



wrap-around  
frames



action  
&  
protection



prescription  
sport lenses



# Market Scenario for Sports lenses

Now-a-days sports have become a trend, it is enjoyed by a large group of population both young and old.

Two-third of the population participate in sports activities of which at least 60% of them vision correction.

Excellent cosmetics without compromising with optics is required.

Hence prescription lenses are in increasing demand today.



# Lifestyle Today and its Requirements

Busy lifestyle.

Sport's is an integral part of today's life.

Sunglasses are a necessity for all.

Presently Rx sport lenses are compromised with

*low base curve* and *inferior optical properties*.

*Lack of Rx lenses for Sports use.*

There is no single spectacle in the market that is ideal for all visual needs.

No single spectacle can be perfect to suit all requirements.



# Availability of Sport Spectacles in the Market

There are two types of spectacle varieties for sports activities available in the market.

- Sports eyewear for lenses with a highly curved front surface.
- Sports eyewear for lenses with a normal curved front surface.



Spectacle for regular use



Wrap around frames for sports activities

# Drawbacks of Sport Spectacles in the Market



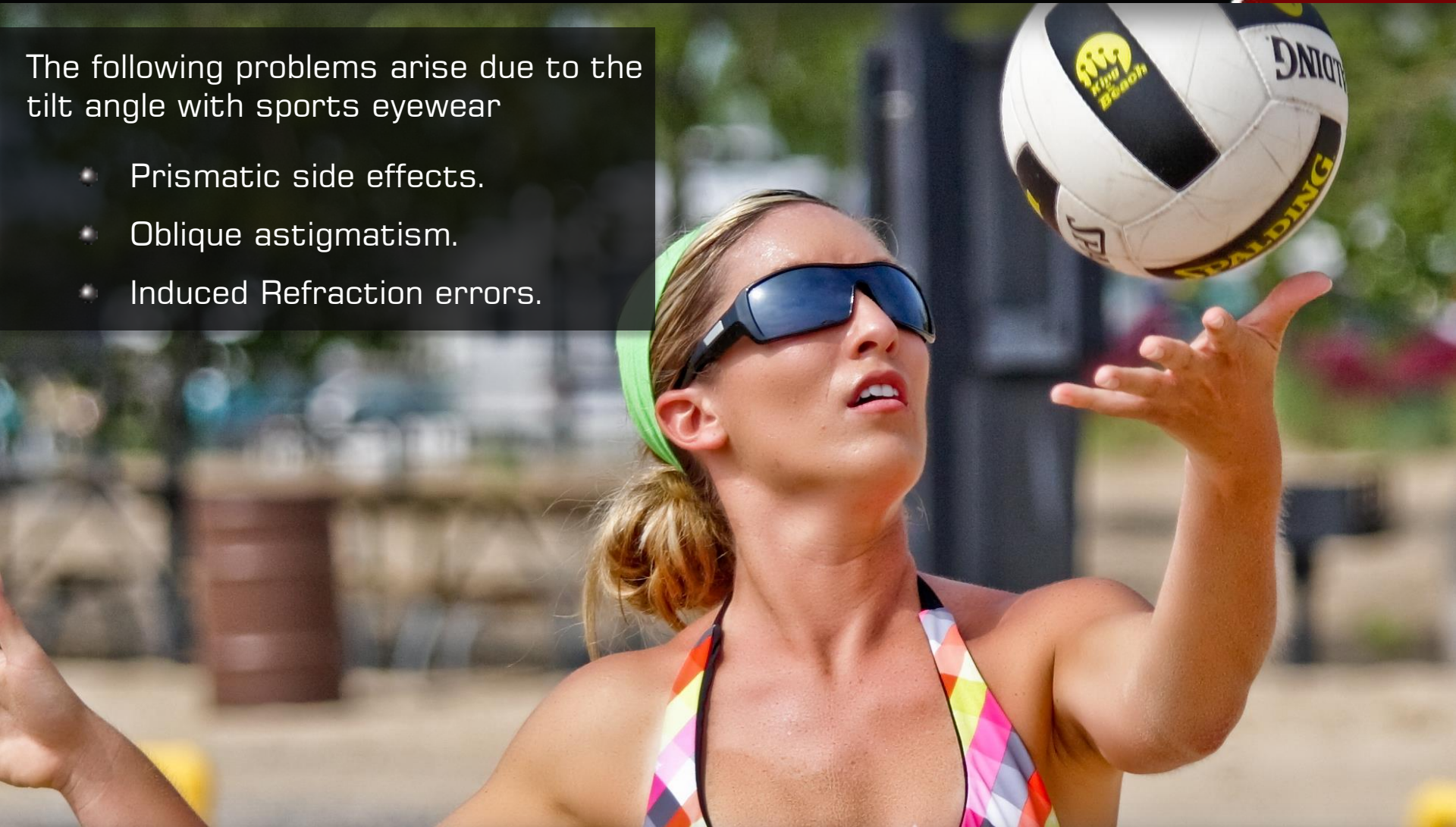
- Sports eyewear are characterized by high base curves.
- In today's scenario if one chooses a Sports wear with a high base curve he has to compromise on the optics. Thus the spectacles are uncomfortable to him.
- Further if perfect optics is considered the priority then one has to choose normal flat frames which are not the ideal frame for sports.
- In all one does not get a perfect pair of spectacles to suit his requirement.



# Optical Problems of Regular Sport lenses

The following problems arise due to the tilt angle with sports eyewear

- Prismatic side effects.
- Oblique astigmatism.
- Induced Refraction errors.



# Conventional Lens Design

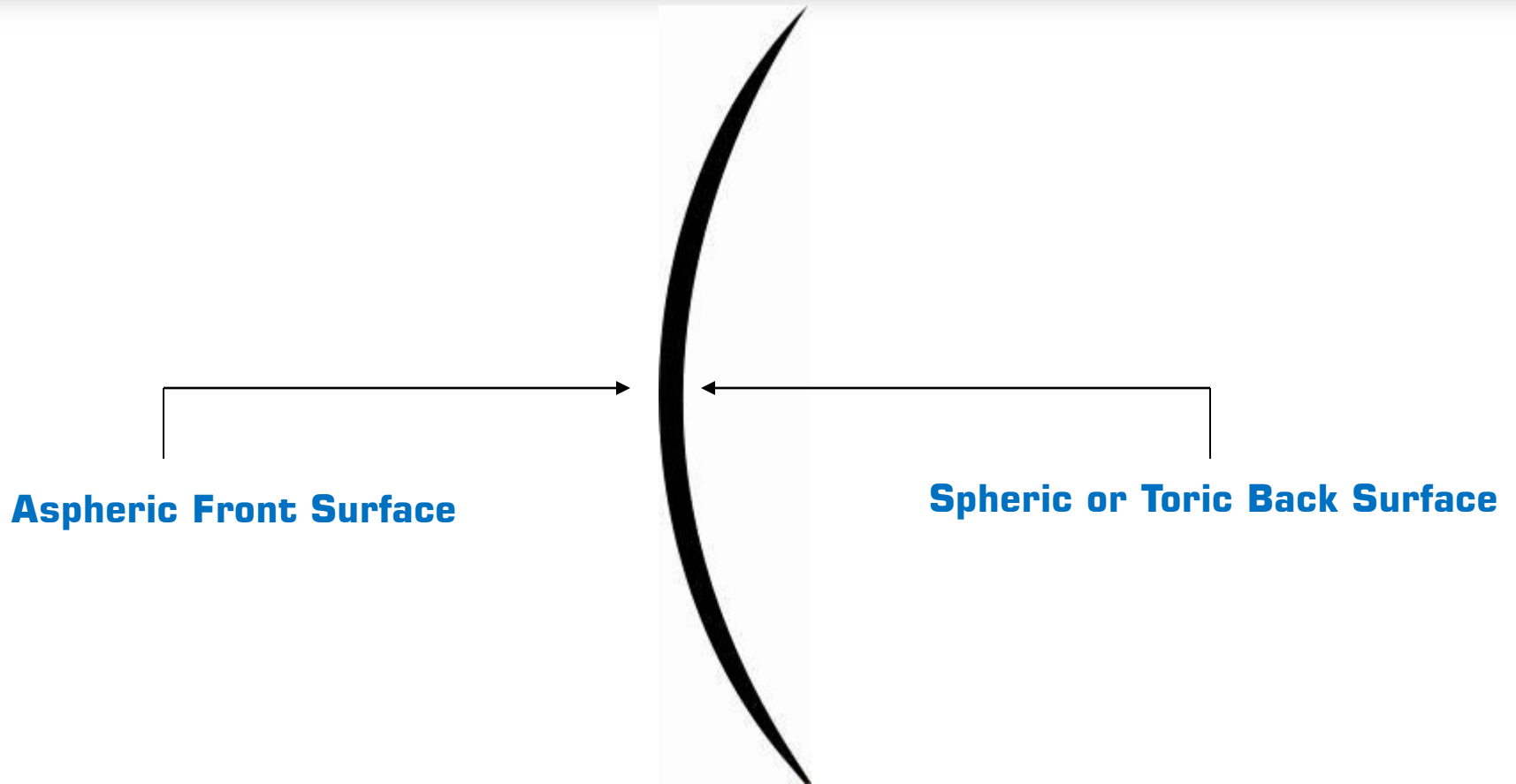


**Spheric Front Surface**

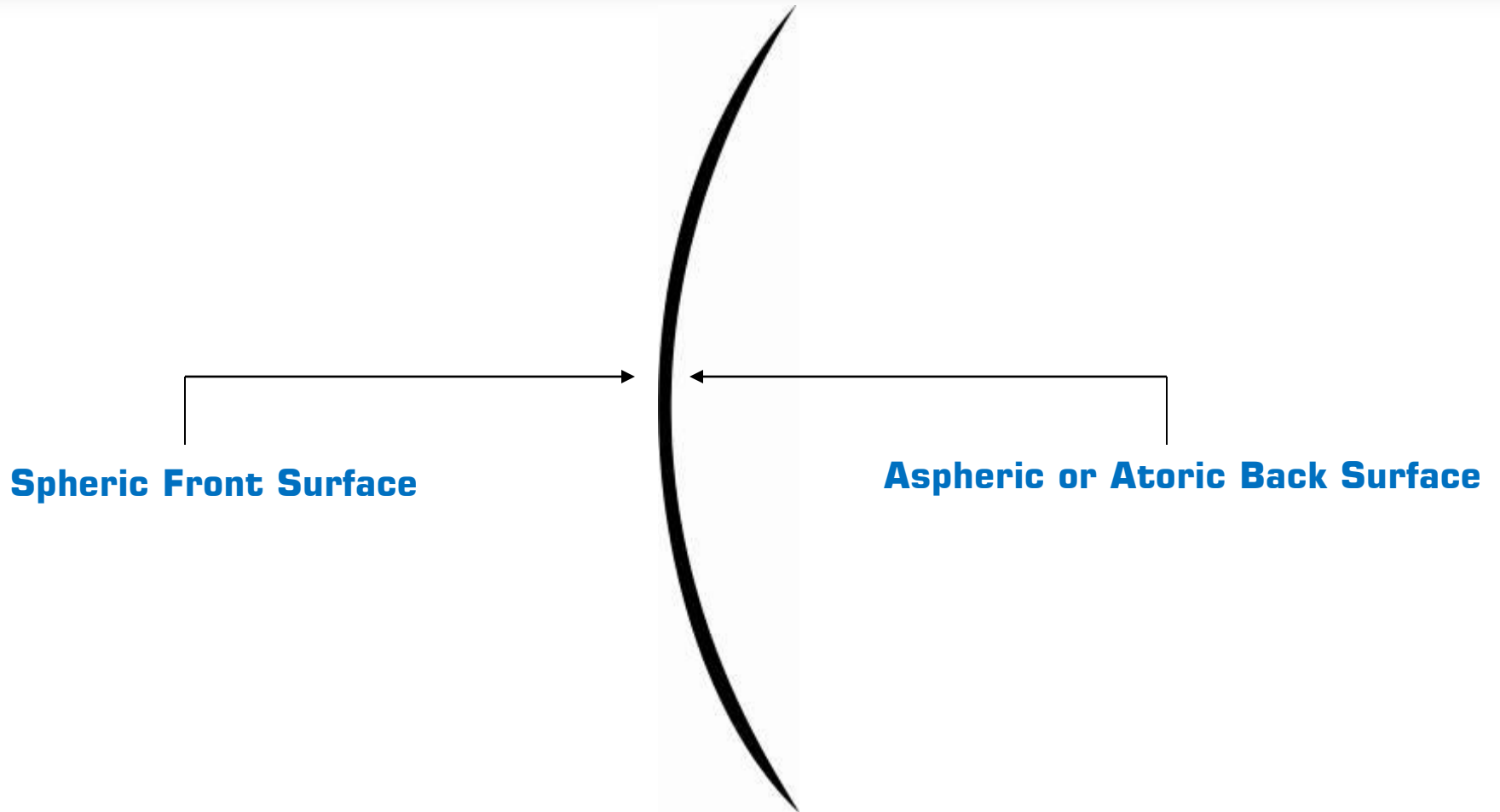
**Spheric or Toric Back Surface**

The conventional design leads to unclear vision at the periphery due to the Spherical back surface

# Second Generation Lenses







Sports lens designed for optical optimization like :

- Quality Control.
- Refractive power.
- Prism Power.

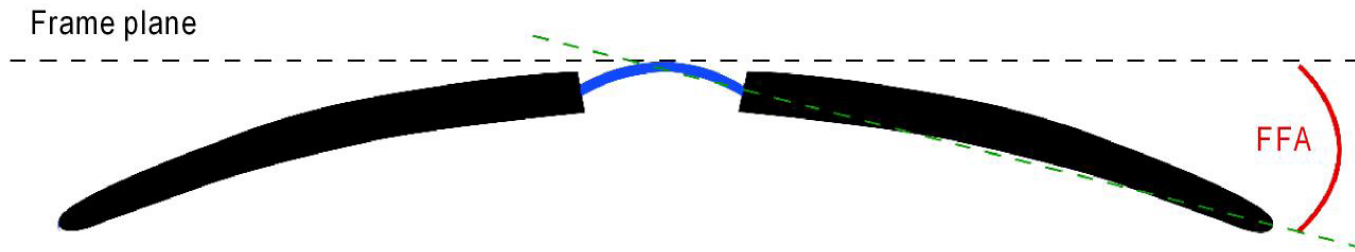


**Conventional Sport lens.**



**Nova Sport lens.**

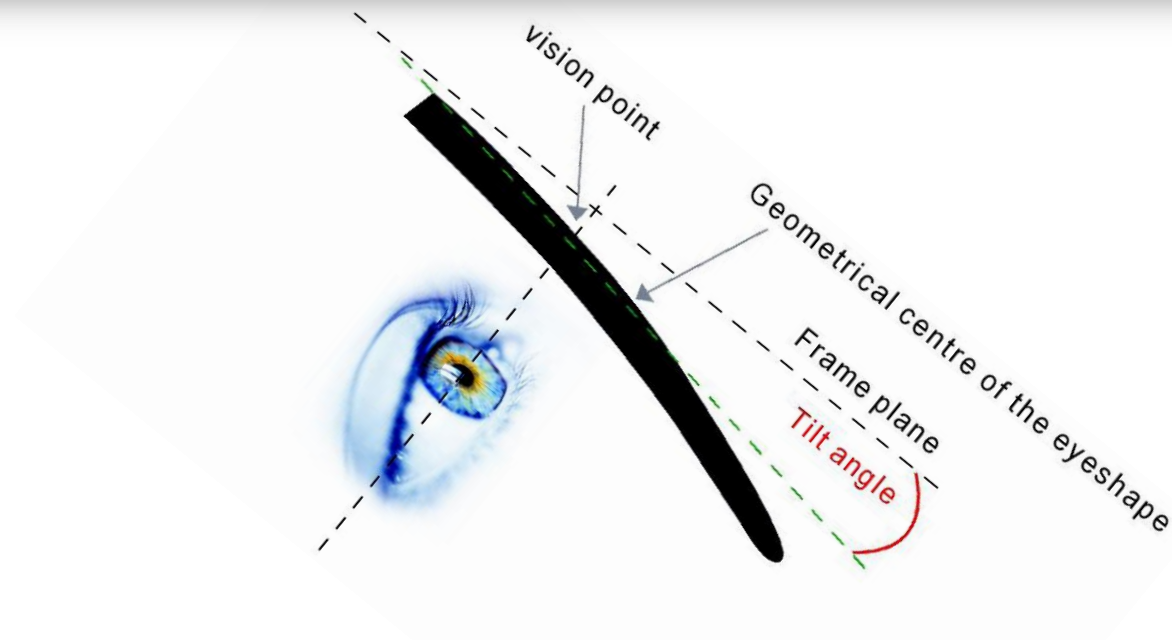
# Role of FFA for visual optimization



Sport lens has a higher degree of FFA because of high curvature compared to normal spectacle.



# Aberrations due to FFA in sport lenses



Prismatic side effects, oblique astigmatism & refraction errors occur as a result of this tilt angle.

# Nova Sport - Features

- Perfect Optics + Perfect Cosmetics.
- Athletes can now wear sports lenses in fashionable sports eyeglasses, with outstanding optical performance.
- Developed specifically for dynamic vision requirements.
- Great freedom in sports frame selection.
- Ideal for outdoor activities with contrast enhancing tints.
- 100% Back Surface Design.
- Thin lenses.
- Aspheric design.
- Near and distance vision zones adapted for sports activities.



# Advantages due to the Advanced Design

- Lesser Magnification as compared to conventional lenses.
- Reduction in Astigmatism.
- Increased field of vision by 30%.
- Natural and comfortable vision.



# Nova Sport FFPAL – also for progressive wearers



Now the presbyopic sport lovers can enjoy the cosmetic benefits of Base 8 with the optical performance of Base 3 and 5. No unwanted astigmatism and all this with 6 times more resolution.

# Nova Sport FFPAL - Design for sport activities

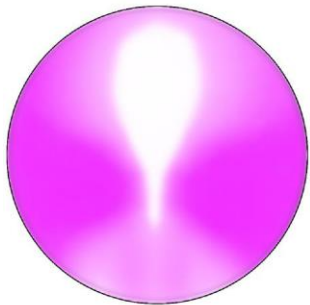
## Conventional progressive

A conventional progressive was ordered with only the given refraction values:

Sph+3.00 D, cyl+1.00 D Add +2.50 D

Normally, the prescription would be surfaced from base curve 5.5 FFA of 4 degree.

The diagram below shows the binocular visual impression through a conventional progressive lens glazed in a sports frame, with the frame of a FFA of 12 degree. In addition, the lens was surfaced with a base curve of 7.00 D to ensure a better glazing of the lens in the sports frame



Restrictions in all vision zones.  
High swim & sway.  
Distortions due to high base curve.



## Nova Sport

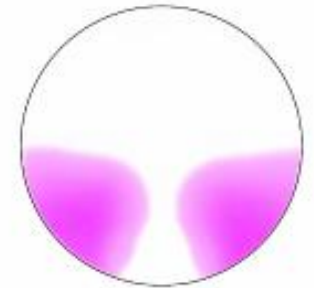
A Nova Sport lens was ordered with only the given refraction values:

Sph+3.00 D, cyl+1.00 D Add +2.50 D

All required individualization parameters, the frame data and the centering data were given in the order.

The diagram here also shows the binocular visual impression through the Nova Sport progressive lens with an adapted base curve.

The parameters of the worn position however, correspond to the parameters used in the calculation.



No restrictions in the vision zones.  
Low swim & sway.  
Lesser peripheral distortions .  
High spontaneous compatibility.



# Sports Lenses are Inevitable

- Cricket
- Cycling
- Driving
- Extreme Sports
- Golf
- Motor Cycling
- Skiing
- Sailing
- Tennis





# Leading Brands in the Sports Sunglasses



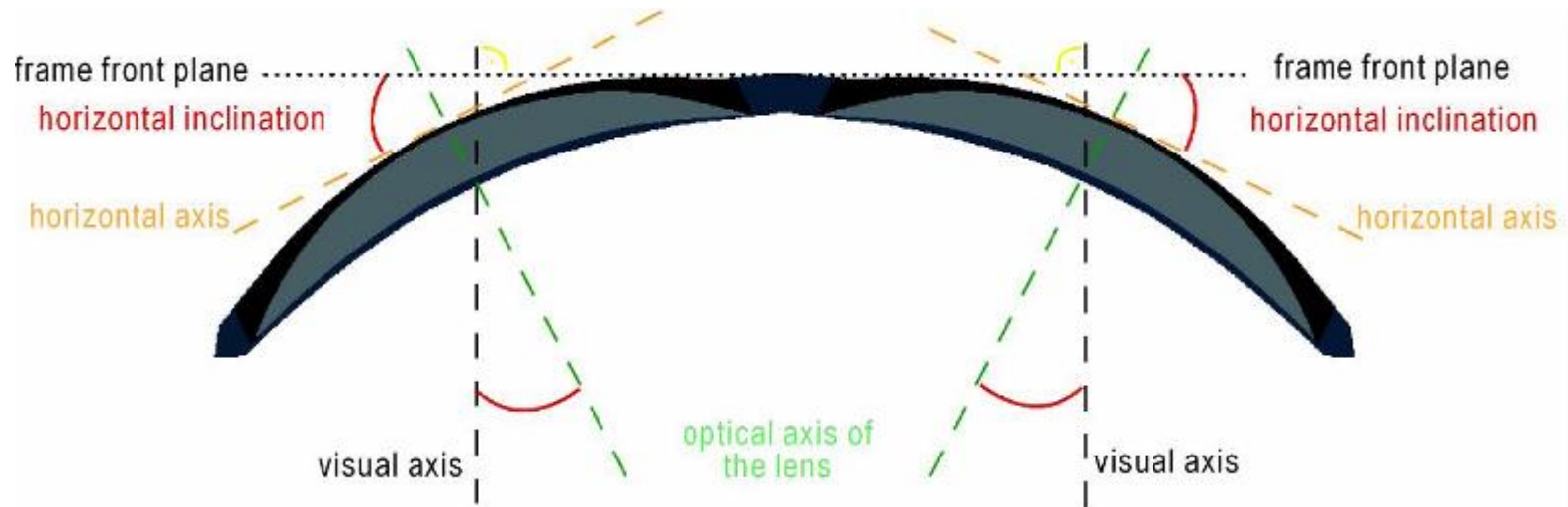
# Advantages of Nova Sport

So now you do not have to compromise in trends, fashion, safety at the cost of clear vision.

- Individual calculation of as-worn power for every single frames and lens power.
- Safety for your customers, especially outdoor sporting activities.
- Protection from dust, wind and UV radiation.



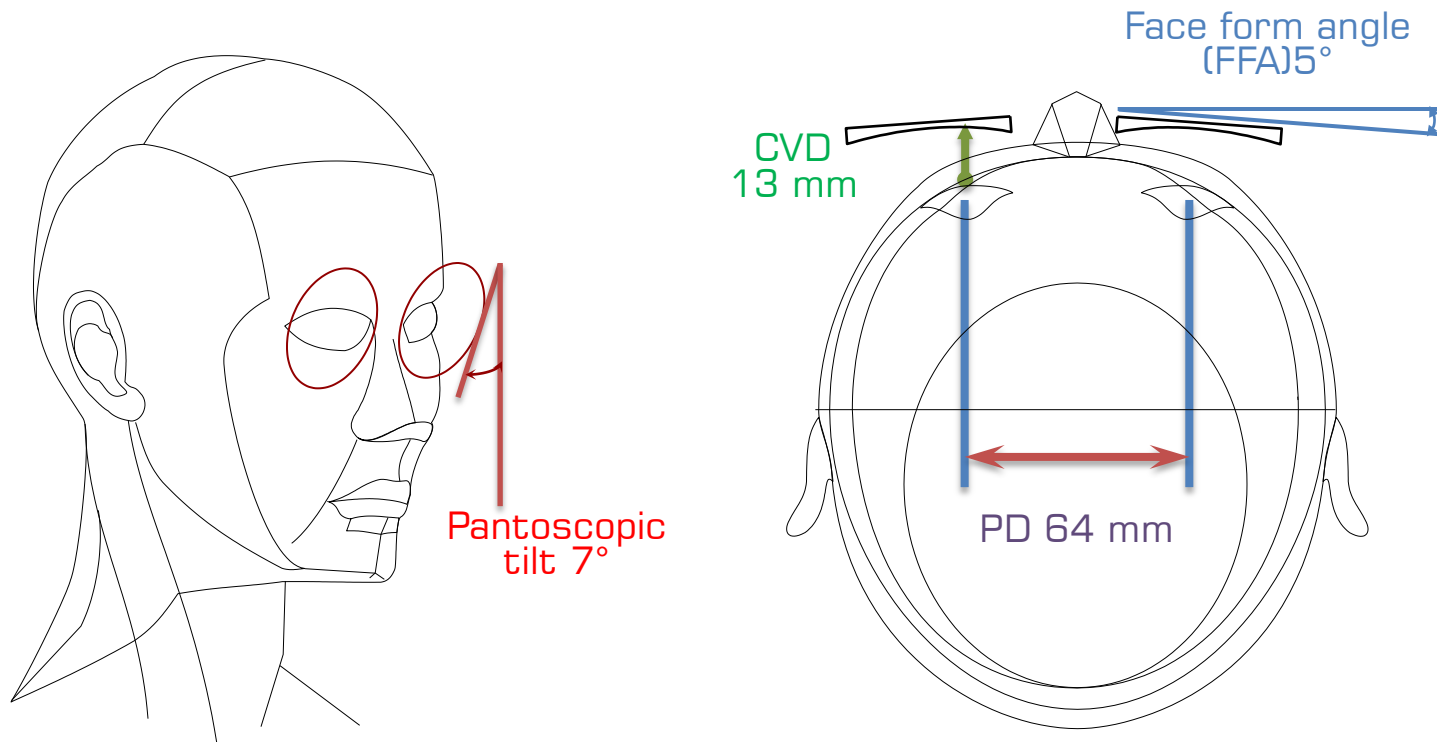
# How Face Form Angle is critical for Sport



## Horizontal Inclination



# Parameters for Individualization



# Parameters for Individualization

**Face form angle (FFA)**



**Pantoscopic tilt (PT)**

**Pupillary distance (PD)**

**Lens power / Refraction**

# Prescription Compensation

	Sph.	Cyl.	A	Pr.
Prescription	+ 3.25	+ 0.75	155°	-
1. horizontal inclination 28°	+ 2.50	+ 1.25	168°	1.5
2. horizontal inclination 21°	+ 3.00	+ 1.00	163°	1.0

Change of dioptric power in ratio changing horizontal inclination

*Note: With your Nova Sport lens there will be a difference between the Prescribed and Compensated power. This is an assurance for the compensation in power due to high face form angle and high curvature of sunglasses. You will find accurate power when positioned in front of the eye.*



# Tints

Nova Sport offers you a full range of tints. No matter whether your customer prefers filter, solid, gradient, bicolour tints or blue blockers-with us, you'll definitely find the right tint for your customers.



Solution for every outdoor needs

Perfect Vision with Perfect Cosmetics for sport activities for all needs!!



