

GEMADDIS

Stencils



machines



tooling



process

www.gemaddis.com

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The company

Who are we ?

Gemaddis is a French company based in Haute-Savoie near Lyon. The company was created after the merging of two former companies : Gemido and addis Electronic.

Gemaddis is specialized into three domains of activity : Machine distribution/ retail for the electronic industry, Design of turn-key tooling solutions for the printed circuit board assembly industry and Process Engineering support and optimization.

Since it's creation, Gemaddis has built a solid reputation in the french industrial landscape. French leader in industrial equipment offering with high technological added value, we have built a network meeting our ambitious expectations. Thanks to our process assembly expertise, we bring our skills to various existing processes, allowing us to offer a global solution that meets each individual customer's needs.

Machine distributor :

Gemaddis is today in partnership with many suppliers who recognize in this expertise an essential added-value to provide you the solution your are expecting.

Gemaddis represents world class machine manufacturers on the French and Northern Africa territory, including : CyberOptics, Universal Instruments, Heller, ASSCON, Nutek, ESE, SEC, Schunk, LPKF, KIC, Inertec, Neotel, Sono-tek, Hover-Davis, Musashi...

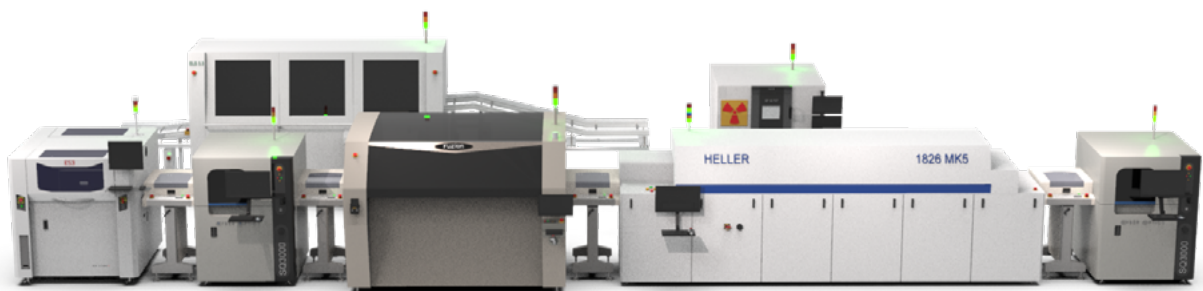
These partnerships and our expertise allow us to offer you more than a single piece of equipment, but a global solution for your specific application.

Engineering Support and Process optimization :

The on board availability of our own technological and scientific team combined to our physic Lab allows us to effectively support the development of all your process related activities. Should you consider having to analyse or characterise products, sub-assembly parts or fabrication processes or even having to investigate and troubleshoot fabrication failures, our local team of process specialists grown through a deep industrial background an backed by a comprehensive failure lab will be able to assist your own staff.

Main FA-Lab capabilities : optical microscope up to x500, SEM microscope up to x150.000, X-Ray inspection + 3D-CT reconstruction, sampling/molding/polishing, 3D size measurement, ...

As such, we can assist you for soldering quality assesement, serching for voids and fractures, construction reverse-engineering, etc... but also provide engineering support for DFM (Design for Manufacturing) and NPI activities.



The company

Tooling :

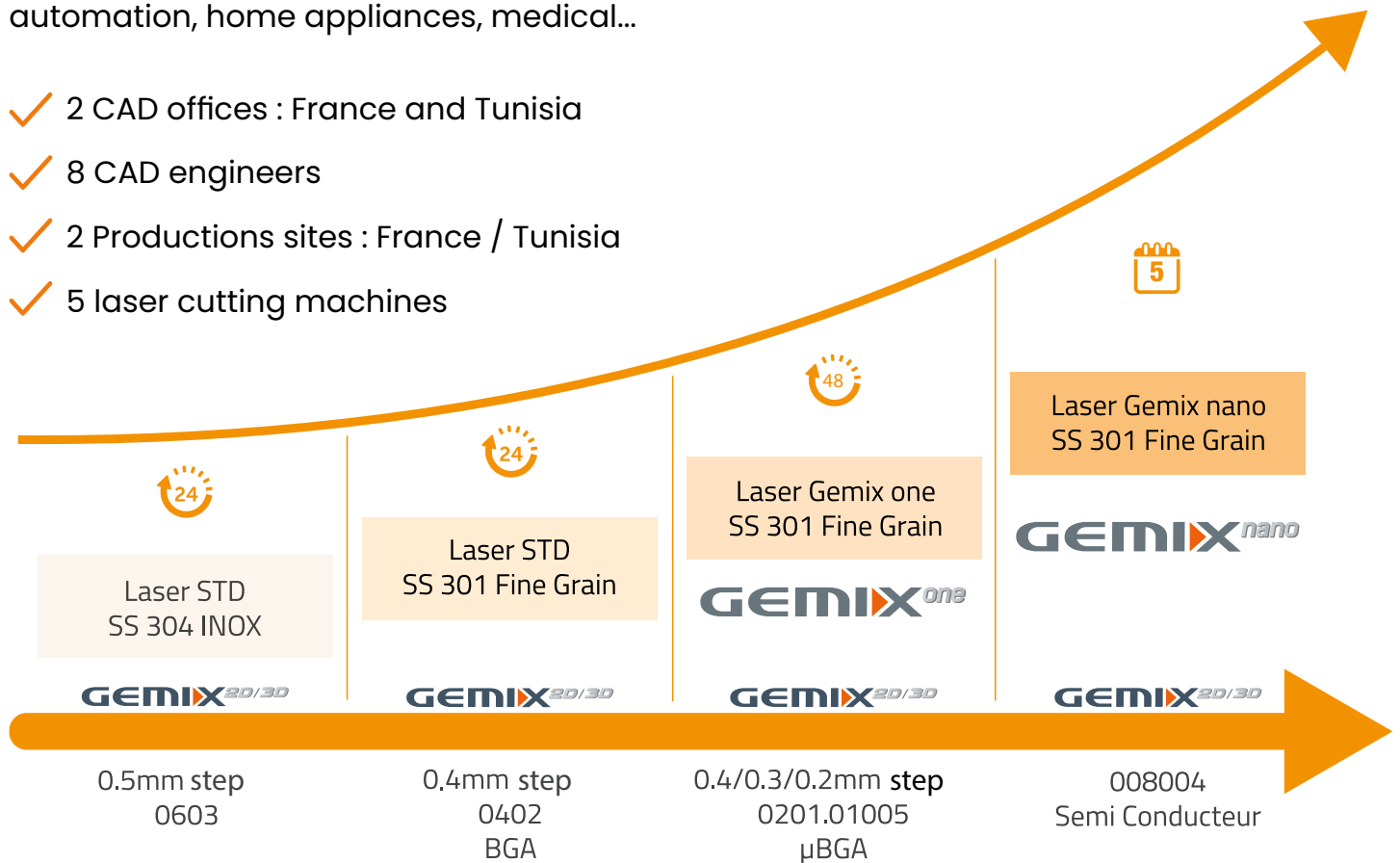
We produce smt stencils, wave solder and varnishing pallets, ICT and functional testing, SMT carrier...

All our products are designed and manufactured starting from a problem or a specific need expressed by our customers. For this purpose, our design office works in close collaboration with engineers, technical directors, technology managers and production teams in order to develop solutions that best suit to your technical constraints and manufacturing processes.

Our CAD service develops models and customized prototypes based on electronic card layout drawings provided by our customers.

More than 400 customers, including companies and research centers, trust our capabilities in France and Europe in different areas such as aircraft industry, armament, home automation, home appliances, medical...

- ✓ 2 CAD offices : France and Tunisia
- ✓ 8 CAD engineers
- ✓ 2 Productions sites : France / Tunisia
- ✓ 5 laser cutting machines

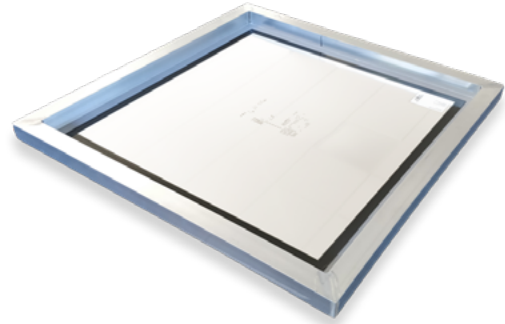


Stencils range

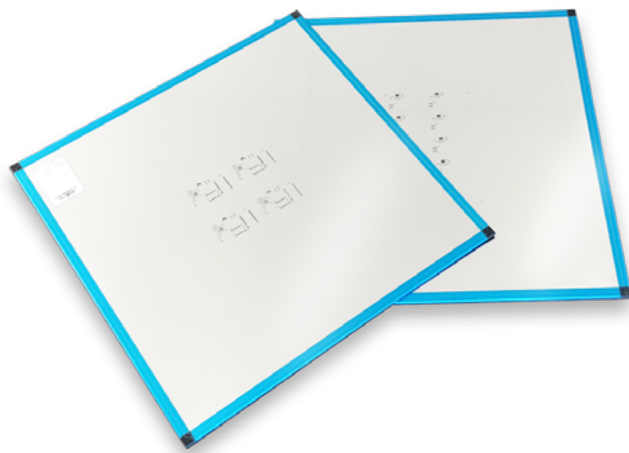
▶ The whole team of our **CAD** advisors is focused on the analysis of your manufacturing data in order to provide the best combination of performance regarding **stencil thickness / aperture size reduction / paste transfer ratio**.

We shall then provide the best possible solution while considering also potential variants for the stencil foil material.

Our stencils can be supplied in **nickel**, **SUS304-stainless steel** or even **SUS301** grade which is much better suitable for smaller area-ratio an producing improved paste transfer ratio.



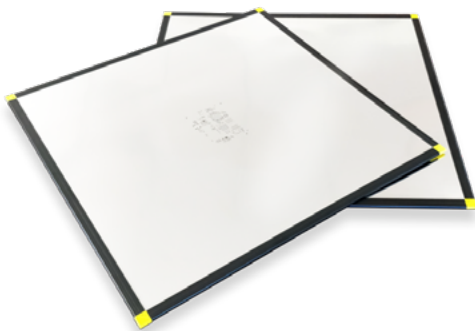
Mesh frame stencil



Vector Guard stencil

Available formats :

- ✓ Mesh frame
- ✓ Vector Guard
- ✓ Tetra / Vector Mount
- ✓ Micro-stencils
- ✓ Personalized formats



Fine Grain Vector Guard stencil



Tetra mount Stencil

GemixOne : High tech Stencil

▶ To face the various **challenges** of denser product integration, associated to more **stringent aperture area-ratio**, Gemaddis has further pushed the mastering of laser-cutting technology of its Stencils. **GemiXone** product is now offering you an awesome paste transfer ratio even for the **smallest apertures** brought by the latests cutting-edge product designs.

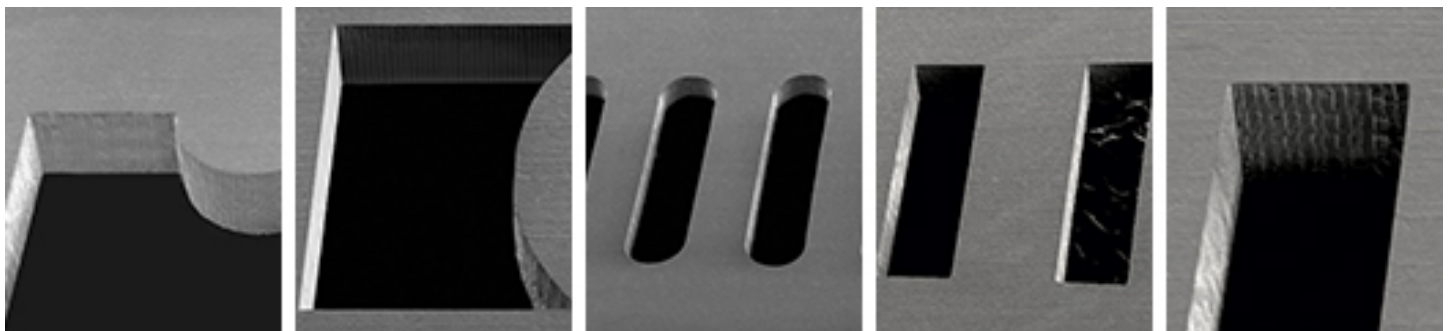
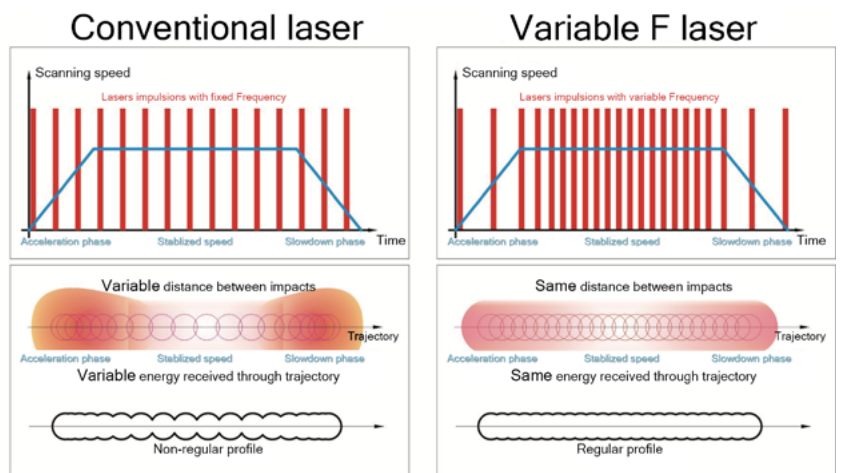
Technologie explanation

GEMIXone

▶ A standard laser does not adapt its cutting beam frequency to the jogging Speed which generates a variable distance between 2 laser impacts and thus a variable energy flow along the cutting path. This forms less precise cutted edges on the apertures.

On the opposite, the laser source used for GemiXone products is using a variable frequency function controlled toward the actual beam travel speed. As such, the distance between 2 laser impacts is kept constant and produces a much better aperture wall smoothness.

▶ Gemaddis engineers have developed a specific gas to assist the cutting process, generating an oxide-free «white cut» improving the surface roughness of the aperture walls which consequently produces better paste release.



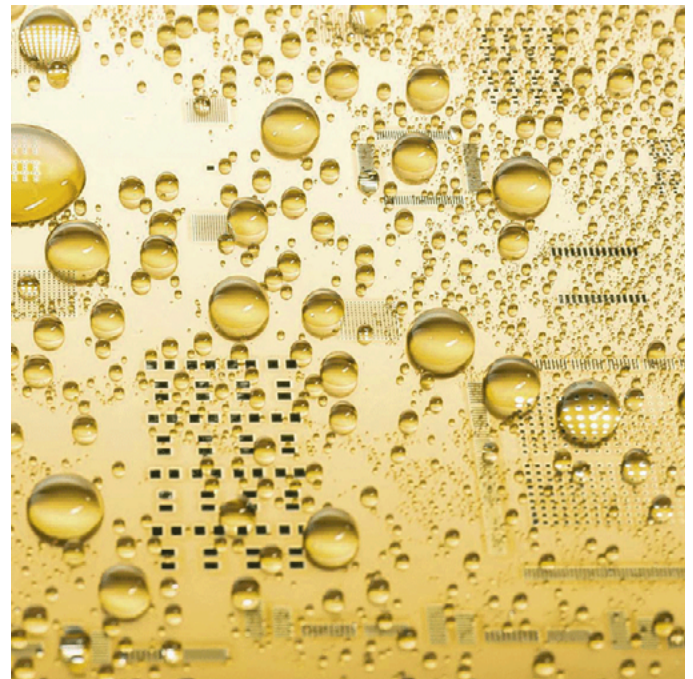
Gemix Nano Coating

Gemix Nano is a marvel of **technology**, mixing our latest Machine Investments, process development and a patented new **hydro/oleo-phobic** coating applied on the surface of our high-technology stencils. Combination of all those technologies produces an outstanding paste release **efficiency** for **perfect prints**. This coating also improves greatly the **wiping/cleaning of the stencils** and **minimize the potential bridging** of adjacent pads.

Benefits

GEMIX^{nano}

- ▶ The Coating is applied on the bottom side and the Aperture Walls of the Stencil for an optimized Printing Performance.
- ▶ Large Reduction of the Stencil Underside Wiping Frequency providing Printing Cost Reduction and Improved Productivity.
- ▶ Yields higher printing Performance for Apertures with Area-Ration below 0.6
- ▶ Improve Efficiency of Paste Transfer by 10 to 40%
- ▶ Reduces potential bridging of adjacent Pads
- ▶ More uniform Paste Prints
- ▶ The Bright Colored Coating provides an unmistakable visual confirmation of the actual use of a Gemix Nano Stencil
- ▶ Chemically inert, it comply with REACH and RoHS Directives
- ▶ Recommended Stencil Foil Material : Stainless Steel SUS304 or even better SUS301



Technical Specifications

Attributes	Values
Visual Appearance	Yellow
Coating Thickness	2-4 µm
Specific Weight @25°C	1.5g/cm ³
Wetting Angle	103 - 105°
Wetting Angle (n-hexadecane)	62 - 64°
Abrasion Resistance - ASTM D2486 - Isopropyl Alcohol	> 2000 cycles
Surface Resistivity	> 10.E12 ohm per Squarre
Ionic Content (ROSE)	0 µg de NaCl / litre
Coating Hardness	> 9 H
Ionic Contamination transferred to PCB (after printing)	Not Detectable
Ionic Contamination transferred to PCB (after reflow)	Not Detectable

* Developed and licensed by Florida CirTech

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Gemix Nano Coating

Cross compatibility with Cleaning Agents

The Gemix Nano is very robust and withstands contact with most chemicals. In no occasion your cleaning agents will deteriorate service life of the Gemix Nano Coating. The following of chemicals have been tested and 100% approved.

KYZEN :

- Aquanox A8820
- Aquanox A8830
- Aquanox A8831
- Cybersolv C3400
- Cybersolv C8622
- Cybersolv C8882
- KYZEN E5611
- KYZEN L5314
- KYZEN E5615

Zestron :

- Vigon SC200
- Vigon SC202
- Vigon SC210
- Vigon UC160
- SD100
- SD301
- SW

Petroferm :

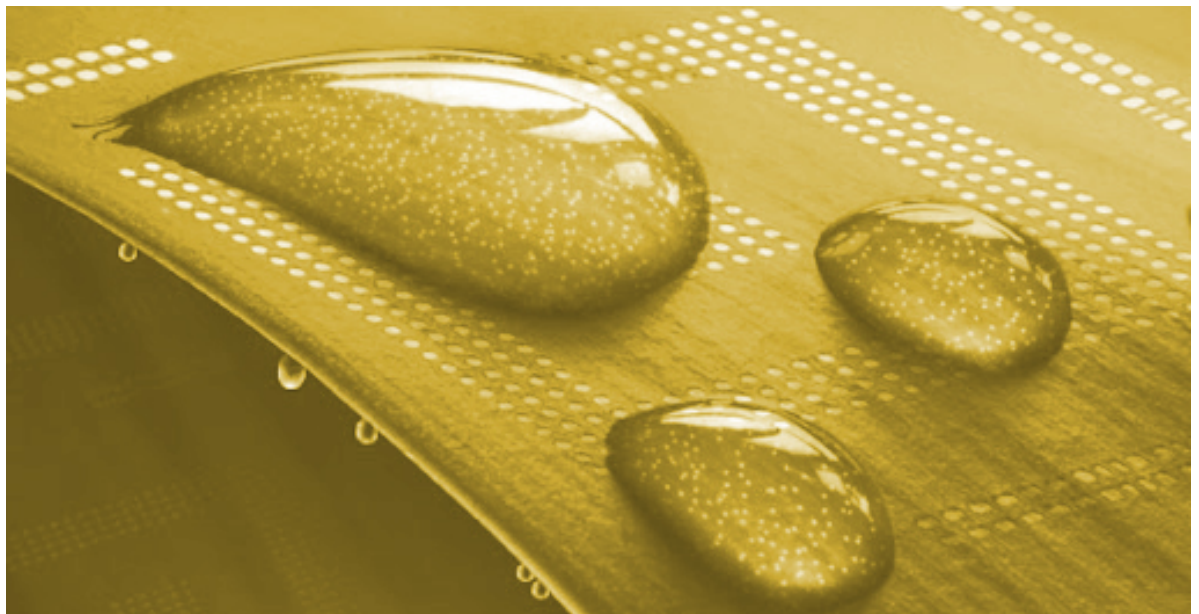
- Axarel 2200
- Bioact SC-10
- Bioact SC-22
- Hydrex A-Plus
- Hydrex SP-50

Simple Green :

- Stencil Cleaner

Smart Sonic :

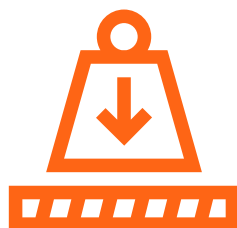
- 440-R SMTDetergent



Improvement of the
paste transfer
efficiency



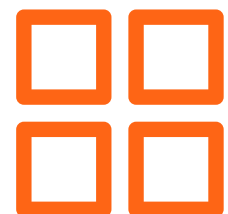
Durable and wear
resistant coating



Reduction of
understencil
wiping necessity



Improvement of
paste release

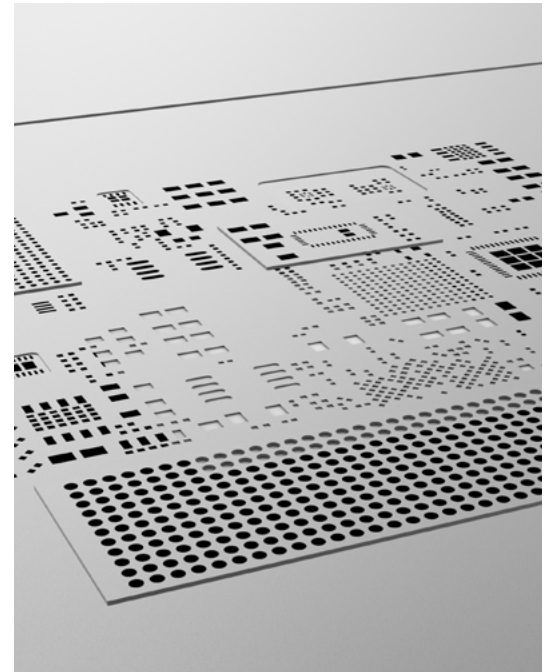


Step Stencils

Thanks to the investments related to 3D machining and cutting technologies, unique on french market, Gemaddis has enlarged its global offer in terms of application and production perspectives for the customers, in particular in the field of precision machining industry, micro-mechanics and watchmaking. The 3D cutting of stencils offers an **improved accuracy** during **paste transfer** through smaller and **smaller apertures** associated to denser board designs and allows sufficient **paste quantity** for every single pad location. In order to better cope with the specific demands of the customers, technicaly and financialy speaking, Gemaddis has developped a full range of stencil products under the generic name **GEMIX**, a new concept of multi-level stencils:

GEMIX2D : **2 Level** stencil using 2 different thicknesses on the same foil (without any limitation on the apertures count) matching the requirements of local constraints specific to one or more components.

GEMIX3D : **Multi-Level** stencil including more than 2 different thicknesses, on either one side or both sides of the foil for complex board designs

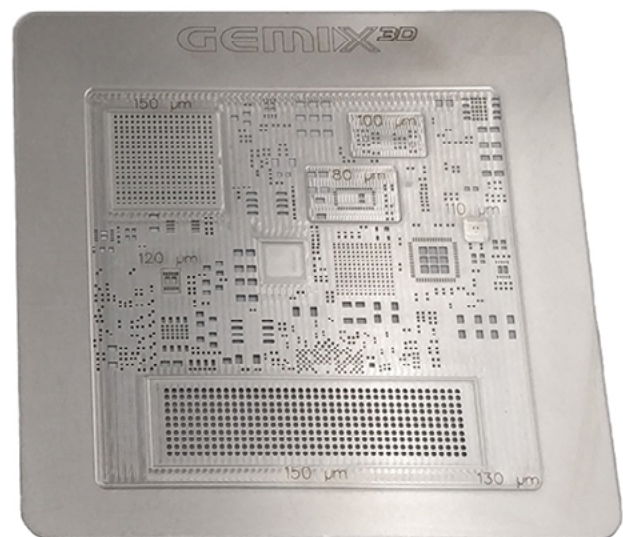
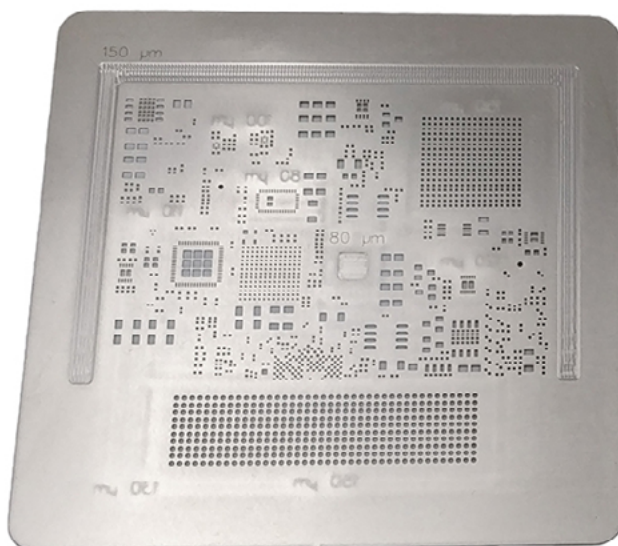


GEMIX^{2D}

GEMIX^{3D}

Bottom face

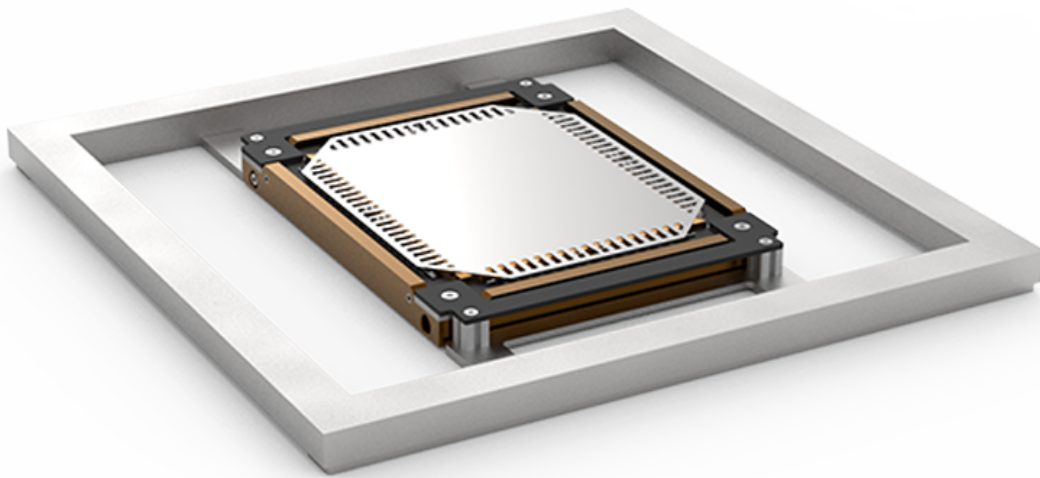
Top face



SM1210 Self-Tension Frames

Gemaddis has developed the **SM1210 Frame** for **small batch** and **prototypes** specific needs. Its frame is **compatible with all the printing machines** available on the market.

This system bring full **benefits** of an **automated printing process** while **saving overall cost**.



Features & benefits

- ▶ Tension on 4 sides with Hook-feature System, Tension by Springs and Air-Pressure Release
- ▶ Suitable for small batch Production and Prototypes
- ▶ Switch to Medium or Large Scale Production without line reconfiguration
- ▶ User Printable Area : 107 x 160mm
- ▶ Stencil Price
- ▶ Ease and Speed of Tool Change (SMED)
- ▶ Compatible with every Printing Machine (no longer stick to manual Printing)
- ▶ Life time Warranty
- ▶ Stencil Delivery Lead Time : 48 - 72h



Discover our website

Online stencil configurator
Machine catalog
Access your history in 3 clics : your orders,
invoices, delivery notes...
Order your spare parts and consumables

**INDUSTRIAL EQUIPMENT DISTRIBUTOR WITH HIGH TECHNOLOGICAL
ADDED VALUE FOR THE ELECTRONIC INDUSTRY**



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