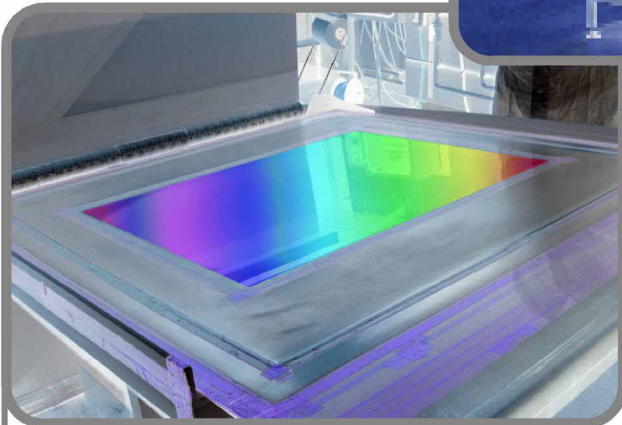


Electroforming



High precision replication

3D AG has state-of-the-art electroforming capabilities, enabling high-precision replications into Nickel metal of almost any micro- and nanostructures, especially holographic gratings. 3D AG's electroformed plates are being widely used for over 15 years as embossing shims in the holographic industry, for the UV-embossing casting of antireflective foils and for injection molding.

Sizes

Standard up to 1200 mm x 1200 mm, up to 2000 mm x 1200 mm on request

Thicknesses

From 25 micrometers up to 10 millimeters

Metal properties

Pure Nickel, hardness approx. 200-300 HV, weldable, no internal stress

Base materials

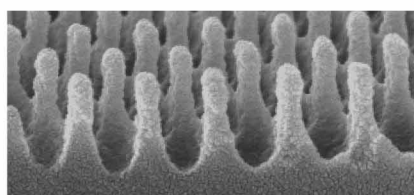
Nickel can be electroformed from various flat substrates, such as Nickel, brass, copper, steel, stainless steel, glass, PMMA, PC, epoxy-resins, titanium, etc. It is of paramount importance that the base material which is supplied by the customer is clean (no residues like grease, oil, etc.)

Shim engineering

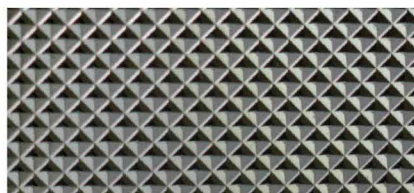
We also provide engineering services for your shim design needs, depending on your specific application. The range of applications for shims we are familiar with is broad, e.g. holographic foil embossing, injection molding, metal stamping, UV-casting. You may therefore involve us at the very beginning of your projects to ensure optimal results when using our tools.

R & D

Electroforming being one of our core competencies, we are always exploring new technical possibilities for our processes and products. Almost all development work is being done in-house, but we are also connected to a network of specialized companies and research institutes. If you have any special application where our development skills are needed for your R&D fields, do not hesitate to ask us.



Motheye nanostructure for antireflective applications



Large format Pyramid array injection molding tool