



# Catalogue 2006

Soldering Irons, Soldering / Desoldering Stations, Special Tools and Accessories

#### **ERSA GmbH**

Soldering Division: Tools & Inspection Systems



# **Greetings**

#### **Dear Valued Customer**

It is once again a pleasure for me to extend my personal greetings to our most valued customers. Two years have now come and gone since the printing of our last ERSA tools catalog. The emphasis at ERSA over the past several years, and at all other major soldering equipment manufacturers, was lead-free preparation. As companies were developing their strategy to phase out SnPb and to phase in to a lead-free production, manufacturers like ERSA were called to the task of providing the necessary process guidance. Looking back over these last two years, ERSA is proud to say that we have been practising this commitment in a most successful fashion, enjoying the most successful years in our company's 85-year history.

Today, the expectations of our valued customers are a bit different. Strategies have already been made for the most part for the implementation of lead-free. We now find ourselves in the last stage where electronic manufacturers will be finalizing their production equipment decisions. Our experience over the years of preparing for lead-free implementation, and our many machines out in the field that have been running lead-free already since 1999, have shown us that the greatest demands will be placed on the soldering equipment. It is for this reason that ERSA's engineering staff has placed their entire efforts in realizing truly innovative soldering solutions.

As process windows become smaller, our job becomes more difficult. True innovation demands more than just a nice slogan, a catchy word. Today's equipment and stations must be intelligent themselves but intuitive for the user. The interactivity between operator and stations must be greater, and the interactivity between stations themselves must be greater. Ingenious solutions, engineered with precisely these demands in mind, make up today's ideal soldering tool!

As the inventor of the first electric soldering iron for production use in 1921, ERSA is very proud to introduce one of the smallest, lightest, most powerful and most intelligent soldering irons in the world specifically developed for lead-free, the ERSA *i*-Tool and *i*-CON.

The new 150 W micro heating element technology (patent pending) of the revolutionary *i*-Tool allows for similar performance as compared to soldering irons with expensive heating cartridge tips, but offers standard low-cost, exchangeable tips. The truly innovative Process Window Alarm notifies operators when the soldering iron tip temperature is outside a specified process window. Three power levels offer maximum power and control (no overshoot) for all soldering applications. The ERSA *i*-CON offers "One Touch" easy to use operation with large, multifunctional display, automatic tool detection, as well as the optional *i*-Set tool for automatic downloading of settings to all stations in factory.

We have accepted the challenge faced by the new demands of lead-free. We have acted by responding with truly innovative solutions which add value to our customers' operations in all areas of soldering – hand soldering, rework soldering, wave, reflow and selective soldering, as well as solder joint inspection. We look forward to future challenges, and to knowing with confidence that our customers have their soldering operations fully under control.

As you go through the pages of our newest catalog before you, please know that we have done our best to inform, but not to overwhelm. We trust that you will be guided to the appropriate tool for your soldering task. Nothing, however, can replace the true technology transfer and applications-oriented problem solving that can only take place during a personal visit to your facility. Our global sales network is made up of the best trained and most professional local distributors the industry has to offer. We look forward to making your soldering opportunities into success stories.

My best wishes for perfect solder joints, and my sincerest regards,



Mark Cannon



The World of ERSA Innovation is this year's motto reflecting ERSA's product strategy. Today at ERSA, "i" stands for innovative, intelligent, intuitive, interactive, ingenious, informative – simply ideal



Mark Cannon President and Chief Operating Officer ERSA GmbH



# **Product Range**

#### **Soldering Irons & Sets**



Miniature Soldering Irons	page	Workshop & Hammer Sold. Irons	page
Minor S, Minityp S	8	ERSA 200 - ERSA 550	9
Microsoldering / Universal Sold. Iro	ns	High-Speed Soldering Irons	
Multitip series, Tip 260	8	Multi-Sprint	10
Multi-Pro, ERSA 30 S	8	Soldering Sets	11
Standard Soldering Irons		Gas Soldering Irons	
ERSA 50 S / 80 S / 150 S	9	Independent 75 / 130	12

#### **Solder Baths**



Solder Baths	page
Static solder baths	14
RA 4500 D temperature regulator	14
Temperature sensors	14

#### **Soldering Stations**



page
16
17
17

# Antistatic Soldering & Desoldering Stations



Antistatic Soldering Stations	<b>page</b>	SMT UNIT 60 AC	page
ANALOG 60 A	19		24
ANALOG 80 A	19	SMD 8012 / SMD 8013	25
SMT & Multifunctional Soldering	Stations	Antistatic Desoldering Stations DIGITAL 2000 A	page
DIGITAL 2000 A	20/21		25

22/23

#### "CLEAN-AIR"-Solder Fume Extractions



Extractions for the Workbench	page
EASY ARM EXTRACTION	27
Accessories and spare parts for	27
CLEAN-AIR	

i-CON

# Accessories & Process Material



Workbench Accessories Solder wire feed unit IRHP 200 heating plate Vacuum placer, -pipette	29 29 29 30	Stacking rack, solder wire dispenser Tool holders and cleaning sponges Process Material	32 33
DTM temperature measurement device		Solder wires, solder bars	34
Desoldering tools Tip exchanger	31 32	Fluxes, desoldering wicks Flux Pen, Flux Remover & Tip Reactivator	35 35
TIP CAGITATISCI	02	riux ren, riux remover & rip reactivato	JJ

#### **Soldering & Desoldering Tips**



Soldering & Desoldering Tips	page	р	age
102 series	37	032, 052, 082, 152, 202, 302, 552 series	43
832 series	38	172, 162, 132, G 072, G 132 series	44
842, 722 series	39		
612, 042, 012 series	40		
422 series	41	References	
212, 622 series	42	Rework and inspection solutions	45



# **Process-Safe and Efficient Lead-Free Hand Soldering**

# Leadfree Bleifrei SAFE





#### Successfully mastering the lead-free hand soldering process

As of 1 July 2006 the elements lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyl (PBB) and biphenyl ether (PBDE) will be prohibited, and electric or electronic equipment and assemblies containing these substances can no longer be offered on the market.

This means that, in many cases, manufacturers of electronic products will have to say goodbye to the established soft solders which are based on tin and lead.

Hand soldering represents a real challenge for lead-free soldering technology. ERSA has been ready to face this challenge, and is geared up for lead-free hand soldering operations. The heating technology of the ERSA soldering stations is perfectly designed to fit the lead-free process requirements.

Guaranteeing quality in a lead-free environment will put the greatest demands on hand soldering applications. From a repeatability standpoint, all solder joints should be made with the same temperature, e. g. the tip temperature must remain constant! Hand soldering quality is completely determined by the skills of the operator and the efficiency of the soldering iron. Due to the fact, however, that irons generally do not recover lost heat fast enough, operators use high set temperatures (380 – 440 °C). These already high temperatures will need to be even higher for lead-free as the process temperature increases by 40 °C.

Three critical design demands required for successful lead-free hand soldering:

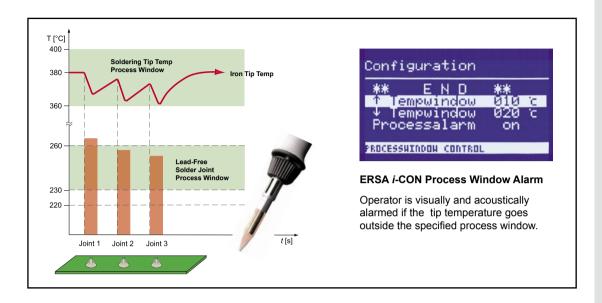
- Accurate control not of the heating element only but also of the soldering tip during the soldering process.
- Rapid heat recovery is essential to ensure constant soldering tip temperatures.
- 3. Low-cost, long-life soldering tips specially designed for lead-free.

ERSA top of the range digital soldering stations allow for low temperature settings, lock-out password function, and the attachment of any of 6 special tools designed for a variety of lead-free applications. Long-life, lead-free soldering tips make the package perfect!

Don't let hand soldering and touch-up be the Achilles' Heel of your lead-free soldering operations!



ERSA i-CON - soldering station featuring innovative technology



ERSA i-CON and i-Tool - the ultimate innovation in hand soldering process control

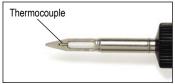
#### i-TRONIC control

The 150 W micro heating element (patent pending) technology with digital PID algorithm allows for rapid heat-up: from room temperature to 350 °C in approx. 9 seconds; from stand-by to 350 °C in approx. 3 seconds.

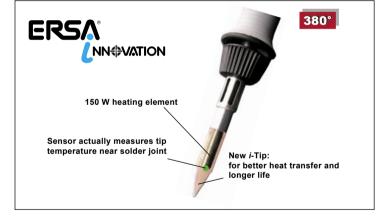
The new technology offers one of the fastest heat recoveries of all soldering irons that have exchangeable, low-cost tips, which now guarantees a stable hand soldering process. This can only be achieved via the innovative, multiple sensor heating element control technology which is a part of the patent application.

#### SENSOTRONIC control

The ERSA SENSOTRONIC control system with precise temperature measurement by means of thermocouples near the soldering track, where the soldering tip transfers the heat to the solder joint, has been standard at ERSA for three decades. The system guarantees the fastest possible supply of heat and a high level of temperature constancy through the entire service life.



Cross-section of internally heated tip on the Tech tool soldering iron with SENSOTRONIC control



#### RESISTRONIC control

With fine soldering tools for SMD technology, the ERSA RESISTRONIC temperature control system is unbeatable, since the heating elements also serve as temperature sensors. The result is a slim design and stable temperature conditions.



Cross-section of internally heated tip on the Micro tool SMD soldering iron with RESISTRONIC control

# Internal heating of soldering tips

ERSA is also a pioneer in state-of-the-art soldering iron design. The internal heating of soldering tips has been the preferred method for many years.

It guarantees high thermal efficiency and the greatest possible range of application for soldering devices.

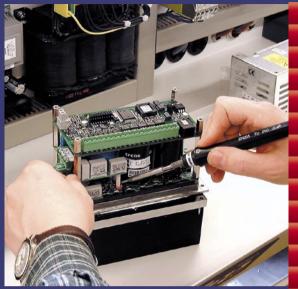


# Alpha-Numerical Product Index

Order No.:	page:	Order No.:	page:	Order No.:	page
<b>00</b> 03B - 0007G	33	0840CDJ	19 / 21	<b>0</b> Ic1000A	22
0012 tip	40	0842 tips	39	IRHP200	29
0015BDH	8	0890CDJ	16		20
0032 tips	43	<b>09</b> <sub>00BD</sub>	8	<b>0L</b> S197	31
0042 tips	40	0910BD	8	0LVE600010	29
0045BDG	8	0910BD0035	11	0LVE600010S	29
0055JD	9	0920BD	8	<b>0R</b> A4500D	14 / 29
0052 tips	43	0920LD0035	11	0RDS80	16
0085JD	9	0930CD	8		
0082 tips	43	0960ED	10	<b>0S</b> H03	33
<b>01</b> 00CDJ	22			0SMD8012	25
0102 tips	37	<b>0A</b> 02 - 0A48	33	0SMD8013	25
0132 tips	44	0A47	19	0SMT60AC	24
0155JD	9	0ANA60	17	0SR100	32
0152 tips	43	0ANA60A	19	0SR101	32
0162 tips	44	0ANA80	17	0STR100	32
0172 tips	44	0ANA80A	19	0SVP100	30
<b>02</b> 00MZ	•	0AS196	31	0SVP12K	30
	9	<b>0C</b> LEAN-AIR	27	0SVP13A	30
0202MZ	43 42	0CU 103 A	25	<b>0T</b> 02 - T55	14
0212 tips 0260BD	8	0D		0TR01	35
		<b>0D</b> IG20A27	21	01/	_
0270BDJ	21 / 24	0DIG20A45	21	<b>0V</b> AC2	31
<b>03</b> 00MZ	9	0DIG20A64	21	0VAC22	31
0302MZ	43	0DIG20A84	20 / 21	0VAC3	3′
0330KD	8	0DIG20AXT	25	0VAC32	3′
0330KD0028	8	0DTM050	31	0VACX	3′
0340KD	8	0DTM050P 0DTM100	31 31	0VACX2	3′
0340KD0035	11	0DTM100P	31	0VP020 0VP100	30 30
<b>04</b> <sub>22 tips</sub>	41		• •		30
0450MDJ	21 / 24	<b>0F</b> 007	14	<b>0W</b> ICKNC1.5/10	35
	21/24	0F008	14	0WICKNC1.5/SB	35
<b>05</b> 50MZ	9	0FMIF2005-002	35	0WICKNC2.2/10	35
0552MZ	43	0FMIF8001-001	35	0WICKNC2.2/SB	35
<b>06</b> 12 tips	40	0FMKANC32-005	35	0WICKNC2.7/10	35
0640ADJ	21	0FMKANC32-200	35	0WICKNC2.7SB	35
0662 tips	42	0FR200	35	<b>3C</b> LEAN-AIR	27
0670CDJ	17	0FR202	35		21
0680CDJ	19	0FR203	35	<b>3N</b> 194	33
		<b>0G</b> 072 tips	44	3 ZT 00164	32
<b>07</b> 20ENJ	25	0G07400141	12	<b>4F</b> MJF8001-PEN	35
0722 tips	39	0G07400041	12	4Solder bars / solder wire	34
0760CD	10	0G132 tips	44		32
0760VD0025	11	0G13400141	12	<b>E0</b> 45600	24
<b>08</b> 10 CDJ	17	0G13400041	12		



# Soldering Irons & Sets









The success story of ERSA soldering irons started in 1921 when the company's founder Ernst Sachs applied for patent for the first electric soldering iron.

Today, the soldering irons and sets, high-speed soldering irons and gas powered soldering irons have proven their merit many times over throughout the world, always providing the fitting solution for various applications.



The Minor S (5 W) and Minityp S (6 W) miniature soldering irons with ERSA-DUR tips are suitable for the finest-detailed soldering work on micro-circuits. The Minor can be operated with a 6 V transformer or a 6 V battery. Besides electronics, the Minor can also be used in watch repair, in the photographic industry and in dental technology. The Minityp can be operated with a 12 V battery.

The ERSA Multitip series covers a wide range of applications. It stands out by its low weight and compact design (short distance between soldering tip and the handle's front part). The handle stays relatively cool while soldering. The Multitip is available for 8, 15 and 25 W and suitable for both micro-soldering joints and medium-sized soldering, as on distributor strips. Long-life and industrially tested PTC heating elements and internally heated soldering tips in the 15 / 25 W version provide high efficiency and fast heat supply. Tip 260 is also heated in this

especially efficient way. **16 W** power and slim design make this soldering iron an ideal aid when working on electronic assemblies in places difficult

to access.

Thanks to its large range of tips, the ERSA Multi-Pro is the ideal soldering iron when great flexibility is required. The device has a heat-resistant connecting cable. Internally heated tips provide a high level of efficiency. ERSA 30 S, the best selling and most tried and tested universal soldering iron, is known the world over for its sturdiness and longevity. It can be used in a variety of ways for soldering tasks in handicrafts, service and hobbies. Delivery includes a practical, easily mounted rubber stick-on support disk. The ERSA 30 S is also

# **ERSA Miniature Soldering Irons**

# Minor S 042 soldering tip series see page 40 ( E Minityp S 012 soldering tip see page 40

Order no.	Description	With soldering tip	Rating / Voltage	Heating time	Max. soldering tip temperature	Weight (w/o cable)
0045BDG	Minor S soldering iron	0042BD, ERSADUR	5 W / 6 V	12 s	approx. 440 °C	6 g
0015BDH	Minityp S soldering iron	0012BD, ERSADUR	6 W / 12 V	20 s	approx. 390 °C	7 g

# **ERSA Microsoldering Irons**



Order no.	Description	With soldering tip	Rating / voltage	Heating time	Max. soldering tip temperature	(w/o cable)
0900BD	Multitip 08 soldering iron	0132BD, ERSADUR	8 W / 230 V	approx. 90 s	approx. 290 °C	26 g
0910BD	Multitip C15 soldering iron	0162BD, ERSADUR	15 W / 230 V	approx. 60 s	approx. 350 °C	28 g
0920BD	Multitip C25 soldering iron	0172BD, ERSADUR	25 W / 230 V	approx. 60 s	approx. 450 °C	34 g
0260BD	Tip 260 soldering iron	0162BD, ERSADUR	16 W / 230 V	approx. 60 s	approx. 350 °C	40 g

# **ERSA Universal Soldering Irons**



Order no.	Description	With soldering tip	Rating / voltage	Heating time	Max. soldering tip temperature	Weight (w/o cable)
0930CD	Multi-Pro soldering iron	0832CDLF, ERSADUR	20 W / 230 V	approx. 5 min	approx. 430 °C	60 g
0330KD*	ERSA 30 S soldering iron	0032KD, ERSADUR	30 W / 230 V	approx. 2 min	approx. 380 °C	80 g
0340KD	ERSA 30 S soldering iron	0032KD, ERSADUR	40 W / 230 V	approx. 2 min	approx. 420 °C	80 g

available with 40 W.



# **ERSA Standard Soldering Irons**



Order no.	Description	With soldering tip	Rating / voltage	Heating time	Max. soldering tip temperature	Weight (w/o cable)
0055JD	ERSA 50 S soldering iron	0052JD, ERSADUR	50 W / 230 V	approx. 3 min	approx. 400 °C	160 g
0085JD	ERSA 80 S soldering iron	0082JD, ERSADUR	80 W / 230 V	approx. 3 min	approx. 410 °C	220 g
0155JD	ERSA 150 S soldering iron	0152JD, ERSADUR	150 W / 230 V	approx. 3 min	approx. 450 °C	245 g

The tried and proven soldering irons of the ERSA 50 S / 80 S / 150 S series are designed for soldering operations with a greater heat requirement, as, for example, on copper conductors with a cross-section of 2.5 mm² (ERSA 50 S, 50 W) to 6 mm² (ERSA 150 S, 150 W).

The devices are supplied with an angled soldering tip as standard. Thanks to their elaborately generated "protective coating", ERSADUR tips have a much longer service life than their simple mates.

Other areas of application of the ERSA standard soldering irons include soldering thin sheet metal and lead glazing (ERSA 150 S).

# **ERSA Workshop Soldering Irons**



Order no.	Description	With soldering tip	Rating / voltage	Heating time	Max. soldering tip temperature	Weight (w/o cable)
0200MZ	ERSA 200 hammer soldering iron	0202MZ, nickel-plated	200 W / 230 V	approx. 5 min	approx. 470 °C	550 g
0200MD	ERSA 200 hammer soldering iron	0202MD, ERSADUR	200 W / 230 V	approx. 5 min	approx. 470 °C	550 g
0300MZ	ERSA 300 hammer soldering iron	0302MZ, nickel-plated	300 W / 230 V	approx. 5 min	approx. 470 °C	870 g
0300MD	ERSA 300 hammer soldering iron	0302MD, ERSADUR	300 W / 230 V	approx. 5 min	approx. 470 °C	870 g
0550MZ	ERSA 550 hammer soldering iron	0552MZ, nickel-plated	550 W / 230 V	approx. 7 min	approx. 600 °C	1,770 g
0550MD	ERSA 550 hammer soldering iron	0552MD, ERSADUR	550 W / 230 V	approx. 7 min	approx. 600 °C	1,770 g

The ERSA 200, 300 and 550 hammer soldering iron series are especially suitable for sheet metal processing, installation work and for soldering commutators and copper bus bars.

Hammer soldering irons have also proven their merit in automotive body adjustments and lead glazing.



The ERSA **Multi-Sprint** is an extremely light, transformer-independent solder gun with a heat-up rating up to **150 W** and an ergonomic design.

In combination with the internally heated ERSADUR long-life soldering tip, the Multi-Sprint's PTC heating element offers especially high performance. The short heat-up time makes it ideal for high-speed series soldering. The Multi-Sprint is heated only as long as the button is pressed.

The large selection of tips of the 832 / 842 series afford a wide range of applications, and not just in service and repairs.

The ERSA Multi-TC is a

powerful, sturdy, temperaturecontrolled universal soldering iron with a precise temperature

sensor located directly under the internally heated soldering

# **ERSA High-Speed Soldering Irons**



Order no.	Description	With soldering tip	Rating / voltage	Heating time	Max. soldering tip temperature	Weight (w/o cable)
0960ED	Multi-Sprint solder gun	0832EDLF, ERSADUR	150/75 W / 230 V, 50 - 60 Hz	approx. 20 s	subject to how long the button is pressed	100 g

# **ERSA Power Soldering Iron with Temperature Control**





cable, the ERSA Multi-TC is especially suitable for mobile use in service, maintenance





The 832 / 842 soldering tip series make the Multi-TC a proper all-rounder

Order no.	Description	With soldering tip	Rating / voltage	Heating time	Max. soldering tip temperature	Weight (w/o cable)
0760CD	Multi-TC soldering iron	0842CD	75 W at 350 °C / 230 V, 50 - 60 Hz	approx. 34 s	250 °C - 450 °C	60 g

and repairs.



# **ERSA Soldering Iron Sets**



# Electronics Start-up Set, 15 W

(€ 🎎 🚭

Order no.

cons. of Multitip C15 sold. iron, 0162BD / 0162KD tips, holder 0A19, antist. desold. pump, desold. wick, soldering guide and 7 g of solder. 162 soldering tip series see page 44.

Description



#### Multitip-Workbox, 25 W

consisting of Multitip C25 soldering iron with soldering tips 0172LD / 0172BD, tool holder 0A18, antistatic desoldering pump and 7 g of solder, packed in a sturdy plastic case.

172 soldering tip series see page 44.

Rating / voltage



#### ERSA 30 S Workbox

Heating time Max. soldering

consisting of ERSA 30 S (40 W) soldering iron, tips 0032KD / 0032BD, support disc 3N194, holder 0A18, antist. desold. pump, 7 g of solder and sponge packed in a sturdy plastic case. 032 soldering tip series see page 43.

Weight

28 g 34 g

80 g

With the ERSA Start-up-Set or the workboxes, you can begin your soldering work right away. Besides the ERSA's "made in Germany" quality soldering iron, you will have an additional ERSADUR long-life soldering tip, solder wire, tool holder, cleaning sponge and even an antistatic desoldering pump.

The Electronics Start-up
Set with its 15 W Multitip
soldering iron also includes
a comprehensive soldering
guide with helpful information
all about soldering.

The Multitip Workbox and the ERSA 30 S Workbox come with a practical plastic case. The case can be used for both storage and transport. The ERSA 30 S delivers 40 W of power, while the internally heated Multitip with PTC heating element has 25 W.

					up temperature
0910BD0035	Electronics Start-up Set	0162BD, 0162KD	15 W / 230 V	approx. 60 s	approx. 350 °C
0920LD0035	Multitip Workbox	0172LD, 0172BD	25 W / 230 V	approx. 60 s	approx. 450 °C
0340KD0035	ERSA 30 S Workbox	0032KD, 0032BD	40 W / 230 V	approx. 2 min.	approx. 420 °C

With soldering tip

# **ERSA Power Tiffany-Set**

#### **ERSA Power Tiffany-Set**

Multi-TC with 0832VD soldering tip, chisel-shaped, 5.0 mm and additional 0832VD soldering tip; tool holder; 100 g of Tiffany solder, Sn60Pb, 3 mm ø; 25 ml of liquid flux and sponge packed in a practical plastic

832 / 842 soldering tip series see page 38 / 39







Order no.	Description	With soldering tip	Rating / voltage	Heating time	Temperature range	Weight (w/o cable)
0760VD0025	Tiffany soldering set	0832VD, ERSADUR	75 W (350 °C) 230 V, 50 - 60 Hz	approx. 55 s (280 °C)	250 °C - 450 °C	60 g

The ERSA Tiffany soldering set is not only for beginners wanting to start work right away; light and slim, equipped with state-of-the-art control technology, the Multi-TC soldering iron replaces ordinary, uncontrolled irons with an output of up to 150 W. The ERSA SENSOTRONIC control system with the PT 1000 temperature sensor inside the soldering tip and near the soldering track immediately reacts to any heat loss. Practically delay-free reheating is ensured. The line voltage operated Multi-TC soldering iron with control electronics integrated in the handle has a heat-resistant connecting cable. The practical plastic case contains Tiffany solder, liquid flux, a sponge and tool holder, besides the Multi-TC soldering iron itself.



Mobile power - wherever you want! Powerful, with comprehensive and top-quality equipment, small, handy and practically packed. The gas soldering Independent 75 Basic Set and Profi Set will meet your every need! The ergonomic, antistatic gas soldering iron with piezo ignition is ideal for service and maintenance work, especially if there is no power supply available! The continuously adjustable output of 15 - 75 W (compared with electrical soldering irons) allows maximum soldering tip temperatures of up to 580 °C. The Independent is powered by ordinary butane as used in gas lighters. Operating time per gas filling is about 60 min. Both sets come with a practical carrying case. Besides the standard "Basic Set" equipment, the "Profi Set" contains two additional soldering tips, a hot blade for cutting highresistance foam, a hot-gas nozzle, a deflector for heatshrinkable sleeves and a flame

# **ERSA Independent 75 Gas Soldering Sets**





( € €65

#### Independent 75 Basic-Set

consisting of Independent 75 gas soldering iron with soldering tips 0G072KN and 0G072CN, holder 0A20, cleaning sponge and sponge container, packed in a practical plastic case.



#### Independent 75 Profi-Set

Independent 75 gas soldering iron with soldering tip 0G072KN, 0G072CN, soldering tips 0G072AN and 0G072VN, flame nozzle 0G072BE, hot gas nozzle 0G072HE, hot blade 0G072MN and deflector 0G072RE to shrink heat-shrinkable sleeves, tool holder 0A20, cleaning sponge 0006G and sponge container 0G156 packed in a practical plastic case.

G 072 soldering tip series see page 44

Order no.	Description	With soldering tips 0G072	Rating	Heating time	Max. soldering tip temperature	Weight
0G07400041	Independent 75 Basic-Set gas soldering set	KN;CN	15 - 75 W	approx. 46 s (280 °C)	approx. 580 °C	73 g
0G07400141	Independent 75 Profi-Set gas soldering set	KN;CN;AN;VN; BE;HE;MN;RE	15 - 75 W	approx. 46 s (280 °C)	approx. 580 °C	73 g

# ERSA Independent 130 Gas Soldering Sets

The "big" gas soldering device from ERSA, the Independent 130, can be applied wherever demanding soldering tasks have to be performed without a power supply. Its broad range of contin-

nozzle for micro-welding.

uously variable 25 - 130 W (compared with electrical soldering irons) and its comprehensive line of soldering tips allow a wide variety of uses in service, installation, maintenance and repair

The piezo ignition integrated in the device and powering by ordinary gas lighter butane ensure the easiest possible handling and great reliability. The operating time per gas filling is about 120 minutes, with a maximum soldering tip temperature of about 580 °C.

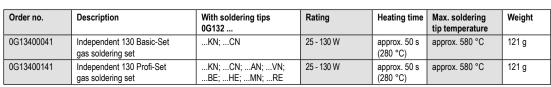
Like its smaller mate, the Independent 75, the Independent 130 is also available in both set versions, namely as a Basic Set or Profi Set.



#### Independent 130 Profi-Set

consisting of Independent 130 gas soldering iron with soldering tip 0G132KN, soldering tips 0G132CN, 0G132AN and 0G132VN, flame nozzle 0G132BE, hot gas nozzle OG132HE, hot blade OG132MN and deflector OG132RE to shrink heat-shrinkable sleeves, cleaning sponge 0006G and sponge container 0G156 packed in a practical plastic case.

G 132 soldering tip series see page 44





#### Independent 130 Basic-Set

consisting of

Independent 130 gas soldering iron with soldering tips 0G132KN and 0G132CN, cleaning sponge and sponge container packed in a practical plastic case





# **Solder Baths**





Apart from a wide range of static solder baths with different solder capacities ERSA also provides a large selection of dynamic solder baths namely wave and selective soldering systems. The photo shows a solder bath with multiwave module of a VERSAFLOW selective soldering system.

ERSA does not only provide a wide range of standard soldering irons, it is also the first choice when it comes to static solder baths and fitting temperature regulator.







## **ERSA Solder Baths**

ERSA solder baths are electrically heated melting pots for tin-lead and similar alloy solders. The high-capacity ceramic heating elements are exchangeable and mounted on the pot. They are thermally insulated from the external sheet metal housing. The T 02, T 03, T 04, T 05, T 06, T 07 and T 25 solder baths can be switched to halfpower operation. Thanks to the high temperature of approximately 600 °C the T 02 and T 07 baths are especially suitable for tin plating enam-eled copper wires. All solder baths are supplied with a 1.5 m connecting cable. To enhance solder quality as well as to reduce oxide formation, and for energy-saving reasons, we recommend the RA 4500 D temperature regulator together with one of the temperature sensors mentioned below. The T 50 S / T 10 S small sol-

The **T 50 S / T 10 S** small solder baths are primarily used for tin-plating stranded wire braids, connecting leads and cable lugs.

The heat resistant special color (order no. 4HMFARBE¹) can be applied to the crucible as a proctection against corrosion and wetting.



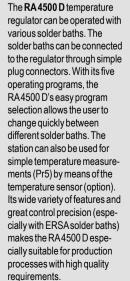
1) = Xi Irritating



Order no.	Description	Rating / Voltage	Temperature	Dimensions in mm (L x W x D)	Capacity	Weight	Heating elements
0T55	solder bath T 50 S	65 W / 230 V	300 °C	28 x 20 x 13	approx. 40 g	370 g	1 pc. 0051T001
0T56	solder bath T 10 S	130 W / 230 V	340 °C	60 x 30 x 25	approx. 185 g	615 g	1 pc. 0151B0
0T02	solder bath T 02	240 W / 230 V	600 °C	25 Ø; 47 D	approx. 125 g	1,200 g	1 pc. 0241T0
0T03	solder bath T 03 <sup>2</sup>	360 W / 230 V	430 °C	100 x 30/15 <sup>1</sup> x 55	approx. 1,000 g	2,300 g	2 pcs. 05X100
0T04	solder bath T 04	400 W / 230 V	410 °C	52 x 52 x 84	approx. 1,900 g	3,900 g	4 pcs. 05X100A1
0T05	solder bath T 05	500 W / 230 V	440 °C	86 x 68/201 x 90	approx. 2,850 g	3,400 g	2 pcs. 08X800
0T06	solder bath T 06	1,000 W / 230 V	560 °C	120 x 80 x 60	approx. 4,800 g	5,200 g	6 pcs. 05X100P2
0T07	solder bathT 07	1,200 W / 230 V	600 °C	90 x 90 x 100	approx. 6,400 g	5,500 g	4 pcs. 08X800A5
0T11	solder bath T 11	1,600 W / 230 V	450 °C	300 x 60 x 50	approx. 7,500 g	8,000 g	8 pcs. 05X100A3
0T25	solder bath T 25	260 W / 230 V	420 °C	71 x 55 <sup>1</sup> x 22	арргох. 750 д	2,100 g	2 pcs. 0151B0

<sup>&</sup>lt;sup>1</sup> tapered solder pot; <sup>2</sup> VDE-tested, all other solder baths are produced according to VDE standards

# **ERSA RA 4500 D Temperature Regulator**





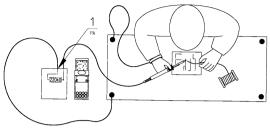
#### RA 4500 D

Amicroprocessor sets new standards with regard to the temperature regulator's functions and provides comfortable operation of the RA4500 D.

Order no.	Description	Connected load / voltage	Tolerance	Temperature	Switch
				range	
0RA4500D	Temperature regulator	3,000 W / 230 V, 50 - 60 Hz	max. ±2 %	50 °C - 600 °C	2-position with P-characteristics
0F007	Temperature sensor, 8 mm ø				
0F008	Long-life temperature sensor, 3 mm ø				



# **Soldering & Desoldering Stations**



#### Integrating a soldering station with potential equalization:

The RDS 80 soldering station can be easily integrated into an ESD working environment. The soldering station, iron and tip can be connected with high impedance (  $220~k\Omega$  resistor integrated in station; tip-to-ground resistance:  $220~k\Omega$ ) to the conductive work surface through the potential equalization socket on the front of the station





Soldering irons bearing this symbol are equipped with PTC heating elements.



For many years ERSA soldering, desoldering and rework stations have proven their merit in industry, handicrafts and ambitious hobbyists. ERSA always provides the fitting station with or without digital display, for conventional or SMD soldering alike.





# **ERSA RDS 80 Soldering Station**

The ERSA RDS 80 digital soldering station offers ERSA RESISTRONIC temperature control, tried and proven for many years and now with 80 W heating power.

The ceramic PTC heating element (positive temperature coefficient) acts as the temperature sensor in this control system and ensures extremely fast heating thanks to the high initial output.

The very high heating power and the large selection of soldering tips allow a very wide range of applications.

The heating system with the internally heated soldering tips has a high thermal efficiency. The redesigned ergonomic handle, the new housing design and the large, digital multifunctional display don't leave much to be desired.

Besides the arbitrary temperature selection between 150 °C and 450 °C, 3 fixed temperatures or 2 fixed temperatures and one stand-by temperature can be programmed.

The device also has a calibrating and power-off feature, in addition to a power bar graph display. The potential equalization socket (with an integrated 220 k $\Omega$  resistor) allows the soldering tip to be equalized with the workplace potential.

The RT 80 soldering iron has a sprayed-on, flexible PVC connecting cable; for changing the tips we recommend tip changing tool 3ZT00164 (see page 32).







#### **RDS 80**

with RT 80 soldering iron, ERSA RESISTRONIC control system 832 and 842 series see page 38 / 39



Order no.	Description	Rating / Voltage	Heating time	Temperature range	Weight (with cable)
0RDS80	RDS 80 soldering station complete	80 W / 230 V, 50 - 60 Hz /24 V		150 °C - 450 °C	
	with RT 80 soldering iron 0890CDJ, soldering tip	105 W (280 °C)	approx. 40 s (280 °C)		approx. 130 g
	0842CD and tool holder 0A39				



Potential equalization socket



Application example



Multifunctional display



RT 80: very slim soldering iron featuring a large selection of soldering tips



# **ERSA ANALOG 60 Soldering Station**



with Basic tool 60 soldering iron, ERSA RESISTRONIC control system 832 and 842 soldering tip series see page 38 / 39

Order no.	Description	Rating / Voltage	Heating time	Temperature range	Weight (w/o cable)
0ANA60	ANALOG 60 soldering station complete	60 W / 230 V, 50 - 60 Hz / 24 V		150 °C - 450 °C	
	with Basic tool 60 soldering iron 0670CDJ,with	60 W (at 350 °C)	approx. 60 s (280 °C)		60 g
	soldering tip 0832CDLF and tool holder 0A41				

The electronically temperature-controlled **ANALOG 60** soldering station is the basic model of the ERSA soldering station series. It has the tried and proven ERSA RESISTRONIC temperature control technology, with the ceramic PTC heating element serving as the temperature sensor. The high initial power enables fast heat-up.

The large selection of soldering tips allows a broad range of applications. The internal heating provides high thermal efficiency. A front-installed socket with integrated, high-impedance allows potential equalization between the soldering tip and the work-place.

The device is primarily used for smaller and medium-sized solder joints. The low-voltage operated soldering iron Basic tool 60 has a highly flexible, heat-resistant connecting cable.

# **ERSA ANALOG 80 Soldering Station**



with Basic tool 80 soldering iron, ERSA SENSOTRONIC control system 832 and 842 soldering tip series see page 38 / 39

Order no.	Description	Rating / Voltage	Heating time	Temperature range	Weight (w/o cable)
0ANA80	ANALOG 80 soldering station complete	80 W / 230 V, 50 - 60 Hz / 24 V		150 °C - 450 °C	
	with Basic tool 80 soldering iron 0810CDJ with	80 W (at 350 °C)	approx. 40 s (280 °C)		50 g
	soldering tip 0832CDLF and tool holder 0A41				

Experienced amateurs and professional users, especially in wiring harness production, etc. have for many years appreciated the unusually wide range of applications of the ERSA **ANALOG 80** soldering station and its predecessors. The light and slim Basic tool 80 soldering iron with an internally heated soldering tip has a high level of thermal efficiency. It can even replace commercially available uncontrolled soldering irons of up to 150 W output. The ERSA SENSOTRONIC

The ERSA SENSOTRONIC control system with its thermocouple temperature sensor inside the soldering tip and near the soldering track immediately reacts to any heat loss. Practically delay-free reheating and high temperature constancy are ensured.

The soldering tip is connected with high impedance to the

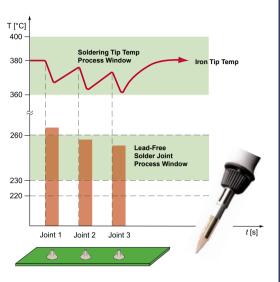
front-installed potential equalization socket.

Basic tool 80 has a highly flexible, heat-resistant connecting cable.



# **Antistatic Soldering & Desoldering Stations**











High-tech soldering and desoldering, diverse applications and high-precision: easily attained with ERSA top-quality products.

Precise temperature measurement near the soldering tip and a microprocessor controlled heating system will guarantee safe lead-free soldering at low temperatures in the future. The ERSA soldering stations' high capacity ensures superior reheating. Even high-mass soldering can be carried out without problems.



The electronically temperature-

# **ERSA ANALOG 60 A Soldering Station**



Order no.	Description	Rating / voltage	Heating time	Temperature	Weight
				range	(w/o. cable)
0ANA60 A	ANALOG 60 A soldering station complete	60 W / 230 V, 50 - 60 Hz / 24 V		150 °C - 450 °C	
	with Ergo tool soldering iron 0680CDJ, with	60 W (at 350 °C)	approx. 60 s (280 °C)		60 g
	soldering tip 0832CDLF and tool holder 0A42				

controlled ERSA ANALOG 60 A soldering station is antistatic according to the MIL-SPEC / ESA standard and has all the positive features of the ERSA ANALOG 60. It has the tried and proven ERSA RESISTRONIC temperature control technology based on the ceramic PTC heating element and the fast heat-up characteristics. Internally heated tips guarantee high thermal efficiency. The unusually wide range of tips allows a varied range of applications. The front-installed potential equalization socket is connected with high impedance to the soldering tip. The light and slim Ergo tool soldering iron has a highly flexible, heat-resistant and antistatic connecting cable. The ANALOG 60 A soldering station is especially suitable for producing small and medium-sized solder joints. For tip changing we recommend the tip exchanger 3ZT00164 with an additional flat nose pliers and side cutter (see p. 32).

# **ERSA ANALOG 80 A Soldering Station**





A 47

Holder for 832 XD mini solder bath series. Delivery without soldering iron and mini solder bath.



#### ANALOG 80 A

with Power tool soldering iron, ERSA SENSOTRONIC control system 832 and 842 soldering tip series see page 38 / 39

Order no.	Description	Rating / voltage	Heating time	Temperature range	Weight (w/o. cable)
0ANA80A	ANALOG 80 A soldering station complete	80 W / 230 V, 50 - 60 Hz / 24 V		150 °C - 450 °C	
	with Power tool soldering iron 0840CDJ, with	80 W (at 350 °C)	approx. 40 s (280 °C)		50 g
	soldering tip 0842CDLF and tool holder 0A42				

The antistatic, electronically temperature-controlled high-powered ERSA ANALOG 80 A soldering station according to the MIL-SPEC / ESA-standard is the ideal tool for producing solder joints with a high heat requirement.

The light and slim Power tool soldering iron has high thermal efficiency, and can replace even ordinary uncontrolled soldering irons of up to 150 W power. The ERSA SENSOTRONIC control system with its thermocouple temperature sensor inside the soldering tip and near the soldering track immediately reacts to any heat loss. Practically delay-free reheating and high temperature constancy are ensured. The soldering tip is connected with high impedance to the front-installed potential equalization socket.

The low-voltage soldering iron Power tool has a highly flexible, heat-resistant and antistatic connecting cable.



# **ERSA DIGITAL 2000 A Soldering Station**

The ERSA DIGITAL 2000 A is a top-class microprocessorcontrolled soldering station distinguished by its flexibility and multifunctionality. It is antistatic according to the MIL-SPEC / ESA standard and is designed for industrial use where high quality is demanded and for repairs and laboratory applications.

The device can alternatively be operated with various soldering and desoldering tools. Besides the Power tool and Tech tool universal soldering irons, the Micro tool microsoldering iron, the Cip tool desoldering pincette and the X-Tool desoldering iron can be connected.

The tools are automatically detected when inserted and the control characteristics accordingly adapted. The soldering and desoldering tips are therefore always connected with high impedance to the front-installed potential equalization socket.

The station is easy to operate and user-friendly. The desired temperatures, the unit of temperature (°C/°F), the stand-by time of 0 to 60 minutes, a tip offset and calibration feature and a three-character passwordcontrolled lock can all be set with just three buttons and a simple menu guide. The energy feature allows you to influence the heat-up and reheating characteristics.

In addition, the soldering station has 4 programs. Each program can be separately and differently configured with the aforementioned functions.

A fixed program is assigned to each soldering and desoldering tool. The station automatically changes the program in case of a tool change.

If only one tool is used, all programs can also be used. A 5th program slot contains a temperature measuring function. For this purpose the temperature sensor DIG207 is required.





## **Multifunctionality Combined With Comfort**



#### **DIG20A64**

with Tech tool soldering iron and ERSA SENSOTRONIC control system 612 soldering tip series see page 40



#### **DIG20A27**

212 soldering tip series see page 42



with Micro tool soldering iron and ERSA RESISTRONIC control system



#### **DIG20A45**

with Chip tool and ERSA RESISTRONIC control system.

422 desoldering tip series see page 41



Order no.	Description	Rating / Voltage	Heating time	Temperature range	Weight (w/o. cable)
0DIG20A84	DIGITAL 2000 A electronic station complete	80 W / 230 V, 50 - 60 Hz / 24 V		50 °C - 450 °C	
	with Power tool soldering iron 0840CDJ, with soldering tip 0842CDLF and tool holder 0A42	80 W (350 °C)	approx. 40 s (280 °C)		approx. 50 g
0DIG20A64	DIGITAL 2000 A electronic station complete with Tech tool soldering iron 0640ADJ, with soldering tip 0612ADLF and tool holder 0A42	80 W / 230 V, 50 - 60 Hz / 24 V 60 W (350 °C)	approx. 12 s (280 °C)	50 °C - 450 °C	approx. 50 g
0DIG20A27	DIGITAL 2000 A electronic station complete with Micro tool soldering iron 0270BDJ, with soldering tip 0212BDLF and tool holder0A42	80 W / 230 V, 50 - 60 Hz / 24 V 20 W (350°C)	approx. 50 s (280 °C)	150 °C - 450 °C	approx. 25 g
0DIG20A45	DIGITAL 2000 A electronic station complete with Chip tool - 0450MDJ, with tips 0422MD and tool holder 0A43	80 W / 230 V, 50 - 60 Hz / 24 V 2 x 20 W (350 °C)	subject to tips	150 °C - 450 °C	approx. 75 g

The calibration feature allows the actual soldering tip temperature to be precisely adjusted to the temperature shown in the LED display. For this purpose a suitable soldering tip temperature measuring device, such as the ERSA DTM series (see page 31), is required.

The ERSA DIGITAL 2000 A soldering station regulates the temperature through a digital PID algorithm, optimized for very precise and fast temperature control.

All connectable soldering and desoldering devices have enormous power reserves thanks to the PTC heating elements located inside the tips.

At a peak temperature of 280 °C the following power is available, for example:

- Power tool 105 W
- Tech tool 70 W
- · Micro tool 30 W
- Chip tool 2 x 30 W
- X-Tool 120 W.

These power reserves also ensure safe and top-quality soldering and desoldering results.

All soldering and desoldering tools are operated at the low voltage of 24 V and have a highly flexible, heat-resistant and antistatic connecting cable.

For tip changes we recommend the tip exchanger 3ZT00164 with flat nose pliers and side cutter (see page 32).



# **ERSA i-CON Soldering Station**

Guaranteeing quality in a lead-free environment will put the greatest demands on hand soldering applications.

Today's hand soldering operators expect a great deal from a state-of-the-art hand solder tool: a small and lightweight, ergonomically designed hand tool that does not get too hot during use, maximum power and efficiency for rapid heat-up and recovery during soldering, fast and easy tip change, as well as easy-to-use station operation and programming.

Today's QA and purchasing managers, however, have much different concerns. In order to quarantee quality, soldering stations must be designed for superior performance. The higher working temperatures and smaller process windows for lead-free hand soldering demand precise temperature control of the soldering tip and rapid heat recovery of the heating element in order to prevent cold solder joints. Low-cost, long-life soldering tips are a must from a running cost efficiency standpoint and are the major concern for the purchasing department.

To meet this challenge, ERSA is proud to introduce its newest technology (patent pending) for a state-of-the-art soldering station that has been specifically designed to meet the challenges the industry will face with lead-free implementation. The ERSA *i*-CON and *i*-Tool is an exciting innovation at the core of our existence, and will be available to the market the second quarter of 2006, just in time for the 1 July lead-free start date.



with i-Tool soldering iron with patent pending heating technology 102 soldering tip series see page 37

Order no.	Description	Rating /	Heating time	Temperature	Weight
		Voltage		range	(w/o. cable)
DIC1000A	i-CON electronic station complete	80 W / 220 - 240 VAC / 50 Hz,		150 °C - 450 °C	
	with i-Tool soldering iron - 0100CDJ, with	150 W (350 °C)			
	soldering tip 0102CDLF16 and tool holder 0A48		approx. 9 s (350 °C)		approx. 30 g

#### Innovative features of this technology

# 150 W 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.

#### Heat-up and recovery:

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 stand-by 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 stand-by motion sensor:

Recognizes when the iron is being used and automatically goes into a stand-by temperature when the iron is put into its holder.

#### i-Set Tool:

This optional item allows for automatic downloading 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!



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

#### Process window alarm:

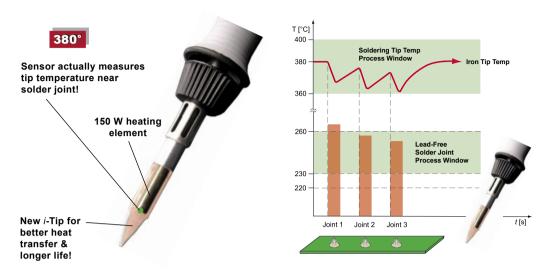
Informs operator with a visual and acoustic signal if the soldering iron tip gets too hot or too cold. QC can specify a process window in which the iron is allowed to work, and, for the first time ever in the history of hand



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



# **Safe and Innovative Lead-Free Hand Soldering**



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.

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 which is installed in the handle.

This now allows for each individual *i*Tool to be calibrated independent of the
soldering 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 tins!



- 1. Low-cost i-Tip
  (Consumable, easy to change, long-life)
  - 2. i-Tip fastener
  - 3. Heating element (stick-on type, long-life)



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





The i-CON2 is also available as double iron station with the Chip tool for SMD removal.

ERSA has succeeded in designing one of the smallest, lightest and most powerful soldering irons in the world - the ERSA i-Tool. The true value added for our customers lies not only in the fact that it will increase both the hand soldering quality and productivity, but also that it can realize a tremendous reduction in operational costs associated with manual soldering.

ERSA's new patent pending technology allows for a similar performance as compared to the soldering irons with expensive heating cartridge tips, but offers a standard low-cost, long-life exchangeable tip!

The ERSA i-CON advanced digital power supply offers ERSA's new "One Touch" easy-to-use operation with the new i-Op Control, as well numerous value added functions.





# **ERSA SMT 60 AC SMD Soldering & Desoldering Station**

The ERSA **SMT UNIT 60 AC** is most often used in the repair of SMD PCBs. It is the basic device for soldering and desoldering the most common SMD components.

Antistatic according to the MIL-SPEC/ESA standard and therefore safe for electrostatically endangered components, this combination station comes with the Micro tool soldering iron and the Chip tool desoldering pincette.

Both are equipped with the tried and proven ERSA RESISTRONIC temperature control system, with the ceramic PTC heating elements serving as the temperature sensor. The use of these heating elements with a high positive temperature coefficient affords high heat-up power, so that the tools can be brought to the desired operating temperature very fast.

The Micro tool soldering iron and the Chip tool desoldering pincette are connected to the electronic station 0SMT603A through coded plug connectors to prevent a mix-up, and can be independently and simultaneously operated. The internal heating of the tips provides great thermal efficiency.

The soldering and desoldering tips are connected with high impedance to the front-installed potential equalization socket. Both tools are equipped with a highly flexible, heat-resistant and antistatic connecting cable. The Mini, Micro and SolderWell soldering tips (see page 42) allow Fine-Pitch components to be soldered in the shortest possible time with top solder quality. The desoldering tips of the ERSA Chip tool range from paired desoldering tips for MICROMELFs to inserts for PLCC 84 housings (see page 41).

The two duroplastic tool holders have a sponge receptacle with a viscous sponge for tip cleaning and also serve as clearly arranged tip holders. Since the soldering and desoldering tips are only plugged in, they can be easily exchanged using the ERSA tip exchanger 3ZT00164 even when hot.



Order no.	Description	Rating / voltage	Heating time	Temperature	Weight	
				range	(w/o. cable)	
0SMT60AC	SMT 60 AC electronic station complete with	60 W / 230 V, 50 - 60 Hz / 24 V				
	Micro tool soldering iron 0270BDJ, tip 0212BDLF and	20 W (350 °C)	approx. 50 s (280 °C)	150 °C - 400 °C	approx. 25 g	
	Chip tool - 0450MDJ, tips 0422MD and	2 x 20 W (350 °C)	subject to tips	subject to tips	approx. 75 g	
	tool holders 0A42 and 0A43					
E045600	Extension set for tip turn protection set for the use of another desoldering tip pair of the 422 series					



#### E045600

Extension set for tip turn protection set for the use of another desoldering tip pair of the 422 series

**IRHP 200** 

Infrared rework heating plate see page 29

# Quick and easy SMD rework:

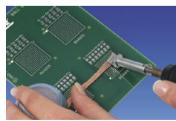
A process description on Fine-Pitch soldering and desoldering of SMD components is available at: www.ersa.com



Superfine SMD soldering tip (0212SD)



Desoldering with the Chip tool



Removal of residual solder



SMD soldering with the Micro tool



# ERSA SMD 8012 and SMD 8013 Tip Holders



212 soldering tip series see page 42, 422 desoldering tip series see page 41

ERSA Seturabello

ERSA SMD 8013

Order no.	Tip holder	Equipped with 212 ERSADUR soldering tips	Equipped with 422 desoldering tip pairs
0SMD8012	SMD 8012 tip holder, complete	BDLF,CDLF,EDLF,KDLF	ED,FD1,FD2,QD1,QD3, QD4,QD2,MD
0SMD8013	SMD 8013 tip holder, complete	BDLF,CDLF,EDLF,MS,WD,SDLF,	ED,FD1,FD2,FD4,FD5, FD6 QD3 QD5 MD SD

#### Flux Cream

A wide range of accessories and consumables, process descriptions on soldering and desoldering are available at: www.ersa.com



# The SMD 8012 and SMD 8013 tip holders are equipped with the latest soldering tips or desoldering tip pairs, in particular for SMD technology. Tips can be stored neatly arranged in a space-saving way for quick access.

The range of currently available soldering tips and desoldering tip pairs, with the component-specific dimensions, can be found on pages 41 and 42.

All soldering tips and desoldering tip pairs are manufactured according to the ERSADUR process. They have excellent thermal conductance and a long service life.

## **ERSA DIGITAL 2000 A Desoldering Station with Compressor Unit**





# X-Tool with compressor unit

with electronic station 0DIG203A and ERSA SENSOTRONIC control system 722 desoldering tip series see page 39

					* incl. tip and cable
Order no.	Description	Rating / Voltage	Vacuum	Temperature	Weight
				range	
0DIG20AXT	DIGITAL 2000 A desoldering station complete	80 W / 230 V, 50 - 60 Hz / 24 V		50 °C - 450 °C	1.25 kg
	with vacuum unit 0CU103A,	45 W	800 mbar max.		
•	X-Tool desoldering iron 0720ENJ,	2 x 60 W (350 °C)			approx. 240 g*
	tip 0722EN1223, holder 0A44				

suitable for removing residual solder and for desoldering wired components, even from multilayer PCBs. The station consists of the ERSA DIGITAL 2000 A described on pages 20 and 21, a vacuum unit with the X-Tool desoldering iron and the 0A44 tool holder. The desoldering tip is heated by two PTC heating elements. A thermocouple temperature sensor near the desoldering tip immediately reacts to any heat loss. Practically delayfree reheating is therefore ensured.

This desoldering station is

The vacuum for suctioning the liquefied solder is immediately available when the push-button is pressed. The recesses of the tool holder 0A44 allow exchanging inserted soldering tips, even when hot, without an additional tool.



#### **CLEAN-AIR Solder Fume Extractions**



#### **Health Protection During Soldering**

The breathing zone lies very close to the soldering process during manual soldering. Suspended particles and gases in the work area cannot be prevented from entering the respiratory system. Noxious gases conveyed through the circulatory system may, over longer periods of time, cause damage to other organs like the liver and kidneys.

The causal relevance of solder fumes to allergic reactions, asthma attacks and chronic bronchitis is medically established.

It must be kept in mind that safeguarding human resources is crucial for any company's success. Risks not detected in due time usually prove more expensive than their prevention would have been.

From a health standpoint, neither eating, drinking nor smoking should be permitted in areas where soldering occurs.

As long as lead-containing solder is used, there is a risk of lead traces remaining on hands entering the human organism through food or cigarettes. For this reason, hands should always be carefully washed after soldering work.

Solder waste and used solder fume filters are hazardous waste and must not be discarded with household rubbish.







Noxious gases develop during the soldering process due to the use of fluxes. This aspect, together with the fact that condensated flux on the PCB can cause problems results in an increased requirement to use solder fume extraction systems, also with regard to quality.

ERSA Easy Arm solder fume extractions ensure clean boards and a healthy environment in an efficient and economic way when hand soldering. They clear off an entire working area via large nozzles which are available in different designs.









# **ERSA EA 110** plus Solder Fume Extraction





Table mounting, order no. 3CA06-9001



Application example



wide range of ac	cessories.			Application	n example
Order no.	Description	Dimensions (L x W x H)	Rating / Voltage	Volume flow / vacuum	Noise level
00400.000	EDGA EAGY ADM EVED ACTION	400 040 470	400 14/7	140 3/1 /	E4 -ID (A)

Order no.	Description	Dimensions (L x W x H)	Rating /	Volume flow /	Noise level	Filter
			Voltage	vacuum		
0CA08-002	ERSA EASY ARM EXTRACTION EA 110 <i>plus</i> filter unit	460 x 210 x 470 mm	100 W / 100 - 250 V 50 - 60 Hz	140 m³/h max. / 2,200 Pa	51 dB (A) max.	HEPA activated carbon

# Accessories for the EA 110 plus

Powerful solder fume extraction unit for the workbench for up to 2 extraction arms.

Please select the extraction arms and nozzles suitable for your requirements from our



Extraction arm with 700 mm flexible hose, incl. connecting hose, table mounting and quick coupling



Metallic nozzle, 50 mm ø



#### 3CA06-4002

Extraction arm 1,000 mm flexible hose (to be installed directly at the EA 110 plus filter unit) with 2 quick couplings



Antistatic nozzle, plastic, 190 x 100 mm



#### 3CA06-9006

Stop valve for extraction arm



Nozzle "Plus", plastic, ESD, 215 x 90 mm

The new EA 110 plus filtering device is a compact and efficient system with economical air recirculation. Thanks to the continuously variable suction power, the device can be adapted to any given situation. It can suction the solder fumes from one or two workplaces effectively and economically.

The variable setup and installation options allow use even where space is limited.

The solder fumes are filtered in two stages: first, the particulate filter removes smallest suspended particles from the suctioned air. Harmful gases are then absorbed in the activated carbon filter.

The powerful suction turbine provides a nearly constant suction flow during the filter's entire service life. The filtering action is monitored by means of a time limit and constant monitoring of the suction power. The user is promptly notified of a necessary filter change by visual and acoustic signals.

For protection of the drive motor, the ERSA EA 110 plus has an automatic cut-off feature.

The combination filter can be changed fast and easily without tools after the housing upper part is removed.

Two suction arms, three suction nozzles and a check valve are available for different work conditions.

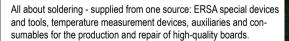
The plug-in system with its flexible suction arms allows fast adaptation to altered conditions at the soldering workplace.

Especially noteworthy is the low noise level, allowing use of the device not only in production, but also in repairs, engineering and in the lab. The decentralized design requires no extensive pipe system and affords the greatest possible flexibility.

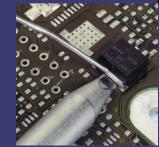


# **Accessories & Process Material**











The electrically operated ERSA **LVE** solder wire

dispenser precisely feeds solder during soldering. It is primarily used when no "third hand" is available, for example, when soldering stranded wire braids to

soldering tags, etc.

The solder wire is fed through

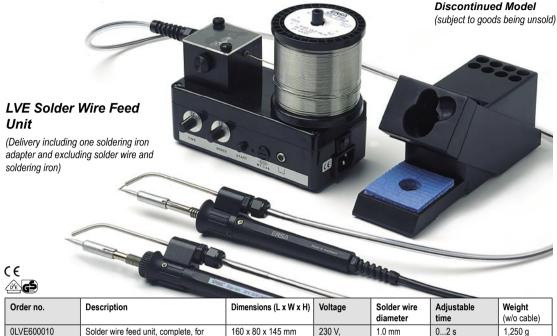
a calibrated Teflon hose to

the soldering tip to ensure

safe transport with minimum

A profiled drive shaft in the

#### **ERSA LVE Solder Wire Feed Unit**



50 - 60 Hz

50 - 60 Hz

1.0 mm

0...2 s

1,250 g

230 V.

gearing part provides the desired feed. The speed and runtime can be separately adjusted, so that the same quantity of solder is always supplied.

friction.

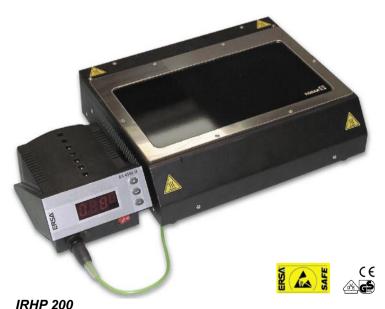
The LVE is controlled by a push-button.

further diameters on request

0LVE600010S

# **ERSA IRHP 200 Infrared Rework Heating Plate**

160 x 80 x 145 mm



Electronically temperature-controlled infrared rework heating plate with integrated thermo-

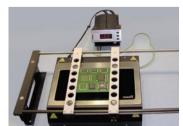
couple, incl. control station 0RA4500D

CT60/80, CTA60, Basic tool 60/80 soldering irons with tool holder 0A34

Solder wire feed unit, complete, for

soldering irons with tool holder 0A34

Power tool, Ergo tool, Tech tool



Application example with optionally available X/Y PCB table 0IR5500-01

Order no.	Description	Heated area	Rating / voltage	Temperature range	Weight
0IRHP200	IRHP 200 infrared rework heating plate with control station 0RA4500D	260 x 135 mm (L x W)	max. 800 W / 230 V~, 50 - 60 Hz	50 °C - 600 °C (at the heating element)	approx. 4 kg

The ERSA IRHP 200 is a compact and ergonomically designed heating plate to preheat all SMD components as well as assemblies and substrates during the hand soldering process. It can also be used to reflow solder one-sided SMD boards and for reballing BGAs.

The heating plate temperature can be adusted continuously from 50 °C to 600 °C.

The IR emitters' even heat distribution ensures non-contact, gentle heating of the assembly. Thus the IRHP 200 is perfectly suited for lead-free applications.

The control station can be placed independently from the heating plate on the workbench in an ergonomically favourable way.



# **ERSA VP 100 SMD Vacuum Placer**

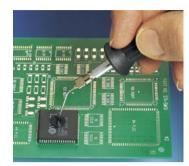
A practical tool for handling and positioning SMD components of varying sizes is the ERSA **VP 100**.

The smallest components, including MELFs and Mini-MELFs, are fixed in place directly by the vacuum at the end of the suction nozzle. For larger components, one of the three suction cups with the corresponding diameter is used.

The VAC Pen vacuum pipette made of antistatic plastic has a bypass opening. When this opening is closed by the index finger, the vacuum acts on the suction nozzle and the component can be taken up. Component legs are protected and not bent.

A hardly audible magnetic piston pump generates the necessary vacuum.





Order no.	Description	Rating / voltage	Cup diameters	Vacuum	Weight (w/o. cable)
0VP100	VP 100 vacuum placer complete with	2 W / 230/24 V	4 mm, 6 mm, 9 mm	0.2 bar max.	
	VAC-Pen 0VP020, bent nozzle,				24 g
	3 silicone cups 0SVP13A and holder 0A27				

# **ERSA SVP 100 Vacuum Pipette**

The device can be used to handle nearly all components, except MELFs and Mini-MELFs.

This tool consists of a nickelplated aluminum handle, sealed at the rear end by a plug.

When opened, replacement tips and suction cups can be stored here.

**SVP 100** 



Order no.	Description	Length	Housing diameter	Cup diameters	Weight
0SVP100	SVP 100 vacuum pipette complete with bent tip 0SVP12K and 3 silicone cups 0SVP13A	150 mm	14 mm	4 mm, 6 mm, 9 mm	69 g



# **ERSA DTM 50 & DTM 100 Temperature Measuring Devices**



The DTM 100 is equipped with a patented sensor unit (K-type) with sensor wires made of chromel and alumel. It provides exact temperatures of even finest soldering tips.

temperature measuring device with flexible NiCrNi thermocouple (K-type)

Order no.	Description	Measuring range	Operating temperature	Power supply	Dimensions (mm) without sensor unit	Weight
0DTM050	DTM 50 temperature measuring device, packed in a plastic case	-50 °C to +1150 °C	0 °C to +45 °C	9 V flat battery 6F22	100 x 60 x 26 mm	approx. 134 g
0DTM050P	DTM 50 temperature measuring device with calibration certificate, packed in a plastic case	-50 °C to +1150 °C	0 °C to +45 °C	9 V flat battery 6F22	100 x 60 x 26 mm	approx. 134 g
0DTM100	DTM 100 temperature measuring device, packed in a plastic case	-50 °C to +1150 °C	0 °C to +45 °C	9 V flat battery 6F22	100 x 60 x 26 mm	approx. 134 g
0DTM100P	DTM 100 temperature measuring device with calibration certificate, packed in a plastic case	-50 °C to +1150 °C	0 °C to +45 °C	9 V flat battery 6F22	100 x 60 x 26 mm	approx. 134 g

In certified businesses and from a quality standpoint, regular checking of the soldering tip temperature is obligatory. Viewed through their entire service life, ERSA soldering stations are extremely temperature-stable depending on the system.

Possible differences between the rated and actual data due to differences in tips or to slight heating element tolerances in the RESISTRONIC control system can be easily ascertained with the DTM 50 and DTM 100 temperature measuring devices and corrected easily and fast on nearly all ERSA soldering stations.

The measurement is practically conducted by cleaning the heated soldering tip with a moist sponge and soaking it in new solder. The soldering tip is then connected to the given temperature sensor and the temperature determined as soon as the display has stabilized.

# **ERSA Desoldering Devices**







slim antistatic desoldering device with metal housing



#### VAC 3

slim antistatic desoldering device with plastic housing







#### Soldapullt AS 196

proven desoldering device with plastic housing and extremely good recoil damping

Order no.	Description	Desoldering tips	Suction capacity
0VAC2	VAC 2 antistatic desoldering device	0VAC22 (2 pcs.)	8.9 cm <sup>3</sup>
0VAC3	VAC 3 antistatic desoldering device	0VAC32 (2 pcs.)	10 cm <sup>3</sup>
0VACX	VAC X antistatic desoldering device	0VACX2	11.3 cm <sup>3</sup>
0AS196	Soldapullt AS 196 antistatic desoldering device	0LS197	34 cm <sup>3</sup>

The VAC 2, VAC 3 and VAC X desoldering devices are distinguished by their high suction power and low-recoil desoldering. The antistatic design of the devices allows desoldering work on electrostatically endangered assemblies.

The long, slim desoldering tips also allow soldering operations on tightly assembled PCBs.

The **Soldapullt AS 196** model is distinguished by extremely good recoil damping and has proven its merit many times over in industry.

The dual seal ring system guarantees constant suction power on a high level.



# **ERSA STR 100 Stacking Rack**

# The ERSA **STR 100** stacking rack can be used for combining two soldering stations or (e.g.) the DIG 2000 A electronic station with the vacuum unit as required (see adjacent illustration) in a practical and space-saving way.



#### STR 100

stacking rack for a well-organized workplace (Delivery without soldering stations)



Order no.	Description
0STR100	STR 100 stacking rack to arrange soldering stations in a safe and space-saving way at the workbench

# **ERSA SR 100 Solder Wire Dispenser**

The ERSA **SR 100** solder wire dispenser is extremely durable and can accept solder wire reels of up to 1,000 g.

Optimal unwinding of different reels is ensured by a conical centering nut.

The flexibly mounted solder wire guide is suitable for all current solder wire diameters and allows unwinding in the desired direction without having to change the location of the SR 100.

Available as an accessory and easily retrofitted, the ERSA **SR 101** kit allows simultaneous use of a second spool.



#### SR 101

retrofit kit for a second solder wire spool, optionally available (Delivery without solder wire and SR 100)

Order no.	Description	Solder wire spools	Spool receiver diameter
0SR100	SR 100 solder wire dispenser for one spool (without solder wire)	250 g, 500 g, 1,000 g	14 mm
0SR101	Kit for 0SR100 for 2nd spool (without solder wire)	250 g, 500 g, 1,000 g	14 mm

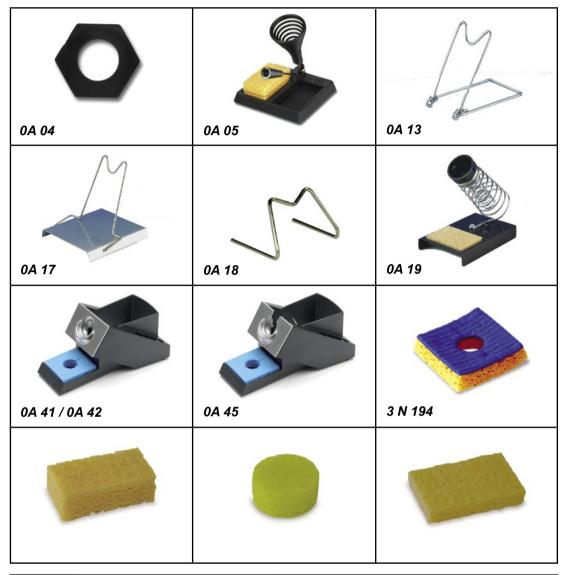
# **ERSA Tip Exchanger**

For changing all internally heated soldering and desoldering tips as well as hot air nozzles, we recommend tip exchanger 3ZT00164 with flat nose pliers and side cutter. These special pliers allow tips to be replaced safely and protectively, even when hot.





# **ERSA Tool Holders and Cleaning Sponges**



Order no.	Description	for
0A04	Tool holder A 04	Soldering irons from 50 W - 150 W output; Isotyp and 0180PZ soldering irons
0A05	Tool holder A 05	Medium-sized and small soldering irons
0A17	Tool holder A 17	Soldering irons with an output ranging from 200 W - 550 W
0A18	Tool holder A 18	Soldering irons of the Multitip series; Tip 260 and TC 65 soldering irons
0A19	Tool holder A 19	Soldering irons of the Multitip series
0A39	Tool holder A39	RT 80 soldering iron
0A41	Tool holder A 41	Irons of the Multitip series; Multi-Pro, Multi-TC, Basic tool 60 / 80 soldering irons
0A42	Tool holder A 42, antistatic	Tip tool, Power tool, Ergo tool, Micro tool and Tech tool soldering irons
0A43	Tool holder A 43, antistatic	Chip tool (fig. see page 21)
0A44	Tool holder A 44, antistatic	X-Tool desoldering iron (fig. see page 25)
0A45	Universal holder A 45	832 soldering tip series (C8 - C18, MD, QD, ZD models), solder wire feed unit and solder fume extraction
0A47	Tool holder A 47 with additional fixing	Mini solder baths of the 0832XD series (fig. see page 19)
0A48	Tool holder A 48, antistatic	i-Tool soldering iron
3N194	Rubber support disk 3 N 194	Multitip, Multi-Pro, ERSA 30 S soldering irons
0SH03	SMD soldering and desoldering tip holder	Soldering and desoldering tips of the 212 and 422 series
0G156	Sponge container G156	Independent 75 and Independent 130 gas soldering irons
0003B	Blue viscose sponge, 55 x 55 mm	Tool holders 0A09, 10, 13, 16, 24, 25, 28, 29, 30, 34, 35, 36, 39, 41 - 45, 48
0004G	Viscose sponge, 34 x 65 mm	Tool holders 0A05, 0A21 and 0A26
0006G	Sponge, ø 36 mm	Sponge container 0G156 for the Independent 75 / 130 gas soldering irons
0007G	Viscose sponge, 70 x 46 mm	Tool holder 0A19

Soldering and desoldering devices are heating devices and depending on the application can attain high temperatures during operation. This equipment must never be operated without supervision; during longer interruptions of work they should be switched off and always stored in suitable tool holders.

Most of the ERSA tool holders are made of metal or heat-resistant duroplastic, and most are antistatic.

Most holders have a viscous sponge for tip cleaning, as well as options for conveniently resting and storing soldering and desoldering tips.

#### Note:

ERSA offers wire mesh to dry clean soldering tips. For further information please refer to: www.ersa.com



ERSA bar solder, like solder wire, is recovered from initial melt solder. It is primarily used for filling solder baths. For easier melting, it can be supplied as required in 50 mm sections. In combination with soldering irons of greater power and with suitable flux, bar solder is also used for soldering cable lugs of larger cross-sections and in sheet metal work.

#### **ERSA Bar Solder**





Order no.	Alloy	Melting temperature	Delivered in
4LOT230GAG3.5CU0.7	Sn95.8Ag3.5Cu0.7	217 - 218 °C	Bars of approx. 230 g
4LOT230GAG3.8CU0.7	Sn95.5Ag3.8Cu0.7	217 °C	Bars of approx. 230 g
4LOT230G3.5AG	Sn96.5Ag3.5	221 °C	Bars of approx. 230 g
4LOT400GCUNIGE	Sn99.3CuNiGe (based on Sn99.3Cu0.7)	227 °C	Bars of approx. 400 g
4LOT230G63B	Sn63Pb37	183 °C	Bars of approx. 230 g
4LOT230G64B	Sn64Pb36	183 °C	Bars of approx. 230 g

#### **ERSA Solder Wire**

ERSA **solder wire** consists exclusively of high-quality raw materials. Manufactured on state-of-the-art machines, the wire meets all quality requirements.

It is manufactured in different dimensions and with different alloys, to meet all practical requirements.

Different types of "flux cores" allow individual adaptation to all soldering needs, especially in electronics and the electronics industry.



ATTENTION: According to the EU Directive as of July 1, 2006 lead may no longer be used in electronic assemblies (see page 4).



#### Solder wire

available in different alloys and drum sizes in order to meet various fields of application



Solder alloy according	Flux according to	Melting	Quantities	Diameters (mm)							
to DIN EN 29453	% flux share	temperature (°C)	(g)	0.35	0.5	0.6	0.7	8.0	1.0	1.5	2.0
Sn95.5Ag3.0Cu0.5	29454 art. 1, type 1.1.3.B, or DIN EN 61190-1-3, ROL0 3.5 %, halogen-free	217	100 250 500		•				•	•	
Sn99.3CuNiGe (based on Sn99.3Cu0.7)	29454 art. 1, type 1.1.3.B, or DIN EN 61190-1-3, ROL0 3.5 %, halogen-free	227	100 250 500	•	•		•		•		
Sn99.3Cu0.7	29454 art. 1, type 1.1.3.B, or DIN EN 61190-1-3, ROL0 3,5 %, halogen-free	227	250 500		•		•		•	•	
Sn96.5Ag3.5	29454 art. 1, type 1.1.3.B, or DIN EN 61190-1-3, ROL0 3,5 %, halogen-free	221	100 250 500	•	•		•		•		

Low-residue, halogen-free No-Clean solder wire. Especially adapted to the requirements in electronics production. The flux stands out by high temperature resistance, and it does not spray while melting. The light, solid flux residues are neither corrosive nor electrically conductive. Consequently it is not necessary to remove them from the solder inint

to remove them nom	o remove them from the solder joint.									
Sn60Pb40	29454/1.1.2 2.2 %	183 - 190	100 250 500 1000				:	•	•	
Sn60Pb40	29454/1.2.3 1.4 %	183 - 190	100 500	•	•					
Sn60Pb38Cu2	29454/1.1.2 2.2 %	183 - 190	100 250 500 1000				•	•	•	•
Sn63Pb37	29454/1.1.3 2.2 %, halogen-free	183	1000					•		

subject to changes



# **ERSA Desoldering Wicks**



#### Desoldering wicks



Order no.	Description	Package size
0WIC NC1.5/10	No-Clean wicks, length 1.5 m, width 1.5 mm	10 pcs.
0WICKNC1.5/SB	No-Clean wicks, length 1.5 m, width 1.5 mm	single-piece package
0WICKNC2.2/10	No-Clean wicks, length 1.5 m, width 2.2 mm	10 pcs.
0WICKNC2.2/SB	No-Clean wicks, length 1.5 m, width 2.2 mm	single-piece package
0WICKNC2.7/10	No-Clean wicks, length 1.5 m, width 2.7 mm	10 pcs.
0WICKNC2.7/SB	No-Clean wicks, length 1.5 m, width 2.7 mm	single-piece package

ERSA desoldering wicks are saturated with halogenfree No-Clean flux. They are suitable for protectively removing excess solder and old solder, especially from boards carrying SMD components. A fine copper fabric with high capillary power ensures optimal desoldering results. The additional use of a flux cream may be appropriate under certain circumstances.

### **ERSA Flux and Flux Remover**





#### Flux cream

ERSA No-Clean flux creams available in different quantities



Flux-Pen



Flux Remover

Order no.	Description	Quantities	Danger sign
0FMKANC32-005	No-Clean flux cream, EN 29454/1.1.3 C	5 ml cartridge	1); 3)
0FMKANC32-200	No-Clean flux cream, EN 29454/1.1.3 C	200 ml can	1); 3)
4FMJF8300-005	Flux gel 8300 for rework, EN 29454-1/1.2.3 C (F-SW33), resinous, halogen-free, low residues	5 ml cartridge	1); 3)
4FMJF8001-PEN	Flux-Pen with IF 8001 flux, EN 29454/2.2.3 A (F-SW 34/DIN 8511)	7 ml	2)
0FMIF8001-001	IF 8001 flux, EN 29454/2.2.3A	100 ml	2)
0FMIF6000-001	Flux IF 6000 for lead-free rework, EN 29454/1.1.3.A (F-SW 32), resinous, halogen-free, long activation time, low residues, solid 7.5%	100 ml	1); 2)
0FMIF2005-002	IF 2005 M low-solid No-Clean flux EN 29454/2.2.3 A	200 ml sprayer	2)
0FR200	Flux Remover 0FR200, with brush 0FR202 and protective cap 0FR203	200 ml cartridge	1); 2); 3)

can be easily and precisely applied by means of the Flux-Pen or cartridge, supplied with plunger and needle. Excess residue is removed. if necessary, by means of the Flux Remover with the aid of

ERSA No-Clean Flux and Flux Cream have proven their merit especially in all repair processes in SMD technology. Like all ERSA consumables, they meet the

applicable standards and

quality requirements. They

absorbent, non-pulping paper towels or specially offered ESD-safe products.





2) = F+ Highly inflammable



3) = N Environmentally

# **ERSA Tip-Reactivator**



#### Tip-Reactivator



Order no.	Description	Quantity	Danger sign
0TR01	Tip-Reactivator, lead-free	15 g can	1)

The ERSA Tip-Reactivator allows the regeneration of oxidized soldering tips. It is environmentally safe, free of lead and halogens and functions even at low soldering tip temperatures. For this purpose the heated soldering tip is wiped on the surface of the regeneration compound.

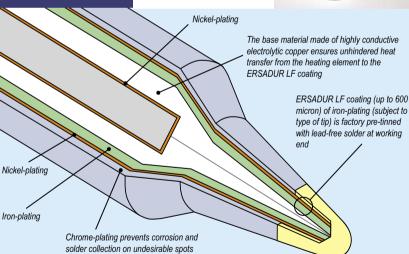


# **Soldering and Desoldering Tips**



The ERSA **Tip-Reactivator** allows the regeneration of oxidized soldering tips. It is environmentally safe, free of lead and halogens and func-tions even at low soldering tip temperatures. For this purpose the heated soldering tip is wiped on the surface of the regeneration compound.





Cross-section of an ERSADUR soldering tip, non-scale representation



#### Important notice: special care for soldering tips!

Hand soldering operators are happy when their soldering tips last a long time and continue to solder well. Soldering tips that do not allow the solder to melt rapidly due to excess oxidation clearly disrupt productivity! Special care of the soldering tip should be taken in order to solder efficiently.

#### Important Facts:

- When a soldering tip remains hot for a long period of time, the tip will oxidize or blacken. An oxidized tip will no longer "wet" or melt solder properly.
- The higher the working temperature of the soldering tip, the faster this oxidation will take place and tip lifetime will be shorter
- Soldering irons that automatically go into a lower "stand-by" temperature increase tip life.
- 4. The oxidation of the tip will be very rapid if the tip is left "cooking" without molten solder covering the tip end. It happens, for example, if the tip is not wettned with solder right after cleaning it.
- 5. Excessive mechanical force during soldering will shorten the tip life
- 6. Proper care of the tip will greatly increase tip life.
- Lead-free soldering requires higher temperatures, is more aggressive to the tip and will always lead to shorter tip life.

#### Special Care:

- Always clean the tip by wiping on a slightly wet sponge after each use. Alternatively, tips can be dry cleaned using wire mesh.
- 2. Always put fresh solder onto the end of the tip BEFORE putting the tip back into the iron holder.
- 3. Always use lowest working temperature possible.
- Never leave an iron "cooking" unattended for some time. Always set iron into automatic stand-by if possible or turn-off when not in use.
- 5. Never use excessive mechanical force when soldering.
- Soldering tip oxidation can be easily removed if detected early. Early detection and removal will greatly increase tip life.
- 7. Tip oxidation removal or tip refurbishing is accomplished in 4 consecutive steps: a. clean on damp sponge, b. clean with wire brush, c. using a Tip re-activator chemical, and d. re-tinning using proper flux cored solder wire.

#### ERSADUR LF soldering tips to process lead-free solders

Conventional soldering tips can also be used for lead-free solders. Since lead-free soldering requires higher process temperatures, and due to the fact that lead-free solder is more aggressive to the soldering tip, the tip's service life is shorter. ERSADUR LF soldering tips have an increased layer of iron, which increases tip life. Consequently they are especially suitable for lead-free soldering.



# **102 ERSADUR Long-Life Soldering Tip Series**

# 0102PDLF02 0102PDLF04 0102PDLF07 pencil point, 0.2 mm ø pencil point, 0.4 mm ø pencil point, 0.7 mm ø 0102PDLF10 pencil point, 1.0 mm ø 0102CDLF12 0102CDLF16 0102CDLF20 chisel-shaped, 1.2 mm chisel-shaped, 1.6 mm chisel-shaped, 2 mm 0102CDLF24 0102CDLF32 0102CDLF50 chisel-shaped, 2.4 mm chisel-shaped, 3.2 mm chisel-shaped, 5 mm 0102ADLF20 0102ADLF40 0102BDLF20 angled face, 2 mm ø angled face, 4 mm ø PLCC blade 0102WDLF16 0102WDLF23 0102WDLF35 PowerWell with concave portion, 1.6 mm ø PowerWell with concave portion, 2.3 mm ø PowerWell with concave portion, 3.5 mm ø



- · i-CON
- i-CON2 with i-Tool soldering iron

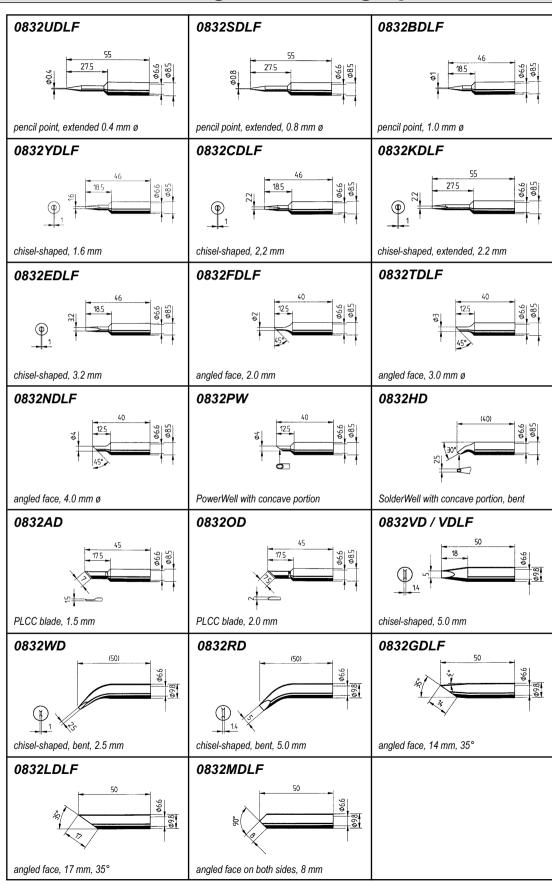




#### For:

# 832 ERSADUR Long-Life Soldering Tip Series

- ANALOG 60 / 60 A
- ANALOG 80 / 80 A
- DIGITAL 80 A
- DIGITAL 2000 A with Power tool soldering iron
- ELS 8000 / M / D
- MICRO-CON 60 iA with Power tool soldering
- MS 6000
- MS 8000 / D
- Multi-Pro
- Multi-Sprint
- Multi-TC
- RDS 80
- TWIN 80 A
   with Ergo tool soldering
  iron







# 842 ERSADUR Long-Life Soldering Tip Series

# 0842UD / UDLF 0842SD / SDLF 0842BD / BDLF pencil point, extenced, 0.4 mm ø pencil point, extenced, 0.8 mm ø pencil point, 1.0 mm ø 0842YD / YDLF 0842CD / CDLF 0842KD / KDLF chisel-shaped, 1.6 mm chisel-shaped, 2.2 mm chisel-shaped, extended, 2.2 mm 0842ED / EDLF 0842ID 0842JD chisel-shaped, 3.2 mm pencil point, bent, 0.4 mm ø chisel-shaped, bent, 2.2 mm

#### For:

- ANALOG 60 / 60 A
- ANALOG 80 / 80 A
- DIGITAL 80 A
- DIGITAL 2000 A with Power tool soldering iron
- ELS 8000 / M / D
- MICRO-CON 60 iA with Power tool soldering iron
- MS 6000
- MS 8000 / D
- Multi-Pro
- Multi-Sprint
- Multi-TC
- **RDS 80**
- TWIN 80 A
   with Ergo tool soldering
  iron



# 722 Desoldering Tip Series, ERSADUR / nickel-plated

#### 0722ED1023 0722EN0615S 0722EN1018S ERSADUR, ID 1.0 mm, OD 2.3 mm nickel-plated, ID 0.6 mm, OD 1.5 mm nickel-plated, ID 1.0 mm , OD 1.8 mm 0722ED0821 0722EN0818 0722EN1020 ERSADUR, ID 0.8 mm, OD 2.1 mm nickel-plated, ID 0.8 mm, OD 1.8 mm nickel-plated, ID 1.0 mm, OD 2.0 mm 0722ED1529 0722EN0823 0722EN1023 ERSADUR, ID 1.5 mm, OD 2.9 mm nickel-plated, ID 0.8 mm, OD 2.3 mm nickel-plated, ID 1.0 mm, OD 2.3 mm 0722EN1223 0722EN1529 0722EN2332 nickel-plated, ID 1.2 mm, OD 2.3 mm nickel-plated, ID 1.5 mm, OD 2.9 mm nickel-plated, ID 2.3 mm, OD 3.2 mm 0722ED1226 0722EN1548 0722EN2348 ERSADUR, ID 1.2 mm, OD 2.6 mm nickel-plated, ID 1.5 mm, OD 4.8 mm nickel-plated, ID 2.3 mm, OD 4.8 mm

#### For:

- DIGITAL 2000 A
   with X-Tool desoldering
   iron
- XTOOLKIT1

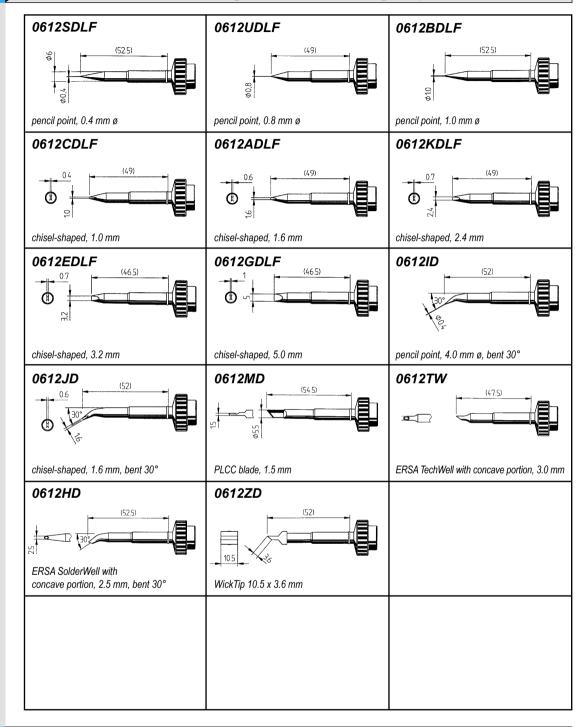




#### For:

# 612 ERSADUR Long-Life Soldering Tip Series

- CPS 60.10
- DIGITAL 60 A
- DIGITAL 2000 A with Tech tool soldering iron
- MICRO-CON 60 iA with Tech tool soldering iron



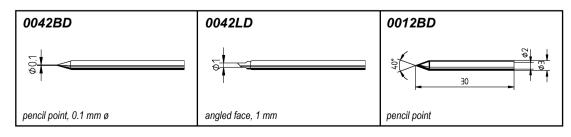


#### For:

- Minor S (042 series)
- Minityp S (tip 0012BD)



# 042 and 012 ERSADUR Long-Life Soldering Tip Series





# **422 ERSADUR Desoldering Tip Series**

#### 0422FD10 0422ED 0422FD3 4 mm, for e.g. SO 8 GT/14 GT/16GT 7,5 mm, for e.g. SOIC 12 / SOT 23 6 mm, for e.g. SOIC 8 0422FD1 0422FD4 0422FD2 10 mm, for e.g. SOIC 16 12.5 mm, for e.g. SOIC 20 15 mm, for e.g. SOIC 24 0422FD5 0422FD6 0422FD7 17.5 mm, for e.g. SOIC 28 20 mm, for e.g. SOIC 32 25 mm, for e.g. SOIC 40 0422FD9 0422FD8 0422QD5 27.5 mm, for components of 27.5 mm 40 mm, for components of 40 mm side length side length 90°, length 10 mm, for e.g. PLCC 20 0422QD1 0422QD6 0422QD3 90°, length 15 mm, for e.g. QFP, TQFP and 90°, length 12.5 mm, for e.g. PLCC 28 TQFP 0T25 90°, length 17.5 mm, for e.g. PLCC 44 0422QD4 0422QD2 0422QD7 90°, length 30 mm, for e.g. PLCC 84 90°, length 20 mm, for e.g. PLCC 52 90°, length 25 mm, for e.g. PLCC 68 0422MD 0422RD1 0422RD2 length 22.5 x 16.5 mm, for e.g. QFP 100 length 15 x 12.5 mm, for e.g. PLCC 32 ellipse, for MELF and MINIMELF 0422SD\* \*Please note: The desoldering tips 0422SD must be used in combination with the tip turn protection set (see page 24) to ensure good results. Tip turn protection set for TC 40 desoldering pincette and Desoldering Pincette 40 on request.

#### For:

- DIGITAL 2000 A
   with Chip tool
- MICRO-CON 60 iA SMD Desoldering Pincette 40
- REWORK 80
- SMD 8000
- SMT UNIT 60 AC / A with Chip tool / SMD Desoldering Pincette 40



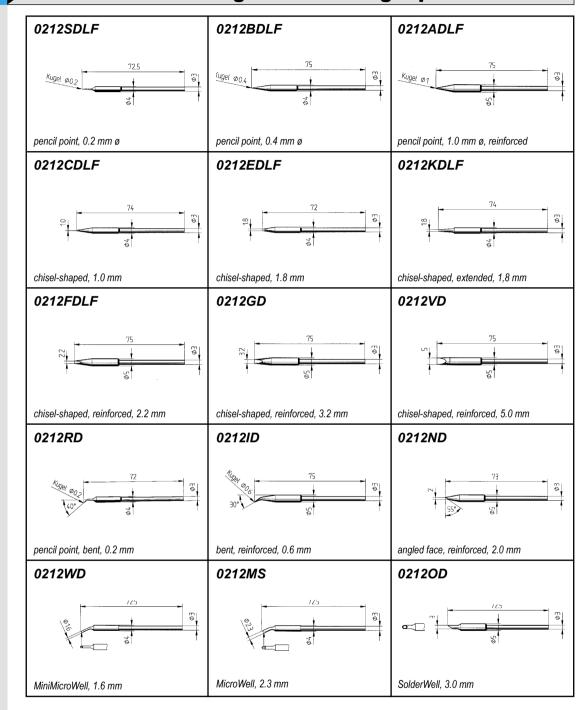
for MICROMELF



#### For:

- ANALOG 20 A
- DIGITAL 2000 A with Micro tool soldering iron
- MICRO-CON 60 iA with Micro tool soldering iron
- REWORK 80
- SMD 8000
- SMT UNIT 60 A / AS
- TWIN 40 A / AS
- TWIN 80 A with Micro tool soldering iron

# 212 ERSADUR Long-Life Soldering Tip Series



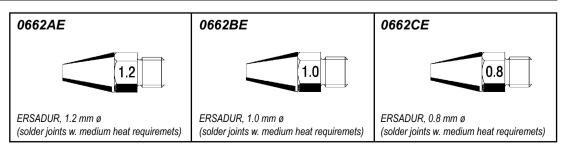


#### For:

- ELS 8000 / M / D
- ELS 8100



# **662 Desoldering Tip Series**





# 032 ERSADUR Long-Life Soldering Tip Series

#### For:

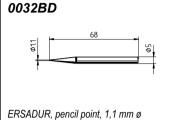
ERSA 30 S

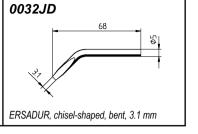


# 0032KD

ERSADUR, chisel-shaped, 3.1 mm

0052JD





# 052 ERSADUR Long-Life Soldering Tip Series

#### For:

• ERSA 50 S

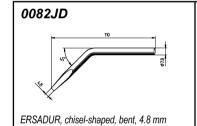


# **082 ERSADUR Long-Life Soldering Tip Series**

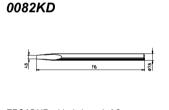
#### For:

• ERSA 80 S





ERSADUR, chisel-shaped, bent, 3.1 mm



ERSADUR, chisel-shaped, 4.8 mm

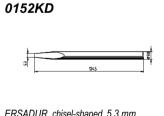
#### For:

• ERSA 150 S



# 152 ERSADUR Long-Life Soldering Tip Series

# 0152JD ERSADUR, chisel-shaped, bent, 5.3 mm



# ERSADUR, chisel-shaped, 5.3 mm

# 202, 302 and 552 Soldering Tip Series, ERSADUR / nickel-plated

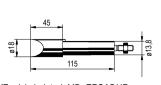
#### For:

#### • ERSA 200 (202 series)

- ERSA 300 (302 series)
- ERSA 550 (552 series)

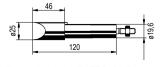


#### 0202MZ / 0202MD



MZ: nickel-plated, MD: ERSADUR chisel-shaped, reinforced, 18 / 25 mm

#### 0302MZ / 0302 MD



MZ: nickel-plated, MD: ERSADUR chisel-shaped, reinforced, 18 / 25 mm

MZ: nickel-plated, MD: ERSADUR chisel-shaped, reinforced, 35 mm

0552MZ / 0552 MD

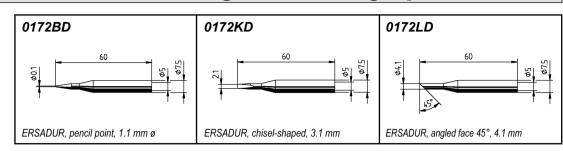


#### For:

Multitip 25



# 172 ERSADUR Long-Life Soldering Tip Series

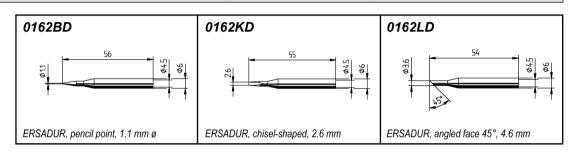


#### For:

Multitip 15



# 162 ERSADUR Long-Life Soldering Tip Series

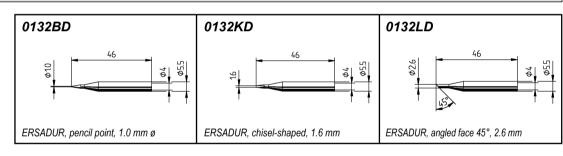


#### For:

Multitip 08



# 132 ERSADUR Long-Life Soldering Tip Series

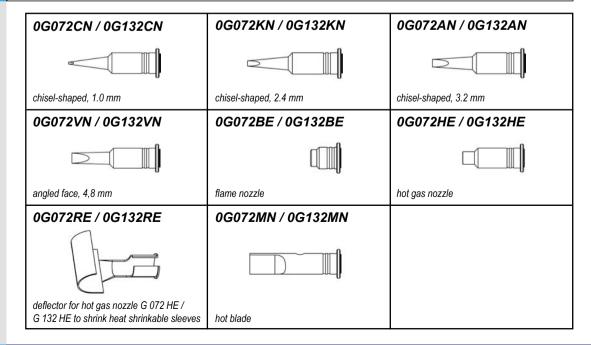


#### For:

#### Independent 75 gas soldering iron (G 072 series)

 Independent 130 gas soldering iron (G 132 series)

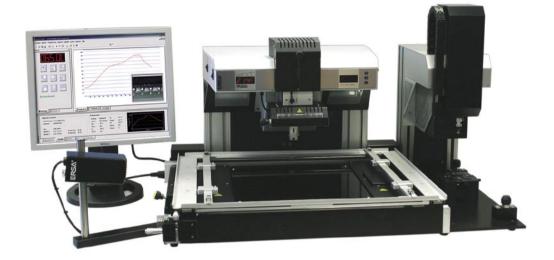
# G 072 and G 132 Soldering Tip Series







# **ERSA IR Rework Systems**



#### ERSA IR / PL 650 A Rework System

The new ERSA IR / PL 650 A and IR 550 A plus rework systems are the latest additions to ERSA's world renowned and tremendously successful IR rework platform.

This third generation IR rework systems top their award-winning and patented predecessors by offering three new technological innovations: *DynamicIR*,

Multi-True-Closed-Loop-Control und IntelligentIRS. Benefitting from an installed base worldwide of more than 5,000 IR rework systems, ERSA's newest system was specifically designed to handle the most difficult rework applications on heavymass PCBs and large-format SMT assemblies (18 x 20 inch / 460 x 560 mm) in a lead-free environment. Ease of use, rapid

rework cycle times, widest variety of rework applications and lowest operational costs - these are the well-known user advantages of ERSA's IR rework systems.



Complete solutions for rework made by ERSA.
Ask for our free catalog.

# **ERSA Inspection Systems**



LNOAGCOFL Z pius

#### ERSASCOPE Visual Inspection Systems

In 1999, the patented ERSASCOPE was the first visual inspection system which finally made destruction-free inspection of soldering joints beneath a BGA a reality. Under the motto "To See is to Survive" this revolutionary technology not only won all of the industry's most significant innovation awards around the globe, but also

allowed previously undetected problems to be discovered, analyzed and corrected at nearly 2,000 of the world's leading manufacturers.

Lead-free implementation will require manufacturers to seriously re-examine their QA procedures, because getting the lead-free process under control in the initial stages will simply be more difficult.

The bottom line is that higher process temperatures and smaller process windows associated with lead-free will require a much more thorough first article inspection. Manual optical inspection systems will require higher magnification and a flexible viewing angle from 0° to 90°. ERSASCOPE inspection is no longer an option, but rather a lead-free requirement!



ERSASCOPE inspection of components



Complete solutions for visual solder joint inspection made by ERSA.

Ask for our free catalog.

# The Complete ERSA Line. Professional Solutions for State-of-the-Art Electronics Production

# Selective soldering



#### **Wave soldering**



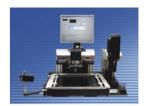
#### **Reflow soldering**



#### **Visual inspection**



#### SMT/BGA Rework



#### **Process software**







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



#### www.ersa.com



Over 70 ERSA agencies are located in more than 50 countries.

#### **Headquarters**

#### **ERSA GmbH**

Leonhard-Karl-Str. 24 97877 Wertheim / Germany Phone: +49 (0) 9342 / 800-0 Fax: +49 (0) 9342 / 800-127 e-mail: info@ersa.de www.ersa.de

#### <u>America</u>

#### **ERSA North America**

A Division of KURTZ North America Inc. 1779 Pilgrim Road Plymouth, WI 53073 USA Phone: 800 363 3772 Fax: +1 920 893 3322 e-mail: infoersa@kna.net www.ersa.com

#### Δεία

#### **ERSA Asia Pacific**

A Division of KURTZ Far East Ltd. Suite 3505, 35/F., China Resources Building 26 Harbour Road, Wan Chai Hong Kong

Tel.: +852 2331 2232 Fax: +852 2758 7749 e-mail: kurtz@kfe.com.hk

www.ersa.com

Room 601, 6th Fl. Beethoven Plaza No. 1158, Chang Ning Road Shanghai 200051 China

Tel.: +86 (21) 5241 6000 Fax: +86 (21) 5241 9918 e-mail: kurtz@kurtz.com.cn

www.ersa.com



For further information, accessories and auxiliaries please refer to our website or contact ERSA directly.