

Connect the welding power link lead to the '+' pin plug on the top control box and the '+' socket of the welder/generator.

Connect the earth link lead to the '-' pin plug on the top control box and the '-' socket of the welder/generator which is marked with the current range you require.

Ensure the metal to be welded is clean, dry and free from rust, paint, grease etc. Aim to weld only bright, bare metal.

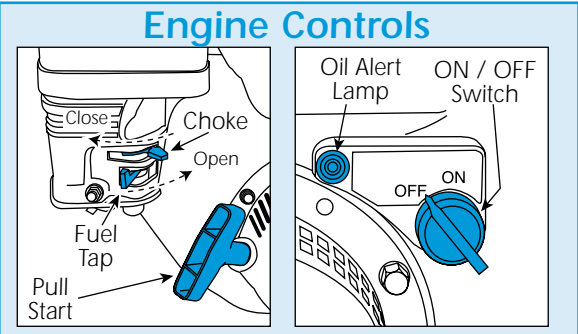
Securely clamp the work pieces in their final positions to stop them moving during welding.

Refer to the table for the welding current and rod size appropriate to the total thickness of metal being welded.

Clip the earth clamp onto the work piece, choosing an area of clean, bright metal close to the proposed weld to ensure a good electrical connection.

Now, insert a welding rod into the notch in the electrode holders jaws. Squeeze the lever to open them; release to close.

**Engine Controls**



Set the engines ON/OFF switch to ON, open the fuel tap and set the choke – fully closed if starting from cold, half closed if the engine is warm.

Turn the engine speed dial fully clockwise, this dial controls the engine speed and is also used to control generator output and welding current.

Two or three brisk pulls on the starter cord, should now start the engine.

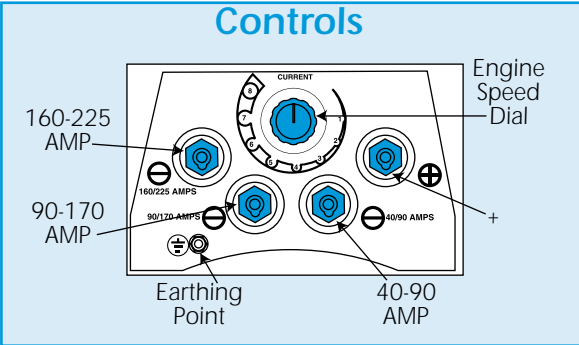
Once the engine has warmed up, fully open the choke and switch the engine OFF.

**BASIC TECHNIQUES**

When first set up, you chose the '-' (negative) socket to suit the welding current range you need. This range is now controlled by the engines speed and it is the operators job to find the correct setting for the work in hand, by increasing or decreasing the engine RPM.

Try the weld on a test piece of scrap if you are not sure of the setting.

Simply increase or decrease the engine speed using the engine speed dial as required.



Before striking an arc, ensure your vision is protected by the welding mask lens.

Holding the welding rod at about 3mm, simply move the rod slowly along the weld in a series of semicircular sweeps, across the line of the joint.

Chip off the any slag build up on the weld before making a second pass.

To Use As A Generator...

If you wish to use the generator, you may power 110V equipment up to a maximum of 2kVA (2,000w). However you can't take power from the generator whilst welding as the units' windings will overheat and fail.

To set the unit for generating, set the engine speed dial fully clockwise to increase the engine speed. Check the voltmeter reading is at 250, at this setting the unit will produce 110V CTE power.

**Power Limits**

Never overloaded the generator. To calculate the running load, add up the power ratings of everything to be connected to it in kilowatts 1kW (kilowatt) = 1000 W (Watts). If in doubt, contact your local HSS Hire Shop for advice.

When you need to use the welder again, switch OFF what ever you are powering and reset the engine speed to suit the weld.

**EQUIPMENT CARE**

Never push the equipment beyond its design limits. If it will not do what want you want with reasonable ease assume you have the wrong size generator for the job. Ask at your local HSS Hire Shop for advice.

Keep the equipment clean. You will find this less of a chore if you clean up regularly rather than wait until the end of the hire.

When not in use, store the equipment somewhere clean, dry and safe from thieves.

Keep the engine upright at all times. If it should be

Welding Currents & Rods		
Total Welded Metal Thickness	Welding Current	Welding Rod Size
3 - 5mm	50 - 70A	2.00mm (14swg)
3 - 6mm	70 - 95A	2.50mm (12swg)
6 - 10mm	100 - 130A	3.25mm (10swg)
10 - 13mm	150 - 180A	4.00mm (8swg)
13 - 16mm	200 - 240A	5.00mm (6swg)

tipped over, mop up oil and fuel spillages and contact your local HSS Hire Shop for advice.

Regularly check the fuel level and top up as required using the correct fuel: lead-free petrol.

Check the engine oil level daily. Let the engine cool, stand it on level ground, withdraw the dipstick and wipe clean. Now, replace the dipstick, withdraw it a second time and verify that the oil level is between min and max. Top up as required.

**FINISHING OFF**

Set the engine speed control dial fully anti-clockwise, set the engines ON/OFF switch to the OFF position and wait for the engine to stop.

Disconnect the welding leads and neatly coil them ready for return to your local HSS Hire Shop.



**...any comments?**

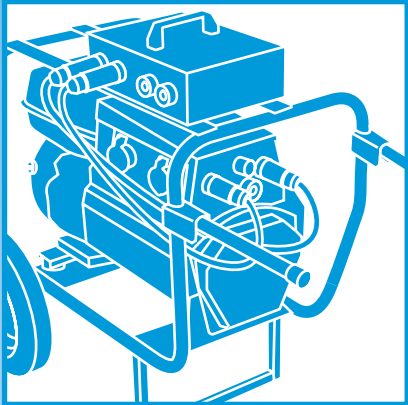
If you have any suggestions to enable us to improve the information within this guide please fax your comments or write to the Product Manager at the address below

Fax: 020 8687 5001

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# 225amp Welder Generator

A portable welding unit designed to meet strict requirements of BS7570 code of practice.



## GENERAL SAFETY

For advice on the safety and suitability of this equipment contact your local HSS Hire Weld Depot.

There is a serious risk of personal injury if you do not follow all instructions laid down in this guide.

The hirer has a responsibility to ensure that all necessary risk assessments have been completed prior to the use of this equipment.


Most welding tasks may be considered as hot work in site situations and may be subject to specific permits to work.

This equipment should only be used by an operator who has been deemed competent to do so by his/her employer.

This equipment should be used by an able bodied, competent adult who has read and understood these instructions. Anyone with either a temporary or permanent disability, should seek expert advice before using it.


Keep children, animals and bystanders away from the work area. Cordon off a NO GO area using cones and either barriers or tape, available for hire from your local HSS Hire Weld Depot.


Welding screens are also available for hire from your local HSS Hire Weld Depot.


 Never use this equipment if you are ill, feeling tired, or under the influence of alcohol or drugs.


## Warning


If you are wearing an electronic life support device (a heart Pacemaker) you must consult your doctor before going near or working with this equipment. Magnetic fields associated with high currents may affect these devices.

 This equipment generates potentially harmful noise levels. To comply with health and safety at work regulations, ear defenders must be worn by everyone in the vicinity.

 Fumes produced by the welding process, if inhaled, can be harmful to health. A suitable mask must be worn when using this equipment. Respiratory protective equipment is available for hire, contact your local HSS Hire Weld Depot for details.

 Skin must be covered – wear practical, protective clothing, gloves and footwear.

 This equipment is heavy (97Kg), never attempt to lift it on your own, always get help.

 A head shield with an 11 EW shade MUST be worn by anyone in the work area – goggles are not suitable. Avoid loose garments and jewellery that could interfere with the work.

If the headshield or lens becomes damaged, return it to your local HSS Hire Weld Depot.

Never use welding equipment near computers or any sensitive electronic equipment.

Always transport, store and operate the machine in an upright position.

## Exhaust Danger

NEVER operate petrol engines indoors or in a confined space.

The exhaust contains gases that can Kill.

## Fuel Safety

NEVER refuel while the engine is hot or running.

Never smoke or allow naked lights into the area while refuelling.

Never inhale fuel vapour.

ALWAYS mop up spillages as quickly as possible, and change your clothes if you get fuel on yourself.

ALWAYS store fuel in a purpose-made sealed container, in a cool, safe place well away from the work area.

Engines, especially the exhausts, get very hot so switch OFF and allow to cool before touching them. Keep flammable materials well away from engine and exhaust.

Keep the power units air vents clear of all obstructions.

Always switch equipment OFF before making any adjustments to it. Never leave it running and unattended.

Ensure the work area is well lit and ventilated, a fume extractor or smoke eliminator should be used. If in doubt, ask about lighting and ventilation equipment at your local HSS Hire Weld Depot.

Do not work near flammable gases or liquids, petrol or paint thinner fumes for example. Keep combustible materials at a safe distance – at least 5m.

Make sure you know how to switch this machine OFF before you switch it ON in case you get into difficulty.

Before carrying out welding work on cars, lorries and similar vehicles, remove the vehicles' battery and disconnect the alternator.

Remove all combustible material and other fire or explosion hazards.

Check the condition of the equipment before use. If it shows signs of damage or excessive wear, return it to your local HSS Hire Weld Depot.

COSHH information sheets are available from your local HSS Hire Weld Depot.

## ELECTRICAL SAFETY

This equipment is capable of supplying up to 2kVA of 110V power continuously (MAX. Total tool wattage 2000W). However, it cannot power the weld at the same time as the generator.

Before you use the unit as a generator, STOP welding and move the welding current knob clockwise to full engine speed.

Next, plug the tool onto the power take off (PTO) socket and switch the tool ON.

Keep flexes out of harm's way, and clear of the work area.

Extension leads should be fully unwound and loosely coiled, away from the equipment. Never run them through water, over sharp edges or where they could trip someone.

Keep the equipment dry, using electrical equipment in very damp or wet conditions can be dangerous.

 To reduce the risk of electric shock, use a suitable RCD (Residual Current-Operated Device) available from your local HSS Hire Shop.

Ensure the tool is switched OFF before plugging into the PTO.

Keep the Welder/Generator and other electrical equipment dry at all times, providing it with adequate shelter from the weather. Operating in wet or very damp conditions can be dangerous.

If powering equipment that requires an earth, connect the generator's earth terminal to a suitable earthing point.

Always turn OFF all electrical switches before making or breaking connections or servicing equipment powered by the generator.

Never use a generator to power computers, and similar electronic equipment. It will damage them!

All HSS Welder/Generators have circuit breakers that cut OFF the power if the electrics become overloaded. If a circuit breaker trips, unplug everything, then reset the switch to restore the power.

Never start or stop the Welder/Generator 'on load'. Always switch OFF and unplug all equipment powered by it.

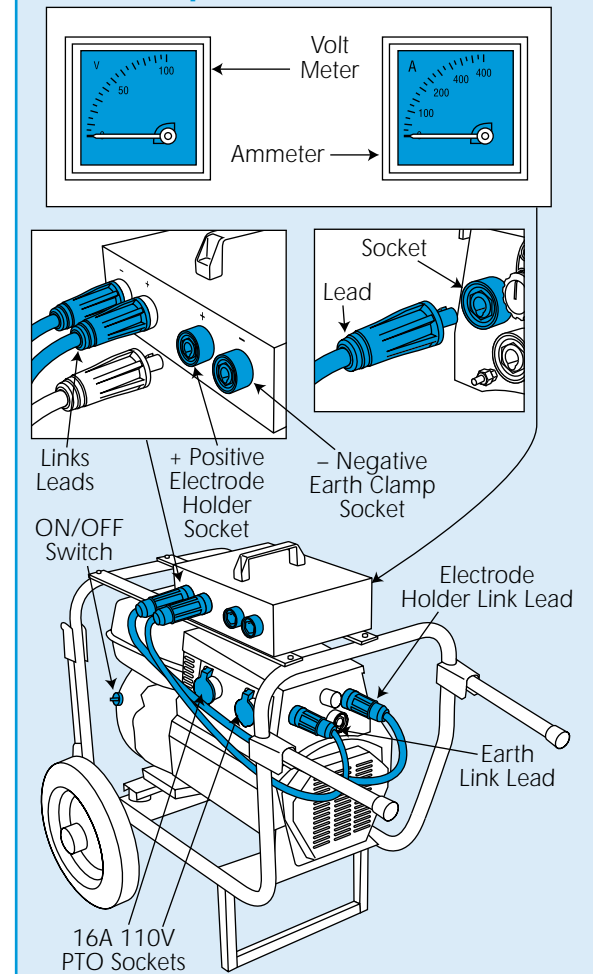
## GETTING STARTED

This guide is designed to help the user to safely set up and dismantle the welder. It is not intended as a guide to welding techniques as it is assumed that the user already has the necessary training/knowledge and experience.

It is essential to familiarise yourself with all the controls before starting.

With the machine on firm level ground, check fuel and oil levels (see EQUIPMENT CARE).

## 225amp Welder Generator



If appropriate, connect the Welder/Generator's earth terminal (a grounding point on the generator chassis, not to be confused with an earth cable used for welding) to an earthing point using suitable cable, this should be made by a qualified electrician.

If Welding...

Connect the earth clamp welding lead to the '-' socket on the top control box and the electrode holder welding lead to the '+' socket on the top control box.

To fit the connections, insert the connector aligning the pin with the slot on the socket. Push the connector fully in then turn clockwise as far as it will go.

Next, check that the welding link leads, which connect the control box to the main unit, are connected correctly.