

Synchronized Convergence and Parallax Adjustment System

The advanced, patented One-Step Small and Variable Pupil Control maximizes stereopsis in dilated pupils and allows for the instant adjustment of the optical system to ensure fully illuminated, stereoscopic views through pupils as small as 1 mm in diameter.

- : Dilated Pupil. In the case of a dilated pupil, the HEINE Synchronized Convergence and Parallax Adjustment System adjusts the left and right observation paths as far apart as possible (large angle of Convergence) providing for maximum stereopsis (depth perception). The illumination beam is automatically positioned as high as possible relative to the observation plane (creating a large angle of parallax) in order to maximize illumination and minimize unwanted reflections [01].
- : Undilated Pupils and viewing in the Periphery. In cases of pupils that can not, or should not be dilated, a binocular view with full illumination is not possible without adjustments of the optical system [02]. By adjusting the Small and Variable Pupil Control Lever located on the bottom of the Omega Series instruments, the angle of convergence between left and right observation paths is reduced and the angle of parallax (light path) is automatically reduced in one, simple step. The observer can now enjoy a fully illuminated, binocular view with excellent stereopsis [03] even through a pupil as small as 1 mm in diameter, or in cases where the pupil appears as an ellipse as a result of viewing the periphery.

HEINE IndirectO phthalmoscopes











MEGA 500	

150 150/M2

SIGMA 150 K 150K 150K/M2

SIGMA 150 KC

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Ophthalmic Instruments

HEINE OMEGA 500[®] Binocular Indirect Ophthalmoscope



A new Dimension in Comfort, Performance and Flexibility

The evolution of the Binocular Indirect Ophthalmoscope. Patented "Synchronized Adjustment of Convergence and Parallax" for high quality, stereoscopic fundus images through any pupil size.

- : Built on the market-leading optical performance of the OMEGA 180, the OMEGA 500 has been optimized for even better views of the fundus. Multi-coated illumination system, featuring a new XHL Xenon Halogen Technology bulb, reduces corneal reflexes and ensures clear, high-resolution images of the fundus which are up to 100% brighter.
- : Enhanced Small Pupil Function the Patented "Synchronized Adjustment of Convergence and Parallax System" (US.Patent # 4,684,227), which allows for the precise selection of observation and illumination optics for any pupil size, has been optimized for even better functionality in small pupils down to 1.0 mm.
- : Registered Design.

Technical Specifications:

- : Apertures and Filters: Can be "locked" into a desired position.
- : Adjustment Levers: Also feature a "Friction-Clutch" ("Safety-Clutch")
- to protect mechanisms from forced adjustment while in the "lock" position. : Increased PD Range: From 46-74 mm.
- : Soft Touch Controls: All key adjustment controls feature soft touch surfaces for precise and positive adjustment control.



Separate fine-tuning of the illumination beam + 4° in addition to synchronized convergence and parallax adjustment.



HEINE Diffuser, 3 Integrated Spot Sizes: small spot. medium and large. 3 Integrated Filters Red-free, Cobalt Blue and Yellow filters.



Arrangement and positioning of all adjustment controls ensure intuitive functionality. Dustproof housing and aluminium chassis assure durability and reliability.



The HEINE diffuser can be selected to provide soft light, simplifying the examination and reducing glare and reflexes but maintaining excellent light intensity. Can be combined with all filters.

HEINE OMEGA 500[®] Headband



- . Articulating Hinge provides vertical adjustment of the rear band of the headband for individual placement. Secure and perfect fit for all shapes and sizes.
- : New Ergonomic design for optimal weight transfer across the surface of the entire headband (no pressure points).
- : New softer, more malleable material. Provides even and comfortable fit of the headband
- : Calibrated Overband Position ensures optics are in true horizontal position for precise adjustment and alignment.
- : Integrated cables in overband eliminates the usual "cable loop" from instrument to headband.
- : Registered Design.

Technical Specifications:

- : HC50 Headband Rheostat: Easily mounted on the left or right sides of the headband.
- : Integrated flip-up adjustment: To raise optics out of the line of sight. Can be mounted on the left or right side of the headband. Optics can be flipped and locked at 0°, 12.5°, 47.5°, 60° degrees.
- : Mechanically reinforced adjustment mechanisms: For durability and precise adjustment of the headband.

: For any pupil size : Patented Synchr. Adjustment

- : Exceptionally light
- : Dust proof





HEINE OMEGA 500[®] Binocular Indirect Ophthalmoscope

Optimum performance and quality

OMEGA500 Ophthalmoscope	6V
OMEGA500 with XHL Xenon Halogen bulb (5W)	
on Headband (not including HC 50 Headband Rheostat)	C-004.33.50
same, with HC 50 Headband Rheostat	C-004.33.502

XHL Xenon Halogen spare bulb 6V, 5W, standard equipment	X-004.88.111
XHL Xenon Halogen spare bulb 6 V, 10 W, optional for twice	
the brightness (reduces operating time)	X-004.88.104
Extension Cord Cinch-Cinch, 2m [01]	X-000.99.207
Connecting Cord UNPLUGGED-Cinch to	
EN 50/mPack/transformer HC 50, 1,6m [02]	X-000.99.667
HC 50 Headband Rheostat (without transformer)	X-095.16.323
Transformer for HC 50 headband brightness control	X-095.16.320
Teaching mirror [03]	C-000.33.209

OMEGA500 Kits

Recommended Product Order Configurations to ensure the most flexibility the OMEGA500/EN50 System has to offer. The following kits include main system elements but no carrying cases or ancillary accessories.

OMEGA500 Kits	6V
Consisting of OMEGA 500, HC 50 Headband Rheostat mounted on	
Headband	
Kit 1: with Transformer	C-004.33.531
Kit 2: with EN 50 complete (incl. EN 50 Rheostat Control Module,	
Extension Cord Cinch-Cinch 2 m, 90° Angled Adaptor,	
Instrument Support)	C-004.33.532
Kit 3: with mPack and Transformer (incl. 90° Angled Adaptor)	C-004.33.533
Kit 4: with EN 50-m (incl. mPack, 90° Angled Adaptor,	
Instrument Support)	C-004.33.534

HEINE OMEGA 500® Sets



Set complete with **OMEGA 500 Head worn Indirect Ophthalmoscope,** 1 Scleral depressor large, 1 Scleral depressor small, A.R. 20D Ophthalmoscopy-lens, Pad with 50 fundus charts, Teaching mirror, 1 spare bulb, in hard case with:

OMEGA 500 Sets	6V
HC50 Headband Control with plug-in transformer	C-275.40.320
EN 50 with Rheostat Control Module, HC50 Headband Control (incl.	
90° Angled Adapter, 2m Extension Cord Cinch-Cinch, Instrument	
Support)	C-275.40.300
EN 50-m with mPack, HC 50 Headband Control (incl. 90° Angled	
Adapter, 2 m Extension Cord Cinch-Cinch, Instrument Support)	C-275.40.302
mPack with plug-in transformer, HC 50 Headband Control	
(incl. 90° Angled Adapter)	C-275.40.670









INDIRECT OPHTHALMOSCOPES

HEINE OMEGA 500[®] UNPLUGGED

with headband battery (rechargeable) - mPack UNPLUGGED



: 100 % freedom of movement
: Low weight

: Charge status indicator



100 % freedom of movement – no cable connections!

The OMEGA500 ophthalmoscope with mPack UNPLUGGED rechargeable battery allows one-of-a-kind mobility without restriction or hindrance caused by cables, cords, or similar connections. In addition, the OMEGA500 with mPack UNPLUGGED is the lightest indirect ophthalmoscope of its kind on the market!

- : Rechargeable battery integrated on the headband. No interfering cable connections.
- : Lightweight with balanced weight distribution. High level of comfort. Lightweight and compact.
- : charge status indicator. indication of remaining operating time.
- : Can be recharged by wall- or plug-in transformer.
- : Direct operation possible while charging through the use of the mobile plug-in transformer.
- : Charging time. 2 hours.
- : mPack Unplugged rechargeable battery. Operating time 2 hours (with standard lamp 6V, 5W).
- : Intelligent charging system. Automatic changeover from operating to charging mode (in the wall unit). Battery-friendly charging.
- **: Top safety standards.** Integrated charge and performance checks during operation. Lithium polymer technology (selected non-flammable materials). UL-compliant.
- : System compatibility with mPack for even greater capacity.

OMEGA 500 UNPLUGGED Kits	6V
Consists of OMEGA500, HC50 headband Control,	
XHL Xenon Halogen bulb 5W:	
Kit 5: with plug-in Transformer Unplugged, 1 x mPack UNPLUGGED	C-004.33.535
Kit 6: with Wall unit EN50 Unplugged, 2x mPack UNPLUGGED	C-004.33.536
XHL Xenon Halogen Spare bulb 6V, 5W, standard	X-004.88.111
XHL Xenon Halogen Spare bulb 6V, 10W, optional for twice	
the brightness (reduces operating time)	Y_00/ 88 10/

the brightness (reduces operating time)X-004.88.104Extension Cord UNPLUGGED-UNPLUGGED, 2 mX-000.99.668

HEINE OMEGA 500® UNPLUGGED Set



Set complete with **OMEGA 500 Head worn Indirect Ophthalmoscope,** 1 Scleral depressor large, 1 Scleral depressor small, A.R. 20D Ophthalmoscopy-lens, Pad with 50 fundus charts, Teaching mirror, 1 spare bulb, in hard case with:

OMEGA 500 UNPLUGGED Set	6V
mPack UNPLUGGED and plug-in transformer UNPLUGGED	C-282.40.670





HEINE OMEGA 200[®] Indirektes Binokulares Ophthalmoskop

Head-worn Indirect Ophthalmoscope with integrated teaching mirrors

The instrument of choice for teaching and operating rooms.

- : Integrated teaching mirrors left and right. Identical images for the examiner and two observers.
- : Synchronized adjustment of illumination and observation beams. Instant adjustment allows stereoscopic examination through pupils down to 1.2 mm in diameter.
- : Separate fine-tuning of the illumination beam ± 4°. Ideal for difficult examinations (e.g. in the periphery.)
- : Quick-action hinged optics. The optics swing into the stand-by position. When released, they return to exactly the same position as before.
- : Light weight. Ensures maximum comfort in long-term use.
- : Multi-coated precision optics. Exceptional quality of image and illumination without UV and IR.
- : Complete range of accessories. Individually-selected instrument kits possible.

OMEGA 200 Ophthalmoscope	6V
OMEGA200 with XHL Xenon Halogen bulb	
and connecting cord (160 cm)	C-004.33.210

XHL Xenon Halogen spare bulb	X-004.88.068
Extension Cord Cinch-Cinch, 2m	X-000.99.207



Soft comfortable headband with

dustproof.

cushions, adjustable for height and width. Aluminum frame, durable and



Separate fine-tuning of the illumination beam ± 4° in addition to synchronized convergence and parallax adjustment



Integrated teaching mirrors with identical images for the examiner and 2 observers



3 different apertures, integrated red-free and cobalt blue filters.



Instant adjustment for any pupil size. Aluminum optical frame and dustproof housing assume durability and reliability.





Set complete with OMEGA 200 Head worn Indirect Ophthalmoscope, 1 Scleral depressor large, 1 Scleral depressor small, A.R. 20D Ophthalmoscopy-lens, Pad with 50 fundus charts, 1 spare bulb, in hard case with:

6V
C-162.40.300
C-276.40.300
C-276.40.302
C-276.40.670

For information on HEINE power sources see page 125.



HEINE VideoO MEGA 2C®

Binocular Indirect Video Ophthalmoscope

The only Binocular Indirect Video Ophthalmoscope on the market designed from the ground up for video application. Ideally suited for teaching, research, patient clarification, digital patient history, and telemedicine.

- : High-resolution A-Cam camera. CCD 470,000 Pixel, 460 lines.
- : Image sensor. 1/2" CCD, color.
- : Fully integrated camera system. No external brackets or prisms.
- : 100% dustproof system. No maintenance required.
- : Water-proof camera head. Can be placed in disinfectant solution (but cannot be autoclaved).
- : Optics specially-developed. Maximum brightness.
- : Focus adjustable for any working distance. From 250 to 800 mm.
- : Automatic white balance.
- : Automatic light metering at the center of the image. Reduction in reflections.
- : Automatic light boost. Boost function for examinations with low lighting.
- : Processor will connect to various output devices, such as: VCR's, digital printers, PC's with image capture software.
- : Compact. Lightweight design (65 g, camera head without cable, complete 250 g).
- : Video OMEGA2C can be supplied without a camera for users' own
- "C"-mount CCD cameras.
- : Connecting cable. 3m.
- : Brilliant image with an S-VHS monitor.
- : FBAS (composite) and Y/C (SVHS) outputs. Extensive compatibility and high image quality.
- : Optional PAL or NTSC format. Please specify when ordering.

Video OMEGA 2C Sets

C-175.40.618
C-175.40.618
C-175.40.618
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C-175.40.618
C-004.33.214
C-004.33.212
C-000.33.223

More information available on request.



Monitor not included





:• Ultra light	
: For any pupil size	
: Dust proof	



For more Information see page 102.







[02]

HEINE SIGMA 150[®] Binocular Indirect Ophthalmoscope

Ophthalmoscope for spectacle and headband, US Pat. 5,815,241

The Spectacle Indirect Ophthalmoscope for any pupil size. Two separate controls let you select the ideal setting for parallax and convergence to suit any pupil. The illumination beam can be adjusted by $\pm 3^{\circ}$ to eliminate reflexes.

- : 6V/5W XHL Xenon Halogen bulb. Bright, white light.
- : Illumination beam adjustable ± 3°. Eliminates reflexes.
- : Integrated red-free filter. Versatile, fully-equipped.
- : Detachable blue and yellow filters. For Fluorescence Angioscopy.
- : Dust proof. Maintenance-free.
- : P.D. selection from 48 to 74 mm. Suits any user.
- : Optics on swivel mount. Unrestricted view.
- : Extremely light, 90 g without frame. Light and comfortable.
- : Carbon Fiber Instrument Frame. Light but very durable.
- : Large and small apertures.

Simplified diagram of various beam configurations: Large pupil - small pupil - peripheral view Large pupil Small pupil Peripheral view

SIGMA150	6V
with S-Frame spectacle frame, retaining cord, cleaning fluid, without power source (mPack)	C-004.33.350
SIGMA150 M2	
same as SIGMA 150, but with a small pinhole aperture, with S-Frame spectacle frame, retaining cord, cleaning fluid, without power source (mPack)	C-004.33.355
SIGMA150K	
The SIGMA 150 as Head-worn Indirect Ophthalmoscope. Comfortable headband with soft cushions, adjustable for height and width, without headband brightness control, without power source (mPack)	C-004.33.325
SIGMA150KC	
like the SIGMA150K, except with transformer E8 and brightness control directly on the headband	C-004.33.342
SIGMA150K M2	
same as SIGMA 150 K, but with a small pinhole aperture, without power source (mPack)	C-004.33.335
S-Frame for SIGMA 150 and 150 M2 Indirect Ophthalmoscope Teaching mirror [01]	C-000.33.036 C-000.33.302
Blue filter	C-000.33.313
Yellow filter	C-000.33.314
Diffusor	C-000.33.315
Case for filters, empty [02]	C-000.33.316

S-Frame for SIGMA 150 and 150 M2 Indirect Ophthalmoscope	C-000.33.036
Teaching mirror [01]	C-000.33.302
Blue filter	C-000.33.313
Yellow filter	C-000.33.314
Diffusor	C-000.33.315
Case for filters, empty [02]	C-000.33.316
XHL Xenon Halogen spare bulb 6V/5W	X-004.88.093





HEINE SIGMA 150[®] Sets



Set complete with **SIGMA150 or 150M2 Spectacle Indirect Ophthalmoscope,** (specify when ordering), with S-Frame, 1 Scleral depressor large, 1 Scleral depressor small, A.R. 20 D Ophthalmoscopy-lens, Teaching mirror, cobalt blue filter, yellow filter, diffusor and 1 spare bulb, in carrying-case with:

mPack with plug-in transformer (incl. 90° Angled Adapter)

C-281.40.670

[063]



Set complete with $\ensuremath{\mathsf{SIGMA150}}\xspace$ K Head-worn indirect Ophthalmoscope,

1 Scleral depressor large, 1 Scleral depressor small, A.R. 20 D Ophthalmoscopy-lens, Teaching mirror, cobalt blue filter, yellow filter, diffusor and 1 spare bulb, in hard case with:

EN50 with Rheostat Control Module (incl. 90° Angled Adapter,	
2 m Extension Cord, Instrument Support)	C-278.40.300
EN50-m with mPack (incl. 90° Angled Adapter, 2m Extension Cord,	
Instrument Support)	C-278.40.302
mPack with plug-in transformer (incl. 90° Angled Adapter)	C-278.40.670



Hand-held Indirect Ophthalmoscope, MONOCULAR



An unusually compact instrument, which is recommended for visits and mobile use.

- : Durable metal construction. Long working life.
- : Built-in interference red-free filter. Improves contrast.
- : All optical components made of coated optical glass. Precise image and high light intensity.
- : Adjustable light beam. Useful for small pupils.
- : Can be used with one hand. Easy to reach all the controls with the thumb.
- :+ 3 D lens attachment. An aid to accomodation, magnifies the image.
- : Add-on binocular attachment available. Instrument can be up-dated for binocular use.

Available for use with a 3.5V rechargeable handle or 6V cord handle with wall/desk transformer EN50 or portable mPack.

The 6V version is recommended for incorporation into ophthalmic examination units.

Monocular Hand-held Indirect Ophthalmoscope	3.5V	6V
with + 3D lens attachment and		
orbit rest extension	C-002.33.001	C-004.33.001

[01]

XHL Xenon Halogen spare bulb	X-002.88.050	X-004.88.081
+ 3D lens attachment only [01]		C-000.33.101
Orbit rest extension only		C-000.33.104

Hand-held Indirect Ophthalmoscope, BINOCULAR



The addition of the binocular attachment to the Hand-held Indirect Ophthalmoscope makes stereoscopic examination possible. PD selection from 54 to 74 mm.

- : Symmetrical selection of PD. Quick and easy to adjust.
- : Multi-coated precision optics. Exceptional image quality.

Available for use with a 3.5V rechargeable handle or 6V cord handle with wall/desk transformer EN50 or mPack.

The 6V version is recommended for incorporation into ophthalmic examination units.

BINOCULAR Hand-held Indirect Ophthalmoscope	3.5V	6V
with + 3 D lens attachment and		
orbit rest extension	C-002.33.002	C-004.33.002

XHL Xenon Halogen spare bulb	X-002.88.050	X-004.88.081
Binocular attachment only		C-000.33.106



HEINE A.R.® Aspheric Ophthalmoscopy Lenses

- : Lens curvature matches that of the retina. Perfect, distortion-free retinal image.
- : Advanced triple multicoating. Reduced reflection, excellent light transmission.
- : Large diameter. Significant increase in field of view without magnification loss.
- : Aspheric surfaces. Reduced distortion of the periphery.

Ophthalmoscopy Lens	
with case	
A.R. 16D, 54mm dia.	C-000.17.225
A.R. 20D, 50mm dia.	C-000.17.228
A.R. 30D, 46mm dia.	C-000.17.231

HEINE Aspheric Ophthalmoscopy Lenses

- : Aspheric surfaces. Reduced distortion of the periphery.
- : Triple-coated. Reduced reflection, good light transmission.
- : Moulded crown glass. Excellent value.

Ophthalmoscopy Lens

with case	
16D, 50mm dia.	C-000.17.210
20D, 50mm dia.	C-000.17.206
30 D, 40 mm dia.	C-000.17.213

Model Eyes

HEINE Ophthalmoscope Trainer

This model eye was developed for the teaching environment. It is the first adjustable model from HEINE to mimic the human eye. Precise, durable and with a multitude of uses, it simplifies the learning process and encourages the student to practice with the ophthalmoscope.

- : Refractive error. Can be set in 1-dpt. steps from 10 to +10 dpt.
- : Diameter of pupil. Variable 2, 3, 4, 5, 6, 8mm.
- : Aspheric optical glass lens. F = 18 mm. Lens curvature matches that of the retina.
- : Trainer body. Made of metal extremely stable and durable.
- : Angle of examination. Variable.

Model Eye

Ophthalmoscope Trainer

C-000.33.010









	Model Eyes	
	HEINESkia/RetinoscopeTrainer	
	 This model eye is ideal for teaching and practice. The pupil diameter and refractive error can be set exactly and are therefore reproducible. The Front holder accepts two trial lenses. The cyl. can be read from the graduated scale. Refractive error can be set to any value in steps of 0.5 dpt from - 7 to + 6 dpt. Scale 0° - 180° for cyl. determination. Diameter of pupil variable: 2, 3, 4, 5, 6, 8mm. Optics: Optical glass achromatic lens F = 32 mm. Trainer body made of metal: Extremely stable and durable. Angle of examination variable. 	
	Model Eye Skia/Retinoscope Trainer	C-000.33.011
	Scleral-Depressor	
	Scleral-Depressor, large	C-000.17.300
	Scleral-Depressor, small	C-000.17.301
	Fundus-Charts	
- 7-20		
	Fundus-Charts , Pad with 50 pcs.	C-000.33.208
	Combi-Case	
	Features a deep, dense foam insert to protect instruments, and can be worn over t shoulder or as a backpack (removable straps included).	
	Combi-case	C-079.03.000
The second	Hard case (not shown)	C-079.00.000