TensoStamp for Nanoimprint

Leave your imprint on the future

nb technologies
consulting engineers

TensoStamp is a new type of stamp for imprint and embossing applications.

TensoStamp uses a perforated metal foil as a carrier for the master imprint pattern. The metal foil is attached to a flexible mesh and suspended in a frame. One function of the perforation is to anchor the master imprint material with the foil. As another advantage, the perforation enables lithography techniques, such as Nano-Imprint lithography (NIL).

Flexibility

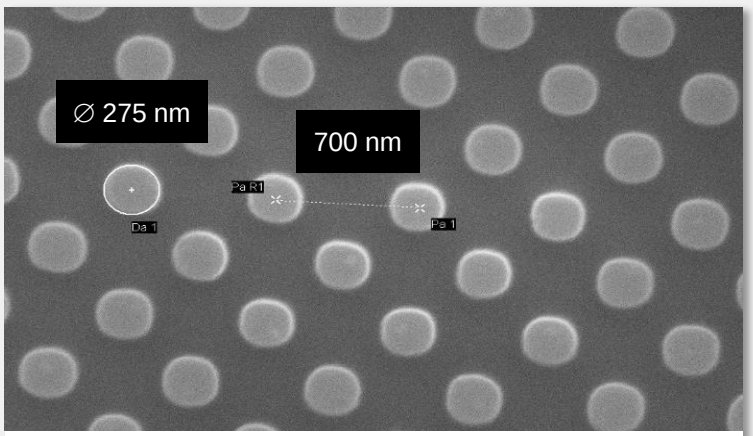
Due to the flexibility and the suspension of the carrier the demolding of the stamp from the imprinted layer is facilitated, as the peeling-off involving favorable sheer forces automatically starts from the edges of the imprint pattern area when the suspension frame is removed from the printed surface.

Distortion-free

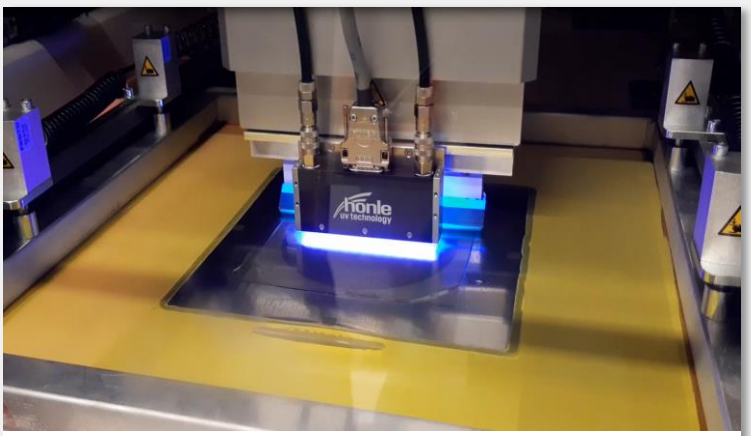
As the metal foil is not elongating during the imprint process, the TensoStamp is **distortion-free**, while keeping the advantageous flexibility for the demolding stage.

Simple application and low cost

TensoStamp can be applied for nanoimprint using basic lab tools. Based on established screen printing tools, the lithography with UV-light can be easily upgraded, which makes nanoimprint technology available at levels of complexity like screen printing.



Imprinted dot pattern



TensoStamp mounted in printing machine

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