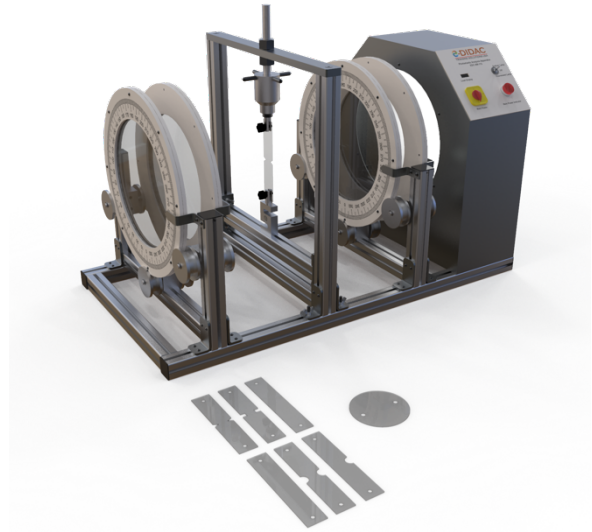


Photoelastic Analysis Apparatus (Polariscope) (EDC-SM-113)

EXPERIMENTAL DATA:

- Observe plane stress states in different shapes under tensile and compressive load
- Stress distributions with linear or circular polarised light
- Demonstration of photoelastic fringe patterns: stress concentrations, zero points, neutral strands, areas of constant stress and stress gradients



DESCRIPTION:

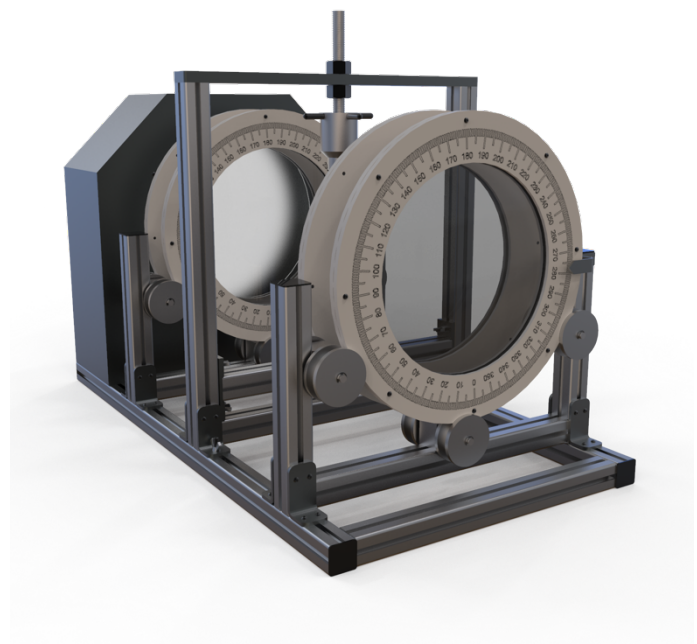
This stand-alone benchtop experimental unit allows students to demonstrate the phenomenon of photo-elasticity. Complex stress states on different models can be analyzed with the help of linear and circular polarised lights. Tensile as well as compressive load can be applied with the help of load assembly with an electronic load cell which measures the load applied in either direction.

The apparatus comprises of a light source, linear polarising filters, two quarter-wave filters for circular polarisation and a load frame in which the models are attached and load is applied. Light source can switch from a white light to monochromatic light for coloured or light/dark stress patterns. The polariser includes a polarising filter and a quarter-wave plate and generates circular polarised light. Behind the model is a second quarter-wave plate (perpendicular to the first one), which is combined with a second polarising filter. These form the analyser. The filters are mounted on rotating bearing wheel and fitted with angle scales.

A wide range of test models such as circular and rectangular plates, notched bars, crane hook and wrench is available as accessories. These ensure the implementation of comprehensive experiments. It is also possible to investigate your own models.

TECHNICAL SPECIFICATIONS:

- Sturdy aluminum frame
- White and monochromatic light
- Angular scale for polarizing and quarter wave filters
- Calibrated load cell
- Light Source:
 - Fluorescent tube and incandescent bulbs for white light
 - Sodium vapour lamp for monochromatic light
- Filters mounted in glass
 - 2 polarising filters (dark olive)
 - 2 quarter-wave filters (uncoloured)



RELATED LAWS:

- Photo-elasticity
- Fringe patterns
- Isochromates
- Polarization
- Stress distribution
- Quantitative stress analysis

SCOPE OF DELIVERY:

- 1 x EDC-SM-113
- 5 x Test models
- 1 x Instructional Manual

WEIGHT AND DIMENSIONS:

- L x W x H (mm): 1000 x 600 x 600
- Weight (approx): 32 kg