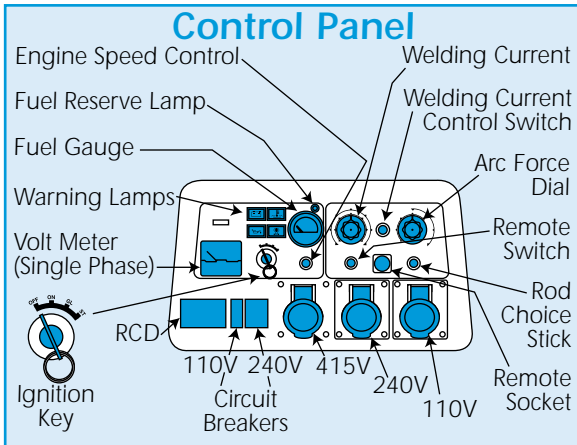


BASIC TECHNIQUES

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.



Check the control panel settings before you start. If you are using standard welding rods, set the rod choice switch to basic. If using cellulosic set it to cellulosic.

Set the arc force dial to 1 and the current dial to the amperage required (a max of 370amps or 400amps depending on model).

Should you need to link 2 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 1. If remote is not being used set the switch to 0.

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 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.

You can use the 'arc force' setting with either standard or cellulosic rods, this feature is used mainly for pipe work and should only be used if you are suitably trained.

The dial setting 1-5 should be used with standard rods and 4-7 only with cellulosic rods. Each setting number increases voltage by 5Vs so intermediate settings can be achieved.

If at any time, the units' windings become overloaded, power will be stopped until the coils have cooled. This will be indicated by the 'overload' lamp being illuminated.

To Use As A Generator...

If you wish to use the generator, you may power either 110V up to a max. of 6kVA (6,000w), or 230V up to a max. of 8kVA or 415V up to a max. of 12kVA. 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 ammeter reading is at 230V (this can only be checked when you switch ON the equipment you wish to power), at this setting the unit will produce either 415V, 230V or 110V CTE power. Note that all the circuits are protected by an RCD, and therefore the earthing point on the unit must be correctly grounded (see 'ELECTRICAL SAFETY'). This must be done by a qualified electrician.

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

Check the oil level before starting and every 8 hours thereafter. Withdraw the dipstick, wipe it clean and then replace it. Remove it a second time to verify that the oil level is between the min and max lines. Top up if necessary (see illustration).

The welder/generator will run happily provided there is sufficient fuel, the engine doesn't overheat and the engine oil level is correct.

If the engine stops, check to see if the oil pressure lamp is illuminated or the reserve fuel lamp is illuminated. If either are top up as necessary.

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

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

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

Handle the equipment with care. If you need to move the unit to the top of a building, use the lifting hook in the centre of the top cover to attach a crane hook.

FINISHING OFF

Set the key to OFF and wait until the engine stops. 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.

Road Safety

Before towing always make sure:-
The Welder Generator is correctly fitted to the vehicle tow bar and the breakaway cable is fitted.
The jockey wheel is raised and locked.
All lights and brakes work and a number plate is displayed.
When towing this equipment, DO NOT EXCEED A SPEED OF 50MPH.



...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

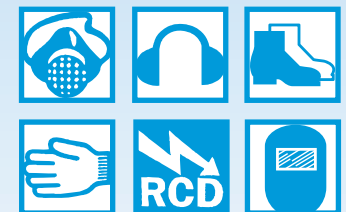
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Group Office: 25 Willow Lane, Mitcham, Surrey CR4 4TS
Web Site: <http://www.hireweld.com>

HSS Hire-Weld



Pipemaster Welder Generator

A road tow diesel welder generators,
for MMA and Cellulosic welding.



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.

 Skin must be covered-protective clothing, footwear and gloves must be worn.

 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.

 A head shield with a 10 EW shade must be worn by everyone in the work area. Goggles are NOT suitable. Ensure that the welding mask is protecting your vision BEFORE striking an arc. If the head shield or lens become damaged, return it to your local HSS Hire Weld Depot for exchange.

Check the equipment before use. If it shows signs of damage or excessive wear, return it.

Exhaust Danger

NEVER operate diesel engines indoors or in a confined space.

The exhaust from the engine contain 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.

Always switch OFF the equipment when not in use. Engines, especially the exhausts, get very hot so switch OFF and allow to cool before touching them.

Let It Cool

Handle welding equipment and work with care, it will be hot.

Leave equipment to cool before changing electrodes, moving earth clamps or handling the work.

Keep flammable materials well away from engine and exhaust.

Never leave the engine running and unattended.

Watch your footing. Take special care if working other than on firm, level ground.

Ensure the tyres are in a road worthy condition and inflated to 27psi.

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


ELECTRICAL SAFETY

This equipment is capable of supplying up to 8kVA of 230V power or 6kVA of 110V power or 12kVA of 415V 3-phase power (but only one voltage at a time), continuously. However, it cannot power the welding process at the same time as the generator. Before you use the unit as a generator you must STOP welding.

Keep flexes out of harms 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, all power takeoff sockets fitted to this unit are protected by an RCD (Residual Current-Operated Device). However, the RCD will only protect the user if the unit has been correctly earthed.

You must have a suitable earth cable connected to 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 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.

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

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.

GETTING STARTED

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.

Apply the handbrake and unhook from any towing vehicle, then set the jockey leg to the correct height.

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

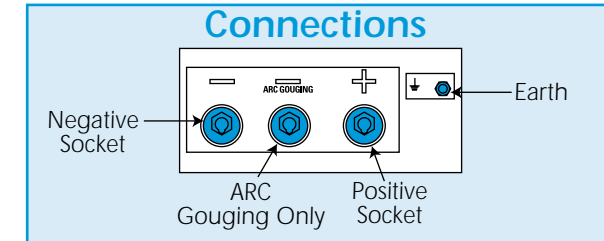
The oil and battery lamps should illuminate to confirm there is power, if the reserve lamp is ON the unit will not run and you will need to refuel using DERV.

Set engine speed control switch to the 'auto' position then turn the key to the 'GL' (glow plug) position and wait until the glow plug warning light goes out.

Turn the key to the 'ST' (start position), the engine will turn over, then once running return the key back to the ON position.

If you turn the key to the OFF position, the engine will stop.

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 connection should only be made by a qualified electrician.

If Stick or Cellulosic Welding...

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

If using Rutile or Acid electrodes...

Connect the earth welding lead to the '+' positive socket and the electrode holder welding lead to the '-' negative 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 415V, 110V or 230V, it is unable to supply more than one voltage at the same time.

Vehicle Safety

Before welding motor vehicles, remove the vehicles battery and disconnect the alternator.

Remove all combustible materials and other hazards.

Remove the fuel tank.

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.