

GETTING STARTED

This guide is designed to help the user to safely set up and use 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.

Stand the Welder Generator on a firm, level surface strong enough to bear its weight. DO NOT use on slopes, soft ground or where there is a risk of subsidence.

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

To start the generator, turn the ignition key to the ON position and check the warning lamps.

The oil and battery lamps should illuminate to confirm there is power, **turn the key to the 'ST'** (start position), the engine will turn over, **then once running return the key back to the ON position.**

Let the engine warm up for a minimum of 10 minutes and then turn the ignition key to the OFF position to stop the engine.

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.

Connect the earth welding lead to the '-' negative socket and the electrode holder welding lead to the '+' positive socket.

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.

The generator can supply, 110V or 230V, it is unable to supply more than 1 at the same time.

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.

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 holder's jaws.** Squeeze the lever to open them; release to close.

BASIC TECHNIQUES

Check the control panel settings before you start. Set the current dial to the amperage required.

Should you need **to link two units together** to increase the welding amperage, **follow the instruction in Operating & Safety Guide No 709.**

Remember to **set one unit to maximum amperage and use the second unit for final adjustment**, this 2nd unit should also be the one with the remote fitted if one is being used.

Where a remote is being used plug it into the remote socket and **move the remote switch to 'I'** (ON). If the remote is not being used set the switch to 'O' (OFF).

You can now **start the engine** as previously described in 'GETTING STARTED'.

Try the weld on a test piece of scrap if you are not sure of the setting. Simply increase or decrease as required.

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

Holding the welding rod/electrode holder at an angle of 60-70 degrees to the surface, **move it towards the work until it strikes an arc.**

Now, **keeping the arc about 3mm long, work slowly along the weld** in a series of semi-circular sweeps across the line of the joint.

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

Note that recommended settings are merely guides. Changing them slightly may give better results. So, always make a test weld.

To Use As A Generator...

If you wish to use the generator, you may power either 110V or 230V up to a maximum of 5kVA (5,000w). However you can't take power from the generator whilst welding as the units' windings will overheat and fail.

To use the unit for generating, check the voltmeter reading is at 250V, at this setting the unit will produce either 230V or 110V CTE (centre tapped to earth) power.

Power Limits

Never overload 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). Depending on the equipment being powered this should be between half and two - thirds the generator's kVA rating but, if in doubt, ask your local HSS Hire Weld Depot for advice.

When you need to use the welder again, switch OFF whatever you are powering.

EQUIPMENT CARE

Never push the equipment beyond its design limits. If it will not do what you want with reasonable ease and speed, assume you have the wrong type or size of welder for the job. **Ask at your local HSS Hire Weld Depot for advice.**

Regularly check the fuel level and top up as necessary with clean fresh diesel.

Regularly check the oil level - when the engine is cold and on level ground. Withdraw the dipstick, wipe it clean, then replace it, remove it a second time and verify that the oil level is between the min and max lines, **top up as**

necessary. Suitable oils are available on sale or return from your local HSS Hire Weld Depot.

Even if you are only stopping work for a short break, shut down the engine completely.

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

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

FINISHING OFF

Set the key to OFF and wait until the engine stops. Leave everything to cool then take the earth clamp off the work.

If you have finished with the equipment completely, you should now **clean up the welder generator** as thoroughly as possible, **disconnect the welding leads then coil them** neatly ready for return to your local HSS Hire Weld Depot.



...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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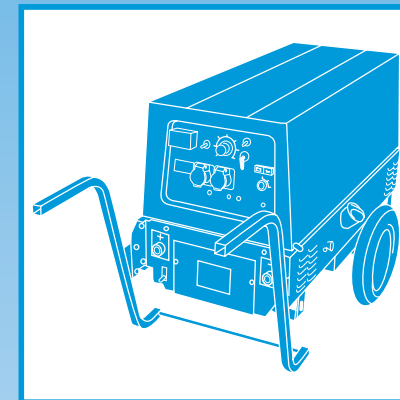
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Operating & Safety Guide HW870

HW870/01

HSS Hire-Weld



225amp Diesel Welder Generator

A diesel welder generator for MMA



Code 55736

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, 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.

Warning!

During electric/electronic welding/cutting operations, intense magnetic & electrical fields are produced and these may interfere with other electronically sensitive equipment.

All personnel wearing Heart Pacemakers or other electronically controlled medical devices must be kept away from any electric/electronic welding/cutting operations.

The welding/cutting equipment should be installed at least 5 metres away from any computer equipment to minimise any possible interaction.

Cables carrying signals between electronic devices are capable of picking up interference from electric/electronic welding/cutting operations. This interference may prejudice the way in which these devices function and therefore all signal-carrying cables should also be sited outside the 5 metre zone.

Do not place objects that are sensitive to magnetism (wristwatches, credit cards, computer discs etc.) near the welding or cutting zone. They may be rendered useless.

The welding/cutting equipment is itself electronically sensitive and its position relative to other radiation emitting equipment (mobile phones, remote controls, motor speed controllers etc.) must be considered.



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



This Welder / Generator produces 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, never attempt to lift it, 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 head shield or lens becomes damaged, return it to your local HSS Hire Weld Depot.

Let it Cool

Handle welding equipment and work with care – it will be hot. Leave equipment to cool before changing welding rods, moving earth clamps, and so on.

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

Exhaust Danger

NEVER operate diesel 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 any spillage 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.

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 welder/generator OFF before you switch it ON in case you get into difficulty.

Vehicle Safety

Before carrying out welding work on cars/lorries and similar vehicles...

Remove the vehicle's battery and disconnect the alternator.

Remove all combustible material and other fire/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 5kVA of 230V power or 5kVA of 110V power (but only one voltage at a time), continuously. However, it cannot power the weld at the same time as the generator.

Before you use the unit as a generator you must STOP welding.

Keep all leads and cables out of harm's way, and clear of the work area.

Leads and cables 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 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.

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

You must have a suitable earth cable connect the generator's earth terminal and to a suitable earthing point. This operation must only be performed by a qualified electrician and must conform to IEC 364 standard.

Ensure any tools are switched OFF before plugging into the PTO.

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!

Always turn OFF the Welder/Generator's engine when not in use and before servicing the engine itself.

Safety Cut-Outs

Safety Cut-Outs

All HSS Welder/Generators have circuit breakers that cut OFF the power if the electrics become overloaded (due to a fault in the generator or the equipment being powered by it). **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.

225Amp Diesel Welder Generator

