STENSBORG

ROLLING NANOIMPRINT LITHOGRAPHY (RNIL)

Why choose Roll-To-Plate (R2P) technology?

THE R2P METHOD

Roll-to-Plate nanoimprint lithography is a roller-based imprinting method consisting of a roller mechanism and a rigid surface plate connecting in a contact line called a "nip".

In R2P, the template is mounted on the roller, and the resin-deposited substrate is placed on the plate. When in contact, the mould installed on the roller imprints its structures onto the sample, replicating its pattern.

Desktop R2P Nanoimprinter: A patented rolling imprinting method developed at Stensborg

A unique optical engine was designed to improve the nanoimprinting experience of researchers and manufacturers who sought an exact yet flexible method.

Present in our Desktop R2P Nanoimprinter, this clever optical engine design allows the user to customise the right amount of UV-light intensity in the nip, resulting in a high-speed, continuous RNIL process without compromising throughput quality.

THE ADVANTAGES OF ROLL-TO-PLATE SOLUTIONS

➤ Higher Replication Fidelity

This process avoids the trapped air bubbles and contamination issues common in other imprinting methods without compromising quality.

➤ Less Imprinting Force

This allows multiple patterning without damaging the mould and the sample.

➤ Faster Testing and Prototyping

We can introduce more rapid trials and demo runs through a compact, easy-to-use and flexible machine: Desktop R2P NanoImprinter.

➤ Smaller Entry Cost

This permits various scalable parameter testing with reduced investment and waste.

WHICH SECTORS CAN BENEFIT FROM OUR TECHNOLOGY?

Academia

Nanoimprint Lithography experimentation for students or early-stage research in development laboratories.

Sustainable Energy

Photovoltaics early-stage experimentation and Holographic Optical Element-based applications for Solar Energy.

Communication

Parameter testing for scalable micro or nano-optical devices in the Electronics, Optics and Semiconductor industries.

Medical

Prototyping of structures for lab-on-a-chip applications or biomedical research.

Contact us today if you are looking for an experienced partner for your Nanoimprint Lithography projects: info@stensborg.com.