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

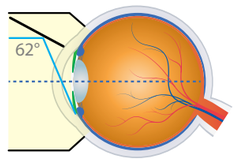
G-1 Gonio

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)



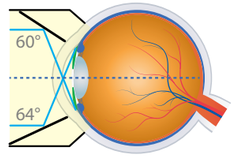
G-2 Gonio

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)

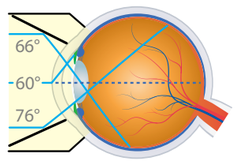
Gonio Mini
No flange: **VG3MININF** (shown)

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)

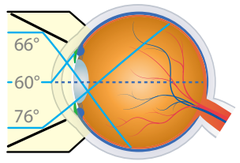
ANF+ Flange:
V3MIRANF+

PRIMARY APPLICATION

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

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

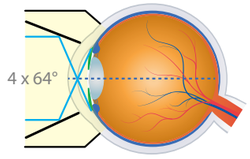
No Flange, Extended Handle:
VG4HAN2 (shown)

PRIMARY APPLICATION

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

4x64° MIRROR ANGLES | 1.0x IMAGE MAG | 1.0x 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

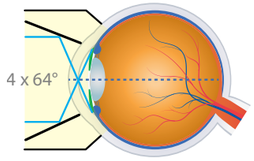
No Flange, Extended Handle:
VG4HMHAN2 (shown)

PRIMARY APPLICATION

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

4x64° MIRROR ANGLES | 1.5x IMAGE MAG | 0.67x 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

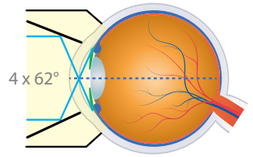
V4MANF+ (shown)

PRIMARY APPLICATION

4-Mirror, Acrylic Design for Anterior Chamber Angle Viewing

4x62° MIRROR ANGLES | 0.90x IMAGE MAG | 1.11x 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)

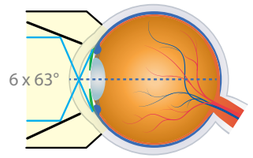
No Flange, Extended Handle:
VG6HAN2 (shown)

PRIMARY APPLICATION

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

6x63° MIRROR ANGLES | 1.0x IMAGE MAG | 1.0x 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

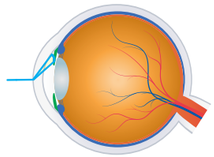
Volk Vold Gonio (VVG) Lens

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)

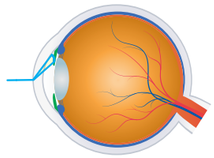
Surgical Gonio Lens

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)

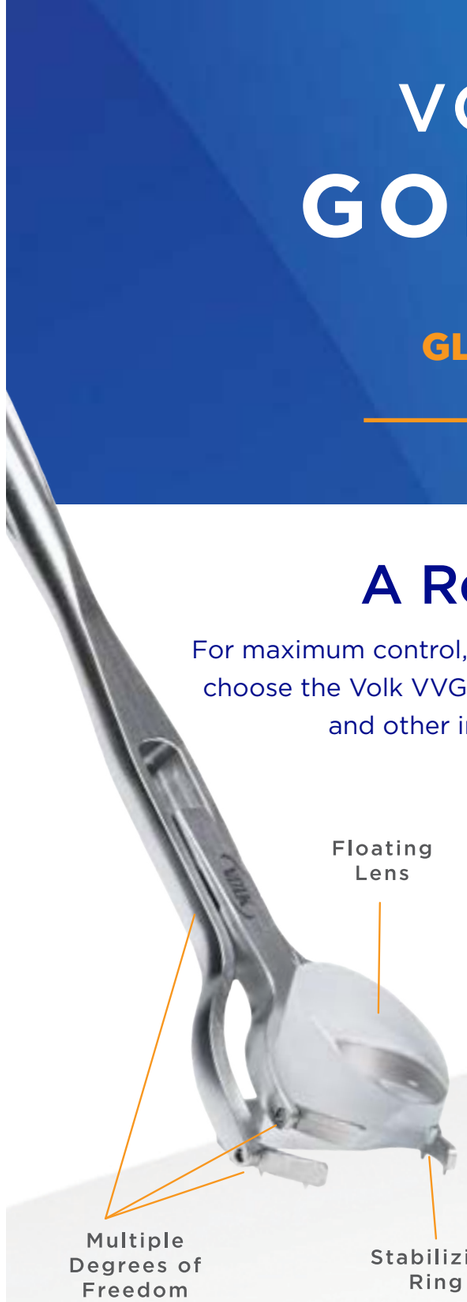
"SUPERB VISUALIZATION

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