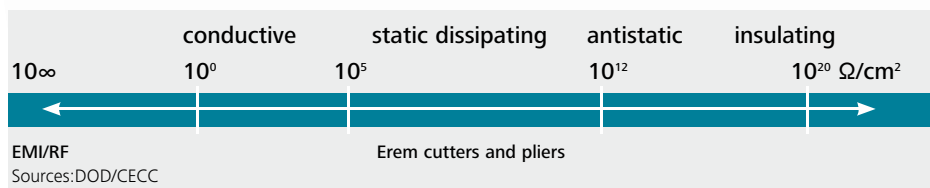


Side Cutters and Tip Cutters



ESD-safe

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



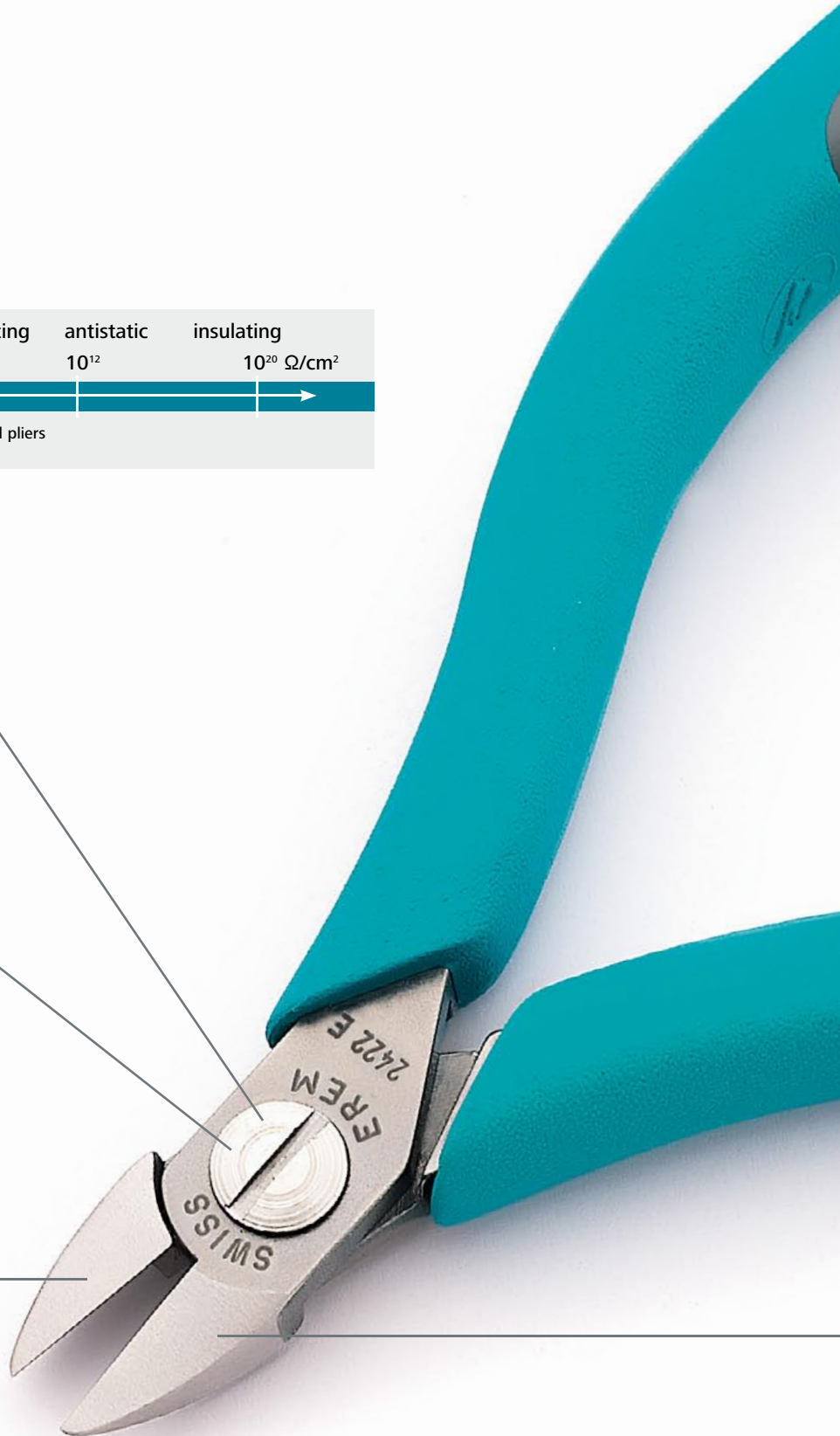
Internal patented Erem Magic Spring

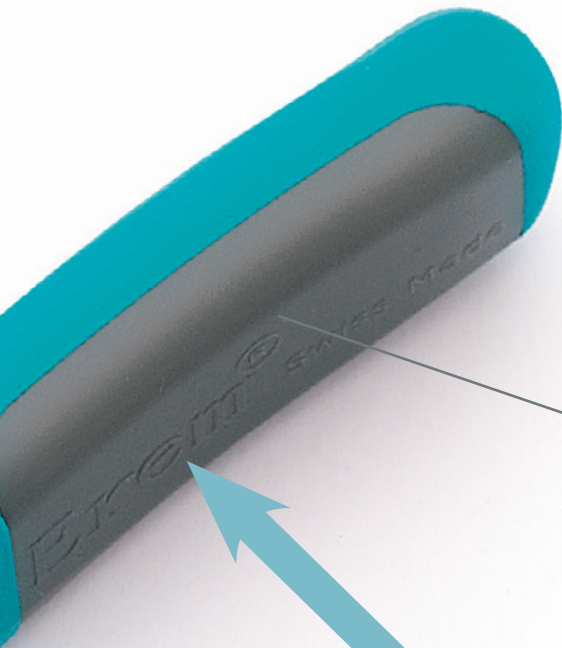
- Reduce costs by long life
- Constant spring force
- Guarantees more than 1 million operations

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



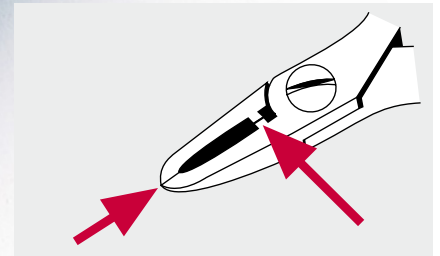
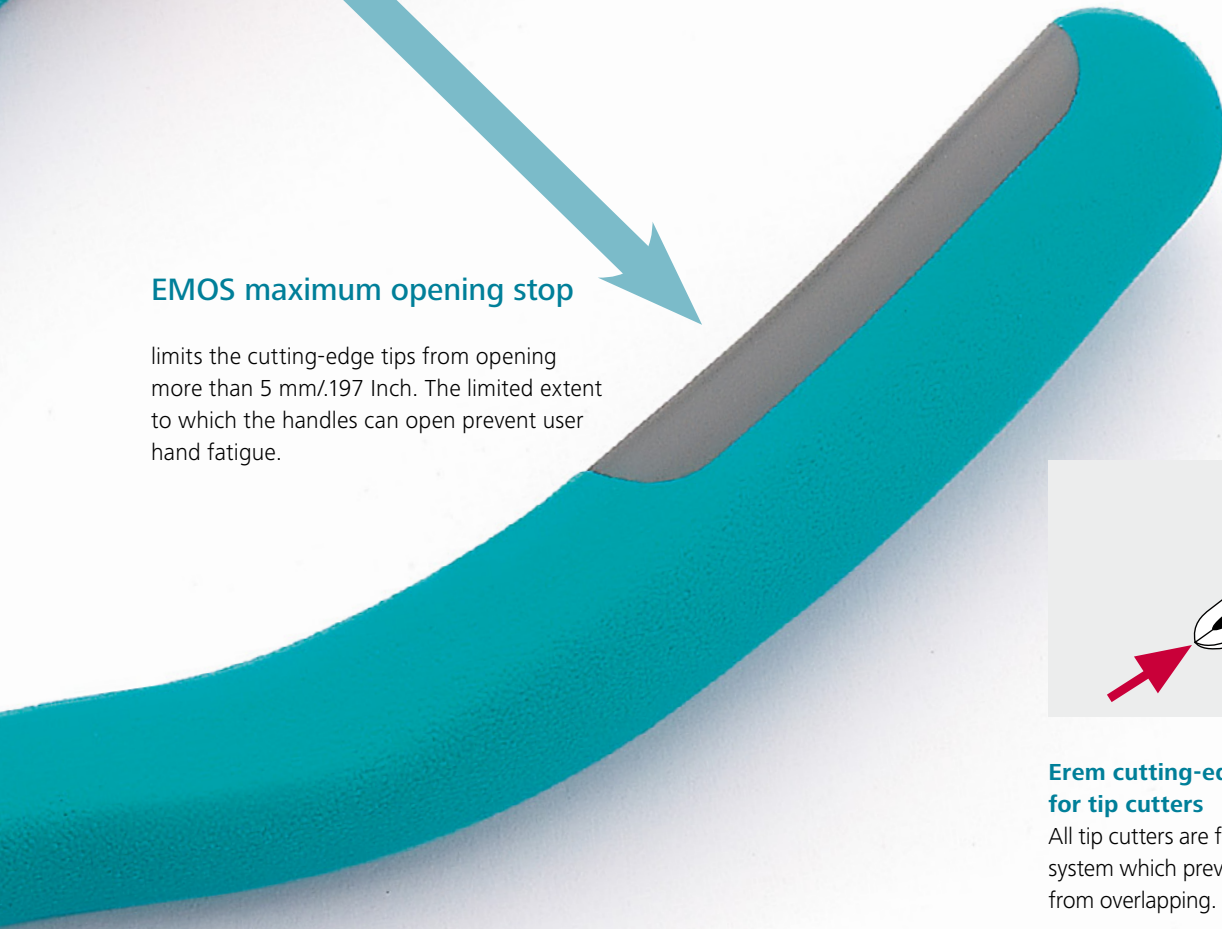


Ergonomically shaped handles

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 on most Series 500, 600 and 2400 cutters (oval head). Order suffix „W“, e.g. 595EW.

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

for exceptionally long life

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.

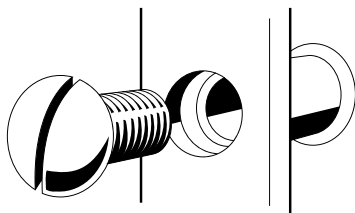
+ The bright tool steel gives additional strength and toughness to the tools pro-moting a long service life.



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 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.

+ 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.

+ 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 Magic-Sense).

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.

+ High level of user comfort thanks to special cutting edge.



Erem cut Super full flush: perfect flush cut

Standard cut „Super full flush“

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.

+ 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 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 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 warranty and availability of spares guarantee long service life.



ESD-safe

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

Choosing the right tool

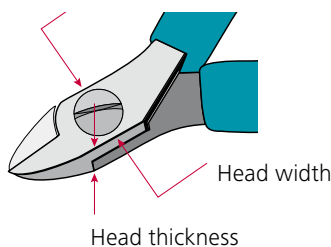
Selection criteria

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.

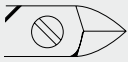






Size



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.

Classification of cutter heads

| Micro | Medium | | Maxi |
|---|---|--|---|
|  |  | |  |
| Series 600 | Series 2400 MagicSense | Series 500 | Series 800 |
|  |  |  |  |
| <p>Size Head width 9.0 mm/.354 Inch Head thickness 6.0 mm/.236 Inch</p> <p>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.</p> | <p>Head width 11.0 mm/.433 Inch Head thickness 6.0 mm/.236 Inch</p> <p>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.</p> | <p>Head width 11.0 mm/.433 Inch Head thickness 6.5 mm/.256 Inch</p> | <p>Head width 13.5 mm/.531 Inch Head thickness 7.5 mm/.295 Inch</p> <p>The strongest and most robust head size for general cutting applications in electronics, cuts large wire diameters.</p> |

Cut

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



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.



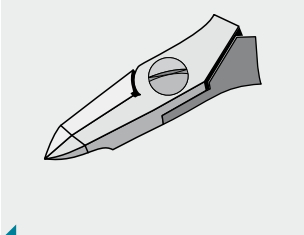
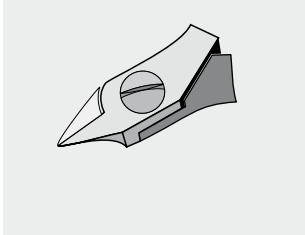
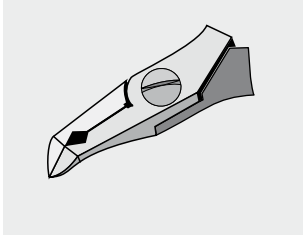
Erem cut Super
full flush: perfect
flush cut

Standard cut
„Super full flush“

Choosing the right tool

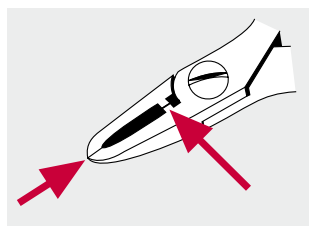
Head shape

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. 265) | 622NB, 632NCF, 676E, 776E (P. 264) | |
| Series 2400 MagicSense | 2470E (P. 269) | | 2475E, 2482E (P. 269) |
| Series 500 Medium | 570E, 573E** (P. 275) | 592E, 792E (P. 274) | 555E, 572E, 582E (P. 53) 575E, 593AE (P. 273) |
| Series 800 Maxi | | 884E (P. 278) | |

* Very short head

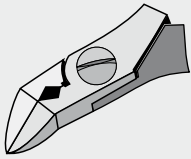
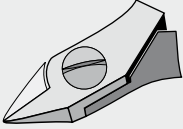
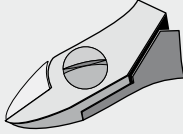
** Straight head for vertical working



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 |
|---|---|---|
|  |  |  |
| <p>The angled head provides for precise cuts at different working angles.</p> | <p>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.</p> | <p>This is the most widely used head shape, it is robust and size for size offers the highest cutting capacity.</p> |
| <p>622NA (P. 264)</p> | <p>612N, 622N, 632N (P. 263)</p> | |
| <p>2403E, 2404E (P. 48)</p> | <p>2477E (P. 268)</p> | <p>2412E, 2422E, 2432E (P. 267)</p> |
| <p>503E, 504E (P. 52)</p> | <p>577E, 595E (P. 272)</p> | <p>512E, 512N, 522N, 532N, 599E (P. 271)</p> |
| | <p>886E (P. 278)</p> | <p>812N, 822N, 896E (P. 277)</p> |












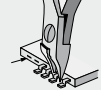

















High cutting capacity
Cutting over the full length of the cutter

Erem offers carbide cutters (see P. 39) for cutting high-hardness wire (piano wire).

Choosing the right tool

Wire quality

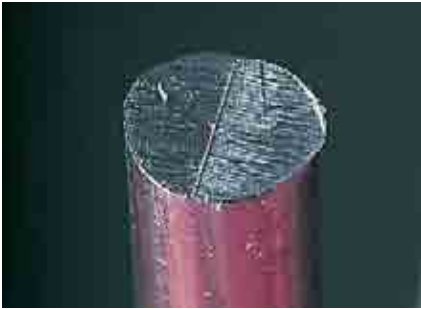
-  Piano wire, stainless spring steel wire, material 1.4310, tensile strength 2000–2400 MPa
-  Hard wire, stainless steel wire, material 1.4301, tensile strength 1800 MPa
-  Medium-hard wire, stainless steel wire, material 1.4301, tensile strength 800 MPa
-  Soft wire, copper, aluminium, tensile strength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

| Model | | Cut | Cutting capability | |
|---|---------------|--|---|------|
| | | | mm | Inch |
| Series 600 Micro | | | | |
| | | | 0,03 | .001 |
| | | | 0,1 | .003 |
| | | | 0,2 | .007 |
| | | | 0,3 | .011 |
| | | | 0,4 | .015 |
| | | | 0,5 | .019 |
| | | | 0,6 | .023 |
| | | | 0,7 | .027 |
| | | | 0,8 | .031 |
| | | | 0,9 | .035 |
| | | | 1,0 | .039 |
| | | | 1,1 | .043 |
| | | | 1,2 | .047 |
| | | | 1,3 | .051 |
| | | | 1,4 | .055 |
| | | | 1,5 | .059 |
| | | | 1,6 | .062 |
| | | | 1,7 | .066 |
| | | | 1,8 | .070 |
| | | | 1,9 | .074 |
| | | | 2,0 | .078 |
|  | 612N |  Semi-flush | [Bar chart showing capabilities for 612N] | |
| | 622N |  Flush | [Bar chart showing capabilities for 622N] | |
| | 632N |  Super full flush | [Bar chart showing capabilities for 632N] | |
|  | 622NA |  Flush | [Bar chart showing capabilities for 622NA] | |
|  | 622NB |  Flush | [Bar chart showing capabilities for 622NB] | |
| | 676E |  Flush | [Bar chart showing capabilities for 676E] | |
| | 776E |  Super full flush | [Bar chart showing capabilities for 776E] | |
| | 632NCF |  Super full flush | Only for soft materials: silicone, rubber, etc. | |
|  | 670E |  Flush | [Bar chart showing capabilities for 670E] | |
| | 670EP |  Flush | For micro-package contacts | |
| | 670EPF |  Flush | Only for micro pitches under 0.5 mm / .019 Inch | |
| Series 2400 MagicSense | | | | |
| | | | 0,03 | .001 |
| | | | 0,1 | .003 |
| | | | 0,2 | .007 |
| | | | 0,3 | .011 |
| | | | 0,4 | .015 |
| | | | 0,5 | .019 |
| | | | 0,6 | .023 |
| | | | 0,7 | .027 |
| | | | 0,8 | .031 |
| | | | 0,9 | .035 |
| | | | 1,0 | .039 |
| | | | 1,1 | .043 |
| | | | 1,2 | .047 |
| | | | 1,3 | .051 |
| | | | 1,4 | .055 |
| | | | 1,5 | .059 |
| | | | 1,6 | .062 |
| | | | 1,7 | .066 |
| | | | 1,8 | .070 |
| | | | 1,9 | .074 |
| | | | 2,0 | .078 |
|  | 2412E |  Semi-flush | [Bar chart showing capabilities for 2412E] | |
| | 2422E |  Flush | [Bar chart showing capabilities for 2422E] | |
| | 2432E |  Super full flush | [Bar chart showing capabilities for 2432E] | |
|  | 2477E |  Flush | [Bar chart showing capabilities for 2477E] | |
|  | 2403E | 30°  Flush | [Bar chart showing capabilities for 2403E] | |
| | 2404E | 30°  Flush | [Bar chart showing capabilities for 2404E] | |
|  | 2482E | 45°  Flush | [Bar chart showing capabilities for 2482E] | |
| | 2475E | 45°  Flush | [Bar chart showing capabilities for 2475E] | |
|  | 2470E |  Flush | [Bar chart showing capabilities for 2470E] | |



| Model | | Cut | Cutting capability | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|----------------|-----|--------------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|
| | | | 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 | .001 | .003 | .007 | .011 | .015 | .019 | .023 | .027 | .031 | .035 | .039 | .043 | .047 | .051 | .055 | .059 | .062 | .066 | .070 | .074 | .078 | | | |
| Series 500 Medium | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 512N | | Semi-flush | [Bar chart showing cutting capability for 512N] | | | | | | | | | | | | | | | | | | | | | | | |
| | 512E | | Semi-flush | [Bar chart showing cutting capability for 512E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 522N | | Flush | [Bar chart showing cutting capability for 522N] | | | | | | | | | | | | | | | | | | | | | | | |
| | 599E | | Flush | [Bar chart showing cutting capability for 599E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 532N | | Super full flush | [Bar chart showing cutting capability for 532N] | | | | | | | | | | | | | | | | | | | | | | | |
| | 595E | | Flush | [Bar chart showing cutting capability for 595E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 577E | | Flush | [Bar chart showing cutting capability for 577E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 503E | | Flush | [Bar chart showing cutting capability for 503E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 504AE | | Flush | [Bar chart showing cutting capability for 504AE] | | | | | | | | | | | | | | | | | | | | | | | |
| | 555E | 35° | Flush | [Bar chart showing cutting capability for 555E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 572E | 40° | Flush | [Bar chart showing cutting capability for 572E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 582E | 45° | Flush | [Bar chart showing cutting capability for 582E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 582EW | | Flush | [Bar chart showing cutting capability for 582EW] | | | | | | | | | | | | | | | | | | | | | | | |
| | 593AE | 30° | Flush | [Bar chart showing cutting capability for 593AE] | | | | | | | | | | | | | | | | | | | | | | | |
| | 575E | 45° | Flush | [Bar chart showing cutting capability for 575E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 592E | | Flush | [Bar chart showing cutting capability for 592E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 792E | | Super full flush | [Bar chart showing cutting capability for 792E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 570E | | Flush | [Bar chart showing cutting capability for 570E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 573E | | Flush | For vertical cutting | | | | | | | | | | | | | | | | | | | | | | | |
| Series 800 Maxi | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 812N | | Semi-flush | [Bar chart showing cutting capability for 812N] | | | | | | | | | | | | | | | | | | | | | | | |
| | 896E | | Semi-flush | [Bar chart showing cutting capability for 896E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 822N | | Flush | [Bar chart showing cutting capability for 822N] | | | | | | | | | | | | | | | | | | | | | | | |
| | 886E | | Flush | [Bar chart showing cutting capability for 886E] | | | | | | | | | | | | | | | | | | | | | | | |
| | 884E | | Flush | [Bar chart showing cutting capability for 884E] | | | | | | | | | | | | | | | | | | | | | | | |
| Tungsten-carbide cutters | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 622TX | | Flush | [Bar chart showing cutting capability for 622TX] | | | | | | | | | | | | | | | | | | | | | | | |
| | 599T | | Semi-flush | [Bar chart showing cutting capability for 599T] | | | | | | | | | | | | | | | | | | | | | | | |
| | 599TF | | Flush | [Bar chart showing cutting capability for 599TF] | | | | | | | | | | | | | | | | | | | | | | | |
| | 595T | | Semi-flush | [Bar chart showing cutting capability for 595T] | | | | | | | | | | | | | | | | | | | | | | | |
| | 595TF | | Flush | [Bar chart showing cutting capability for 595TF] | | | | | | | | | | | | | | | | | | | | | | | |
| | 2476TX1 | | Flush | [Bar chart showing cutting capability for 2476TX1] | | | | | | | | | | | | | | | | | | | | | | | |
| | 576TX1 | | Flush | [Bar chart showing cutting capability for 576TX1] | | | | | | | | | | | | | | | | | | | | | | | |
| | 2476 TX | | Flush | [Bar chart showing cutting capability for 2476 TX] | | | | | | | | | | | | | | | | | | | | | | | |
| | 576TX | | Flush | [Bar chart showing cutting capability for 576TX] | | | | | | | | | | | | | | | | | | | | | | | |
| | 503ET | 30° | Semi-flush | [Bar chart showing cutting capability for 503ET] | | | | | | | | | | | | | | | | | | | | | | | |
| | 503ETF | 30° | Semi-flush | [Bar chart showing cutting capability for 503ETF] | | | | | | | | | | | | | | | | | | | | | | | |

Side cutters for use in medical device manufacturing



The 632NCF miniature side cutter is ideally suitable for soft material such as silicone tubes in medical device 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.

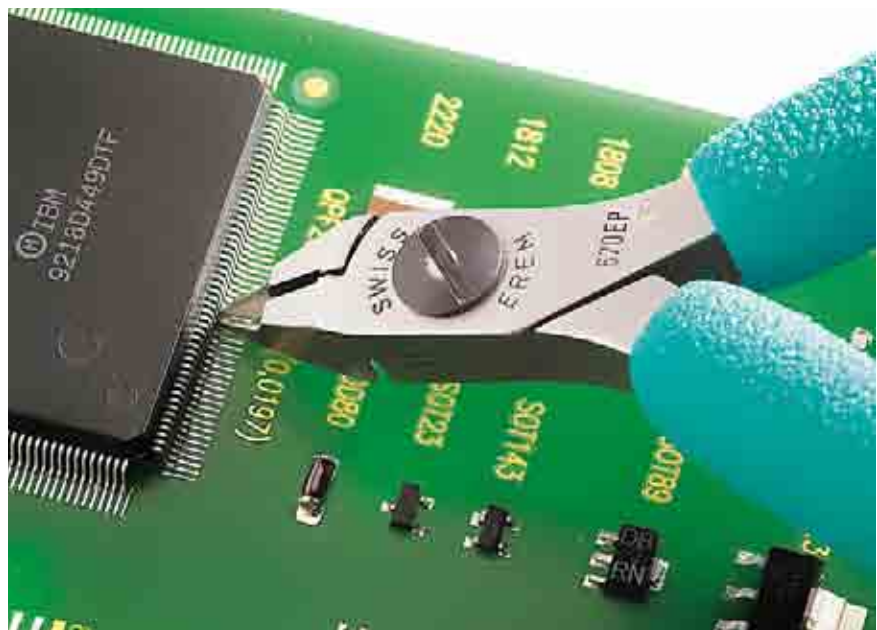
The cutting edges of the 632NCF side cutter are precision-ground to an extremely high level. This enables the cutter to deliver a razor-like full-flush cut.

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 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

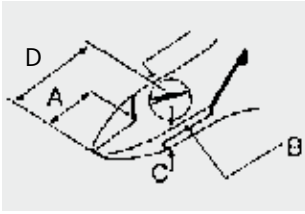
Series 600 Micro

- 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





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/1.69 oz.

- This is the most widely used head shape.
- Fits for all cutting applications where easy access is given
- 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 |

Side Cutters and Tip Cutters


Series 600 Micro

Side cutter – tapered head



 **110 mm/4.331 Inch**
 **48 g/1.69 oz**

- 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 | 9 | 6 | 15 | 0.7 | 1.0 |
| | | .354 | .354 | .236 | .590 | .027 | .039 |

Tip cutter – pointed relieved head



 **110 mm/4.331 Inch**
 **48 g/1.69 oz.**

- 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 | 9 | 6 | 15 | 0.6 | 0.8 |
| | | .354 | .354 | .236 | .590 | .023 | .031 |
| 676E |  Flush | 9 | 9 | 6 | 15 | Model same as 622NB, but with short, robust head | |
| 776E |  Super full flush | 9 | 9 | 6 | 15 | 0.6 | 0.8 |
| | | .354 | .354 | .236 | .590 | .023 | .031 |
| 632NCF |  Super full flush | 9 | 9 | 6 | 15 | For soft material such as small silicone tubes, miniature rubber seals or for cutting soft synthetic parts | |
| | | .354 | .354 | .236 | .590 | | |

Series 600 Micro






Tip cutter – straight short relieved head



 **110 mm/4.331 Inch**
 **48 g/1.69 oz.**

■ 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 |
| 670EPF* |  Flush | 9 .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) | |

*Not available in North America

Side Cutters and Tip Cutters

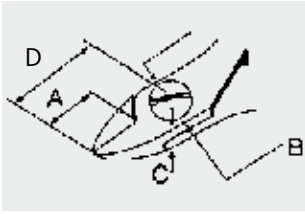
Series 2400 MagicSense

- 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





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/2.47 oz.

- This is the most widely used head shape.
- Fits for all cutting applications where easy access is given
- 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/2.47 oz.**

- 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 | 11 | 6 | 19 | 1.0 | 1.3 |
| | | .472 | .472 | .433 | .236 | .039 | .051 |

Tip cutter – angled wide head



 **127 mm/5.118 Inch**
 **70 g/2.47 oz.**
 **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 | 11 | 6 | 19 | 1.0 | 1.6 |
| | | .354 | .433 | .236 | .748 | .039 | .062 |
| | | | | | | | Wide, robust head, fine cut |
| 2404E |  Flush | 9 | 11 | 6 | 20 | 0.8 | 1.3 |
| | | .354 | .433 | .236 | .787 | .031 | .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/2.54 oz.
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 | 11 | 6 | 26 | 0.6 | 1.2 |
| | | .236 | .433 | .236 | 1.024 | .023 | .047 |
| Suitable for working on printed-circuit boards, component connections, can be used in both 90° and 180° applications | | | | | | | |
| 2475E | Flush | 4 | 11 | 6 | 22 | 0.4 | 0.6 |
| | | .157 | .433 | .236 | .866 | .015 | .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/2.54 oz.

■ 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 | 11 | 6 | 29 | 0.4 | 0.6 |
| | | .157 | .433 | .236 | 1.142 | .015 | .023 |



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

Side Cutters and Tip Cutters

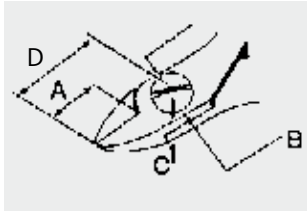
Series 500 Medium

- 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





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/2.36 oz.

- This is the most widely used head shape.
- Fits for all cutting applications where easy access is given
- 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 |
| 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/2.36 oz.**

- 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 | 11 | 6.5 | 19 | 1.0 | 1.3 |
| | | .472 | .433 | .256 | .748 | .039 | .051 |
| | | | | | | Tapered head | |
| 577E |  Flush | 10 | 11 | 6.5 | 17 | 1.0 | 1.3 |
| | | .472 | .433 | .256 | .669 | .039 | .051 |
| | | | | | | Tapered, short head | |

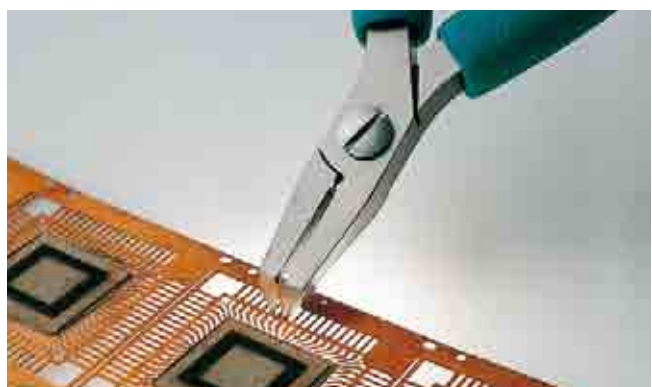
Tip cutter – angled wide head



 **110 mm/4.331 Inch**
 **67 g/2.36 oz.**
 **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 |
| 503E |  Flush | 9 | 11 | 6.5 | 19 | 1.0 | 1.6 |
| | | .354 | .433 | .256 | .748 | .039 | .062 |
| | | | | | | Wide, robust head | |
| 504AE |  Flush | 9 | 11 | 6.5 | 19 | 0.8 | 1.3 |
| | | .354 | .433 | .256 | .748 | .031 | .051 |
| | | | | | | Model same as 503E, but with pointed rounded head | |









Series 500 Medium

Tip cutter – angled narrow head






 **120 mm/4.724 Inch**
 **68 g/2.40 oz.**
 **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 | 11 | 6.5 | 24 | 0.6 | 1.3 |
| | | .236 | .433 | .256 | .945 | .023 | .051 |






 **115 mm/4.527 Inch**
 **68 g/2.40 oz.**
 **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 | 11 | 6.5 | 21 | 0.6 | 1.3 |
| | | .236 | .433 | .256 | .827 | .023 | .051 |






 **115 mm/4.527 Inch**
 **68 g/2.40 oz.**
 **40°**


- 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 | 11 | 6.5 | 26 | 0.6 | 1.3 |
| | | .236 | .433 | .256 | 1.024 | .023 | .051 |



 **115 mm/4.527 Inch**
 **67 g/2.36 oz.**
 **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 | 11 | 6.5 | 26 | 0.6 | 1.3 |
| | | .236 | .433 | .256 | 1.024 | .023 | .051 |

Side Cutters and Tip Cutters


Series 500 Medium

Tip cutter – angled narrow head






 **115 mm/4.527 Inch**
 **68 g/2.40 oz.**
 **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 | 11 | 6.5 | 26 | 0.4 | 1.0 |
| | | .157 | .433 | .256 | 1.024 | .015 | .039 |



 **110 mm/4.331 Inch**
 **67 g/2.36 oz.**
 **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 | D | Medium hardness | Copper wire |
| 575E |  Flush | 4 | 11 | 6.5 | 22 | 0.2 | 0.6 |
| | | .157 | .433 | .256 | .866 | .007 | .023 |

Tip cutter – pointed relieved head



 **115 mm/4.527 Inch**
 **67 g/2.36 oz.**

- 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 | 11 | 6.5 | 19 | 0.4 | 0.8 |
| | | .472 | .433 | .256 | .748 | .015 | .031 |
| 792E |  Super full flush | 12 | 11 | 6.5 | 19 | 0.4 | 0.6 |
| | | .472 | .433 | .256 | .748 | .015 | .023 |

Series 500 Medium




Tip cutter – straight long relieved head



 **120 mm/4.724 Inch**
 **67 g/2.36 oz.**


- 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 | 11 | 6.5 | 29 | 0.6 | 1.2 |
| | | .157 | .433 | .256 | 1.142 | .023 | .047 |
| For cutting at extreme tips | | | | | | | |

Tip cutter – straight head for vertical use



 **120 mm/4.724 Inch**
 **67 g/2.36 oz.**

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

Side Cutters and Tip Cutters

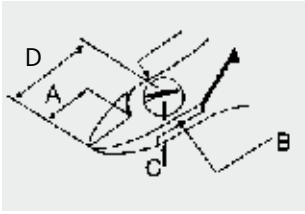
Series 800 Maxi

- 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 /2.36 oz.

- This is the most widely used head shape.
- Fits for all cutting applications where easy access is given
- 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 | ø 0,6 .023 | ø 1,2 .047 | ø 1,8 .070 |
| 822N | Flush | 15 .590 | 13.5 .531 | 7.5 .295 | 21 .827 | – | 1.2 .047 | 1.8 .070 |

Side Cutters and Tip Cutters


Series 800 Maxi

Side cutter – tapered head



 **120 mm/4.724 Inch**
 **83 g/2.93 oz.**

- 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 |
| 886E |  Flush | 15 | 13.5 | 7.5 | 21 | 1.0 | 1.8 |
| | | .590 | .531 | .295 | .827 | .039 | .070 |

Tip cutter – pointed relieved head



 **120 mm/4.724 Inch**
 **81 g/2.86 oz.**

- 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 | 13.5 | 7.5 | 21 | 0.8 | 1.6 |
| | | .590 | .531 | .295 | .827 | .031 | .062 |



Series 800 Maxi



Side Cutters and Tip Cutters

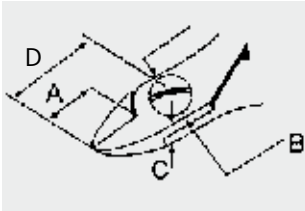
Tungsten-carbide cutters

- 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/2.36 oz.

- This is the most widely used head shape.
- Fits for all cutting applications where easy access is given
- 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 | 9 | 6 | 15 | 0.2 | 0.4 | 0.6 | 1.2 |
| | | .315 | .354 | .236 | .590 | .007 | .015 | .023 | .047 |
| Miniature cutter | | | | | | | | | |
| 599T | Semi-flush | 12 | 11 | 6.5 | 19 | 0.6 | 0.8 | 1.0 | 1.5 |
| | | .472 | .433 | .256 | .748 | .023 | .031 | .039 | .059 |
| 599TF | Flush | 12 | 11 | 6.5 | 19 | 0.6 | 0.8 | 1.0 | 1.5 |
| | | .472 | .433 | .256 | .748 | .023 | .031 | .039 | .059 |



Side Cutters and Tip Cutters

Tungsten-carbide cutters







Side cutter – tapered head



 **115 mm/4.527 Inch**
 **67 g/2.36 oz.**

- 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 | 11 | 6.5 | 19 | 0.4 | 0.6 | 0.8 | 1.5 |
| | | .472 | .433 | .256 | .748 | .015 | .023 | .031 | .059 |
| 595TF |  Flush | 12 | 11 | 6.5 | 19 | 0.4 | 0.6 | 0.8 | 1.5 |
| | | .472 | .433 | .256 | .748 | .015 | .023 | .031 | .059 |
| 2476TX1 |  Flush | 11 | 11 | 6 | 19 | 0.3 | 0.4 | 0.5 | 1.0 |
| | | .433 | .433 | .236 | .748 | .011 | .015 | .019 | .039 |
| Series 2400 MagicSense model (Length: 130 mm / 5.118 Inch) | | | | | | | | | |
| 576TX1 |  Flush | 11 | 11 | 6.5 | 19 | 0.3 | 0.4 | 0.5 | 1.0 |
| | | .433 | .433 | .256 | .748 | .011 | .015 | .019 | .039 |





Tungsten-carbide cutters

Tip cutter – pointed relieved head






 **115 mm/4.527 Inch**
 **67 g/2.36 oz.**

- 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 | 11 | 6 | 19 | 0.1 | 0.2 | 0.3 | 1.0 |
| | | .433 | .433 | .236 | .748 | .003 | .007 | .011 | .039 |
| Series 2400 MagicSense model | | | | | | | | | |
| 576TX |  Flush | 11 | 11 | 6.5 | 19 | 0.1 | 0.2 | 0.3 | 1.0 |
| | | .433 | .433 | .256 | .748 | .003 | .007 | .011 | .039 |

Tip cutter – angled wide head



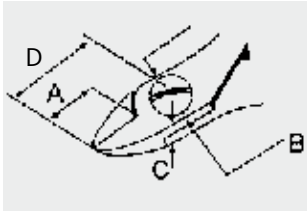
 **110 mm/4.331 Inch**
 **67 g/2.36 oz.**
 **30°**

- 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 | 11 | 6.5 | 19 | 0.4 | 0.6 | 0.8 | 1.2 |
| | | .354 | .433 | .256 | .748 | .015 | .023 | .031 | .047 |
| 503ETF |  Flush | 9 | 11 | 6.5 | 20 | 0.4 | 0.6 | 0.8 | 1.2 |
| | | .354 | .433 | .256 | .787 | .015 | .023 | .031 | .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/3.53 oz.

■ Side cutter with compound action.

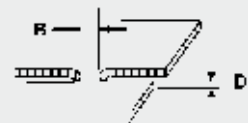
| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter Copper wire | |
|--------------|----------------|-----------------------|--------------|-------------|---|---|
| | | A | B | C | Max. D | Max. B |
| 147A | Semi-flush | 12 .472 | 10.5 .413 | 7.5 .295 | 1.8 .070 | 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/2.79 oz.

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

| Model | Cut | Max. cutting capability in mm/Inch | |
|-----------------|-----------|------------------------------------|-------------|
| | | Max. D | Max. B |
| 1884EPCM | Flush | 1.5 .059 | 2.0 .078 |



*Not available in North America




Special applications




 **110 mm/4.331 Inch**
 **48 g/1.69 oz.**

- 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/2.36 oz.**


- 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/2.36 oz.**

- 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

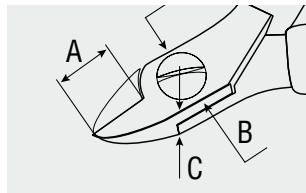


 **130 mm/5.118 Inch**
 **130 g/4.59 oz.**

- Pneumatic-cutter housing

| Model | Dimensions in mm/Inch Diameter | |
|-----------------|--------------------------------|--|
| | D | |
| 1500 BSF | 28 | 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/1.16 oz.**

- 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 Copper wire |
|--------------|---|-----------------------|--------------|-------------|--|
| | | A | B | C | |
| 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/1.16 oz.**

- 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 Copper wire |
|---------------|--|-----------------------|--------------|-------------|---|
| | | A | B | C | |
| 1522NA |  Flush | 9 .354 | 10.5 .413 | 6.5 .256 | 1.4 .055 |

Side cutter – pointed relieved head




 **32 g/1.12 oz.**

- 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 Copper wire |
|---------------|--|-----------------------|--------------|-------------|---|
| | | A | B | C | |
| 1522NB |  Flush | 9 .354 | 10.5 .413 | 6.5 .256 | 1.2 .047 |

Tip cutter – angled head



 **38 g/1.34 oz.**
 **30°**

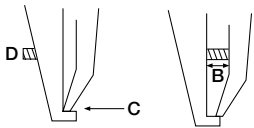
- The angled head provides for precise cuts at different working angles.

| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter Copper wire |
|--------------|--|-----------------------|--------------|-------------|---|
| | | A | B | C | |
| 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

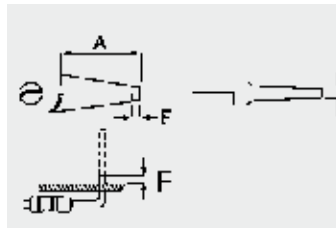


The protective stop screw D improves the performance of Erem distance cutters:

- 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/2.36 oz.**

- 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 Inc |
| 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

*Not available in North America




**Order as 539E060 in North America






Distance cutters

| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter | |
|----------------|--|-----------------------|-----------|-------------|---|--|
| | | A | E | F | 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 Inc |
| 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/2.36 oz.**
 **45°**

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

| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter | |
|----------------|--|-----------------------|-----------|-------------|---|---|
| | | A | E | F | 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/2.47 oz.**

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




| Model | Cut | Dimensions in mm/Inch | | | Max. cutting capability in mm/Inch Diameter | |
|-----------------|--|-----------------------|-------------|------------------------|---|--|
| | | A | E | V | 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/2.47 oz.**

- 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 | | | Max. cutting capability in mm/Inch Diameter | |
|--------------|--|-----------------------|-------------|-------------------|---|---|
| | | A | E | V | 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 |

*Not available in North America