



TIG INVERTER WELDING TORCH 16MM²

MODEL NO: TIG13S

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 instruction manual



Wear a welding mask



Wear protective gloves



Wear safety footwear



Wear protective clothing



Electrical shock hazard



Hot surfaces



Do not use in the vicinity of a pacemaker



Welding sparks can cause explosions or fire



Arc rays can be hazardous to health



Breathing welding fumes can be hazardous to health

1. SAFETY

1.1. ELECTRICAL SAFETY

- ☐ **WARNING!** It is the user's responsibility to check the following:
- ✓ Check all electrical equipment and appliances to ensure that they are safe before using.
- ✓ Inspect power supply leads, plugs and all electrical connections for wear and damage.
- ✓ Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply.
- ✗ **DO NOT** use worn or damaged cables, plugs or connectors.
- ✓ Ensure that any faulty item is repaired or is replaced immediately by a qualified electrician.
- ✓ If the cable or plug is damaged during use, switch off the electricity supply and remove from use.
- ✓ Ensure that repairs are carried out by a qualified electrician.
- ✓ Sealey recommend that an RCD (Residual Current Device) is used with all electrical products.
- Important:** Ensure that the voltage rating on the appliance suits the power supply to be used and that the plug is fitted with the correct fuse.
- ✗ **DO NOT** pull or carry the appliance by the power cable.
- ✗ **DO NOT** pull the plug from the socket by the cable.

1.2. GENERAL SAFETY

1.2.1. OPERATOR SAFETY

- ✓ Operators must receive adequate training before using the inverter.
- ✓ Remove ill fitting clothing, remove ties, watches, rings and other loose jewellery and contain long hair.
- ✗ **DO NOT** operate the inverter while under the influence of drugs, alcohol or intoxicating medication, or if tired.
- ✓ Stand correctly keeping a good footing and balance, ensure that the floor is not slippery and wear non-slip shoes.
- ✓ Keep unauthorised persons away from the work area. Any persons working within the area must wear the same protective items.
- ✓ Avoid oily greasy clothing. A spark may ignite them.
- ✗ **DO NOT** touch the work piece close to the weld as it will be very hot. Allow to cool.
- ✗ **DO NOT** touch the electrode holder immediately after use. Allow the electrode holder to cool.
- ✓ Wear safety welding gauntlets.
- ☐ **WARNING! DO NOT** place the welding power source on a tilted plane as this may lead to the unit toppling over.
- ✓ The output is rated at an ambient temperature of 20°C and the welding time may be reduced at higher temperatures.
- ✓ Risk of electric shock: Electric shock from welding electrode can kill. **DO NOT** weld in the rain or snow. Wear dry insulating gloves.
- ✗ **DO NOT** touch electrode with bare hands. **DO NOT** wear wet or damaged gloves. Protect yourself from electric shock by insulating yourself from workpiece. **DO NOT** open the equipment enclosure.
- ✓ Use genuine parts and accessories only. Unapproved parts may be dangerous and will invalidate the warranty.
- ▲ **DANGER! DO NOT** weld near flammable materials, solids, liquids, or gases, and **DO NOT** weld containers or pipes which have held flammable materials or gases, liquids or solids. Avoid operating on materials cleaned with chlorinated solvents or near such solvents.
- ✗ **DO NOT** use power source for pipe thawing.
- ▲ **DANGER!** Vapours from chlorinated solvents (such as de-greasers) can be decomposed by the heat of the arc to form PHOSGENE, a highly toxic gas, and other lung and eye irritating products.
The ultraviolet (radiant) energy of the arc can also decompose trichloroethane and perchloroethylene vapours to form phosgene.
- ✗ **DO NOT** weld where solvent vapours can be drawn into the welding or cutting atmosphere or where the radiant energy can penetrate to atmospheres containing even minute amounts of trichloroethylene or perchloroethylene.
- ✓ Prevent dangerous conditions arising by providing adequate ventilation. **NEVER** ventilate with oxygen.
- ▲ **DANGER!** Lead-, cadmium-, zinc-, mercury- and beryllium-, bearing materials, when welded (or cut) may produce harmful concentrations of toxic fumes. Adequate local exhaust ventilation must be used, or each person in the area as well as the operator must wear an air- supplied respirator.

For beryllium, both must be used. Metals coated with or containing materials that emit toxic fumes should not be heated unless coating is removed from the work surface, the area is well ventilated, or the operator wears an air-supplied respirator.

✗ **DO NOT** work in an unventilated confined space. If necessary, wear an air-supplied respirator.

☐ **WARNING!** Generator engine exhaust must be vented to the outside air. Carbon monoxide can kill.

✓ When not in use store the welder in a safe, dry, childproof area.

1.2.2. CABLE CONNECTIONS

✓ Keep the inverter and cables in good working order and condition. Take immediate action to repair or replace damaged parts.

✓ Ensure that there is no obstruction to the flow of clean, cool air and ensure that there are no conductive dusts, corrosive vapours or humidity which could enter the inverter and cause serious damage.

1.2.3. PROTECTION FROM ARC

☐ **WARNING!** Use welding head shield to protect eyes and avoid exposing skin to ultraviolet rays given off by electric arc. Looking at an arc momentarily with unprotected eyes (particularly a high intensity gas-shielded arc) can cause a retinal burn that may leave a permanent dark area in the field of vision.

✓ Before welding whilst wearing contact lenses, seek advice from your optician.

✓ Avoid unintentional contact with workpiece. Accidental or uncontrolled arcing on the electrode holder may be dangerous.

✗ **DO NOT** hit the electrode on the workpiece, this may damage the electrode and make strike-up difficult.

✓ Wear safety welding gauntlets.

1.2.4. WELDING ENVIRONMENT

✓ Locate the inverter in a suitable work area.

✓ Keep the work area clean and tidy and free from unrelated materials. Also ensure that the work area has adequate lighting.

✗ **DO NOT** get inverter wet or use in damp or wet locations or areas where there is condensation.

✓ First aid facilities and a qualified first aid person should be available during welding operations.

✓ For production welding, a separate room or enclosed bay should be provided. In open areas, surround the operation with low reflective, non-combustible screens or panels. Allow for free air circulation, particularly at floor level. Provide face shields for all persons who will be looking directly at the weld. Before starting to weld, make sure that screen or bay doors are closed.

✓ Always ensure that there is full free air circulating around the outer casing of the machine, and that the louvres are unobstructed.

1.2.5. FIRE HAZARD

☐ **WARNING!** Be aware that flying sparks or falling slag can pass through cracks, along pipes, through windows or doors, and through wall or floor openings, out of sight of the operator. Sparks and slag can fly 10m.

✗ **DO NOT** weld within 10 metres of combustible materials (including building construction materials).

✗ **DO NOT** weld adjacent to openings (concealed or visible) in floors or walls within 10m that can expose combustibles to sparks.

✗ **DO NOT** weld near to walls, ceilings, roofs or metal partitions where there are combustibles that can be ignited by radiant or conducted heat.

✓ Have suitable fire extinguishing equipment available and someone to use it during welding operations and for some time after welding ceases. After work is done, check that area is free of sparks, glowing embers, and flames.

1.2.6. PRODUCT CARE & MAINTENANCE

✗ **DO NOT** attempt to fit any unapproved electrode holder, components, or parts to the inverter unit.

✓ Keep the inverter clean for best and safest performance.

☐ **WARNING!** If the case is opened for maintenance or repair, wait 10-15 seconds after the unit is switched off for the capacitor to discharge.

1.2.7. TRANSPORTATION

Never pull welder by the welding gun or cables.

1.2.8. ENVIRONMENT

Suitable for both indoor and outdoor use. But it should be protected from heavy rain and sunshine. Store in a dry and clean environment and protect it from sand and dust during use and storage. The recommended operating temperature range -20°C-+40°C.

Place in a way that it does not come in contact with hot surfaces, sparks and spatters.

1.3. WELDING CABLES

The welding cables should be kept as short as possible and should be positioned close together, close to the floor level.

1.3.1. EARTHING OF THE WORK PIECE

Where the work piece is not bonded to earth for electrical safety, nor connected to earth because of its size and position, e.g. ship's hull or building steel work, a connection bonding the work piece to earth may reduce emissions in some. But not all instances. Care should be taken to prevent the earthing of the work piece increasing the risk of injury to users, or damage to other electrical equipment. Where necessary, the connection of the work piece to earth should be made by direct connection to the work piece.

☐ **WARNING!** Hot metal such as electrode stubs and workpieces should never be handled without gloves.

2. INTRODUCTION

Designed for use with Sealey MINIMIG120i, MINIMIG160i and MIG200i models. Ergonomic torch grip ensures control and reduces fatigue during use. Built to withstand high temperatures for reliable performance in demanding conditions.

3. CONTENTS

Refer to attached Parts Information for Contents details.



4. SPECIFICATION

Model No: TIG13S

Applicable Standard: EN 60974-7:2023

Contents:

Three ceramic nozzles 5, 6, 7, one splitter, three collets 1.6mm, 2mm, 2.4mm, one long cap, one short cap.

Electrode Capacity: 1.6, 2, 2.4mm

Recommended Temperature Range: -20°C to 40°C

Method of Guidance: Manual

Arc Striking and Stabilising Voltage Rating: 110-220V

Length of cable/gas hose: 360cm/580cm

Rated Current: Max. 180A

Process Type: TIG

Type of Cooling: None

Type of Shielding Gas: Argon

5. CONNECTION OF TORCH

- 5.1. Refer to welder manual for specific connection details.
- 5.2. Fit Quick Connector cable (10) to front of welder.
- 5.3. Connect gas hose.



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.



WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

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.

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

Warranty: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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