

# SEIKO Supernal

Advanced Patented 100% Internal Free Form Design



**SEIKO**

# SEIKO Supernal

## Naturally Smooth Vision

### Optimized Universal Performance for All Wearers

SEIKO Supernal is a new individualized lens design that utilizes patented “Internal progressive + Internal Aspheric design”. This was first commercialized by SEIKO in 1997, and since then improvements have continued to be made to the design. As a result, blurriness and distortions have been reduced and a wide field of vision has been realized. In addition, by adopting a “Non-linear Progressive Power Change”, the variation of power between the distance and the progressive zones has been made smoother. From this, clarity of vision ranges has been expanded at the fitting point surroundings and the distance field of vision, while the near field of vision, which is sufficiently broad, has been maintained.

#### SEIKO Individualized Progressive Lenses

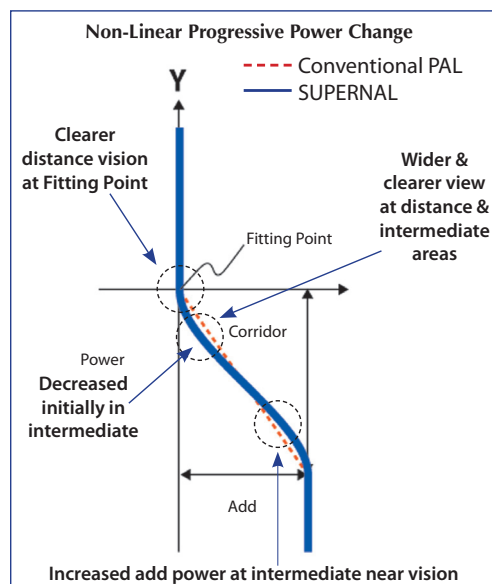
<i>Best</i>	Surmount/Surmount Ws
<i>Better</i>	Supernal
<i>Good</i>	Supercede II

#### Non-Linear Progressive Power Change

**The width of clear vision around the fitting point is increased by 50%**

Smoothing the power variations from the long-distance zone to the intermediate zone, the width of clear vision around the fitting point has been increased by approximately 50% compared to previous lenses.

This lens also ensures an ample width of the near-distance field of vision, as well as achieving a sharp expansive range of long-distance vision.



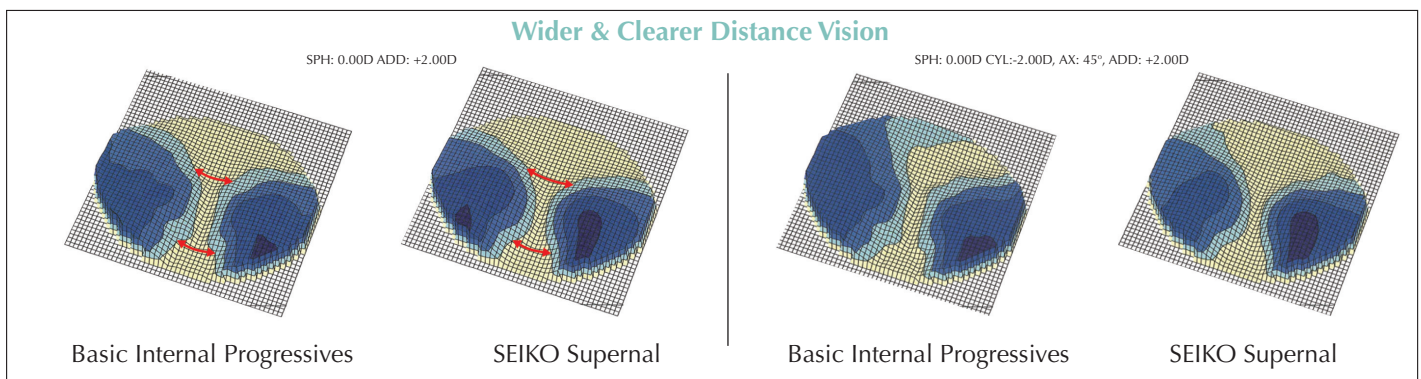
- A better choice for all wearers, all add powers and difficult Rx's
- Designed using the new 3D Virtual Reality System for realistic simulation evaluation
- Non-linear progressive power change increases clear vision around the fitting point by 50%
- Automatic semi-variable inset based on total Rx
- Advanced Aspheric Compensation improves clarity and visual comfort
- Multi-polar Astigmatic correction improves panoramic vision and image stability
- Large variety of materials, coatings and Transitions® lenses

### Advanced Aspheric Compensation

Supernal modifies the Rx to achieve an optically precise correction in the as-worn position. This compensation factors in eye rotation, vertex distance and frame tilt. The benefit to the wearer is improved clarity and visual comfort throughout the entire lens, with expanded peripheral vision, even in high-cylinder, high-add Rx's.

### Multi-Polar Astigmatic Correction

Multi-polar astigmatic correction manages unwanted cylinder in all meridians, creating a balanced progressive design that increases wearer comfort. It takes into account the three-dimensional orientation of the eye and its axis of rotation and provides proper eye to lens alignment in all directions. This significantly improves panoramic vision and image stability.



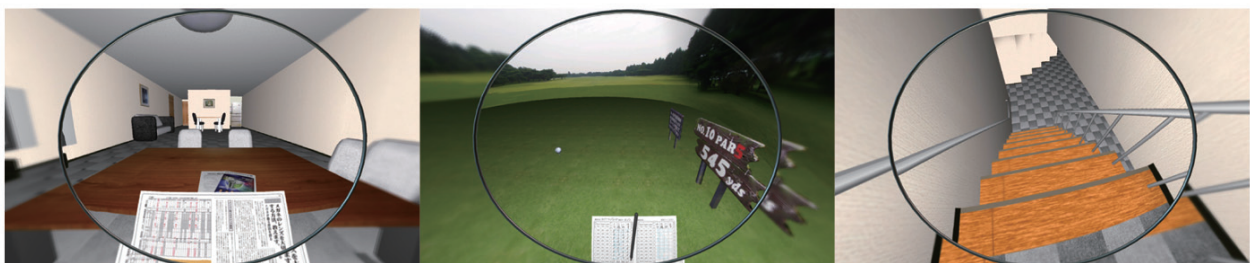
### 3D Virtual Reality System

Developed by SEIKO, the 3D Virtual Reality System is a simulation evaluation method utilizing computer graphics technology. This system recreates how patients see objects with or without prescription lenses for each eye or both eyes. Utilizing this technology enables us to verify how patients can see objects and how patients can realize width, depth, swim and sway, distortion and blurriness.

In addition, this technology also enables us to evaluate lens performance by simulating vision through the wearer's eyes as we develop new PAL designs.

SEIKO Supernal is the first lens to apply this innovative evaluation technology, which enables patients to really see naturally.

### Scenario Specific Simulations



# SEIKO Supernal

## Specifications

Index:	Clear	Polarized	Transitions®	Transitions® XTRActive™	Transitions® Vantage™
1.50	●	●	●		●
1.53 (Trivex®)	●		●	●	●
1.59 (Poly)	●	●	●	●	●
1.60	●		●		
1.67	●	●	●	●	
1.74	●				

**Corridor Length (Min. Fit Ht.):** 10mm (14mm), 12mm (16mm), 14mm (18mm)

**Add Powers:** +0.50 to +3.50D in 0.25 diopter steps

**Range:** Extended Cylinder range to -5.00D (Total power -12.50D)

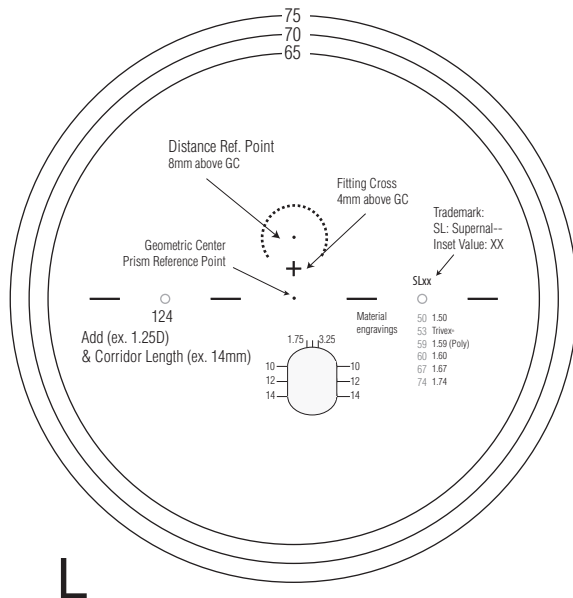
**Prism:** 0.25 to 3.00D

**Inset:** Automatic semi-variable inset based on total RX.

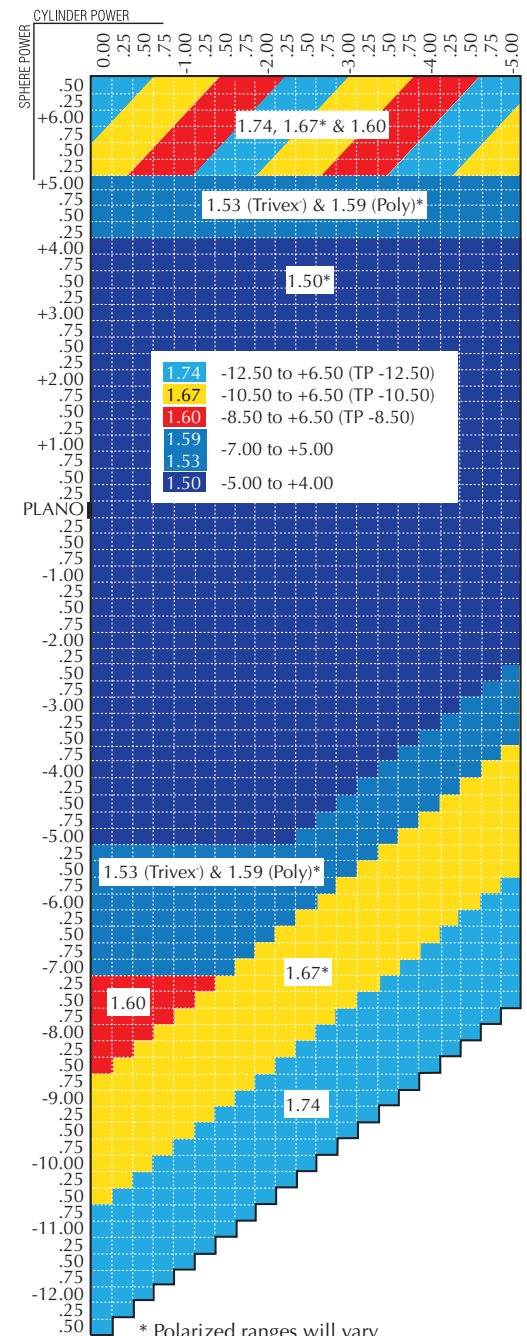
7 insets from 1.75mm to 3.25mm (0.25mm steps)

**Measured Power:** Distance, intermediate, and near

## Lens Markings & Engravings



## Production Range



\* Polarized ranges will vary.  
Add Power: +0.50 to +3.50D (0.25 steps)  
Prism: Up to 3.00D

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