

Using the Arc Welder

1. Wear the protective equipment, especially the welding helmet.
2. Take care to avoid an electric shock from the welding cables.
3. Do not work in damp or wet conditions.
4. Check that the welding cables are connected properly. Switch off if any adjustments are needed to be made including changing rods or welding current.
5. Uncoil the cables completely. Make a good earth connection on the workpiece close to the part to be welded.
6. Always put down the welding rod on an insulated surface. If it touches the workpiece or earth, it could strike an arc.
7. Goggles must be worn to protect the eyes when chipping the slag off.
8. The welder may switch itself off if it is overloaded. Allow it to cool down before restarting. If this happens repeatedly check with an electrician or the hire company.
9. Remember any welding will remain hot for some time. Make sure no-one touches it. Do not cool with water.
10. Stop the engine before leaving the machine unattended.
11. If the equipment does not work properly, do not attempt to repair it. Contact the hire company.

Please keep this leaflet safely as it may be required for future reference

Arc Welder

Read this entire leaflet before using the Arc Welder

1. Petrol is highly flammable. Take care not to cause a fire or explosion.
2. Electricity can be hazardous and must always be used with great care.
3. The glare produced by the electric arc during welding is harmful to the eyes and skin.
4. This welder is designed to weld metals like iron and steel. It will not weld non-ferrous metals.
5. The action of this arc welder can cause injury or damage if the machine is not used in a careful and controlled way. It is quite heavy; care should be taken when moving it.
6. If the operator has not used the arc welder before, they should practice welding some scrap metal before starting on the main task.
7. The work should be thought out and planned ahead to ensure it will always be carried out safely.
8. The following items of personal protective equipment must be worn as a minimum:
Dust mask – a minimum of EN149 FFP3(s) protection;
Ear muffs or plugs giving protection for levels up to 94 dB(A);
Welding mask: EN166/EN169/EN175 or BS679/1542;
Impact resistant goggles: EN166 – B or BS2092 grade 1;
Gloves.
9. This machine must not be used by minors, or by anyone under the influence of drugs or alcohol.
10. This arc welder is designed for operation by an able bodied adult. Anyone with either temporary or permanent disability must seek expert advice before using it.



WORK AREA

1. Do not use this welder where there is danger of explosion. It will ignite fumes from petrol, or gas cylinders.
2. Using this equipment indoors or in confined spaces could cause **fatal** carbon monoxide poisoning. **Never** use it in domestic premises and only use it in other indoor situations if its suitability and the ventilation required has been **fully** assessed. Mechanical extraction ventilation will almost always be required.
3. Make sure that the area is clear and safe and no-one is nearby who could cause a distraction.
4. Protect other people from the noise, and glare from the arc, use a welding booth or screens. Other should be warned to keep away, out up a warning sign.
5. The hot sparks could start a fire, check there is nothing nearby that would burn easily.

OPERATORS

1. The following items of personal protective equipment (ppe) are the minimum that should be worn whenever this equipment is used. Particular jobs or environments may require a higher level of protection.
2. This equipment is likely to cause noise levels up to 94 dB(A) – appropriate ear muffs or plugs giving hearing protection for this level should be worn as a minimum.
3. Impact resistant goggles must be worn

Before Starting Work...



(EN166 – B or BS2092 grade 1) when chipping slag off the workpiece.

4. An appropriate dust mask (with a minimum of EN149 FFP3(s) protection) must be worn if the work produces hazardous fumes.
5. A welding mask must be worn (EN166/EN169/EN175 or BS679/1542) when using the welder.
6. The glare and the heat from the arc, and the sparks, can burn skin, canvas gloves, cotton overalls and safety boot or strong shoes must be worn. Nylon or rubber based clothing should be avoided because it burns easily.
7. Anybody who is working nearby will also need to wear personal protective equipment.
8. Watches or rings must be removed before starting work. The action of the welding arc may make them hot.

ARC WELDER

1. Check the welder, engine, and all equipment. Anything found to be damaged should not be used – contact the hire company.
2. A petrol tank, or anything that has contained a flammable liquid should not



be welded – it is likely to explode.

3. The welding machine should be kept out of the rain; do not get it wet.
4. This machine will get hot in use. Do not cover the air vents in the case. Ensure there is adequate air flow.
5. Make sure that all of the controls are understood. Before starting the machine it must be known how to stop it.

REFUELLING

1. No smoking.
2. Stop the engine and let it cool down.
3. If possible the machine should be moved away from the work area.
4. The filler cap and the area around it should be cleaned to prevent dirt falling into the fuel tank.
5. A funnel should be used, and clean petrol when refuelling. Do not spill any fuel on people or the machine.
6. Wipe any fuel off the machine. Dispose of the fuel soaked cloth carefully.
7. If any fuel is spilled on the ground, wipe it up or cover it with soil.
8. If any fuel is spilled on clothes they should be changed immediately.

9. All fuel caps should be put back on properly, and the fuel should be moved to a safe, cool place.

STARTING THE ENGINE

If the hire company has given you special instructions follow them. If not, read the instructions below for the starting procedure for most diesel-engined arc welders

1. Check that the engine and machine controls are set correctly.
2. Make sure that the machine is held firmly so it will not move when the starter is pulled.
3. The starter handle should be pulled slowly until the starter has engaged with the engine, then it should be pulled quickly and strongly. It should not be pulled too far or it may break.
4. The cord should be guided gently back into place so that it recoils correctly.