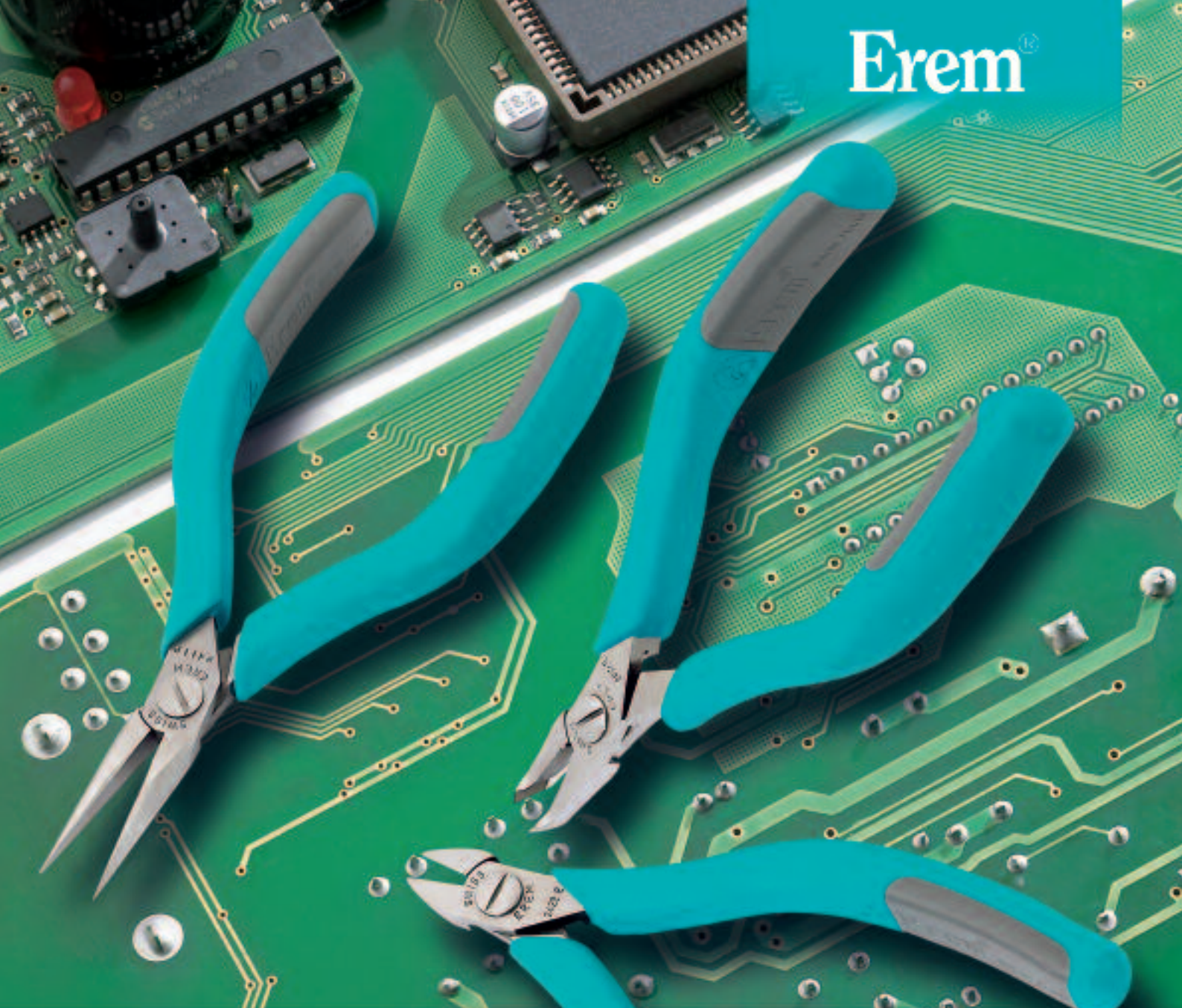


Erem®



## 2400 MagicSense

 Swiss Made

 **COOPER** Hand Tools

# 2400 MagicSense

The Erem® 2400 MagicSense series will impress you with its:

**Erem Technology**

**Erem Cut**

**Erem MagicSense**

**Erem Service**

The quality and performance of Erem precision tools are the result of more than 30 years of development and know-how. Market developments inspire Erem to create forward looking, innovative products for a variety of applications in electronics, aviation, medical device manufacturing or telecommunications.

Our global customers make use of our expertise in the field of electronic cutters and pliers.

The electronic cutters of the 2400 MagicSense series are the result of constant development in accord with our customers' requirements. The result is high quality craftsmanship, precision cutting and operator comfort, the optimum combination needed to meet the highest manufacturing requirements.

## Internal patented Erem Magic Spring

- constant spring force
- more than 1 million cutting cycles guaranteed

## High Precision screw joint

- smooth cutting action
- wobble free operation with no blade overlap

**Erem Cut: Special cutting blade for achieving the desired cutting shape**



Erem®

 **Swiss Made**

**MagicSense shaped handle  
with Softtouch feature**

for high comfort, better grip and added safety

**Erem® Maximum  
Opening Stop**

limits blade opening to 5 mm maximum.  
Reduces operator fatigue by preventing  
excessive hand spread.



**ESD safe**

**Induction hardened blades in  
Rockwell hardness 63–65 HRC**

for exceptionally long life





## Erem Technology

### The steel

Erem electronic cutters are made from bright steel. They are not drop forged. The special tool steel is made using a unique Swiss processing technique.

### Your advantage:

The high grade tool steel gives the tools additional strength and toughness.

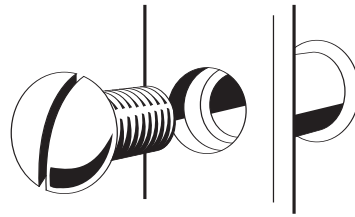


### The internal patented Erem Magic Spring

The Erem Magic Spring is unique, it is integral to the cutter head and provides a constant opening and closing force and is guaranteed for more than 1 million operations.

### Your advantage:

The Magic Spring is reliable, makes the cutter easy to operate and reduces operator fatigue.



### Precision screw joint

The precision screw joint ensures a smooth cutting action, without play or overlapping of the jaws and prevents the cutter head sticking when opening.

### Your advantage:

Precise cutting, reduced shock to components.

### EMOS Maximum Opening Stop

The unique EMOS Erem **M**aximum **O**pening **S**top system limits the blade tips from opening more than 5 mm. Reduces operator fatigue by preventing excessive hand spread.

### Your advantage:

Comfortable and fatigue free working.

## Erem Cut

### Cut options

There are 3 cut options:



#### 1. Semi flush

For general cutting applications in which the shape of the cut is not important. Will cut both hard and soft wires equally well. Leaves a wedge shape on the cut leg of the component.



#### 2. Flush

Will cut both hard and soft wires. The blades are ground to shallower angle than those of semi flush cutters, this means that the cutting effort is reduced and the component is subjected to less shock. A much smaller wedge shape is left on the leg of the component. Used for general purpose cutting, or where greater precision is required.



#### 3. Super full flush

Erem super full flush cutters are precision ground and sharpened. This cut provides absolutely flush wire ends. No rework is needed. Less effort is required and the components are subjected to less shock load. This type of cut is suitable **only** for soft wires in microelectronics, aerospace and medical engineering applications.



Erem Cut super full flush:  
perfect flush cut

Regular "Super full  
flush" cut



## MagicSense

### Blade

The Erem 2400 MagicSense series cutters are noted by their ease of use. This is because of the design of the blades, which can cut over the full length of the blade from heel to tip. This promotes operator comfort and reduces operator fatigue.

### Rockwell Hardness

The Erem 2400 MagicSense series blades are hardened to Rockwell 63–65 by an induction heating process. This level of hardening plus the high grade tool steel used in the manufacture of the tools and continuous process control ensure that Erem tools have an exceptionally long life.

### MagicSense comfort

The handles of the Erem 2400 MagicSense are designed for maximum operator comfort and safety. The grip material has a soft touch but firm feel and has an anti-slip surface that is resistant to water, perspiration, oil and chemicals to ensure a secure hold. The ergonomic shape of the handle spreads the grip force over the palm of the hand and automatically positions the thumb and fingers in the most comfortable position. Worn handles can be replaced as necessary.

## Erem Service

### Sharpening

Erem offers a sharpening service on all cutters except those with a carbide insert blades, most cutters can be sharpened up to 3 times.

### Your advantage:

You receive back a fully reconditioned tool, reducing your tool costs.

### Replacement parts

Erem cutters and pliers and their component parts come with a warranty against manufacturing defects. The Magic Springs and precision joint components are available as spare parts.



**ESD safe**



# Side cutters and pliers

## Side cutter, oval head



**Semi flush**



2412E

Side cutter, oval head, semi flush cut  
Side cutter with robust head for general use. High cutting capacity.

| Dimensions in mm |    |    |   |      | Cutting capacity in mm |     |
|------------------|----|----|---|------|------------------------|-----|
| L                | A  | B  | C | D    | CU                     |     |
| 130              | 12 | 11 | 6 | 19.2 | max.                   | 1.6 |

**Flush**



2422E

Side cutter, oval head, flush cut  
Side cutter with robust head for general use. For soft and thin wires of medium hardness.

| Dimensions in mm |    |    |   |      | Cutting capacity in mm |     |
|------------------|----|----|---|------|------------------------|-----|
| L                | A  | B  | C | D    | CU                     |     |
| 130              | 12 | 11 | 6 | 19.2 | max.                   | 1.6 |

**Super full flush**



2432E

Side cutter narrow, oval head, super full flush cut  
Suitable only for soft wires. With razor sharp cut.

| Dimensions in mm |    |    |   |      | Cutting capacity in mm |     |
|------------------|----|----|---|------|------------------------|-----|
| L                | A  | B  | C | D    | CU                     |     |
| 130              | 12 | 11 | 6 | 19.2 | max.                   | 1.3 |

## Side cutter, tapered head



**Flush**

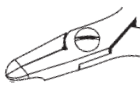


2477E

Side cutter, tapered head, flush cut  
For work in confined spaces which are not easily accessible.

| Dimensions in mm |   |    |   |      | Cutting capacity in mm |     |
|------------------|---|----|---|------|------------------------|-----|
| L                | A | B  | C | D    | CU                     |     |
| 127              | 9 | 11 | 6 | 16.2 | max.                   | 1.3 |

## Tip cutter with straight head



**Flush**



2470E

Tip cutter straight, tapered head, flush cut  
For horizontal cutting and easier access to tight spots.  
For small wires only.

| Dimensions in mm |     |    |   |      | Cutting capacity in mm |     |
|------------------|-----|----|---|------|------------------------|-----|
| L                | A   | B  | C | D    | CU                     |     |
| 140              | 4.5 | 11 | 6 | 29.3 | max.                   | 0.6 |

## Tip cutter, 30° angled head



**Flush**



2403E

Tip cutter, 30° angled head, flush cut  
Fairly wide and robust head, fine cut.  
Tip cutter for general cutting applications.

| Dimensions in mm |     |    |   |      | Cutting capacity in mm |     |
|------------------|-----|----|---|------|------------------------|-----|
| L                | A   | B  | C | D    | CU                     |     |
| 130              | 9.3 | 11 | 6 | 19.6 | max.                   | 1.3 |

**Flush**



2404E

Tip cutter, 30° angled head, flush cut  
same as 2403E, but with fine rounded head at the front.

| Dimensions in mm |     |    |   |      | Cutting capacity in mm |     |
|------------------|-----|----|---|------|------------------------|-----|
| L                | A   | B  | C | D    | CU                     |     |
| 130              | 9.3 | 11 | 6 | 19.8 | max.                   | 1.2 |

## Tip cutter, 45° angled head



**2482E** Tip cutter, 45° angled head, flush cut  
Medium size. Ideal for cutting DIL components etc. on PCBs.  
Usable at both 90° and 180° angles.

| Dimensions in mm |     |    |   |      | Cutting capacity in mm |  |
|------------------|-----|----|---|------|------------------------|--|
| L                | A   | B  | C | D    | CU                     |  |
| 135              | 6.2 | 11 | 6 | 26.2 | max. 1.0               |  |



**2475E** Tip cutter, 45° angled head, flush cut  
Tip cutter, narrow. For fine cutting work on hybrid circuits of miniature components.  
For working in confined spaces which are not easily accessible.

| Dimensions in mm |   |    |   |      | Cutting capacity in mm |  |
|------------------|---|----|---|------|------------------------|--|
| L                | A | B  | C | D    | CU                     |  |
| 135              | 4 | 11 | 6 | 22.4 | max. 0.6               |  |

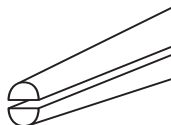
## Side cutter, tapered head



**2476TX1** Side cutter, tapered head, tungsten hard metal cutting edges, flush cut  
Narrow head for perfect work in confined spaces. High precision side cutter ideal for stainless wires, catheters, coils, etc. Suitable for medical applications.

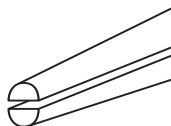
| Dimensions in mm |    |    |   |      | Cutting capacity in mm |  |
|------------------|----|----|---|------|------------------------|--|
| L                | A  | B  | C | D    | piano wire             |  |
| 130              | 11 | 11 | 6 | 18.5 | < 0.3                  |  |

## Pliers



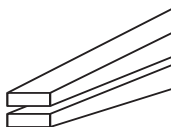
**2411P** Needle nose pliers with very precise, finely rounded jaws.

| Dimensions in mm |      |    |   |      |   |     |
|------------------|------|----|---|------|---|-----|
| L                | A    | B  | C | D    | E | G   |
| 146              | 33.5 | 11 | 6 | 40.5 | 1 | 1.2 |



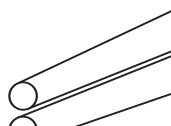
**2411PD** Needle nose pliers, same as 2411P but inside serrated for secure grip.

| Dimensions in mm |      |    |   |      |   |     |
|------------------|------|----|---|------|---|-----|
| L                | A    | B  | C | D    | E | G   |
| 146              | 33.5 | 11 | 6 | 40.5 | 1 | 1.2 |



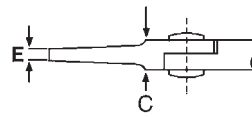
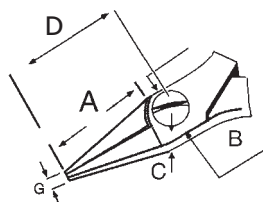
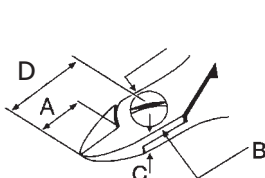
**2442P** Flat nose pliers with precise smooth jaws.  
Precision machined edges for gripping flat workpieces.

| Dimensions in mm |      |    |   |      |     |     |
|------------------|------|----|---|------|-----|-----|
| L                | A    | B  | C | D    | E   | G   |
| 146              | 33.5 | 11 | 6 | 40.5 | 3.4 | 1.2 |



**2443P** Round long nose pliers with very precise, smooth jaws for bending wires.











| Dimensions in mm |      |    |   |      |       |
|------------------|------|----|---|------|-------|
| L                | A    | B  | C | D    | E     |
| 146              | 33.5 | 11 | 6 | 40.5 | ∅ 0.8 |



L = total length of blade / pliers  
A = jaw length  
B = head width  
C = head thickness  
D = head length  
E = nose width  
G = total height of both noses

## Cutting capacity

| Wire Cu                          |                                   |                                   |                                  | Piano wire              |
|----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|-------------------------|
| 0.1 – 0.6 mm<br>.004 – .024 inch | 0.6 – 0.8 mm<br>.024 – .0315 inch | 0.8 – 1.3 mm<br>.0315 – .051 inch | 1.3 – 1.6 mm<br>.051 – .063 inch | < 0.3 mm<br>< .012 inch |

|   |   |                  |                  |                  |                  |
|---|---|------------------|------------------|------------------|------------------|
|  2412E     | [Red bar spanning all four Wire Cu columns] |                  |                  |                  | [Light blue bar] |
|  2422E     | [Red bar spanning all four Wire Cu columns] |                  |                  |                  | [Light blue bar] |
|  2432E     | [Red bar spanning three Wire Cu columns]    |                  |                  | [Light blue bar] | [Light blue bar] |
|  2477E   | [Red bar spanning three Wire Cu columns]    |                  |                  | [Light blue bar] | [Light blue bar] |
|  2470E   | [Red bar]                                   | [Light blue bar] | [Light blue bar] | [Light blue bar] | [Light blue bar] |
|  2403E   | [Red bar spanning three Wire Cu columns]    |                  |                  | [Light blue bar] | [Light blue bar] |
|  2404E   | [Red bar spanning three Wire Cu columns]    |                  |                  | [Light blue bar] | [Light blue bar] |
|  2482E   | [Red bar spanning three Wire Cu columns]    |                  |                  | [Light blue bar] | [Light blue bar] |
|  2475E   | [Red bar]                                   | [Light blue bar] | [Light blue bar] | [Light blue bar] | [Light blue bar] |
|  2476TX1 | [Red bar spanning all four Wire Cu columns] |                  |                  |                  | [Light blue bar] |