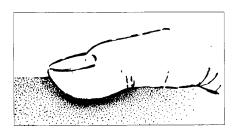
# Mangier 1990 of the Company of the C

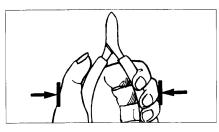
The Erem-Magic pliers are definitely unique in quality, precision, reliability, life-time and ergonomics. They are far superior to any of the other professional tools on the market.

Here are the reasons why:

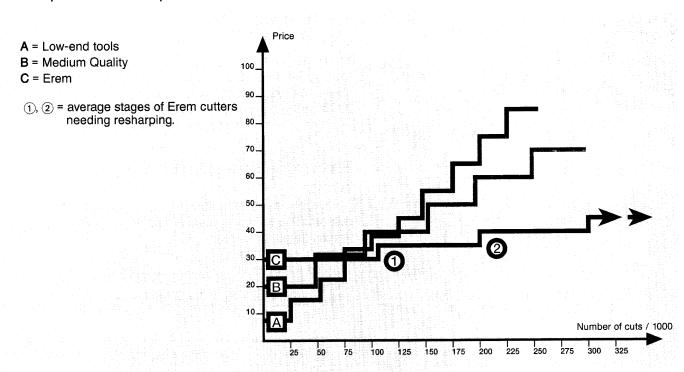
- 1. The Magic hand tools are of extruded tool steel, 100% machined.
- 2. They are all constant and regular in precision.
- 3. A solution has been found for practically all problems in assembly, research and production works.
- 4. The Magic hand tools are long lasting.
- 5. The magic cutters' fine sharpening allows for reduced wear and less working force.
- 6. Their ergonomic foam grips allow easier handling and less fatigue.
- 7. Erem Magic hand tools are ESD safe.
- 8. Erem Magic hand tools are "Made in Switzerland".







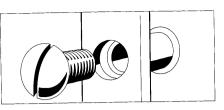
#### Cost per cut comparison

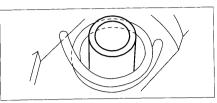


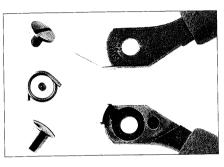
The best way to compare the real costs between different hand tools is to consider the number of cuts - besides the work itself and the performance.

The parameters below indicate how Magic tools - representing a higher initial investment - become even more economical than lower quality cutters on a medium or long-term basis.

("PRICE" can be defined in various currencies)













#### Joints

Surfaces between the two halves are machine-faced. They provide smooth, wobble-free operation. Interlock Screw System, no blades overlapping, no way of blocking the head by "over tightening".

#### Springs

Built-in springs! Invisible, long life, interchangeable. The closing and opening force is linear. Minimum hand pressure to reduce user fatigue.

#### **Opening Stops**

Ergonomic-type integrated stop. Limits handles from opening and reduces operator fatigue by preventing excessive hand spread.

#### \* Magic Handles

Static-dissipative. Standard on all models. No extra cost.

#### CP (Option)

Conductive grips, available on all Magic tools. Add "CP" when ordering.

Example: 595 E + CP

3 Sizes: Series 500, 600, 800

#### W (Option)

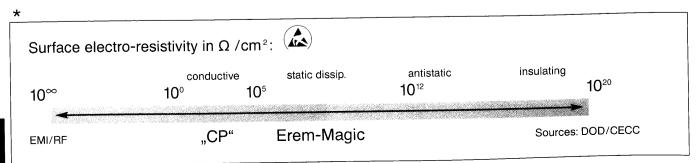
Cutting safety device. Holds wire scraps. Safety lead-catcher to be adapted on all side-cutters, series 800, 1500 B. 2200 series on request. N series, min. 100 pcs per size. Add "W" when ordering, example: 595 E + W.

## Erem Customer Service for Magic Tools

Erem tools and their spare parts are guaranteed against defects. The following parts would be supplied free (return defective ones):

- Magic foam grips
- Magic springs
- Magic stops

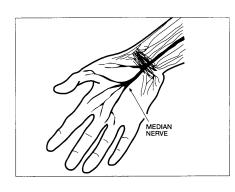
Please advise size (S, M, L) small, medium, large



#### **Erem Ergonomics**

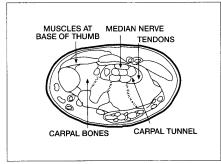
#### Introduction

Repetitive use of hand tools can cause compression of the median nerve and produce sensations of pins and needles.



#### Problem: CTS

This possible discomfort is called Carpal Tunnel Syndrome (CTS). The ability to grip and hold objects can be impaired.

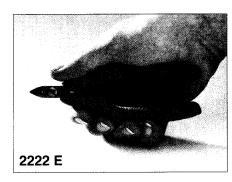


#### Solution: ERG

An ergonomic-type handle has been developed by Erem to reduce exposure to the CTS. Add suffix "ERG". It allows gripping pressure to be distributed over the full palm area. It is slightly flexible, soft and lightweight.

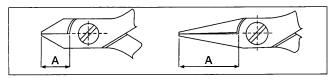
Example: 595 E-ERG.

Ergo Series, see pages 34-35

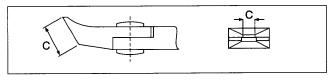


#### **Useful Dimensions**

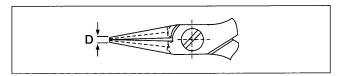
(Subject to change without notice)



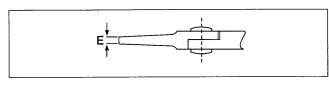
A = Length of jaws



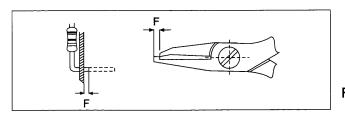
C = Length of blades



D = Overall width in closed condition



E = Width of tips



F =This length (for shear cutters) can be determined by the user. No surcharge up to 2,5 mm (.010).

Ref.N°.	Materials			Type of cut			
	Copper wires Cu max. ø	Various	Page	SF	F	FF	7
	ø 0.2-0.6 ø 0.6 - 1.2 ø + 1.2 mm						\\
47 A				•			
i00 - 108			41				•
03 E	The state of the s		37		•		
03 ET		Specify application	39	•			
04 AE			37		•		
09 E		IC-Pins only	1				•
11 E			26	•			
12 E			27	•			
12 N			32	•			
12 F0		For fibre only	58	•			
21 E			28		•		
22 E			28		•		
22 N			32		•		
30 E	4		40				•
30 E - 15			40				•
30 S	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		41				•
32 N			32			•	
49 E	1		40				•
55 E			37		•		
70 E			38		•		
72 E			38		•		
73 E			39		•		
73 EB			41		•		
75 E			38		•		
76 E			28 31		•		
76 TX 77 E			28		•		
82 E			38		•		
82 EW			38		•		
92 E			28		•		
93 AE		IC-Pins only	44		•		
95 E		IC-FILIS UTILY	29				
95 T		Specify application	31		•		
95 TF		Specify application	31	•			
97 E		Specify application	27		-		
99 E			29	•			
99 FO	en a service seguine a seguine a seguine a seguine seg	For Kevlar only	58		•		
99 T		Specify application	31				
99 TF		Specify application	31		•		
11 E		οροσην αργησατιση	26	•	•		
12 E			26	•			
12 N			33	•			
22 N			33		•		
22 NA			33		•		
22 NB			33		•		
32 N			33			•	
70 E			39		•		
70 EP		For SMD / IC-Pins only			•		
76 E			27		•		
77 E			27		•		
10 E	Assessment Assessment		30			•	
76 E			30			•	
92 E			30			•	
84 E			29		•		
84 EPC		For PCB attachments only	29		•		
86 E			29		•		
96 E	1		27	•			
212 E			34	•			
222 E			34		•		
232 E			34			•	
697 E-PC		For PCB attachments only	57				

#### Cut

Suggestions to a choice:

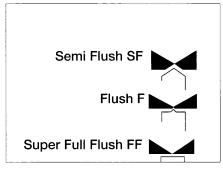
- For standard cut one should consider blades with semi-flush edges (SF) or:
- 2. Flush cut (**F**)
- 3. Flush cut, "razor sharp" cutting edges, exclusively for soft wires = Erem 700 series (**FF**) Form (1), (2)

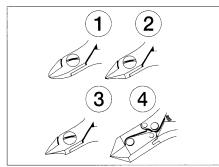
#### Form

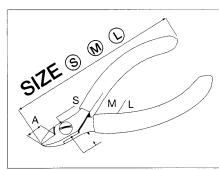
- (1) = Standard cut
- (2) = Easier accessibility
- (3) = Easier accessibility
- (4) = Specials

#### Size

- (S) = 110 mm S = 9 mm
- (M) = 115 mm M = 11 mm
- (L) = 125 mm L = 13 mm

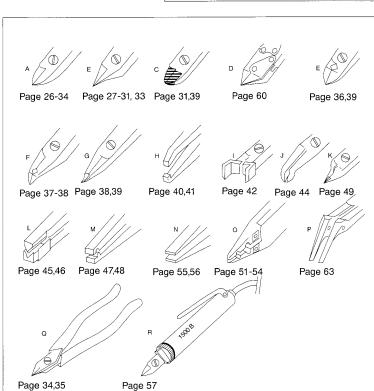




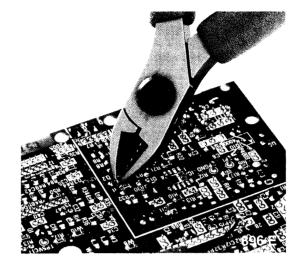


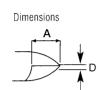
#### **Applications**

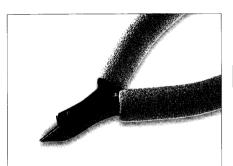
- A = Standard cut
- B = PCB
- C = Medical
- D = Strong wire
- E = SMD
- F = PCB, SMD
- G = Micro-circuits
- H = Distance-Cutting
- I = IC-insertion / extraction
- J/K = Pin cutter for IC/SMD
- L = Preforming
- M = Preforming of passive components
- N = Bending holding
- O = Stripping
- P = Connector tools
- Q = Ergonomics
- R = Pneumatic



Side Cutters All Erem-Magic-Cutters are ESD-safe.









611 E





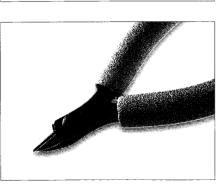
Size

110 mm

4 1/4" (S)

Description

Miniature semi-flush cutter. Small head allows very good access. Anti-glare finish.



612 E





110 mm 4 1/4" (S)

Max. Cu ø 1,5 mm / .059 9 mm

.354

Same as above, but medium-size head allows good access. Antiglare finish. Semi-flush cut.



511 E





Α	Max. Cu ø 1,5 mm / .059
10,5 mm	
413	

115 mm 4 1/2" (M)

Anti-glare finish. High cutting capacity. Semi-flush cut. Typical universal side-cutter.

Α	Max. Cu ø 1,6 mm / .063
10 mm	
30/	

### Pliers

#### Side Cutters

#### Description

Anti-glare finish. A medium-size cutter for tough cutting applications. Semiflush cut. Typical universal side-cutter. 512 E FO see page 58.

## Size

Model

115 mm

4 1/2" (M)



512 E



Max. Cu ø 1,6 mm / .063 12 mm .472

For soft and small hard wires, semi-flush edges. Strong head. 115 mm 4 1/2"

(M)





Max. Cu ø 1,6 mm / .063 12 mm .472

For general purpose use when cutting hard leads, kovar wires, connector pins etc. Semi-flush cut.

120 mm 4 3/4"

896 E







Max. Cu ø 1,5 mm / .059 15 mm

Super-fine relieved head cutter. Full-flush cut.

110 mm 4 1/411

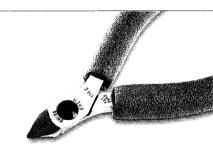
(S)

676 E









Max. Cu ø 1 mm / .040 9 mm

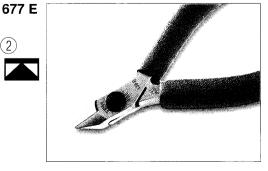
Same, but straight head.

110 mm

4 1/4"

(S)





Max. Cu ø 1 mm / .040 9 mm .354

#### Model

## 521 E

4 1/2" (M)

Size

115 mm

115 mm

115 mm

115 mm

4 1/2" (M)

4 1/2"

(M)

4 1/2" (M)

#### Description

Polished head. Full flush cut.

Full flush cut with polished head.



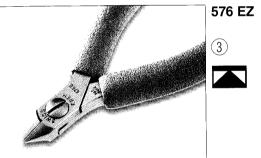
Α	Max. Cu ø 1,2 mm / .047
10 mm	
.394	



(1)

Α	Max. Cu ø 1,2 mm / .047
12 mm	
472	

Full-flush cut.





A	D	Max. Cu ø 1,2mm / .047
9 mm	1 mm	
.354	.039	

Same as 576 E, but head not

For copper wires. Fine relieved

Max. Cu ø 1,2 mm / .047\_

For fine, soft wires. Super-fine

relieved straight head.





1 mm

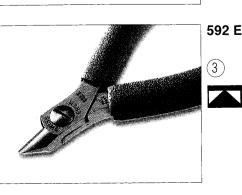
head. Full-flush cut.

.039

relieved.

9 mm

.354



E	115 mm
	4 1/2"
	M

Α	D	Max. Cu ø 0,6 mm / .024
12 mm .472	1,5 mm .059	

#### Side Cutters

#### Description

Straight head. Standard type. Full-flush cut.

Size

Model

115 mm

4 1/2" (M)





12 mm 1,5 mm .472 .059

Max. Cu ø 1,2 mm / .047

Full-flush cut but strong head.

115 mm

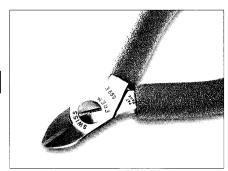
4 1/211

(M)

599 E







Max. Cu ø 1,6 mm / .063 12 mm .472

Jaws relieved to permit cutting in limited-access areas. Full-flush cut.

120 mm 4 3/411

884 E





884 E PC



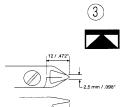
Max. Cu ø 1,6 mm / .063 D 15 mm 1,5 mm .059 .591

Side cutter. For PCB separation.

115 mm

4 1/2"

(M)





max. D max. B 0,8 mm 2,0 mm .031 .079

Same as 884 E, but with stronger head. Full-flush cut.

120 mm 4 3/4"

886 E







Α	D	Max. Cu ø 1,8 mm / .070
15 mm	1,5 mm	
.591	.059	

#### Series 700 • Super Full Flush

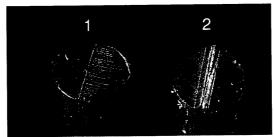
Fine honing and sharpening. For professional applications such as space, medical, where a perfect full flush cut is imperative.

The "700 series" cutters are unbeatable as far as precision cutting is concerning.





1 Erem Cut 2 Others



Model

710 E





#### Size

#### 110 mm 4 <sup>1</sup>/4"

(S)

#### Description

Miniature head Super-full-flush cutter. Ideal for small circuit board work. Recommended for cutting 24 AWG and smaller leads.

Α	Max. Cu ø 1 mm / .039
8,8 mm	
.346	



776 E

(3)



110 mm 4 <sup>1</sup>/4"

 $\bigcirc$ 

Small tapered relieved head. Super-full-flush.

Α	D	Max. Cu ø 1 mm / .039
9 mm	1 mm	
.354	.039	



792 E

3



115 mm 4 <sup>1</sup>/2" M Very fine elongated tips (13mm [.512]). For fine copper wires, max. dia. 0,6 mm (.031). Relieved head. Super-full-flush.

Α	D	Max. Cu ø 0,6 mm / .024
13 mm	1 mm	
.512	.039	