Resistance soldering device (Joule effect soldering device)

ref. SI1R

ref. SI2R

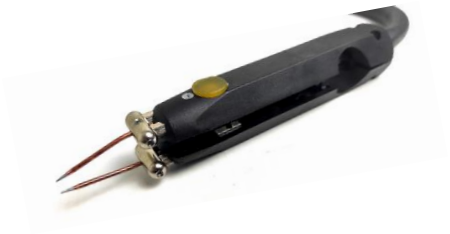
Principle:

Electric resistance welding, also called Joule effect welding, is a technique that replaces traditional soldering with a soldering iron. Its advantage is that it provides instant localized heat. The principle is to pass a powerful current at very low voltage through a contact resistance at the point of application. The law which explains this phenomenon is the Joule effect: $W = RI^2 t$

Use and advantages:

The welding operation consists of pinching the parts to be assembled and adding a tin alloy. As soon as the pedal is engaged, the temperature instantly rises to the desired temperature (maximum 1100 ° C).

- √ Better heat distribution (= better weld distribution)
- √ No component overheating (= instantaneous welding up to 1100 ° c) and therefore reduces thermal damage
- √ Flameless process
- √ Speed of execution
- √ The pliers holds the assembly and leaves one hand free for welding
- √ No keeping a heating tool on standby
- √ Allows access to restricted areas
- √ Reduces energy consumption compared to a traditional heating tool
- √ Low maintenance and upkeep: the electrodes last longer than soldering iron tips and do not require tinning



PCSR & ESI1R

PCSR & ESI1P

PCSI2 & ESI2R

Technical characteristics		
Soldering device	SI1R	SI2R
Power supply	230 V / 50-60 Hz	230 V / 50-60 Hz
Power	80 W	250 W
Output voltage	2,1 V	1,9 V
Output intensity	15 A	135 A
Dimensions L x W x H mm	200 x 100 x 100	300 x 190 x 210
Pliers reference	PCSR	PCSI2
Electrodes reference	ESI1R – Set of 5 pairs of copper-plated stainless steel electrodes ESI1P – Set of 5 pairs of flat stainless steel electrodes	ESI2R – Set of 3 pairs of copper-plated stainless steel electrodes

Our two sets of resistance welders consist of:

A power supply box producing a high amperage and low voltage output current
A trigger pedal
An insulating material pliers allowing fatigue-free hold
A pair of highly resistive copper-coated stainless steel electrodes

Applications :

Connector soldering on semi-rigid
Coaxial connector center contact solder
Welding of several strands at the same time
Soldering of multi-pin connectors
Soldering sensitive connections
Welding high frequency cables
Butt splicing of copper strips
Fast welding of pre-tinned pellets