



# HERCULES®

## Lithography Track System



### Introduction

**The HERCULES® is a high-volume platform integrating the entire lithography process flow in one system, reducing process footprint and operator support.**

Based on a modular platform, the HERCULES combines EVG's established optical mask alignment technology with integrated wafer cleaning, resist coating, baking and resist development modules. The HERCULES enables cassette-to-cassette processing of various wafer sizes. The HERCULES safely handles thick, highly bowed, rectangular, small-diameter wafers or even device trays. Precision top-side and bottom-side alignment as well as coating of sub-micron to ultra-thick (up to 300 microns) resists can be applied for interlayer and passivation applications. The superior alignment stage design achieves highly accurate alignment and exposure results at high throughput.

### Technical Data

Alignment modes	- Top side alignment: $\leq \pm 0,5 \mu\text{m}$ - Bottom side alignment: $\leq \pm 1,0 \mu\text{m}$ - IR alignment: $\leq \pm 2,0 \mu\text{m}$ / substrate material depending
Advanced alignment features	- Manual alignment - Automatic alignment - Dynamic alignment - Alignment offset correction - Automatic cross correction / manual cross correction - Large gap alignment - Darkfield alignment / FCMM (Full Clearfield Mask Movement)
Industrial automation features	Cassette / SMIF / FOUP / SECS/GEM / thin, bowed, warped, edge wafer handling
Exposure source	Mercury light source / UV LED light source
Exposure setup	Vacuum contact / hard contact / soft contact / proximity mode / flex mode

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### Features

- Production platform combines all advantages of EVG's precision alignment and resist processing systems in a minimized footprint
- Versatile platform supports fully automated processing of various substrate shapes, sizes, highly warped mold wafers and even trays
- Coating of up to 52,000 cP enables manufacturing of ultra-thick resist features of up to 300 microns in height
- CoverSpin™ rotating cover for low resist consumption and optimized resist coating uniformity
- OmniSpray® coating for optimized coating of high topography surfaces
- Optical edge exposure and/or solvent cleaning for edge bead removal
- Fragile, thin or warped wafer handling of multiple wafer sizes with bridge-tool system
- Rework sorting wafer management and flexible cassette system
- Multi-user concept (unlimited number of user accounts and recipes, assignable access rights, different user interface languages)

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