



TIFOO

GALVANOPEN - basic kit and starter kit

MANUAL

GALVANOPEN



Safety

When dealing with any plating solutions always follow the safety instructions on the respective label and the respective operating instructions for the product. When handling chemicals always wear the appropriate protective equipment, such as goggles and gloves. Keep all equipment and materials for electroplating out of the reach of children.

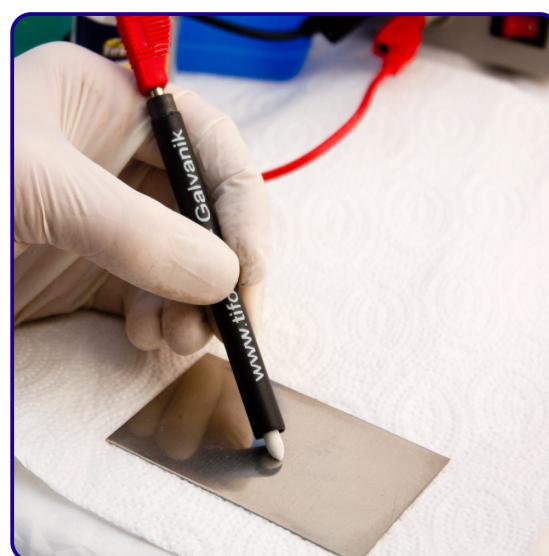
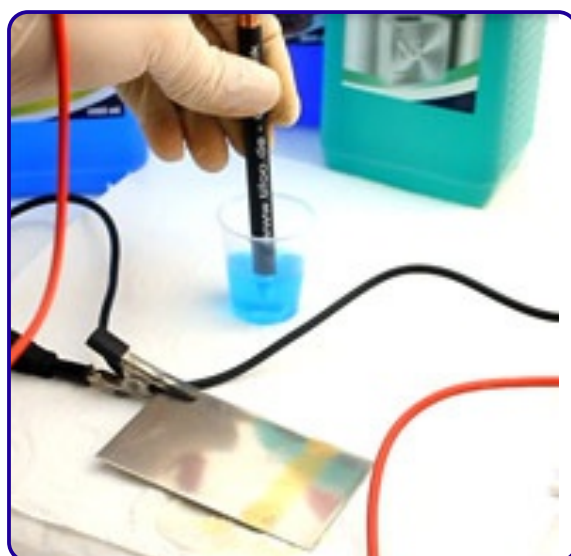
Application fields of the GalvanoPen

The Tifoo GalvanoPen resembles the well-known Rhodinette technique for fine pen plating. The Tifoo GalvanoPen is particularly indicated for the treatment of small objects (in jewelry for example) and in general whenever you want to achieve very precise metal depositions on conductive surfaces.

Choosing the right pen

Different electrode materials have to be used depending on which metal you would like to deposit. The following table shows you which material is best suited for each specific application. This table holds true also for selecting the right anodes for tank plating and for brush plating.

Which pen for which plating solution?	
Step/Plating solution	Suitable pen
Gold plating/Gold plating solution	Graphite pen
Stainless steel gold plating / Gold plating solution FLASH	Graphite pen
Silver plating/Silver plating solution	Graphite pen
Copper plating/Copper plating solution	Graphite pen
Rhodium plating/Rhodium plating solution	Graphite pen
Nickel plating/Nickel plating solution	Nickel pen
Black nickel plating/Black nickel plating solution	Nickel pen
Chrome plating/Chrome plating solution	Nickel pen
Zinc plating/Chrome plating solution	Graphite pen



Using the GalvanoPen

The use is very simple: connect the pin at the end of the bigger and marked hole on the positive outlet (anode) of the power supply and plug one of the fiber tips on the other end. Fasten the tip slightly until it is firmly settled in the extremity of the pen. Connect the workpiece to the negative pole (cathode) and then dip fiber tip for a few seconds (5 - 10s) in the electrolyte solution. Alternatively, you can work

with a stainless steel tray: you connect it to the negative pole and then you place the object to be coated on it (there must be electrical contact). You can find suitable accessories in our online shop. This method is particularly advantageous for objects that are difficult to connect or that might get damaged by the clamping. The fiber tip must be completely soaked with the plating solution, so that electrical contact with the rest of the pen can occur. Apply now the plating solution on the part of the surface that you want to coat in order to deposit the desired metal layer.

Before proceeding with the electroplating make sure that the surface has been properly cleaned and degreased. The appropriate voltages to be used for different plating solutions are reported in the respective manuals. Use the round shaped tip for the more elaborated surfaces and the flat tips for small flat surfaces areas.

"Tifoo GalvanoPen" especificaciones

Anode materials available:
graphite, copper, nickel and zinc

Diameter of the hole for the connection cable:
4,0 mm

Diameter of the hole for the fiber tip:
4,5 mm

Length of the pen:
10 cm

Included accessories:
3x tips

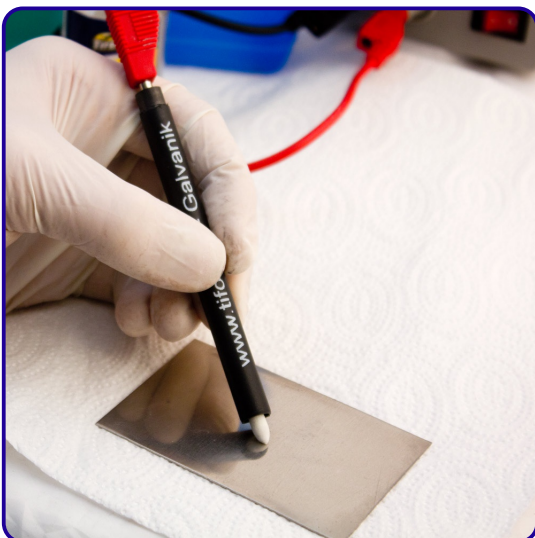


Application examples

We are going to explain the proper use of the Galvanopen describing a couple of examples. We first show how you can easily gild an earring pendant made from silver. As showed in the following images, the pendant is connected to the negative terminal of the rectifier via the alligator clip. After dipping the pen in the gold plating solution (specifically designed for pen plating) you can start to gild the piece. With short, circular motions of the object you'll be able to deposit a gold layer in a short time. The front with the gemstone has been treated with the round shaped tip while the flat back side was treated with the flat tip.



Another interesting example is the so-called "galvanic writing". The pen can be indeed used to write, as an actual pen - with the difference that with the Galvanopen you can write on metal surfaces employing another metal as "ink". You can thus produce highly stable signs or writing on metals. In our example, we wrote with the Tifoo bright copper electrolyte on a nickel plate. The sheet was clamped to the negative pole and the Galvanopen to the positive pole. After shortly immersing the tip of the Galvanopen into the plating solution (in such a manner that the swab is thoroughly soaked with electrolyte), you can immediately start writing. The copper deposit is visible as soon as the tip touches the nickel surface. The final result is impressive!



Check our website www.tifoo.de/en-uk! You will find our complete catalog and a photo gallery that shows many of the applications that are possible with our products.

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