Grazing Angle Surface Polarimeter, GASP®
For surface stress measurement in glass products.

PURPOSE
The GASP®, or Grazing Angle Surface Polarimeter, is an optical instrument designed to measure SURFACE STRESS in glass products. The procedure is nondestructive, accurate and simple, suitable for in-plant or field testing of actual glass products.

GASP uses:

Tempered Glass
- to control tempering level and get feedback for tempering furnace adjustment.
- to avoid over-tempering and thus increase capacity and reduce spontaneous breakage risk.
- Factory Production Control according to EN 12150-2, after necessary correlation tables between surface stress and mechanical strength has been established.

Heat Strengthened glass:
- to control surface stress level and get feedback for furnace control.
- Factory Production Control according to EN 1863-2, after necessary correlation tables between surface stress and mechanical strength has been established.
- Production Control per ASTM C 1279 in conformance with ASTM C 1048.

Annealed glass, windscreens, TV glass
- to measure residual stress after annealing.
- to control required compressive surface stress on windscreen at areas where average stress is tensile.

The GASP is designed to measure on the “tin side” of float glass. We also provide a selection of UV lamps which are useful for identifying the tin side.
**Grazing Angle Surface Polarimeter, GASP®**

![Diagram of Grazing Angle Surface Polarimeter](image)

**Model options and accessories**

Depending on the usage described before there are 2 basic models, that both come with several options to accommodate every need:

- Standard GASP for flat surfaces, or for slightly curved surfaces
- GASP-CS for curved and flat surfaces

These two versions can be equipped with a fiber-optic or laser light source.

Both versions come with a standard sensitivity quartz measuring wedge. For low stress products, such as annealed glass, windshields or TV panels, there is a high sensitivity wedge which doubles the measurement resolution. Both wedge types are interchangeable and may be used with the same instrument.

Both GASP models can be equipped with a video head and connected to a black/white monitor. Video-GASP is available separately or as an upgrade to a regular GASP.

The video GASP and laser GASP with video option, can also be used with our automatic stress mesurement software AMAYA.

All GASP instruments are supplied as complete kits, equipped as follows:

- **INSTRUMENT OPTICAL ASSEMBLY**
- **STANDARD «QUARTZ» MEASUREMENT WEDGE**
- **INDEX FLUID (30 cc)**
- **CARRYING CASE**
- **AC POWER SUPPLY/RECHARGER**
- **BATTERY PACK (Laser model only)**
- **MANUAL WITH CALIBRATION CHART**
In addition to the standard laser GASP, there are the following options available:

**LCD GASP**

The solution for applications where a large volume of measurements are made daily. The LCD-GASP is battery-operated and replaces the standard eyepiece with a CCD video camera and a built-in 3-1/2" LCD display to eliminate operator eye fatigue and parallax errors.

Available as a standalone LCD-GASP or as a LCD-GASP conversion kit to an existing laser-GASP/laser-GASP CS.

**Auto GASP II**

the auto GASP II is the best solution for measuring building glazing according the EN-12150, EN-1863, ASTM C1048 and C1279. All the measurements are made using our proprietary software. This eliminates all operator errors, and allows for easy storing of all measurement results.

Includes a touchscreen, and a SD card to store the measurement information.

Available as a standalone Auto-GASP II or as an upgrade kit for owners of standard Laser GASP instruments.
available accessories:

**Calplate**

A calplate is a Glass reference standard with certified surface stress value. This enables for verifications of the GASP instruments measurement accuracy. In addition it is an ideal tool for operator training.

Available for standard and high-sensitivity GASP wedges

**GASP-Station**

The GASP-STATION accessory is a portable benchtop platform that safely holds any Laser GASP surface polarimeter when out of its carry case and not in use. It protects the instrument’s prisms from accidental damage, while providing a built-in connection for charging the battery pack from an ac outlet. It also comes with a refillable plastic dispenser bottle and convenient holder for GASP index matching fluid.