OPTICARE
See the Difference

Mastering Prism: Distance or Near

Prism management is now possible in progressive designs at distance or near.

Introducing Opticare's innovative lens design update that allows prism to be ground at distance (on pupil) or at near (middle of near zone).

Controlling prism in progressive designs is a feature that the industry has been asking for since progressives were introduced over 30 years ago.

One of the draw backs with a traditional progressive design is not being able to incorporate prism where a patient needs it, at the point it will help their vision the most – either at pupil height for those who need prism for distance or at the centre of the near zone for those who need prism for near.

Opticare can now offer Optometrists the option to include prism when prescribing lenses within the Optilux range – at distance or near!

This innovative change gives control to the practice by providing:

- Prism at the position needed to correct vision problems.
- Choice to include prism in Opticare's Premium progressive and behavioural lens designs.
- Enhanced visual outcomes for work, leisure, and everyday needs.

Why is prism needed?

There are some eye conditions that can be improved by including prism in the patient's glasses. Without prism to correct these eye conditions, the patient may suffer from symptoms such as eye strain, headaches, double vision, and crossed eyes. These conditions include:

Strabismus (Crossed Eyes)

Prism lenses can help align the eyes, preventing double vision and reducing eye strain.

Binocular Vision Dysfunction (BVD)

BVD occurs when the eyes don't work together, causing eye strain and difficulty with tasks like reading. Prism lenses can help the eyes work together more effectively by shifting the images slightly.

Convergence Insufficiency

This condition makes it difficult for the eyes to converge (turn inward) to focus on near objects. Prism lenses can help the eyes converge more easily, improving near vision and reducing eye strain.

Double Vision (Diplopia)

Prism lenses can help align the images, reducing double vision and improving visual clarity.

Vertical Heterophoria

This condition causes the eyes to be out of alignment vertically, potentially leading to double vision or eye strain. Vertical prisms can help correct this misalignment.

Neurological (brain-related) issues

Such as head injuries, stroke, migraine, or tumor.

Nerve-related problems

Such as multiple sclerosis or diabetes mellitus.

Prism in lenses works by bending the light that enters the eye, which can help shift the image slightly. This can help the eyes align properly, reduce double vision, and improve visual clarity.

Traditional
Progressive Lens Designs and Prism

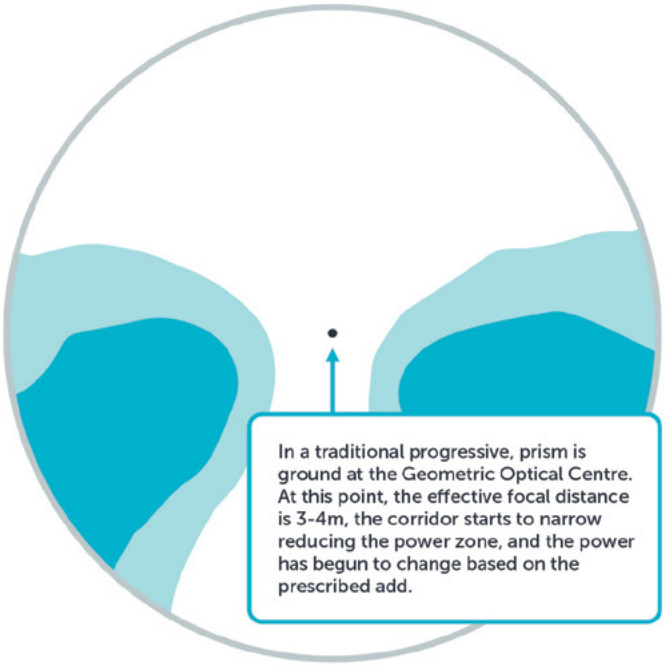
1 Progressive Lens Geometry

Progressive lenses have a complex, continuously changing curvature that provides multiple focal powers (distance, intermediate, and near), all in one lens. The distance power is centred at the Pupil Centre. The intermediate corridor starts 2-4mm below the pupil centre with the addition impacting the corridor power until the full add is reached in the near zone.

2 Prism Placement in Conventional Progressives

When adding prism to a traditional progressive design:

It is placed on the geometric optical centre of the lens so the location where the prism is measured is not aligned with the pupil height like it is in a single vision lens – instead it is at the Geometric Centre, 4mm below the Pupil Centre.



3 Lab Manufacturing Constraints

Each lab uses set designs that follow specific manufacturing guidelines to achieve those designs. Adding prism at pupil height would require custom design changes not supported by progressives (generally). Laboratory software has always calculated prism at Geometric Optical Centre (GOC), also called the Prism Reference Point (PRP).

INNOVATION – **Opticare's advanced calculations & designs can now incorporate prism into progressive designs.**

The Opticare progressive range now **allows 3 options** for prescribing prism based on patient needs:

- **Geometric Optical Centre**
  This position is used across all traditional progressive designs in the market
- **Distance Optical Centre**
  For distance prism needs.
- **Near Optical Centre**
  For near prism needs.

Why has prism management been introduced?

For the first time, the prescribed prism can be set at distance or near, as prescribed by the Optometrist. This gives control to the Optometrist to improve vision where required.

In traditional progressives prism is placed at the Geometric Centre (also known as the prism reference point). This means prism is set where the focal distance is 3-4m, the corridor is starting to narrow reducing the field of view and the power has begun to change based on the patients add.

In essence, the prism is not where the patient needs it and is not what the optometrist has prescribed based on the eye examination results.

How are patient outcomes improved?

- The optometrist can prescribe prism for distance or near needs in the position it is most effective – where the patient needs it to give best vision.
- When prism is placed at distance, unwanted prism at near is reduced by the soft Opticare designs and short corridors.
- The lens is correcting both the vision and how the patient uses their eyes at a given point on the lens.
- Induced prism outcomes can be changed. When there is more than 1.00D difference between the eyes for the distance Rx with a +2.00D ADD, it induces 0.4D Prism (standard is 0.33D), so P @ D is recommended.

Understanding the Opticare Progressive Design

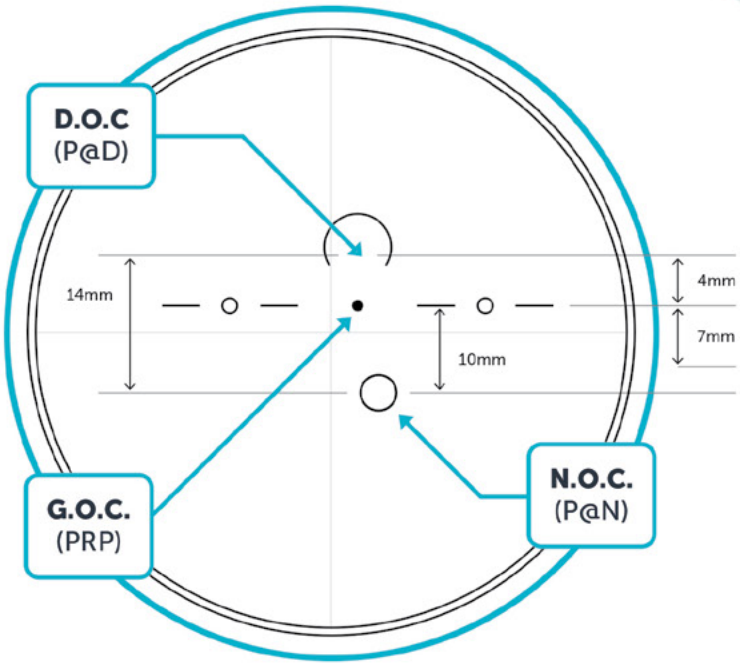
It is important to understand how the Opticare design works. This includes the options for prism placement, the corridor measurements and the position of each zone of the lens.

Distance Optical Centre – This is at pupil height and where the full distance prescription is located. This is where Prism @ Distance will be positioned.

Geometric Optical Centre – This is also referred to as the Prism Reference Point. This is where prism is located in traditional progressive designs. This is where Opticare measures the start of the corridor length and is located **4mm below** the distance optical centre.

Corridor length – This is the length of the corridor where the power change is. A **7mm** corridor is the default length. 7mm is measured from the geometric optical centre to the top of the near zone – i.e. the start and finish of power change in the progressive.

Near Optical Centre – This is the position wearers will have the full reading prescription. This is located **3mm below** the end of the corridor and **10mm below** the geometric optical centre. This is where Prism @ Near will be positioned.



14mm – Distance from Distance Optical Centre to Near Optical Centre.

Near Inset Options

The default fixed inset for Opticare designs vary between 1.5mm and 2.5mm. To compliment Prism @ Near, Opticare also offers the option to order inset of up to 4mm each eye on 3 premium designs:

- **Vergence Pro** – Designed as a behavioural lens to help with convergence issues.
- **Optilux Indoor** – Designed for indoor use where wide and clear intermediate and near vision is important.
- **Optilux Excellence** – Designed for indoor with the least possible unwanted cylinder.

Inset changes can be ordered with Prism @ Near giving more options to the practice.

Lens Options

Prism at Distance and Prism at Near can be ordered with the following lens design options:

Prism at Distance (P @ D)	Prism at Near (P @ N)	Inset - up to 4mm inset option for near PD
Optilux Panorama	Optilux Panorama	Optilux Indoor
Optilux Ultraclear	Optilux Ultraclear	Optilux Vergence Pro
Optilux Excellence	Optilux Excellence	Optilux Excellence
Optilux Lifestyle	Optilux Lifestyle	
Optilux Indoor	Optilux Indoor	
Optilux Active	Optilux Active	
Optilux Vergence Pro	Optilux Vergence Pro	

P @ D — Prism at Distance

Opticare has introduced updated designs that combat the issues associated with grinding prism at the pupil height.

These changes include:

High level calculations
Updated calculations allow **Opticare** to adjust their premium **Optilux** designs precisely in **0.01** diopter changes for power, cylinder, and prism. These calculations are so advanced that Opticare manufacture their Optilux lenses in their **Sydney lab** to control the outcomes and ensure results within **0.02** of a diopter.

Prism at Distance
Highly precise calculations allow Opticare to calculate prism at pupil height without interrupting the corridor power graduation, ensuring the prescription and designs are not impacted.

Script Refinement with Wavefront & Distortion Analysis
After 10 years of research, Opticare has introduced the ART Adaptive Biometric device to compliment their updated designs. The ART allows highly precise wavefront measurements to the 7th Order. This is combined with 0.01 correction and complimented by subjective steps of 0.06, 0.12, and 0.25D to take refraction precision to a new level when 0.25D steps are still ruling the industry.

Balanced temporal and nasal distortion
Optilux Progressives have been designed to reduce and balance the temporal and nasal distortion levels. This ensures no interruption to side gaze providing a **wider, clearer visual outcome** with **more peripheral vision** and **wider field of view** than traditional designs.

Lowest unwanted cylinder
The AR Lens Mapper that Opticare uses, measures both the power design and cylinder design. The result is a map of the overall lens design showing unwanted cylinder, corridor width, power clarity, power zones and usable areas of the lens. Both maps are then overlaid providing a Hybrid Map that helps Opticare work with a practice to assess the visual impact on the patient. The Optilux lens designs have **extremely low unwanted cylinder** making them easy to adapt to, as well as providing great clarity. The precise nature of the reduced unwanted cylinder and control of the corridor allows prism to be ground where required with minimal impact on the overall lens performance.

Conventional Progressive Design	Innovative P @ D with Optilux Progressives
Prism is calculated at Geometric Optical Centre. This is also called the Prism Reference Point (PRP).	Prism is calculated on Pupil Centre due to advanced algorithms. This is defined as "Prism at Distance" (P @ D).
Prism Rx is set **4mm below pupil centre**. (where prism is ground)	Prism set **on pupil centre**.
Focal point of **3** to **4 metres**. (where prism is ground)	Focal point is **6 metres** and beyond. (where prism is ground)
Incorrect Prism due to induced prism for all Distance Rx except plano.	Correct Prism prescribed for Distance vision for any Distance Rx.
Narrow field of view as located in the corridor.	Patient has **wide field** on view.
Prism prescribed in **0.25D**.	Prism can be prescribed in **0.06D**, **0.12D**, and **0.25D steps**.
Traditional Rx in **0.25D steps**.	**ART machine** measures 0.01 steps – use in conjunction with P @ D for optimized vision with correct Prism at Distance.

P @ N — Prism at Near

The same technology and calculations used for adding prism at distance have been used to make prism available for near use.

What does this mean for near vision?

- Power, cylinder, and prism can be ground within 0.02 of a dioptre accuracy
- Subjective testing can be done in 0.06, 0.12, or 0.25D options for power, cylinder, and prism
- Prism can be ordered and will be positioned 10mm below the geometric centre at the near optical centre
- Short corridors and soft designs minimise unwanted cylinder and improve adaption levels
- Designs can be used for convergence and behavioural patients

Conventional Progressive Design	Innovative P @ N with Optilux Progressives
Prism is calculated at **Geometric Optical Centre**. This is also called the Prism Reference Point (PRP)	Prism is calculated **10mm below** the Geometric Optical Centre at the Near Optical Centre.
Prism Rx is set **4mm below pupil centre**	Prism Rx is set **14mm below pupil centre.**
Focal point of **3** to **4 metres**. (where prism is ground)	Focal point of **30-40cm** – or the reading distance required by the patient. (where prism is ground)
Incorrect Prism due to induced prism based on placing prism at the Geometric Optical Centre	Correct Prism prescribed for near vision at the distance required by the patient.
Field of view is not a factor as cannot place Prism where needed	Clean and wide field of view at required Prism is placed where needed – at the Near Optical Centre.
Prism prescribed in **0.25D**	Prism can be prescribed in **0.06D**, **0.12D**, and **0.25D steps**.
Traditional Rx in **0.25D steps**	**ART machine** measures **0.01D steps** – use in conjunction with **P @ N** for optimised vision with correct **Prism at Near**.