

Instructions for use Rodenstock Sport single vision lenses

For opticians

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Instructions for use Rodenstock Sport single vision lenses For opticians

When selling medical products, the adapter, hereinafter referred to as the optician, is obliged to inform the end user, hereinafter referred to as the spectacle wearer, about restrictions of use, preferably in writing.

Convince with your professional competence by informing your customer about relevant restrictions of use during your individual and personal consultation.

You can find important information on Rodenstock lenses at any time at <https://www.rodenstock.de/de/de/instructions-for-use.html>

1 Intended use

1.1 Purpose & target group

- Sport single vision lenses are lenses that have been specially developed for dynamic visual requirements in sports. They are used to correct customer-specific refractive errors such as hyperopia (long-sightedness), myopia (short-sightedness), astigmatism and positional errors of the eyes.
- Sport single vision lenses offer spectacle wearers a wide vision area..
- Sport single vision lenses are used for far correction. Depending on the accommodation ability of the spectacle wearer, Sport single vision spectacles enable him/her to see sharply at all distances up to near distances.

1.2 Design of Sport single vision lenses

1 Vision area for one distance

One single power over the entire lens. Sharp vision for one single distance, e.g. the distance (depending on the accommodation ability also up to the near).



Figure 1: Schematic structure of a Sport single vision lens

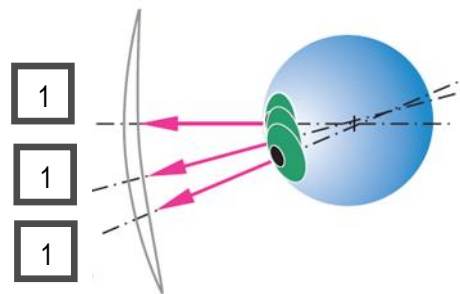


Figure 2: Vertical deflection of view when looking through a Sport single vision lens

1.3 Further information

Sport single vision lenses are optimised for the following wearing situations (variable tilt situation depending on e.g. base curve, frame, centre thickness reduction, individual parameters):

Possible ranges of values for Sport single vision lenses with individual parameters that can be ordered:

cornea vertex distance (CVD): 5 - 30 mm,

pupil distance (PD): 20 - 40 mm,

face form angle (FFA): -5° to 30°

pantoscopic tilt (PT): -5° - 20°

Standard Sport single vision lenses:

pupil distance (PD): 20 - 40 mm,

face form angle (FFA): -5° bis 30°

For these products, it is recommended to adjust the frame for a standard CVD of approx. 13 mm.

- Frame and centring data, base curve and axis are mandatory when ordering.
- Sport single vision lenses meet the criteria for roadworthiness prescribed by EN ISO 14889 and 8980-3:2013. They are therefore suitable for road use and driving in traffic and operating machinery.
- The satisfaction guarantee for Rodenstock Sport single vision lenses is only valid for the described intended use and with proper application.

2 Restrictions of use & foreseeable misuse

- For presbyopes, Sport progressive lenses are more suitable.
- Despite their partly higher curved shape, glasses with Sport single vision lenses are not safety glasses in the sense of EN 166 (personal eye protection).
- The points mentioned for restrictions of use and foreseeable misuse are only examples and do not claim to be complete. Reference is made to the contents of the chapter "Intended use" and "Correct use".

3 Correct use

- For an optimal calculation and correct centring, it is essential that the frame is anatomically fitted to the wearer's face. The individual parameters of the wearing situation (pupil distance, corneal vertex distance, partly pantoscopic tilt and face form angle) should be measured and the appropriate single vision lens selected. In order to maintain the full optical performance of the lens, the wearing situation must not be changed afterwards by the optician or spectacle wearer.

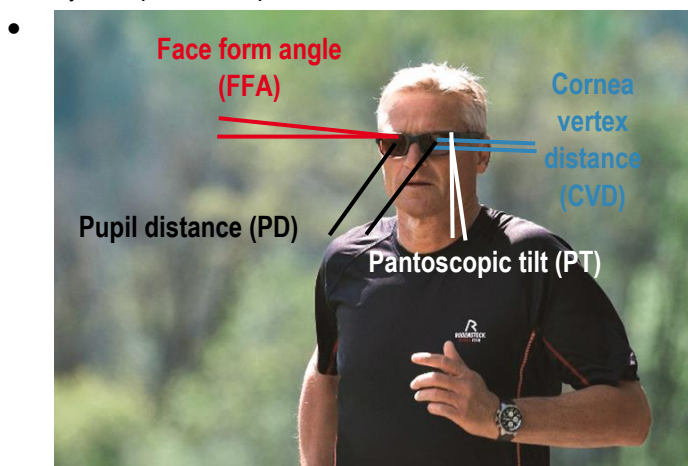


Figure 3: Individual parameters of the wearing situation

- All B.I.G. Exact and B.I.G. Norm Sport single vision lenses shall be centred so that the centring point aligns with the pupil centre with head and body in habitual position and zero viewing direction.
- Sport single vision lenses of the category Standard must be centred so that the optical axis of the lens passes through the eye rotation point Z' (eye rotation point requirement).
- The lenses must be fitted according to the specified centring specifications and the resulting spectacles must correspond to the order parameters, so that the respective calculations are optimally applied.
- The lens bag contains information on exact centring, e.g. the centring point distance e^{eye} and centring point height y^{eye} for the frame plane as well as the centring correction for prismatic lenses.
- For prismatic B.I.G. EXACT & B.I.G. NORM Sport single vision lenses, no decentration of lenses in horizontal or vertical direction is necessary when grinding. The centring correction on the lens bag is therefore always = 0. The centring of the lenses during grinding in the lens plane is carried out horizontally on the basis of the centring point distance e^{eye} and vertically on the basis of the centring point height y^{eye} on the lens bag.
- For prismatic Standard Sport single vision lenses, a decentration of the lenses is necessary in vertical but not in horizontal direction when grinding in. The horizontal centring correction on the lens bag is therefore always = 0, the vertical centring correction is > 0. The centration of the lenses in lens plane is carried out horizontally on the basis of the centring point distance e^{eye} on the lens bag, the centring vertically on the basis of the measured centring point height and centring correction on the lens bag.
- If the lens is tilted very much in the wearing situation (high face form angle and/or strong pantoscopic tilt), the centring data and in the lens plane may deviate from the values measured in the frame plane for pupil distance and height. The centring data for the lens plane e^{eye} and y^{eye} printed on the lens bag should be used for grinding.
- Sport single vision lenses are checked in accordance with ISO 8980-1 before delivery to the optician at the reference point to ensure that they are within tolerance. If the measured values of the lens at the distance reference point correspond to the verification values on the lens bag, taking into account the tolerance, the single vision lens is perfect for fullcorrection in the wearing situation.
- All Sport single vision lenses are provided with permanent markings (engravings). These serve to identify the manufacturer and the type of lens, as well as to reconstruct the reference point distance.
- All Sport single vision lenses are stamped.
- Further information on single vision lenses, such as the correct selection of the required product, depending on the requirement profile of the wearer, can be found in the current Rodenstock consultation programme and Rodenstock Tips & Technology Lenses.

4 Risks & side effects

- With higher curved spectacle frames, the plane of the frame does not coincide with the plane of the lens. The resulting angle between the two planes is called the face form angle (FFA).

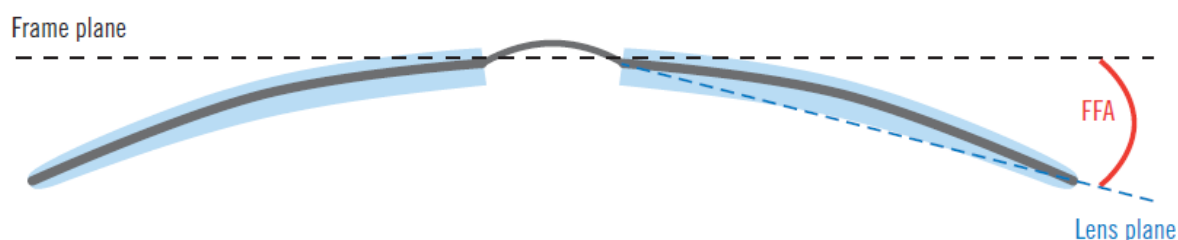


Figure 4: Face form angle

Due to the greater face form angle, the greater curvature of the lenses and depending on the frame and centring data, there is a certain tilt angle of the lenses in front of the customer's eyes. The tilt angle corresponds approximately to the face form angle when the viewing point coincides with the geometric centre of the lens. The greater the distance between these two points, the greater the difference between the tilt angle of the lenses and the face form angle of the frame.

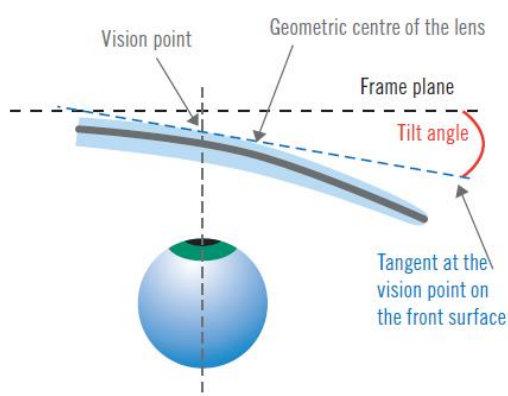


Figure 5: Tilt angle

This tilt angle causes prismatic side effects, astigmatism of oblique bundles, refraction errors and binocular different distortions R/L. Rodenstock takes these special conditions of higher curved spectacles into account when calculating the lenses, thus reducing the aberrations to a minimum. Nevertheless, the special features of Sport single vision lenses can cause distortions in the peripheral areas of the lenses combined with a changed perception of space. Therefore, it may take some time at the beginning for the spectacle wearer to get used to the new lenses. In special cases, incompatibilities may also occur.

- Due to the special features of Sport single vision lenses, which are calculated with high base curves and high face form angles, the power range is limited in sphere and cylinder because of their limited optical performance characteristics.

For further information see also “Instructions for use Rodenstock general”.

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