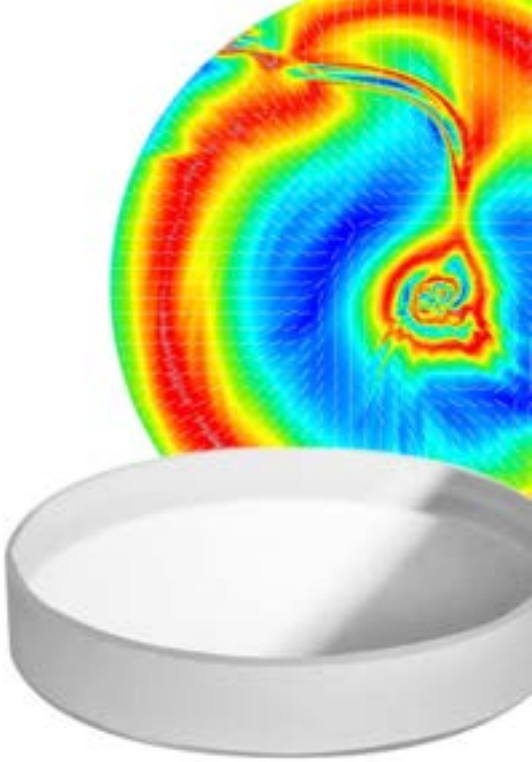
# StrainScope
## Stepper



**Real-time polarimeter for fast and precise measurement of the stress birefringence in large-format optical materials and components**

Internal stresses affect the mechanical and optical properties of products made of glass and plastics, both in the manufacturing process as well as in the further processing.

With the StrainScope® Stepper you can measure residual stresses with high spatial resolution precisely and reproducibly – in real time and including orientation (azimuth angles). The telecentric optics enable the measurement of even thick materials without parallax errors and the measurement of residual stresses in materials with intrinsic birefringence. The motorized positioning stage features automatic stitching of larger samples up to 220 x 220 mm².

The convenient archive function ensures that all measurement results are fully documented.

### Features and Benefits

- ✓ Fast and easy operation
- ✓ Integrated XY positioning table with automatic stitching
- ✓ Objective, reproducible and precise measurement results
- ✓ Complete traceability through automatic result documentation

# StrainScope®
## Stepper 200

## Technical Data

| | |
|---|---|
| Operation | external Windows PC with 27“ monitor, keyboard/mouse |
| Illumination | LED array (diffuse), circularly polarized |
| Image acquisition | matrix camera with telecentric lens |
| Image resolution | 1000 x 1000 pixels up to approx. 2800 x 2800 pixels |
| Measuring field size | approx. 78 x 78 mm up to approx. 220 x 220 mm |
| Lateral resolution | approx. 0.078 mm |
| Measuring results | optical retardation (nm)<br>normalized retardation (nm/cm)<br>integrated stress (MPa) |
| Measuring range | approx. 0 to 120 nm optical retardation |
| Measuring resolution | approx. 0.1 nm optical retardation |
| Data interface | USB 3.0 |
| Power supply | 100–240 V (AC), 50/60 Hz, 100 VA (max. 1.1 A) |
| Operating conditions | 15-30 °C, 30-70 % relative humidity, non-condensing |
| Dimensions | approx. 800 mm (H) x 480 mm (W) x 530 mm (D) |
| Weight | approx. 45 kg (excl. PC) |

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