



**The Revolutionary ERSA *i*-CON and *i*-Tool:
*i*ntelligent and Performing Power
For the Ultimate *i*nnovation in Hand Soldering**

ERSA GmbH

Soldering & Inspection Systems

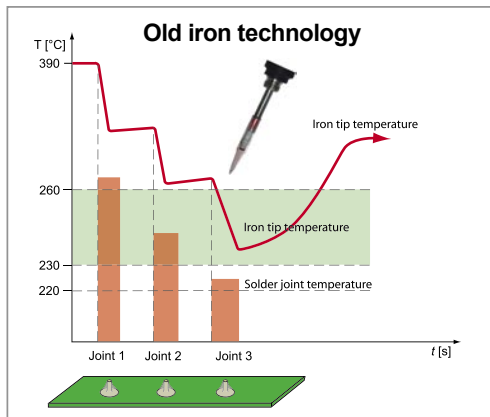
ERSA *i*-Tool

The World's Most intelligent Professional Soldering Iron!



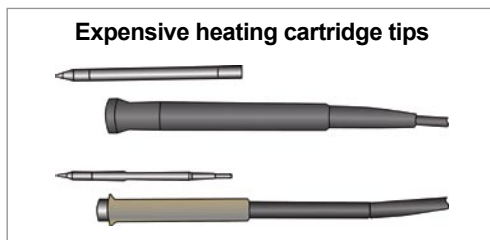
Actual size

The *i*-Tool has a highly advanced PCB integrated into the handle for a level of intelligence never before seen in a solder iron.



Standard soldering irons where the sensor is located far away from the tip will lead to inconsistent solder joint quality. The tip loses temperature into the joints but does not recover fast enough before the next joint is made.

Guaranteeing quality in a Lead Free environment will put the greatest demands on hand soldering applications. How well the iron recovers or puts back the heat lost at the tip and how long the tip remains on the joint, ultimately determines the actual joint temperature. Slow recovering irons will lead to inconsistent joint temperatures. Today, soldering iron manufacturers are developing better performing irons, but many are based on the tip being attached to the heating element cartridge which means the tip temperature can overshoot and the tip price is very high! Such irons force companies to throw away a perfectly good and expensive heating element only because the small copper tip is worn out!



Micro power soldering irons offer performance and ergonomic advantages, but have the two major drawbacks of tip temperature overshoot and expensive heating cartridge tips.



To meet the Lead Free challenge, ERSA is introducing its newest technology (patent pending) for a state of the art solder station – the ERSA *i*-CON and *i*-Tool! Today at ERSA, “*i*” stands for *intelligent, innovative, intuitive, ingenious, interactive, informative* – simply *ideal!*



As process windows become smaller, the soldering task becomes more difficult. True *innovation* demands more than just a nice slogan, a catchy word. Today's soldering stations must be *intelligent* themselves but *intuitive* for the user. The *interactivity* between operator and station must be greater, and the *interactivity* between stations themselves must be greater. Truly *ingenious* solutions are engineered to optimize process quality and productivity while at the same time reducing operating costs. These are the elements that make up today's *ideal* soldering station, and these are precisely the elements that make up the world's most *intelligent* soldering iron

ERSA *i*-CON: Solving the Industries Toughest Hand Soldering Problems!

innovative features of this technology

150W micro heating element (patent pending): allows for standard, long life, low cost tips to be removed without replacing the expensive heating element each time the tip wears out.

Ultra fastest heat up and recovery of all soldering irons that have exchangeable, low cost tips: room temp to 350°C in approx. 9 seconds; from standby to 350°C in approx. 3 seconds.

“One Touch” Easy to Use operation: user friendly station software with large, multifunctional display has on-line Help Text and easy menu navigator with *i*-Op control.

Automatic Standby Motion Sensor: recognizes when the iron is being used and automatically goes into a standby temperature when the iron is put into its holder.

***i*-Set Tool:** this optional item allows for automatic down-loading of station settings and lockout by acting as a type of USB stick. Simply upload the station settings from an *i*-CON into the *i*-Set Tool. The *i*-Set Tool is then plugged into any other *i*-CON station and all set parameters are automatically downloaded in less than 5 seconds and the station is locked out!

Process Window Alarm: informs operator with a visual and acoustic signal if the soldering iron tip gets too hot or too cold. QC can specify a Process Window in which the iron is allowed to work, and for the first time ever in the history of hand soldering, it is possible to guarantee that every solder joint is made with the proper temperature!

***i*-Tool Calibration:** unlike other systems, the microprocessor which stores the temperature calibration of the iron is actually located in the PCB handle. This now allows for each individual *i*-Tool to be calibrated independent of the solder station meaning great time and cost savings. Only the irons need to be taken for calibration, which is much easier and faster!

Power Level Settings: allows for the use of three different power settings which control the heating element overshoot depending on the heat required. Thus, the operator can choose the right setting for the right job – either more power or more control! Power Level Low guarantees NO OVERSHOOT for maximum component safety!

Lead free *i*-Tips: The low cost *i*-Tips are specially plated with the new ERSADUR LF galvanic process lasting 2 to 3 times longer than standard tips!



1. Low cost *i*-Tip
(Consumable, long life)

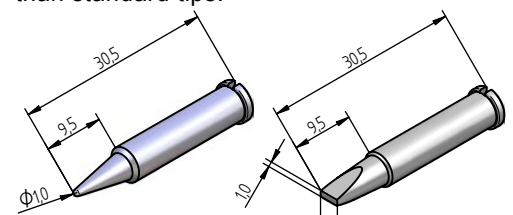
2. *i*-Tip fastener
(Re-usable, long life)

3. Heating element
(Re-usable, long life)

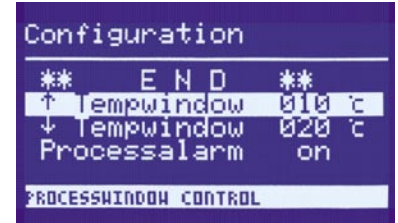
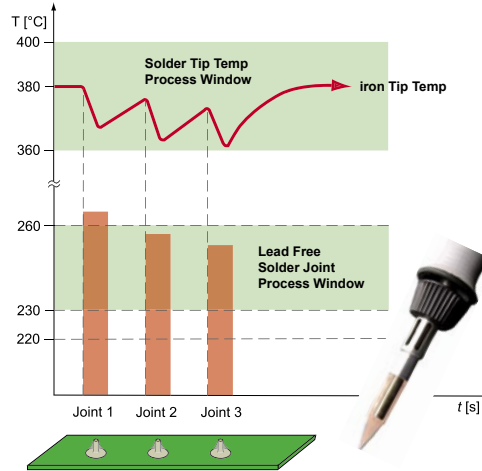
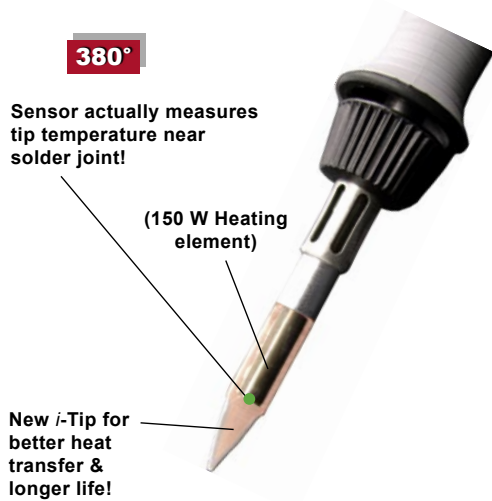
***i*-Tool Solder iron:** Ultra light (only 30 grams), ultra short (only 155 mm), and ultra short tip-to-grip (only 45 mm).



The fastest, safest programming and locking out of solder stations for maximum quality control and documentation!



The long life, low cost *i*-Tip series come in over 17 different sizes and shapes to handle all standard soldering applications.



Operator is visually and acoustically alarmed if the tip temperature goes outside of the specified process window

The i-Tool recovers so fast that all solder joints can be made with nearly the same temperature. The sensor measures the actual tip temperature very close to the tip extremity. The Process Window Alarm assists the operators in guaranteeing repeatable quality.

The Ultimate innovation in Hand Soldering Process Control

Highest Quality & Repeatability:

this technology offers the world's first Process Window Alarm which notifies operator if they are working outside a specified process window. Each solder joint can be now made with the proper temperature. Overshoot is not possible, thereby reducing lifted pads and damaged components! All systems can be locked out, thereby guaranteeing repeatability. Individually calibrated i-Tools can follow an operator in order to deliver best results anywhere in the factory.

Highest Productivity:

this technology offers ultra fast heat up and recovery. Additionally, QC managers can use the optional i-Set Tool for the fastest station setting and lockout available on the market – less than 5 seconds! Finally, individual i-Tool calibration will greatly increase calibration

productivity.

Lowest Running costs:

this technology offers long tip life with low tip prices compared to all high powered solder irons using expensive heating cartridge tips. Station setting, maintenance and calibration costs will be dramatically reduced.

Best Documentation and Traceability:

this technology offers a software package option that keeps a continual process log similar to production soldering machines.



Highlights: ERSA *i*-Tool and *i*-CON



Highest Power & Performance:

- 150W Micro Heating Element (Patents Pending)
- Ultra Fast Heat up: from 30°C to 350°C in approx. 9 sec., Standby to 350°C in approx. 3 sec.
- Ultra Fast Heat Recovery Time

Ultimate Innovations:

- Process Window Alarm Function alerts operator if tip temp is out of window
- Three Power Levels settings to control overshoot
- *i*-Set Tool for quick & easy downloading of parameter settings to all stations
- ASM – Automatic Standby Motion Sensor
- Calibration of *i*-Tool itself, independent from station

Optimal Ergonomics & Ease of Use:

- Ultra Short Tip-to-Grip: 45 mm, Ultra small: 155 mm, Ultra Light: 30 gr.
- Thinnest & Lightest Cable for Maximum Comfort
- Dual Material Grip with “Soft Pad” stays cool during use
- “One Touch” Easy to Use Operation with new *i*-Op Control
- Ultra Large, Multi-functional Display
- Small footprint
W: 150 mm x L: 175 mm x H: 100 mm
- Automatic Tool Detection of 6 Different Soldering & De-soldering Tools

Lowest Running Costs:

- Low Cost, Long life, Quick Change *i*-Tips specially designed for lead free
- Lowest maintenance, station programming and calibration costs
- Highest productivity in hand soldering

Features, technical description ERSA *i*-Tool and *i*-CON:



www.ersa.com



More than 70 ERSA representatives
in over 65 countries.

<i>i</i>-CON soldering station	
Supply voltage; frequency:	220 – 240 VAC/50Hz; 110 – 120 VAC/60 Hz
Admissible ambient temperature:	0 °C – 40 °C / 0 - 104 °F
Secondary voltage:	24 V~
Continuous rating:	80 W (120 W with <i>i</i> -CON 2) protection class I (double insulation)
Weight:	2 kg / 4.4 lb
Control technology:	<i>i</i> -Tool: intellitronic control (patent pending) with digital PID algorithm and multiple sensors; Power tool, Tech tool, X-Tool: SENSOTRONIC control system with digital PID algorithm; Micro tool and Chip tool: RESISTRONIC control system
Temperature range:	continuous 150 °C – 450 °C / 300 °F – 842 °F
Display:	blue LCD display,
Operation:	one-touch operation by means of a rotary type push button
Cable:	2 m / 6.5 ft PVC with connector
Antistatic:	antistatic design suitable for operation in an ESD environment. MIL-SPEC/ESA standard
Non-operative temperature fluctuation	less than +/-2 °C
Tip to ground resistance:	less than 2 ohms
Tip leakage	less than 2 mVeff, VDE, EMV checked
Fuse rating:	800 mA, slow-blow
Connectable soldering and desoldering tools:	<i>i</i> -Tool, Power tool, Tech tool, Micro tool, Chip tool, X-Tool

<i>i</i>-Tool soldering iron	
Voltage:	24 V~
Rating:	150 W +/- 10 %
Heating time:	approx. 9 s to 350 °C / 662 °F
Weight (without cable):	approx. 30 g / 1 oz
Cable:	1.5 m / 5 ft highly flexible, heat resistant, antistatic
Model:	antistatic according to MIL-SPEC/ ESA standards with integrated ID and standby function

Total weight soldering station, tool holder, soldering iron incl. packaging: approx. 3.1 kg / 7 lb



Fig. *i*-CON2



Fig. Chip tool

***i*-CON2 offers all the amazing features of the revolutionary *i*-CON in a double iron digital station with Chip tool for SMD removal**



Lead-free soldering,
inspection or rework:
ERSA solutions for a safe
process.



Ask for the latest issue of the
ERSA multimedia Demo CD!

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