

## Wedge Angle Sensor KWS160



The Wedge angle measuring instrument **WedAS 160** serves for the measurement of wedge angle and radius of curvature, for instance for automobile windshields. The use for any other glass substrates is possible.

In the automotive manufacture the parameters wedge angle and surface curvature have meaning if with the help of special projectors important informations are in-reflected into the field of view of the driver. If the parameters deviate noticeably from the demanded values, double pictures or indistinct pictures can develop, which make the projection system useless.

The measuring head essentially contains a motor focussable autocollimator with a CCD-camera and the LED lighting. The autocollimation system serves for the measurement of the windshield wedge angle and surface curvature.

The autocollimator is usually focused on "infinity", since the autocollimation picture develops only as reflection at flat surfaces.

If a spherical surface is to be brought in autocollimation position, is to be focused on their center of curvature.

The focusing takes place in the **WedAS 160** via motor shifting of the front lense by autofocus or by joystick. From the change of position of the front lense concerning the infinite position the surface radius can be computed.

The measuring head contains a low-noise miniature CCD camera with high resolution. The controlling of the stepper motor in the measuring head as well as the computation of the measured values takes place in the associated PC. This contains on the one hand the Frame Grabber, which digitizes the video signal of the CCD camera in real time, so that a live video representation on the PC monitor is made possible. On the other hand it contains the controller for the stepper motor.



Live-video picture of the measuring signal, red marked: measuring window

Operating elements:  
Mouse, joystick,  
keyboard, autofocus

specimen

Software surface for operation

The slit images can be focussed manually by means of joystick or automatically by autofocus. The image processing system computes the wedge angle of the glass and its radius of curvature from the visible double hair cross and the movement of the front lens.

### **Technical Parameters**

#### **Measuring function**

Wedge angle  
Radius of curvature

#### **Resolution**

0,01 arcmin  
0,1%

#### **Accuracy / Repeatability**

0,1 arcmin  
1%

**Dimensions** (H x W x D) in mm : 300 x 150 x 200

Weight : 5 kg