

# Respiratory Equipment

## Why use PAPR (Powered Air Purifying Respirator)

The welding fume generated from the open arc welding process contains airborne particles released from the consumables and the material being welded. More than 90% of the fume arises from vaporisation of the consumable electrode, wire or rod as material is transferred across the arc or flame. Welding fume particles can be hazardous as they can penetrate the innermost parts of the lungs.

Long term exposure to welding fumes may affect the body's respiratory system, for example through substance inhalation and release into the blood system.

ESAB recommends the use of powered air purifying respirators (PAPR) in combination with ESAB's welding helmet. PAPR units operate by filtering the air through a battery powered unit, which is then supplied into the breathing zone inside the helmet.

ESAB PAPR systems are fitted with a P3 main filter which, if used correctly, can filter out up to 99.8%.

The PAPR should always be used, cleaned, inspected and maintained in accordance with the operating and maintenance instructions provided. A risk assessment should be carried before use to ensure the PAPR system is suitable for the risks involved, the conditions at the place where exposure to the risk may occur, and the period for which it is worn, taking into account the state of health of the person who may wear the equipment, the work to be undertaken and the work environment.

