

HEINE QUALITY
MADE IN GERMANY



: HEINE Hand-held Ophthalmic Instruments





HEINE HSL 150® Hand-held Slit Lamp
Uncompromisingly compact.

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[HEINE HSL 150® HAND-HELD SLIT LAMP]

|| ORDER NO. [HEAD ONLY] AV | [C-02.14.602]

TL CONNECTOR | [C-02.14.602 TL]

The ideal portable addition to a static full-size slit lamp.

HSL 150 features bright, white XHL Xenon Halogen illumination comparable in intensity with the best static slit lamps for examination of the anterior segment. The compact, ergonomic design provides instant loupe alignment of the slit image for comfortable operation.

HSL 150 provides a 10mm x 0.2mm up to 14mm x 4mm slit image for direct focal illumination with an optical section.

The ideal alternative for examinations where a static slit lamp is not available or practical to use. This hand-held slit lamp is invaluable for screening, in accident and emergency rooms, and for bed-ridden patients or small children.

- ∴ **Magnified view with 20-Diopter loupe.**
- ∴ Instant selection of **interference cobalt blue filter (FITC)** for corneal examination.
- ∴ **Instant selection of loupe position for optimal alignment with slit.**
- ∴ **Advanced multi-coated optics** maximize light transmission and reduce reflexes.
- ∴ **Full metal construction** assures perfect optical alignment and will provide a lifetime of reliable performance.
- ∴ **HEINE 3.5V XHL® Xenon Halogen Technology** provides a bright, white light for true full-size slit lamp brightness.
- ∴ **Continuously adjustable brightness control.**
- ∴ **Compact design for complete portability and ease of use.**
- ∴ **100% dustproof construction,** for a lifetime of maintenance-free performance.
- ∴ **The HSL 150 instrument head weighs only 2.5 oz,** the lightest portable Slit lamp available.
- ∴ **6x magnification.**



HEINE HSL 150®
Hand-held Slit Lamp
with HEINE BETA SLIM®
handle

Typical applications include:

- ∴ Corneal examination for foreign bodies or ocular trauma.
- ∴ Corneal examination with fluorescein using the precision interference cobalt blue filter (FITC).
- ∴ General examination of the anterior segment, iris and crystalline.
- ∴ Primary diagnosis of patients with eye infections.
- ∴ Examination of elderly and bed-ridden patients.
- ∴ Contact lens work.
- ∴ Industrial medicine.

[HEINE HSL 10x® LOUPE ATTACHMENT]

|| ORDER NO. [LOUPE ATTACHMENT] : | [C-00.14.606]

Loupe attachment with 10x magnification for HSL 150.

With precision magnification optics for crisp, clear images.

- ∴ **10x magnification** when combined with HSL 150 Loupe.
- ∴ **Increased working distance** from examiner to patient.
- ∴ **Large field of view.**
- ∴ **With an additional detachable TP-elastomer Eyepiece** to steady the instrument on the brow and avoid stray light. Can be replaced with a soft TP-elastomer cap, suitable for spectacle-wearers.



HEINE HSL 10x®
Loupe Attachment

∴ HEINE LAMBDA 100® Retinometer
Unique design.



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[HEINE LAMBDA 100® RETINOMETER]

|| ORDER NO. [HEAD ONLY] AV | [C-02.35.015]

TL CONNECTOR | [C-02.35.015 TL]

The first compact instrument for assessing potential visual acuity of patients with cataracts and other opacities.

LAMBDA 100 – clinically tested with excellent results.

- ∴ **Simple, easy-to-use controls.**
Reliable diagnosis, easy to operate.
- ∴ **The instrument fits onto battery- or rechargeable handles.**
Complete mobility – no dependence on the slit lamp.
- ∴ **Compact, lightweight (3.5 oz).**
Can be used anywhere – even bedside.
- ∴ **HEINE XHL® Xenon Halogen Technology and brightness control.**
Avoids patient discomfort from dazzle.
- ∴ **Includes explanatory card for patient instruction.**



HEINE LAMBDA 100®
Retinometer with
HEINE BETA® handle

Examples of various acuity grating patterns (visual angle 1')



0°

Setting = $\frac{20}{40}$



45°

Setting = $\frac{20}{60}$



90°

Setting = $\frac{20}{300}$

Three simple steps to potential acuity assessment with LAMBDA 100.

- [01] Switch on instrument, select acuity, select grating angle, reduce ambient lighting.
- [02] Rest Retinometer against the patient's forehead. Scan the pupil with the red light spot to find a "window" through which the patient can recognize the grating pattern and identify its angle.
- [03] Select progressively-finer grating patterns with different angles until the patient can no longer recognize the angle. The value of the last recognizable angle indicates potential acuity.





∴ **HEINE BETA 200S® Ophthalmoscope**
Perfection in detail.

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[HEINE BETA 200S® OPHTHALMOSCOPE]

|| ORDER NO. [HEAD ONLY] AV | [C-02.30.120]

TL CONNECTOR | [C-02.30.120 TL]

Superior aspherical optics.

The BETA 200S is the first hand-held direct ophthalmoscope with a combination of patented aspherical optics¹⁾ and single-step diopter selection from -36D to +38D for precise lens selection and a crisp, focused fundus image in all diagnostic situations.

HEINE's aspherical optical system uses the Gullstrand principle to separate the illumination and observation beams. Corneal and iris reflexes are avoided and a complete section of the retina is visible even with a small pupil.

7 apertures for diagnostic flexibility in both large and small pupils.

1) U.S. Pat. 4.963.014








- ∴ **Aspherical optics**
avoid corneal and iris reflex.
- ∴ **74 single-diopter steps**
(from -36 to +38 dpt) for perfect focus even with high refractive error.
- ∴ **The optics are mounted on a metal frame**
to ensure a lifetime of optical precision.
- ∴ **7 different apertures**
for retinal examination with both large and small pupils.
- ∴ **Separate interference red-free filter**
for improved contrast when viewing retinal blood-vessels.
- ∴ **A powerful HEINE XHL® Xenon Halogen bulb**
for full illumination with bright, white light.
- ∴ **Dustproof and maintenance-free**
for the life of the instrument.
- ∴ **The ergonomic rounded shape**
fits the orbita comfortably. Ergonomic, one-handed operation.
- ∴ **The multi-coated, recessed eyepiece**
avoids stray light during the examination.
- ∴ **The soft brow rest**
steadies the instrument and protects the examiners glasses.



HEINE BETA200S®
Ophthalmoscope
with HEINE BETA®
handle

Apertures

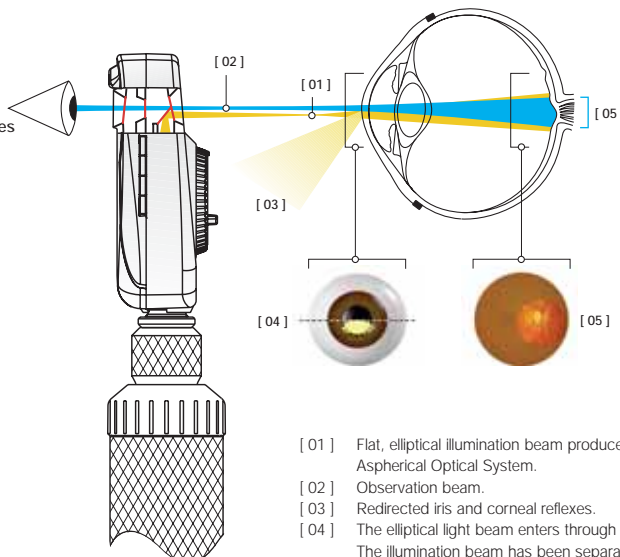
[A] [B]

-  [01]
Cobalt blue filter
-  [02]
Fixation star with polar co-ordinates
-  [03]
Large aperture
-  [04]
Medium aperture
-  [05]
Macula aperture / MicroSpot
-  [06]
Slit aperture
-  [07]
Hemispot

[A] without red-free filter
[B] with red-free filter

Patented "Aspherical Optical System" (AOS) exclusively from HEINE

reduces corneal and iris reflexes to provide large, crisp and glare-free fundus images.



- [01] Flat, elliptical illumination beam produced by HEINE's patented Aspherical Optical System.
- [02] Observation beam.
- [03] Redirected iris and corneal reflexes.
- [04] The elliptical light beam enters through the lower half of the cornea. The illumination beam has been separated from the observation beam (Gullstrand-Principle). All reflexes are diverted away from the observation beam due to the curvature of the reflective cornea. Due to the flat, compressed form of the light beam, a maximum amount of light enters through the pupil.
- [05] Once past the anterior chamber, the light beam opens up dramatically to illuminate a large area of the retina.

∴ HEINE BETA 200® Retinoscope
A new benchmark.



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[HEINE BETA 200® RETINOSCOPE]

|| ORDER NO. [HEAD ONLY] AV | [C-02.15.353]

TL CONNECTOR | [C-02.15.353 TL]

HEINE ParaStop® for total precision in selecting a parallel beam.

The BETA 200 Retinoscope with ParaStop¹⁾ and the latest in multi-coated optics provides an exceptionally-bright fundus reflex for improved accuracy of diagnosis.

ParaStop was designed and developed to simplify precise selection of a parallel illumination beam. ParaStop simplifies and speeds up the precise detection of cylinder axis. ParaStop also simplifies the verification of the cylinder correction after refraction.

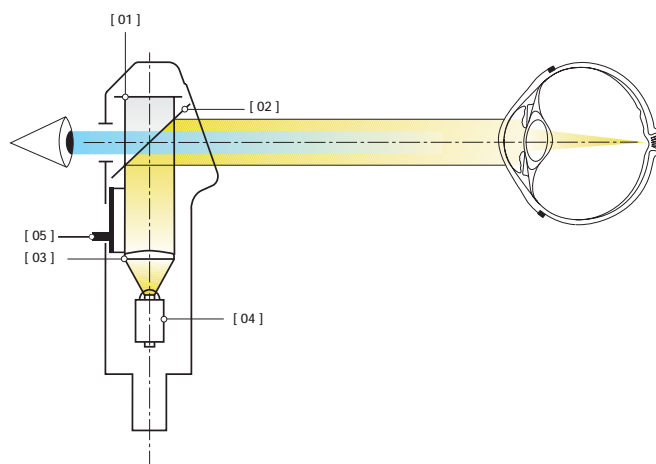
The internal polarisation filter in the BETA 200 eliminates stray light and internal reflex without reducing brightness.

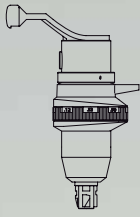
1) U.S. Pat. 5.859.687

- ∴ **ParaStop** simplifies precise selection of a parallel beam.
- ∴ **Multi-coated optics** ensure bright, clear images.
- ∴ **The internal polarisation filter** eliminates stray light and internal reflex.
- ∴ **A single control sleeve** adjusts vergence of the beam and provides streak rotation.
- ∴ **The powerful, bright HEINE XHL® Xenon Halogen bulb** ensures easy recognition of neutralisation.
- ∴ **Can be changed from a streak to a spot retinoscope** by simply changing the bulb.
- ∴ **Instrument controls** are made of metal to guarantee lifelong precision and quality of operation.
- ∴ **Improved ergonomic shape** effectively shields the examiner's orbit from stray light.
- ∴ **Totally-dustproof,** maintenance-free.
- ∴ **Optional detachable orange filter** for light-sensitive patients.
- ∴ **Optional holder** for fixation cards available.
- ∴ **Includes detachable brow-rest** for spectacle wearers.

**ParaStop and polarisation filter**

- [01] Polarisation filter, eliminates internal reflexes and stray light.
- [02] Semi-reflector mirror: Simultaneous illumination and observation. Reflected light from the retina enters the examiner's eye.
- [03] Condensor lens adjustable by a single control sleeve: Produces a divergent, convergent or parallel beam of light.
- [04] A special retinoscope bulb rotates for diagnosis of the cylinder axis.
- [05] ParaStop simplifies and speeds up the precise detection of cylinder axis.



**LAMBDA 100 Retinometer**

	AV	TL
LAMBDA 100 Retinometer head with acuity scale 20/300 to 20/25 , without handle	C-02.35.015	C-02.35.015 TL
XHL Xenon Halogen spare bulb	X-02.88.078	X-02.88.044
Patient card (for patient instruction prior to examination)		C-00.35.005

Set complete with LAMBDA 100 Retinometer, acuity scale 20/300 to 20/25
in hard case, with:

	AV	TL
BETA battery handle	C-189.10.118	C-189.10.118 TL
BETA R rechargeable handle	C-189.20.376	C-189.20.376 TL
same, with Lithium-Ion battery	C-189.27.376	C-189.27.376 TL
BETA NT rechargeable handle and NT 200 charger	C-189.20.420	C-189.20.420 TL
same, with Lithium-Ion battery	C-189.27.420	C-189.27.420 TL





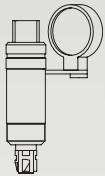
BETA 200S Ophthalmoscope

	AV	TL
BETA 200S Ophthalmoscope, without handle	C-02.30.120	C-02.30.120 TL
XHL Xenon Halogen spare bulb	X-02.88.070	X-02.88.072



BETA 200 Streak- / Spot Retinoscope

	AV	TL
BETA 200 Streak Retinoscope with XHL Xenon Halogen bulb, detachable brow rest, without handle	C-02.15.353	C-02.15.353 TL
XHL Xenon Halogen spare Streak bulb	X-02.88.089	X-02.88.089
BETA 200 Spot Retinoscope with XHL Xenon Halogen bulb, detachable brow rest, without handle	C-02.15.363	C-02.15.363 TL
XHL Xenon Halogen spare bulb	X-02.88.090	X-02.88.090
Bulb holder		C-00.15.355
Bulb-cover		C-00.15.356
Detachable brow rest for spectacle-wearers		C-00.15.357
Orange filter for light-sensitive patients		C-00.15.359
Fixation cards with holder for dynamic retinoscopy		C-00.15.360



HSL 150 Hand-held Slit Lamp

	AV	TL
for BETA or BETA SLIM handles		
HSL 150, without handle	C-02.14.602	C-02.14.602 TL
XHL Xenon Halogen spare bulb	X-02.88.099	X-02.88.099
Replacement filter attachment for HSL 150		C-00.14.605
HSL 10x Loupe Attachment for HSL 150		C-00.14.606

Set complete with HSL 150 and BETA SLIM handle

(slim, compact), with:	AV	TL
BETA SLIM 2.5V AA battery handle, in hard case	C-266.10.105	C-266.10.105 TL
BETA SLIM rechargeable handle and NT 200 charger, in hard case	C-266.20.470	C-266.20.470 TL

Set complete with HSL 150, BETA handle

(standard size) and spare bulb in hard case, with:	AV	TL
BETA 2.5V C battery handle	C-265.10.118	C-265.10.118 TL
BETA R rechargeable handle	C-265.20.376	C-265.20.376 TL
same, with Lithium-Ion battery	C-265.27.376	C-265.27.376 TL
BETA NT rechargeable handle and NT 200 charger	C-265.20.420	C-265.20.420 TL
same, with Lithium-Ion battery	C-265.27.420	C-265.27.420 TL

∴ About our Connection Systems - AV and TL

Connection Systems / System Compatibility

All full size (3.5V) HEINE instruments and power sources feature our patented "AV" automatic connector for increased durability and a positive lock between handle and instrument. Due to standardization issues, all full size HEINE instruments and power sources are also available with the traditional bayonet "twist" style connectors ("TL" connector) popular throughout North America.

Ordering information for instruments with the "TL" style connector is clearly outlined in this brochure for each product. When ordering instruments and power sources with the "TL" connector, simply add the suffix "TL" to the order number: ie: C-02.30.120 BETA 200S phthalmoscope with AV connector becomes a C-02.30.120 TL BETA 200S Ophthalmoscope with Twist Lock connector.

Bulbs for "TL" connector Instruments

Instruments with "TL" connectors often require different bulbs than those used in instruments with the standard HEINE "AV" connector. Bulb ordering information for each instrument is clearly indicated along with each product throughout the brochure.



AV Connector:
Our patented automatic connector. The quickest, most secure connection system available.



TL (twist lock) Connector:
Compatible with other manufacturers' instruments.

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A company makes history and gives a name to outstanding product quality: HEINE. Founded in 1946, family owned, rich in tradition and today international market leader in a complete range of diagnostic instruments. HEINE products meet all international standards (ISO/CE) and represent the leading edge in precision and ergonomic design. Ongoing dedication to research and development has created a solid and diverse technology base for continued quality and product leadership. Over 500 employees worldwide contribute to this success.



We reserve the right to change specification without notice.

Your distributor

07/06. med 2306 e HUSA

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