Erem®

Swiss Made

Catalog

High precision tweezers, cutters and pliers

COOPER Hand Tools

Contents

Erem Tools – Precision Made in Switzerland

Since 1963

Erem®

The genuine Swiss pliers & tweezers

Photo: Martine Chollet

The quality and performance of our Erem precision tools are the product of more than 40 years of development and know-how. Made in Switzerland, Erem tools are the result of constant product development and innovation to meet customer demands and the requirements of modern manufacturing techniques.

Constantly changing market developments encourage Erem to design and manufacture forward looking tools for applications in the fields of electronics, aviation / aero-space, biology, medical accessories, the watch industry and telecommunications.

Erem tools enjoy the deserved high reputation of Swiss precision manufacture and our expertise, combined with ease of use and operator comfort make them an ideal partner in global manufacturing processes.

Erem is a branch of Cooper Hand Tools whose European headquarters are located in Besigheim, Germany.

Cooper Hand Tools is a subsidiary of Cooper Industries, headquartered in Houston Texas, has a global workforce of 35,000 and achieved sales of $5 billion US.

Erem Tweezers

Erem manufacture a wide range of tweezers. The combination of expert manufacture, symmetry and balance give Erem tweezers their renowned reputation for precision and the highest quality.

- Pointed tips for precision work
- Ergonomically shaped handles prevent hand fatigue
- Large selection of matching SMD tweezers and cutting tweezers for individual applications


EREM
SWISS
EREM
SWISS
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Erem impresses

Erem manufactures a wide range of precision tweezers. The range covers tweezers made from hardened steel, stainless steel, non-magnetic acid resistant stainless steel, titanium, brass, nickel silver and nickel-plated tweezers. Tweezer tips can be serrated or smooth metal, or made from synthetic ESD safe material to prevent damage to fragile surfaces.

In addition to SMD and stripping tweezers, the range includes special gripping tweezers, which enable particularly fine wires or insulated optical fibres to be held and manipulated.

Erem can make to order tweezers for specialised applications. The combination of precision-manufactured, symmetrical tips and perfect balance make Erem tweezers outstanding high-precision tools of the highest quality.

Material

The choice of which tweezers to use will depend as much on the material it is made from as the function it carries out:

Hardened steel

Tweezers made from hardened steel are typified by their particularly hard tips, which ensure great durability. The tweezers are magnetic and the material is not non-rusting.

Stainless steel

Tweezers made from stainless steel have robust tips and are non-rusting. The material is less hard than hardened steel.

Stainless-steel tweezers have the identification letter "S" in their order numbers.

Erem special stainless steel

This alloy is non-magnetic. The tweezers are non-rusting, acid-proof and heat-resistant up to 300°C.

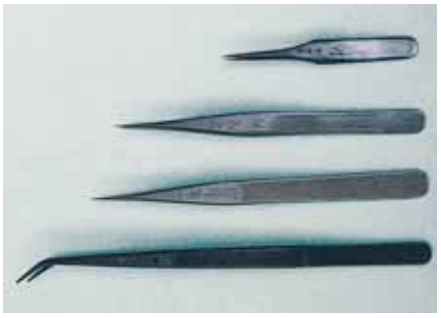
Tweezers made from special stainless steel tweezers have the identification letter "SA" in their order numbers.

Titanium

Titanium tweezers are light weight and resistant to high temperatures.

Coating

Only Erem offers tweezers with a special Pyroplast coating.



Advantages:

- Heat-resistant up to 500°C (932°F), almost twice as high as Teflon or Cralon
- No capillary effect on tips, e.g. while soldering (non-stick property)
- No contamination caused by positive or negative charge
- Water-resistant
- Radiation-resistant
- Thickness of coating 60-80 µ

The Pyroplast coating is not available on all Erem tweezers.

It is made to order and requires a minimum order quantity.

Please contact your nearest sales office for more information.

Ergonomic

Erem has developed a series of tweezers with ergonomic handles to reduce the risk of **R**epetitive **S**train **I**njuries (RSI) to the hands.

The identification letter in the order number is "E".

Advantages:

- Ergonomic handle shape prevents hand and wrist fatigue
- Two-colour, thermally insulated soft-grip handles made from soft foam material ensure high user comfort
- ESD-safe for safe working
- Supplied in a sturdy, transparent plastic box

Erem also offers two further innovative tweezers with ergonomically shaped handles:

- E15AGW cutting tweezers with hardened cutting edges for increased service life
- E00DSA precision tweezers with straight strong tips which are inside-serrated for secure handling

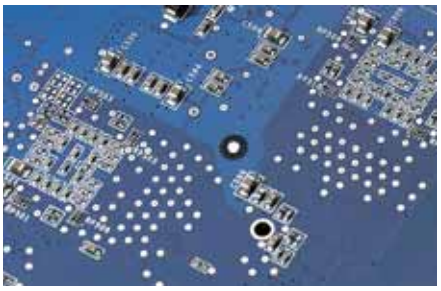
Advantages:

- Ergonomically shaped handles prevent **C**arpal **T**unnel **S**yndrome (CTS) and early hand fatigue
- Two-colour, thermally insulated soft-grip handles made from soft foam material ensure high user comfort
- Manufactured from non-magnetic, acid-proof and stainless steel alloy
- ESD-safe

Special applications

The quality and performance of Erem precision tweezers are the result of more than 40 years of development and know-how.

Erem is one of the leaders in the development of high-precision tools for a wide variety of applications in electronics, aeronautical engineering, light engineering, telecommunications, laboratory technology, medicine and the jewellery, watchmaking and goldsmith industries.



Tweezers for biology and laboratory applications

Erem micro-tweezers are suitable for use in biology (e.g. model 5MBS, 5FSA or M5S).

These tweezers with very pointed tips enable confined spaces to be accessed and offer excellent visibility when performing precision work and when working under a microscope.

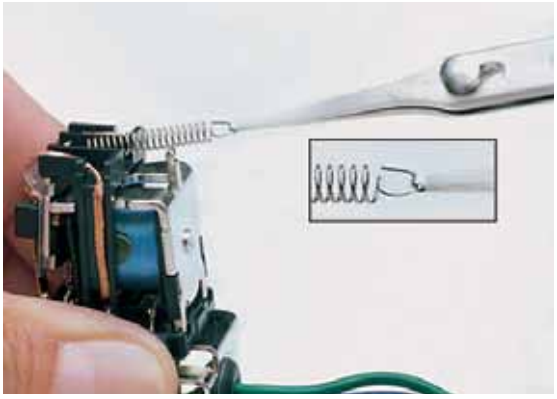
High precision tweezers are particularly suitable for analysis applications and the handling of tissues, fine threads and other very small objects.

Tweezers for use in the jewellery industry

These stainless steel tweezers with teflon coated tips (e.g. type 2ASASLT) are particularly suited for use in the jewellery industry. They are robust and the Teflon coated tips are non stick.

Titanium tweezers type like 3CTA are also ideal for this application. Their lightweight maintains fingertip control over extended working periods and their resistance to high temperatures allows them to be used where gas flames might be encountered.

Tweezers for use in light engineering and dental applications

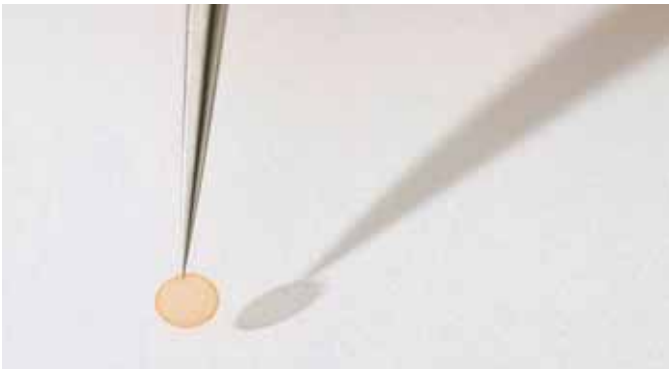


Erem offers special gripping pliers for applications in light engineering. The lockable gripping tweezers type 940AS can withstand a tensile force of 5 kg and can securely hold small wires.

The stainless steel construction allows the tweezers to be sterilised in an autoclave.

Tweezers

Precision tweezers: Pointed tips straight

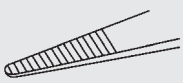


- For applications in microelectronics, jewellery-making, watchmaking, medicine and laboratory technology
- Suitable for delicate standard applications and precision work on small components or wires
- For all models with the suffix SA or SASL in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant
- For all models with the suffix S in the order number: Stainless steel, robust tips, non-rusting, non-reflecting surface

80 mm/3.150 Inch

Model		Description
M5S	6 g	Micro-tweezers, very pointed tips, e.g. for precision work under a microscope.

108 mm/4.252 Inch

Model		Description
ACSA	16 g	Precision tweezers with serrated finger grips for secure handling. For precise bending and holding of components or wires.
20AS	12 g 	Precision tweezers with serrated finger grips and inside-serrated tips for secure handling. Guide pin to avoid overlapping of tips. For precise bending and holding of components or wires.

Precision tweezers: Pointed tips straight

110 mm/4.331 Inch

Model		Description
3CS	11 g	Precision tweezers with long tips for precision work on printed-circuit boards.
3CSA	11 g	Precision tweezers, standard model for delicate work.
3CSASL	11 g	Same as 3CSA, but economy model.

3CTA	8 g	Model same as 3CSA, but made from titanium: non-magnetic, very heat-resistant and very light.
53CSA	11 g	Precision tweezers with fine and flexibly movable tips. Prevents damage to sensitive components. Tweezers relieved at front for secure handling.

120 mm/4.724 Inch

Model		Description
3SA	14 g	Precision tweezers with pointed tips for work in microelectronics.
3SASL	14 g	Same as 3SA, but economy model.

1SA	14 g	Precision tweezers with pointed tips for standard applications.
1SASL	14 g	Same as 1SA, but economy model.

00SA	20 g	Precision tweezers with pointed tips. Very robust. Suitable for standard applications, e.g. for assembly in electronics.

Tweezers

Precision tweezers: Pointed tips straight

120 mm/4.724 Inch

Model		Description
00SASL	20 g	Same as OOSA, but economy model.
00CSA	18 g	Model same as 00SA, but with shorter tips.
00BSA	20 g	Model same as 00SA, but with serrated finger grips for secure handling.
00DSA	20 g	Model same as 00SA, but with serrated finger grips and inside-serrated tips for secure handling.
64SA	17 g	Precision tweezers with pointed tips and serrated finger grips for secure handling.
11N	17 g	Precision tweezers with medium-pointed tips for use on soft components. **Nickel-silver**, non-magnetic.
AAZ	16 g	Precision tweezers with medium-pointed tips, **nickel-plated**. Suitable for electronic assembly tasks.

125 mm/4.921 Inch

Model		Description
AAS	16 g	Precision tweezers with fine but robust tips.
AASA	16 g	Precision tweezers with fine but robust tips for standard applications.
AASASL	16 g	Same as AASA, but economy model.

Precision tweezers: Pointed tips straight

125 mm/4.921 Inch

Model		Description
AM	17 g	Precision tweezers made from **brass**. The soft metal protects sensitive components against damage. No sparks.

130 mm/5.118 Inch

Model		Description
249SA	20 g	Precision tweezers with pointed synthetic tips (PPS) and serrated finger grips for secure handling. Volume resistance 16 Ω/cm. Heat-resistant up to 250°C (480°F). Resistant to acids and molten soldering tin. Water-repellent.
249CER	24 g	Same as 249SA, but with ceramic tips. Heat-resistant up to 900°C (1500°F).

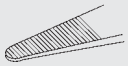
140 mm/5.512 Inch

Model		Description
RRS	30 g	Precision tweezers with strong tips for heavy-duty applications.
SSSA	11 g	Precision tweezers with long, narrow grips and low tension, responds to minimal pressure. The long grips allow precision work close to heat sources.

150 mm/5.906 Inch

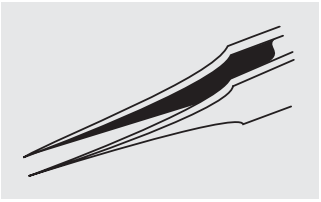
Model		Description
29SA	26 g	Reverse-action tweezers with wide, rounded tips. For holding parts by reverse clamping action. Insulated handles, e.g. for protecting against heat.

160 mm/6.299 Inch

Model		Description
21SA 	23 g	Precision tweezers with medium-pointed tips and serrated finger grips and inside-serrated tips for secure handling. Very robust. The long grips allow precision work close to heat sources.

Tweezers

Precision tweezers: Pointed tips straight relieved



- For precision work e.g. under a microscope
- Relieved shape facilitates excellent access to the most confined spaces
- For all models with the suffix SA or SASL in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant
- For all models with the suffix S in the order number: Stainless steel, robust tips, non-rusting, non-reflecting surface

90 mm/3.543 Inch

Model		Description
M4AS	9 g	Micro-tweezers, very pointed tips, e.g. for working under a microscope.

110 mm/4.331 Inch

Model		Description
4SA	13 g	Precision tweezers with very pointed tips.
4ASL	13 g	Same as 4SA, but economy model.

Precision tweezers: Pointed tips straight relieved

115 mm/4.528 Inch

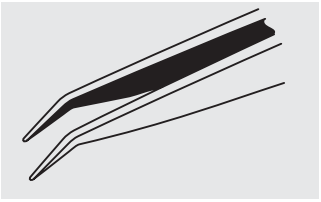
Model		Description
5MBS	12 g	Precision tweezers with extremely pointed tips (~ 0.03 x 0.07 mm/.002 Inch) for use in dissection procedures and working under a microscope. For use on soft materials only.
5FSA	122 g	Precision tweezers with extremely pointed tips (~ 0.05 x 0.1 mm/.003 Inch) for use in dissection procedures and working under a microscope. For use on soft materials only.
5SA	12 g	Precision tweezers with very pointed tips, suitable for very fine wires.
5SASL	12 g	Same as 5SA, but economy model.
2SA	16 g	Precision tweezers with medium-pointed tips.
2SASL	16 g	Same as 2SA, but economy model.

120 mm/4.724 Inch

Model		Description
258SA	15 g	Precision tweezers with pointed synthetic tips (PPS) and serrated finger grips for secure handling. Volume resistance 16 Ω/cm. Heat-resistant up to 250°C (480°F). Resistant to acids and molten soldering tin. Water-repellent.

Tweezers

Precision tweezers: Pointed tips bent



- For applications in biology, medicine, laboratory technology and microelectronics
- Bent shape facilitates access to confined spaces
- For all models with the suffix SA or SASL in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant
- For all models with the suffix S in the order number: Stainless steel, robust tips, non-rusting, non-reflecting surface

110 mm/4.331 Inch

Model		Description
3CBS	15 g	Precision tweezers, curved 40°, with pointed tips, for precision work such as e.g. assembly on printed-circuit boards.

115 mm/4.528 Inch

Model		Description
5CSA	12 g	Precision tweezers, curved 30°, relieved. Pointed tips. Relieved shape at front of handle provides excellent visibility of the area to be worked on.
5BSA	12 g	Precision tweezers, curved 30°, relieved. Pointed tips. Relieved shape at front of handle provides excellent visibility of the area to be worked on.
51SA	12 g	Precision tweezers, curved 30°, relieved. Very pointed tips. Relieved shape at front of handle provides excellent visibility of the area to be worked on.

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Precision tweezers: Pointed tips bent

115 mm/4.528 Inch

Model		Description
51SASL	12 g	Same as 51SA, but economy model.
5ASA	12 g	Precision tweezers, lightly curved 15°, relieved. Very pointed tips, e.g. for installing small components.
5ASASL	12 g	Same as 5ASA, but economy model.

120 mm/4.724 Inch

Model		Description
7SA	15 g	Precision tweezers, curved, relieved, with pointed tips. Excellent handling in confined spaces.
7SASL	15 g	Same as 7SA, but economy model.

140 mm/5.512 Inch

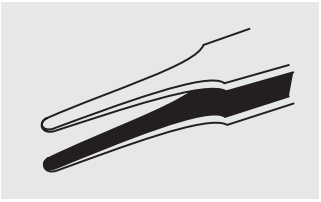
Model		Description
65ASA	11 g	Precision tweezers, curved 50°. Very pointed tips. For working with extra-small chips and other miniature components.

150 mm/5.906 Inch

Model		Description
24SA	22 g	Precision tweezers, curved 40°, with robust pointed tips. Serrated finger grips and inside-serrated tips for secure handling. Guide pin to avoid overlapping of tips. Ideally suitable for soldering and assembly jobs.
30SA	26 g	Reverse-action tweezers, curved 30°, with robust pointed tips. Fibreglass handles for protection against heat. Reverse clamping action for comfortably holding parts. Particularly suitable for soldering and assembly jobs.

Tweezers

Precision tweezers: Flat round tips straight



- Suitable for all standard gripping applications and assembly jobs on printed-circuit boards, e.g. in the goldsmith and jewellery industries
- For all models with the suffix SA or SASL in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

120 mm/4.724 Inch

	Model		Description
	**2ASA**	15 g	Precision tweezers with flat rounded tips for gripping small components. Tip width 2 mm/.078 Inch.
	2ASASL	15 g	Same as 2ASA, but economy model.
	**2ASASLT**	16 g	Same as 2ASA, but with Teflon-coated tips for non-stick holding of self-adhesive parts.
	**2ASARU**	16 g	Same as 2ASA, but with coated tips for non-stick holding of self-adhesive parts.
	**25SA**	15 g	Precision tweezers with flat, round tips slightly wider than the 2ASARU model. Serrated finger grips for secure handling. For standard gripping jobs.
	**52ASA**	15 g	Precision tweezers with pointed, rounded and flexibly movable tips. Prevents damage to sensitive components.

Precision tweezers with ergonomic handles

- This series offers models with thin shaped tips to suit every application
- Ergonomically shaped handles prevent early hand fatigue and facilitates comfortable working
- Thermally insulated, soft foam handles, ESD-safe
- For all models with the suffix SA in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

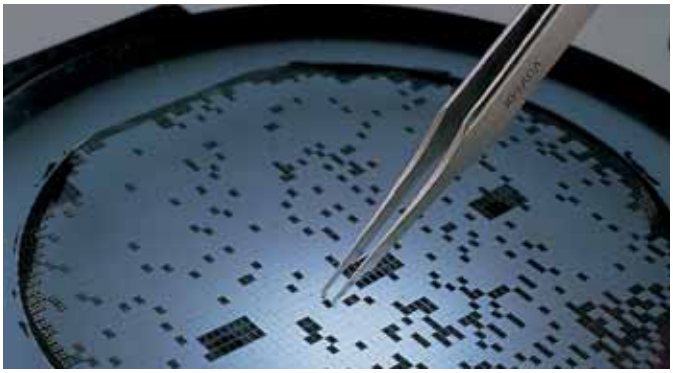
120 mm/4.724 Inch

Model		Description
E5SA	25 g	Ergonomic precision tweezers with straight, very pointed tips for gripping fine wires.
E3CSA	25 g	Ergonomic precision tweezers with long, straight and pointed tips, e.g. for assembly jobs on printed-circuit boards.
E00SA	30 g	Ergonomic precision tweezers with straight, strong tips for standard applications. Very robust.
E00DSA	30 g	Model same as EOOSA, but with inside-serrated tips.
E7SA	28 g	Ergonomic precision tweezers with curved strong tips, e.g. for working in confined spaces.
E2ASA	28 g	Ergonomic precision tweezers with straight, flat and rounded tips for simple gripping jobs. Tip width 2 mm/ .078 Inch.
E15AWG	30 g	Cutting tweezers, carbon-steel tips.

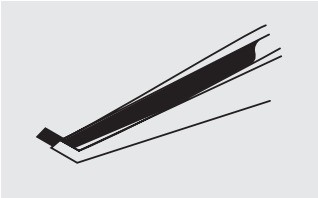
Tweezers

SMD tweezers

- High-quality precision tweezers for SMD jobs with different designs (chip, MELFs, mini MELFs)
- Blunted edges prevent damage to printed-circuit boards

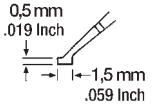
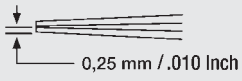
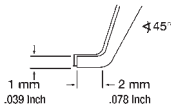


SMD tweezers – Angled tips



- Suitable for perfect handling of chips and miniature components
- Suitable for assembling SMD printed-circuit boards or ceramic substrates
- Bent shape facilitates optimum access to confined spaces and provides excellent visibility of the area to be worked on
- For all models with the suffix CA in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

115 mm/4.528 Inch

Model		Description
102ACA	15 g 	SMD tweezers, angled 45°, with pointed tips for vertical application.
102ACAX	14 g 	Model same as 102ACA, but reverse clamping action for easy holding.
103ACA	15 g 	SMD tweezers, angled 45°, with slightly wider tips for vertical application.

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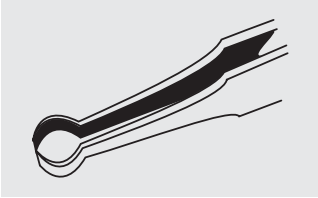
SMD tweezers – Round tips straight

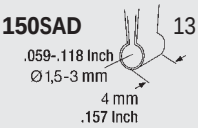
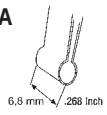


- Suitable for gripping and holding round components and wires
- Blunted edges prevent damage to printed-circuit boards
- For all models with the suffix SA in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

110 mm/4.331 Inch

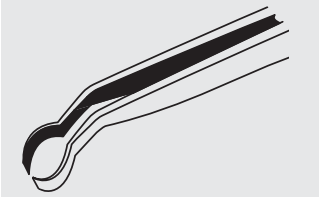
Model		Description
39SA	15 g	SMD tweezers with round tips, dia. 0.3 mm/.011 Inch. Serrated finger grips for secure handling. For gripping small wires and cylindrical components.
40SA	15 g	SMD tweezers with round tips, dia. 0.4 mm/.015 Inch. Serrated finger grips for secure handling. For gripping small wires and cylindrical components.

120 mm/4.724 Inch

Model		Description
150SAMF	13 g	SMD tweezers with round, very narrow tips, dia. 1.2 – 2.5 mm/ .047 – .098 Inch. Serrated finger grips for secure handling. For gripping cylindrical components, mini MELFs, etc.
150SAD 	13 g	SMD tweezers with round tips, dia. 1.5 – 3 mm/.059 – .118 Inch. Serrated finger grips for secure handling. For gripping cylindrical components, mini MELFs, etc.
150SA 	13 g	SMD tweezers with round tips, dia. 1.5 – 3 mm/.059 – .118 Inch. Serrated finger grips for secure handling. For gripping cylindrical components.
151SA 	13 g	SMD tweezers with round tips, dia. 3 – 6 mm/.118 – .236 Inch. Serrated finger grips for secure handling. For gripping cylindrical components.

Tweezers

SMD tweezers – Round tips bent



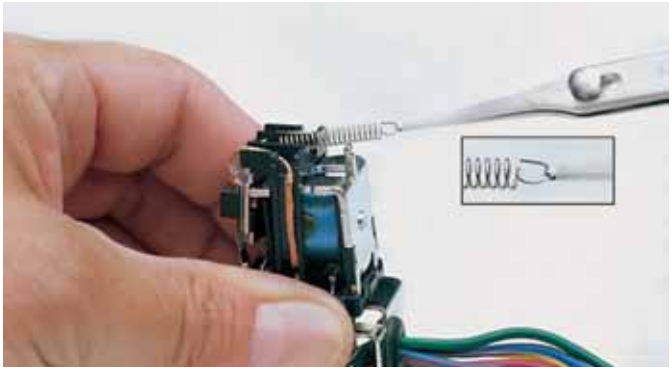
- Suitable for gripping fine wires and cylindrical components
- Blunted edges prevent damage to printed-circuit boards
- For all models with the suffix SA in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant

115 mm/4.528 Inch

Model		Description
32BSA	17 g	SMD tweezers, angled 45°, with round tips, dia. 5 mm/.197 Inch.
32BSA20	17 g	SMD tweezers, angled 45°, with round tips, dia. 2 mm/.078 Inch.
32BSA25	17 g	SMD tweezers, angled 45°, with round tips, dia. 2.5 mm/.098 Inch.
150SAMB	13 g	SMD tweezers, angled 40°, with round tips, dia. 1.2 – 2.5 mm/ .047 – .098 Inch. Serrated finger grips for secure handling.

Locking Gripping Tweezers

- Gripping tweezers enable the user to hold and manipulated particularly fine wires with a diameter from 0.3 mm/.011 Inch or insulated optical fibres with a diameter of between 1.5 mm/.059 Inch and 5 mm/.197 Inch
- Suitable as a ligature clamp in dentistry
- Can be disinfected and sterilised

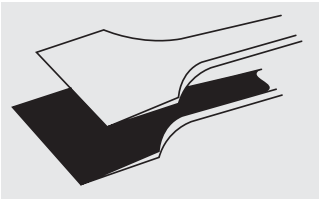


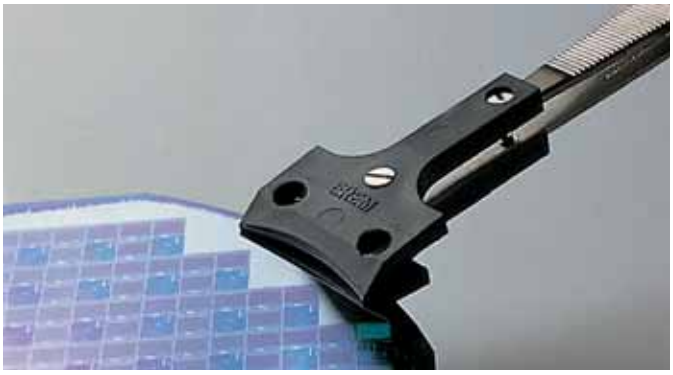
120 mm/4.724 Inch

Model		Description
940AS	17 g	Gripping tweezers with locking mechanism. The ring-shaped tip provides for secure handling up to a tensile force of 5 kg.

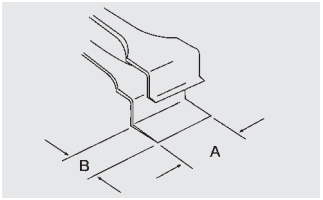
Tweezers

Wafer tweezers





- Suitable for 3“ to 6“ wafers
- Serrated finger grips for secure handling
- Wafer tweezers are available to order in various sizes and coatings
- For all models with the suffix SA in the order number: Special stainless steel, non-magnetic, non-rusting, acid-proof, heat-resistant



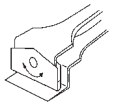
A = Paddle width
B = Paddle depth

125 mm/4.921 Inch

Model	g	Dimensions in mm/Inch A	B	Description
91SA	15 g	12 .472	7 .276	Standard wafer tweezers for 3” and 4” wafers.

130 mm/5.118 Inch

Model	g	Dimensions in mm/Inch A	B	Description
600ASA	23 g	19.5 .768	8 .315	Wafer tweezers with flat lower paddle and 6 upper fingers for protecting wafers against damage. For 6” wafers.
608ASA	23 g	30 1.181	8.5 .276	Model same as 600ASA, but 30 mm/1.181 Inch wide.
600JSA	24 g	20 .787	8 .315	Wafer tweezers with free-floating Teflon upper paddle for secure, damage-free gripping. For 4” – 6” wafers.

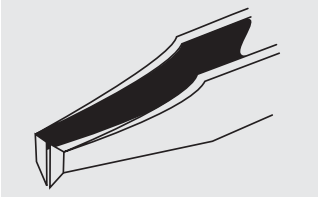


Wafer tweezers

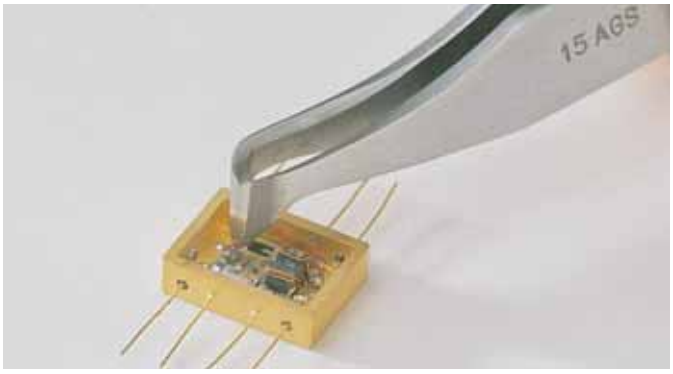
150 mm/5.906 Inch

Model		Dimensions in mm A	B	Description
141SAP	30 g	30 1.181	8 .315	Wafer tweezers with polyester tips for protecting Si, GaAs or Ti wafers against damage. For 4" – 6" wafers.
141SAHP	30 g	30 1.181	8 .315	Model same as 141SAP, but with Halar coating (acid-proof) and non-pigmented plastic tips.

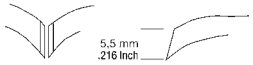
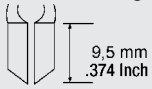
Cutting tweezers



- Suitable for cutting fine, soft wires and small components
- Delivers high-precision cuts
- Hardened cutting edges for long service life
- For all models with the suffix S in the order number: Stainless steel, robust tips, non-rusting, non-reflecting surface

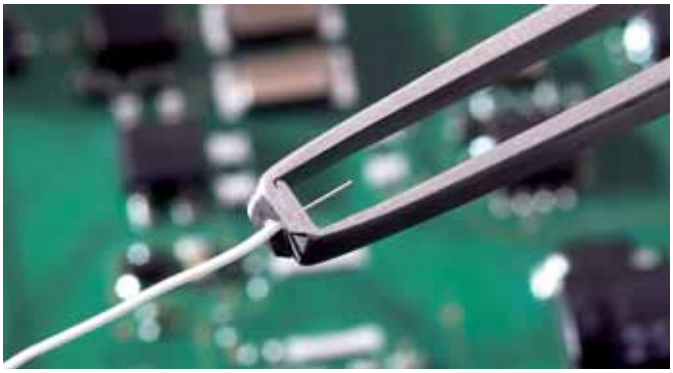


115 mm/4.528 Inch

Model		Description
15AGS	21 g 	Cutting tweezers with narrow oblique head. For soft wires up to dia. 0.25 mm/.010 Inch.
15AGW	26 g 	Cutting tweezers with narrow oblique head. For soft wires up to dia. 0.25 mm/.010 Inch.

Tweezers

Stripping tweezers



- Suitable for stripping fine wires with PVC or Teflon insulation
- Non-reflecting surface
- Please send a wire sample when ordering

120 mm/4.724 Inch

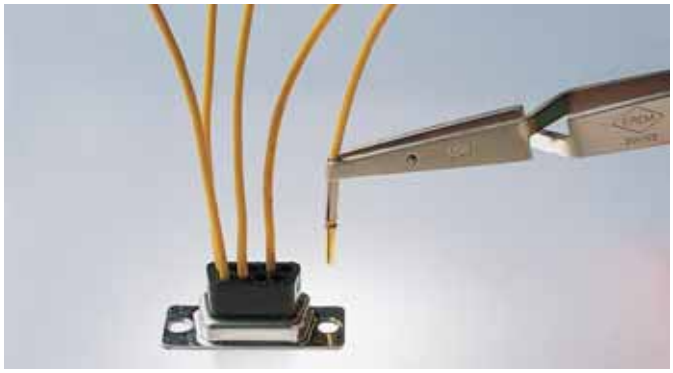
Model		Description
29Y30	22 g	Miniature stripping tweezers, dia. 0.25 mm/.010 Inch (AWG 30). Stainless steel. Serrated finger grips for secure handling.
29Y32	22 g	Miniature stripping tweezers, dia. 0.2 mm/.007 Inch (AWG 32). Stainless steel. Serrated finger grips for secure handling.
29Y34	22 g	Miniature stripping tweezers, dia. 0.16 mm/.006 Inch (AWG 34). Stainless steel. Serrated finger grips for secure handling.
29Y36	22 g	Miniature stripping tweezers, dia. 0.13 mm/.005 Inch (AWG 36). Stainless steel. Serrated finger grips for secure handling.
29Y40	22 g	Miniature stripping tweezers, dia. 0.08 mm/.003 Inch (AWG 40). Stainless steel. Serrated finger grips for secure handling.

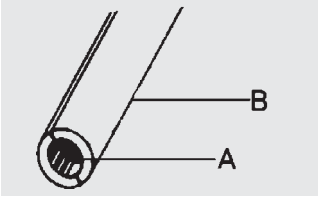
120 mm/4.724 Inch

Model		Description
29W30	28 g	Stripping tweezers with synthetic fibre handle. For wires of dia. 0.25 – 0.3 mm/.010 – .011 Inch (AWG 30 – 28). For standard and Teflon insulation.
XB29W301		Spare blade for 29W30

Extraction tweezers

- Suitable for extracting contacts from the rear of a plug connector





A = Outside diameter of pin
B = Inside diameter of pin

120 mm/4.724 Inch

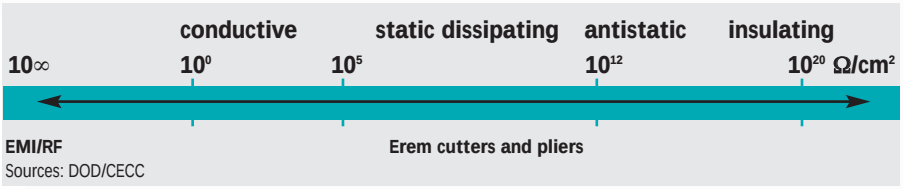
Model		Dimensions in mm Dia. A	Dia. B	Description
024C	15 g	12 .472	7 .276	Extraction tweezers for Sub-D connectors. Stainless steel.

Erem Side Cutters and Tip Cutters

Erem impresses

ESD-safe

The interchangeable foam-cushion handles are ESD-safe and are fitted as standard on all Erem cutters and pliers.



Internal patented Erem Magic Spring

– Constant spring force
– Guarantees more than 1 million operations

High precision screw joint

– Smooth jaw action with no play
– Smooth cutting operation with no jaw overlapping

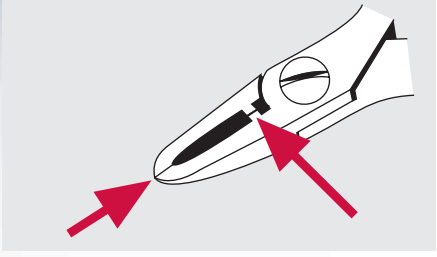
Erem Cut: Options for semi flush, full flush or super flush cuts

Ergonomically shaped handles

for high comfort, better grip and added safety

EMOS maximum opening stop

limits the cutting-edge tips from opening more than 5 mm/.197 Inch. The limited extent to which the handles can open prevent user hand fatigue.



Erem cutting-edge protection for tip cutters
All tip cutters are fitted with a special stop system which prevents the cutting edges from overlapping.

Safety device for holding wire scraps
This safety device for side cutters holds wire scraps securely after cutting. Available for all Series 500, 600 and 2400 cutters. Order suffix "W", e.g. 595EW.

Induction-hardened cutting edges in Rockwell hardness 63 – 65 HR

for exceptionally long life

Erem impresses

Erem Technology

Special tool steel

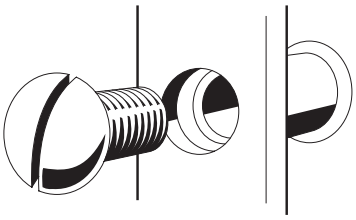
Erem electronics tools are made from bright steel. They are not drop forged. The special tool steel is made using an unique Swiss processing technique.

The advantage:
The bright tool steel gives additional strength and toughness to the tools promoting a long service life.

The internal patented Erem Magic Spring

The Magic Spring system used in Erem precision tools is unique. It is integral to the cutting head and provides a constant closing and re-opening force. It is guaranteed for 1 million operations.

The advantage:
The Magic Spring system is highly reliable, makes the tools easy to use and reduces operator fatigue.



High precision screw joint

This self locking screw joint system gives a smooth cutting and opening action and ensures that there is no blade overlap or play.

The advantage:
Precision cutting and reduced shock to components.

EMOS maximum opening stop

The unique EMOS (**E**rem **M**aximum **O**pening **S**top) system prevents the tips from opening more than 5 mm/.197 Inch. It reduces user fatigue by preventing excessive hand spread.

The advantage:
Comfortable and fatigue free working.

Handle

Erem cutters and pliers with ergonomic handles

Work **R**elated **U**pper **L**imb **D**isorder (WRULD) can be caused by positional fatigue or nerve damage brought about by the repeated use of non-ergonomic hand tools, otherwise known as **R**epetitive **S**train **I**njuries (RSI).

WRULDS is a direct consequence of insufficient ergonomics in manufacturing processes and working practices. To reduce the factors which cause WRULDS, Erem has developed a range of tools with ergonomic handles (Series 2400 MagicSense).

The handle shape and special materials ensure a soft feel, operating comfort and safety. The specially shaped handles ensure that the gripping pressure is evenly spread over the entire palm of the hand. The thumb and fingers automatically find their best position. The effort that has to be exerted by the user is reduced, thereby reducing hand fatigue.

The anti-slip surface provides excellent grip. The material is highly resistant to perspiration, water, oil and chemicals. The handles are ESD-safe and are easily interchangeable.

Erem Cut

Cut shape

There are three blade options, which determine the shape left on a lead after cutting. (see also P. 35)

1. Semi-flush

2. Flush

3. Super full flush

Cutting edge

Erem cutters are noted for their ease of use, one of the reasons for this is the ability of the blade to cut equally well over its full length. This promotes operator comfort and reduces fatigue.

Semi-flush cutters offer the best performance and the longest service life. Super full flush cutters leave a flat wire end with minimal effort and prevent components from being subjected to load.

The advantage:
High level of user comfort thanks to special cutting edge.

Rockwell hardness

The cutting blades of Erem cutters are hardened to Rockwell 63-65 HRc by an induction heating process. Continuous process control ensures that the blades achieve the correct level of hardening and are not embrittled.

The advantage:
This level of hardening plus the high-grade tool steel used in the manufacture of the tools and continuous process control promote an exceptionally long service life.

Erem cut Super full flush: perfect flush cut

Standard cut "Super full flush"

Erem Service

Re-sharpening

Erem is your service partner. All Erem side and tip cutters except those with carbide insert blades can be re-sharpened up-to three times. Carriage charges will apply.

The advantage:
The re-sharpened tool is as good as new, its life is extended and costs are reduced.

Replacement parts

Erem cutters and pliers and their component parts are warranted against manufacturing defects. Magic springs, precision joint components are available as spare parts.

The advantage:
The warranty and availability of spares guarantee long service life.

ESD-safe

The ergonomic, soft, interchangeable foam-grip handles are ESD-safe and are fitted as standard on all Erem cutters and pliers.

Choosing the right tool

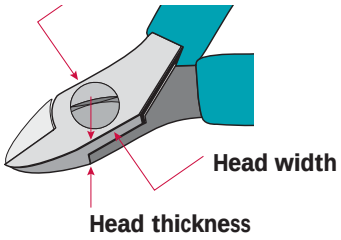
Selection criteria

Erem offers a wide selection of precision side and tip cutters for virtually any application.

When choosing the right cutter, it is important to take
- Size
- Cut
- Head shape
- Cutting capacity

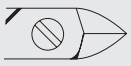
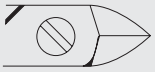
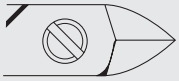
into consideration.

Size



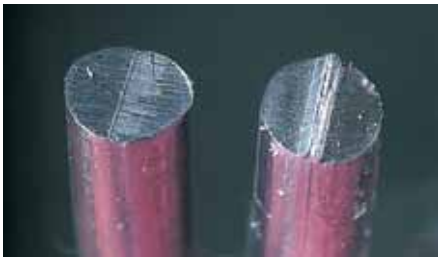
Erem offers the right head size to suit every application. There are three main sizes: Micro, Medium and Maxi.

Each head size is available in different head shapes.

Micro	Medium		Maxi
			
Series 600	**Series 2400 MagicSense**	**Series 500**	**Series 800**
			
Size			
Head width 9.0 mm/.354 Inch	Head width 11.0 mm/.433 Inch	Head width 11.0 mm/.433 Inch	Head width 13.5 mm/.331 Inch
Head thickness 6.0 mm/.236 Inch	Head thickness 6.0 mm/.236 Inch	Head thickness 6.5 mm/.256 Inch	Head thickness 7.5 mm/.295 Inch
Miniature cutter for applications in microelectronics and for fine wires. Offers a large variety of head shapes for very good access even to hard-to-reach areas.	Medium-size cutter. Combines robustness, visibility and accessibility. Large variety of head shapes for precision working in hard-to-reach areas. The Series 2400 MagicSense offers an optimised ergonomic shape and an improved grade of hardness.		The strongest and most robust head size for general cutting applications in electronics, cuts large wire diameters.

Cut

There are three blade options, which determine the shape left on a lead after cutting.

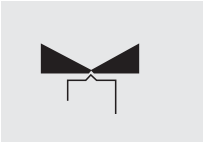


Erem cut Super full flush: perfect flush cut

Standard cut "Super full flush“

Semi-flush

This cut leaves a pyramidal tip at the end of the wire. It is particularly suitable for standard jobs where the final shape does not play a significant role. Cutters with this cut are suitable for both soft copper wires and very hard wires such as stainless steel.



Flush

This cut leaves a much smaller tip at the end of the wire than the semi-flush cut – without reducing the cutting capacity. The cutting edges are finer than on semi-flush cutters. The effort exerted when cutting is less and the load on the component is reduced. Flush wire ends reduce the effort needed to fit components on printed-circuit boards. Erem guarantees precise cutting even after frequent use.

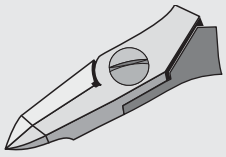
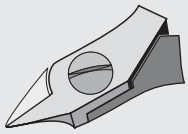
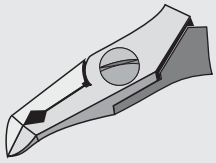
Super full flush

Only Erem offers you a super full flush cut. This cut provides absolutely flush wire ends. No rework is needed. Cutters with this cut are absolutely precision-ground and sharpened. The effort exerted when cutting is low, as is the load on the component caused by the cut. Soldering tags in soldering-bath procedures are prevented. Cutters of this type are used in microelectronics, space travel or medical technology. These cutters are suitable for soft wires.

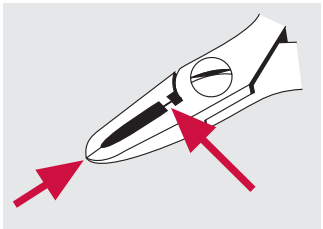
Choosing the right tool

Head shape

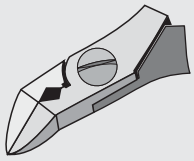
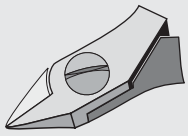
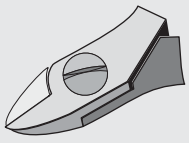
Erem offers the right head shape to suit your application. The head shapes differ in terms of shape and design. There are six basic shapes:

Shape	Tip cutter Straight relieved head	Tip cutter Pointed relieved head	Tip cutter Angled narrow head
			
Visibility and accessibility Cutting at the outermost tip of the cutter	This head is suitable for horizontal and vertical cuts. The long tips facilitate cutting in hard-to-reach areas.	This is the narrowest head shape. The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.	The angled head provides for precise cuts at different working angles.
Series 600 Micro	**670E*, 670EP*, 670EPF*** (P. 45)	**622NB, 632NCF, 676E, 776E** (P. 44)	
Series 2400 MagicSense	**2470E** (P. 49)		**2475E, 2482E** (P. 49)
Series 500 Medium	**570E, 573E****(P. 55)	**592E, 792E** (P. 54)	**555E, 572E, 582E** (P. 53), **575E, 593AE** (P. 54)
Series 800 Maxi		**884E** (P. 58)	

*** Very short head**
**** Straight head for vertical working**



Erem cutting-edge protection for tip cutters
Erem tip cutters are equipped with cutting-edge protection.
A special stop system prevents the cutting edges from overlapping.

	Tip cutter Angled wide head	Side cutter Tapered head	Side cutter Oval head
			
	The angled head provides for precise cuts at different working angles.	The jaws of the cutter have straight edges and taper to a point. This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.	This is the most widely used head shape, it is robust and size for size offers the highest cutting capacity.
		622NA (P. 44)	**612N, 622N, 632N** (P. 43)
	2403E, 2404E (P. 48)	**2477E** (P. 48)	**2412E, 2422E, 2432E** (P. 47)
	503E, 504E (P. 52)	**577E, 595E** (P. 52)	**512E, 512N, 522N, 532N, 599E** (P. 51)
		886E (P. 58)	**812N, 822N, 896E** (P. 57)

High cutting capacity
Cutting over the full length of the cutter

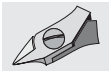
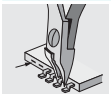
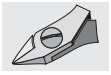
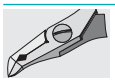
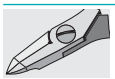
Erem offers carbide cutters (see P. 38) for cutting high-hardness wire (piano wire)

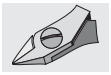
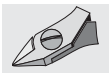
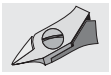
Choosing the right tool

Cutting capacity

Wire quality

- Piano wire, stainless spring steel wire, material 1.4310, tensile strength 2000–2400 MPa
- Hard wire, stainless steel wire, material 1.4301, tensile strength 1800 MPa
- Medium-hard wire, stainless steel wire, material 1.4301, tensile strength 800 MPa
- Soft wire, copper, aluminium, tensile strength 250 MPa

	Model		Cut	Cutting capability
Series 600 Micro				mm 0.03 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 Inch .0001 .003 .007 .011 .015 .019 .023 .027 .031 .035 .039 .043 .047 .051 .055 .059 .062 .066 .070 .074 .078
	612N		Semi-flush	
	622N		Flush	
	632N		Super full flush	
	622NA		Flush	
	622NB		Flush	
	676E		Flush	
	776E		Super full flush	
	632NCF		Super full flush	**Only** for soft materials: silicone, rubber, etc.
	670E		Flush	
	670EP		Flush	For micro-package contacts
	670EPF		Flush	**Only** for micro pitches under 0.5 mm
Series 2400 MagicSense				mm 0.03 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 Inch .0001 .003 .007 .011 .015 .019 .023 .027 .031 .035 .039 .043 .047 .051 .055 .059 .062 .066 .070 .074 .078
	2412E		Semi-flush	
	2422E		Flush	
	2432E		Super full flush	
	2477E		Flush	
	2403E	30°	Flush	
	2404E	30°	Flush	
	2482E	45°	Flush	
	2475E	45°	Flush	
	2470E		Flush	

	Model		Cut		Cutting capability
Series 500 Medium					mm 0.03 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 Inch .0001 .003 .007 .011 .015 .019 .023 .027 .031 .035 .039 .043 .047 .051 .055 .059 .062 .066 .070 .074 .078
	**512N**			Semi-flush	
	512E			Semi-flush	
	522N			Flush	
	599E			Flush	
	532N			Super full flush	
	**595E**			Flush	
	577E			Flush	
	**503E**			Flush	
	504AE			Flush	
	**555E**	35°		Flush	
	572E	40°		Flush	
	582E	45°		Flush	
	582EW			Flush	
	593AE	30°		Flush	
	575E	45°		Flush	
	**592E**			Flush	
	792E			Super full flush	
	**570E**			Flush	
	573E			Flush	For vertical cutting
Series 800 Maxi					mm 0.03 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 Inch .0001 .003 .007 .011 .015 .019 .023 .027 .031 .035 .039 .043 .047 .051 .055 .059 .062 .066 .070 .074 .078
	**812N**			Semi-flush	
	896E			Semi-flush	
	822N			Flush	
	**886E**			Flush	
	**884E**			Flush	
Tungsten-carbide cutters					mm 0.03 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 Inch .0001 .003 .007 .011 .015 .019 .023 .027 .031 .035 .039 .043 .047 .051 .055 .059 .062 .066 .070 .074 .078
	**622TX**			Flush	
	599T			Semi-flush	
	599TF			Flush	
	**595T**			Semi-flush	
	595TF			Flush	
	2476TX1			Flush	
	576TX1			Flush	
	**2476TX**			Flush	
	576TX			Flush	
	**503ET**	30°		Semi-flush	
	503ETF	30°		Semi-flush	

Special applications

Side cutters for use in medicine

The 632NCF miniature side cutter is ideally suitable for soft material such as silicone tubes in medical applications, precision connector seals or miniature rubber seals.

The miniature cutter is also the ideal tool for cutting soft synthetic parts, e.g. in the manufacture of hearing aids.

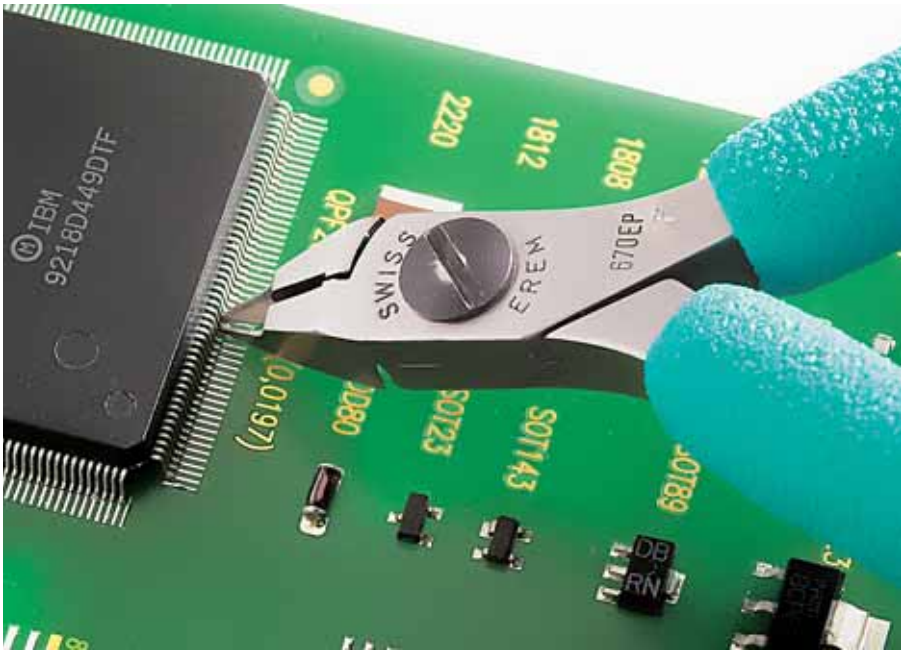
The cutting edges of the 632NCF side cutter are precision-ground to an extremely high level. This enables the cutter to deliver a razor-like full-flush cut.

Tip cutters to remove fine pitch SMD ICs

A simple method to remove SMD ICs is to cut each of the individual leads to remove the device and then reflow the joint with a soldering iron and remove the component lead from the board.

The solder left on the board can then be removed with a desoldering tool or desolder braid and a new component fitted.

The 670EP and 670EPF have fine pointed tapered and relieved heads that are able to fit between individual leads and cut them without causing damage to the printed circuit.



Tungsten-carbide cutter for the preparation of cardio-vascular stents

A stent is a vascular-wall prop. It is a lattice-shaped tube made of stainless steel or nickel-titanium. It serves to hold open constricted coronary blood vessels and improves the flow of blood through the vessels.

It is important in stent manufacture that the cut end of any wire in the lattice is as flat as possible, otherwise it will be necessary rework the stents.

These side cutters have fine polished carbide cutting blades to accurately cut the lattice and reduce the need for rework.

High precision side cutter for cutting stainless tough wires

The 599TFO has wear resistant tungsten carbide cutting edges and all round capability. It is able to cut Vectran braided wires, fibre optics, Kevlar and small stainless steel braids and wires.

A further application lies in telecommunications, i.e. working on fibre-optic cables, Kevlar silks and piano wires.

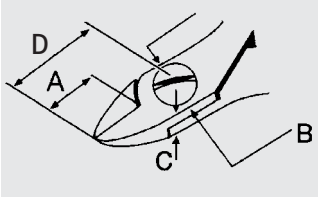
Side Cutters and Tip Cutters

Series 600 Micro

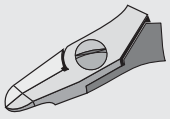
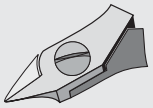
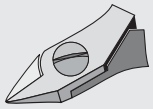
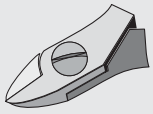
- Miniature cutters
- Offers a wide variety of head shapes for access in difficult to reach areas
- Suitable for SMD and leads (670EP, 670EPF)
- Made from high grade tool steel with cutting edges hardened to 63-65HRc
- Non reflecting surface, ESD safe, resharpenable

Erem®

Series 600 Micro



A = length of cutting edges
B = head width
C = head thickness
D = head length

Tip cutter Straight short relieved head	Tip cutter Pointed relieved head	Side cutter Tapered head	Side cutter Oval head
			

Visibility and accessibility — **Robustness, high cutting capacity**

Side cutter – oval head

110 mm/4.331 Inch
48 g

- **This is the most widely used head shape.**
- **It is robust and size for size offers the highest cutting capacity.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter		
		A	B	C	D	Hard wire	Medium hardness	Copper wire
612N	Semi-flush	9 .354	9 .354	6 .236	15 .590	0.5 .019	0.8 .031	1.3 .051
622N	Flush	9 .354	9 .354	6 .236	15 .590	–	0.8 .031	1.3 .051
632N	Super full flush	9 .354	9 .354	6 .236	15 .590	–	0.7 .027	1.3 .051

Wire quality, see P. 38

Side Cutters and Tip Cutters

Series 600 Micro

Side cutter – tapered head

110 mm/4.331 Inch
48 g

- The jaws of the cutter have straight edges and taper to a point.
- This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
622NA	Flush	9 .354	9 .354	6 .236	15 .590	0.7 .027	1.0 .039

Tip cutter – pointed relieved head

110 mm/4.331 Inch
48 g

- This is the narrowest head shape.
- The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
622NB	Flush	9 .354	9 .354	6 .236	15 .590	0.6 .023	0.8 .031
676E	Flush	9 .354	9 .354	6 .236	15 .590	Model same as 622NB, but with short, robust head	
776E	Super full flush	9 .354	9 .354	6 .236	15 .590	0.6 .023	0.8 .031
632NCF	Super full flush	9 .354	9 .354	6 .236	15 .590	For soft material such as small silicone tubes, miniature rubber seals or for cutting soft synthetic parts	

Erem®

Series 600 Micro

Tip cutter – straight short relieved head

110 mm/4.331 Inch
48 g

- **Suitable for cutting SMD and micro-package contacts.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter		
		A	B	C	D	Medium hardness	Copper wire	
670E	Flush	9 .354	9 .354	6 .236	18 .709	0.5 .019	0.8 .031	
670EP	Flush	9 .354	9 .354	6 .236	18 .709	0.4 .015	0.6 .023	High-precision working on SMD and micro-package contacts up to 0.25 mm/.010 Inch
670EPF	Flush	3 .354	9 .354	6 .236	18 .709	Model same as 670EP, but smaller version **only** for micro pitches under 0.5 mm/.019 Inch (see also P. 40)		

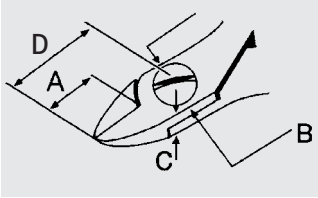
Side Cutters and Tip Cutters

Series 2400 MagicSense

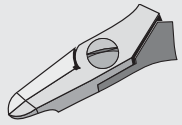
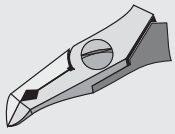
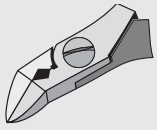
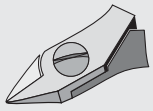
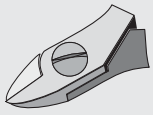
- Medium-size cutter
- Combines robustness, visibility and accessibility.
- Large variety of head shapes for precision working in hard-to-reach areas.
- The optimised ergonomic shape of the Series 2400 MagicSense prevents hand fatigue
- Improved induction-hardened cutting edges up to 64 – 65 HRc for an extremely long service life
- Cutting edges made from special tool steel
- Non-reflecting surface, ESD-safe and resharpenable

Erem®

Series 2400 MagicSense



A = length of cutting edges
B = head width
C = head thickness
D = head length

Tip cutter Straight long relieved head	Tip cutter Angled narrow head	Tip cutter Angled wide head	Side cutter Tapered head	Side cutter Oval head
				

Visibility and accessibility — **Robustness, high cutting capacity**

Side cutter – oval head

130 mm/5.118 Inch
70 g

- **This is the most widely used head shape.**
- **It is robust and size for size offers the highest cutting capacity.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter		
		A	B	C	D	Hard wire	Medium hardness	Copper wire
2412E	Semi-flush	12 .472	11 .433	6 .236	19 .748	0.5 .019	1.0 .039	1.6 .062
2422E	Flush	12 .472	11 .433	6 .236	19 .748	–	1.0 .039	1.6 .062
2432E	Super full flush	12 .472	11 .433	6 .236	19 .748	–	0.8 .039	1.6 .062

Wire quality, see P. 38
Optional: Safety device for wire scraps. Order suffix "W", e.g. 2412W.

Side Cutters and Tip Cutters

Series 2400 MagicSense

Side cutter – tapered head

127 mm/5.999 Inch
70 g

- **The jaws of the cutter have straight edges and taper to a point.**
- **This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
2477E	Flush	12 .472	12 .472	11 .433	6 .236	1.0 .039	1.3 .051

Tip cutter – angled wide head

130 mm/5.118 Inch
70 g
30°

- **The angled head provides for precise cuts at different working angles.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter		
		A	B	C	D	Medium hardness	Copper wire	
2403E	Flush	9 .354	11 .433	6 .236	19 .748	1.0 .039	1.6 .062	Wide, robust head, fine cut
2404E	Flush	9 .354	11 .433	6 .236	20 .787	0.8 .031	1.3 .051	Model same as 2403E, but with pointed rounded head

Series 2400 MagicSense

Tip cutter – angled narrow head

135 mm/5.315 Inch
72 g
45°

- **The angled head provides for precise cuts at different working angles.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter		
		A	B	C	D	Medium hardness	Copper wire	
2482E	Flush	6 .236	11 .433	6 .236	26 1.024	0.6 .023	1.2 .047	Suitable for working on printed-circuit boards, component connections, can be used in both 90° and 180° applications
2475E	Flush	4 .157	11 .433	6 .236	22 .866	0.4 .015	0.6 .023	Suitable for fine cutting work on hybrid circuits of miniature components.

Tip cutter – straight long relieved head

140 mm/5.512 Inch
72 g

- **This head is suitable for horizontal and vertical cuts.**
- **The long tips facilitate cutting in hard-to-reach areas.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
2470E	Flush	4 .157	11 .433	6 .236	29 1.142	0.4 .015	0.6 .023

Safety device for wire scraps **only** possible on 2412EW, 2422EW, 2432EW, 2477EW, 2482EW models.

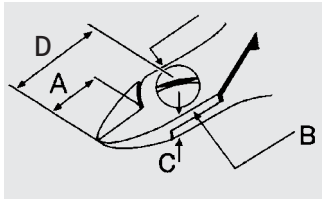
Side Cutters and Tip Cutters

Series 500 Medium

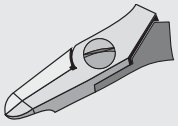
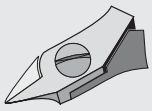
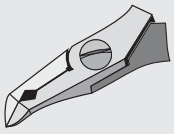
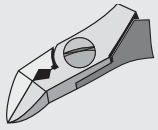
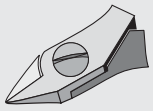
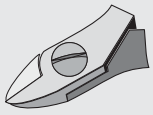
- Medium size, robust, precision cutters
- Wide range of head shapes
- Manufactured from high grade tool steel
- Cutting edges hardened to Rockwell 63-65 HRc
- Non reflecting surface, ESD safe and resharpenable

Side Cutters and Tip Cutters

Series 500 Medium



A = length of cutting edges
B = head width
C = head thickness
D = head length

Tip cutter Straight long relieved head	Tip cutter Pointed relieved head	Tip cutter Angled narrow head	Tip cutter Angled wide head	Side cutter Tapered head	Side cutter Oval head
					

Visibility and accessibility — **Robustness, high cutting capacity**

Side cutter – oval head

115 mm/4.527 Inch
67 g

- **This is the most widely used head shape.**
- **It is robust and size for size offers the highest cutting capacity.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter			
		A	B	C	D	Hard wire	Medium hardness	Copper wire	
512N	Semi-flush	12 .472	11 .433	6.5 .256	19 .748	0.5 .019	1.0 .039	1.6 .062	
512E	Semi-flush	12 .472	11 .433	6,5 .256	19 .748	Model same as 512N, but with burnished head			
522N	Flush	12 .472	11 .433	6.5 .256	19 .748	–	1.0 .039	1.6 .062	
599E	Flush	10 .472	11 .433	6.5 .256	17 .669	–	1.0 .039	1.6 .062	Short, robust head
532N	Super full flush	12 .472	11 .433	6.5 .256	19 .748	–	0.8 .039	1.6 .062	

Wire quality, see P. 38
Optional: Safety device for wire scraps. Order suffix "W", e.g. 512NW.

Side Cutters and Tip Cutters

Series 500 Medium

Side cutter – tapered head

115 mm/4.527 Inch
67 g

- **The jaws of the cutter have straight edges and taper to a point.**
- **This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.**

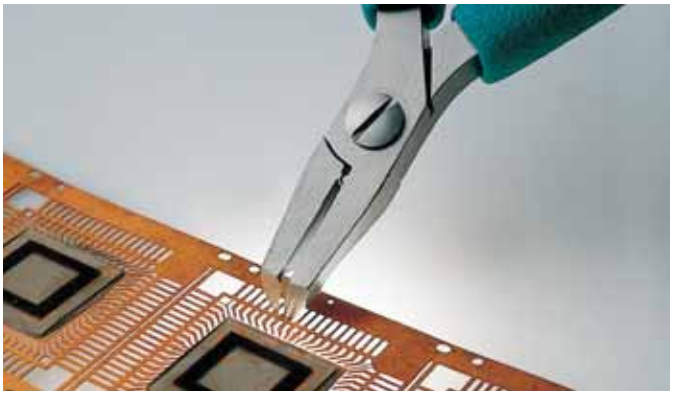
Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter		
		A	B	C	D	Medium hardness	Copper wire	
595E	Flush	12 .472	11 .433	6.5 .256	19 .748	1.0 .039	1.3 .051	Tapered head
577E	Flush	10 .472	11 .433	6.5 .256	17 .669	1.0 .039	1.3 .051	Tapered, short head

Tip cutter – angled wide head

110 mm/4.331 Inch
67 g

- **The angled head provides for precise cuts at different working angles.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter		
		A	B	C	D	Medium hardness	Copper wire	
503E	Flush	9 .354	11 .433	6.5 .256	19 .748	1.0 .039	1.6 .062	Wide, robust head
504AE	Flush	9 .354	11 .433	6.5 .256	19 .748	0.8 .031	1.3 .051	Model same as 503E, but with pointed rounded head



Erem®

Series 500 Medium

Tip cutter – angled narrow head

120 mm/4.724 Inch
68 g
35°

- The angled head provides for precise cuts at different working angles.
- Narrow, robust head, suitable for working with high cutting force in confined areas.

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
555E	Flush	6 .236	11 .433	6.5 .256	24 .945	0.6 .023	1.3 .051

115 mm/4.527 Inch
68 g
40°

- Relieved cutting edge for easy access.

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
572E	Flush	6 .236	11 .433	6.5 .256	21 .827	0.6 .023	1.3 .051

115 mm/4.527 Inch
68 g
45°

- Suitable for working on printed-circuit boards, component connections, can be used in both 90° and 180° applications.

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
582E	Flush	6 .236	11 .433	6.5 .256	26 1.024	0.6 .023	1.3 .051

115 mm/4.527 Inch
67 g
45°

- Model same as 582E, but with safety device for wire scraps.

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
582EW	Flush	6 .236	11 .433	6.5 .256	26 1.024	0.6 .023	1.3 .051

Side Cutters and Tip Cutters

Series 500 Medium

Tip cutter – angled narrow head

115 mm/4.527 Inch
68 g
30°

- **Ideal rework tool, suitable for cutting DIL contacts at front and rear and densely printed circuit boards.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter.	
		A	B	C	D	Medium hardness	Copper wire
593AE	Flush	4 .157	11 .433	6.5 .256	26 1.024	0.4 .015	1.0 .039

110 mm/4.331 Inch
67 g
45°

- **Suitable for fine cutting work on hybrid circuits or miniature components.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C		Medium hardness	Copper wire
575E	Flush	4 .157	11 .433	6.5 .256	22 .866	0.2 .007	0.6 .023

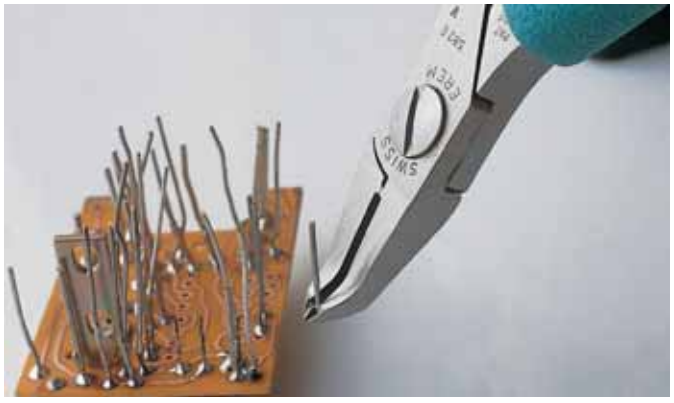
Tip cutter – pointed relieved head

115 mm/4.527 Inch
67 g

- **This is the narrowest head shape.**
- **The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
592E	Flush	12 .472	11 .433	6.5 .256	19 .748	0.4 .015	0.8 .031
792E	Super full flush	12 .472	11 .433	6.5 .256	19 .748	0.4 .015	0.6 .023

Series 500 Medium



Tip cutter – straight long relieved head

120 mm/4.724 Inch
67 g

- **This head is suitable for horizontal and vertical cuts.**
- **The long tips facilitate cutting in hard-to-reach areas.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter		
		A	B	C	D	Medium hardness	Copper wire	
570E	Flush	4 .157	11 .433	6.5 .256	29 1.142	0.6 .023	1.2 .047	For cutting at extreme tips

Tip cutter – straight head for vertical use

120 mm/4.724 Inch
67 g

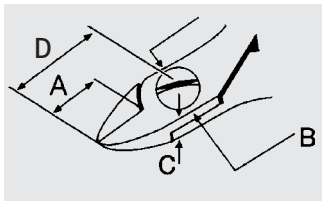
Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
573E	Flush	4 .157	11 .433	6.5 .256	29 1.142	0.4 .015	0.6 .023

Side Cutters and Tip Cutters

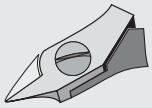
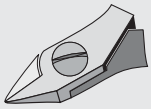
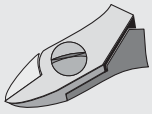
Series 800 Maxi

- Maxi-sized cutter for general cutting applications in electronics
- Made from high grade tool steel, cutting edges hardened to Rockwell 63-65 HRc
- Cuts large wire diameters
- Non-reflecting surface, ESD-safe and resharpenable

Series 800 Maxi



A = length of cutting edges
B = head width
C = head thickness
D = head length

Tip cutter Pointed relieved head	Side cutter Tapered head	Side cutter Oval head
		

Visibility and accessibility — Robustness, high cutting capacity

Side cutter – oval head

120 mm/4.724 Inch
67 g

- **This is the most widely used head shape.**
- **It is robust and size for size offers the highest cutting capacity.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter			
		A	B	C	D	Hard wire	Medium hardness	Copper wire	
812N	Semi-flush	15 .590	13.5 .531	7.5 .295	21 .827	0.6 .023	1.2 .047	1.8 .070	
896E	Semi-flush	15 .590	13.5 .531	7.5 .295	21 .827	0.6 .023	1.2 .047	1.8 .070	Suitable for cutting hard wires, Kovar, connector pins
822N	Flush	15 .590	13.5 .531	7.5 .295	21 .827	–	1.2 .047	1.8 .070	

Wire quality, see P. 38

Side Cutters and Tip Cutters

Series 800 Maxi

Side cutter – tapered head

120 mm/4.724 Inch
83 g

- The jaws of the cutter have straight edges and taper to a point.
- This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
886**E**	Flush	15 .590	13.5 .531	7.5 .295	21 .827	1.0 .039	1.8 .070

Tip cutter – pointed relieved head

120 mm/4.724 Inch
81 g

- This is the narrowest head shape.
- The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter	
		A	B	C	D	Medium hardness	Copper wire
884E	Flush	15 .590	13.5 .531	7.5 .295	21 .827	0.8 .031	1.6 .062

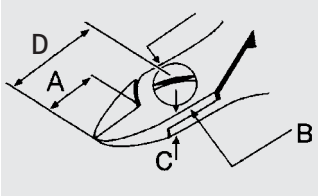
Series 800 Maxi

Side Cutters and Tip Cutters

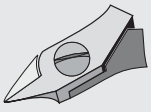
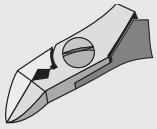
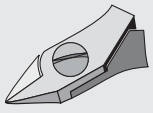
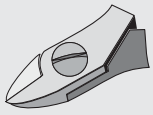
Tungsten-carbide cutters

- Medium sized precision cutters
- Wear resistant tungsten carbide edged cutting blades
- Manufactured from high grade tool steel
- Suitable for cutting hard and tough wires e.g. piano wire, nickel and diode leads
- Non reflecting surface, ESD safe and resharpenable

Tungsten-carbide cutters



A = length of cutting edges
B = head width
C = head thickness
D = head length

Tip cutter Pointed relieved head	Tip cutter Angled wide head	Side cutter Tapered head	Side cutter Oval head
			

Visibility and accessibility — **Robustness, high cutting capacity**

Side cutter – oval head

115 mm/4.527 Inch
67 g

- **This is the most widely used head shape.**
- **It is robust and size for size offers the highest cutting capacity.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter				
		A	B	C	D	Piano wire	Hard wire	Medium hardness	Copper wire	
622TX	Flush	8 .315	9 .354	6 .236	15 .590	0.2 .007	0.4 .015	0.6 .023	1.2 .047	Miniature cutter
599T	Semi-flush	12 .472	11 .433	6.5 .256	19 .748	0.6 .023	0.8 .031	1.0 .039	1.5 .059	
599TF	Flush	12 .472	11 .433	6.5 .256	19 .748	0.6 .023	0.8 .031	1.0 .039	1.5 .059	

Wire quality, see P. 38

Side Cutters and Tip Cutters

Tungsten-carbide cutters

Side cutter – tapered head

115 mm/4.527 Inch
67 g

- **The jaws of the cutter have straight edges and taper to a point.**
- **This head shape allows access to difficult to reach areas but reduces the cutting capacity in comparison to the same size oval head cutter.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter				
		A	B	C	D	Piano wire	Hard wire	Medium hardness	Copper wire	
595T	Semi-flush	12 .472	11 .433	6.5 .256	19 .748	0.4 .015	0.6 .023	0.8 .031	1.5 .059	
595TF	Flush	12 .472	11 .433	6.5 .256	19 .748	0.4 .015	0.6 .023	0.8 .031	1.5 .059	
2476TX1	Flush	11 .433	11 .433	6 .236	19 .748	0.3 .011	0.4 .015	0.5 .019	1.0 .039	Series 2400 MagicSense model (Length: 130 mm / 5.118 Inch)
576TX1	Flush	11 .433	11 .433	6.5 .256	19 .748	0.3 .011	0.4 .015	0.5 .019	1.0 .039	

Tungsten-carbide cutters

Tip cutter – pointed relieved head

115 mm/4.527 Inch
67 g

- **This is the narrowest head shape.**
- **The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.**

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter				
		A	B	C	D	Piano wire	Hard wire	Medium hardness	Copper wire	
2476TX	Flush	11 .433	11 .433	6 .236	19 .748	0.1 .003	0.2 .007	0.3 .011	1.0 .039	Series 2400 MagicSense model
576TX	Flush	11 .433	11 .433	6.5 .256	19 .748	0.1 .003	0.2 .007	0.3 .011	1.0 .039	

Tip cutter – angled wide head

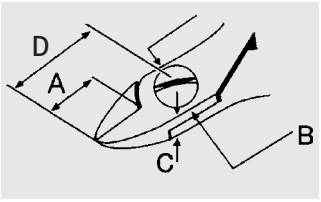
110 mm/4.331 Inch
67 g
30°

- The angled head provides for precise cuts at different working angles.

Model	Cut	Dimensions in mm/Inch				Max. cutting capability in mm/Inch Diameter			
		A	B	C	D	Piano wire	Hard wire	Medium hardness	Copper wire
503ET	Semi-flush	9 .354	11 .433	6.5 .256	19 .748	0.4 .015	0.6 .023	0.8 .031	1.2 .047
503ETF	Flush	9 .354	11 .433	6.5 .256	20 .787	0.4 .015	0.6 .023	0.8 .031	1.2 .047

Side Cutters and Tip Cutters

Special applications



A = length of cutting edges
B = head width
C = head thickness
D = head length

Special applications – Special tool steel, ESD-safe

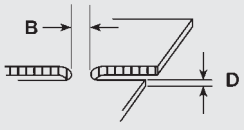
120 mm/4.724 Inch
100 g

■ **Side cutter with compound action.**

Model	Cut	Dimensions in mm/Inch A	B	C	Max. cutting capability in mm/Inch Diameter Copper wire	
147A	Semi-flush	12 .472	10.5 .413	7.5 .295	1.8 .070	For cutting hard wires with minimal effort
147AT	Semi-flush	12 .472	10.5 .413	7.5 .295	1.8 .070	Model same as 147A, but with cutting edges made from tungsten carbide, model on request

115 mm/4.527 Inch
79 g

■ **Side cutter, suitable for cutting printed-circuit boards.**

Model	Cut	Max. cutting capability in mm/Inch Max. D	Max. B	
884EPCM	Flush	1.5 .059	2.0 .078	

Special applications

110 mm/4.331 Inch
48 g

- **Side cutter, suitable for precision cuts on soft materials, e.g. small silicone tubes in medical applications, precision connector seals, miniature rubber seals, soft synthetic parts.**

Model	Cut	Dimensions in mm/Inch			
		A	B	C	
632NCF	Super full flush	9 .354	9 .354	6 .236	

115 mm/4.527 Inch
67 g

- **Side cutter, suitable for cutting Kevlar silks.**

Model	Dimensions in mm/Inch				
	A	B	C	D	
599FO	12 .472	11 .433	6.5 .256	19 .748	

115 mm/4.527 Inch
67 g

- **Side cutter with cutting edges made from tungsten carbide.**

Model	Cut	Dimensions in mm/Inch				
		A	B	C	D	
599TFO	Semi-flush	12 .472	10.5 .413	6.5 .256	19 .748	Model same as 599FO, but with cutting edges made from tungsten carbide. Suitable for cutting Kevlar silks, Vectran-sheathed wires, optical fibres and small stainless wires

Side Cutters and Tip Cutters

Pneumatic side cutters and tip cutters

- Pneumatic cutter
- Handy, light and precise
- Extremely versatile thanks to a selection of different cutting heads
- Easily interchangeable cutting heads
- Suitable for cutting conventional components, soft metals or small plastic parts

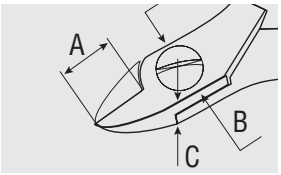
Pneumatic side cutters and tip cutters

130 mm/5.118 Inch
130 g

- **Pneumatic-cutter housing**

Model	Dimensions in mm/Inch Diameter	
	D	
1500 BSF	28 1.102	Requires 4 – 6 bar oil-free clean compressed air

Cutting heads for 1500BSF



A = length of cutting edges
B = head width
C = head thickness

Side cutter – oval head

35 g

- **This is the standard head shape.**
- **It is used for all cutting jobs in easy-to-reach areas.**
- **The oval head provides for a high cutting capacity and is characterised by its robustness.**

Model	Cut	Dimensions in mm/Inch			Max. cutting capability in mm/Inch Diameter
		A	B	C	Copper wire
1512N	Semi-flush	10 .394	10.5 .413	6.5 .256	1.6 .062
1522N	Flush	10 .394	10.5 .413	6.5 .256	1.6 .062

Wire quality, see P. 38

Pneumatic side cutters and tip cutters

Side cutter – tapered head

35 g

- The edges of the cutter head are straight and taper to a point, allowing access to hard to reach areas.

Model	Cut	Dimensions in mm/Inch			Max. cutting capability in mm/Inch Diameter
		A	B	C	Copper wire
1522NA	Flush	9 .354	10.5 .413	6.5 .256	1.4 .055

Side cutter – pointed relieved head

32 g

- This is the narrowest head shape.
- The underside is relieved and facilitates optimum access even to extremely hard-to-reach areas.

Model	Cut	Dimensions in mm/Inch			Max. cutting capability in mm/Inch Diameter
		A	B	C	Copper wire
1522NB	Flush	9 .354	10.5 .413	6.5 .256	1.2 .047

Tip cutter – angled head

38 g
30°

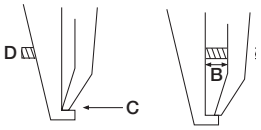
- The angled head provides for precise cuts at different working angles.

Model	Cut	Dimensions in mm/Inch			Max. cutting capability in mm/Inch Diameter
		A	B	C	Copper wire
1503E	Flush	12 .472	10.5 .413	6.5 .256	1.2 .047

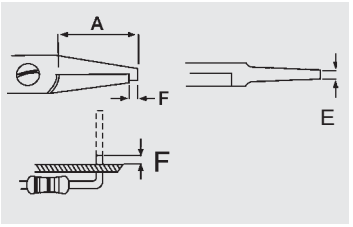
Side Cutters and Tip Cutters

Distance cutters

- Erem distance cutters are available with fixed and variable cutting lengths
- The tips are polished so as to prevent board damage
- For cutting wires to the right length and for fixing components



The protective stop screw D improves the performance of Erem distance cutters:
– Clearance B larger than the wire diameter = cut wire is ejected.
– Clearance B smaller than the wire diameter = cut wire is held.
Adjust protective stop screw D so that cutting edge C does not hit the opposite side. This increases the lifetime of the cutting edge.



A = jaw length
E = width of tips
F = cutting length

Fixed cutting length (F)

120 mm/4.724 Inch
67 g

- **Special tool steel**
- **ESD-safe**
- **Fixed cutting length (= F)**
- **Reduces mechanical shock on components**

Model	Cut	Dimensions in mm/Inch			Max. cutting capability in mm/Inch Diameter	
		A	E	F	Copper wire	
530E06	Flush	20 .787	3 .118	0.6 .023	1.2 .047	Cuts copper wire to a length of 0.6 mm/.023 Inch
530E08	Flush	20 .787	3 .118	0.8 .031	1.2 .047	Cuts copper wire to a length of 0.8 mm/.031 Inch
530E10	Flush	20 .787	3 .118	1.0 .039	1.2 .047	Cuts copper wire to a length of 1.0 mm/.039 Inch
530E12	Flush	20 .787	3 .118	1.2 .047	1.2 .047	Cuts copper wire to a length of 1.2 mm/.047 Inch
530E13	Flush	20 .787	3 .118	1.3 .051	1.2 .047	Cuts copper wire to a length of 1.3 mm/.051 Inch
530E15	Flush	20 .787	3 .118	1.5 .059	1.2 .047	Cuts copper wire to a length of 1.5 mm/.059 Inch

Wire quality, see P. 38

Distance cutters

Model	Cut	Dimensions in mm/Inch A	E	F	Max. cutting capability in mm/Inch Diameter Copper wire	
530E18	Flush	20 .787	3 .118	1.8 .070	1.2 .047	Cuts copper wire to a length of 1.8 mm/.070 Inch
530E20	Flush	20 .787	3 .118	2.0 .078	1.2 .047	Cuts copper wire to a length of 2.0 mm/.078 Inch

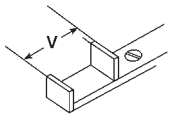
120 mm/4.724 Inch
67 g
45°

- **Special tool steel**
- **ESD-safe**
- **Fixed length distance cutter**
- **Tapered 45°**

Model	Cut	Dimensions in mm/Inch A	E	F	Max. cutting capability in mm/Inch Diameter Copper wire	
549E	Flush	20 .787	3 .118	1.5 .059	1.2 .047	Cuts wire to a length of 1.5 mm/.059 Inch
549E10	Flush	20 .787	3 .118	1.0 .039	1.2 .047	Cuts wire to a length of 1.0 mm/.039 Inch
549E12	Flush	20 .787	3 .118	1.2 .047	1.2 .047	Cuts wire to a length of 1.2 mm/.047 Inch

Variable cutting length (V)

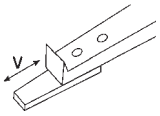
120 mm/4.724 Inch
70 g



- **Special tool steel**
- **ESD-safe**
- **Variable cutting length (= V)**
- **With protective stop screw**

Model	Cut	Dimensions in mm/Inch A	E	V	Max. cutting capability in mm/Inch Diameter Copper wire	
530E15A	Flush	20 .787	4.5 .177	1.2 – 6 .047 – .236	1.2 .047	Variable cutting length from 1.2 mm to 6 mm/ .047 to .236 Inch

115 mm/4.527 Inch
70 g



- **Special tool steel**
- **ESD-safe**
- **Variable cutting length (= V)**
- **With protective stop screw**
- **Interchangeable plastic stop protects the printed-circuit board against damage**

Model	Cut	Dimensions in mm/Inch A	E	V	Max. cutting capability in mm/Inch Diameter Copper wire	
573EB	Flush	20 .787	4.5 .177	0 – 5 0 – .197	0.8 .031	Variable cutting length from 0 mm to 5 mm/ 0 to .197 Inch

Pliers

Erem pliers, stripping pliers, forming pliers

- Gripping and bending pliers with standard and ergonomic handles
- MagicSense – moulded handle for increase comfort
- Wide variety of head shapes
- Special tool steel, non-reflecting surface, ESD-safe

Internal patented Erem Magic Spring

– Constant spring force
– Guarantees more than 1 million operations

High precision screw joint

– Smooth jaw action with no play
– Smooth cutting operation with no jaw overlapping

Precision ground jaws

Ergonomically shaped handles

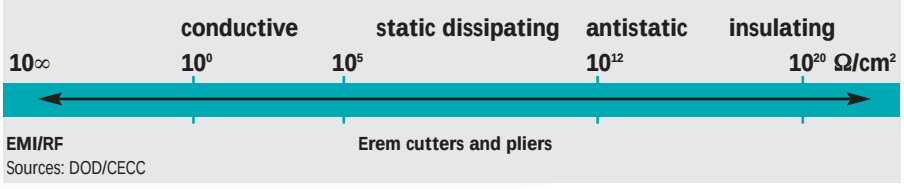
for high comfort, better grip and added safety

EMOS maximum opening stop

limits the cutting-edge tips from opening more than 5 mm/.197 Inch. The limited extent to which the handles can open prevent user hand fatigue.

ESD-safe

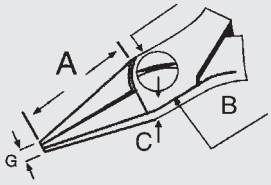
The interchangeable foam-cushion handles are ESD-safe and are fitted as standard on all Erem cutters and pliers.

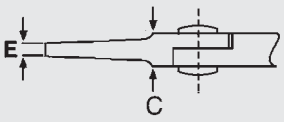


Pliers

Erem pliers

- Pliers for miniature and standard electronics
- Special tool steel, non-reflecting surface, ESD-safe
- High grade tool steel





A = jaw length
B = head width
C = head thickness
E = width of tips
G = total height of both tips

Round nose pliers

120 m/4.724 Inch
62 g

- **Round nose pliers with very precise, smooth jaws.**
- **Suitable for forming, bending, laying and feeding in wires.**

Model	Shape	Dimensions in mm/Inch				
		A	B	C	E ø	G
543E		23 .905	9 .354	6.5 .256	0.8 .031	1.6 .062

Needle nose pliers

120 m/4.724 Inch
62 g

- **Needle nose pliers with very precise, smooth and rounded jaws.**
- **Suitable for forming, bending, laying and feeding in wires.**

Model	Shape	Dimensions in mm/Inch				
		A	B	C	E	G
547		23 .905	9 .354	6,5 .256	0,9 .035	1,2 .047

Erem pliers

Flat nose pliers

120 m/4.724 Inch
67 g

- Flat nose pliers with smooth jaws and precision-machined edges.
- Suitable for gripping flat workpieces.

Model	Shape	Dimensions in mm/Inch				
		A	B	C	E	G
542E		23 .905	9 .354	6.5 .256	2.4 .094	1.4 .055

125 m/4.921 Inch
67 g

- Flat nose pliers with replaceable nylon jaws.
- Nylon jaws prevent nicking and scratching.
- Suitable for forming precious metals and component connections.

Model	Shape	Dimensions in mm/Inch				
		A	B	C	E	G
531E		23 .905	9 .354	6.5 .256	5 .197	3 .118

Chain nose pliers

120 m/4.724 Inch
67 g

- Chain nose pliers with narrow half-round jaws.
- For securely handling components.

Model	Shape	Dimensions in mm/Inch				
		A	B	C	E	G
544E		23 .905	9 .354	6.5 .256	1 .039	1.4 .055

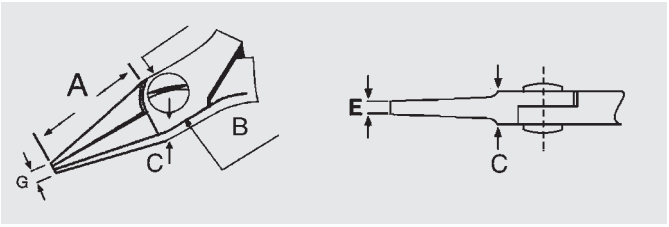
125 mm/4.921 Inch
67 g

Model	Shape	Dimensions in mm/Inch					
		A	B	C	E	G	
544D		23 .905	9 .354	6.5 .256	1 .039	1.4 .055	Inside-serrated jaws for secure handling

Pliers

Series 2400 MagicSense pliers

- Pliers for miniature and standard electronics
- Optimized ergonomically shaped handles for increased comfort
- Special tool steel, non-reflecting surface, ESD-safe



A = jaw length
B = head width
C = head thickness
E = width of tips
G = total height of both tips

Needle nose pliers

146 mm/5.748 Inch
72 g

- **Needle nose pliers with very precise, smooth and rounded jaws.**

Model	Shape	Dimensions in mm/Inch					
		A	B	C	E	G	
2411P	⊖	33.5 1.319	11 .433	6 .236	1 .039	1.2 .047	
2411PD	⊖	35.5 1.319	11 .433	6 .236	1 .039	1.2 .047	Model same as 2411P, but with inside-serrated jaws for secure handling

Series 2400 MagicSense pliers

Flat nose pliers

146 mm/5.748 Inch
72 g

- **Flat nose pliers with smooth jaws and precision-machined edges.**
- **Suitable for gripping flat workpieces.**

Model	Shape	Dimensions in mm/Inch				
		A	B	C	E	G
2442P		33.5 1.319	11 .433	6 .236	3.4 .139	1.2 .047

Round nose pliers

146 mm/5.748 Inch
72 g

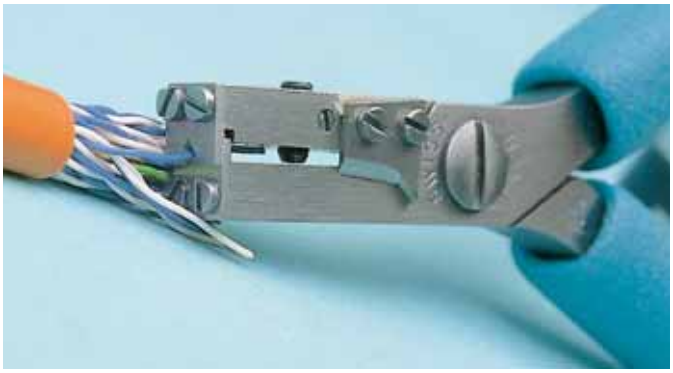
- **Round nose pliers with very precise, smooth jaws.**
- **Suitable for bending wires.**

Model	Shape	Dimensions in mm/Inch				
		A	B	C	E ø	G
2443P		33.5 1.319	11 .433	6 .236	0.8 .031	1.6 .062

Stripping pliers

High precision stripping pliers

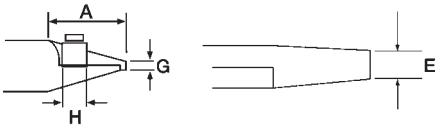
- Robust, high-precision tools for use in electronics and aeronautical engineering
- The required diameter is set by means of screws
- Screwdriver and key are included
- Interchangeable blades
- ESD-safe
- Special designs also available on request



Front stripping

120 mm/4.724 Inch
75 g

- **Suitable for all types of insulation and optical fibres.**
- **Integral side cutting blade.**



A = jaw length
E = width of tips
G = total height of both tips
H = length of cutting blade

Model	Dimensions in mm/Inch				
	A	E	G	H	Wire diameter
510AE	21 .827	5 .197	4 .157	7 .276	0.25 mm – 1.02 mm (AWG 30 – 18) .010 Inch – .040 Inch

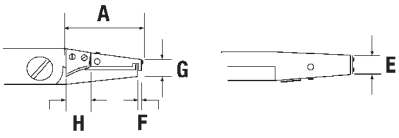
Erem®

High precision stripping pliers

Front stripping

120 mm/4.724 Inch
80 g

- **Unique precision for damage-free stripping of fine wires.**
- **Suitable for all types of insulation, Teflon, Tefzel and optical fibres.**



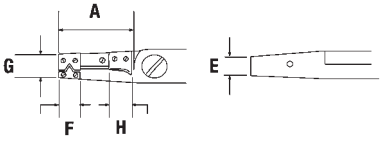
A = jaw length
E = width of tips
F = depth of interchangeable blade
G = total height of both tips
H = length of cutting blade

Model	Dimensions in mm/Inch					
	A	E	F	G	H	Wire diameter
552E	23 .905	6.5 .256	1 .039	11 .433	9 .354	0.06 mm – 0.6 mm (AWG 42 – 24) .002 Inch – .023 Inch

Side stripping

120 mm/4.724 Inch
80 g

- **Unique precision for damage-free stripping of fine wires.**
- **Suitable for all types of insulation, Teflon, Tefzel and optical fibres.**



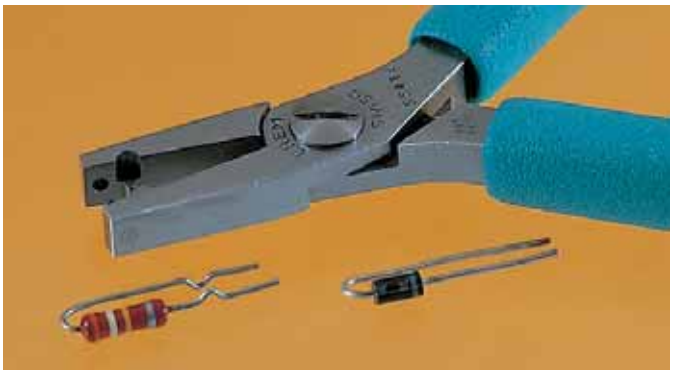
A = jaw length
E = width of tips
F = width of interchangeable blade
G = total height of both tips
H = length of cutting blade

Model	Dimensions in mm/Inch					
	A	E	F	G	H	Wire diameter
552S	21 .827	6.5 .256	6.7 .264	11 .433	9 .354	0.06 mm – 0.6 mm (AWG 42 – 24) .002 Inch – .023 Inch

Forming pliers

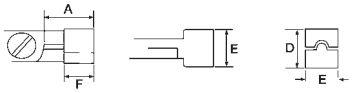
Forming pliers for passive components

- Safe bending, forming and preparation of component connections
- High grade tool steel
- Non-reflecting surface
- ESD-safe

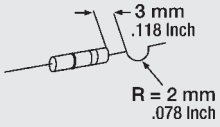


120 mm/4.724 Inch
70 g

- **Suitable for component connections, U-shape.**

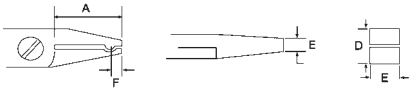


A = jaw length
D = height of tips
E = width of tips
F = length of forming tool

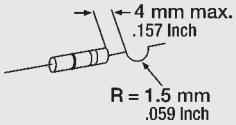
Model		Dimensions in mm/Inch				Max. connection diameter		
		A	D	E	F	Diodes	Capacitors	Resistors
554E		13 .512	10 .394	10 .394	10 .394	0.65 mm .025 Inch	0.7 mm .027 Inch	1/2 W

120 mm/4.724 Inch
70 g

- **Suitable for component connections, U-shape, axial forming.**
- **Narrow head shape.**



A = jaw length
D = height of tips
E = width of tips
F = length of forming tool

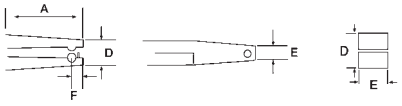
Model		Dimensions in mm/Inch				Max. connection diameter		
		A	D	E	F	Diodes	Capacitors	Resistors
554A		23 .905	5.6 .220	2.5 .098	4.5 .177	0.65 mm .025 Inch	0.7 mm .027 Inch	1/2 W

Erem®

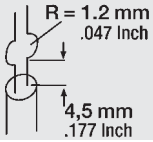
Forming pliers for passive components

120 mm/4.724 Inch
70 g

- **Suitable for secure assembly.**
- **Forms the two opposing Us in one operation.**

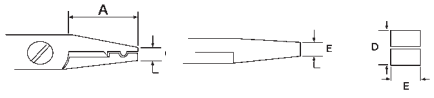


A = jaw length
D = height of tips
E = width of tips
F = length of forming tool

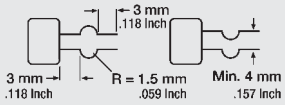
Model		Dimensions in mm/Inch				Max. connection diameter		
		A	D	E	F	Diodes	Capacitors	Resistors
554TX		20 .787	6.5 .256	6.5 .256	4 .157	0.65 mm .025 Inch	0.7 mm .027 Inch	1/2 W

120 mm/4.724 Inch
67 g

- **For cutting and bending components into two operations to a predefined length.**

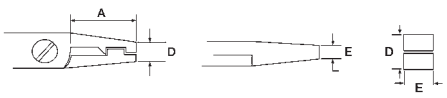


A = jaw length
D = height of tips
E = width of tips
F = length of forming tool

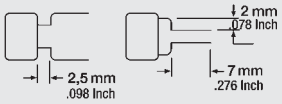
Model		Dimensions in mm/Inch			Max. connection diameter		
		A	E	F	Diodes	Capacitors	Resistors
50788		23 .905	4 .157	3 .118	0.65 mm .025 Inch	0.7 mm .027 Inch	1/2 W

120 mm/4.724 Inch
67 g

- **For cutting and bending different types of components with two outputs.**



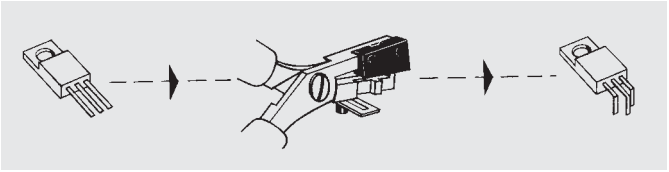
A = jaw length
D = height of tips
E = width of tips
F = length of forming tool

Model		Dimensions in mm/Inch			Max. connection diameter		
		A	D	E	Diodes	Capacitors	Resistors
50789Z		23 .905	3.3 .130	3.5 .138	0.65 mm .025 Inch	0.7 mm .027 Inch	1/2 W

Forming pliers

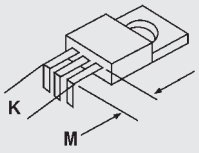
High precision forming tools for active components

- Safe bending, forming and preparation of component connections, specially for integrated components and power transistors
- High grade tool steel
- Non-reflecting surface
- ESD-safe



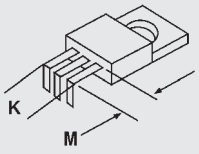
120 mm/4.724 Inch
85 g

- **Suitable for bending flat components, contacts, power transistors, Triac connections to a right angle.**

Model		Dimensions in mm/Inch	
		K max.	M
500103A		15 .590	3 – 12 .118 – .472

120 mm/4.724 Inch
85 g

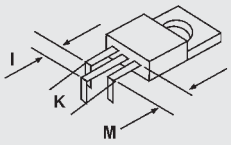
- **Suitable for cutting and bending Series TO components, diodes and mechanical parts to a right angle.**
- **Easily adjustable with interchangeable cutting edges.**

Model		Dimensions in mm/Inch	
		K max.	M
500210E		11 .433	3.8 – 15 .149 – .590

High precision forming tools for active components

120 mmm/4.724 Inch
85 g

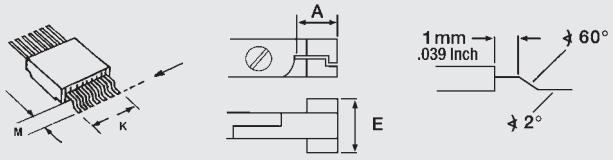
- **3 connections, suitable for bending components of Series TO 126, 218, 220 and power transistors through 90° in two rows.**
- **Adjusted by means of a screw.**

Model		Dimensions in mm/Inch		
		K max.	M	I
500104A		13 .512	3.5 – 15 .138 – .590	2.54 .100

High precision forming pliers for Flat Packs, Quads

120 mmm/4.724 Inch
100 g

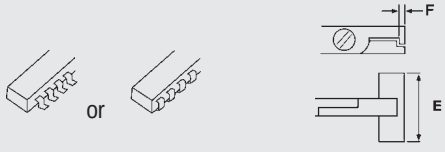
- **Suitable for bending flat components, contacts, power transistors, Triac connections to a right angle.**

Model		Dimensions in mm/Inch		
		A	K max.	M
80013C		17 .669	13 .512	2.8 .110

High precision forming pliers for DIL pins

120 mmm/4.724 Inch
98 g

- **Suitable for cutting and bending DIL pins through 90° in one operation.**
- **Up to max. 20 DIL pins.**

Model		Dimensions in mm/Inch	
		E	F
809IC		25 .984	0.9 .035

Special tools

IC and SMD tools, Fibre optic tools, Vacuum micromanipulator

- IC and SMD tools with precise fine adjustment for inserting, extracting, straightening and cutting IC and SMD components
- High-precision tools for optical fibres for professional stripping, suitable for cutting Kevlar silks, Vectran-sheathed wires, etc.
- Vacuum system for precise handling of tiny SMD components and silicon wafers, suitable for assembly and laboratory work


EREM
505C
SWISS

IC and SMD tools

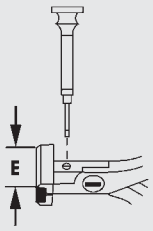
- IC and SMD tools for inserting, extracting, straightening and cutting IC and SMD components
- Non-reflecting surface
- ESD-safe

Inserting and extracting

120 mm/4.724 Inch

- **One screwdriver included for fine adjustments.**

Model	Model	Dimensions in mm/Inch			
		E		505C	505BGC	505BG
505C	505C	20 .787	pins:	14-16	28	28
	505BGC	36 1.417	Width:	.300	.300	.600
	505BG	36 1.417				

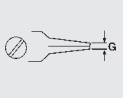


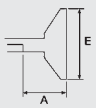
Straightening

130 mm/5.118 Inch
120 g

- **Practical straightening tool, suitable for straightening contacts, DIL/IC connections.**
- **Up to 16 connections possible.**

Model	Dimensions in mm/Inch		
	A	E	G
808G	23 .905	42 1.653	1 .039





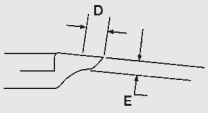
Erem®

IC and SMD tools

Cutting

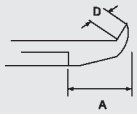
110 mm/4.331 Inch
48 g

- **High-precision tip cutter.**
- **For connections of SMD micro-packages up to 0.25 mm/.010 Inch, also for pitches smaller than 1/20".**
- **For µ pitches below 0.5 mm/.019 Inch, you will need the 670EPF model.**
- **Please send component when ordering.**

Model	Cut			Dimensions in mm/Inch		
				A	D	E
670EP	Flush			10 .394	3 .118	2 .079

115 mm/4.527 Inch
67 g

- **High-precision tip cutter, bent.**
- **Practical rework tool.**
- **For cutting DIL contacts directly on the component.**
- **Ideal for densely printed boards.**

Model	Cut		Dimensions in mm/Inch	
			A	D
593AE	Flush		20 .787	4 .157

Kit for SMD work

- **For SMD assembly and repair applications.**
- **6-piece tool kit with monitored discharging ESD handles.**
- **Special tool steel, non-reflecting surface, resharpenable (cutter).**
- **High-quality precision tweezers, non-magnetic.**
- **In an ESD-safe plastic case.**

Model	Description
3900KC	Kit for SMD work
contents:	
51SA	Precision tweezers with very pointed tips, bent 30°, relieved; length 115 mm/4.527 Inch
102ACA	SMD tweezers with angled tips and blunted edges, suitable for vertical working with small components; length 115 mm/4.527 Inch
103ACA	SMD tweezers with angled tips and blunted edges for vertical working with small components; length 115 mm/4.527 Inch
150SAMB	SMD tweezers with bent tips 40°, serrated finger grips for gripping small cylindrical parts, dia. 1.2 – 2.5 mm/.047 – .108 Inch; length 120 mm/4.724 Inch
150SAMF	SMD tweezers with straight tips and serrated finger grips for gripping small cylindrical parts, dia. 1.2 – 2.5 mm/.047 – .108 Inch; length 120 mm/4.724 Inch
670EP	High-precision tip cutter for connections of SMD micro-packages up to 0.25 mm/.010 Inch

Fibre optic tools

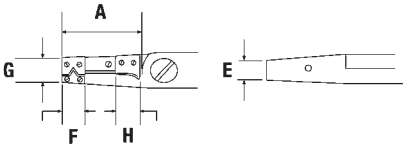
High precision tools for optical fibres

- Suitable for simple and precise stripping of optical fibres
- High grade tool steel
- Non-reflecting surface
- ESD-safe

Side stripping

120 mm/4.724 Inch
80 g

- **Suitable for all types of insulation, Teflon, Tefzel and optical fibres.**
- **Unlimited stripping length thanks to side stripping.**
- **Diameter is set by means of two screws.**
- **Replaceable cutting blade.**



A = jaw length
E = width of tips
F = depth of interchangeable blades
G = total height of both tips
H = length of cutting blade

Model	Dimensions in mm/Inch					
	A	E	F	G	H	Wire diameter
552S	21 .827	6.5 .256	6.7 .264	11 .433	9 .354	0.06 mm – 0.60 mm (AWG 42 – 24) .002 Inch – .023 Inch

Holding / gripping

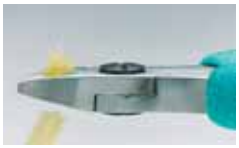
120 mm/4.724 Inch
20 g

- **Stainless-steel tweezers with synthetic tips (PPS).**
- **Non-reflecting surface.**
- **Non-magnetic.**

Model	
249SA	Precision tweezers with pointed synthetic tips (PPS) to protect optical fibres and serrated finger grips for secure handling. Volume resistance 16 Ω/cm. Heat-resistant up to 250°C (480°F). Resistant to acids and molten soldering tin. Water-repellent.

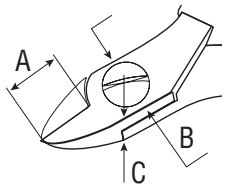
High precision tools for optical fibres

Cutting



115 mm/4.527 Inch
67 g

- **Side cutter, suitable for cutting Kevlar silks, Vectran-sheathed wires, optical fibres and small stainless wires.**



A = length of cutting edges
B = head width
C = head thickness

Model	Dimensions in mm/Inch		
	A	B	C
599FO	15 .590	10.5 .413	6.5 .256

115 mm/4.527 Inch
67 g

- **Side cutter, suitable for cutting Kevlar silks, Vectran-sheathed wires, optical fibres and small stainless wires.**

Model	Cut	Dimensions in mm/Inch		
		A	B	C
599TFO	Semi-flush	15 .590	10.5 .413	6.5 .256

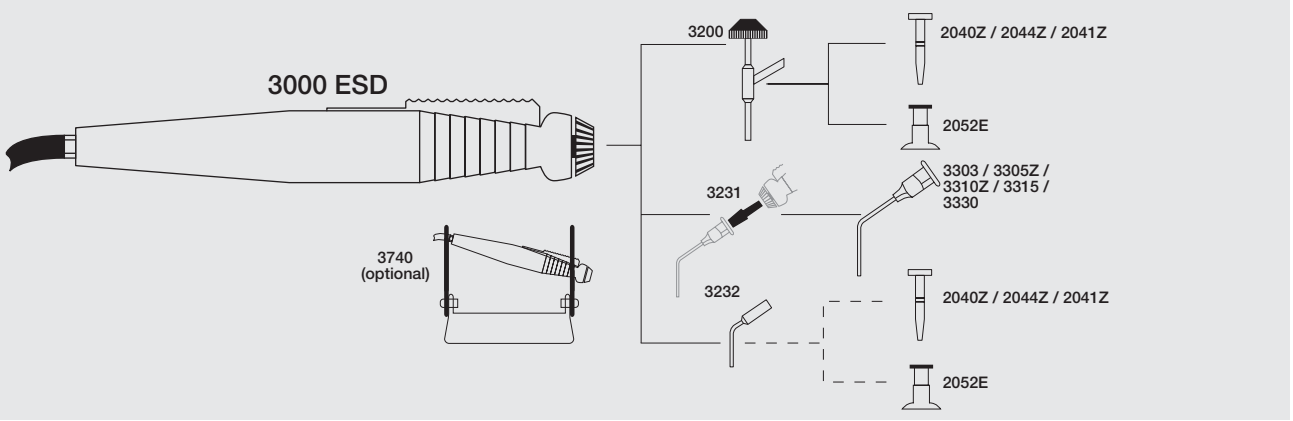
Vacuum micromanipulator

Vacuum micromanipulator

- Professional vacuum system for precise handling of tiny SMD components and silicon wafers
- Suitable for assembly and laboratory work

Advantages of the vacuum micromanipulator:

- Easy picking up of components or silicone wafers
- Immediate set-down/release of parts
- Full 360° rotating system
- Direct axial switch for vacuum
- Ergonomic shape reduces hand and wrist fatigue
- ESD-safe



Handle

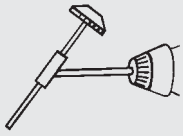
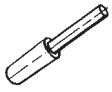
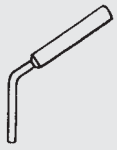
140 mm/5.512 Inch
35 g

- **Ergonomic handle with axial switch, serrated finger grip for secure handling.**

Model	Dimensions in mm/Inch	
3000ESD	Dia. 10 mm .394 Inch	Handle

Inserts for 3000ESD housing

Adapters

Model				Description
3200		25 mm .984 Inch	15 g	Stainless-steel adapter, rotatable through 360°, straight suction tip for direct working or as an adapter for suction tips or suction cups
3231		5 mm .197 Inch	5 g	Adapter fix, for working with Series 3300 suction tips
3232		15 mm total .590 Inch	3 g	Adapter fix, for direct working or as an adapter for suction tips 20442/20412 or suction cup 2052E

Suction tips, straight

- **Polyethylene suction tip.**
- **For working with 3200 or 3232 adapter.**

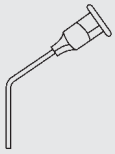
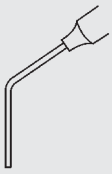
Model		Outside diameter	Inside diameter
2044Z		1.3 mm .051 Inch	0.9 mm .035 Inch
2041Z		2.0 mm .078 Inch	1.4 mm .015 Inch

Vacuum micromanipulator

Inserts for 3000ESD housing

Suction needles

- **Stainless-steel suction needle.**
- **Bent 45°.**
- **For working with 3200 or 3232 adapter.**

Model		Outside diameter	Inside diameter
3303		0.30 mm .011 Inch	0.16 mm .006 Inch
3305Z		0.50 mm .020 Inch	0.25 mm .019 Inch
3310Z		1.0 mm .039 Inch	0.65 mm .025 Inch

Suction cups

- **Silicone suction cup.**
- **For working with 3200 or 3232 adapter.**

Model		Diameter
2052E		4.5 mm .177 Inch

Inserts for 3000ESD housing

Accessories

Model	Description
3714Z	Diaphragm pump 230 V, 5 l/min, max. vacuum –250 mbar
3008ESD	Tube, flexible, 1.8 m/70.866 Inch, ESD-safe
3717	Filter for tube 3008ESD
3740	Table holder for 3000ESD (without accessories)

Vacuum kit

- **Complete accessories for easy pick-up and immediate set-down of components or silicon wafers.**
- **Set for laboratory work.**
- **In an ESD-safe plastic case.**

Model	Description	
3000KCESD	Vacuum kit	
	contents:	
	3000ESD	Handle
	3200	Adapter, rotatable through 360°
	3231	Adapter fix
	3305Z, 3310Z, 3315	Suction needles
	2052E	Suction cup, dia. 4.5 mm / .177 Inch
	KDS 260L	Suction cup, dia. 9.5 mm / .374 Inch
	3740	Table holder
	3714Z	Diaphragm pump 230 V
	3008ESD	Tube, flexible
	3717	Filter
	102ACA	SMD tweezers, 115 mm / 4.527 Inch, with bent tips and blunted edges. For vertical working with small components. Stainless steel, non-reflecting surface, non-magnetic.

Kits

Swiss high precision tools in a kit

- Large selection of tool kits with high-quality precision tools
- Optimum combination of suitable precision tools for many applications, e.g. in microelectronics, medicine or biology
- Precision tools in an ESD-safe plastic case with padded foam inlay


150 SAMF
150 SAMF

Kits

Swiss high precision tools in a kit

Erem Toolset Universal

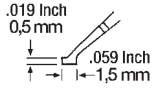
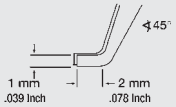
- **For use in electronics assembly, the watchmaking industry, medicine or dentistry.**
- **11-piece tool kit with monitored discharging ESD handles.**
- **Special tool steel, non-reflecting surface, resharpenable (cutter).**
- **High-quality precision tweezers, non-magnetic, for assembly work in electronics and light engineering.**
- **Precision screwdriver with hardened, durable tips, for precision working in confined areas.**
- **In an ESD-safe plastic case.**

Model	Description	
3600KU	Erem Toolset Universal	
contents:		
XP600	Precision-screwdriver set for electronics	4 regular screwdrivers: 1.5 x 60 mm/.059 x 2.362 Inch, 2.0 x 60 mm/ .078 x 2.362 Inch, 2.5 x 60 mm/.098 x 2.362 Inch, 3.0 x 60 mm/ .118 x 2.362 Inch, 2 Phillips screwdrivers No. 0 and No. 00
2412E	Series 2400 MagicSense side cutter, semi-flush, oval head	Robust head for universal use, hard wire 0.5 mm/.019 Inch, medium hardness 1.0 mm/.039 Inch, Cu 1.6 mm/.066 Inch
2442P	Series 2400 MagicSense flat nose pliers	With smooth jaws, precision-machined edges, e.g. for gripping flat workpieces
622NB	Tip cutter, flush, relieved, long, fine head	Miniature cutter for excellent access, flush, medium hardness 0.6 mm/.023 Inch, Cu 0.8 mm/.031 Inch
AASA	Precision tweezers	Pointed tips straight, special stainless steel, non-magnetic
2ASASL	Precision tweezers	With flat rounded tips, tip widths 2 mm/.078 Inch, special stainless steel, non-magnetic

Swiss high precision tools in a kit

Erem Toolset SMD

- For SMD assembly and repair applications.
- 6-piece tool kit with monitored discharging ESD handles.
- Special tool steel, non-reflecting surface, resharpenable (cutter).
- High-quality precision tweezers, non-magnetic, for SMD work.
- In an ESD-safe plastic case.

Model	Description		
3900KC	Erem Toolset SMD		
contents:			
51SA	Precision tweezers		With very pointed tips, angled 30°, relieved
102ACA	SMD precision tweezers		Tip width 0.5 mm/.019 Inch, angled 45°
103ACA	SMD precision tweezers		Tip width 1 mm/.039 Inch, angled 45°
150SAMB	SMD precision tweezers		With round tips, dia. 1.2 mm – 2.5 mm/.047 Inch – .098 Inch, angled 40°, serrated finger grips for gripping cylindrical components
150SAMF	SMD precision tweezers		With round, very narrow tips, dia. 1.2 mm – 2.5 mm/ .047 Inch – .098 Inch, serrated finger grips
670EP	Miniature tip cutter, flush, relieved head		For SMD and micro-package contacts up to 0.25 mm/.010 Inch

Kits

Swiss high precision tools in a kit

Erem 2400 MagicSense

- **For use in electronics, PCB assembly, wire and connection handling.**
- **3-piece tool kit.**
- **MagicSense moulded handle with soft touch for increased comfort and grip.**
- **Induction-hardened cutting edges in Rockwell hardness 64-65 HRc, high grade of hardness for exceptionally long life.**
- **High grade tool steel, non-reflecting surface, ESD-safe, resharpenable.**
- **In an ESD-safe plastic case.**

Model	Description	
2400KMS	Erem 2400 MagicSense	
contents:		
2412E	Series 2400 MagicSense side cutter, semi-flush, oval head	Robust head for universal use, hard wire 0.5 mm/.019 Inch, medium hardness 1.0 mm/.039 Inch, Cu 1.6 mm/.062 Inch
2482E	Series 2400 MagicSense tip cutter, flush, narrow head	Angled 45°, ideally suitable for working on printed-circuit boards, component connections, can be used in both 90° and 180° applications
2411P	Series 2400 MagicSense needle nose pliers	Smooth, rounded jaws

Swiss high precision tweezers in a kit

Erem Tweezers Prime Selection

- **High-quality precision tweezers for use in microelectronics, light engineering, laboratory work, biology and medicine.**
- **3-piece tweezer kit.**
- **Special stainless steel, non-magnetic, non-rusting, acid-proof.**
- **In an ESD-safe plastic case.**

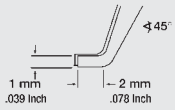
Model	Description	
3300TPS	Erem Tweezers Prime Selection	
contents:		
3SA	Precision tweezers	With pointed tips straight
2ASA	Precision tweezers	With flat rounded tips for gripping smaller components, tip width 2 mm/.078 Inch
7SA	Precision tweezers	Curved, relieved, with pointed tips

Kits

Swiss high precision tweezers in a kit

Erem SMD Tweezers – Universal

- **High-quality precision tweezers for SMD work with assorted shapes of chip, SOT, MELFs, mini MELFs, flatpacks.**
- **4-piece tweezer kit.**
- **Blunted edges prevent PCB damage.**
- **Special stainless steel, non-magnetic, non-rusting, acid-proof.**
- **In an ESD-safe plastic case.**

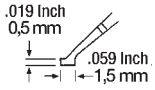
Model	Description		
3400TSMDU	Erem SMD Tweezers – Universal		
contents:			
103ACA	SMD precision tweezers		Angled 45°, tip width 0.5 mm/.019 Inch
150SAMF	SMD precision tweezers		With round tips, angled 40°, serrated finger grips for secure handling, for gripping cylindrical components
102ACAX	SMD precision tweezers		With angled pointed tips for vertical use, reverse clamping action for easy handling
7SA	Precision tweezers		Curved, relieved, with pointed tips

Erem®

Swiss high precision tweezers in a kit

Erem Premium Tweezers

- **High-quality precision tweezers for microelectronics, light engineering and SMD work.**
- **5-piece tweezer kit.**
- **Blunted edges prevent PCB damage.**
- **Special stainless steel, non-magnetic, non-rusting, acid-proof.**
- **In an ESD-safe plastic case.**

Model	Description		
3500TP	Erem Premium Tweezers		
contents:			
3SA	Precision tweezers		With pointed tips straight
2ASA	Precision tweezers		With flat rounded tips for gripping small components, tip width 2 mm/.078 Inch
7SA	Precision tweezers		Curved, relieved, with pointed tips
102ACA	SMD precision tweezers		Tip width 0.5 mm/.019 Inch, angled 45°
15AGW	Cutting tweezers		With narrow oblique head, for soft wires, hardened cutting edges for increased service life

Kits

Swiss high precision tools in a kit

Vacuum kit

- **Complete accessories for easy pick-up and immediate set-down of components or silicon wafers.**
- **Set for laboratory work.**
- **In an ESD-safe plastic case.**

Model	Description	
3000KCESD	Vacuum kit	
contents:		
3000ESD	Handle	Size: 400 x 320 x 150 mm/15.748 x 12.598 x 5.905 Inch, 2.2 kg, with axial switch, ergonomic, serrated finger grip
3200	Adapter, rotatable through 360°	Stainless-steel adapter, rotatable through 360°, straight suction tip for direct working or as an adapter for section tips or suction cups
3231	Adapter fix	For working with 3300 suction tips
3305Z, 3310Z, 3315	Suction needles, 45°, stainless steel	For working 3231 adapter
2052E	Suction cup, dia. 4.5 mm, silicone	For working with 3200 or 3232 adapter
KDS 260L	Suction cup, dia. 9.5 mm	
3740	Table holder	
3714Z	Diaphragm pump	230 V, 5 l/min, max. vacuum –250 mbar
3008ESD	Tube, flexible,	1.8 m, ESD-safe
3717		Filter for tube 3008ESD
102ACA	SMD tweezers	115 mm/4.527 Inch, with curved tips and blunted edges, for vertical working with small components, stainless steel, non-reflecting surface, non-magnetic

Index

Key

Explanation of symbols

Dimensions

 Length

 Weight

 Angle

Cut shape

 Semi-flush

 Flush

 Super full flush

Identification letters

E (Prefix)	Ergonomic handles
M	Brass, soft material for protecting against damage, no sparks
N	Nickel-silver, absolutely non-magnetic
PYR	Pyroplast coating
RU	Anti-stick coating
S	Stainless steel
SA, CA	Special stainless steel, non-magnetic, acid-proof
SL	Economy model
TA	Titanium, non-magnetic, very light, heat-resistant
Z	Nickel-coated
None	Hardened steel

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