increase power and wire speed<br>Move torch slower and weave a little more  |
| 12. Weld bead too wide   | Weld current too high<br>Weld speed too low<br>Arc too long   | Decrease power and wire speed<br>Move torch faster and weave less<br>Bring torch closer to workpiece  |
| 13. Poor penetration   | Weld current too high<br>Arc too long   | Increase power and wire speed<br>Bring torch closer to workpiece  |
| 14. Excessive penetration  | Weld current too high<br>weld speed too slow<br>incorrect distance of torch to workpiece  | Decrease power and wire speed<br>Move torch faster<br>Torch distance should be 8-10mm   |
| 15. Fuse blowing   | Tension too great<br>Gas cup contact tip clogged  | Release tension<br>Clean gas cup and contact tip  |
| 16. Coils of wire on reel overlap, or wire is oxidised. Coils break or fall under wheel. | Tension to loose or tight. Coil damaged or wire twisted.  | Reset tension. Change wire reel   |
| 17. Wire runs through torch but there is no welding current                              | Defective contactor.<br>Worn contacts of contactor regulator<br>Regulation switch problem<br>Faulty rectifier.<br><br>Fault on electronic circuit of contactor<br>Work cable not connected correctly. | Check coil ends, change coil if necessary.<br>Check, clean contacts, change if oxidation is present.<br>Check secondary voltage for each switch setting.<br>Disconnect rectifier from secondary, check each diode goes one way only.<br>If not change rectifier.<br>Change control module.<br>Connect work clamp directly to workpiece. Check wire is in good condition and making good contact with clamp. |



### ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

**Note:** It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice. Please note that other versions of this product are available. If you require documentation for alternative versions, please email or call our technical team on [technical@sealey.co.uk](mailto:technical@sealey.co.uk) or 01284 757505.

**Important:** No Liability is accepted for incorrect use of this product.

**Warranty:** Lifetime guarantee on Transformer - Comprises 1 year unconditional parts and labour on all parts, followed by a lifetime guarantee (parts and labour) conditional on registering your purchase with us online at [www.sealey.co.uk](http://www.sealey.co.uk).

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