New Optical Technology for providing an Extended Range of Vision
## Traditional IOL Solutions for Treating Presbyopia

<table>
<thead>
<tr>
<th>Multifocal/Trifocal IOLs</th>
<th>Accommodating IOLs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work on the principle of simultaneous vision by splitting light into multiple distinct foci</td>
<td>Change in shape and power when the ciliary muscle contracts</td>
</tr>
</tbody>
</table>
Traditional IOL Solutions for Treating Presbyopia

With traditional technology for the correction of presbyopia, we commonly think in terms of the distinct distances for which functional vision is provided.
Key Needs for Presbyopia-Correcting IOLs

**Patient**
- High quality full range of vision
- Full-range of vision without contrast loss
- Lack of visual disturbances, such as halos and glare

**Physician**
- High patient satisfaction by providing reliable outcomes
- Low number of complaints (on refractive outcomes or halos and glare)
- No significant additional chair time
New Solution for Presbyopia Correction
Extended Range of Vision IOLs

The first and only presbyopia-correcting extended range of vision IOL

Delivers a continuous, full-range of high quality vision with reduced incidence of halos and glare comparable to a monofocal IOL$^{1,2}$

1. 168 Data on File_Symfony_Simulated Defocus Curves
2. 166 Data on File_Extended Range of Vision IOL 3-Month Study Results (NZ)
A New Segment of IOLs – Extended Range of Vision IOLs

The TECNIS® Symfony Extended Range of Vision IOL represents a new segment in presbyopia-correcting IOLs.
TECNIS® Symfony IOL is a significant advancement over traditional technologies that provides a **full-range of continuous, high quality vision with minimal visual disturbances** (halos, glare)

1. **Range of Vision**
2. **Extended Range of Vision**
3. **Full-Range**
4. **Continuous**
5. **High Quality**
6. **Minimal Visual Disturbances**

1. TECNIS® Symfony DFU
2. 166 Data on File_Extended Range of Vision IOL 3-Month Study Results (NZ)
TECNIS® Symfony IOL merges two complementary enabling technologies

Proprietary Echelette Design Feature
Extends the range of vision

Proprietary Achromatic Technology
Reduces chromatic aberration for enhanced contrast sensitivity

1. TECNIS® Symfony DFU
Proprietary echelette design feature introduces a novel pattern of light diffraction that elongates the focus of the eye, resulting in an extended range of vision.¹

¹ TECNIS® Symfony DFU
Proprietary Achromatic Technology Reduces Chromatic Aberration

The refractive index of the eye varies with wavelength causing the power of the eye to be wavelength dependent. Colors that are out-of-focus cause blur and reductions in contrast vision. This is called chromatic aberration.

The average eye has approximately 2 D of chromatic aberration between 400 and 700nm and 0.8 D between 500 and 640nm. Chromatic aberration can be corrected with a diffractive IOL with achromatic technology.

Chromatic Aberration = 0.14 D

Chromatic Aberration = 1.2 D

Proprietary Achromatic Technology Results in Contrast Enhancement

- Achromat technology for the correction of longitudinal chromatic aberration (LCA) causes contrast enhancement.

- Correction of corneal chromatic aberration results in a sharper focus of light. When combined with correction of spherical aberration, it increases retinal image quality, without negatively affecting depth of focus.\(^1,2\)

---

MTF is a measure of the amount of contrast transferred by the optics in a visual system.\(^2\)

The higher the MTF value, the more contrast is transferred to the image resulting in higher contrast sensitivity.\(^2\)

---

Clinically Significant Increase in Range of Vision

Defocus Curve: 3-Month Adjusted Data

Bilaterally Implanted Subjects
TECNIS® Symfony IOL (n=31), TECNIS® Monofocal IOL (n=10)

TECNIS® Symfony IOL showed:
- Sustained mean visual acuity of 20/20 or better through 1.5 D of defocus
- Increase of 1.0 D range of vision throughout the defocus curve

166 Data on File_Extended Range of Vision IOL 3-Month Study Results (NZ)
White light MTF at 50 c/mm measured in the ACE model eye for a 5 mm pupil

1. 170 Data on File_Symfony_Modulation Transfer Function
Simultaneous Vision in Multifocal IOLs May Lead to Halos and Glare

Multifocal IOLs work on the principle of simultaneous vision; one image is in focus while the out-of-focus image is suppressed.

Halos are caused by the out-of-focus image.
Lack of a Distinct Second Focus Minimizes Halo and Glare

The lack of a distinct second focus, coupled with achromat technology to enhance contrast, provides halo performance comparable to a monofocal IOL.

[Graph showing defocus curve for 3-month adjusted data for TECNIS® Symphony IOL (n=31) and TECNIS® Monofocal IOL (n=10).]

166 Data on File, Extended Range of Vision IOL 3-Month Study Results (NZ)
TECNIS® Symfony Extended Range of Vision IOL Product Profile

**TECNIS® Symfony EXTENDED RANGE OF VISION IOL**

**OPTICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Powers</td>
<td>+5.0 D to +34.0 D in 0.5 diopter increments</td>
</tr>
<tr>
<td>Diameter</td>
<td>6.0 mm</td>
</tr>
<tr>
<td>Center Thickness</td>
<td>0.7 mm (20.0D)</td>
</tr>
<tr>
<td>Shape</td>
<td>Biconvex, wavefront-designed anterior aspheric surface, posterior achromatic diffractive surface designed to reduce chromatic aberration for enhanced contrast sensitivity and echelle feature to extend the range of vision.</td>
</tr>
<tr>
<td>Material</td>
<td>UV-blocking hydrophobic acrylic</td>
</tr>
<tr>
<td>Refractive Index</td>
<td>1.47 at 35° C</td>
</tr>
<tr>
<td>Edge Design</td>
<td>ProTEC frosted, continuous 360° posterior square edge</td>
</tr>
</tbody>
</table>

**BIOMETRY**

<table>
<thead>
<tr>
<th>BIOMETRIC CHARACTERISTIC</th>
<th>CONTACT ULTRASOUND</th>
<th>OPTICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-constant</td>
<td>118.8D</td>
<td>119.3D</td>
</tr>
<tr>
<td>Theoretical AC Depth</td>
<td>5.4 mm</td>
<td>5.7 mm</td>
</tr>
<tr>
<td>Surgeon Factor</td>
<td>1.68 mm</td>
<td>1.96 mm</td>
</tr>
</tbody>
</table>

**HAPTIC CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Haptic Characteristic</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Diameter</td>
<td>13.0 mm</td>
</tr>
<tr>
<td>Thickness</td>
<td>0.46 mm</td>
</tr>
<tr>
<td>Style</td>
<td>C</td>
</tr>
<tr>
<td>Material</td>
<td>Soft, Foldable, UV-blocking hydrophobic acrylic</td>
</tr>
<tr>
<td>Design</td>
<td>TRI-FIX, Haptics offset from optic, 1-piece lens</td>
</tr>
</tbody>
</table>

**RECOMMENDED INSERTION INSTRUMENTS**

<table>
<thead>
<tr>
<th>Insertion Instrument</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNFOLDER® Platinum 1 Series Screw-Style Inserter</td>
<td>DK7706</td>
</tr>
<tr>
<td>UNFOLDER® Platinum 1 Series Cartridge</td>
<td>1MTEC30</td>
</tr>
<tr>
<td>UNFOLDER® Emerald-AR Inserter</td>
<td>EMERALDAR</td>
</tr>
<tr>
<td>UNFOLDER® Emerald-AR Cartridge</td>
<td>1CART30</td>
</tr>
<tr>
<td>ONE SERIES Ultra Syringe-Style Inserter</td>
<td>DK7706</td>
</tr>
<tr>
<td>ONE SERIES Ultra Cartridge</td>
<td>1WP930</td>
</tr>
</tbody>
</table>

*Value theoretically derived for a typical 22.0 D lens. AMO recommends that surgeons personalize their A-constant based on their surgical techniques and equipment, experience with the lens model and postoperative results.*

1. Calculated based on Holladay 1 formula; Holladay JE, Proper TC, Chandler TV, Magrane RN.

©2014 Abbott Medical Optics Inc., Santa Ana, CA 92705
www.AbbottMedicalOptics.com
2014.02.10-CT8173
Indications For Use

The **TECNIS® Symphony IOL**, Model ZXR00, is indicated for primary implantation for the visual correction of aphakia in adult patients, with and without presbyopia, in whom a cataractous lens has been removed by extracapsular cataract extraction, and aphakia following refractive lensectomy in presbyopic adults, who desire useful vision over a continuous range of distances including far, intermediate and near, and increased spectacle independence.

**TECNIS® Symphony extended range of vision IOLs** are designed to be positioned in the lens capsule to replace the optical function of the natural crystalline lens.
The proprietary combination of optic, material and design technologies work together to create optical synergy for outstanding visual results.