MECACHIMIQUE

Excellence in etching & electroforming

Chemical etching and electroforming : Two processes, endless possibilities

CHEMICAL ETCHING: ACCURACY – QUALITY – VERSATILITY

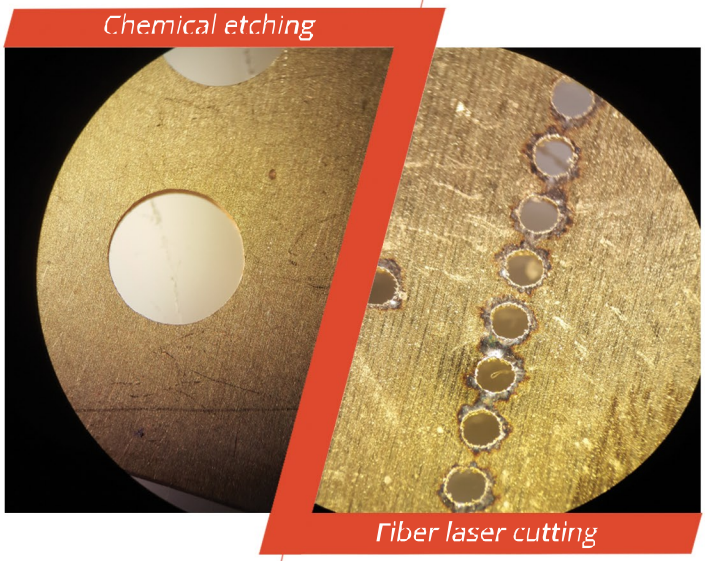
A PROCESS PROVIDING MULTIPLE POSSIBILITIES: YOU DRAW, WE MAKE IT!

The chemical etching process enables to manufacture countless different parts. Possibilities are almost unlimited. The complexity of the patterns, the fineness of shapes or the fragility of the metal is not an issue. Engraving the metal's surface also is achievable.

This manufacturing process is compatible with most metals alloys, such as copper, brass, nickel, stainless steel, steel, Arcap, Inconel, Kovar, Invar, copper-beryllium, silver, bronze, Maillechort, aluminium. We machine in a thickness range of 0,010 up to 2mm. The accuracy obtained is excellent and proportional to the metal strip thickness.

PERFECT CUTTING QUALITY: NO BURR, NO BREAK POINT, NO HEAT-AFFECTED ZONE (HAZ)!

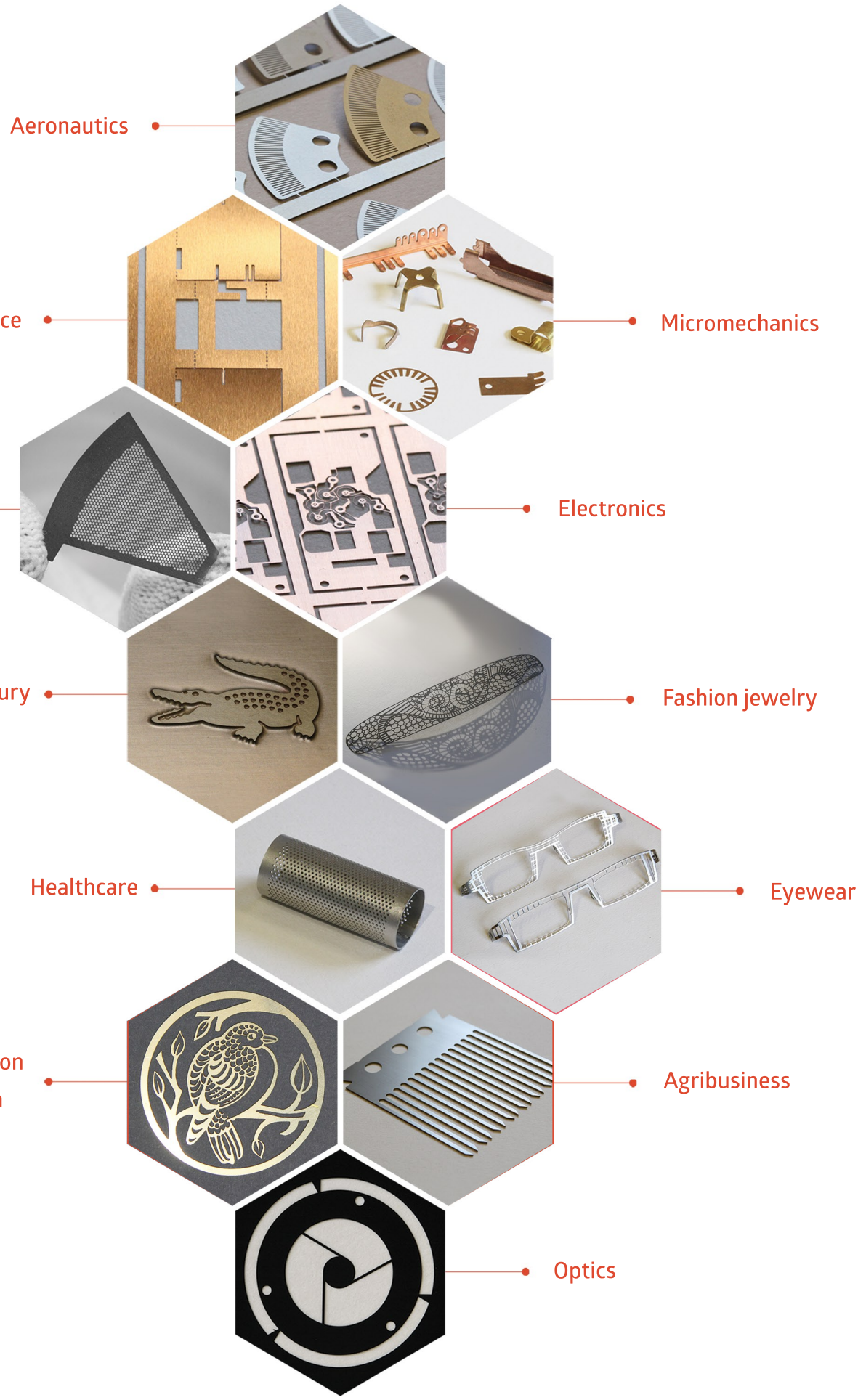
The chemical etching process prevents burr, stress, break point and heat-affected zone (HAZ). The internal structure of the material remains unchanged even at the cutting edge. Unlike other machining processes, no stress is put on the metal sheet. Mechanical, electrical and magnetic properties remain unchanged.



A COST EFFECTIVE, FLEXIBLE AND FAST MANUFACTURING PROCESS FROM SAMPLE TO SERIES

The chemical etching process does not require any costly and time consumable tooling. A photo-tool is used on which a negative and accurate image of the part to manufacture is applied. Such tooling can be made quickly and is inexpensive. Once it has been created, the photo-tool can be used many times. In case of design modification, the photo-tool is easy to modify. Such versatility, linked to low tooling cost, is very suitable for samples or small and medium series.

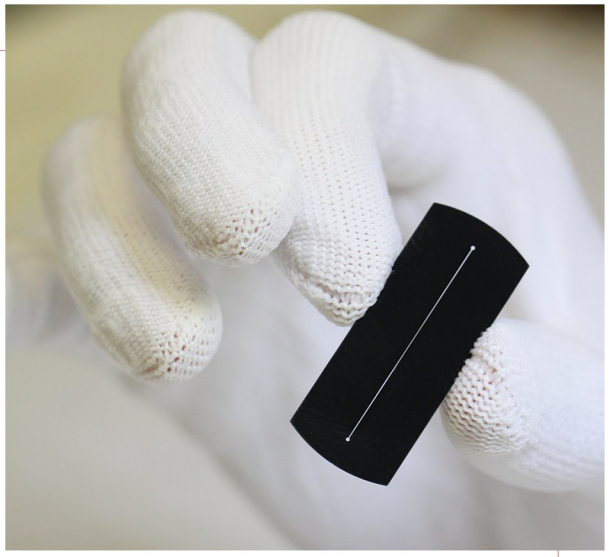
TWO DIFFERENT PROCESSES FOR MANY APPLICATIONS



ELECTROFORMING: TREMENDOUSLY ACCURATE – THIN – SMALL

NO OTHER MANUFACTURING PROCESS CAN ACHIEVE SO FINE DESIGN

Electroforming enables to achieve smaller opening than the material thickness. Indeed, such additive process enables to build the part atom-by-atom which ensures unrivaled micrometric accuracy. Close-tolerance of +/- 3 µm with 3 to up to 80 µm thickness.

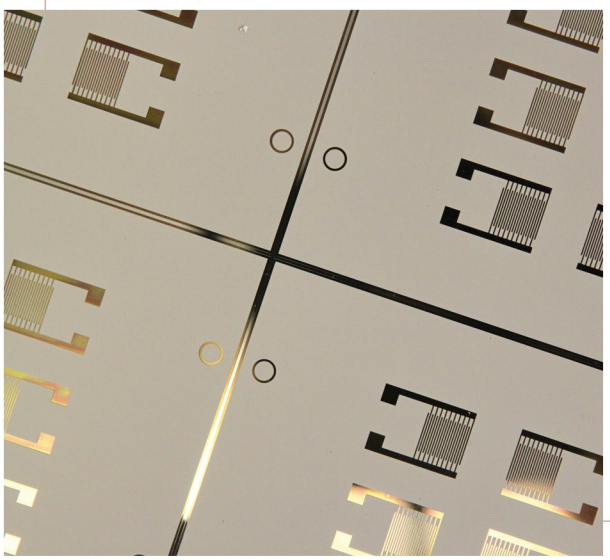


A PROCESS WHICH COMBINES HIGH ACCURACY, PERFECT SHAPE AND FLEXIBILITY

Like chemical etching, electroforming provides a perfect cutting quality: no burr, no break point, no heat-affected zone (HAZ). This process uses nickel or copper material and it is possible to add an optical black surface treatment.

Like chemical etching, electroforming involves a photo-tool which is quick to manufacture and inexpensive. This tool can be used many times and is easy to modify in case of design change.

When chemical etching is no longer accurate enough, here comes electroforming.



A PROCESS PROVIDING A HIGH BRIGHTNESS SURFACE

Depending on the growth parameters applied during manufacturing, it is possible to achieve a surface finishing from matt to perfectly bright.

10 GREAT REASONS TO CONSIDER MECACHIMIQUE

MORE THAN **40** YEARS OF EXPERIENCE AND A RECOGNIZED KNOW-HOW

VERY HIGH LEVEL OF QUALITY AND ON TIME DELIVERY

CUSTOMIZED TECHNICAL EXPERTISE AND ADDED VALUE

HIGH REACTIVITY : QUOTE WITHIN **48** HOURS, AVERAGE MANUFACTURING TIME OF TWO WEEKS

COMPREHENSIVE RANGE OF SERVICES INCLUDING BENDING AND HEAT & SURFACE TREATMENT

EXPRESS SERVICE PERFORMING A THREE WORKING DAYS MANUFACTURING TIME

MAINTENANCE AND RENEWAL OF THE EXISTING PHOTO-TOOL FREE OF CHARGE

WIDE RANGE OF METAL AVAILABLE IN STOCK

QUATLITY MANAGEMENT SYSTEM ACCORDING TO ISO 9001 STANDARD

RESPONSIBLE AND RELIABLE PARTNER WHO TAKES CARE OF THE ENVIRONMENT

THEY TRUST US

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