

# SWISSCOAT™ : Gold cost-Killer Production Solution for Electrical Contacts

Find out how to mitigate gold cost in  
pin & socket contacts screw-machining,  
without tampering with high quality  
and performance now!



## Problem

### Gold cost has always been expensive, impacting priced goods directly

The price of gold depends on different factors, but **its scarcity** plays a massive part in the pricing fluctuation.

Especially fierce competition raises the cost of production of electrical contacts.

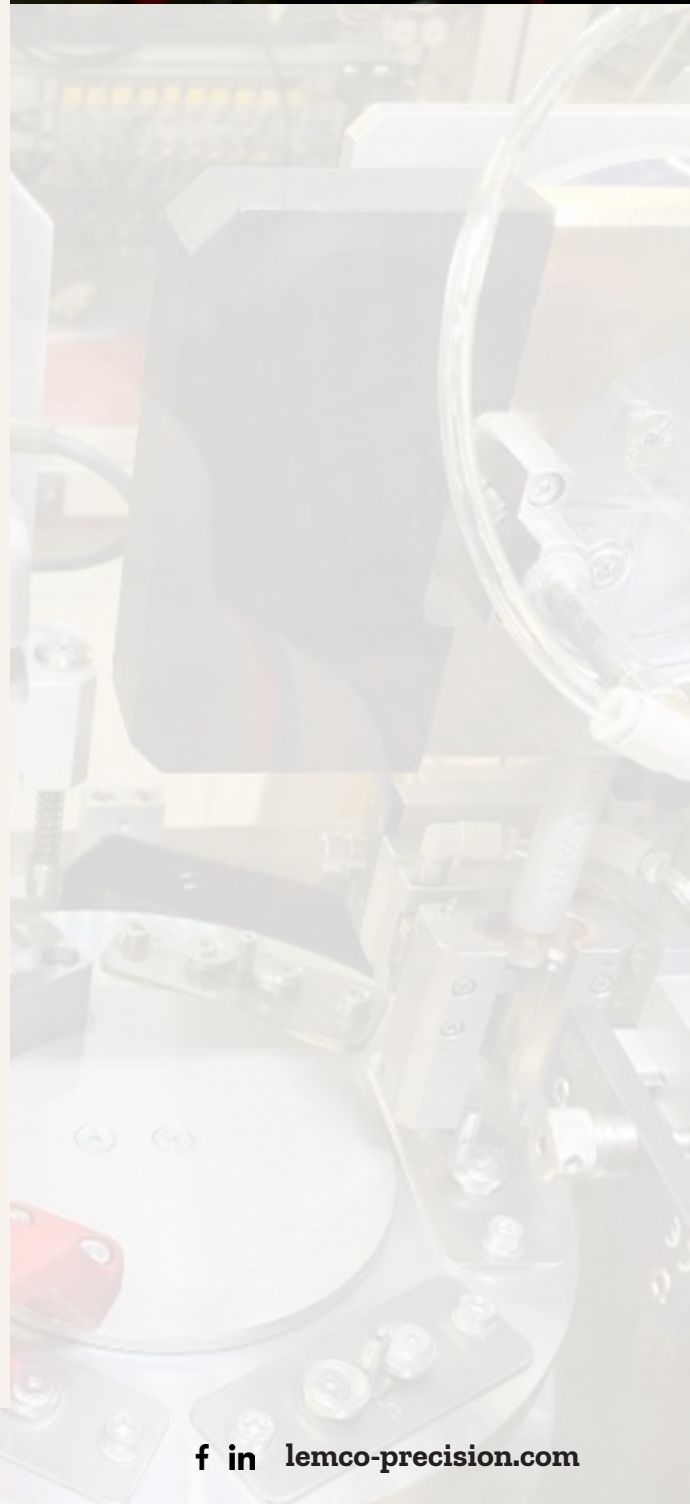
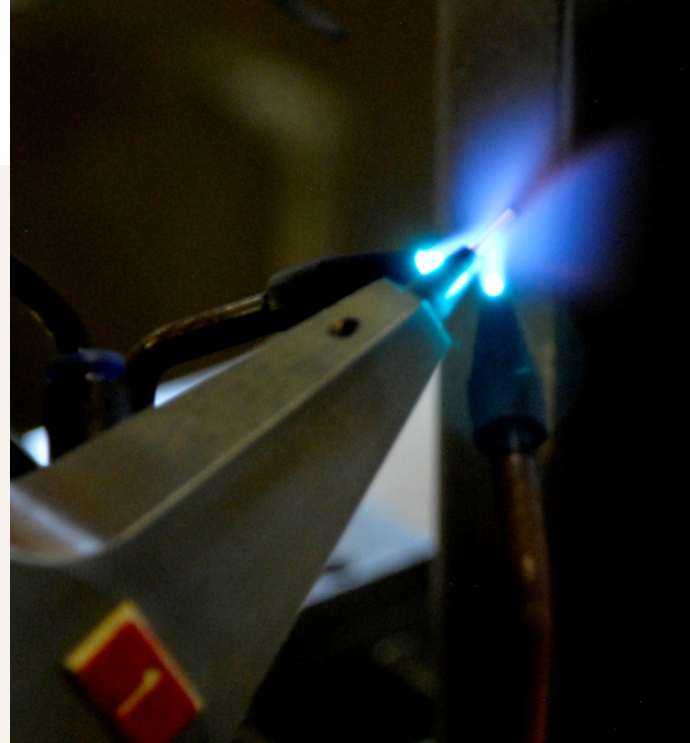
Other factors such as the **economic plight in 2020/2021**, due to the COVID pandemic have tremendously contributed to the increased price of gold and therefore, the screw-cutting of contact price raised, and players have started to search for alternatives to gold such as palladium.

### But is Palladium cost lower than gold in screw-machining?

When it comes to connectors and contacts manufacturing, to minimize their expenditure, clients began to use more palladium instead of gold or pure gold as it was less expensive.

However, if palladium was a good alternative, its demand increased suddenly and standard contacts cost production also encountered a peak. This is a pinpoint in each sector of activities as all companies have the same interests at heart: **costs savings**.

At Lemco Précision, based on our long-lasting expertise in high precision screw-machining parts, **we have created an economical and efficient solution to gold.**



## Solutions

Our **SWISSCOAT™** as the successful alternative to gold, reducing electrical contact costs production

Our **SWISSCOAT™** coating system, results directly from the need of clients to mitigate their charges. Our ambition aimed to find a **balance between usage of noble metal and costs production optimization** without sacrificing **high quality and resistance.**

The **SWISSCOAT™** has been specifically optimized for the connector industry requirements. One of the key takeaways of this **innovative contact plating**, is that compared to regular gold-plating, **significant savings are realized with a 20-30% lowered price range.**

## Definition

**How can this electrical contact plating be defined ?**

The **SWISSCOAT™** is a **galvanic multilayer with gold finish**, offering similar properties to regular gold-plating, conforming to **MIL-C-45204 TYPE II Grade C Class 1**. It is an alternative plating with Gold over Nickel Phosphorus.

## SWISSCOAT™ Gold Cost Killer



### INNOVATIVE COATING SYSTEM

- Thin gold layer
- 3 types of SWISSCOAT 1,2 & 3
- Wear rate in sliding behaviour 10-15 m<sup>2</sup>/ N
- Coefficient of friction < 0.2
- Corrosion resistance > 96 hours salt spray mist to DIN 50021
- Electrical contact resistance < 10 MΩ with 1 N load

### ALL NEW SWISSCOAT™

**100%** CUSTOMERS SATISFACTION who tested it, are still using the solution to produce electrical contacts

### ADAPTABLE TO ALL INDUSTRIES APPLICATIONS



MIL-AERO



Medical



Civil  
Aviation



INDUSTRIAL



FIBER  
OPTICS



TRANSPORTS



TELECOMS



TESTS &  
MEASUREMENT



## Benefits

### The SWISSCOAT™ represents massive gold savings, with additional advantages

The coating guarantees a **long life cycle** and provides a **lubrication effect** of hard-soft type in the interface. It has **good thermal resistance** and high protection against corrosion.

It is adapted to most cable crimping sizes under certain configurations and enables the increase of **mating cycles**. Compared to other platings, it also provides **wear resistance enhancement to electrical parts**.

Furthermore, the thin gold layer guarantees **small and consistent electrical contact resistance**.

The solution is suitable to plug-in contacts and all contacts can be **assemble on different types of connectors, for various applications**.



## ASSEMBLY CAPABILITY

### Easy to assemble on your Different Types of Connectors

- RF connectors (Quax, Twinax, Coax and Triax)
- Fiber Optics
- PCB
- Circular, rectangular & triangular connectors
- Arinc 400 & 600
- EN3155 & EN4125
- Sub-D & Micro-D
- MIL EN Gauges #4 to 23
- IC Sockets, etc

### Costs optimisation with In-house Surface Treatment

- Heat treatment
- Galvanosplaty
- Partial zone annealing

### Robust & Resistant to Harsh Environment

- Vibrations
- Shocks
- Heat
- Cold
- Corrosion
- Water, etc.

Some tests to evaluate the feasibility of your project

## SWISSCOAT™

### RELIABLE & ECONOMICAL GOLD COST-SAVIN SOLUTION

#### DURABILITY TEST



Based on MIL-C39029D (3.5.9 & 4.7.10) Contacts shall be subjected to 500 cycles of mating and un-mating at 300 cycles by hour maximum, after test contacts shall show no evidence of defects detrimental to the mechanical of electrical performance.

#### SALT SPRAY WITH VOLTAGE



Applied 500 hours (connectors only). To determine device capacity to be exposed to a salt laden atmosphere without physical degradation.

#### SOLDER TEST

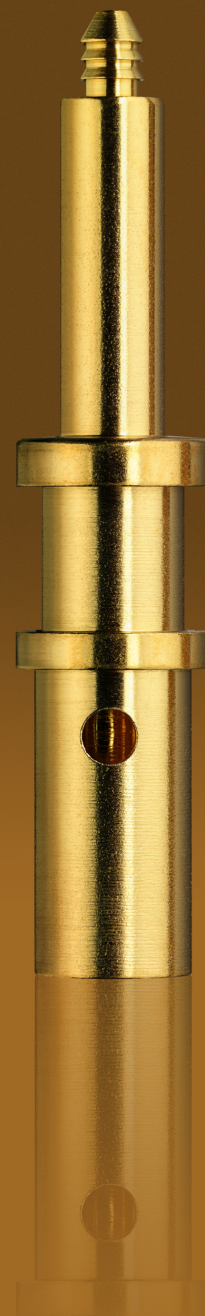


To verify that the solderability of component leads and terminations meets the requirements established in the standard J-STD-002B and that subsequent storage has had no adverse effect on the ability to solder components to and interconnecting substrate.

### Company presentation

#### A few words about our company

Lemco Précision is the specialist in **screw-machining standard** and **custom-made electrical contacts**, with vertical production in our Swiss plants. For over 50 years, we have been developing **long & thin contacts with small diameter**, along with **bent parts** with multi angles, **complex forms** and **miniature contacts** (from size #23 to #30), according to clients' needs operating in different sectors.



Get in touch with us