

# 1.1 The PUK Principle

The PUK precision welding devices work on a principle that is both simple and intelligent. Touching the electrode tip to a work-piece completes an electrical circuit; as soon as this happens the actual welding process begins. This process runs automatically and doesn't require any further intervention by the user.

## The welding procedure

- As soon as the electrode tip has been placed on the spot that is to be welded, the protective (inert) gas begins to flow.
- Shortly before the actual arc ignites, an acoustic signal will sound, and the eye protecting filter will close, (switch to its dark setting).
- At the same time that the electric arc is triggered, the electrode retracts and pulls away from the work piece.
- After the weld has been carried out, the gas-flow will stop.



fig. 1.1

## The 5 most important rules

Please always remember when welding with a PUK Fine welding device the 5 most important rules for successful welding:



fig. 1.2

Always work with a **well sharpened electrode**. This is the only way to achieve optimum results.

(fig. 1.2)



fig. 1.3

Always make sure that the work-piece has a **good electrical contact** to the welding apparatus; whenever possible use the crocodile clip.

(fig. 1.3)



fig. 1.4

Never weld "free-hand", e.g. always rest both hands on a solid base (work table).

(fig. 1.4)

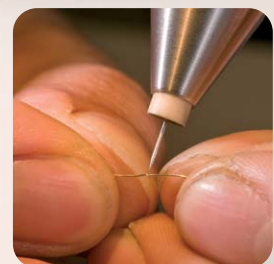


fig. 1.5

Do not apply any pressure to the electrode tip. Instead, very lightly "touch" the work piece to the tip. This gentle contact with the tip must be maintained throughout the process.

(fig. 1.5)



fig. 1.6

Weld only using low gas pressure. When clamping the electrode in the hand piece, make sure that it is clamped in short, and doesn't stick out any more than necessary. When using the newer hand pieces with a ceramic nozzle, 2 l/min will be sufficient. For hand pieces without a ceramic nozzle, we recommend setting the regulator to 3-4 l/min.

(fig. 1.6)