TRIOPTICS
TRIOPTICS GMBH · OPTICAL TEST EQUIPMENT

OptiCentric®
AspheroCheck®

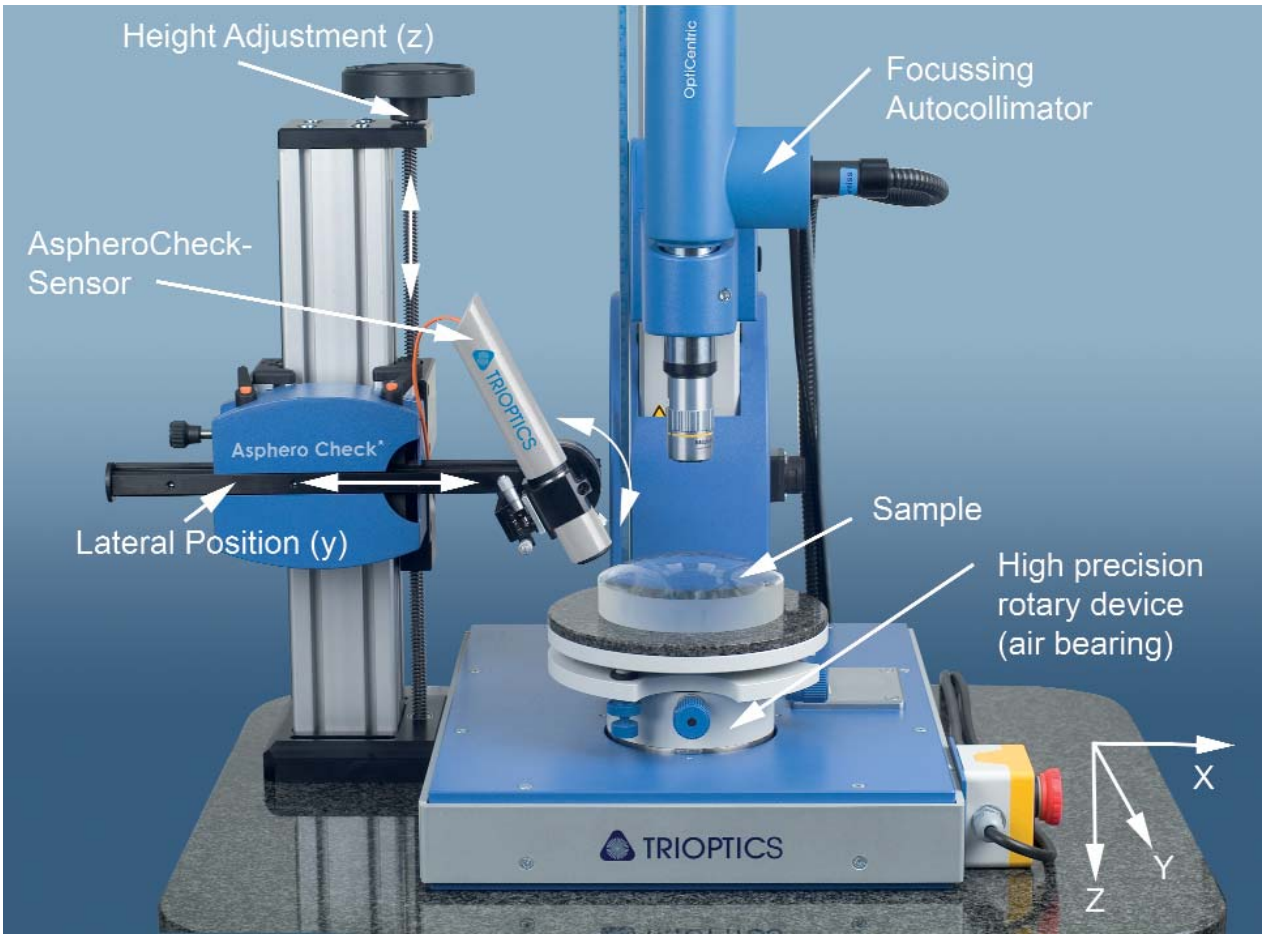

Fig. 1: AspheroCheck®

AspheroCheck® (Patent application 10 2006 052 047.5-51) is a hardware and software module designed to measure the tilt and shift of an aspherical axis with respect to a defined reference axis. This module is available as upgrade to the OptiCentric® System.

OptiCentric® is a device designed to measure the surface tilt error of spherical surfaces with respect to a reference axis. The measurement is according to the ISO 10110. OptiCentric® is able to measure the exact tilt of any spherical surface either of single lens elements or of fully mounted objective lenses.

For lenses featuring one spherical surface and one aspheric surface AspheroCheck® provides additional information about the tilt of the aspherical surface with respect to the same axis of reference. Taking into consideration the measurement results of both surfaces of the lens element, the tilt of the asphere with respect to an optical axis (fig. 2a) can be calculated.

When both surfaces of the sample have aspherical shape, the tilt and shift between both aspherical axis can be calculated (fig. 2b).

The procedure includes a first measurement of the top surface with respect to a given reference axis. In order to measure the second surface, the sample has to be replaced on the holder upside down. The measurement data provides the angle and the shift between the axes of both aspherical surfaces. The shift is measured in the vertex plane of one surface.

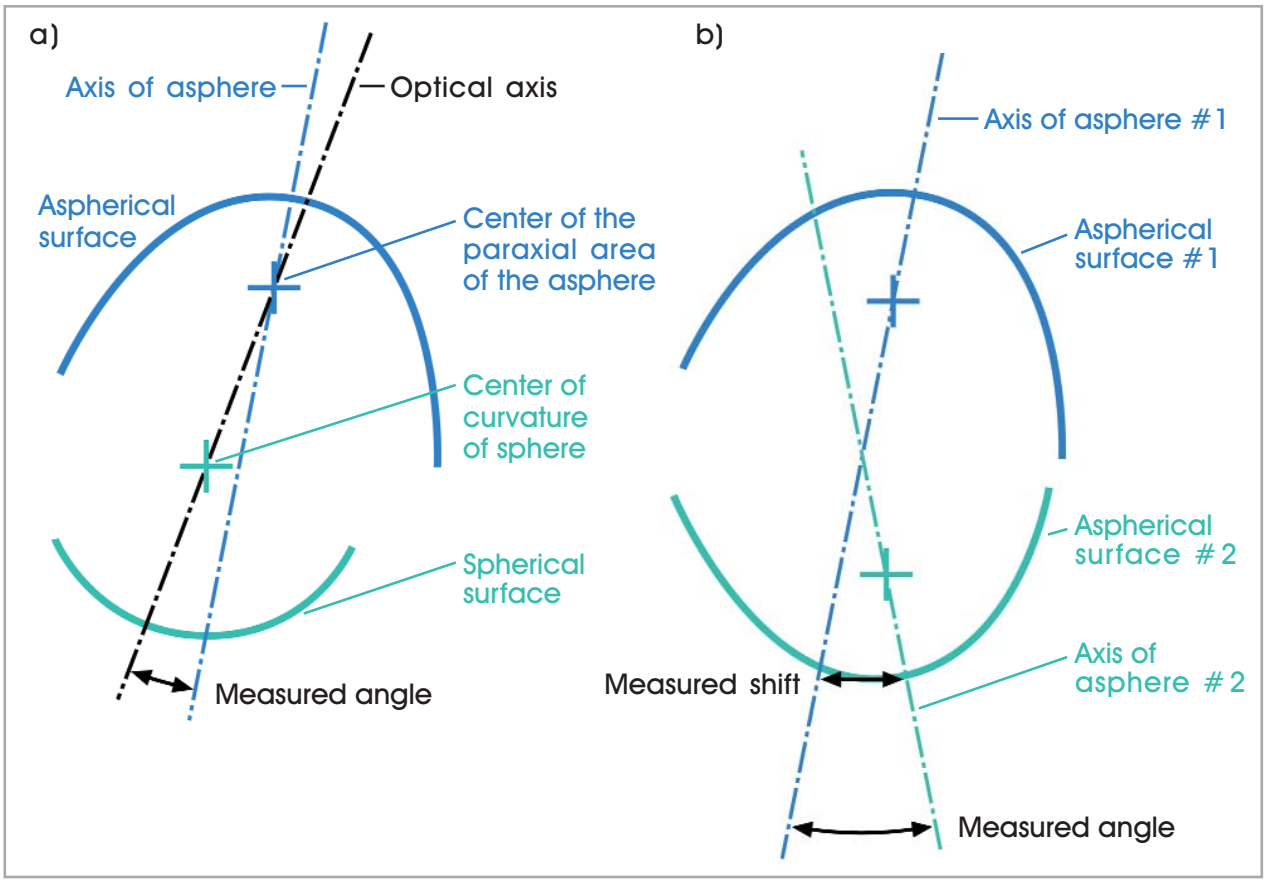

Fig. 2: a) Lens with aspherical and spherical surface.

Fig. 2: b) Lens with two aspherical surfaces

Specification:

Diameter Sample: . . . . . 1...150 mm
Maximum Off-Axis-Angle: . . . . . 90°
Absolute accuracy of the distance sensor: . . . <0.05μm

TRIOPTICS

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