THE FINEST OPHTHALMIC IMAGING

2021 Catalog

QUALITY YOU CAN SEE

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.

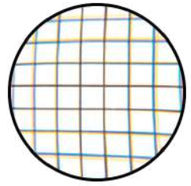
See the Difference

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.

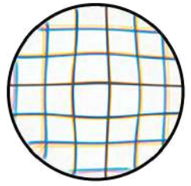
The result is superior distortion-free image quality with exceptional stereopsis, clarity, and resolution across the entire lens, a difference you can see!

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.

QUALITY
you can see



Volk's Double-Aspheric Design



Non-Volk Design

Volk's patented double-aspheric lenses provide clear, high resolution, distortion free views

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 gonio 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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BIO LENSES

CLASSIC | DIGITAL

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	FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG	WORKING DISTANCE	RING DIAMETER	PRIMARY APPLICATION
Macula Plus® 5.5	36° / 43°	5.50x	0.18x	80 mm	63.2 mm	Ultra-high resolution viewing of posterior pole
14D	36° / 47°	4.30x	0.23x	75 mm	57.4 mm	High magnification viewing of posterior pole
15D	36° / 47°	4.11x	0.24x	72 mm	57.4 mm	High magnification viewing of posterior pole
20D	46° / 60°	3.13x	0.32x	50 mm	55.4 mm	General diagnosis and treatment
Pan Retinal® 2.2	56° / 73°	2.68x	0.37x	40 mm	57.4 mm	General diagnosis and treatment
25D	52° / 68°	2.54x	0.39x	38 mm	50.1 mm	Mid-peripheral diagnosis and treatment
28D	53° / 69°	2.27x	0.44x	33 mm	45.9 mm	Small pupil diagnosis and treatment
30D Small	44° / 57°	2.09x	0.48x	31 mm	34.9 mm	Small profile lens for ease of use within the orbit
30D	58° / 75°	2.15x	0.47x	30 mm	48.3 mm	Small pupil diagnosis and treatment
40D	69° / 90°	1.67x	0.60x	20 mm	45.3 mm	Retinal examination and diagnosis at the far periphery
DIGITAL SERIES	**FIELD OF VIEW**	**IMAGE MAG**	**LASER SPOT MAG**	**WORKING DISTANCE**	**RING DIAMETER**	**PRIMARY APPLICATION**
Digital ClearMag	38° / 49°	3.89x	0.26x	60 mm	51.9 mm	Detailed optic disc and posterior pole examination
Digital ClearField	55° / 72°	2.79x	0.36x	37 mm	51.9 mm	Mid and far-peripheral retinal examination

Macula Plus® 5.5

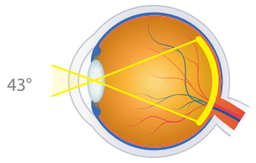
VMP5.5

PRIMARY APPLICATION

Ultra-High Magnification View of the Central Retina

36°/43° FIELD OF VIEW | 5.50x IMAGE MAG | 0.18x LASER SPOT MAG

+ 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

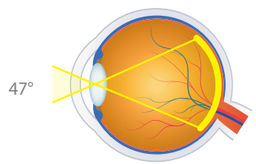
V14LC

PRIMARY APPLICATION

High Magnification Viewing of the Posterior Pole

36°/47° FIELD OF VIEW | 4.30x IMAGE MAG | 0.23x IMAGE SPOT MAG

+ 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



15D

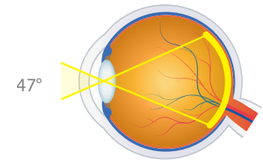
V15LC

PRIMARY APPLICATION

High Magnification Viewing of the Posterior Pole

36°/47° FIELD OF VIEW | 4.11x IMAGE MAG | 0.24x LASER SPOT MAG

+ High magnification allows thorough examination of the macula and optic disc
+ Double-aspheric design provides enhanced clarity, even at the periphery
+ Detailed view of the optic disc facilitates targeted central retinal examination such as glaucoma screening



20D

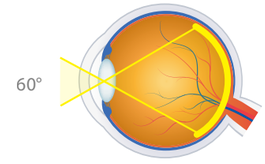
V20LC

PRIMARY APPLICATION

Industry Standard General Diagnostic Lens

46°/60° FIELD OF VIEW | 3.13x IMAGE MAG | 0.32x LASER SPOT MAG

+ 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 autoclave sterilizable (ACS®) design (see page 53) or single-use design (see page 58)



Pan Retinal® 2.2

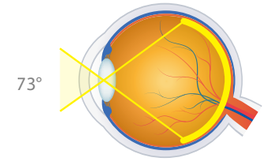
VPRC

PRIMARY APPLICATION

Excellent for General Diagnosis and Treatment

56°/73° FIELD OF VIEW | 2.68x IMAGE MAG | 0.37x LASER SPOT MAG

+ 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

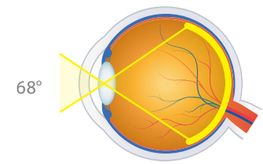
V25LC

PRIMARY APPLICATION

Mid-Peripheral Diagnosis and Treatment

52°/68° FIELD OF VIEW | 2.54x IMAGE MAG | 0.39x LASER SPOT MAG

+ 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)

28D

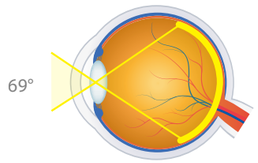
V28LC

PRIMARY APPLICATION

Ideal for 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)

53°/69° FIELD OF VIEW | 2.27x IMAGE MAG | 0.44x LASER SPOT MAG



30D Small

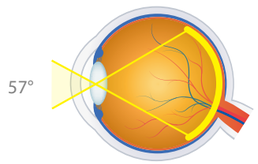
V30SC

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

44°/57° FIELD OF VIEW | 2.09x IMAGE MAG | 0.48x LASER SPOT MAG



30D

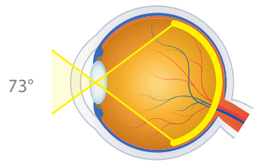
V30LC

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

58°/75° FIELD OF VIEW | 2.15x IMAGE MAG | 0.47x LASER SPOT MAG



40D

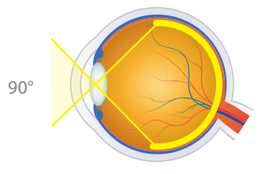
V40LC

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 lens allows for a rapid exam - perfect for patients who have trouble sitting still

69°/90° FIELD OF VIEW | 1.67x IMAGE MAG | 0.60x LASER SPOT MAG



DIGITAL SERIES BIO LENSES

The Digital Series BIO lenses are a result of Volk's spirit of innovation and undying 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.

CLASSIC SERIES	FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG	WORKING DISTANCE	RING DIAMETER	PRIMARY APPLICATION
Macula Plus® 5.5	36° / 43°	5.50x	0.18x	80 mm	63.2 mm	Ultra-high resolution viewing of posterior pole
14D	36° / 47°	4.30x	0.23x	75 mm	57.4 mm	High magnification viewing of posterior pole
15D	36° / 47°	4.11x	0.24x	72 mm	57.4 mm	High magnification viewing of posterior pole
20D	46° / 60°	3.13x	0.32x	50 mm	55.4 mm	General diagnosis and treatment
Pan Retinal® 2.2	56° / 73°	2.68x	0.37x	40 mm	57.4 mm	General diagnosis and treatment
25D	52° / 68°	2.54x	0.39x	38 mm	50.1 mm	Mid-peripheral diagnosis and treatment
28D	53° / 69°	2.27x	0.44x	33 mm	45.9 mm	Small pupil diagnosis and treatment
30D Small	44° / 57°	2.09x	0.48x	31 mm	34.9 mm	Small profile lens for ease of use within the orbit
30D	58° / 75°	2.15x	0.47x	30 mm	48.3 mm	Small pupil diagnosis and treatment
40D	69° / 90°	1.67x	0.60x	20 mm	45.3 mm	Retinal examination and diagnosis at the far periphery
DIGITAL SERIES	**FIELD OF VIEW**	**IMAGE MAG**	**LASER SPOT MAG**	**WORKING DISTANCE**	**RING DIAMETER**	**PRIMARY APPLICATION**
Digital ClearMag	38° / 49°	3.89x	0.26x	60 mm	51.9 mm	Detailed optic disc and posterior pole examination
Digital ClearField	55° / 72°	2.79x	0.36x	37 mm	51.9 mm	Mid and far-peripheral retinal examination

Digital ClearMag

Next Gen 14D/15D

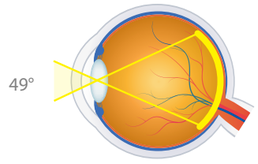
VDGTLCM

PRIMARY APPLICATION

High Resolution Exam of the Posterior Pole

+ 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

38°/49° FIELD OF VIEW | 3.89x IMAGE MAG | 0.26x LASER SPOT MAG



Digital ClearField

Next Gen 20D

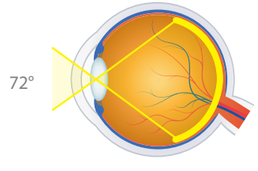
VDGTLCF

PRIMARY APPLICATION

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

55°/72° FIELD OF VIEW | 2.79x IMAGE MAG | 0.36x LASER SPOT MAG



AVAILABLE IN 7 DIFFERENT COLORS (shades may vary)

SLIT LAMP LENSES

CLASSIC | SUPER | DIGITAL

CLASSIC SERIES SLIT LAMP LENSES

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 timeless 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.

CLASSIC SERIES	FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG	WORKING DISTANCE	RING DIAMETER	PRIMARY APPLICATION
60D	68° / 81°	1.15x	0.87x	13 mm	34.9 mm	High Magnification View of the Posterior Pole
78D	81° / 97°	0.93x	1.08x	8 mm	34.9 mm	General Diagnosis and Laser Treatment
90D	74° / 89°	0.76x	1.32x	7 mm	25.8 mm	Pan Retinal Exam and Small Pupil Examination
SUPER SERIES	**FIELD OF VIEW**	**IMAGE MAG**	**LASER SPOT MAG**	**WORKING DISTANCE**	**RING DIAMETER**	**PRIMARY APPLICATION**
Super 66®	80° / 96°	1.0x	1.0x	11 mm	34.5 mm	High Magnification View of the Central Retina
SuperField®	95° / 116°	0.76x	1.32x	7 mm	30.0 mm	Wide Field Small Pupil Pan Retinal Examination
Super VitreoFundus®	103° / 124°	0.57x	1.75x	4-5 mm	26.7 mm	Ultra Wide Field Small Pupil Pan Retinal Scanning
SuperPupil® XL	103° / 124°	0.45x	2.20x	4 mm	23.6 mm	Ultra Wide Field Small Pupil Pan Retinal Scanning
DIGITAL SERIES	**FIELD OF VIEW**	**IMAGE MAG**	**LASER SPOT MAG**	**WORKING DISTANCE**	**RING DIAMETER**	**PRIMARY APPLICATION**
Digital High Mag®	57° / 70°	1.30x	0.77x	13 mm	33.0 mm	High Resolution, High Magnification Retinal Examination
Digital 1.0x Imaging Lens	60° / 72°	1.0x	1.0x	12 mm	31.1 mm	Digital Slit Lamp Photography
Digital Wide Field®	103° / 124°	0.72x	1.39x	4-5 mm	34.9 mm	High Resolution Small Pupil Retinal Examination

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 dioptric 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.

60D

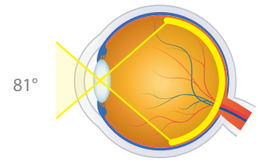
V60C

PRIMARY APPLICATION

High Magnification View of the Posterior Pole

68°/81° FIELD OF VIEW | 1.15x IMAGE MAG | 0.87x LASER SPOT MAG

+ High magnification lens for detailed optic disc and macula imaging
+ High magnification enables detection of small defects and subtle changes in retinal abnormalities
+ Ideal diameter for use in the orbital area
+ Dilation is required to obtain optimum retinal imaging



78D

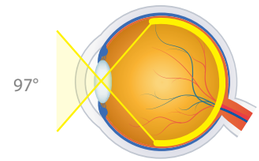
V78C

PRIMARY APPLICATION

General Diagnosis and Laser Treatment

81°/97° FIELD OF VIEW | 0.93x IMAGE MAG | 1.08x LASER SPOT MAG

+ Ideal balance of magnification and field of view
+ Optimally designed for use within range of motion of all slit lamps
+ Offers clear and large views of the central mid-retinal regions
+ Dilation is required to obtain optimum retinal imaging
+ Ideal general lens for doctors who regularly cater to populations prone to glaucoma and other posterior pole abnormalities



90D

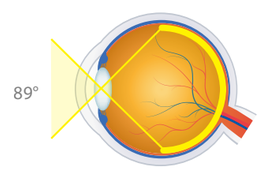
V90C

PRIMARY APPLICATION

Pan Retinal Exam and Small Pupil Examination

74°/89° FIELD OF VIEW | 0.76x IMAGE MAG | 1.32x LASER SPOT MAG

+ Original 90D lens that started the slit lamp fundus examination revolution and the industry gold standard
+ Small diameter ring is ideal for dynamic fundoscopy and easy manipulation within the orbit
+ Optical profile makes it easy to use - an ideal training lens for new students and residents
+ Outstanding general diagnostic lens for pan retinal examination
+ Can be used on small pupils and patients who do not accommodate dilation



AVAILABLE IN 7 DIFFERENT COLORS (shades may vary)

SUPER SERIES SLIT LAMP LENSES

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.

CLASSIC SERIES	FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG	WORKING DISTANCE	RING DIAMETER	PRIMARY APPLICATION
60D	68° / 81°	1.15x	0.87x	13 mm	34.9 mm	High Magnification View of the Posterior Pole
78D	81° / 97°	0.93x	1.08x	8 mm	34.9 mm	General Diagnosis and Laser Treatment
90D	74° / 89°	0.76x	1.32x	7 mm	25.8 mm	Pan Retinal Exam and Small Pupil Examination

SUPER SERIES	FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG	WORKING DISTANCE	RING DIAMETER	PRIMARY APPLICATION
Super 66®	80° / 96°	1.0x	1.0x	11 mm	34.5 mm	High Magnification View of the Central Retina
SuperField®	95° / 116°	0.76x	1.32x	7 mm	30.0 mm	Wide Field Small Pupil Pan Retinal Examination
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SuperPupil® XL	103° / 124°	0.45x	2.20x	4 mm	23.6 mm	Ultra Wide Field Small Pupil Pan Retinal Scanning

DIGITAL SERIES	FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG	WORKING DISTANCE	RING DIAMETER	PRIMARY APPLICATION
Digital High Mag®	57° / 70°	1.30x	0.77x	13 mm	33.0 mm	High Resolution, High Magnification Retinal Examination
Digital 1.0x Imaging Lens	60° / 72°	1.0x	1.0x	12 mm	31.1 mm	Digital Slit Lamp Photography
Digital Wide Field®	103° / 124°	0.72x	1.39x	4-5 mm	34.9 mm	High Resolution Small Pupil Retinal Examination

"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."

- 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

Super 66®

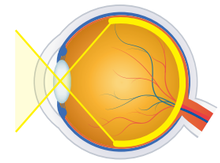
VS66

PRIMARY APPLICATION

High Magnification Viewing of the Central Retina

- Optical design enables 3D discernment of subtle macular and optic disc details with high magnification
- 1.0x magnification simplifies optic disc ratio measurement
- Seamless upgrade from the 78D

80°/96° FIELD OF VIEW | 1.0x IMAGE MAG | 1.0x LASER SPOT MAG



SuperField®

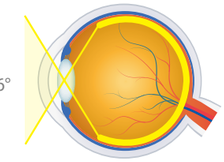
VSFNC

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

95°/116° FIELD OF VIEW | 0.76x IMAGE MAG | 1.32x LASER SPOT MAG



Super VitreoFundus®

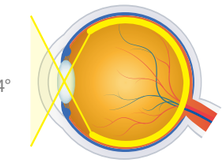
VSVF

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

103°/124° FIELD OF VIEW | 0.57x IMAGE MAG | 1.75x LASER SPOT MAG



SuperPupil® XL

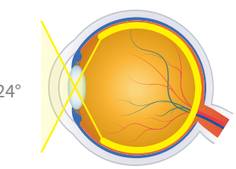
VSPXL

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

103°/124° FIELD OF VIEW | 0.45x IMAGE MAG | 2.20x LASER SPOT MAG



AVAILABLE IN 7 DIFFERENT COLORS (shades may vary)

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.

CLASSIC SERIES	FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG	WORKING DISTANCE	RING DIAMETER	PRIMARY APPLICATION
60D	68° / 81°	1.15x	0.87x	13 mm	34.9 mm	High Magnification View of the Posterior Pole
78D	81° / 97°	0.93x	1.08x	8 mm	34.9 mm	General Diagnosis and Laser Treatment
90D	74° / 89°	0.76x	1.32x	7 mm	25.8 mm	Pan Retinal Exam and Small Pupil Examination
SUPER SERIES	**FIELD OF VIEW**	**IMAGE MAG**	**LASER SPOT MAG**	**WORKING DISTANCE**	**RING DIAMETER**	**PRIMARY APPLICATION**
Super 66®	80° / 96°	1.0x	1.0x	11 mm	34.5 mm	High Magnification View of the Central Retina
SuperField®	95° / 116°	0.76x	1.32x	7 mm	30.0 mm	Wide Field Small Pupil Pan Retinal Examination
Super VitreoFundus®	103° / 124°	0.57x	1.75x	4-5 mm	26.7 mm	Ultra Wide Field Small Pupil Pan Retinal Scanning
SuperPupil® XL	103° / 124°	0.45x	2.20x	4 mm	23.6 mm	Ultra Wide Field Small Pupil Pan Retinal Scanning
DIGITAL SERIES	**FIELD OF VIEW**	**IMAGE MAG**	**LASER SPOT MAG**	**WORKING DISTANCE**	**RING DIAMETER**	**PRIMARY APPLICATION**
Digital High Mag®	57° / 70°	1.30x	0.77x	13 mm	33.0 mm	High Resolution, High Magnification Retinal Examination
Digital 1.0x Imaging Lens	60° / 72°	1.0x	1.0x	12 mm	31.1 mm	Digital Slit Lamp Photography
Digital Wide Field®	103° / 124°	0.72x	1.39x	4-5 mm	34.9 mm	High Resolution Small Pupil Retinal Examination

"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 this 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 un-dilated 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*

Digital High Mag®

3rd Generation 60D

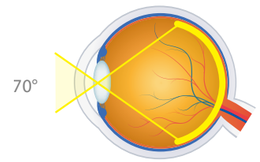
VDGTLHM

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

57°/70° FIELD OF VIEW | 1.30x IMAGE MAG | 0.77x LASER SPOT MAG



Digital 1.0x Imaging Lens

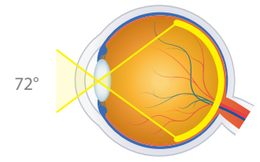
VDGTL1

PRIMARY APPLICATION

Digital Slit Lamp Photography

- Unique glass surface curvature and coating minimize photographic distortion and reflections
- 1.0x 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

60°/72° FIELD OF VIEW | 1.0x IMAGE MAG | 1.0x LASER SPOT MAG



Digital Wide Field®

3rd Generation 90D

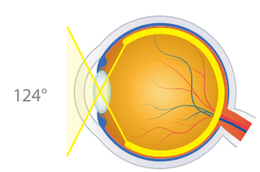
VDGTLWF

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

103°/124° FIELD OF VIEW | 0.72x IMAGE MAG | 1.39x LASER SPOT MAG



"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

AVAILABLE IN 7 DIFFERENT COLORS (shades may vary)

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 & DIGITAL WIDE FIELD

Follow us on Instagram @volkoptical to hear about seasonal launches

A Clear Solution

Even in the new normal

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!

90D

78D

Digital Wide Field®

SuperField®

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.

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.

ELEGANT AND ERGONOMIC

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

"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

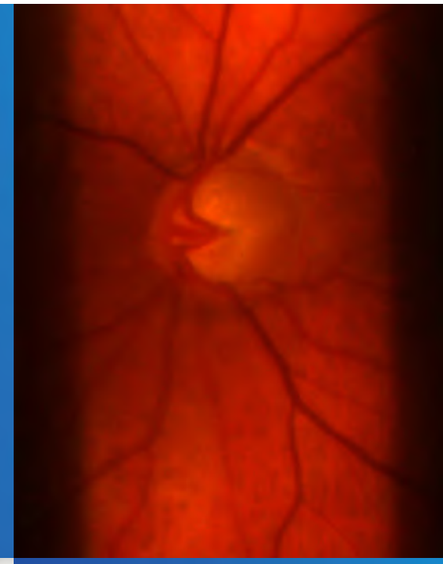
Ophthalmologist, Hospital of Merano-Südtirol, Italy

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!

GONIO LENSES

DIAGNOSTIC GONIO | SURGICAL GONIOTOMY AND MIGS

GONIO LENSES

Volk'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 seratta 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.

LENS	MIRROR ANGLES	IMAGE MAG	LASER SPOT MAG	CONTACT DIAMETER	PRIMARY APPLICATION
G-1 Gonio	62°	1.50x	0.67x	15 mm	Detailed Viewing of the Trabecular Meshwork
G-1 Gonio, No Flange	62°	1.50x	0.67x	8.4 mm	Detailed Viewing of the Trabecular Meshwork
G-2 Gonio	60° / 64°	1.50x	0.67x	15 mm	Detailed and a Broad View of the Anterior Chamber
G-2 Gonio, No Flange	60° / 64°	1.50x	0.67x	8.4 mm	Detailed and a Broad View of the Anterior Chamber
G-3 Gonio (Goldmann Style)	60° / 66° / 76°	1.06x	0.94x	15 mm	View of the Iridocorneal Angle/ Mid-peripheral/Peripheral Retina/Retinal Image from the Equator to the Ora Serrata
G-3 Gonio, No Flange	60° / 66° / 76°	1.03x	0.97x	11.4 mm	View of the Iridocorneal Angle/ Mid-peripheral/Peripheral Retina/Retinal Image from the Equator to the Ora Serrata
G-3 Gonio Mini, No Flange	60° / 66° / 76°	1.0x	1.0x	9.6 mm	View of the Iridocorneal Angle/ Mid-peripheral/Peripheral Retina/Retinal Image from the Equator to the Ora Serrata
3 Mirror, No Flange	60° / 66° / 76°	0.90x	1.11x	15.7 mm	View of the Iridocorneal Angle/ Mid-peripheral/Peripheral Retina/Retinal Image from the Equator to the Ora Serrata
3 Mirror, ANF+	60° / 66° / 76°	0.90x	1.11x	18.1 mm	View of the Iridocorneal Angle/ Mid-peripheral/Peripheral Retina/Retinal Image from the Equator to the Ora Serrata
G-4 Gonio	4x64°	1.0x	1.0x	15 mm	Examination of the Trabecular Meshwork
G-4 Gonio, No Flange (Sussman & Posner Style)	4x64°	1.0x	1.0x	8.1 mm	Examination of the Trabecular Meshwork
G-4 High Mag Gonio	4x64°	1.50x	0.67x	15 mm	Magnified Detailed Viewing of the Trabecular Meshwork
G-4 High Mag Gonio, No Flange	4x64°	1.50x	0.67x	8.1 mm	Magnified Detailed Viewing of the Trabecular Meshwork
Mini 4-Mirror	4x62°	0.9x	1.11x	15 mm	Easy Manipulations within the Orbit to View Trabecular Meshwork
G-6 Gonio, No Flange	6x63°	1.0x	1.0x	8.1 mm	Panoramic View of the Anterior Chamber without Rotation

"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

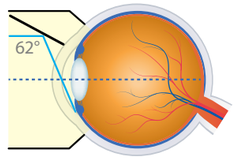
G-1 Gonio

Flange: **VG1** (shown)
No Flange: **VG1NF**

PRIMARY APPLICATION
1-Mirror, All-Glass Design to View Trabecular Meshwork

62° MIRROR ANGLES | 1.50x IMAGE MAG | 0.67x LASER SPOT MAG

- High magnification (1.50x) enables detailed viewing of the trabecular meshwork
- All-glass design provides superior clarity and durability
- Requires rotation to view all quadrants of the angle
- Not recommended for SLT as lens does not have total internal reflection. We recommend a Volk Rapid SLT® or SLT lens instead (page 39)



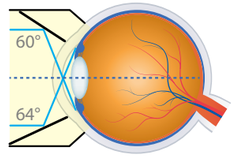
G-2 Gonio

Flange: **VG2** (shown)
No Flange: **VG2NF**

PRIMARY APPLICATION
2-Mirror, All-Glass Design to View Anterior Chamber

60°/64° MIRROR ANGLES | 1.50x IMAGE MAG | 0.67x LASER SPOT MAG

- High magnification (1.50x) combined with dual mirror angles (60°/64°) allows for both a detailed and a broad view of the anterior chamber
- All-glass design provides superior clarity and durability
- Requires rotation to view all quadrants of the angle
- Not recommended for SLT as lens does not have total internal reflection. We recommend a Volk Rapid SLT® or SLT lens instead (page 39)



G-3 Gonio

Flange: **VG3**
No Flange: **VG3NF** (shown)

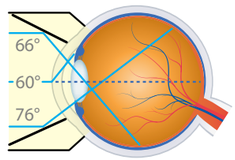
Gonio Mini
No flange: **VG3MININF** (shown)

Available in mini version for pediatric and patients with small orbits

PRIMARY APPLICATION
3-Mirror, All-Glass Design for Anterior, Peripheral, and Equatorial Viewing (Goldmann-style Lens)

60°/66°/76° MIRROR ANGLES | 1.06x IMAGE MAG | 0.94x LASER SPOT MAG

- 60° mirror provides a view of the iridocorneal angle to visualize the trabecular meshwork
- 66° mirror provides a retinal image from the equator to the ora serrata
- 76° mirror provides a view of the mid-peripheral/far-peripheral retina
- Central lens enables clear viewing of the posterior pole
- Available in two formats: flanged (can be used for laser, however, not compatible with SLT) and no flanged (recommended for routine gonioscopy without indentation)



"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 seratta. 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

3-Mirror

No Flange:
V3MIR (shown)

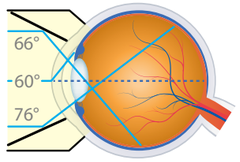
ANF+ Flange:
V3MIRANF+

PRIMARY APPLICATION

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

60°/66°/76°	0.90x	1.11x
MIRROR ANGLES	IMAGE MAG	LASER SPOT MAG

+ 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)



G-4 Gonio

Flange:
VG4 (shown)

No Flange, Small Ring (25.5 mm):
VG4SNF

No Flange, Large Ring (28.5 mm):
VG4LNF

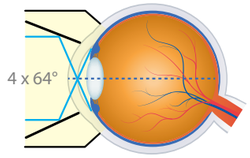
No Flange, Extended Handle:
VG4HAN2 (shown)

PRIMARY APPLICATION

4-Mirror, All-Glass Design (Sussman-Style Lens) to View Anterior Chamber Angle

4x64°	1.0x	1.0x
MIRROR ANGLES	IMAGE MAG	LASER SPOT MAG

+ 4-mirror design allows for comprehensive examination of the trabecular meshwork in four quadrants with minimal lens rotation
+ Enables a quick exam with maximum patient comfort
+ 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
+ Not recommended for SLT. We recommend a Volk Rapid SLT® or SLT lens instead (page 39)



FLANGES & FLUID

Flange versus No-Flange

A flanged element offers better stability on the cornea and is also less prone to the patient blinking 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 scleral indentation/compression for angle closure glaucoma diagnosis with an appropriate no-flange gonio lens (indentation can be performed with G-4, G-6; not G3 or 3 Mirror).

G-4 High Mag Gonio

Flange:
VG4HM (shown)

No Flange, Small Ring (25.5 mm):
VG4HMSNF (shown)

No Flange, Large Ring (28.5 mm):
VG4HMLNF

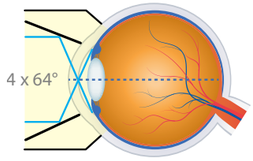
No Flange, Extended Handle:
VG4HMHAN2 (shown)

PRIMARY APPLICATION

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

4x64°	1.5x	0.67x
MIRROR ANGLES	IMAGE MAG	LASER SPOT MAG

+ 50% more image magnification than our classic 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



Mini 4-Mirror

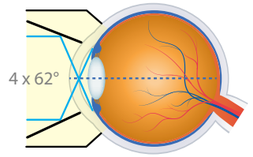
V4MANF+ (shown)

PRIMARY APPLICATION

4-Mirror, Acrylic Design for Anterior Chamber Angle Viewing

4x62°	0.90x	1.11x
MIRROR ANGLES	IMAGE MAG	LASER SPOT MAG

+ Smaller, lighter-weight design facilitates easy manipulations within the orbit
+ Excellent choice for small anatomies, narrow palpebral fissures, pediatric examinations, and more
+ Advanced no fluid (ANF+) flange does not require coupling fluid during routine gonioscopy



G-6 Gonio

No Flange, Large Ring (28.5 mm):
VG6LNF (shown)

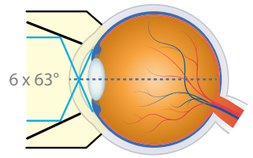
No Flange, Extended Handle:
VG6HAN2 (shown)

PRIMARY APPLICATION

6-Mirror, All-Glass Design for 360° Angle Viewing

6x63°	1.0x	1.0x
MIRROR ANGLES	IMAGE MAG	LASER SPOT MAG

+ Six closely-aligned mirrors create a 360° panoramic view of the anterior chamber and eliminate the need for dynamic gonioscopy/ rotation
+ No Flange/No Fluid design allows for quick exams and enables indentation/compression for angle closure glaucoma detection
+ Available with a large ring (28.5 mm) or a 2-position handle (right/left handle) - Posner-Style (right/left handle)



Fluid versus No-Fluid

A coupling fluid/gel should always be used with flanged lenses. Commonly used fluids include Goniovisc®, Gonak®, Refresh Celluvisc®, Genteal® or any comparable solution. No flange (NF) lenses have a small corneal contact area and do not require a contact fluid with these lenses with the one exception of the glass G-3 no-flange lens or the acrylic 3-Mirror no flange lens. Some doctors prefer to use artificial tears for no flanged lenses. Volk's ANF+ (Advanced No Fluid) lenses have also been designed to have a unique flange that does not require the use of a coupling fluid except when laser procedures are carried out.

SURGICAL GONIO LENSES

Volk's Surgical Gonioprism lenses leverage the same proprietary optical design and manufacturing principles as Volk's diagnositic lenses. Each surgical gonio lens is designed and tested in partnership with numerous surgeons resulting in the best optical clarity, maximum visualization, surgeon & microcope friendly ergonomics, and optimized for patient comfort.

LENS	IMAGE MAG	CONTACT DIAMETER	HANDLE LENGTH	PRIMARY APPLICATION
VVG Lens	1.20x	10.2 mm	84 mm	Direct Views for Micro-Invasive Glaucoma Surgery (MIGS) and all Intraoperative Gonio Procedures
Surgical Gonio Lens	1.20x	10.3 mm	75 mm	Direct Views for Intraoperative Gonio Procedures

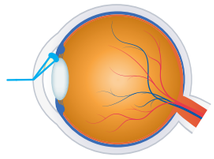
Volk Vold Gonio (VVG) Lens

VTSVVG

PRIMARY APPLICATION

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

1.20x
IMAGE MAG



+ Thornton-style stabilization 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)

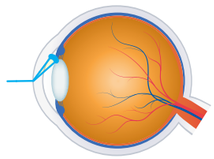
Surgical Gonio Lens

VSGACS

PRIMARY APPLICATION

Direct Views for Intraoperative Gonio Procedures

1.20x
IMAGE MAG



+ 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)

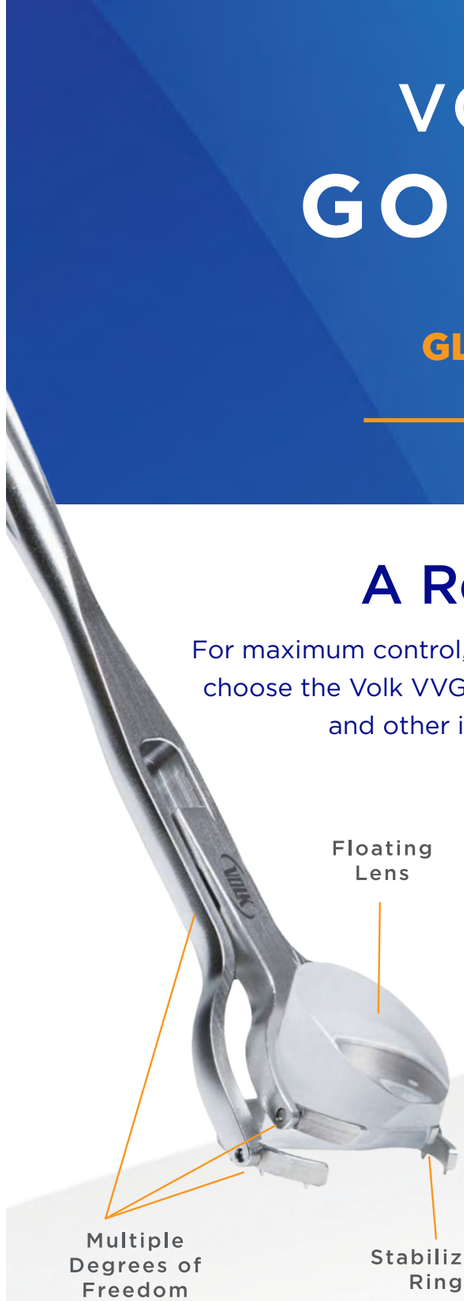
"SUPERB VISUALIZATION

The Volk surgical gonioprism 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."

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

VOLK VOLD GONIO LENS

MICRO-INVASIVE GLAUCOMA SURGERY



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.

Stabilize and Control the Globe
with Thornton-style fixation ring

Eliminate Anterior Chamber Distortion
floating lens minimizes pressure on the cornea

Minimal Microscope & Head Adjustments
visualize angle in primary phaco position

Withstands Repeat Sterilization
compatible with both steam and gas sterilization

SPECIFICATIONS

IMAGE MAG	CONTACT DIAMETER	RING DIAMETER	HANDLE LENGTH
1.20x	10.2 mm	15.2 mm	84 mm

"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."

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

LASER LENSES

RETINA | ANTERIOR | SINGLE USE

Image courtesy of Terry Cooper, United Kingdom

RETINA LASER LENSES

Volk's range of indirect contact Retina Laser lenses are fabricated with world class optics designed to deliver crystal-clear visualization and precise delivery of laser energy for treating the retina. Our laser lenses are ergonomically designed keeping both the practitioner and patient in mind for efficient and comfortable procedures.

LENS	FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG	CONTACT DIAMETER	PRIMARY APPLICATION
HR Wide Field	160° / 165°	0.50x	2.0x	16.5 mm	Wide Field of View for Pan Retinal Examination and Laser Treatments
Super Quad® 160	160° / 165°	0.50x	2.0x	Flange 16.5 mm NF 15.7 mm	Wide Field of View for Pan Retinal Examination and Laser Treatments
QuadrAspheric®	120° / 144°	0.51x	1.97x	Flange 15.5 mm ANF+ 15.5 mm NF 13.6 mm	Wide Field View for Pan Retinal Examination & Laser in Small Pupils
Area Centralis®	70° / 84°	1.06x	0.94x	Flange 15.5 mm ANF+ 15.5 mm NF 13.5 mm	High Magnification Examination and Treatment of the Posterior Pole
HR Centralis	74°/ 88°	1.08x	0.93x	15.5 mm	High Magnification for Small Pupil Posterior Pole Treatment
Super Macula® 2.2	60° / 78°	1.49x	0.67x	15.5 mm	High Magnification Examination and Treatment of the Posterior Pole
TransEquator®	110° / 132°	0.70x	1.44x	Flange 15.5 mm ANF+ 15.5 mm NF 13.2 mm	Mid-Peripheral Diagnosis and Focal/Grid Laser Therapy
Equator Plus®	114° / 137°	0.44x	2.27x	ANF+ 15.5 mm NF 13.6 mm	Small Pupil Diagnosis and Treatment
Quad Pediatric	100° / 120°	0.55x	1.82x	10.0 mm	ROP and Other Pediatric Conditions
PDT Laser	115° / 137°	0.67x	1.50x	15.5 mm	Photodynamic Therapy

"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."

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

CONTACT OPTIONS

Flanged version provides optimal stability on the cornea during laser procedures and is the recommended contact element 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 contact 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 contact 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

HR Wide Field

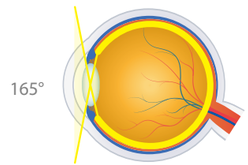
Flange:
VHRWF

PRIMARY APPLICATION | PRP

Wide Field of View for Pan Retinal Examination and Laser Treatments

+ Same field of view and image magnification as the classic favorite Super Quad® 160, but at half the size and half the weight
+ Advanced low-dispersion glass reduces chromatic aberrations and ensures excellent imaging to the ora serrata
+ Most popular lens for PRP

160°/165° FIELD OF VIEW | 0.50x IMAGE MAG | 2.0x LASER SPOT MAG



Super Quad® 160

Flange:
VSQUAD160
(shown)

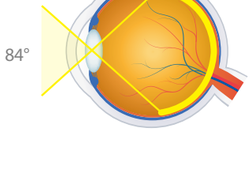
No Flange:
VSQUAD160NF

PRIMARY APPLICATION | PRP

Wide Field of View for Pan Retinal Examination and Laser Treatments

+ Wide field views for complete retinal imaging out to the ora serrata
+ Excellent for PRP and other laser treatments out to the far-peripheral retina
+ Flanged version recommended for laser for optimal stability on cornea

160°/165° FIELD OF VIEW | 0.50x IMAGE MAG | 2.0x LASER SPOT MAG



QuadrAspheric®

Flange:
VQFL (shown)

No Flange:
VQFLNF

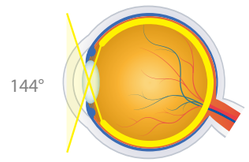
ANF+ Flange:
VQFLANF+

PRIMARY APPLICATION | SMALL PUPIL PRP

Wide Field View for Pan Retinal Examination and Laser Treatments in Small Pupils

+ High resolution imaging of the peripheral retina with small pupil capability for patients who do not accommodate dilation well
+ Excellent general diagnostic and laser treatment lens
+ Flanged version recommended for laser for optimal stability on cornea

120°/144° FIELD OF VIEW | 0.51x IMAGE MAG | 1.97x LASER SPOT MAG



Area Centralis®

Flange:
VAC (shown)

No Flange:
VACNF

ANF+ Flange:
VACANF+

PRIMARY APPLICATION | FOCAL/GRID

High Magnification Examination and Treatment of the Posterior Pole

+ Ideal for focal/grid laser treatment
+ High magnification image of the posterior pole with expanded field of view
+ Flanged version recommended for laser for optimal stability on cornea

70°/84° FIELD OF VIEW | 1.06x IMAGE MAG | 0.94x LASER SPOT MAG

HR Centralis

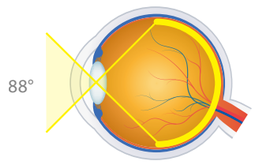
Flange:
VHRC

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

74°/88°	1.08x	0.93x
FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG



Super Macula® 2.2

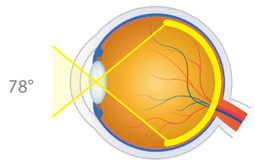
Flange:
VSMAC2.2

PRIMARY APPLICATION | FOCAL/GRID

High Magnification Examination and Treatment of the Posterior Pole

+ Highest magnification imaging of the posterior pole of any indirect contact lens
+ Excellent detail and distortion free visualization for critical evaluation of the optic nerve head and macula
+ Flange is designed to provide optimum stability and control on the cornea needed to manipulate tall lens body

60°/78°	1.49x	0.67x
FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG



TransEquator®

Flange:
VTE (shown)

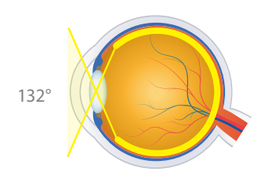
ANF+ Flange:
VTEANF+

PRIMARY APPLICATION | PRP & 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

110°/132°	0.70x	1.44x
FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG



Equator Plus®

ANF+ Flange:
VEPANF+
(shown)

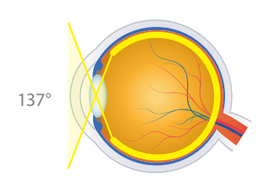
No Flange:
VEPNF

PRIMARY APPLICATION | PRP

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

114°/137°	0.44x	2.27x
FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG



Quad Pediatric

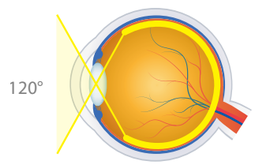
Flange:
VQPED

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

100°/120°	0.55x	1.82x
FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG



PDT Laser

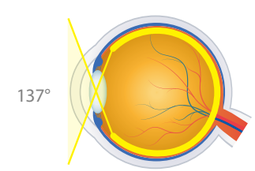
Flange:
VPDT

PRIMARY APPLICATION

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.

115°/137°	0.67x	1.50x
FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG



FLAWLESS OPTICS
Unmatched Precision

ANTERIOR & MID-VITREOUS LENSES

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.

LENS	IMAGE MAG	LASER SPOT MAG	CONTACT DIAMETER	PRIMARY APPLICATION
Singh MidVitreous	1.16x	0.86x	15.5 mm	Laser Treatment of Vitreous Floaters
Rapid SLT®	1.0x	1.0x	15.0 mm	SLT Procedures
Selective Laser Trabeculoplasty (SLT)	1.0x	1.0x	14.4 mm	SLT Procedures
Capsulotomy	1.57x	0.64x	15.5 mm	Laser Capsulotomy Procedures
Blumenthal Iridotomy	1.54x	0.65x	13.9 mm	Far Peripheral Laser Iridotomy Procedures
MagPlus Iridectomy Lens	1.60x	0.63x	15.5 mm	Laser Iridotomy Procedures
Iridectomy	1.70x	0.59x	15.5 mm	Magnified Laser Iridotomy Procedures
Blumenthal Suturelysis	2x-3x	0.50x-0.33x	1.1 mm	Suturelysis Procedure

Singh MidVitreous

VSMV

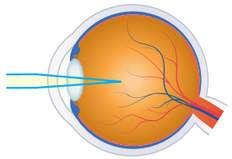
PRIMARY APPLICATION

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

1.16x IMAGE MAG

0.86x LASER SPOT MAG



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®

VMSLT

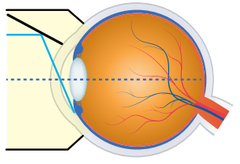
PRIMARY APPLICATION

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

1.0x IMAGE MAG

1.0x LASER SPOT MAG



Selective Laser Trabeculoplasty (SLT)

VSLT

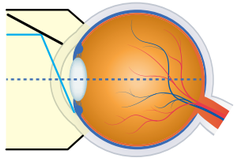
PRIMARY APPLICATION

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
+ Broadband A/R coating

1.0x IMAGE MAG

1.0x LASER SPOT MAG



UNMATCHED PRECISION
Enhances Confidence

Capsulotomy

VCAPS

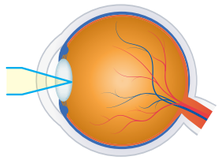
PRIMARY APPLICATION

Laser Capsulotomy Procedures

+ Enables precise focusing of the laser beam at the posterior lens capsule for post-cataract/secondary cataract treatment
+ Superior optical design provides tight focus to minimize pitting and damaging the IOL
+ Laser Window provides a protective barrier for internal imaging components

1.57x IMAGE MAG

0.64x LASER SPOT MAG



Blumenthal Iridotomy

VBIRID

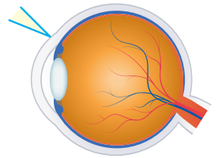
PRIMARY APPLICATION

Far Peripheral Laser Iridotomy Procedures

+ Unique lens button allows access to the farthest peripheral iris for laser placement and superior optical quality for sharply focused laser spots
+ Specially designed shallow contact element allows corneal indentation to open the angle and flatten the peripheral iris
+ Improved lens peformance uses lower energy for less iris tissue damage and post laser inflammation
+ Larger lens housing aids manipulation and allows more oblique viewing. Ideal for deep-set eyes

1.54x IMAGE MAG

0.65x LASER SPOT MAG



MagPlus Iridectomy

VMPIRID

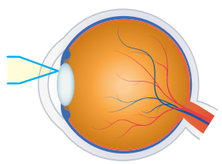
PRIMARY APPLICATION

Laser Iridotomy Procedures

+ Mag Plus lens derives its name from the large magnification button within the lens body which is perfect for practitioners who prefer a large working space to work with
+ Larger offset viewing area delivers superior clarity and resolution with large laser spot size
+ Laser Window protects imaging element from contamination ensuring precise laser spot placement
+ Silvered indent on lens ring helps orient the button towards the right clock position
+ Laser beam should be aimed at center of circular button for effective laser transmission

1.60x IMAGE MAG

0.63x LASER SPOT MAG



Iridectomy

VIRID

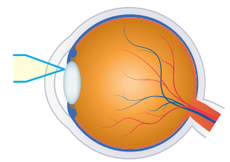
PRIMARY APPLICATION

Laser Iridotomy Procedures

+ Provides high magnification view of the iris through the top-hat style 'button'
+ Button design ensures precise placement of the laser beam
+ Lens surface provides a clear plano view of surrounding iris to help identify and orient desired treatment location
+ Laser beam should be aimed at center of circular button for effective laser transmission

1.70x IMAGE MAG

0.59x LASER SPOT MAG



Blumenthal Suturelysis

VBSL

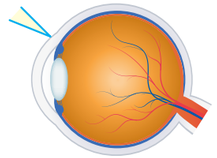
PRIMARY APPLICATION

Suturelysis Procedures

+ Unique tip of lens designed to alleviate compressive force on cornea for visualization and removval of deep seated sutures, increasing patient comfort
+ Lens surface and tip magnify view 2x to 3x facilitating clear visualization of all sections of the suture
+ High magnification enables treatment of deep seated sutures
+ Unique design facilitates visualization through thick Tenon's layer or a subconjunctival hemorrhage

2x-3x IMAGE MAG

0.50x-0.33x LASER SPOT MAG



"PREMIUM LENSES FOR PREMIUM SURGERY

Premium cataract surgery does not end with just a new lens implant, it also needs perfect YAG Capsulotomy and optical clearance for best outcomes and 20/happy patients.

In my 100% premium cataract practice, I take advantage of the optical superiority (visibility) of Volk Capsulotomy lenses to perform exact YAG Capsulotomy with zero implant pitting (due to excellent focus) and minimal laser energy (safety).

Since we have a worldwide referral base of complex corneas and cataracts, I can also use these lenses to perform YAG Capsulotomy through previous radial keratotomy and scarred corneas (which otherwise take longer and higher energy to get through in between scarred areas). Additionally, I have had great success in immobilizing the eye during YAG Capsulotomy in Nystagmus cases.

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.

LENS	FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG	CONTACT DIAMETER	PRIMARY APPLICATION
Centralis Direct®	22° / 26°	0.90x	1.11x	15.5	Direct upright image for posterior pole laser treatments
Fundus Laser	35° / 40°	1.25x	0.80x	15.5	High magnification view for posterior pole laser treatments
Fundus Laser 20 mm	25° / 30°	1.44x	0.70x	20.0	Highest magnification view for posterior pole treatments

Centralis Direct®

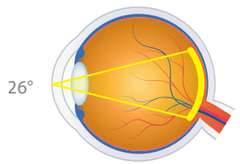
Flange:
VCD

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

22°/26° FIELD OF VIEW | 0.90x IMAGE MAG | 1.11x LASER SPOT MAG



Fundus Laser

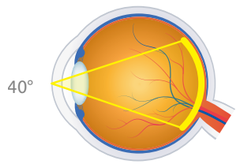
Flange:
VFUNDUS

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

35°/40° FIELD OF VIEW | 1.25x IMAGE MAG | 0.80x LASER SPOT MAG



Fundus Laser 20mm

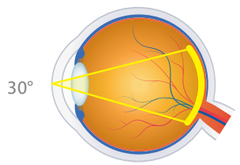
Flange:
VFUNDUS20

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

25°/30° FIELD OF VIEW | 1.44x IMAGE MAG | 0.70x LASER SPOT MAG



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 reoccur 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 sight threatening conditions. The usage of YAG laser in ophthalmology has been around for decades in procedures such as Iridotomy and Capsulotomy. However, its application and acceptance in the floater treatment space is relatively new owing to the intricacies involved in visualizing and treating the floater. It is critical to know where the floater(s) are placed relative to 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. Oftentimes, 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 an d Kenosha

Dr. Singh is the leading 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.

RAPID SLT®

Four Views are Better Than One

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.

Until now, special laser lenses with a contact element and a single reflective element to facilitate viewing the trabecular meshwork were used as the standard in this procedure. However, these types of lenses require rotation on the patient's eye to view and target the entire trabecular meshwork. This procedure is often cumbersome for doctors as they must balance rotating

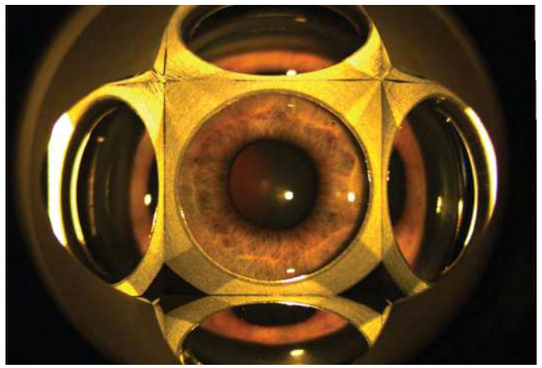


Figure 2. A view through the Rapid SLT lens with a 6x magnification on the slit lamp. Four large and clear views of the trabecular meshwork can be obtained without rotating the lens.

Figure 1. The new Rapid SLT lens from Volk is the first of its kind, employing multiple reflective surfaces for SLT procedure.

the lens while simultaneously stabilizing the lens firmly on the cornea. For patients, this method increases discomfort due to the time the lens remains on the eye, as well as the rotation, which induces blink reflex in many patients.

Efficient Procedure, Lesser Strain

With four spectacular views available through the Rapid SLT (Figure 2), doctors can carry out the SLT procedure with just a minimal one-time adjustment of the lens, resulting in reduced procedure time by almost 50%. The number of laser spots targeted on the eye is also reduced, owing to a clear, high resolution, 360° view of the angle.

"This lens is very comfortable for both doctor and patient and provides excellent resolution imaging. After the first round of laser, I only need to rotate it just about one and a half clock hours to complete the SLT procedure," says Douglas Ripkin, MD; glaucoma and anterior segment specialist at the Cole Eye Institute, Cleveland Clinic.

This enhances patient comfort, owing to a quicker procedure and reduced lens rotation. The 1.0x image magnification provides an optimally intuitive view of the angle, while the 1.0x laser magnification helps keep the laser spot profile accurate. "I also use this lens for quick dynamic gonioscopy to examine the angle because of its contact design," adds Ripkin.

Nathan Lighthizer, O.D., F.A.A.O, the Assistant Dean of Clinical Care Service and Director of Continuing Education at the Oklahoma College of Optometry highlights the functional convenience provided by the four views of the Rapid SLT. "The Rapid SLT lens has been a tremendous addition to our clinic and specifically for SLT procedures in our patients with glaucoma. The new lens has allowed us to reduce our SLT times significantly. The four mirrors of the Rapid SLT lens drastically diminish the need to rotate the lens while performing the SLT procedure, making the procedure more efficient, while at the same time also helping to reduce glare and bubble formation during the procedure which can limit views of the anterior chamber angle anatomy. From the very experienced doctors who have done thousands of procedures, to the students and resident doctors who are early in their experience with SLT, all have commented on the great 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 is 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.

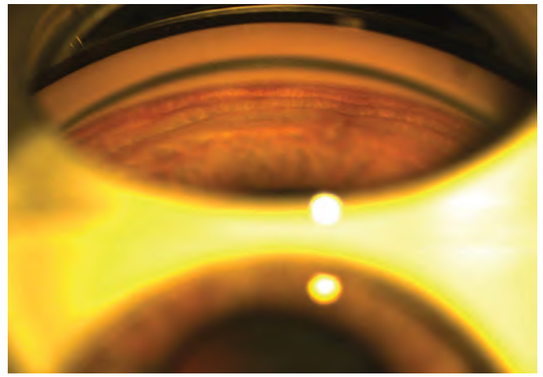


Figure 3. Appreciate the smallest of details with the high-resolution optics of the Rapid SLT. Shot on 16x zoom on the slit lamp.

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!

DOUGLAS RIPKIN, MD
Cole Eye Institute, Cleveland Clinic

Ripkin specializes in the care of advanced glaucoma, including bypass and MIGS shunt devices, glaucoma laser surgery and cataract surgery.

JOHN A. MCCALL, JR., OD
Crockett Eye Clinic

A past President of the American Optometric Association, McCall specializes in general optometry and laser treatments for glaucoma management.

NATHAN R. LIGHTHIZER, OD, F.A.A.O
Oklahoma College of Optometry

Lighthizer serves as the Assistant Dean of Clinical Care Services and the Chief of Specialty Care Clinic among other roles.

SINGLE-USE LASER & GONIO LENSES

VOLK® 1 SINGLE-USE

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 associate with reprocessing.

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

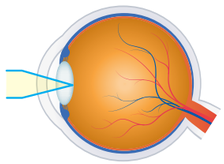
Volk®1 Single-Use Capsulotomy

PRIMARY APPLICATION
Laser Capsulotomy Procedures

N/A MIRROR ANGLES | 1.57x IMAGE MAG | 0.63x LASER SPOT MAG

+ Facilitates accurate laser beam focus on the posterior lens capsule

VCAPSD10



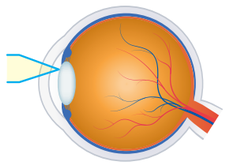
Volk®1 Single-Use Iridotomy

PRIMARY APPLICATION
Laser Iridotomy Procedures

N/A MIRROR ANGLES | 1.70x IMAGE MAG | 0.59x LASER SPOT MAG

+ Magnified view of the peripheral iris enables precise laser placement for iridotomy procedures

VIRIDD10



LASER COMPATIBILITY

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

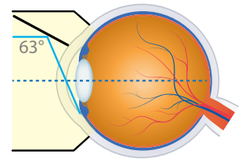
Volk®1 Single-Use SLT

PRIMARY APPLICATION
SLT Procedures, Static and Dynamic Gonioscopy

63° MIRROR ANGLES | 1.0x IMAGE MAG | 1.0x LASER SPOT MAG

+ Single-mirror lens angled at 63° ensures proper laser placement during Selective Laser Trabeculoplasty
+ Single-use SLT lens can also be used for ALT and other trabeculoplasty procedures
+ Used for visualization in XEN® Gel Stent procedures

VSLTD10



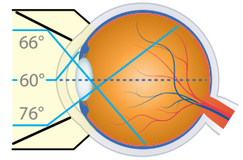
Volk®1 Single-Use 3-Mirror Gonio

PRIMARY APPLICATION
Gonioscopy and Examination of Anterior Chamber Angle and the Central, Equatorial, & Peripheral Retina

60°/66°/76° MIRROR ANGLES | 1.0x IMAGE MAG | 1.0x LASER SPOT MAG

+ 60° mirror provides a view of the iridocorneal angle
+ 66° mirror provides a retinal image from the equator to the ora serrata
+ 76° mirror provides a view of the mid-peripheral/peripheral retina
+ Central mirror provides a view of the central retina

V3MIRD10



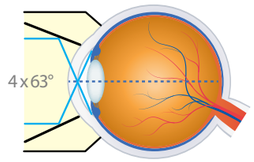
Volk®1 Single-Use 4-Mirror Gonio

PRIMARY APPLICATION
Static and Dynamic Gonioscopy

4x63° MIRROR ANGLES | 1.0x IMAGE MAG | 1.0x LASER SPOT MAG

+ Four-mirror design allows for comprehensive examination and treatment of the trabecular meshwork with minimal lens rotation

V4MIRD10



VOLK® 1 | SINGLE-USE

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

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

SURGICAL LENSES

VITRECTOMY | SINGLE USE | ACCESSORIES

VITRECTOMY FOR A RETINAL DETACHMENT WITH MULTIPLE TEARS

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 VITRECTOMY LENSES

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

LENS	FIELD OF VIEW	IMAGE MAG	CONTACT DIAMETER	PRIMARY APPLICATION
HRX Vit Lens	130° / 150°	0.43x	11.35 mm / SSV 16.0 mm	Far-Peripheral Indirect Vitreoretinal Procedures
Mini Quad® XL	112° / 134°	0.39x	16.0 mm	Indirect Viewing and Treatment of Peripheral Retinal Disorders
Mini Quad®	106° / 127°	0.39x	11.35 mm / SSV 16.0 mm	Indirect Viewing and Treatment of Peripheral Retinal Disorders
DynaView	95° / 127°	0.39x	8.08 mm	Treatment of Retinopathy of Prematurity
Central Retinal	73° / 88°	0.71x	11.35 mm / SSV 16.0 mm	High Magnification Indirect Viewing and Treatment of the Central Retina
Super Macula®	64° / 77°	1.03x	11.35 mm	Highest Magnification Indirect Viewing and Treatment of the Central Retina

HRX Vit Lens

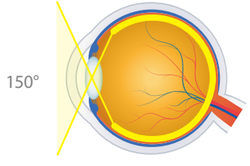
VHRXVIT **VHRXVITSSV**
Self Stabilizing (shown)

PRIMARY APPLICATION

Far-Peripheral Indirect Vitreoretinal Procedures

130°/150° FIELD OF VIEW | 0.43x IMAGE MAG

- 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 autoclave sterilizable design (see page 52)



Mini Quad® XL

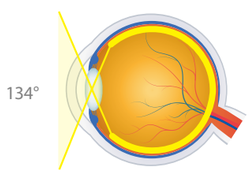
VMQXLVIT (shown) **VMQXLVITSSV** Self Stabilizing

PRIMARY APPLICATION

Indirect Viewing and Treatment of Peripheral Retinal Disorders

112°/134° FIELD OF VIEW | 0.39x IMAGE MAG

- 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



"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 Tractional 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

Mini Quad®

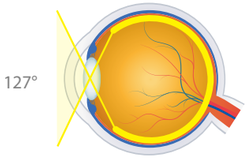
VMQVIT (shown) **VMQVITSSV** Self Stabilizing

PRIMARY APPLICATION

Indirect Viewing and Treatment of Peripheral Retinal Disorders

106°/127° FIELD OF VIEW | 0.39x IMAGE MAG

- Wide field of view of the entire retina including the ora serrata
- Smaller ring facilitates manipulation within the orbit
- Ideal for retinal detachments, PDR and giant retinal tears
- Available in standard and self-stabilizing contact (SSV®) options
- Available in autoclave sterilizable design (see page 52)



DynaView

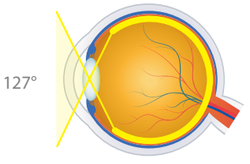
VDVVIT

PRIMARY APPLICATION

Treatment of Retinopathy of Prematurity

95°/127° FIELD OF VIEW | 0.39x IMAGE MAG

- 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

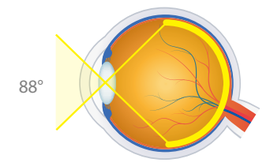
VCRLVIT (shown) **VCRLVITSSV** Self Stabilizing

PRIMARY APPLICATION

High Magnification Indirect Viewing and Treatment of the Central Retina

73°/88° FIELD OF VIEW | 0.71x IMAGE MAG

- High resolution, high magnification imaging to the equator
- Ideal for epiretinal membranes, diabetic membranes, vitreo 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 autoclave sterilizable design (see page 52)



Super Macula®

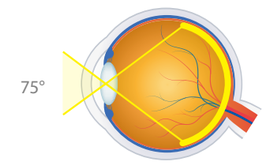
VSMACVIT

PRIMARY APPLICATION

Highest Magnification Indirect Viewing and Treatment of the Central Retina

64°/77° FIELD OF VIEW | 1.03x IMAGE MAG

- 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, vitreo macular traction, and submacula surgeries
- 2x field of view compared to plano/concave direct image lenses



AUTOCLAVABLE INDIRECT VITRECTOMY LENSES

LENS	FIELD OF VIEW	IMAGE MAG	CONTACT DIAMETER	PRIMARY APPLICATION
HRX ACS®	130° / 150°	0.43x	11.38 mm / SSV 16.0 mm	Widest Field Views for Vitreoretinal Procedures
Mini Quad® ACS®	106° / 127°	0.48x	11.38 mm / SSV 16.0 mm	Peripheral Indirect Vitreoretinal Procedures
Central Retinal ACS®	73° / 88°	0.71x	11.38 mm / SSV 16.0 mm	High Magnification Indirect Vitreoretinal Procedures

HRX ACS®

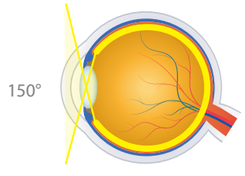
VHRXVITSSVACS Self Stabilizing (shown)
VHRXVITACS

PRIMARY APPLICATION

Widest Field Views for Vitreoretinal Procedures

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

130°/150° FIELD OF VIEW
0.43x IMAGE MA



Mini Quad® ACS®

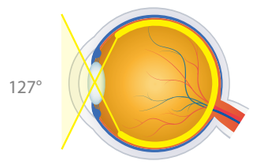
VMQVITSSVACS Self Stabilizing (shown)
VMQVITACS

PRIMARY APPLICATION

Peripheral Indirect Vitreoretinal Procedures

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

106°/127° FIELD OF VIEW
0.48x IMAGE MAG



Central Retinal ACS®

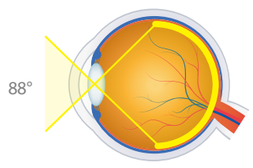
VCRLVITSSVACS Self Stabilizing (shown)
VCRLVITACS

PRIMARY APPLICATION

High Magnification Indirect Vitreoretinal Procedures

- 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

73°/88° FIELD OF VIEW
0.71x IMAGE MAG



AUTOCLAVABLE SURGICAL BIO LENSES

Combine the optical excellence of Volk lenses with the comfort of reduced processing time in a surgical environment with the autoclavable lens line.

LENS	FIELD OF VIEW	IMAGE MAG	LASER SPOT MAG	WORKING DISTANCE	RING DIAMETER	PRIMARY APPLICATION
20D ACS®	46° / 60°	3.13x	0.32x	50 mm	55.4 mm	Industry Standard Diagnostic Lens in an Autoclavable Format
28D ACS®	53° / 69°	2.27x	0.44x	33 mm	45.9 mm	Fundus Scanning Lens in an Autoclavable Format

20D ACS®

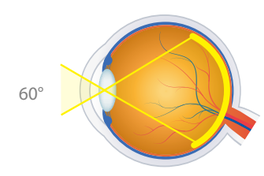
V20LCACSPV

PRIMARY APPLICATION

Industry Standard Diagnostic Lens in an Autoclavable Format

- 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

46°/60° FIELD OF VIEW
3.13x IMAGE MAG
0.32x LASER SPOT MAG



28D ACS®

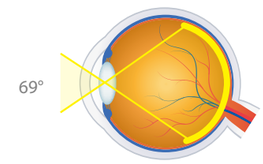
V28LCACSPV

PRIMARY APPLICATION

Fundus Scanning Lens in an Autoclavable Format

- 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)

53°/69° FIELD OF VIEW
2.27x IMAGE MAG
0.44x LASER SPOT MAG

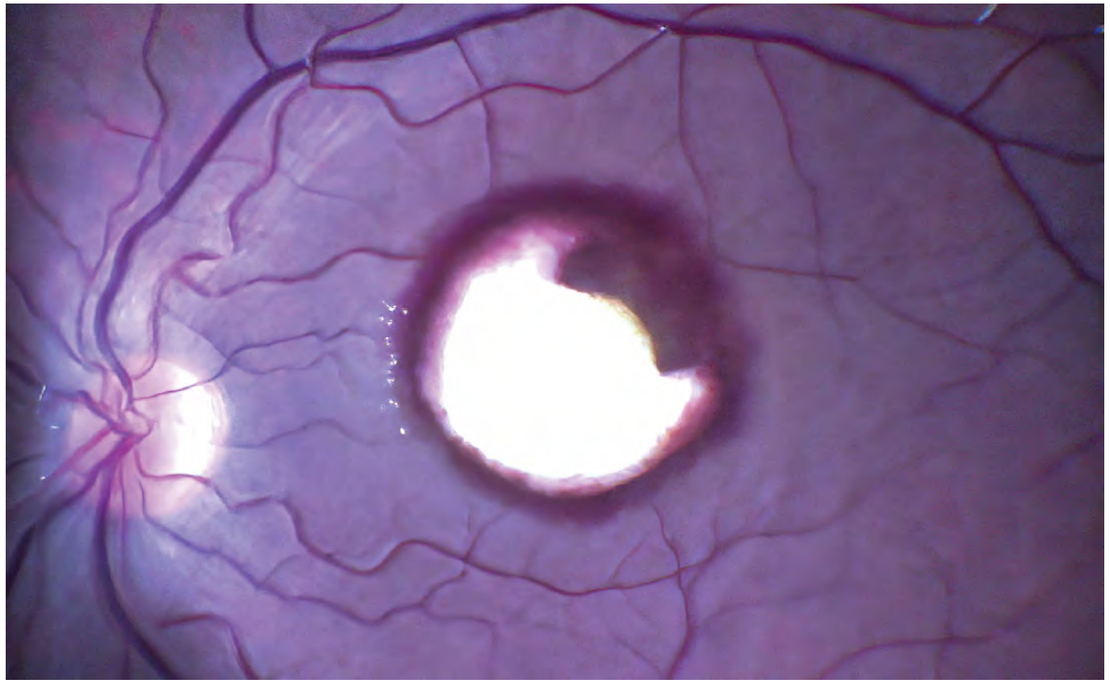


HIGH RESOLUTION (HR) DIRECT VITRECTOMY LENSES

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 allows them to stabilize suitably without the need for an additional stabilizing ring.

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



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

1X

1X (NSR)

Stabilizing Ring:
VHRD1XACS

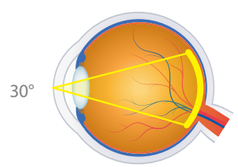
No Stabilizing Ring:
VHRD1XNSRACS

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

30° FIELD OF VIEW
1.0x IMAGE MAG



HR Direct Bi-Concave

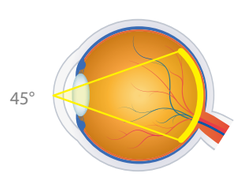
VHRDBCACS

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

45° (Mid Field) 30° (AFX) FIELD OF VIEW
0.49x (Mid Field) 1.0x (AFX) IMAGE MAG



HR Direct High Mag

HIGH MAG

HIGH MAG (NSR)

Stabilizing Ring:
VHRDHMACS

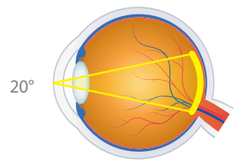
No Stabilizing Ring:
VHRDHMNSRACS

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

20° FIELD OF VIEW
1.35x IMAGE MAG



HR Direct 20° Prism

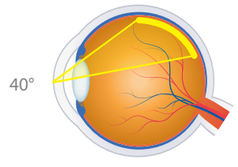
VHRD20PACS

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

40° (Offset 20°) FIELD OF VIEW
0.53x IMAGE MAG



DIRECT VITRECTOMY LENSES

SELF STABILIZING (SSV)

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.

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

Direct Image Flat SSV® ACS®

VFLATSSVACS

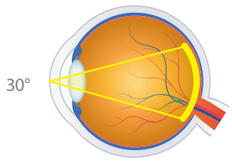
PRIMARY APPLICATION

Routine Direct Image Vitreoretinal Surgery of the Central Retina

30° FIELD OF VIEW

0.92x IMAGE MAG

+ Delivers high resolution direct image of the central retina
+ Steam sterilizable for reduced processing time
+ Most popular lens for high resolution macula work such as epiretinal membrane peeling and ILM peeling



Direct Image High Mag SSV® ACS®

VFHMSSVACS

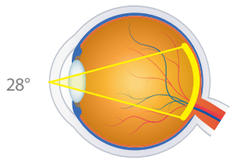
PRIMARY APPLICATION

High Magnification Direct Image Vitreoretinal Surgery of the Central Retina

28° FIELD OF VIEW

1.50x IMAGE MAG

+ Delivers high resolution, high magnification direct image of the central retina
+ Steam sterilizable for reduced processing time
+ Ideal for detailed work of the macula with high magnification like macular holes, membrane peeling, tractional retinal detachments



Direct Image Mid Field SSV® ACS®

VMFSSVACS

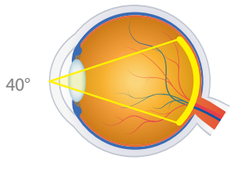
PRIMARY APPLICATION

Wide Field Direct Image Vitreoretinal Surgery

40° FIELD OF VIEW

0.50x IMAGE MAG

+ Bi-concave design provides widest field available in a direct image lens
+ Can be used for air/gas exchange procedures
+ Steam sterilizable for reduced processing time



Direct Image 15° Prism SSV® ACS®

VPRISMSSVACS

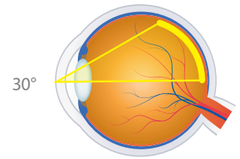
PRIMARY APPLICATION

Off Axis Direct Image Vitreoretinal Surgery

30° (15° Offset) FIELD OF VIEW

0.90x IMAGE MAG

+ Design delivers 15° off axis retinal views
+ Steam sterilizable for reduced processing time
+ Ideal for direct visualization of the mid-peripheral fundus



Direct Image 30° Prism SSV® ACS®

V30PRISMSSVACS

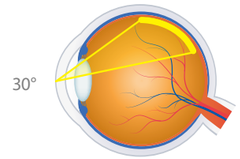
PRIMARY APPLICATION

Off Axis Direct Image Vitreoretinal Surgery

30° (30° Offset) FIELD OF VIEW

0.90x IMAGE MAG

+ Design delivers 30° off axis retinal views
+ Steam sterilizable for reduced processing time
+ Ideal for direct visualization of the posterior peripheral fundus



Direct Image 45° Prism SSV® ACS®

V45PRISMSSVACS

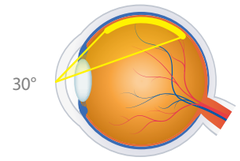
PRIMARY APPLICATION

Off Axis Direct Image Vitreoretinal Surgery

30° (45° Offset) FIELD OF VIEW

0.90x IMAGE MAG

+ Design delivers 45° off axis retinal views
+ Steam sterilizable for reduced processing time
+ Ideal for direct visualization of the posterior peripheral fundus



Direct Image AFX SSV® ACS®

VAFXSSVACS

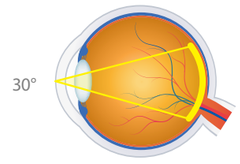
PRIMARY APPLICATION

Direct Image Vitreoretinal Surgery During Air Fluid Exchange Procedures

30° FIELD OF VIEW

0.82x IMAGE MAG

+ Delivers high resolution central retinal imaging
+ Steam sterilizable for reduced processing time
+ Ideal for Air Fluid exchange procedures



SINGLE-USE SURGICAL BIO LENSES

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 associate 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 20D

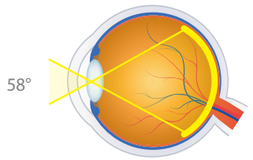
V20LCD10

PRIMARY APPLICATION

Industry Standard Diagnostic Lens in a Single-Use Format

- 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

58°
FIELD OF VIEW



Volk®1 Single-Use 28D

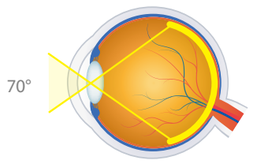
V28LCD10

PRIMARY APPLICATION

Fundus Scanning Lens in a Single-Use Format

- 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

70°
FIELD OF VIEW



"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."

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

SINGLE-USE DIRECT VITRECTOMY LENSES

Available in six popular designs, these lenses deliver high resolution direct-image retinal views for all vitrectomy procedures. Designed in collaboration with Dr. K.V. Chalam, the SSV® (self-stabilizing) contact design element eliminates the need for sutures or rings. They are packaged individually in easy-to-open single-use Tyvek® pouches and are boxed in quantities of 10 lenses. These single-use lenses minimize the risk of infection and cross-contamination and reduce the cost and time associate with reprocessing.

LENS	FIELD OF VIEW	IMAGE MAG	CONTACT DIAMETER	PRIMARY APPLICATION
Volk®1 Single-Use Flat Standard	36°	1.0x	14.8 mm	Routine Direct Image Vitreoretinal Surgery of the Central Retina
Volk®1 Single-Use Flat SSV®	30°	0.92x	16.0 mm	Routine Direct Image Vitreoretinal Surgery of the Central Retina
Volk®1 Single-Use Magnifying	30°	1.50x	14.8 mm	High Magnification Direct Image Vitreoretinal Surgery of the Central Retina
Volk®1 Single-Use Wide Field	48°	0.50x	14.8 mm	Wide Field Direct Image Vitreoretinal Surgery
Volk®1 Single-Use Bi-Concave	25°	0.80x	14.8 mm	Direct Image Vitreoretinal Surgery During Air Fluid Exchange
Volk®1 Single-Use 30° Prism	33° (Offset 30°)	1.0x	14.8 mm	Off Axis Direct Image Vitreoretinal Surgery

Volk®1 Single-Use Flat Standard

VFD10

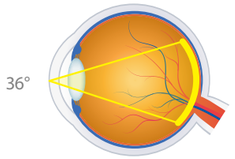
PRIMARY APPLICATION

Routine Direct Image Vitreoretinal Surgery of the Central Retina

- Ideal for visualizing the posterior pole in ILM peeling
- Silicone ring base

36°
FIELD OF VIEW

1.0x
IMAGE MAG



Volk®1 Single-Use Flat Self Stabilizing SSV®

VFLATSSVD10

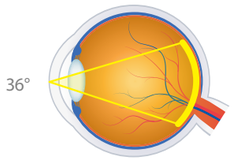
PRIMARY APPLICATION

Routine Direct Image Vitreoretinal Surgery of the Central Retina

- Ideal for visualizing the posterior pole in ILM peeling
- Patented SSV (self-stabilizing) feet for maximum stability and greater access for instrumentation when working closer to the center axis.

30°
FIELD OF VIEW

0.92x
IMAGE MAG



Volk®1 Single-Use Magnifying

VMD10

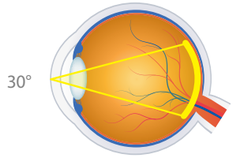
PRIMARY APPLICATION

High Magnification Direct Image Vitreoretinal Surgery of the Central Retina

+ Ideal for detailed macular work due to high 1.50x magnification
+ Silicone ring base

30° FIELD OF VIEW

1.50x IMAGE MAG



Volk® Single-Use Wide Field

VWFD10

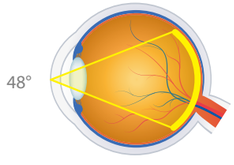
PRIMARY APPLICATION

Wide Field Direct Image Vitreoretinal Surgery

+ Ideal for wide field imaging of the posterior pole
+ Silicone ring base

48° FIELD OF VIEW

0.50x IMAGE MAG



Volk®1 Single-Use Bi-Concave

VBCD10

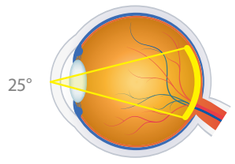
PRIMARY APPLICATION

Direct Image Vitreoretinal Surgery During Air Fluid Exchange

+ Ideal for air-fluid exchange procedures
+ Silicone ring base

25° FIELD OF VIEW

0.80x IMAGE MAG



Volk®1 Single-Use 30° Prism

V30PD10

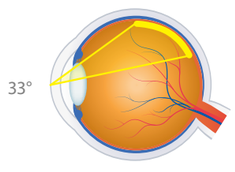
PRIMARY APPLICATION

Off Axis Direct Image Vitreoretinal Surgery

+ Ideal for direct visualization of the posterior peripheral fundus
+ Silicone ring base

33° (Offset 30°) FIELD OF VIEW

1.0x IMAGE MAG



SURGICAL ACCESSORIES

Suture Ring

VSRS2

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)

Infusion Handle

VINFHAN

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

VitreoLens Handle

DynaView Vit, Mini Quad Vit:
VVITHAN-LG

Central Retinal Vit, HRX Vit, Super Macula Vit, Mini Quad XL Vit, Central Retinal ACS®,HRX ACS®, Mini Quad® ACS®:
VVITHAN-MQXL

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

Sterilization Tray

Small Tray:
VSCA

Large Tray:
VSCB

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

MERLIN®
SURGICAL SYSTEM

PRECISE ALIGNMENT
for Non-Contact
Vitreoretinal Visualization

CLARITY
UNMATCHED BY RIVALS

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.

ALIGNMENT
DELIVERS PRECISION EVERY TIME

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

COMPACT
DESIGN MAXIMIZES WORKING SPACE

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

PATIENT SAFETY
INCREASED BY EFFICIENT OPTICAL DESIGN

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

WHERE CLARITY, WIDE FIELD VIEW,
& Enhanced
Performance Converge

"ULTRA-WIDE SURGICAL VIEWING

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

3 LENS OPTIONS
SUIT YOUR LENS NEEDS

+ 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

WIDE ANGLE
ACS® LENS

102°/120°	0.43x	19 mm
FIELD OF VIEW	IMAGE MAG	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°	0.74x	19 mm
FIELD OF VIEW	IMAGE MAG	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°	0.42x	13 mm
FIELD OF VIEW	IMAGE MAG	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.

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.

ROLS® ∞ Infinity

The **ROLS** ∞ is our newest reinverter and provides superior image quality with minimal image shift. It is available in manual and powered versions. The powered version works with the Merlin surgical system, engaging automatically when the LPU is pivoted into place. The powered version can also be operated by an available footswitch.

Ophthalmology MANAGEMENT

SPOTLIGHT ON TECHNOLOGY & TECHNIQUE

A SYSTEM WITH A NONCONTACT VIEW

By Louise Gagnon, contributing editor

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."

The small wide-angle lens is particularly beneficial for patients who have small pupils or for those with a prominent brow for whom space is a consideration, says Dr. Lema. "Despite its small size, there's no considerable decrease in depth of field versus the larger lens," he says. Also, the midfield lens delivers an excellent, high-magnification view of the central retina, providing a noncontact option for macula work like membrane peeling.

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 repeatably.

"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.

Quicker Surgery, Less Strain

The ergonomic design of the Merlin system can reduce the duration of surgical cases, says Dr. Huang. "The faster and more confidently 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.

Ophthalmology Management, Volume: 21, page(s): 80, 82

DIAGNOSTIC IMAGING DEVICES

VISTAVIEW® | PICTOR PRESTIGE™ | PICTOR PLUS®

VISTA VIEW®

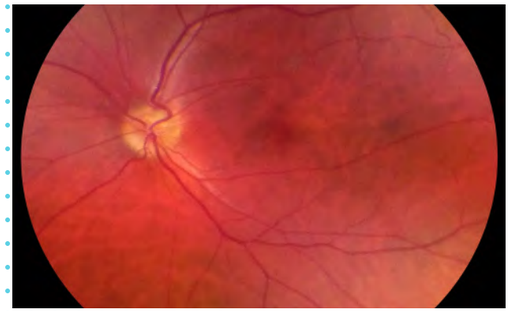
TAKE THE VIEW WITH YOU

VOLK®

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.



Do More. Pay Less.

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.

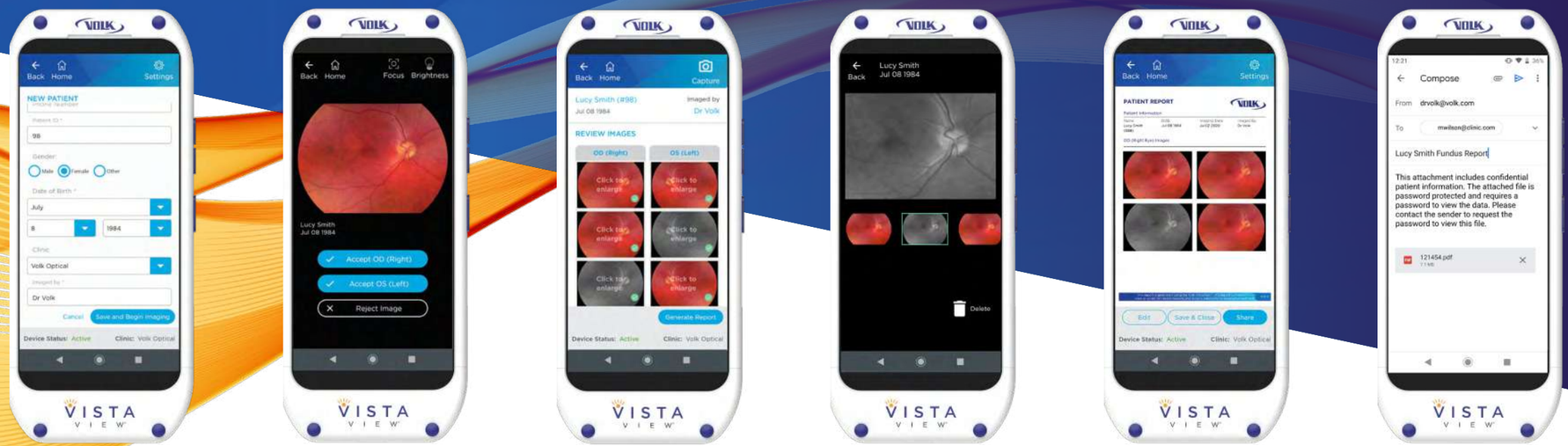
Take your VistaView anywhere! With its extremely light and ergonomic design that easily fits in your bag, you can take **exam room quality images anywhere** from waiting rooms to patient rounds to nursing homes and screening campaigns. Instantly generate reports with patient images and your notes on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

So Simple. Anyone Can Image.

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.



Patient Entry

Image Capture

Review & Analysis

Patient Education

Generate Reports

Share Data

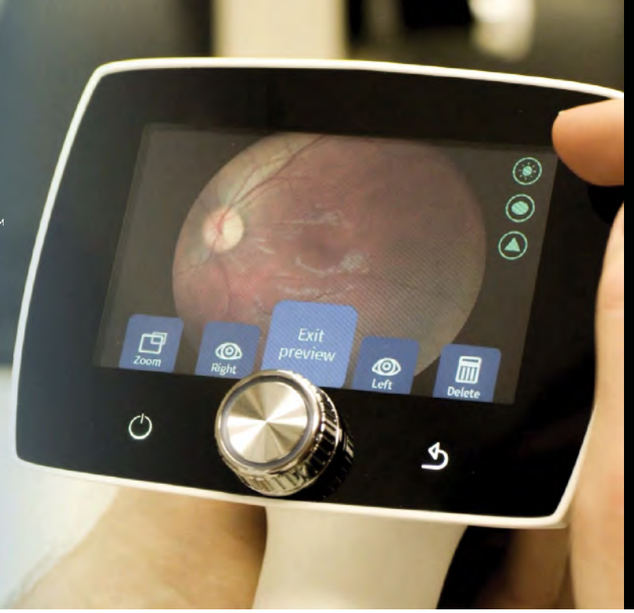
"A Complete
IMAGING EXPERIENCE

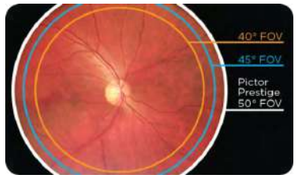
Overall, I am very impressed with the VistaView. It is easy-to-use and the image quality is really good. One of the most impressive features about the camera is the red-free images, especially when I am seeing patients for diabetic retinopathy detection and monitoring retinal changes. This helps retina 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

PICTOR Prestige™

IMAGE ANYONE. ANYWHERE.





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.

PICTOR Prestige™ STUDIO

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.

PICTOR PLUS

THE PICTOR PLUS PORTABLE OPTHALMIC CAMERA CAN TAKE YOUR PRACTICE PLACES.

From the exam room to on-location screenings, nursing home calls and everywhere in between.

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.

STANDARD VOLK ACCESSORIES

Steady Mount

VSM

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

Volk Lens Pen®

VLENSPEN

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

Not for use on surfaces that contact the eye.

Precision Optical Lens Cleaner

Box: **VPOLC1**

Case: **VPOLCCASE**

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

Not for use on surfaces that contact the eye.

RESEARCH LENSES

Recommeded for use on animals. Designed and maufactured 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.

LENS	IMAGE MAG	CONTACT DIAMETER	LENS HEIGHT	HANDLE LENGTH	PRIMARY APPLICATION
Fundus Lens	1.0x	2 mm	5 mm	76 mm	Provides High Resolution Views of the Posterior Pole
Glass Gonio Lens	1.0x	2 mm	11 mm	84 mm	Provides High Resolution Views of the Anterior Chamber

Fundus Lens

V2MFUNDUS

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°

Glass Gonio Lens

V2MGONIO

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

CASES AND PERSONALIZATION

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.

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.

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 accomodated. Even if a standard case cannot meet your need, we can provide a customized solution for you.

COLOR: Brighten your day.

For select BIO and Slit Lamp lenses, choose your favorite from 7 ring colors.

FREQUENTLY ASKED QUESTIONS

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 diopter imply?
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.

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 Slit 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 without dilating my patients?
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 with ETO 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 a great fit 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 dioptric 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 lens is the Volk Super 66 (VS66). This lens will offer you an approximate equivalent field of view as the 78D, however the magnification will be slightly increased at 1.0x. This magnification can be especially handy when calculating the cup to disk 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 60D 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 1.0x have 1.0x 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.

I get too much glare/reflections when using the Digital Wide Field; what do I do?
This is likely due to the way the lens is being held due to muscle memory from using the 90D! The Digital Wide Field has different glass and coatings than the classic lenses and also has a different optical design, so it takes slight adjustments to get used to it. Try tilting the lens slightly to find the right sweet spot to give you a glare free view and you will see a significant difference. Alternatively, you can also have the slit lamp illumination tower at a slight angle if you prefer to direct the reflections in a different direction. Lastly, the Digital Wide Field has a shorter working distance than the classic lenses, so make sure you get closer towards the cornea (~5 mm) to get the full field.

I don't see any difference in field when using the Digital Wide Field compared to the 90D; what is going on?
This is due to viewing at the incorrect working distance. The Digital Wide Field has a shorter working distance than the 90D. Trying getting closer to the cornea (~5 mm) and you will see the expansive view the Digital Wide Field has to offer.

What lens is best for small pupil/miotic pupil exams?
The SuperPupil XL is especially designed for small pupil exams (4 mm) and preferred for miotic eyes. However, if you are looking to do a general undilated exam and not necessarily focusing on small pupils, the 90D, SuperField, and Digital Wide Field all provide wide fields of view at higher magnifications than the SuperPupil.

Do I have to dilate with the SuperField or Digital Wide Field?
No you do not. These lenses, like the 90D can get through undilated pupils and still offer a wide field.

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 iridocorneal 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 iridoconeal 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 iridoconeal angle and has 6 mirrors. The advantage of 6 mirrors is 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 diagnosis. 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.

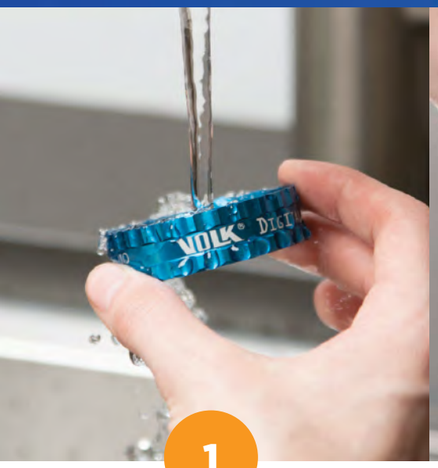
How do you disinfect Gonio lenses?
Please refer to the instructions for use (IFU) provided by the manufacturer with your lens. Always make sure to follow cleaning procedures before disinfecting and/sterilizing.

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

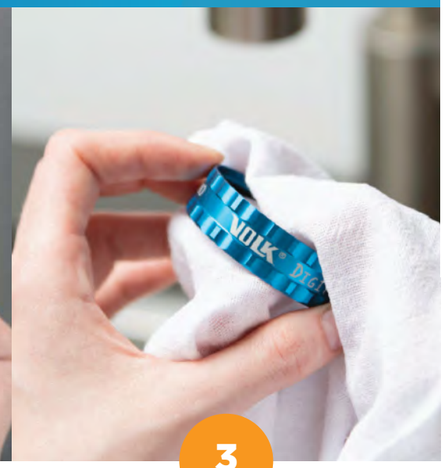


1

Rinse lens under gently flowing cold or lukewarm water

2

Gently rub the lens in a clockwise direction with a clean soft cloth & a mild detergent like Dawn or Fairy



3

Carefully dry the lens with a soft, lint-free cotton cloth. Always dry in clockwise direction

PRECAUTIONS

- Detergent should not contain emollients
- Clean and dry in a clockwise direction, 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
- Only use the approved list of disinfectants for your lens (Reference your lens' Instructions For Use)

WARRANTY INFORMATION

Warranty Service
If the product fails to function due to defects in either materials or workmanship, Volk will, at its option, either repair or replace the product without charge, subject to the Warranty Limitations.

Non-Contact Slit Lamp & BIO Lenses
Volk Optical warrants its Non-contact Slit Lamp & BIO Lenses against defects in materials or workmanship for a period of 10 years from receipt by end user.

Laser & Diagnostic Lenses
Volk Optical warrants its Volk Contact Laser & Diagnostic Lenses against defects in materials or workmanship for a period of 5 years from receipt by end user.

G-Series Gonio Lenses
Volk Optical warrants its All GLASS G-Series Gonio Lenses against defects in materials or workmanship for a period of 4 years from receipt by end user.

Standard 3 & 4 Mirror and Vitrectomy Lenses
Volk Optical warrants its standard 3 & 4 Mirror and Vitrectomy Lenses against defects in materials or workmanship for a period of 1 year from receipt by end user.

2 mm Research Lenses
Volk Optical warrants its 2 mm research lenses (fundus and gonio) against defects in materials or workmanship for a period of 1 year from receipt by end user.

Pictor Plus®, Pictor Prestige™ and VistaView®
Volk Optical warrants its Pictor Plus, Pictor Prestige and VistaView digital ophthalmic imaging devices against defects in materials or workmanship for a period of 1 year from receipt by end user.

MERLIN®, ROLS® Reinverter and ROLS® ∞
Volk Optical warrants its MERLIN®, ROLS® Reinverter and ROLS® ∞ against defects in materials or workmanship for a period of 1 year from receipt by end user.

Autoclave Sterilizable (ACS) Vitrectomy, Surgical Gonio, and Volk Vold Gonio Lens
Volk Optical warrants its Autoclave Sterilizable (ACS) Vitrectomy, Surgical Gonio, and Volk Vold Gonio Lens against defects in materials or workmanship for the lesser of 6 months from receipt by end user or 100 sterilization cycles.

VitreoLens Handle®, Infusion Handle & Steady Mount
Volk Optical warrants its VitreoLens Handle®, Infusion Handle & Steady Mount against defects in materials or workmanship for a period of 6 years from receipt by end user.

ClearPod™
Volk Optical warrants its ClearPod against defects in materials or workmanship for the lesser of 6 months from receipt by end user or 1000 uses.

Volk® 1 Single-Use Lenses
Volk Optical warrants its Volk® 1 Single-Use Lenses against defects in material and workmanship for the period ending with the product's sterility expiration.

Product Returns
All product returns must be disinfected and/or sterilized prior to return and be accompanied by a Return Authorization Number.

Please contact Volk Optical for a Return Authorization Number. Customers are responsible for returning products to Volk Optical; 7893 Enterprise Drive; Mentor, OH 44060; U.S.A. We recommend that all returns be insured and be sent by a traceable shipment method. Volk cannot be held responsible for lost shipments.

Warranty Limitations
Warranty service may not be provided without proof the product was purchased from Volk Optical Inc., an authorized Volk Distributor, or a Volk-authorized e-commerce platform.

This warranty becomes null and void if the customer fails to return the product in packaging consistent with the original protective packaging and it results in shipping damage.

This warranty becomes null and void if the customer fails to follow the recommended cleaning, disinfection and sterilization instructions and/or cautions contained in the product instruction manual.

This warranty does not cover service required because of disassembly, unauthorized modifications or service, misuse and abuse.

Warranty repairs will include labor, adjustments and replacements parts. Replacement parts may be remanufactured or contain remanufactured materials.

Limit of Liability
Seller makes no other warranty, express or implied, of the product, goods, services, or software license supplied hereunder, including, without limitation, implied warranties of merchantability and fitness for a particular purpose, and non-infringement, and all such warranties are hereby expressly excluded. Seller shall have no liability for loss of profits, or special, incidental, punative, or consequential damages under any circumstances or legal theory, whether based on negligence, breach of warranty, strict liability, tort, contract, or otherwise. Seller shall in no event be liable in respect of this order and/or product, service or software license delivered on account of this order for any amount greater than that paid to seller on account of this order. The purchaser and end user each acknowledge that they are purchasing the goods solely on the basis of the commitments of the seller expressly set forth herein.

For more information on Volk's warranty terms, please refer to the Volk Terms and Conditions of Sale on volk.com.

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