
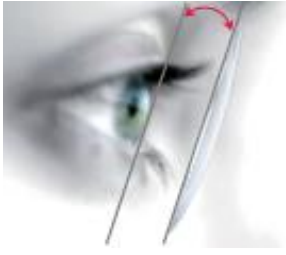


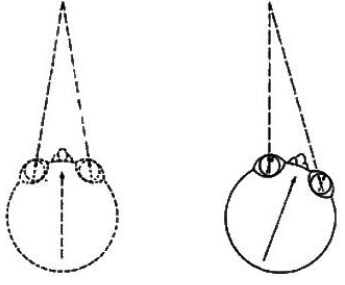
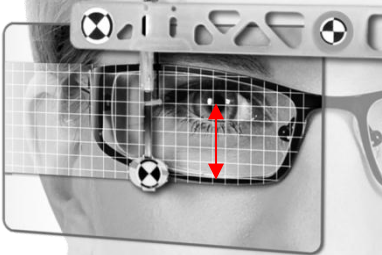


IPD		Interpupillary distance
CVD/BVD		Back Vertex Distance/ Corneal Vertex Distance
PA		Pantoscopic Angle
FFA		Face Form Angle (bending of the frame)
Headrotation		Head Rotation
y to box		Individual fitting height

Specification

Interpupillary Distance (IPD)

The interpupillary distance (IPD) describes the distance between the pupil centres having the principal visual direction and thus defines the distance of the eyes. The distance of the eyes are indicated in millimetres (mm). The distance can be recorded as total PD of e.g. 65mm or as single PD, e.g. right eye R32.5mm and left eye L32.5mm ($32.5\text{mm}+32.5\text{mm}=65\text{mm}$)

Back Vertex Distance - (BVD)

The back vertex distance defines the distance between the front face of the cornea/corneal vertex and the back side of the lens. Normally approximately 16mm. In case of contact lenses the distance is 0.

This distance has to be considered when examining the eyes and adapting spectacles. Ideally, the BVD determined during the eye examination should be the same as with spectacles.

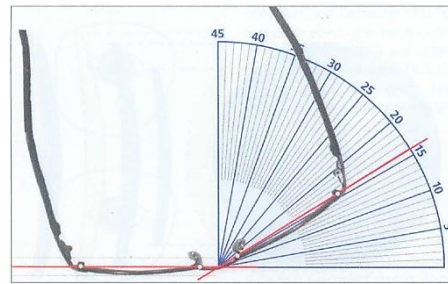
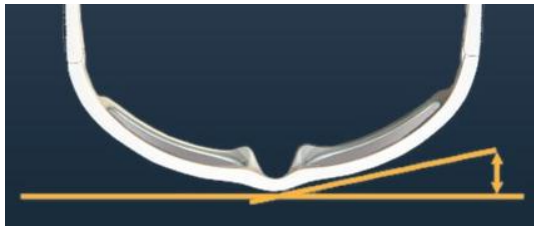
In case of individual lenses this distance information can be one of the required values in order to produce customized spectacle lenses.

Pantoscopic Angle of the Spectacles

The inclination of a frame impacts the visual comfort. Due to this, the inclination is considered when calculating the lenses. In case of adapting progressive lenses, the inclination has to be measured precisely. This requires well-adapting the frame in advance.

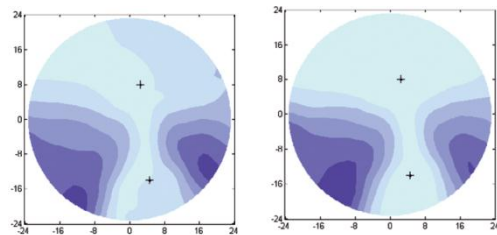
The Impact of the Face Form Angle (FFA)

Face Form Angle. This is the angle between the frame plane and the right or left lens plane of a spectacle frame. As shown in the figure below, the determination of the face form angle is indicated as half angle. The visuReal® portable automatically shows the total angle and considers the base curve value of the lens at the same time.



The face form angle indicates the angle, by that the lens plane is bent in relation to the frame plane.

The majority of the prescription frames have a face form angle of 4 to 6 degrees. This satisfies the up to now considered standard value of 5 degrees. The consideration of an individual value now allows another optimization of the spectacle lens. In order to make clear the impact of the face form angle, the figures show a very big face form angle of 15 degrees. Both show the lens design when having a face form angle of 15 degrees. In the left picture, there was only considered a standard value. In the right picture the face form angle is included into the optimization, thus the big ranges of vision are usable without limitation.



Head Rotation

When taking a front-view picture with visuReal® portable, the head rotation is considered automatically and all measurement values are corrected by this value. Thus, the deviating convergence of the eyes is considered and all parts of the face are equalized calculationally.

Individual Fitting Height

The individual fitting height depends on the frame size, frame form and the fitting of the frame on the face. This has to be measured newly with each new adaptation of spectacles.

Here, the well-adaptation of the selected frame before determining the fitting height is necessary, too.