

# Safety instructions for welding machines

## *General safety instructions*

Before commissioning, inspect the welding machine for externally visible damages and defects. Any defects and damages must be repaired immediately.

Protect the welding machine from moisture.

Never use the welding machine in environments

- that contain unknown substances.

- with a risk of explosion or fire.

- with poor ventilation.

Never work under the influence of illnesses that affect concentration abilities, fatigue, drugs, alcohol or medication.

Keep the air inlet and outlet clear.

Do not use aggressive cleaning agents to clean the welding machine.

Repair work may be carried out only by qualified persons.

Use only genuine spare parts and accessories.

## **Electrical voltage**

Do not touch any live parts.

Disconnect the machine from the power supply before making any adjustments.

Keep yourself at a distance from the workpiece to be welded and from the floor; wear insulating gloves and clothing.

Do not work with damaged or poorly connected cables or with loose clamp cables.

Keep your work clothing and body dry.

Do not work in damp or wet environments.

Do not move your body against the workpiece to be cut.

Do not use the machine if components or safety devices have been removed.

Ensure that the welding machine is always securely positioned so that it cannot fall or topple over. Use a drop guard when working at great heights.

Do not switch on the welding machine until all cables are correctly connected.

Ensure that all accessories are connected correctly and always ensure that the machine is grounded properly.

## **Explosion hazard**

Ensure that there are no flammable and ignitable materials near the work area.

Watch out for flammable gas mixtures in the work area (ensure ventilation and extraction).

Never weld containers that contain flammable or combustible substances.

When welding aluminium, please note that hydrogen atoms become trapped inside the aluminium when underwater welding stands are used during underwater welding. Trapped hydrogen can lead to explosions.

Never mix the gas in the cylinders.

Replace any gas pipes that appear damaged.

Ensure that the pressure regulators are functioning properly.

Do not weld in environments that contain dust, gas or explosive vapours.

## **Fire hazard**

Ensure that there are no flammable and ignitable materials near the work area.

Have suitable extinguishing agents ready.

Prevent the spread of fire caused by sparks, slag and red-hot glowing material.

Ensure that fire safety equipment is located near the work area.

Remove flammable materials and combustibles from the work area.

## **Burns**

Protect your body against burns and ultraviolet radiation by wearing fire-retardant protective clothing (gloves, headgear, shoes, welding masks etc.).

Moving parts or thermal parts can cause human injuries.

Wear a welding mask.

Keep the tip of the electrode away from your body and from other people.

Do not wear contact lenses. The intense heat emitted by the arc could cause them to melt to the cornea.

Ensure that there is a first aid kit provided in the work area.

Replace the viewing window of the welding mask if it is damaged or unsuitable for the welding work to be carried out.

Wait until the processed workpieces have cooled down before you pick them up.

The arc causes spatter and flying sparks. Always wear oil-free protective clothing such as leather gloves, uncuffed trousers and high top shoes. Cover your hair with a cap.

## **Pacemaker wearers**

Magnetic fields from high-voltage circuits can affect the functioning of pacemakers.

Persons who wear this type of vital electronic equipment must consult their doctor before being in areas where welding equipment is present.

## Radiation

The radiation produced during welding can cause damage to eyesight and burns. The radiation produces strong ultraviolet and infrared light.

The arc generates radiation that can injure eyes and cause skin burns; use appropriate protective equipment.

## Electric shock

An electric shock can be fatal. Touching live parts can lead to serious shocks or burns. Ensure that all parts are connected correctly and that the machine is grounded properly. Ensure that there is always insulation between your body and the workpiece and do not touch live parts with your bare hands. Wear dry, insulating protective clothing when welding and never operate the machine when the housing is open.

## Welding spatter

Welding spatter can cause fires and explosions. Do not weld if flammable materials are nearby or on containers that contain flammable material.



Please ensure that the safety instructions contained in the type-specific or product-specific operating instructions are followed strictly.