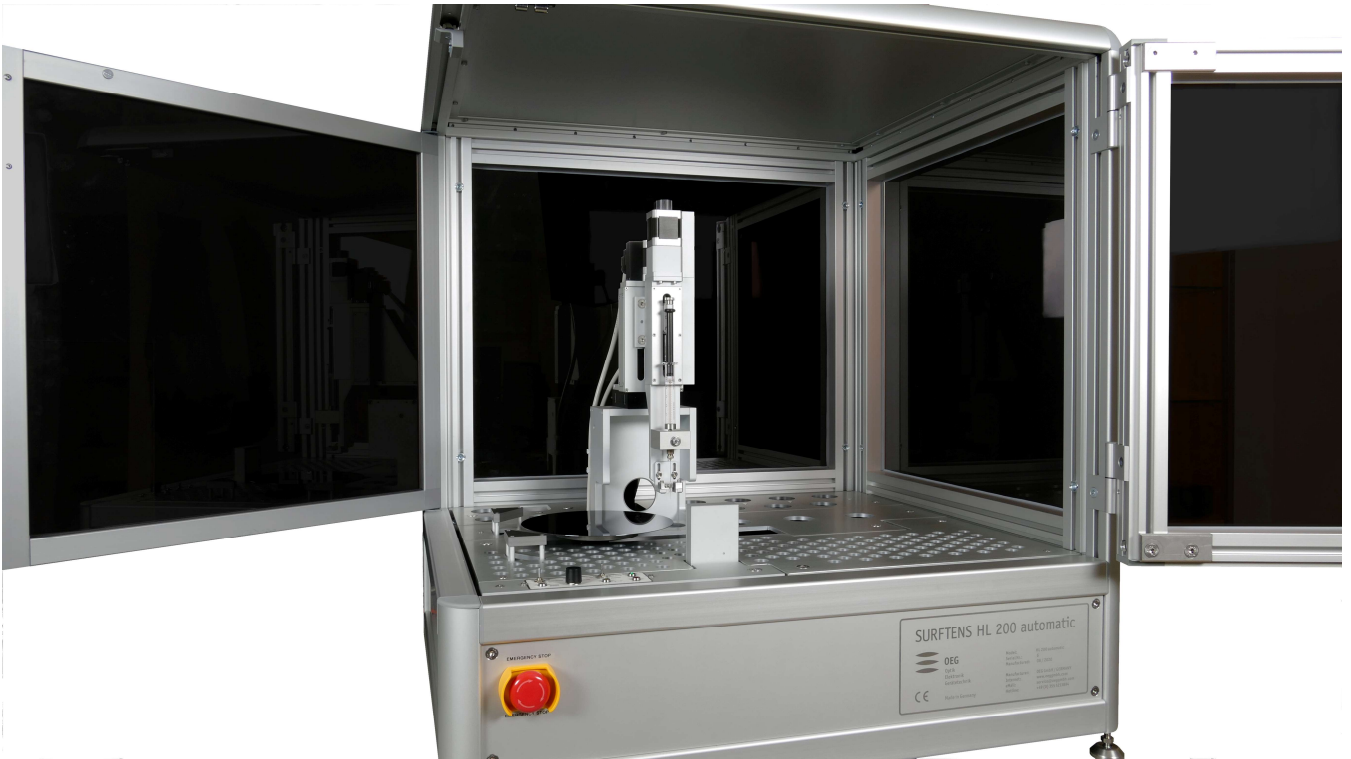


SURFTENS HL automatic

Fully automatic contact angle measuring instrument for wafers up to 12"

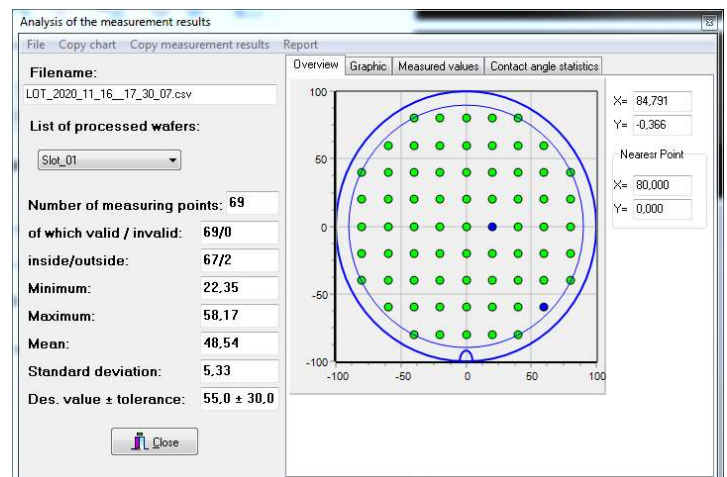


Features

The contact angle measuring system **SURFTENS HL automatic** is designed for use in semiconductor industry and research, in particular for process control of wafer coating and in the photolithographic process.

It is characterized by the following features:

- fully automatic contact angle mappings
- space-saving construction
- motorized wafer table x/phi for automatic sample positioning
- motorized, automatic dosing unit
- automatic drop placement
- software controls fully automatic measuring sequence
- comfortable documentation of the measuring results in protocols and in the video images



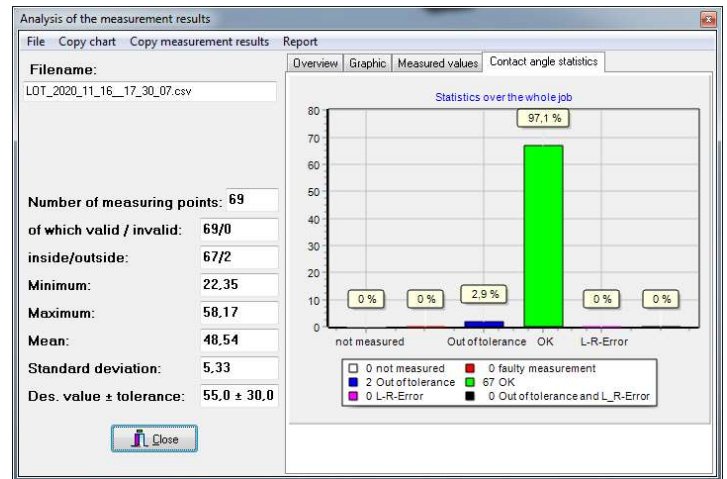
Fastest measuring of contact angle and homogeneity

SURFTENS HL automatic has been specially developed for use in clean-rooms where it excels due to small size, short cycle time and simple operation.

The stepping motor driven x/phi-stage allows the contact angle measurement at any point on the wafer quickly.

SURFTENS HL automatic measures the homogeneity of surface properties in only a few seconds. Print-out of the measuring results is just as simple and fast, and data can be transferred to QA software or configured for other formats.

Statistics on all wafers of the entire job are displayed on the tab "Statistics marginal angle"



Highest accuracy with automatic measuring functions

The drop of test liquid is produced by the automatic dosing unit.

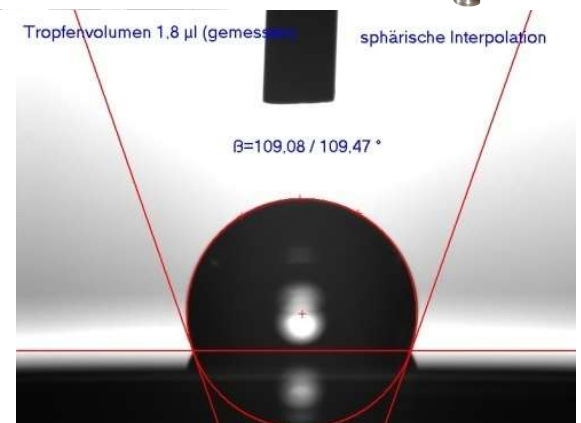
The image of the drop appears immediately as a high-quality, live video picture at the PC screen. Measuring is started by a single keystroke. The software determines the contact angle and immediately presents it graphically as with numerical data included. Fast measuring times of only 1 second per drop exclude errors. **SURFTENS HL automatic** guarantees highest reproducibility and measuring accuracy combined with ease of operation. In the case of poor contrast images, a manual measuring function can be used.



With SURFTENS HL automatic you solve your adhesion problems

Surface free energy (SFE) of substrates and layers used in semiconductor technology can be investigated by contact angle measurement. Measuring the contact angle allows you to quickly optimize new process steps as well as to better standardize known processes. Small changes in the surface property of wafers are seen as large, easily detected changes in the contact angle.

A small investment of time used to measure the contact angle can give a large return by avoiding later production problems. To reduce defect density and feature sizes of resist



structures $<1\mu\text{m}$ a good adhesion of the resist is necessary. By help of contact angle you can control the adhesion very easily.

Other contact angle measuring equipment for semiconductor industry

SURFTENS HL manual

SURFTENS HL is a manual contact angle measuring system for Si-Wafers. It can be equipped with manual or motorized dosing unit.



SURFTENS WH 300

SURFTENS WH 300 the master tool for contact angle measurement in 300mm wafer technology.

The **SURFTENS WH 300** is typically equipped with:

- 3-axis wafer robot
- Loadport for 300mm FOUP's
- Filter Fan Unit
- 1 automatic direct dosing system
- tank for automatic refill up to 10x

Optional equipment:

- dosing system for 2. Test liquid
- 200mm bridge tool
- SECS/GEM interface

