

Review of Digital Soldering Station BAKON 950D

This soldering station is quite interesting, especially for that price.
I got it for about 35€ plus 13€ for 5 extra tips.

1. [Soldering Station, from eBay-user: vst-store](#)
2. [Soldering Tips, from eBay-user: zqualj](#)

The tips have the ceramic heating element included. The temperature is measured via the resistance of the PTC heating element. In cold state it has about 8Ω, @ 330°C (measured) it has about 16Ω.

This design has 2 major disadvantages:

1. Every tip has its own heating element, with its own characteristic. Therefore there is always a different temperature error. I have measured 6 different tips with a thermocouple temperature sensor at a constant setting of 400°C. The results were between 335°C and 365°C.
As a workaround one can use a lookup table for each tip, which is a bit impractical.
Edit: there is an adjustment potentiometer at the controller. Therefore the Error can be reduced to about $\pm 15^\circ\text{C}$.
2. Since the temperature is measured in the heating wire, that wire is held at a constant temperature. Due to the thermal resistance from the wire to the tip a big temperature drop is the result on heavy thermal loads. Numerically spoken: The thermal power is reduced by 60%, compared to the Ersa Multi-TC, which has also a nominal power of 75W and a dedicated temperature sensor behind the tip.

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