

# User Manual

Release 1.2

## EL-Cut

High precision cutting pliers



The information in this manual has been carefully checked and believed to be accurate; however, no responsibility is assumed for inaccuracies.

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## 1 Product description

The EL-Cut is a high-precision punching tool specially designed for punching electrodes from coated Cu and Al foils.

In contrast to conventional punching (stamping), electrodes being cut (fine blanked) by the EL-Cut are produced by three active forces and in tools with a few microns cutting clearance. The fine blanking process results in electrodes having clean cutting surfaces without torn or chipped edges and being almost perfectly flat.

The punching tool of the EL-Cut is permanently installed and cannot be changed. The EL-Cut is available in different versions, each with a different cutting tool.



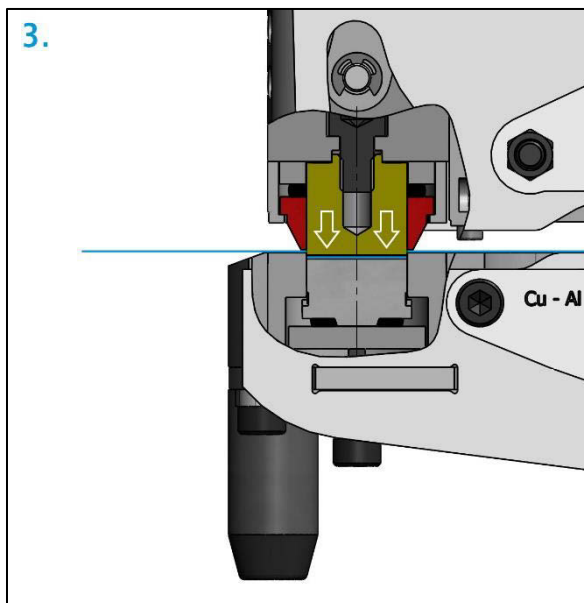
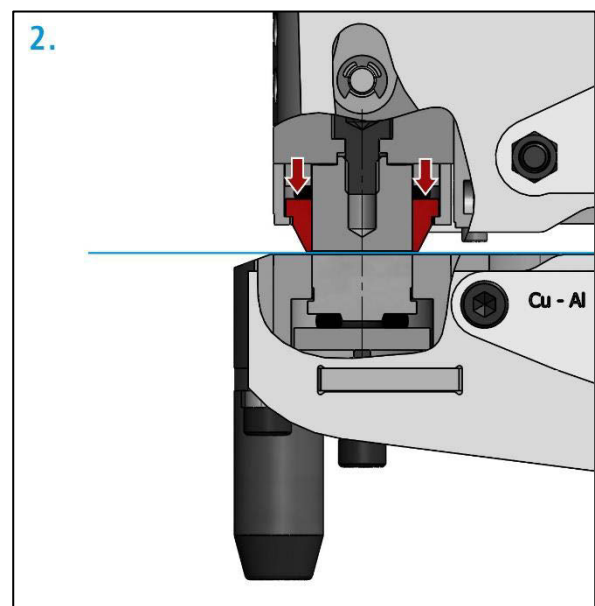
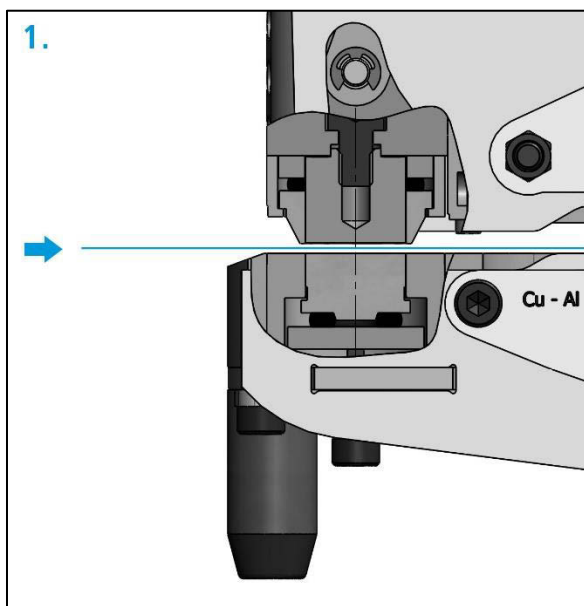
## 2 Technical data

Height:	140 mm
Width:	380 mm
Depth:	60mm
Weight:	approx. 2.8 kg

### 3 Features

- The diameter of the tool can be between 6 and 40 mm. Different shapes, e.g. squared, are possible
- Specifically designed for cutting electrodes coated on Al and Cu foil
- High-accuracy and durable cutting unit.

### 4 Mode of operation



The sheet to be punched is inserted with the electrode coating pointing either upwards or downwards (1).

When the pliers handle is operated, the sheet is first fixed at the edge outside the punch contour (2) before the inner part is extracted (3). This process is sometimes referred to as fine blanking.

## 5 Guidelines for intended use

- These punch pliers are designed for use with Cu and Al foils in 0.1 to 0.3 mm thickness. If you would like to use them for other materials or thicknesses, please contact us in case of doubt. (e-mail: [info@el-cell.com](mailto:info@el-cell.com))
- Do not punch lithium metal foil with the pliers.
- Do not punch electrode films wetted with electrolyte, or any sticky films
- For punching, place the electrode film into the punching slit with electrode coating pointing downwards.
- The high-precision cutting unit is very sensitive. You should therefore prevent impacts such as, for example, if the tool falls over.
- Actuate the pliers with gentle force only. **In case of blockage**, the pliers have to be unlocked by pushing the small lever (blue arrow) upwards while slightly compressing the two handles.



## 6 Cleaning

After use, as necessary, clean the punch and the die with alcohol and compressed air.

**NOTE:** Punch and die are made of hardened steel with limited stability against corrosion. Don't expose to corrosive atmosphere. Don't leave wetted.

## 7 Technical support

Technical support for this product is exclusively provided by EL-Cell GmbH.

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## 8 Warranty

For a period of one year from the date of shipment, EL-Cell GmbH (hereinafter Seller) warrants the goods to be free from defect in material and workmanship to the original purchaser. During the warranty period, Seller agrees to repair or replace defective and/or nonconforming goods or parts without charge for material or labor, or, at the Seller's option, demand return of the goods and tender repayment of the price. Buyer's exclusive remedy is repair or replacement of defective and nonconforming goods, or, at Seller's option, the repayment of the price.

Seller excludes and disclaims any liability for lost profits, personal injury, interruption of service, or for consequential incidental or special damages arising out of, resulting from, or relating in any manner to these goods.

This Limited Warranty does not cover defects, damage, or nonconformity resulting from abuse, misuse, neglect, lack of reasonable care, modification, or the attachment of improper devices to the goods. This Limited Warranty does not cover expendable items. This warranty is void when repairs are performed by a non-authorized person or service center. At Seller's option, repairs or replacements will be made on site or at the factory. If repairs or replacements are to be made at the factory, Buyer shall return the goods prepaid and bear all the risks of loss until delivered to the factory. If Seller returns the goods, they will be delivered prepaid and Seller will bear all risks of loss until delivery to Buyer. Buyer and Seller agree that this Limited Warranty shall be governed by and construed in accordance with the laws of Germany.

The warranties contained in this agreement are in lieu of all other warranties expressed or implied, including the warranties of merchantability and fitness for a particular purpose.

This Limited Warranty supersedes all prior proposals or representations oral or written and constitutes the entire understanding regarding the warranties made by Seller to Buyer. This Limited Warranty may not be expanded or modified except in writing signed by the parties hereto.