**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 accommodation, magnifies the image.
- **Add-on binocular attachment available.** Instrument can be up-dated for binocular use.

Available for use with a 3.5 V rechargeable handle or 6V cord handle with desk transformer EN50 or portable mPack.
The 6V version is recommended for incorporation into ophthalmic examination units.

### MONOCULAR Hand-held Indirect Ophthalmoscope

<table>
<thead>
<tr>
<th></th>
<th>3.5V</th>
<th>6V</th>
</tr>
</thead>
<tbody>
<tr>
<td>with +3 D lens attachment and orbit rest extension</td>
<td>C-002.33.001</td>
<td>C-004.33.001</td>
</tr>
<tr>
<td>XHL Xenon Halogen spare bulb</td>
<td>X-002.88.050</td>
<td>X-004.88.081</td>
</tr>
<tr>
<td>+3D lens attachment only</td>
<td>C-000.33.101</td>
<td></td>
</tr>
<tr>
<td>Orbit rest extension only</td>
<td>C-000.33.104</td>
<td></td>
</tr>
</tbody>
</table>

**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 3.5 V rechargeable handle or 6V cord handle with desk transformer EN 50 or mPack.
The 6V version is recommended for incorporation into ophthalmic examination units.

### BINOCULAR Hand-held Indirect Ophthalmoscope

<table>
<thead>
<tr>
<th></th>
<th>3.5V</th>
<th>6V</th>
</tr>
</thead>
<tbody>
<tr>
<td>with +3 D lens attachment and orbit rest extension</td>
<td>C-002.33.002</td>
<td>C-004.33.002</td>
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<tr>
<td>XHL Xenon Halogen spare bulb</td>
<td>X-002.88.050</td>
<td>X-004.88.081</td>
</tr>
<tr>
<td>Binocular attachment only</td>
<td>C-000.33.106</td>
<td></td>
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</table>

For information on HEINE battery and rechargeable handles, see pages 115–119.
HEINE SIGMA 150th 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 ±3° 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 74mm. Suits any user.
- Optics on swivel mount. Unrestricted view.
- Extremely light, 90g without frame. Light and comfortable.
- Carbon Fiber Instrument Frame. Light but very durable.
- Large and small apertures.

**SIGMA 150**

<table>
<thead>
<tr>
<th>Description</th>
<th>Code</th>
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<tbody>
<tr>
<td>with S-Frame spectacle frame, retaining cord, cleaning fluid</td>
<td>C-004.33.350</td>
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**SIGMA 150 M2**

Same as SIGMA 150, but with a small pinhole aperture,

<table>
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<tbody>
<tr>
<td>with S-Frame spectacle frame, retaining cord, cleaning fluid</td>
<td>C-004.33.355</td>
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</table>

**SIGMA 150K**

The SIGMA 150 as Head-worn Indirect Ophthalmoscope. Comfortable headband with soft cushions, adjustable for height and width

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<tr>
<td>C-004.33.325</td>
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**SIGMA 150KC**

Like the SIGMA 150K, except with transformer E8 and brightness control directly on the headband

<table>
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**SIGMA 150KM2**

Same as SIGMA 150K, but with a small pinhole aperture

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<tbody>
<tr>
<td>C-004.33.335</td>
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**Accessories**

<table>
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<tr>
<th>Description</th>
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<tbody>
<tr>
<td>S-Frame for SIGMA 150 and 150M2 Indirect Ophthalmoscope</td>
<td>C-000.33.036</td>
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<tr>
<td>Teaching mirror</td>
<td>C-000.33.302</td>
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<tr>
<td>Blue filter</td>
<td>C-000.33.313</td>
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<tr>
<td>Yellow filter</td>
<td>C-000.33.314</td>
</tr>
<tr>
<td>Diffusor</td>
<td>C-000.33.315</td>
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<tr>
<td>Case for filters, empty</td>
<td>C-000.33.316</td>
</tr>
<tr>
<td>XHL Xenon Halogen spare bulb 6V/5W</td>
<td>X-004.88.093</td>
</tr>
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</table>

For information on HEINE power sources see pages 115–123.
HEINE SIGMA 150® Sets

Set complete with SIGMA 150 or 150 M2 Spectacle Indirect Ophthalmoscope, (specify when ordering), with S-Frame, 1 Scleral depressor large, 1 Scleral depressor small, A.R. 20D 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

Set complete with SIGMA 150 K Head-worn indirect Ophthalmoscope, 1 Scleral depressor large, 1 Scleral depressor small, A.R. 20D 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 Connecting Cord, Instrument Support), C-278.40.300
EN50-m with mPack (incl. 90° Angled Adapter, 2 m Connecting Cord, Instrument Support), C-278.40.302
mPack with plug-in transformer (incl. 90° Angled Adapter), C-278.40.670

For information on HEINE power sources see pages 115–123.
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.

• 30% lighter than the OMEGA 180.

• Reduced Volume, 20% less volume than OMEGA 180.

• 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.

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.

• Increased Cushion Area: 40% more cushion area than on OMEGA 180.

• Registered Design.

Technical Specifications:
HC 50 Headband Rheostat: Easily mounted on the left or right sides of the headband. 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.
Integrated flip-up adjustment: Mechanically reinforced adjustment mechanisms: For durability and precise adjustment of the headband.
HEINE Synchronized Convergence and Parallax Adjustment System

U.S. Patent # 4,684,227

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 (Illustration 1).

- 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 (Illustration 2). 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 (Illustration 3) 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 OMEGA 500® Binocular Indirect Ophthalmoscope

OMEGA 500 Ophthalmoscope

OMEGA 500 with XHL Xenon Halogen bulb (5W) on Headband (not including HC50 Headband Rheostat) C-004.33.500
same, with HC50 Headband Rheostat C-004.33.502
XHL Xenon Halogen spare bulb 6V, 5W, standard equipment X-004.88.111
XHL Xenon Halogen spare bulb 6V, 10W, optional for twice the brightness (reduces operating time) X-004.88.104

Extension Cord Cinch, 2m C-000.33.510
Connecting Cord OMEGA 500 to EN50/mPack/transformer HC50, 1,6m X-000.99.867
HC50 Headband Rheostat (without transformer) X-095.16.323
Teaching mirror C-000.33.209

OMEGA 500 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.

OMEGA 500 Kits consisting of OMEGA500, HC50 Headband Rheostat mounted on Headband

Kit 1: with Transformer
C-004.33.531
Kit 2: with EN50 complete (incl. EN50 Rheostat Control Module, Extension Cord Cinch 2m, 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 EN50-m (incl. mPack, Extension Cord Cinch 2m, 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:

HC50 Headband Control with plug-in transformer C-275.40.320
EN50 with Rheostat Control Module, HC50 Headband Control (incl. 90° Angled Adapter, 2m Extension Cord Cinch, Instrument Support) C-275.40.300
EN50-m with mPack, HC50 Headband Control (incl. 90° Angled Adapter, 2m Extension Cord Cinch, Instrument Support) C-275.40.302
mPack with plug-in transformer, HC50 Headband Control (incl. 90° Angled Adapter) C-275.40.670

For information on HEINE power sources see pages 115–123.
HEINE OMEGA 500® UNPLUGGED

with headband battery (rechargeable) - mPack UNPLUGGED

100% freedom of movement – no cable connections!
The OMEGA 500 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 OMEGA 500 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.
- LED charge status indicator. LED 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 6 V, 5 W).
- Intelligent charging system. Automatic changeover from operating to charging mode (in the wall unit). Battery-friendly charging.
- System compatibility with mPack for even greater capacity.

OMEGA 500 UNPLUGGED Kits

Consists of OMEGA 500, HC50 headband Control, XHL Xenon Halogen bulb 5W:

Kit 5: with plug-in Transformer UNPLUGGED, 1x mPack UNPLUGGED

Kit 6: with Wall unit EN50 UNPLUGGED, 2x mPack UNPLUGGED

XHL Xenon Halogen Spare bulb 6V, 5W, standard

XHL Xenon Halogen Spare bulb 6V, 10W, optional for twice the brightness (reduces operating time)

Extension Cord transformer UNPLUGGED, 2 m

X-004.88.104

X-004.88.111

X-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:

mPack UNPLUGGED and plug-in transformer UNPLUGGED

C-282.40.670

For information on EN 50 UNPLUGGED and mPack UNPLUGGED see page 121.
HEINE OMEGA 200® Ophthalmoscope

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**

| OMEGA 200 with XHL Xenon Halogen bulb and connecting cord (160 cm) | C-004.33.210 |
| XHL Xenon Halogen spare bulb | X-004.88.068 |
| Connection / extension cord 160 cm | X-000.99.207 |

- Soft comfortable headband with cushions, adjustable for height and width. Aluminum frame, durable and dustproof.
- Separate fine-tuning of the illumination ± 4° in addition to synchronized convergence and parallax adjustment.
- Instant adjustment for any pupil size. Aluminum optical frame and dustproof housing assume durability and reliability.
- Integrated teaching mirrors with identical images for the examiner and 2 observers.
- 3 different apertures, integrated red-free and cobalt blue filters.

**HEINE OMEGA 200® Set**

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:

- EN 15 transformer with brightness control | C-162.40.300 |
- EN 50 with Rheostat Control Module (incl. 90° Angled Adapter, 2 m Connecting Cord, Instrument Support) | C-276.40.300 |
- EN 50-m with mPack (incl. 90° Angled Adapter, 2 m Connecting Cord, Instrument Support) | C-276.40.302 |
- mPack with plug-in transformer (incl. 90° Angled Adapter) | C-276.40.670 |

For information on HEINE power sources see pages 115–123.
HEINE Video OMEGA 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 (65g, camera head without cable, complete 250g).
- Video OMEGA 2C can be supplied without a camera for use with user’s 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 Set

Complete with headband, A-Cam camera and processor, Video cable, S-VHS cable, EN50 with Rheostat Control Module, replacement bulb, large and small scleral depressors, AR 20D lens, and carrying case.  

C-175.40.618

Video OMEGA 2C, Optics, headband and bulb, without accessories. Instrument with C-Mount, without A-Cam camera and processor  

C-004.33.214

Video OMEGA 2C, Optics, headband and replacement bulb, without accessories. Instrument with A-Cam camera and processor  

C-004.33.212

A-Cam camera with processor (available systems: PAL or NTSC, please specify when ordering)  

C-000.33.223

More information available on request.

For information on HEINE power sources see pages 115–123.
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.

Ophthalmoscopy Lens with case

<table>
<thead>
<tr>
<th>Power</th>
<th>Diameter</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 D</td>
<td>54 mm dia.</td>
<td>C-000.17.225</td>
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<tr>
<td>20 D</td>
<td>50 mm dia.</td>
<td>C-000.17.228</td>
</tr>
<tr>
<td>30 D</td>
<td>46 mm dia.</td>
<td>C-000.17.231</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Power</th>
<th>Diameter</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 D</td>
<td>50 mm dia.</td>
<td>C-000.17.210</td>
</tr>
<tr>
<td>20 D</td>
<td>50 mm dia.</td>
<td>C-000.17.206</td>
</tr>
<tr>
<td>30 D</td>
<td>40 mm dia.</td>
<td>C-000.17.213</td>
</tr>
</tbody>
</table>

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, 8 mm.
- 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

HEINE Skia / Retinoscope Trainer

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 up to two trial lenses. The cyl. can be read of 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, 8 mm.
- **Optics.** Optical glass achromatic lens F = 32 mm.
- **Angle of examination.** Variable.

Model Eye

| Skia / Retinoscope Trainer | C-000.33.011 |

Scleral-Depressor

Scleral-Depressor

| large | C-000.17.300 |
| small | C-000.17.301 |

Fundus-Charts

Fundus-Charts

| Pad with 50 pcs. | C-000.33.208 |

Extension Cord

Extension Cord Cinch, 2 m for OMEGA 200

| C-004.33.206 |

Combi-Case

Features a deep, dense foam insert to protect instruments, and can be worn over the shoulder or as a backpack (removable straps included).

| Combi-case | C-079.03.000 |
| Hard case (not shown) | C-079.00.000 |