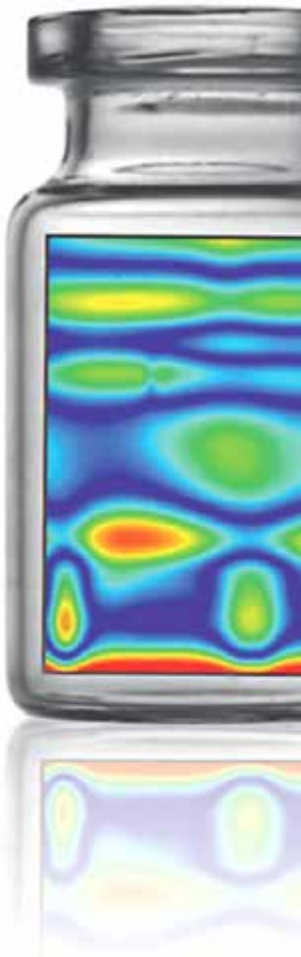
StrainScope

Pharma Tester

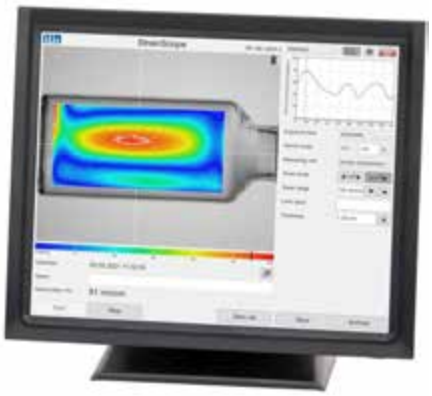


Real-time polarimeter for fast and precise measurement of residual stresses in pharmaceutical glass packaging

The breaking strength of glass products is strongly influenced by internal mechanical stresses. This is particularly important when the products are exposed to mechanical loads or strong temperature fluctuations. In the case of pharmaceutical primary packaging made of glass such as vials, syringes and ampoules, the constant testing and monitoring of residual stresses is therefore an important part of quality control – during production at the glass supplier, but also as an incoming inspection in the pharmaceutical industry.

The StrainScope® Pharma Tester, specially developed for this measurement task, delivers objective and precise measurement results. An automatic device rotates the test specimen and thus reliably and reproducibly identifies the maximum value of the residual stress – in just a few seconds.

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



Features and Benefits

- ✓ Fast and easy operation
- ✓ Objective, reproducible and precise measurement results
- ✓ Consistently high product quality through testing close to production
- ✓ Avoidance of customer complaints
- ✓ Complete traceability through automatic result documentation

StrainScope®
Pharma Tester

Technical Data

Operation	external Windows PC with 17“ touch screen
Illumination	LED array (diffuse), linearly polarized
Image acquisition	matrix camera with telecentric lens
Image resolution	1000 x 600 pixels
Measuring field size	approx. 100 x 60 mm
Lateral resolution	approx. 0.1 mm
Measuring results	polarization angle (°) optical retardation (nm) normalized retardation (nm/cm, nm/mm, nm/in) integrated stress (MPa, psi)
Measuring range	approx. -280 to +280 nm optical retardation
Measuring resolution	approx. 1 nm optical retardation
Measuring frequency	up to 25 Hz (depending on PC performance)
Interfaces	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 350 mm (W) x 370 mm (D), excl. PC
Weight	approx. 31.3 kg (excl. PC)

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