SEEING IS BELIEVING

2023-2024 Catalog
WHO WE ARE

At Volk, our purpose is to eradicate preventable blindness by providing our doctors with the best tools and technology for visualization and imaging to screen, diagnose, and treat eye disease. Pursuit of this purpose has led us to become the leading manufacturer of ophthalmic diagnostic, laser, and surgical lenses and diagnostic imaging cameras in the ophthalmic device industry.

All Volk lenses are manufactured in the USA, where our highly skilled associates blend timeless craftsmanship with contemporary technology to create lenses of exceptional quality that stand the test of time. We are honored to serve the global community, reaching doctors in over 150 countries across the world to help eradicate blindness.

History of Double Aspheric Lenses

In 1956, Dr. David Volk first discovered that aspheric surfaces corrected distortions present in more common spherical lenses. This discovery led to the invention of a proprietary design where both surfaces of the lens were aspheric, resulting in an exceptional enhancement of image quality, clarity, and stereopsis. This breakthrough innovation subsequently resulted in the patented, double-aspheric designs that have become synonymous with Volk Optical and have led to the establishment of Volk lenses as the leading standard and most sought-after lenses in the ophthalmic industry.

See the Difference

Volk’s unsurpassed image quality is achieved through a combination of Volk’s patented double-aspheric design, proprietary A/R (antireflective) coatings specially developed to maximize light transmission as well as reduce glare & reflections, and most importantly, our timeless manufacturing processes which blend artisanal craftsmanship perfected over time with modern technology and 100% inspection processes.

The result is superior distortion-free image quality with exceptional stereopsis, clarity, and resolution across the entire lens, a difference you can see!

The image to the right represents an actual side by side comparison of a Volk 20D lens and a non-Volk lens over a 2 mm grid. The photo has not been retouched.

Continued innovation led to the development of 2nd generation lenses, the Super Series, which provide enhanced imaging, followed by the best-in-class 3rd generation Digital Series lenses, which provide the highest resolution visualization available today. Volk continued to push the boundaries with the development of the Volk®1 Single Use Lenses, which are widely used across hospitals and in settings where infection control is top of mind. Volk’s unmatched image quality can be appreciated across our comprehensive range of imaging products, including gono lenses, laser lenses, a full range of surgical lenses, and the Merlin® non-contact vitrectomy system.

In addition to its comprehensive lens portfolio, Volk has developed a suite of mydriatic and non-mydriatic portable retinal cameras including the Pictor Plus®, Pictor Prestige™ and most recently, the VistaView® which was developed with the intention that every eyecare specialist in the world should have a portable camera in their pocket. These cameras enable point-of-care screening for patients in virtually any care setting from nursing homes to mobile buses to mass screening camps. To further enable access to eye health, Volk launched its telemedicine platform, Virtual™ by Volk to allow for remote screening by automatically and instantaneously sending images from connected cameras to a cloud-based platform for on-demand reading and immediate report generation.
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**CLASSIC BIO LENSES**

Volk Optical pioneered the double-aspheric lens design, a breakthrough innovation where both surfaces of the lens are aspheric, resulting in exceptional image quality, clarity, and stereopsis to provide clear views across the entire lens, all the way to the periphery. The combination of Volk’s patented double-aspheric optical design in conjunction with the highest quality glass materials, proprietary anti-reflective (A/R) coating, and timeless manufacturing and inspection processes developed by Dr. David Volk and perfected over time, make Volk’s Classic Series lenses the leading standard in the ophthalmic industry.

### Classic Series

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<thead>
<tr>
<th>CLASSIC SERIES</th>
<th>FIELD OF VIEW</th>
<th>IMAGE MAG</th>
<th>LASER SPOT MAG</th>
<th>WORKING DISTANCE</th>
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<td>Macula Plus® 5.5</td>
<td>36°/43°</td>
<td>5.50x</td>
<td>0.18x</td>
<td>80 mm</td>
<td>63.2 mm</td>
<td>Ultra-high resolution viewing of posterior pole</td>
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<tr>
<td>14D</td>
<td>36°/47°</td>
<td>4.30x</td>
<td>0.23x</td>
<td>75 mm</td>
<td>57.4 mm</td>
<td>High magnification viewing of posterior pole</td>
</tr>
<tr>
<td>15D</td>
<td>36°/47°</td>
<td>4.11x</td>
<td>0.24x</td>
<td>72 mm</td>
<td>57.4 mm</td>
<td>High magnification viewing of posterior pole</td>
</tr>
<tr>
<td>20D</td>
<td>46°/60°</td>
<td>3.13x</td>
<td>0.32x</td>
<td>50 mm</td>
<td>55.4 mm</td>
<td>General diagnosis and treatment</td>
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<tr>
<td>Pan Retinal® 2.2</td>
<td>58°/73°</td>
<td>2.68x</td>
<td>0.37x</td>
<td>40 mm</td>
<td>40.1 mm</td>
<td>General diagnosis and treatment</td>
</tr>
<tr>
<td>25D</td>
<td>52°/68°</td>
<td>2.54x</td>
<td>0.39x</td>
<td>38 mm</td>
<td>50.1 mm</td>
<td>Mid-peripheral diagnosis and treatment</td>
</tr>
<tr>
<td>28D</td>
<td>53°/69°</td>
<td>2.27x</td>
<td>0.44x</td>
<td>33 mm</td>
<td>45.9 mm</td>
<td>Small pupil diagnosis and treatment</td>
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<tr>
<td>30D</td>
<td>44°/57°</td>
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<td>0.47x</td>
<td>30 mm</td>
<td>48.3 mm</td>
<td>Small pupil diagnosis and treatment</td>
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<tr>
<td>400</td>
<td>69°/90°</td>
<td>1.67x</td>
<td>0.60x</td>
<td>20 mm</td>
<td>45.5 mm</td>
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### Digital Series

<table>
<thead>
<tr>
<th>DIGITAL SERIES</th>
<th>FIELD OF VIEW</th>
<th>IMAGE MAG</th>
<th>LASER SPOT MAG</th>
<th>WORKING DISTANCE</th>
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<th>PRIMARY APPLICATION</th>
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<tbody>
<tr>
<td>Digital ClearMag</td>
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<td>3.89x</td>
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<td>51.9 mm</td>
<td>Detailed optic disc and posterior pole examination</td>
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<td>Digital ClearField</td>
<td>55°/72°</td>
<td>2.79x</td>
<td>0.36x</td>
<td>37 mm</td>
<td>51.9 mm</td>
<td>Mid and far-peripheral retinal examination</td>
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</table>

### Macula Plus® 5.5 - Primary Application

**Ultra-High Magnification View of the Central Retina**

+ Excellent stereo imaging for diagnosis of macular abnormalities in diseases like age-related macular degeneration
+ Highest magnification BIO lens facilitates examination of geriatric patients
+ Lens adapter provides stability for extended working distance

### 14D - Primary Application

**High Magnification Viewing of the Posterior Pole**

+ High magnification provides excellent imaging of the macula and optic disc
+ Detailed view of the optic disc facilitates glaucoma screening examination
+ The only single-aspheric BIO lens design, it still remains in our portfolio for those users who are accustomed to this design

### 20D - Primary Application

**Industry Standard General Diagnostic Lens**

+ Perfect balance of magnification and field of view makes this lens the most popular choice for general diagnostic exams
+ Dynamic examination allows viewing of the peripheral retina while a primary position gaze enables a central retinal exam
+ Also available in autoclavable sterilizable (ACS®) design (see page 53) or single-use design (see page 58)

### Pan Retinal® 2.2 - Primary Application

**Excellent for General Diagnosis and Treatment**

+ Balance of magnification and field of view for general diagnosis with 20% wider field than the 20D allowing for a quick general exam
+ Allows clear visualization up to the peripheral retina during dynamic examination to quickly examine and identify peripheral retinal tears, hemorrhages and other defects
+ Examine through small pupils

### 25D - Primary Application

**Mid-Peripheral Diagnosis and Treatment**

+ Provides approximately 15% wider field of view than the 20D, which extends from the central to the mid-peripheral retina
+ Smaller diameter facilitates manipulation within the orbit and is perfect for those doctors with smaller hands

**AVAILABLE IN 7 DIFFERENT COLORS** (shades may vary)
**Digital Series BIO Lenses**

The Digital Series BIO lenses are a result of Volk’s spirit of innovation and unyielding commitment to optical excellence. The Digital Series incorporates advanced optical lens design to minimize distortion and enhance stereopsis coupled with low dispersion glass to reduce chromatic aberrations. The Digital Series lenses have advanced A/R coatings to reduce reflections and glare up to 50% more than traditional coatings. These collective advancements result in high resolution imaging & superior optical clarity.

### PRIMARY APPLICATION

- **Fundus Scanning**
  - Wide field capability enables visualization past the mid-periphery to equator and viewing to the far-periphery during a dynamic exam
- **Optical design and lens power make it ideal for small pupils**
- Small profile and short working distance enable easy lens manipulation for fast examination/scanning
- Most widely used for ROP and peripheral retinal defects
- Available in autoclave sterilizable (ACS®) design (see page 53) or single-use design (see page 58)

### PRIMARY APPLICATION

- **Small Pupil and Pediatric Examination**
  - Optical design delivers high resolution views through a small pupil
  - Small profile lens for ease of use within the orbit during examination making it ideal for babies and children
  - Provides similar field of view as the 20D
  - Commonly used in ROP screening

### PRIMARY APPLICATION

- **Small Pupil and Pediatric Examination**
  - Optical design delivers high resolution views through a small pupil
  - Dynamic BIO exam yields a field of view of the peripheral retina
  - Small profile enables quick and easy examination, enhancing patient comfort and cooperation

### PRIMARY APPLICATION

- **Low Mag Scanning out to the Far-Peripheral Retina**
  - Widest field of view available in a BIO lens allowing views to the far peripheral retina
  - Great for small pupil and pediatric exam
  - Wide field of view allows for a rapid exam - perfect for patients who have trouble sitting still

### CLASSIC SERIES

<table>
<thead>
<tr>
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<th>FIELD OF VIEW</th>
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<tr>
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<td>55°/72° 42°/54°</td>
<td>3.89x 0.26x</td>
<td>55 mm 519 mm</td>
<td>Mid and far-peripheral retinal examination</td>
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### DIGITAL SERIES

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<tr>
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<td>33 mm 45.9 mm</td>
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<td>Small pupil diagnosis and treatment</td>
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<tr>
<td>44°/57° 2.09x 0.48x</td>
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<td>Small profile lens for ease of use within the orbit</td>
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<tr>
<td>58°/75° 2.15x 0.47x</td>
<td>30 mm 48.3 mm</td>
<td>Small pupil diagnosis and treatment</td>
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<tr>
<td>69°/90° 1.67x 0.60x</td>
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### NEXT GEN SERIES

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<th>NEXT GEN SERIES</th>
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<tbody>
<tr>
<td>36°/43° 5.50x 0.36x</td>
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<td>Ultra-high resolution viewing of posterior pole</td>
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<tr>
<td>36°/43° 4.11x 0.24x</td>
<td>72 mm 57.4 mm</td>
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<tr>
<td>52°/68° 2.54x 0.32x</td>
<td>56 mm 52.1 mm</td>
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</tr>
<tr>
<td>55°/72° 2.79x 0.36x</td>
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<td>Mid and far-peripheral retinal examination</td>
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### LOW MAG SCANNING OUT TO PRIMARY APPLICATION

- **Small Pupil and Pediatric Examination**
  - High resolution view from the central retina
  - Designed specifically for high magnification and detailed examination of the macula and optic disc, this lens is perfect for detecting and monitoring subtle changes in disc morphology
  - High resolution view of the central retina

### HIGH RESOLUTION RETINAL EXAM

- **20% wider field of view than the Classic 20D lens, this lens is the perfect choice for peripheral retinal examinations to diagnose retinal detachments**
  - High resolution view from the central to the mid and far-peripheral retina, even through small pupils
The Volk Classic Series started the revolution of slit lamp fundus examination with lenses from this series considered the industry gold standard. The double-aspheric lens design combined with proprietary A/R coating and timelessness manufacturing & inspection processes developed by Dr. David Volk and perfected over time result in exceptional image quality, clarity, and stereopsis to provide clear views across the entire lens, all the way to the periphery.

The Classic trinity of the 60D, 78D, and 90D double-aspheric lenses are designed to enable various levels of retinal examination ranging from detailed high-magnification macular visualization to far-peripheral and small pupil exams.

<table>
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<tr>
<th>CLASSIC SERIES</th>
<th>FIELD OF VIEW</th>
<th>IMAGE MAG</th>
<th>LASER SPOT MAG</th>
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<th>RING DIAMETER</th>
<th>PRIMARY APPLICATION</th>
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<tbody>
<tr>
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<td>81° / 97°</td>
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<td>1.08x</td>
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<td>34.9 mm</td>
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<tr>
<td>90D</td>
<td>74° / 89°</td>
<td>0.76x</td>
<td>1.32x</td>
<td>7 mm</td>
<td>25.8 mm</td>
<td>Pan Retinal Exam and Small Pupil Examination</td>
</tr>
</tbody>
</table>

**INSIGHT**

Lens power is commonly measured in ‘diopters’ (eg. 90 diopters). Generally, an increase in diopter power results in a wider field of view and lower magnification. Conversely, the lower the diopter number, the lower the field of view and higher the magnification.

However, the size and design of the lens also play a role in performance. While the 90D theoretically should have a wider field of view, due to the 90D being smaller in size than the 78D, the field is essentially “cropped” in the 90D to allow for a small lens size. As a result, the 78D has both wider field and higher magnification than the 90D, despite its lower dioptic value.

When Dr. David Volk developed the first fundoscopy lenses, the smaller size of the 90D was found to be the most widely accepted by doctors since it allowed for easier manipulation within the orbit and provided undilated exam ability leading it to become the most popular lens choice and establishing its place as the industry gold standard for slit lamp exams.
Volk’s commitment to optical excellence resulted in development of the 2nd generation of slit lamp lenses – The Super Series. The Super Series lenses combine advanced double-aspheric lens designs with high-grade glass and improved proprietary manufacturing processes to further enhance optical clarity and augment stereopsis for 3D-like viewing. The Super Series lenses were introduced with functionality in mind and cater to the full diagnostic spectrum from high-magnification stereoscopic capabilities to wide field peripheral viewing as well as unsurpassed small pupil visualization to enable undilated, wide-field exams.

<table>
<thead>
<tr>
<th>CLASSIC SERIES</th>
<th>FIELD OF VIEW</th>
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<td>8°/97°</td>
<td>0.93x</td>
<td>1.00x</td>
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<tr>
<td>90D</td>
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<td>0.76x</td>
<td>1.32x</td>
<td>7 mm</td>
<td>25.8 mm</td>
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<tr>
<td>Super 66°</td>
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<td>1.0x</td>
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<td>High Magnification View of the Central Retina</td>
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<td>SuperField®</td>
<td>95°/116°</td>
<td>0.76x</td>
<td>1.32x</td>
<td>7 mm</td>
<td>30.0 mm</td>
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<tr>
<td>Super VitreoFundus®</td>
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<td>1.75x</td>
<td>4-5 mm</td>
<td>26.7 mm</td>
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<td>SuperPupil® XL</td>
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<tbody>
<tr>
<td>Digital High Mag®</td>
<td>57°/70°</td>
<td>1.0x</td>
<td>0.77x</td>
<td>13 mm</td>
<td>33.0 mm</td>
<td>High Resolution, High Magnification Retinal Examination</td>
</tr>
<tr>
<td>Digital 1.0x Imaging Lens</td>
<td>60°/72°</td>
<td>1.0x</td>
<td>1.0x</td>
<td>12 mm</td>
<td>31.1 mm</td>
<td>Digital Slit Lamp Photography</td>
</tr>
<tr>
<td>Digital Wide Field®</td>
<td>103°/124°</td>
<td>0.72x</td>
<td>1.39x</td>
<td>4-5 mm</td>
<td>34.9 mm</td>
<td>High Resolution Small Pupil Retinal Examination</td>
</tr>
</tbody>
</table>

“EXCELLENT FIELD OF VIEW & MAGNIFICATION”

The Volk Super 66 and SuperField lenses are amongst my favorite lenses. The Super 66 provides excellent magnification and stereopsis for examining the subtle details of my patient’s optic nerve head and macula. The SuperField is the perfect complement to my 90D lens as it provides a wider field view out towards the periphery with the same magnification. I recommend both lenses to my residents and fellows as the optical clarity and views are excellent. I also tend to use the Digital Wide Field when I need to go even further out to the periphery.19

---
- Donny W. Suh, MD, FAAP, MBA, FACS
Pediatric Ophthalmology and Strabismus, Gavin Herbert Eye Institute (GHEI) & Children’s Hospital of Orange County (CHOC), UC Irvine, Irvine, CA, USA

Available in 7 different colors (shades may vary)

Super 66°
Primary Application: High Magnification Viewing of the Central Retina
- Optical design enables 3D discernment of subtle macular and optic disc details with high magnification
- 10x magnification simplifies optic disc ratio measurement
- Seamless upgrade from the 78D

SuperField®
Primary Application: Wide Field Small Pupil Pan Retinal Examination
- The ‘Super 90D’ – same magnification as the 90D with a wider field of view enabling both posterior pole and pan retinal examinations
- Provides dynamic, high resolution viewing to the periphery
- Combines a wide field of view with a comfortable working distance and magnification
- Can be used on small pupils and patients who do not accommodate dilation

Super VitreoFundus®
Primary Application: Ultra Wide Field Small Pupil Pan Retinal Examination
- Wide field of view with views past the vortex
- Excellent small pupil capability through a 3-4 mm pupil
- Ideal for quick undilated screening exams
- A shorter working distance will enable the full wide field of view capability of this lens

SuperPupil® XL
Primary Application: Ultra Wide Field Small Pupil Pan Retinal Examination
- Optimal small pupil capability through a pupil as small as 2-3 mm
- Excellent for funduscopy through a miotic pupil
- Wide field views past the vortex
- Most popular choice for quick undilated screening exams
**Digital Series Slit Lamp Lenses**

Volk has taken double-aspheric lenses to the next level with our 3rd Generation slit lamp lenses: The Digital Series. Similar to the Digital BIO lenses, the digital slit lamp series incorporates advanced optical lens design to minimize distortion and enhance stereopsis coupled with low-dispersion glass to reduce chromatic aberrations. The digital series lenses are equipped with advanced A/R coatings to reduce reflections and glare up to 50% more than traditional coatings. These collective advancements result in high-resolution imaging & superior optical clarity to produce detailed views of the retina that were previously unattainable at the slit lamp.

Whether you’re looking for a wider field of view or higher magnification, Volk’s Digital Series slit lamp lenses have you covered. The Digital Wide Field, Digital High Mag, and Digital 1.0x Imaging Lens offer the highest image resolution available.

### Digital High Mag®

**Primary Application**

- **High Resolution, High Magnification Retinal Examination**

- **High magnification, along with outstanding stereopsis, provide detailed stereo views of the optic disc, the optic nerve, and the retinal nerve fiber layer making this lens ideal for glaucoma screening**

- **Image magnification of 1.30x is the highest magnification available in a non-contact slit lamp lens**

### Digital 1.0x Imaging Lens

**Primary Application**

- **Digital Slit Lamp Photography**

- **Unique glass surface curvature and coating minimize photographic distortion and reflections**

- **10x magnification simplifies optic disc ratio measurements**

- **High-index, high resolution glass provides improved stereopsis and image clarity**

- **Perfect lens for photography at the slit lamp**

### Digital Wide Field®

**Primary Application**

- **High Resolution Small Pupil Pan Retinal Examination**

- **40% more field of view than the Classic 90D, the widest field of view available in a non-contact lens**

- **Allows crystal clear, distortion-free views spanning from central retina to the periphery, including ora serrata under dynamic viewing**

- **Enhanced double-aspheric design paired with high-index glass ensures highest resolution stereo image, even through small pupils**

- **A shorter working distance will enable appreciation of the full wide field of view capability of this lens**

---

**“The Best of Two Worlds!”**

The Volk Digital Wide Field lens is such an amazing all-rounder lens to use in my retinal practice. It presents me with the best of two worlds – not only does it provide an exceptional wide field view of the peripheral retinal pathology without peripheral aberrations allowing me to see a crystal clear and focused image throughout the entire examination, it also preserves the magnification needed to conduct a thorough exam. The superior optical quality and high resolution of the lens make it very reliable in detecting pathology that I hardly need to use contact 3-mirror lenses in my busy vitreoretinal clinic as I have full confidence in making an accurate diagnosis with the Volk Digital Wide Field lens. It is very easy to use on undilated pupils and patients with small pupils and my trainees find it very comfortable to hold and use while examining their patients as well.

- Maged Habib, MD Consultant Ophthalmologist & Vitreoretinal Surgeon, Sunderland Eye Infirmary, Honorary Clinical Senior Lecturer, Biosciences Institute, Newcastle University, United Kingdom

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**“Outstanding Resolution”**

I keep a Volk Digital High Mag Lens in my coat pocket whenever I’m in clinic. I think of it as a ‘poor man’s OCT’ because of the outstanding resolution and stereopsis it provides. Its image rivals that of many contact lenses, yet without the inconvenience and patient discomfort. More importantly, the non-contact design preserves the corneal surface for any diagnostic testing needed later that day.

- Carl C. Awh, MD FASRS
  President, Tennessee Retina & Former President of ASRS, Nashville, TN, USA

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**Slit Lamp**

**Digital Series Slit Lamp Lenses**

**Digital High Mag®**

<table>
<thead>
<tr>
<th>Field of View</th>
<th>Image Mag</th>
<th>Laser Spot Mag</th>
<th>Working Distance</th>
<th>Ring Diameter</th>
<th>Primary Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>60°/90°</td>
<td>1.30x</td>
<td>0.77x</td>
<td>13 mm</td>
<td>33.0 mm</td>
<td>High Resolution, High Magnification Retinal Examination</td>
</tr>
<tr>
<td>70°/103°</td>
<td>1.30x</td>
<td>0.72x</td>
<td>13 mm</td>
<td>34.9 mm</td>
<td>High Resolution, High Magnification Retinal Examination</td>
</tr>
</tbody>
</table>

**Digital 1.0x Imaging Lens**

<table>
<thead>
<tr>
<th>Field of View</th>
<th>Image Mag</th>
<th>Laser Spot Mag</th>
<th>Working Distance</th>
<th>Ring Diameter</th>
<th>Primary Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>60°/72°</td>
<td>1.0x</td>
<td>1.0x</td>
<td>11 mm</td>
<td>34.5 mm</td>
<td>Digital Slit Lamp Photography</td>
</tr>
<tr>
<td>70°/103°</td>
<td>0.72x</td>
<td>1.0x</td>
<td>13 mm</td>
<td>34.9 mm</td>
<td>Digital Slit Lamp Photography</td>
</tr>
</tbody>
</table>

**Digital Wide Field®**

<table>
<thead>
<tr>
<th>Field of View</th>
<th>Image Mag</th>
<th>Laser Spot Mag</th>
<th>Working Distance</th>
<th>Ring Diameter</th>
<th>Primary Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>90°/124°</td>
<td>1.0x</td>
<td>1.0x</td>
<td>11 mm</td>
<td>31.1 mm</td>
<td>Digital Slit Lamp Photography</td>
</tr>
<tr>
<td>103°/124°</td>
<td>0.72x</td>
<td>1.0x</td>
<td>13 mm</td>
<td>34.9 mm</td>
<td>Digital Slit Lamp Photography</td>
</tr>
</tbody>
</table>

### Slit Lamp Specifications

- **VDGT1**:AVAILABLE IN 7 DIFFERENT COLORS (shades may vary)
- **VDGTL1**:AVAILABLE IN 7 DIFFERENT COLORS (shades may vary)
- **VDGLTM**
OUR GENERATIONS

From the Classic 20D, 78D and 90D lenses, Volk’s lenses have evolved through the second generation (Super Series) to the current, third generation (Digital Series) for the highest quality retinal imaging available.

1ST GENERATION

20D: Most popular lens for general BIO exams
90D: Most popular lens for examination at the slit lamp and great for small pupils
78D: Complements the 90D but with higher magnification for central retinal examination

2ND GENERATION

Pan Retinal 2.2: 22% wider field of view than the 20D
SuperField*: 30% wider field of view than the 90D
Super 66*: Complements the 90D, but with a higher magnification to use for central retinal examination

3RD GENERATION

Digital ClearField: Highest resolution diagnostic BIO lens
Digital Wide Field*: Ultimate 90D power lens with 40% wider field of view than the 90D
Digital High Mag*: The highest magnification and finest resolution lens for detailed central retinal views.

KEEP AN EYE OUT FOR OUR SEASONAL

LIMITED EDITION

PINK LENSES

THINK PINK

ADD A POP OF COLOR TO YOUR COLLECTION

AVAILABLE IN 20D, 78D, 90D, SUPERFIELD & DIGITAL WIDE FIELD

Follow us on Instagram @volkoptical to hear about seasonal launches
Designed with Doctors FOR DOCTORS
We realize the importance of clear visualization to provide a confident and accurate diagnosis. We also recognize that no one understands this problem better than you. Therefore, to combat this new problem, we worked with experts like you to design and develop the ClearPod.

Developed in collaboration with Dr. Jeremy Wingard and Dr. Bradley Sacher, the patent-pending ClearPod results in a fog-minimizing solution that is practical, simple and effective.

Freedom from Fogging FOR EFFICIENT EXAMS
As facemasks became commonplace with COVID-19, the inconvenience of fogging lenses came with it, compromising your view and slowing down your fundus exams.

The ClearPod diverts fog away from your lens surface, giving you ample time to conduct detailed exams without having to interrupt care.

Crystal Clear Views UNINTERRUPTED!
Experience uninterrupted visualization during your retina examination with the Volk ClearPod and reclaim the Volk clarity you remember and trust.

No more asking patients to remove their masks, dealing with messy tape, or using solutions that erode your lens coatings!

Choose your ClearPod™
Choose the right ClearPod for your lens to ensure the best fit and working distance to enjoy the enhanced visualization of your Volk lens, just the way you remember!

LIFT THE FOG The unique shield has carefully designed wing and flange features to efficiently direct warm currents of air away from your optical path.

JUST CLIP AND GO Optimized shape and fit allows you to securely clip your lens while enabling you to maintain your natural grip.

ELEGANT AND ERGONOMIC The flange is designed to balance optimal fog diversion while accommodating the right working distance.

THE PERFECT FIT, EVERYTIME The ledge on the inside of your ClearPod is designed to act as a back-stop to guide your lens into the right position.

“PREVENTS FOGGING AND A GREAT TEACHING AID
The ClearPod is a perfect solution to prevent non-contact lenses from fogging up. I strongly recommend this device to every ophthalmologist examining a mask-wearing patient, allowing a normal examination of the retina. Even without COVID, I think this is a great tool for teaching medical students and residents ophthalmoscopy techniques, as the flange guides and supports to better accommodate the proper working distance.”

- Francesco Comacchio, MD
Ophthalmologist, Hospital of Merano-Südtirol, Italy

FOR DOCTORS
90D
78D
Digital Wide Field®
SuperField®
Volkmann’s Gonio Lenses are the industry standard for performing static, dynamic, and indentation gonioscopy. Our G-Series lenses (G-1, G-2, G-3, G-4, and G-6) are made entirely of glass optics and each lens is hand-made and 100% inspected using timeless and perfected craftsmanship techniques, resulting in the unmatched optical clarity.

The No-Flange Gonio lenses are designed for maximum patient comfort and minimized corneal wrinkling during dynamic exams and the Flanged Gonio lenses provide optimal stability and control during laser procedures.

The G-3 is a versatile all-purpose lens for central, equatorial and peripheral views out to the ora serrata in addition to anterior chamber angle viewing and the G-4 or G-6 are an essential in every glaucoma specialist’s portfolio for uninterrupted views of the angle.

<table>
<thead>
<tr>
<th>LENS</th>
<th>MIRROR ANGLES</th>
<th>IMAGE MAG</th>
<th>LASER SPOT MAG</th>
<th>CONTACT DIAMETER</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-1 Gonio</td>
<td>62°</td>
<td>1.50x</td>
<td>0.67x</td>
<td>15 mm</td>
<td>Detailed Viewing of the Trabecular Meshwork</td>
</tr>
<tr>
<td>G-1 Gonio, No Flange</td>
<td>62°</td>
<td>1.50x</td>
<td>0.67x</td>
<td>15 mm</td>
<td>Detailed Viewing of the Trabecular Meshwork</td>
</tr>
<tr>
<td>G-2 Gonio</td>
<td>60°/64°</td>
<td>1.50x</td>
<td>0.67x</td>
<td>15 mm</td>
<td>Detailed and a Broad View of the Anterior Chamber</td>
</tr>
<tr>
<td>G-2 Gonio, No Flange</td>
<td>60°/64°</td>
<td>1.50x</td>
<td>0.67x</td>
<td>15 mm</td>
<td>Detailed and a Broad View of the Anterior Chamber</td>
</tr>
<tr>
<td>G-3 Gonio (Goldmann Style)</td>
<td>60°/66°/76°</td>
<td>1.06x</td>
<td>0.94x</td>
<td>15 mm</td>
<td>View of the Indocorneal Angle/ Mid-peripheral/Peripheral Retina/Retinal Image from the Equator to the Ora Serrata</td>
</tr>
<tr>
<td>G-3 Gonio, No Flange</td>
<td>60°/66°/76°</td>
<td>1.05x</td>
<td>0.97x</td>
<td>11.4 mm</td>
<td>View of the Indocorneal Angle/ Mid-peripheral/Peripheral Retina/Retinal Image from the Equator to the Ora Serrata</td>
</tr>
<tr>
<td>G-3 Gonio Mini, No Flange</td>
<td>60°/66°/76°</td>
<td>1.0x</td>
<td>1.0x</td>
<td>9.5 mm</td>
<td>View of the Indocorneal Angle/ Mid-peripheral/Peripheral Retina/Retinal Image from the Equator to the Ora Serrata</td>
</tr>
<tr>
<td>3 Mirror, No Flange</td>
<td>60°/66°/76°</td>
<td>0.90x</td>
<td>1.1x</td>
<td>15.7 mm</td>
<td>Mid-peripheral/Peripheral Retina/Retinal Image from the Equator to the Ora Serrata</td>
</tr>
<tr>
<td>3 Mirror, ANF+</td>
<td>60°/66°/76°</td>
<td>0.90x</td>
<td>1.1x</td>
<td>18.1 mm</td>
<td>Mid-peripheral/Peripheral Retina/Retinal Image from the Equator to the Ora Serrata</td>
</tr>
<tr>
<td>G-4 Gonio</td>
<td>6x64°</td>
<td>1.0x</td>
<td>1.0x</td>
<td>15 mm</td>
<td>Examination of the Trabecular Meshwork</td>
</tr>
<tr>
<td>G-4 Gonio, No Flange(Sussman &amp; Posner Style)</td>
<td>6x64°</td>
<td>1.0x</td>
<td>1.0x</td>
<td>8.1 mm</td>
<td>Examination of the Trabecular Meshwork</td>
</tr>
<tr>
<td>G-4 High Mag Gonio</td>
<td>6x64°</td>
<td>1.50x</td>
<td>0.67x</td>
<td>15 mm</td>
<td>Magnified Detailed Viewing of the Trabecular Meshwork</td>
</tr>
<tr>
<td>G-4 High Mag Gonio, No Flange</td>
<td>6x64°</td>
<td>1.50x</td>
<td>0.67x</td>
<td>8.1 mm</td>
<td>Magnified Detailed Viewing of the Trabecular Meshwork</td>
</tr>
<tr>
<td>Mini 4-Mirror</td>
<td>6x63°</td>
<td>0.9x</td>
<td>1.1x</td>
<td>15 mm</td>
<td>Easy Manipulations within the Orbit to View Trabecular Meshwork</td>
</tr>
</tbody>
</table>

“QUICK AND EASY ANGLE VIEWING”

“The Volk G4 is an easy all-around lens to view the angle. It is easy to insert and quickly obtain a good view. It allows you to efficiently and effectively view the angle without requiring any rotation and is comfortable to the patient.”

- Rachel N. Brackley, OD FAAO
Pennsylvania College of Optometry at Salus University, Philadelphia, PA, USA

“My GO-TO GONIO LENS”

“The Volk G3 is one of my go-to gonioscopy lenses. The flange is great for stabilizing the lens, especially for challenging patients who squeeze their lids or move their eyes. In addition to gonioscopy, the G3 is phenomenal for retina evaluation. I love the Magnified Stereo image you can get during slit lamp examination of the retina. It allows me to view the retina from posterior pole to ora serrata. I always use my G3 gonio lens when I need a better look at a retinal lesion. I recommend the G3 to all my students.”

- Lloyd Pate, OD ABCMO
Clinical Associate Professor
University of Houston, College of Optometry, Houston, TX, USA
G-4 Gonio enables more detailed viewing of the trabecular meshwork in four quadrants.

- Available with a large ring (28.5 mm), a small ring (25.5 mm) for petite hands, or a 2-position handle - Posner style (right/left-handed) for additional support.
- No Flange/No Fluid version is ideal for dynamic and indentation/compression gonioscopy.

### 4-Mirror, All-Glass Design for Magnified Anterior Chamber Angle Viewing

- 50% more image magnification than our classic G-4 Gonio.
- Available with a large ring (28.5 mm) or a 2-position handle - Posner style (right/left-handed) for additional support.
- No Flange/No Fluid version is ideal for dynamic and indentation/compression gonioscopy.

### 3-Mirror, Acrylic Design for Anterior, Peripheral, and Equatorial Viewing (Goldmann-style Lens)

- 3-mirror design provides the same anterior chamber angle, central, equatorial, and peripheral retinal views as our G-3 Gonio lenses, but in a light-weight acrylic design while still providing Volk quality optics.
- Advanced no fluid (ANF+) flange only requires a coupling fluid during laser procedures.
- Not recommended for SLT. We recommend a Volk Rapid SLT® or SLT lens instead (page 39).

### No Flange

- Small Ring (28.5 mm):
  - Mini 4-Mirror
  - Flange: VG4 (shown)
  - No Flange, Large ring (28.5 mm): VG4LNF
  - Fluid versus No-Fluid
    - A coupling fluid/gel should always be used with flanged lenses. Commonly used fluids include Goniovisc®, Gonak®, Refresh Celluvisc®, or any comparable solution. No flange (NF) lenses have also been designed to have a unique flange that does not require the use of a coupling fluid.

### Fluid versus No-Fluid

- A flanged element offers better stability on the cornea and is also less prone to the patient blinks off the lens. We always recommend a flanged lens for any laser procedures. A no-flanged lens has a smaller contact area and is shaped to comfortably conform to the curvature of the corneal surface to minimize corneal wrinkling during dynamic exams such that use of coupling gel is not required. As a result, this enables you to perform a quicker and simpler exam. You can also perform skin contact indentation/compression for angle closure glaucoma diagnosis with an appropriate no-flange gonio lens (indentation can be performed with G-4, G-6; not G-3 or 3 Mirror).

### Flange versus No-Flange

- A no-flanged lens has a smaller contact area.
Volk’s Surgical Gonioprism lenses leverage the same proprietary optical design and manufacturing principles as Volk’s diagnostic lenses. Each surgical gonio lens is designed and tested in partnership with numerous surgeons resulting in the best optical clarity, maximum visualization, surgeon & microscope friendly ergonomics, and optimized for patient comfort.

### Volk Vold Gonio (VVG) Lens

**Primary Application:**
- Direct Views for Micro-Invasive Glaucoma Surgery (MIGS) and all Intraoperative Gonio Procedures

#### Specifications
- Image Mag: 1.20x
- Contact Diameter: 10.2 mm
- Ring Diameter: 15.2 mm
- Handle Length: 84 mm

#### Features
- Thornton-style fixation ring provides maximum control of the globe
- Floating ring design minimizes corneal pressure to prevent anterior chamber distortion
- Visualizes angle in primary phaco position with minimal microscope and head adjustments
- Designed in collaboration with Dr. Steven Vold and refined with doctors across the world to ensure maximum usability
- Sterilizable by either steam autoclave or ethylene oxide (ETO)

#### Testimony
- J. Morgan Micheletti, MD
  - Cataract, Refractive, & Anterior Segment Surgeon
  - Berkeley Eye Center, Houston, Texas, USA

### Surgical Gonio Lens

**Primary Application:**
- Direct Views for Intraoperative Gonio Procedures

#### Specifications
- Image Mag: 1.20x
- Contact Diameter: 10.3 mm
- Ring Diameter: 15 mm
- Handle Length: 75 mm

#### Features
- Lightweight titanium handle and chip resistant lens design with adjustable lens orientation
- Enables clear visualization of the angle for surgery
- Lens design enables comfortable positioning against the cornea
- Lens position can be adjusted relative to the handle: for left hand and right hand or center position allowing freedom of movement
- Applicable for MIGS procedures
- Sterilizable by either steam autoclave or ethylene oxide (ETO)

#### Testimony
- Michael S. Berlin, MD
  - Director of Glaucoma Institute of Beverly Hills, West Hollywood, CA, USA

### A Revolution in MIGS

For maximum control, clearer angle image, and minimal corneal pressure, choose the Volk VVG Lens for Micro-Invasive Glaucoma Surgery (MIGS) and other intraoperative surgical gonio procedures.

#### Key Features
- Stabilize and Control the Globe with Thornton-style fixation ring
- Eliminate Anterior Chamber Distortion
- Minimal Microscope & Head Adjustments
- Withstands Repeat Sterilization compatible with both steam and gas sterilization

#### Testimony
- Michael S. Berlin, MD
  - Director of Glaucoma Institute of Beverly Hills, West Hollywood, CA, USA

#### Testimony
- J. Morgan Micheletti, MD
  - Cataract, Refractive, & Anterior Segment Surgeon
  - Berkeley Eye Center, Houston, Texas, USA

**“SUPERB VISUALIZATION”**

The Volk surgical gonio prism allows superb visualization of the angle and conforms well to the cornea with minimal coupling agent. The handle is well sized to fit under the increasing size of microscope stacks and the ability to rotate the lens allows additional surgical freedoms while maintaining positional comfort.96

**“STABILITY FOR MIGS”**

The floating lens and stabilizing Thornton Ring assist you with rotating the eye so you can easily visualize the trabecular meshwork... and stabilize for perfect visualization.96
with ANF+ lenses, a coupling fluid must be used. For the Flanged version, a coupling fluid is recommended during diagnostic examination. Should you choose to do laser with ANF+ lenses, a coupling fluid must be used. Regular flanged lenses are recommended for laser procedures. ALL LASER PROCEDURES WITH ANY VOLK CONTACT LENS MUST USE A COUPLING FLUID.

**CONTACT OPTIONS**

<table>
<thead>
<tr>
<th>LENSType</th>
<th>FIELD OF VIEW</th>
<th>IMAGE MAG</th>
<th>LASER SPOT MAG</th>
<th>CONTACT DIAMETER</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR Wide Field</td>
<td>160°/165°</td>
<td>0.50x</td>
<td>2.0x</td>
<td>16.5 mm</td>
<td>Wide Field View for Pan Retinal Examination and Laser Treatments</td>
</tr>
<tr>
<td>Super Quad® 160</td>
<td>160°/165°</td>
<td>0.50x</td>
<td>2.0x</td>
<td>Flange: 16.5 mm NF: 15.7 mm</td>
<td>Wide Field View for Pan Retinal Examination and Laser Treatments</td>
</tr>
<tr>
<td>QuadrAspheric®</td>
<td>120° / 144°</td>
<td>0.51x</td>
<td>1.97x</td>
<td>Flange: 15.5 mm ANF+: 15.5 mm NF: 13.6 mm</td>
<td>Wide Field View for Pan Retinal Examination &amp; Laser in Small Pupils</td>
</tr>
<tr>
<td>Area Centralis®</td>
<td>70° / 84°</td>
<td>1.06x</td>
<td>0.94x</td>
<td>Flange: 16.5 mm ANF+: 15.5 mm NF: 13.5 mm</td>
<td>High Magnification Examination and Treatment of the Posterior Pole</td>
</tr>
<tr>
<td>HR Centrals+</td>
<td>74° / 88°</td>
<td>1.08x</td>
<td>0.93x</td>
<td>15.5 mm</td>
<td>High Magnification for Small Pupil Posterior Pole Treatment</td>
</tr>
<tr>
<td>Super Macula® 2.2</td>
<td>62° / 78°</td>
<td>1.49x</td>
<td>0.67x</td>
<td>15.5 mm</td>
<td>High Magnification Examination and Treatment of the Posterior Pole</td>
</tr>
<tr>
<td>TransEquator®</td>
<td>110° / 152°</td>
<td>0.70x</td>
<td>1.44x</td>
<td>Flange: 15.5 mm ANF+: 15.5 mm NF: 13.2 mm</td>
<td>Mid-Peripheral Diagnosis and Focal/Grid Laser Therapy</td>
</tr>
<tr>
<td>Equator Plus®</td>
<td>94° / 137°</td>
<td>0.44x</td>
<td>2.27x</td>
<td>Flange: 15.5 mm ANF+: 15.5 mm NF: 13.6 mm</td>
<td>Small Pupil Diagnosis and Treatment</td>
</tr>
<tr>
<td>Quad Pediatric</td>
<td>100° / 120°</td>
<td>0.55x</td>
<td>1.82x</td>
<td>10.0 mm</td>
<td>ROP and Other Pediatric Conditions</td>
</tr>
<tr>
<td>PDT Laser</td>
<td>115° / 137°</td>
<td>0.67x</td>
<td>1.50x</td>
<td>15.5 mm</td>
<td>Photodynamic Therapy</td>
</tr>
</tbody>
</table>

**“WIDE FIELD VIEWS FOR PRP”**

The HR Wide Field lens provides excellent views of the peripheral retina and in conjunction with proper patient gaze instructions, enables me to apply PRP just anterior to the ora serrata. In addition, the compact and light-weight size of this lens simplifies manipulation of the lens within the orbit leading to shortened procedure times and is especially helpful and comfortable for patients with narrow palpebral fissures. The high refractive index of the lens also reduces the aberrations associated with any lens system. The optical design of the lens also enables simple optical alignment enabling easy visualization and is forgiving to small movements, allowing for excellent image quality during PRP. The HR Wide Field is my go-to lens for delivery of PRP in proliferative retinal diseases and for detailed evaluation of the peripheral retina.29

- K. V. Chalam, MD Professor & Director of Retina
Loma Linda University School of Medicine, Loma Linda, CA, USA

**Flanged version provides optimal stability on the cornea during laser procedures and is the recommended contact lens for laser treatment. A coupling fluid should be used with flanged lenses. No Flange (NF) versions have a smaller corneal contact area than flanged versions. It is necessary to use a coupling fluid with this version. Non-flanged lenses are not recommended for use with laser due to lack of flange for stability and should only be used for diagnostic examination. ANF+ flanged version is designed to provide optimal stability without the need for a coupling fluid during diagnostic examination. ANF+ flange versions are recommended for diagnostic examination. Should you choose to do laser with ANF+ lenses, a coupling fluid must be used. Regular flanged lenses are recommended for laser procedures. ALL LASER PROCEDURES WITH ANY VOLK CONTACT LENS MUST USE A COUPLING FLUID.**
Primary Application | PRP & Focal/Grid
Small Pupil Diagnosis and Treatment
- High resolution wide field imaging with small pupil capability
- Ergonomic, smaller lens body designed for increased freedom of maneuverability within the orbit, ideal for patients with deep-set eyes

Primary Application | Focal/Grid
Mid-Peripheral Retinal Diagnosis and Focal/Grid Laser Therapy
- Wide field of view past the equator for pan retinal imaging and treatment
- Perfect balance whether you are treating retinal tears at the mid-periphery or performing focal/grid laser procedures at the posterior pole
- Excellent substitute for Rodenstock pan fundus lens

Primary Application | PRP
Retinopathy of Prematurity and Pediatric Diagnosis and Treatment
- Patented double aspheric glass optics provide enhanced imaging with wide field views
- Miniaturized contact diameter provides optimal comfort and stability for diagnosis and treatment of ROP and other infant conditions
- Excellent for treatment of patients with narrow palpebral fissures

Primary Application | Focal/Grid
High Magnification Examination and Treatment of the Posterior Pole in Small Pupils
- Low-dispersion glass and advanced double-aspheric design produces a high resolution view out to the peripheral retina
- Excellent capability with pupils as small as 4 mm

Primary Application | PRP
Photodynamic Therapy
- Delivers maximum laser spot size for treatment of the choroidal neovascular membranes
- Ideal combination of magnification and field of view to facilitate PDT procedures
- Optimized A/R coating for 689 nm wavelength used for PDT procedures to treat retinal neovascularization, tumors, etc.
Volk’s range of Anterior and Mid-Vitreous lenses are specially crafted for laser treatment of the anterior segment and vitreous pathologies. Experience precision, clarity, high-resolution and aberration free viewing with excellent stereo imaging using our laser lenses. All these laser lenses have been carefully designed with the best experts in the industry to ensure efficient and comfortable laser procedures.

<table>
<thead>
<tr>
<th>LENS</th>
<th>IMAGE MAG</th>
<th>LASER SPOT MAG</th>
<th>CONTACT DIAMETER</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singh MidVitreous</td>
<td>116x</td>
<td>0.86x</td>
<td>15.5 mm</td>
<td>Laser Treatment of Vitreous Floaters</td>
</tr>
<tr>
<td>Rapid SLT®</td>
<td>1.0x</td>
<td>1.0x</td>
<td>15.0 mm</td>
<td>SLT Procedures</td>
</tr>
<tr>
<td>Selective Laser</td>
<td>1.0x</td>
<td>1.0x</td>
<td>14.4 mm</td>
<td>SLT Procedures</td>
</tr>
<tr>
<td>Trabeculoplasty (SLT)</td>
<td>1.0x</td>
<td>1.0x</td>
<td>15.5 mm</td>
<td>Laser Capsulotomy Procedures</td>
</tr>
<tr>
<td>Capsulotomy</td>
<td>1.0x</td>
<td>0.64x</td>
<td>15.5 mm</td>
<td>Laser Capsulotomy Procedures</td>
</tr>
<tr>
<td>Blumenthal Iridotomy</td>
<td>1.54x</td>
<td>0.65x</td>
<td>11.9 mm</td>
<td>Far Periperal Laser Iridotomy Procedures</td>
</tr>
<tr>
<td>MagPlus Iridectomy Lens</td>
<td>1.60x</td>
<td>0.63x</td>
<td>15.5 mm</td>
<td>Laser Iridotomy Procedures</td>
</tr>
<tr>
<td>Iridectomy</td>
<td>1.70x</td>
<td>0.59x</td>
<td>15.5 mm</td>
<td>Magnified Laser Iridotomy Procedures</td>
</tr>
<tr>
<td>Blumenthal Suturelysis</td>
<td>2x-3x</td>
<td>0.50x-0.33x</td>
<td>11 mm</td>
<td>Suturelysis Procedure</td>
</tr>
</tbody>
</table>

**Singh MidVitreous**

**PRIMARY APPLICATION**

- Laser Treatment of Vitreous Floaters
  - Superior depth of focus provided by this lens allows visualization of the entire vitreous chamber from the posterior lens to the retina for the treatment of floaters
  - Provides clear context regarding location of floaters and relative position with respect to the lens and retina, contributing to safe and confident laser application
  - Unique flanged contact element provides stability during laser procedures and is ideal for patients with small palpebral fissures

**LASER COMPATIBILITY**

Capsulotomy, Iridectomy, and Iridotomy lenses are suitable for argon, diode and YAG laser treatments.

SLT & Rapid SLT lenses can be used for ALT and MLT per the following laser compatibility for each procedure:

- Selective Laser Trabeculoplasty (SLT): Q-switched frequency doubled Nd:YAG 532 nm
- Argon Laser Trabeculoplasty (ALT): Argon laser 488/514 nm
- Multipulse Laser Trabeculoplasty (MLT): Diode laser 810 nm

**Rapid SLT®**

**PRIMARY APPLICATION**

- SLT Procedures
  - Four-mirror design with total internal reflection reduces the time taken for the SLT procedure by half
  - Simultaneously visualize of all quadrants of the trabecular meshwork minimizing the need to rotate the lens
  - 1.0x magnification maintains laser spot size and power density and the treatment size
  - Broadband A/R coating

**Selective Laser Trabeculoplasty (SLT)**

**PRIMARY APPLICATION**

- SLT Procedures
  - Large internally reflective facet provides excellent view of the angle
  - 1.0x magnification maintains laser spot size and power density at the treatment site

**UNMATCHED PRECISION**

Enhances Confidence
The Volk Iridectomy Lens is extremely helpful in ICL surgery, especially for narrow angles allowing use of minimal energy and accurate lens placement with minimal inflammation. I feel Volk lenses should be a necessary inclusion in the full spectrum Keratotomy-Lenticulo-Refractive surgical practice.

- Arun Gulani, MD FAAO
  Founding Director & Chief Surgeon, Gulani Vision Institute, Jacksonville, FL, USA
DIRECT CONTACT LASER LENSES

Volk’s fundus laser lenses provide high resolution and magnified views of the fundus for treatment of the posterior pole. These lenses are designed with features to eliminate reflections and the fundus laser lenses have a proprietary Laser Window for optimal laser beam transmission and imaging element protection.

<table>
<thead>
<tr>
<th>LENS</th>
<th>FIELD OF VIEW</th>
<th>IMAGE MAG</th>
<th>LASER SPOT MAG</th>
<th>CONTACT DIAETER</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralis Direct*</td>
<td>22° / 26°</td>
<td>0.90x</td>
<td>1.13x</td>
<td>15.5</td>
<td>Direct upright image for posterior pole laser treatments</td>
</tr>
<tr>
<td>Fundus Laser</td>
<td>35° / 40°</td>
<td>1.25x</td>
<td>0.80x</td>
<td>15.5</td>
<td>High magnification view for posterior pole laser treatments</td>
</tr>
<tr>
<td>Fundus Laser 20mm</td>
<td>25° / 30°</td>
<td>1.44x</td>
<td>0.70x</td>
<td>20.0</td>
<td>Highest magnification view for posterior pole treatments</td>
</tr>
</tbody>
</table>

Centralis Direct*

**PRIMARY APPLICATION**
- Direct Image Viewing and Treatment of the Posterior Pole
- Provides direct upright image of the posterior segment of the eye
- Highest laser spot size of laser lenses
- High profile design eliminates filament reflection
- Optimized aspheric corneal contact design for improved fit and maneuverability

Fundus Laser

**PRIMARY APPLICATION**
- Direct Image Viewing and Treatment of the Posterior Pole
- Patented double-aspheric glass optics provide enhanced imaging
- Superior high magnification viewing and treatment of the optic nerve head and macula
- Laser Window ensures optimal laser beam transmission and protects imaging element from contamination ensuring precise laser spot placement

Fundus Laser 20mm

**PRIMARY APPLICATION**
- Direct Image Viewing and Treatment of the Posterior Pole
- Highest magnification viewing and treatment of the optic nerve head and macula
- Laser Window ensures optimal laser beam transmission and protects imaging element from contamination ensuring precise laser spot placement
- Large 20 mm contact element is designed to sit under the patient’s eyelid and provides superior stability during laser treatment

SINGH MIDVITREOUS

Superior Focus & Stability for Laser Vitreolysis Procedures

**Clearer Visualization. Better Treatment.**

How the Singh MidVitreous Brings Together Unmatched Imaging and Ergonomics for Optimum Laser Floater Removal/Vitreolysis Procedures

Floaters are translucent vitreous strands that move randomly and lazily across the visual field and obstruct vision. While floaters are generally harmless and self-correct, in approximately 30% of cases, floaters recur or frequently, obstructing the direct line of sight which adversely impacts everyday tasks like reading and can potentially even be dangerous in situations such as driving.

Floaters are caused by contraction and solidification of collagen within the vitreous. Floaters are known to be symptomatic of vitreous traction which may lead to retinal detachment/tears or could be a side effect of cataract surgery. However, any sudden increase in the number, size or frequency of floaters must be reported to an eye care specialist to rule out possibly serious conditions. The usage of YAG laser impact on everyday tasks like reading and can potentially obstruct the direct view of the retina so that the surgeon is confident that it is at a safe distance and the laser convergence zone is not incident on the retina causing unwanted damage. Laser floater treatment as an outpatient treatment is helping improve the quality of vision in patients that may not be qualified for a complete vitrectomy.

**Perfect Visualization is Key to Safer Procedures and Better Patient Outcomes**

Designed in collaboration with Dr. Inder Paul Singh, the Volk Singh MidVitreous lens provides enhanced depth of focus and best-in-class optics to eliminate vitreous strands or opacities in the mid-vitreous. The crisp stereo visualization and depth of focus that the lens provides helps plan efficient laser placement while the precise focusing ability helps keep the laser energy low, leading to safer, more effective laser procedures.

"Visualization is the most important aspect when you are treating anywhere in the eye. The key is to know exactly where the floater is relative to the retina and the ocular lens in order to safely fire the laser," says Dr. Inder Paul Singh from The Eye Centers of Racine and Kenosha when asked what was the critical factor when performing LFR procedures. "The pristine images that I acquire through the Volk Singh MidVitreous lens is truly second to none. The depth of field is amazing and allows me to visualize all the way from vasculature at the retina to the surface of the cornea with the same lens. Often times, I am able to visualize problematic floaters using the Volk lens at the laser which I couldn't during the slit lamp examination," Dr. Singh adds.

Visualizing and treating such symptomatic floaters improves patient outcomes and provides a better visual experience. For the surgeon, the patient is asked to look in different directions in order to coax the floater into the field of view. It is important to have the lens stay stable on the eye during this procedure without slipping or forming air bubbles within the coupling fluid. The contact element of the Singh MidVitreous has been carefully designed to provide optimum control and fit over the patient’s cornea to prevent blink reflex, while ensuring patient comfort. The size of the lens allows for streamlined manipulation of the lens and laser, leaving comfortable working space for the doctor between the laser and the patient’s eye. The small lens size also makes the lens optimal for use in patients with small eyes. An over-all combination of superior optics and ergonomics, the Singh MidVitreous enhances laser floater treatments.

INDER PAUL SINGH, MD
Eye Centers of Racine and Kenosha

Dr. Singh is the leadering opinion on laser floater removal. He also specializes in glaucoma treatment such as SLT and MIGS procedures. He is an expert in other anterior eye laser surgeries such as capsulotomy and iridotomy.
Volk’s Rapid SLT® lens cuts down Selective Laser Trabeculoplasty (SLT) procedure time by almost 50% and minimizes the need for lens rotation.

The Rapid SLT is the newest addition to the laser lens family from Volk Optical. Specially designed for Selective Laser Trabeculoplasty (SLT), this innovative lens incorporates four total internal reflective surfaces instead of just one – which has been the industry standard – until now. The large reflective surfaces provide four amazing and simultaneous views of the trabecular meshwork and iridocorneal angle.

SLT has emerged as a widely accepted treatment choice for addressing increased Intraocular Pressure (IOP) in patients with glaucoma. Using a Q-switched, frequency-doubled, 532 nm Nd:YAG laser, SLT is considered to be less disruptive than Argon Laser Trabeculoplasty (ALT). This technique ‘selectively’ targets pigmented cells that have a greater ability to absorb the laser than the surrounding structures, thereby being considered a relatively safer procedure.

The prevalence of glaucoma continues to increase, owing to a clear, high resolution, 360° view of the angle. analogous to the four mirror gonioscopy and simultaneous views achieved with the Rapid SLT lens and the efficiency that it brings to the procedure. It has now become our lens of choice for SLT procedures,” states Lighthizer.

**An Easy Transition**

According to John McCall Jr., O.D., who collaborated on the design of the rapid SLT, not only does the Rapid SLT speed up the procedure time but also results in more efficient laser spot placement. “What I found, as well as my partners have, is that we use about 25% fewer laser shots with the Rapid SLT. That is 25% lesser millijoules fired into the eye than we used to before, making the procedure safer,” says McCall.

He also highlights the importance of the smaller contact design element of the lens. “With this flange, it’s easy on the patient while providing adequate suction through the whole procedure. It is also easier to get off of the eye.” This feature is particularly beneficial when treating patients with small palpebral fissures or flaccid eyelids who are more prone to blinking the lens off the eye. Overall, starting with the application of lens on the patient’s eye, through administering the laser, to removing the lens off the eye, the Rapid SLT enhances ease of use at each step of the treatment.

The prevalence of glaucoma continues to increase, bringing an increased need for timely intervention. The Rapid SLT enables an easy transition from diagnosis to treatment for O.D.s, thanks to the nearly 360° view of the angle, analogous to the four mirror gonioscopy technique mastered by every O.D. The Rapid SLT’s views enable better-informed diagnosis and treatment. For O.D.s traveling to licensed states for treatment days, the reduced procedure time translates directly to an ability to treat more patients with each visit.

**Conclusion**

As evidenced by the images provided by Vadym Pecherii, Ophthalmologist and laser surgeon at the Zinitsa Ophthalmic Center, Ukraine (Figures 2 & 3), the Rapid SLT is a prime example of Volk’s dedication to high resolution imaging. He describes the lens as providing a comprehensive look into the angle from an overall four-view examination, to being able to notice minuscule details with the slit lamp setting at 40x magnification.

Volk’s promise of unmatched imaging quality combined with enhanced ease of use, increased patient comfort, and reduced procedure time makes the Rapid SLT a lens every glaucoma specialist will look forward to adding to their collection!
Experience unmatched image quality and focusing capability with Volk’s Single-Use Laser and Gonio lenses. Single-use lenses are perfect for routine examination, laser treatments, and surgical procedures.

Volk’s single-use lenses are pre-sterilized and individually packaged in a Tyvek® pouch. Single-use lenses are sold in boxes of 10. These single-use lenses minimize the risk of infection and cross-contamination and reduce the cost and time associated with reprocessing.

### LENS MIRROR ANGLES IMAGE MAG LASER SPOT MAG CONTACT DIAMETER PRIMARY APPLICATION

<table>
<thead>
<tr>
<th>LENS</th>
<th>MIRROR ANGLES</th>
<th>IMAGE MAG</th>
<th>LASER SPOT MAG</th>
<th>CONTACT DIAMETER</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volk®1 Single-Use Capsulotomy</td>
<td>N/A</td>
<td>1.57x</td>
<td>0.63x</td>
<td>14.2</td>
<td>Laser Capsulotomy Procedures</td>
</tr>
<tr>
<td>Volk®1 Single-Use Iridotomy</td>
<td>N/A</td>
<td>1.70x</td>
<td>0.59x</td>
<td>14.2</td>
<td>Laser Iridotomy Procedures</td>
</tr>
<tr>
<td>Volk®1 Single-Use SLT</td>
<td>63°</td>
<td>1.0x</td>
<td>1.0x</td>
<td>14.8</td>
<td>SLT Procedures, Static and Dynamic Gonioscopy</td>
</tr>
<tr>
<td>Volk®1 Single-Use 3-Mirror Gonio</td>
<td>60° / 66° / 76°</td>
<td>1.0x</td>
<td>1.0x</td>
<td>8.1</td>
<td>Gonioscopy and Examination of Anterior Chamber Angle and the Central, Equatorial, &amp; Peripheral Retina</td>
</tr>
<tr>
<td>Volk®1 Single-Use 4-Mirror Gonio</td>
<td>4x63°</td>
<td>1.0x</td>
<td>1.0x</td>
<td>8.1</td>
<td>Static and Dynamic Gonioscopy</td>
</tr>
</tbody>
</table>

### QUALITY
Volk optics deliver unmatched imaging and focusing capabilities with minimal glare for retinal and anterior chamber examinations, laser treatments, and surgical procedures.

### ASSURANCE
Eliminate any potential for cross-contamination of transmissible diseases & lower Hospital Acquired Infection score.

### CONVENIENCE
Do away with cumbersome and costly intra-facility reprocessing of reusable medical devices by mitigating bulk lens reprocessing effort, time and cost.

Capsulotomy and Iridotomy lenses are suitable for argon, diode and YAG laser treatments

All Volk®1 Single-Use Lenses are pre-sterilized and packaged in individually sealed Tyvek® pouches Sold in boxes of 10 lenses

### LASER COMPATIBILITY
Experience unmatched image quality and focusing capability with Volk’s Single-Use Laser and Gonio lenses. Single-use lenses are perfect for routine examination, laser treatments, and surgical procedures.

Volk’s single-use lenses are pre-sterilized and individually packaged in a Tyvek® pouch. Single-use lenses are sold in boxes of 10. These single-use lenses minimize the risk of infection and cross-contamination and reduce the cost and time associated with reprocessing.
A 25-gauge Vitrectomy was performed using the Miniquad XL SSV. After clearing the core and peripheral vitreous, PFCL heavy liquid was injected to flatten and stabilize the posterior pole. Vitreous attached to the margins of breaks was also removed. Air fluid exchange was done and endodrainage was carried out through an existing break. Once the retina was flat, 360° endolaser was carried out around the breaks.

Manish Nagpal, MD FRCS FASRS
Director of Retina Foundation, Ahmedabad, India
**INDIRECT VITREOMICY LENSES**

Volk offers a suite of vitrectomy lenses over a range of optical profiles, designed to cater to the full spectrum of vitreoretinal procedures with the highest quality Volk optics for the best surgical visualization.

<table>
<thead>
<tr>
<th>LENS</th>
<th>FIELD OF VIEW</th>
<th>IMAGE MAG</th>
<th>CONTACT DIAMETER</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRX Vit Lens</td>
<td>130° / 150°</td>
<td>0.43x</td>
<td>11.35 mm / SSV 16.0 mm</td>
<td>Far-Peripheral Indirect Vitreoretinal Procedures</td>
</tr>
<tr>
<td>Mini Quad® XL</td>
<td>112° / 134°</td>
<td>0.39x</td>
<td>11.35 mm / SSV 16.0 mm</td>
<td>Indirect Viewing and Treatment of Peripheral Retinal Disorders</td>
</tr>
<tr>
<td>Mini Quad®</td>
<td>106° / 127°</td>
<td>0.39x</td>
<td>11.35 mm / SSV 16.0 mm</td>
<td>Indirect Viewing and Treatment of Peripheral Retinal Disorders</td>
</tr>
<tr>
<td>DynaView</td>
<td>95° / 127°</td>
<td>0.39x</td>
<td>8.08 mm</td>
<td>Treatment of Retinopathy of Prematurity</td>
</tr>
<tr>
<td>Central Retinal</td>
<td>73° / 68°</td>
<td>0.71x</td>
<td>11.35 mm / SSV 16.0 mm</td>
<td>High Magnification Indirect Viewing and Treatment of the Central Retina</td>
</tr>
<tr>
<td>Super Macula®</td>
<td>64° / 77°</td>
<td>1.03x</td>
<td>11.35 mm</td>
<td>Highest Magnification Indirect Viewing and Treatment of the Central Retina</td>
</tr>
</tbody>
</table>

**HRX Vit Lens**

Far-Peripheral Indirect Vitreoretinal Procedures
- High index glass delivers widest field, distortion-free retinal views of any surgical lens
- Small profile ring facilitates instrument manipulation and surgical procedures
- Available in standard and patented self-stabilizing contact (SSV) options for best ergonomics
- Ideal for retinal detachments, PVR, giant retinal tears and works seamlessly in fluid and air filled eyes
- Available in autocalve sterilizable design (see page 52)

**Mini Quad® XL**

Indirect Viewing and Treatment of Peripheral Retinal Disorders
- Wide field of view of the entire retina including the ora serrata
- Ideal for retinal detachments, giant retinal tears, PDR, including diabetic cases requiring endolaser to the periphery
- Available in standard and self-stabilizing contact (SSV) options for best ergonomics

**DynaView**

Treatment of Retinopathy of Prematurity
- Enhanced design provides wide field imaging out to the ora serrata
- Minified housing facilitates extension of instruments
- Reduced contact size ideal for pediatric examination and treatment such as bilateral retinal detachment, vitreous hemorrhage, ROP

**Central Retinal**

High Magnification Indirect Viewing and Treatment of the Central Retina
- High resolution, high magnification imaging to the equator
- Ideal for epiretinal membranes, diabetic membranes, vitreous macular traction, macular holes, submacular surgeries, and other small detail procedures of the central retina
- Available in standard and self-stabilizing contact (SSV) options
- Available in autocalve sterilizable design (see page 52)

**Super Macula®**

Highest Magnification Indirect Viewing and Treatment of the Central Retina
- High resolution, highest magnification imaging of the central retina
- Provides excellent magnification for fine peeling of epiretinal membrane as well as ILM. Ideal for macular holes, vitreous macular traction, and submacular surgeries
- 2x field of view compared to plano/concave direct image lenses

“CRYSTAL CLEAR VISIBILITY & STABILITY

The Volk HRX and MiniQuad XL are my absolute go-to lenses for all my vitrectomy procedures. The wide-field view offered by these lenses allows for crystal clear visibility through all mediums such as fluid, air, PFCL, or silicon oil. Vitrectomy is all about The View and these contact lenses provide the best possible view to operate and to get optimum, distortion-free video footage for teaching and academics. Complex cases such as Retinal Detachments with PVR, Giant Retinal Tears, and Diabetic Tractinal Detachments have become easier to manage as the Mini Quad XL and HRX lenses provide a seamless view of the extreme periphery to do a thorough clean-up and flatten the retina effectively. The self-stabilizing (SSV) component adds superb stability to this lens and I don’t need any ring or assistant to support it for me. The only time I shift to another lens is when I want to do fine work on the macula like epiretinal membrane peeling or ILM peeling, which is when I move to the Volk Flat SSV lens for that part of the procedure to get the best magnified stereoscopic view of the macula.”

- Manish Nagpal, MD FRCs FASRS
  Director of Retina Foundation, Ahmedabad, India
**AUTOCLAVABLE INDIRECT VITRECTOMY LENSES**

<table>
<thead>
<tr>
<th>LENS</th>
<th>FIELD OF VIEW</th>
<th>IMAGE MAG</th>
<th>CONTACT DIAMETER</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRX ACS®</td>
<td>150° / 150°</td>
<td>0.43x</td>
<td>11.58 mm / SSV 16.0 mm</td>
<td>Widest Field Views for Vitreoretinal Procedures</td>
</tr>
<tr>
<td>Mini Quad® ACS®</td>
<td>106° / 127°</td>
<td>0.48x</td>
<td>11.58 mm / SSV 16.0 mm</td>
<td>Peripheral Indirect Vitreoretinal Procedures</td>
</tr>
<tr>
<td>Central Retinal ACS®</td>
<td>73° / 88°</td>
<td>0.71x</td>
<td>11.58 mm / SSV 16.0 mm</td>
<td>High Magnification Indirect Vitreoretinal Procedures</td>
</tr>
</tbody>
</table>

**HRX ACS®**

- Superior high-index glass design ensures widest field views of any vitreoretinal lens
- Advanced aspheric design provides unmatched high resolution imaging
- Ideal for retinal detachments, PDR and giant retinal tears
- Steam sterilizable for reduced processing time

**Mini Quad® ACS®**

- Steam sterilizable for reduced processing time
- Smaller ring facilitates manipulation within the orbit
- Ideal for retinal detachments, PDR and giant retinal tears

**Central Retinal ACS®**

- High resolution, high magnification imaging to the equator
- Steam sterilizable for reduced processing time
- Ideal for epiretinal membranes, diabetic membranes, vitreo macular traction, macular holes, submacular surgeries, and other small detail procedures of the central retina

**AUTOCLAVABLE SURGICAL BIO LENSES**

<table>
<thead>
<tr>
<th>LENS</th>
<th>FIELD OF VIEW</th>
<th>IMAGE MAG</th>
<th>LASER SPOT MAG</th>
<th>WORKING DISTANCE</th>
<th>RING DIAMETER</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>20D ACS®</td>
<td>46° / 60°</td>
<td>3.13x</td>
<td>0.32x</td>
<td>50 mm</td>
<td>55.4 mm</td>
<td>Industry Standard Diagnostic Lens in an Autoclavable Format</td>
</tr>
<tr>
<td>28D ACS®</td>
<td>53° / 69°</td>
<td>2.27x</td>
<td>0.44x</td>
<td>35 mm</td>
<td>45.9 mm</td>
<td>Fundus Scanning Lens in an Autoclavable Format</td>
</tr>
</tbody>
</table>

- Steam sterilizable for use in a surgical environment
- High quality Permaview™ glass withstands the rigors of repeated sterilization
- Perfectly corrected for field curvature, astigmatism, and aberrations
- Combine the optical excellence of Volk lenses with the comfort of reduced processing time in a surgical environment with the autoclavable lens line.

**20D ACS®**

- Superior high-index glass design ensures widest field views of any vitreoretinal lens
- Advanced aspheric design provides unmatched high resolution imaging
- Ideal for retinal detachments, PDR and giant retinal tears
- Steam sterilizable for reduced processing time

**28D ACS®**

- Steam sterilizable for use in a surgical environment
- High quality Permaview™ glass withstands the rigors of repeated sterilization
- Excellent for small pupil diagnosis and treatment including LIO (Laser Indirect Ophthalmoscope)
HIGH RESOLUTION (HR) DIRECT VITRECTOMY LENSES

Volk’s High Resolution Direct Image lenses utilize a high-index glass to deliver superior image quality. This robust glass type is highly resistant to the rigors of continued steam sterilization and will not deteriorate or discolor.

Volk’s No Stabilizing Ring (NSR) range of lenses allow suitable stability without the need for suturing or stabilizing rings. Two of the lenses in the group are also available in a no suture ring design. The profiles of these two lenses allow them to stabilize suitably without the need for an additional stabilizing ring.

<table>
<thead>
<tr>
<th>LENS</th>
<th>FIELD OF VIEW</th>
<th>IMAGE MAG</th>
<th>CONTACT DIAMETER</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR Direct 1x</td>
<td>30°</td>
<td>1.0x</td>
<td>11.2 mm</td>
<td>Direct Image Vitreoretinal Surgery of the Central Retina</td>
</tr>
<tr>
<td>HR Direct Bi-Concave</td>
<td>45° (Mid Field, Fluid)</td>
<td>0.49x</td>
<td>11.2 mm</td>
<td>Wide Field and AFX (Air Fluid Exchange) Direct Image Vitreoretinal Surgery</td>
</tr>
<tr>
<td>HR Direct High Mag</td>
<td>20°</td>
<td>1.35x</td>
<td>11.2 mm</td>
<td>High Magnification Direct Image Vitreoretinal Surgery</td>
</tr>
<tr>
<td>HR Direct 20° Prism</td>
<td>40° (Offset 20°)</td>
<td>0.53x</td>
<td>11.2 mm</td>
<td>Off Axis Wide Field Direct Image Vitreoretinal Surgery</td>
</tr>
</tbody>
</table>

A case of sub ILM blood collection in which the ILM was peeled to expose the blood, followed by aspiration. The blood is partly whitish in color due to de-hemoglobinization which occurs over time. A Flat SSV Lens was used for this procedure. – Image courtesy of Dr. Manish Nagpal, Ahmedabad, India

HR Direct 1x

PRIMARY APPLICATION
Direct Image Vitreoretinal Surgery of the Central Retina

- High-index glass delivers highest resolution direct image of the central retina
- Highly suited for repeated steam sterilization with no material degradation
- Standard design fits all major suture rings
- Unique optional no stabilizing ring (NSR) design available
- Ideal for visualizing the posterior pole in ILM peeling

HR Direct Bi-Concave

PRIMARY APPLICATION
Wide Field and AFX (Air Fluid Exchange) Direct Image Vitreoretinal Surgery

- High-index glass in a bi-concave design delivers highest resolution imaging for wide field and AFX procedures
- Ideal for visualizing fundus through an air filled cavity
- Highly suited for repeated steam sterilization with no material degradation
- Standard design fits all major suture rings

HR Direct High Mag

PRIMARY APPLICATION
High Magnification Direct Image Vitreoretinal Surgery of the Central Retina

- High-index glass delivers highest resolution, high magnification of the central retina
- Best suited for detailed work of the macula
- Highly suited for repeated steam sterilization with no material degradation
- Standard design fits all major suture rings
- Unique optional no stabilizing ring (NSR) design available

HR Direct 20° Prism

PRIMARY APPLICATION
Off Axis Wide Field Direct Image Vitreoretinal Surgery

- High-index glass delivers highest resolution off axis (20°) direct image retinal views
- Improved design delivers wider field (40°) off axis views
- Highly suited for repeated steam sterilization with no material degradation
- Ideal for visualizing the posterior peripheral fundus through direct imaging
Volk’s Surgical Vitrectomy lenses were developed in collaboration with Dr. K.V Chalam and are available in 7 designs to meet all the visualization needs of a retina surgeon. The SSV® (self-stabilizing) contact element eliminates the need for sutures or rings and provides excellent stability. The compact lens design provides greater spatial access without interfering with instruments.

<table>
<thead>
<tr>
<th>LENS</th>
<th>FIELD OF VIEW</th>
<th>IMAGE MAG</th>
<th>CONTACT DIAMETER</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Image Flat SSV® (ACS®)</td>
<td>30°</td>
<td>0.92x</td>
<td>11.9 mm</td>
<td>Routine Direct Image Vitreoretinal Surgery of the Central Retina</td>
</tr>
<tr>
<td>Direct Image High Mag SSV® (ACS®)</td>
<td>28°</td>
<td>1.50x</td>
<td>11.9 mm</td>
<td>High Magnification Direct Image Vitreoretinal Surgery of the Central Retina</td>
</tr>
<tr>
<td>Direct Image Mid Field SSV® (ACS®)</td>
<td>40°</td>
<td>0.50x</td>
<td>8.0 mm</td>
<td>Wide field of view for pan retinal examination and laser treatments</td>
</tr>
<tr>
<td>Direct Image 15° Prism SSV® (ACS®)</td>
<td>30° (15° Offset)</td>
<td>0.90x</td>
<td>11.9 mm</td>
<td>Off Axis Direct Image Vitreoretinal Surgery</td>
</tr>
<tr>
<td>Direct Image 30° Prism SSV® (ACS®)</td>
<td>30° (30° Offset)</td>
<td>0.90x</td>
<td>10.0 mm</td>
<td>Off Axis Direct Image Vitreoretinal Surgery</td>
</tr>
<tr>
<td>Direct Image 45° Prism SSV® (ACS®)</td>
<td>30° (45° Offset)</td>
<td>0.90x</td>
<td>10.0 mm</td>
<td>Off Axis Direct Image Vitreoretinal Surgery</td>
</tr>
<tr>
<td>Direct Image AFX SSV® (ACS®)</td>
<td>30°</td>
<td>0.82x</td>
<td>11.9 mm</td>
<td>Direct Image Vitreoretinal Surgery During Air Fluid Exchange Procedures</td>
</tr>
</tbody>
</table>

**Primary Application**

- **Direct Image 15° Prism SSV® ACS®**
  - Delivers high resolution direct image of the central retina
  - Steam sterilizable for reduced processing time
  - Ideal for direct visualization of the mid-peripheral fundus

- **Direct Image 30° Prism SSV® ACS®**
  - Delivers high resolution direct image of the central retina
  - Steam sterilizable for reduced processing time
  - Ideal for direct visualization of the posterior peripheral fundus

- **Direct Image 45° Prism SSV® ACS®**
  - Delivers high resolution direct image of the central retina
  - Steam sterilizable for reduced processing time
  - Ideal for direct visualization of the posterior peripheral fundus

- **Direct Image AFX SSV® ACS®**
  - Delivers high resolution central retinal imaging
  - Steam sterilizable for reduced processing time
  - Ideal for Air Fluid exchange procedures
Volk®1 Single-Use Surgical BIO lenses combine high-quality optics that Volk is known for and the convenience of pre-sterilization into a ready-to-use design. Volk’s single-use surgical BIO lenses enable convenient pre- and post-operative examination and laser treatment. These single-use lenses minimize the risk of infection and cross-contamination and reduce the cost and time associated with reprocessing.

Single-use lenses are pre-sterilized and individually-packaged in a Tyvek® pouch. Single-use lenses are sold in boxes of 10.

Volk®1 Single-Use Flat Standard
- Perfectly balanced magnification and field of view make this lens ideal for general diagnostic examination
- Provides excellent views of the optic disc and macula
- Anti-reflective coating greatly reduces distracting glare

Volk®1 Single-Use 30° Prism
- Excellent for wide field examination and treatment through a small pupil
- Compatible with LIO (Laser Indirect Ophthalmoscope)
- Excellent lens for ROP rounds to reduce infection risk in high-risk babies

“SAFE & EFFICIENT
Since the reports of using reusable lenses during Retinopathy of Prematurity (ROP) screening rounds were linked to infection transmission and serious adverse outcomes in the NICU, I have explored different options to maintain sterile equipment for use during my ROP screening rounds. I feel that the quality and field-of-view of the Volk Single-Use 28D lens is equivalent to the standard and I currently use a separate Volk Single-Use 28D lens for each infant during ROP screening rounds to reduce the risk of infection transmission between infants being examined. I have found that using Volk Single-Use 28D lenses for ROP screening rounds is more efficient than following a protocol to disinfect and reuse standard lenses between infants being screened.29

- S. Grace Prakalapakorn, MD, MPH
  Pediatric Ophthalmologist, Durham, NC, USA
SURGICAL

Volk®1 Single-Use Magnifying

**PRIMARY APPLICATION**
High Magnification Direct Image Vitreoretinal Surgery of the Central Retina
+ Ideal for detailed macular work due to high 1.50x magnification
+ Silicone ring base

VMD10

Volk® Single-Use Wide Field

**PRIMARY APPLICATION**
Wide Field Direct Image Vitreoretinal Surgery
+ Ideal for wide field imaging of the posterior pole
+ Silicone ring base

VWF010

Volk®1 Single-Use Bi-Concave

**PRIMARY APPLICATION**
Direct Image Vitreoretinal Surgery During Air Fluid Exchange
+ Ideal for air-fluid exchange procedures
+ Silicone ring base

VBCD10

Volk®1 Single-Use 30° Prism

**PRIMARY APPLICATION**
Off Axis Direct Image Vitreoretinal Surgery
+ Ideal for direct visualization of the posterior peripheral fundus
+ Silicone ring base

VSOP10

Suture Ring

**PRIMARY APPLICATION**
Provides a Stable Lens Platform During Vitreoretinal Surgery
+ Premium surgical implant grade titanium for optimal durability and ease of sterilization
+ Larger radius provides enhanced functionality and safety during use
+ Compatible with all Volk direct and indirect contact vitrectomy lenses (except SSV® styles)

VSR52

Infusion Handle

**PRIMARY APPLICATION**
Infusion of Saline Solution Beneath the Lens During Vitreoretinal Surgery
+ Flushes blood and debris providing a clear view during surgery
+ Autoclave sterilizable for reduced processing time
+ Ideal for diabetic surgery

VINFHAN

VitreoLens Handle

**PRIMARY APPLICATION**
Holding and Stabilization of Lenses During Vitreoretinal Surgery
+ Holds vitrectomy lenses stably to assist during vitreoretinal surgery
+ Malleability allows user to bend the handle to suit their preference
+ Autoclave sterilizable for reduced processing time

DynaView Vit, Mini Quad Vit, Super Macula Vit, Mini Quad XL Vit, Central Retinal Vit, HRX Vit, Super Macula Vit, Mini Quad® ACS®, Mini Quad® ACS®

Sterilization Tray

**PRIMARY APPLICATION**
Sterilization of Ophthalmic Lenses
+ Autoclave safe and approved for use with ETO
+ Small tray (2.7” x 1.5” x 1.25”) houses Volk surgical and smaller indirect and slit lamp lenses
+ Large tray (6” x 2.5” x 1.25”) houses the largest Volk lenses and accessories including vitrectomy handles

Large Tray: VSCB
Small Tray: VSCA
The Merlin lenses bring Volk’s proprietary double-aspheric lens technology into the OR, providing exquisite views of the retina with superior sharpness and depth of field.

Precise alignment with the optical axis of the microscope
- Smooth, graduated rotation to optimally position the lens
- Intuitive fine focus adjustment

A simple pivoting mechanism that folds away when not in use, occupying minimal space beneath the microscope.

Merlin’s exclusive Condenser Lens Assembly:
- Automatically slides a condenser lens into the optical train when the Merlin is engaged
- Eliminates the need to refocus the microscope when switching from anterior to posterior viewing, reducing surgery time
- Significantly improves light transmission via anti-reflective coatings, reducing the risk of phototoxicity

- Designed using Volk’s proprietary double-aspheric lens technology
- Made from PermaView™ glass, designed to withstand repeat steam sterilization without degradation
- Equipped with a hinge mechanism to ensure patient safety in case of accidental contact

Merlin has always provided a very clear ultra-wide field to examine the eye. Now, the Merlin moves the lens smoothly in and out of the surgical field, returning to the same position - every time. Confidence in the lens placement allows me to concentrate on the most important parts of surgery.

- Suber Huang, MD
  President & CEO, Retina Center of Ohio
  Former President of ASRS

“ULTRA-WIDE SURGICAL VIEWING”

**WIDE ANGLE ACS® LENS**

- 102°/120° FIELD OF VIEW
- 0.43x IMAGE MAG
- 19 mm LENS DIAMETER

- Widest field of view, allowing visualization of the retina approaching the ora serrata
- Superior clarity and depth of field from the macula to the peripheral retina

**MID-FIELD ACS® LENS**

- 80°/95° FIELD OF VIEW
- 0.74x IMAGE MAG
- 19 mm LENS DIAMETER

- Higher magnification lens for clearest views of the macula
- Intermediate field of view allows visualization to the equator

**SMALL WIDE ANGLE ACS® LENS**

- 95°/112° FIELD OF VIEW
- 0.42x IMAGE MAG
- 13 mm LENS DIAMETER

- Smallest diameter lens, ideal for patients with small pupils or deep seated eyes, and pediatric cases
- Provides a very wide field of view, while maintaining superior clarity and depth of field
Reinverting Operating Lens System® ROLS®

The ROLS® is an advanced panoramic viewing system that provides reinverted viewing during vitreoretinal surgery, delivering high resolution, direct retinal images. ROLS® is compatible with all surgical microscopes for viewing the retina with indirect contact surgical lenses and the Merlin non-contact surgical viewing system.

Removable magnetic latching handles facilitate cleaning and sterilization

The ROLS® reinverter delivers the added benefit of a decreased working distance when switching between a plano/concave lens to a wide field indirect lens, providing a more comfortable working position.

Volk’s Merlin® surgical system offers visualization and flexibility for vitreoretinal surgery.

The decision to purchase a noncontact surgical visualization system usually is motivated by the following: the confidence that comes with the ability to survey the entire surgical field and potential concern about contact with the cornea. “Even a small fraction of swelling can degrade one’s view of the inside of the eye. It is like fog on a bathroom mirror,” says Suber Huang, MD, President and Chief Executive Officer of the Retina Center of Ohio in Cleveland and former ASRS President. “Water vapor on the mirror can be negligibly thin, yet it takes very little water vapor to degrade one’s view very quickly.”

Volk Optical’s latest generation of the Merlin surgical system is designed to provide solutions for both, giving retinal surgeons a noncontact visualization option for vitreoretinal surgery.

A Clear Field of View

The Merlin’s indirect, wide-angle viewing system brings Volk’s double aspheric technology into the operating room. Three lenses are available:
• A standard, widefield lens that provides a maximum 120° field of view and enables visualization of the peripheral retina to the ora serrata;
• A midfield lens that allows a high magnification view for detailed imaging of the posterior pole to the equator;
• A small-diameter, wide-angle lens that delivers a wide field of view (112°) in a small and ergonomic footprint.

“...you have a very clear, ultrawide field to examine the eye,” says Dr. Huang. “This helps you avoid complications in small eyes and also helps inexperienced surgeons avoid complications.”

Gareth Lema, MD, PhD, Director, Retina; Vitreous and Uveitis Service, Ross Eye Institute and Assistant Professor of Ophthalmology at University at Buffalo Jacobs School of Medicine, Buffalo, NY, says that Volk’s new surgical system makes procedures like retinal detachment surgeries easier to perform. “The Volk lenses do not cause significant distortion at the perimeter of the lens.”

Workflow Improvements

The Merlin also offers several features designed to optimize surgical workflow. A lens positioning unit (LPU) enables the surgeon to position and focus the lens by adjusting a fine focus wheel. When not in use, the LPU’s pivoting design allows it to fold away underneath the microscope, occupying a minimal footprint and providing unobstructed access to the surgical field.

It’s a welcome improvement: The Volk Product Development team notes that users of Volk’s technology had found the previous iteration of its surgical system less than optimal because it did not easily permit the surgeon to reposition the Merlin lens assembly repeatedly.

That part of the system has been completely redesigned, so that the lens can be repositioned to be in exactly the same place,” according to Volk engineers. A motorized condensing lens assembly lets the surgeon switch between viewing the eye’s anterior and posterior segment without having to refocus the microscope. When the LPU folds away, the condenser lens automatically retracts into a protective housing, returning the microscope focus to the anterior segment. Storing the condenser lens in this housing improves light transmission because it can be anti-reflection coated.

Dr. Huang notes that the improved light transmission means surgeons can inject less light into the patient’s eye, decreasing the likelihood of retinal phototoxicity.

Quickier Surgery, Less Strain

The ergonomic design of the Merlin system can reduce the duration of surgical cases, says Dr. Huang. “The faster and more confident that you can move about the eye, the more efficiently and faster you can do the surgery, and the less likely you will have medial opacity from the cornea or other structures of the eye.”

“The less time you spend in the eye, and the less light you inject, the lower the chances are for complications and toxicity,” says Dr. Huang. “The duration of surgery is in direct correlation to the amount of light.”

Conclusion

Volk engineers are confident the latest generation of the Merlin system will make life easier for surgeons. “The Merlin folds away unobtrusively, minimizes the need for refocusing of the microscope, and provides an additional factor of safety against phototoxicity.” All of this ultimately leads to a device that’s both more comfortable and more efficient, they say.
Everyone
SHOULD HAVE ONE

The VistaView® was designed with the vision of addressing the overwhelming need that every eye doctor should have their own reliable, affordable, connected retinal camera without having to compromise on quality.

The VistaView integrates the power of Volk optics with the simplicity, portability, and affordability of smartphone technology, allowing everyone access and ownership of a quality portable, mydriatic retinal camera.

TAKE THE VIEW WITH YOU

Powered by Volk optics, capture sharp, 55° retina images with ease. The VistaView streamlines your patient data workflow, saving you time! Whether you are opening your first practice or adding portability to your existing imaging services, bypass the burden of heavy financing and rental agreements. Expand your reach by owning your very own personal camera.

Be Untethered. Stay Connected.
Take your VistaView anywhere! With its extremely light and ergonomic design that easily fits in your bag, you can take exam room quality images anywhere from waiting rooms to patient rounds to nursing homes and screening campaigns. Instantly generate reports with patient images and your notes on the spot. Easily share reports and export DICOM images for billing, consultations, and referrals on the go.

We worked with you to make this device so obvious to use, you’ll be up and imaging right out of the box. Anyone on your team can take high quality images in no time, without needing hours of demos, training, and learning – ideal for high staff turnover situations. The VistaView is also perfect for busy residents, who are always on the go.
One Device
TO DO IT ALL

From patient entry all the way through imaging, review, education, report generation, and data sharing, the VistaView will be your all-in-one solution - on the go.

“A Complete IMAGING EXPERIENCE

Overall, I am very impressed with the VistaView. It is easy-to-use and the image quality is really good. One of the most impressive features about the camera is the red-free images, especially when I am seeing patients for diabetic retinopathy detection and monitoring retinal changes. This helps retina specialists review red-free images to quickly determine hemorrhages and detect exacerbations, cotton wool spots, microaneurysms, and many other vascular anomalies as well. The device lets you add detailed patient information and clinical notes in a consolidated app.”

- Rishi Singh, MD Retina Surgeon
Medical Director of Informatics Cole Eye Institute, Cleveland Clinic, OH, USA
Two easily interchangeable modules provide high resolution retinal (non-mydriatic) or external eye imaging.

**Retinal Module**
Pictor Plus retinal imaging enables non-mydriatic fundus examination with a 40° field of view. With digital still and video images, the appearance of optic disc, macula and retinal vasculature can be screened and documented for ocular lesions and anomalies.

**Anterior Module**
Pictor Plus anterior imaging provides high-resolution images of the surface of the eye and areas directly surrounding the eye. The cobalt blue LED light allows fluorescent imaging to detect a dry eye or any trauma on the ocular surface.

Drive down the time from imaging to diagnosis and bring efficiency to your workflow. Images transfer wirelessly to your computer where they can be seamlessly tied to patient records, edited, annotated, and stitched together using our lifelong access to the Pictor Prestige Studio software.

**POWERFUL** small pupil capability
Specifically designed for small-pupil capability to obtain high quality imaging, even through pupils as small as 3 mm.

**NEVER REPEAT a patient visit**
Onboard Image Quality Analysis (IQA) provides instant feedback, maximizing readability and gradeability during the first patient visit.

**MINIMIZE** your learning curve
Easy to use interface and powerful optics enable novice technicians to master imaging techniques rapidly — perfect for practices with rotating and busy staff.

**BUILT TOUGH with a robust design**
Limited moving parts, makes it hard to shake up. Precision built parts mean the Prestige stays calibrated on the bumpiest of roads and most turbulent flights.

**THE PICTOR PLUS PORTABLE OPHTHALMIC CAMERA CAN TAKE YOUR PRACTICE PLACES.**
From the exam room to on-location screenings, nursing home calls and everywhere in between.
STANDARD VOLK ACCESSORIES

Steady Mount

**PRIMARY APPLICATION**
Precisely Holds and Positions Volk Lenses at the Slit Lamp

+ Holds lenses steady at the slit lamp to facilitate photography and routine examinations
+ Lens can be positioned, tilted and angled in all planes, providing versatility
+ Adapts to all slit lamps and holds all Volk lenses, ensuring ease of use

**VSM**

Volk Lens Pen®

**PRIMARY APPLICATION**
Dry Cleaning of Coated Ophthalmic Lens Surfaces

+ Carbon based cleaning pad wipes away smudges and reduces static build up
+ Cost effective device, good for 400–500 uses
+ Conveniently stows away like a pen with a pocket clip

**VLENSPEN**

Precision Optical Lens Cleaner

**PRIMARY APPLICATION**
Cleaning of Ophthalmic Lenses

+ Absorbent, moistened lint-free towelette cleans lenses instantly, free from smudges, haze and water spots
+ Ideal for use on Volk lenses, microscope eyepieces, cameras, and other precision optical surfaces
+ Packaged in boxes of 24. Bulk case purchase contains 108 boxes

**Box:** VPOLC1  **Case:** VPOLCASE

Not for use on surfaces that contact the eye.

RESEARCH LENSES

Recommended for use on animals. Designed and manufactured especially for research purposes for small animal eyes using the same Volk optics and manufacturing processes as traditional Volk lenses, for the highest quality research outcomes.

<table>
<thead>
<tr>
<th>LENS</th>
<th>IMAGE MAG</th>
<th>CONTACT DIAMETER</th>
<th>LEN HEIGHT</th>
<th>HANDLE LENGTH</th>
<th>PRIMARY APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fundus Lens</td>
<td>1.0x</td>
<td>2 mm</td>
<td>5 mm</td>
<td>76 mm</td>
<td>Provides High Resolution Views of the Posterior Pole</td>
</tr>
<tr>
<td>Glass Gonio Lens</td>
<td>1.0x</td>
<td>2 mm</td>
<td>11 mm</td>
<td>84 mm</td>
<td>Provides High Resolution Views of the Anterior Chamber</td>
</tr>
</tbody>
</table>

**Fundus Lens**

**PRIMARY APPLICATION**
Provides High Resolution Views of the Posterior Pole

+ Its upper surface has an A/R coating to minimize reflections and glare and maximize laser throughput
+ The contact surface is conically shaped to facilitate placement and does not require viscous coupling fluid
+ Its handle is fixed at 45°

**V2MFUNDUS**

**Glass Gonio Lens**

**PRIMARY APPLICATION**
Provides High Resolution Views of the Anterior Chamber

+ View the anterior chamber angle structures with four equally angled 62° mirrors
+ Views of the optic nerve and posterior retina can be obtained through the center of the lens
+ The small contact surface does not require viscous coupling fluid
+ Its handle may be fixed in two positions: straight or at a 45° angle

**V2MGONIO**
Volk’s single-lens case features a sleek and modern functional design. We’ve incorporated a robust hinge designed to withstand over 50,000 openings and a magnetic closure that keeps your lens securely stored within the case.

CONVENIENCE: Want to keep your lenses together?
Keep all your lenses in one convenient location with our multi-lens cases. Our multi-lens cases are available in two sizes: 3”x4” for up to 3 lenses or 4”x6” for up to 6 lenses. Almost any combination can be accommodated. Even if a standard case cannot meet your need, we can provide a customized solution for you.

ENGRAVING: Want to add a personal touch to your lenses?
Engrave custom text on your case and lens (up to 14 characters) to create a personal possession that will last a lifetime.

COLOR: Brighten your day.
For select BIO and Slit Lamp lenses, choose your favorite from 7 ring colors.
GENERAL:
What are double aspheric lenses and why are they better?
Lenses with spherical surfaces inherently have peripheral lens distortion. Double aspheric lenses use aspheres on both surfaces which provide superior depth of focus/stereopsis and minimize distortions to provide clear views across the entire lens.

Why do lenses have a coating?
High quality optics are coated to maximize visible light transmission as well as to reduce glare and reflections during exams. They are also used to maximize laser energy throughput during treatment.

What does the lens dioptrier imply?
Lens power is commonly measured in ‘diopters’ (eg. 90 diopters). Generally, an increase in dioptrier power results in a wider field of view and lower magnification. Conversely, the lower the dioptrier number, the lower the field of view and higher the magnification.

Why are there so many lenses?
Each lens has a unique optical profile which serves a purpose in allowing you to see varying fields of view at various magnifications. These two parameters (Field of View and Magnification) provide different advantages depending on the use case. Although some lenses can provide you with a good balance of magnification & field of view, no single lens will provide you with everything.

For example, a wide field lens will help you scan a larger area quickly, perfect for general diagnosis and as a first pass retinal exam. Higher magnification lenses are used when you are examining the optic nerve head, macula, or noticed something during a wide field exam that you want to examine more closely.

Lenses like the 20D, 90D, and 78D are usually the first lenses you will learn on, as they provide a good balance of field of view and magnification and will help you master the technique of lens handling. As you gain more proficiency, adding more lenses will make you more effective. You don’t necessarily need every “club in the bag,” however you do need more than a driver!

Is there a ‘right’ side that the lens needs to be facing?
Yes. The bottom tip of the letter ‘V’ of the word Volk engraved on your lens should always be pointed towards the patient (think of an arrow pointing towards the patient). Some BIO lenses have a thin silver ring on one side of the housing and in those cases, the silver ring points towards the patient.

How should I clean my lens?
For non-contact lenses like BIO and Silt lamp lenses, we recommend rinsing the lens with cold to lukewarm water or using distilled water to remove particles and clean using a gentle soap (like Dawn or Fairy). The lens can be dried by using a lint free soft cotton cloth in a clockwise direction. Always work clockwise to avoid loosening the lens ring. Be careful that the water pressure is not too high, to avoid damaging the antireflective coating. DO NOT USE a microfiber cloth, as over time these tend to collect dirt and dust which can damage the antireflective coating on the lens! We always encourage you to follow the approved cleaning methods on the manufacturer’s website to take proper care of your lenses and allow them to last you a long time. For lenses with a contact element like gonio or laser lenses, always follow the approved cleaning and care instructions included in the IFU (instructions for use) accompanying each lens.

My lens has scratches on it and/or the coating has rubbed off; can it be repaired?
Scratched lenses cannot be fixed and the lenses are unable to be recoated – we recommend to not use microfiber cloths for cleaning as these usually pick up dirt and are the key culprit leading to damage of the lens over time.

I am a student/resident; which lenses should I start with?
As a new doctor, we recommend you start out with a 20D for the BIO lenses and a 78D and 90D for the slit lamp lenses. These will allow you to get a good balance of magnification and field of view. With regards to gonio lenses, we suggest a 3-mirror lens to enable you to see the retina as well as the anterior segment angle for gonioscopy. However, if you are specializing in glaucoma and will be looking at the angle regularly, we also suggest to select a gonio lens with 4 or 6 mirrors to easily see as much of the angle as possible and minimize the need to rotate the lens, resulting in a shorter exam and increased patient comfort due to less contact time.

BINOCULAR INDIRECT OPHTHALMOSCOPY (BIO):
Which is the best BIO lens to use for small pupils?
Many doctors choose to use a 28D or 30D lens for patients with small pupils. The 30D offers slightly more field of view with ever so slightly less magnification.

Do you have a lens I can use for small pupils?
As far as BIO lenses go, we always recommend dilating your patients. You might be able to obtain a central view with higher field lenses like the 40D and 30D and even the 28D in some cases, but you might not be able to obtain the complete field of view this lens has to offer. And remember, one of the biggest advantages of a BIO lens is the ability to view the far periphery, and in order to achieve the goal of the exam, you will have to dilate the patient to get out into the periphery.

Which is the best BIO lens for pediatric patients, sometimes they have small eyes and don’t sit still, do you have a lens I can use? Also, what is a good lens for geriatric patients.
For pediatric exams or older patients, consider using the 30D or 40D. The 40D is great for small pupils but also provides a wider field of view (90 degrees) allowing for quicker scans for patients that have trouble sitting still (the magnification will be less, however). The 30D is an excellent alternative if you want more magnification than the 40D. Both the 30D and 40D have smaller rings and closer working distance making lens manipulation easier when holding a child steady. The 30D also comes in the option of an even smaller ring to help facilitate this further if you usually tend to younger infants. With that said, the 28D will also do a great job and is often used by many doctors for this application – it really comes down to your preference and technique.

Which lens do you recommend specifically for examining ROP?
We suggest the 28D or 30D for examining ROP. A Single Use version is also available for the 28D and often used and recommended to mitigate infection risk in premature babies.

Can I use my BIO lens to perform lasers for ROP?
Yes, all our BIO lenses are compatible with lasers and can be used for LIO (Laser Indirect Ophthalmoscope). The 28D or 30D are preferred for ROP. The reusable BIO lenses are compatible withETO for sterilization before treatment (but not autoclavable). If you prefer to use an autoclave, only the autoclavable 20D ACS or 28D ACS lenses can be used. You can also choose to use single use 20D or 28D lenses for LIO procedures.

Do you recommend the 20D or the Pan Retinal Lens?
Both lenses are work horses and provide excellent balance of field of view and magnification. The 20D is a trusted classic, however, if you are looking for an enhancement, the Pan Retinal lens does provide 22% greater field of view while still providing a good balance of magnification. The Pan Retinal 2.2 also has a closer working distance (10 mm less than the 20D), so you may find it easier to handle depending on your preference.

I am not able to view far out to the periphery as noted on the specifications/I am not able to get a wide field of view and only catch glimpses of the posterior pole. What should I do?
In order to fully appreciate the Field of View for which the lens has been designed, make sure you are placing the lens at the right working distance. Every lens has a unique working distance where you can see the field specifications. If you are away from the right working...
distance, your field of view gets clipped thus resulting in the experience you described. If you are too close, the peripheral view appears dark and unclear. Many doctors start by holding the BIO lens close to the eye and then move away until they are able to fill the lens with the entire field.

Do you have a BIO lens that allows me to look at the extreme periphery to check for retinal tears?

Wide field lenses like the 28D, 30D and the Digital ClearField will be better for examining the peripheral retina given their wider field of view balanced with good magnification. The Digital ClearField will provide the widest field and the highest magnification amongst the three.

Which BIO lens allows me to get a zoomed in view of the posterior pole/optic nerve head/macula?

The 15D and the Digital ClearMag provide nice magnified viewing of the posterior pole.

Do you have any tips for stabilizing my lens?

My lens keeps slipping/falling!

It is possible that the ring size/working distance might not be working for you and the lens you are using is too large for your hands. For small hands, we recommend some of the smaller lenses like the 25D, 28D, and 30D (the 30D comes in 48 mm and 35 mm diameters). These lenses also have shorter working distances allowing you to stabilize your fingers on the patient.

SLIT LAMP BIO-MICROSCOPY:

Which lens is better for wide angle viewing - the 90D or 78D?

If you are not dilating the patient, a 90D will be much easier to get through small pupils. However, if you are dilating, the 78D, will provide larger field of view with higher magnification.

Why does the 78D have larger Field of View (FOV) than the 90D?

That is a great question! Yes, theoretically the FOV and magnification have a relationship to the dioptic power such that a high diopter implies higher FOV. However, the size and design of the lens also plays a role in performance. While the 90D theoretically should have a wider field of view, due to the 90D being smaller in size than the 78D, the field is essentially “cropped” in the 90D to allow for a small size. As a result, the 78D has both wider field and higher magnification than the 90D. The smaller size of the 90D allows for easier manipulation within the orbit which coupled with its undilated exam ability makes it a popular choice and a classic industry standard lens.

Which lenses can I use without dilating the patient at the slit lamp?

The 90D, SuperField, and Digital Wide Field are all excellent lenses for undilated exams. The Digital Wide Field and SuperField provide similar magnification to the 90D while providing for wider fields.

What lens is an upgrade to my 78D?

The direct upgrade to the 78D is the Volk Super 66 (V566). This lens will offer you an approximate equivalent field of view as the 78D, however the magnification will be slightly increased at 10x. This magnification can be especially handy when calculating the cup to disc ratio.

Which is the widest field slit-lamp lens for a retinal exam?

The Digital Wide Field provides 124 degrees FOV and is the widest field slit lamp field with many doctors being able to see out to the ora depending on their technique.

Which lens can I use for looking at the periphery?

The 90D, Superfield, and Digital Wide Field all allow ability to view out into the periphery with each providing progressively more field than the other.

I am a glaucoma specialist: which is the best lens to examine the posterior pole/optic nerve head/macula?

The Digital High Mag is the best lens to get a magnified view of the retina at 1.3x and provides excellent resolution and stereopsis due to low dispersion glass. The Super 66 and 600 are also great choices for applications requiring high magnification such as viewing the posterior pole and looking at the optic nerve head.

Is there a lens that you recommend for easy cup to disc ratio assessment/calculations?

The Super 66 and Digital 10x have 10x magnification which makes cup to disc ratio calculations straightforward.

Is the Digital Wide Field better than the 90D?

Both are excellent lenses when it comes to general examination. The Digital Wide Field offers ~40% greater field of view without compromising on the magnification. So, you get the same view as you are used to with a 90D, but a lot more field of view. Both lenses provide good views even on un-dilated patients. One thing to remember is that the Digital Wide Field has a closer working distance compared to the 90D.

GONIOSCOPY:

What is a 3-mirror/G-3 gonio lens used for?

A gonio lens with 3 mirrors is a multi-purpose contact lens and provides views of both the anterior chamber angle AND the retina. These lenses have a mirror for viewing the anterior chamber iridoconal angle (gonioscopy mirror), a mirror for viewing the peripheral retina (peripheral mirror), and a mirror for viewing the equator and vortex veins (equatorial mirror). The lens also has a central lens for viewing the posterior pole. A gonioscopy lens with 3 mirrors is a multi-purpose lens.

What is a 4-mirror/G-4 gonio lens used for?

A gonio lens with 4 mirrors is primarily used for gonioscopy to examine the anterior chamber iridoconal angle and has 4 mirrors. The advantage of 4 mirrors is that you do not have to rotate the lens multiple times to view each quadrant thereby providing for a faster exam and a more comfortable experience for the patient.

What is a 6-mirror/G-6 gonio lens used for?

A gonio lens with 6 mirrors is primarily used for gonioscopy to examine the anterior chamber iridoconal angle and has 6 mirrors. The advantage of 6 mirrors is that it essentially provides a 360 degree view of the anterior chamber angle so you never have to rotate the lens and can do a very quick gonioscopy exam. This also makes it more comfortable for the patient.

Can I do compression/indentation with a gonio lens?

You can conduct compression/indentation only with a G4 (4 mirror) or G6 (6 mirror) lens without a flange. The non-flanged version of the G4 and G6 lenses do not require any coupling fluid, however, many customers do prefer to use artificial tears. You can use the G4 or G6 no-flange contact element to gently apply pressure on the eye and open up the angle. If you have a patient with a suspected closed angle, the indentation procedure is a great way to determine the level of closure, temporarily relieve pressure, and examine any troublesome synechiae requiring intervention.

What is the purpose of a flange on a gonio lens?

A flanged contact element helps stabilize the lens on the cornea, allowing for maximum stability during diaphragm. A flanged lens also provides stability during laser procedures. We do not recommend to conduct laser procedures without a flanged lens. When using a flange, always use a coupling fluid for patient comfort and to make sufficient contact onto the cornea.

How do you disinfect Gonio lenses?

Please refer to the instructions for use (IFU) provided by the manufacturer with your lens. Always make sure to follow cleaning procedures before disinfecting and sterilizing.

Can you do laser procedures with Gonio lenses?

Yes, you can do laser procedures with gonio lenses, however, you cannot do procedures that use a frequency doubled laser (eg: SLT). However, we always recommend using a specific laser lens that is specially designed for the desired laser procedure.

Which gonio lens is suitable for pediatric patients?

The G-3 Gonio is available in a mini version which is great for pediatric and patients with small orbits.
**CLEANING**

**Cleaner Lenses**

**SAFER DIAGNOSIS**

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**CLEANING**

**Cleaner Lenses**

**SAFER DIAGNOSIS**

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**PRECAUTIONS**

- Detergent should not contain emollients
- Clean and dry in a clockwise direction, to avoid loosening the lens ring

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**CLEANING**

**Cleaner Lenses**

**SAFER DIAGNOSIS**

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**PRECAUTIONS**

- Be careful that the water pressure is not too high, to avoid damaging the antireflective coating
- DO NOT USE a microfiber cloth, as over time these tend to collect dirt and dust which can damage the antireflective coating on the lens
- Only use the approved list of disinfectants for your lens (Reference your lens’ Instructions For Use)

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