

: HEINE Hand-held Ophthalmic Instruments







: HEINE BETA 200 S® Ophthalmoscope Perfection in detail.



[ C-001.30.120 ]

## Superior aspherical optics.

The BETA 200 S 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
- 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 BETA 200 S® Ophthalmoscope with HEINE BETA® handle

#### **Apertures**

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

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

[A] [B]



[01] Cobalt blue filter



[ 02 ] Fixation star with polar co-ordinates



[03]



Large aperture



[ 04 ] Medium aperture

[ 05 ] Macula aperture / MicroSpot

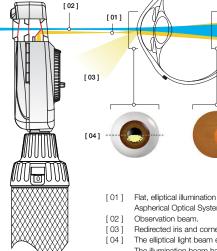


[ 06 ] Slit aperture



[ 07 ] Hemispot

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



Flat, elliptical illumination beam produced by HEINE's patented Aspherical Optical System.

F 05 1

- Redirected iris and corneal reflexes.
- 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.
- 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.



2.5V

[ C-001.15.353 ]\*

\* Streak Retinoscope

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

The retinoscope is used to measure the refractive error of the eye. Conditions such as long- and shortsightedness and astigmatism can be detected and measured.

The BETA 200 Retinoscope with ParaStop<sup>1)</sup> 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 helps to determine the cylinder axis more precisely and speeds up subsequent testing 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

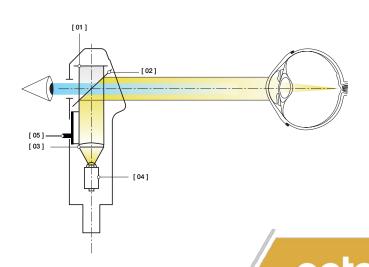
### : ParaStop simplifies precise selection of a parallel beam.

- 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.



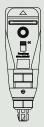
#### ParaStop and polarisation filter

- [01] Polarisation filter, eliminates internal reflexes and stray light.
- Semi-reflector mirror: Simultaneous [02] 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.
- ParaStop simplifies and speeds up the precise detection of cylinder axis.





BETA 200 S Ophthalmoscope	2.5 V	3.5 V
BETA 200S Ophthalmoscope, without handle	C-001.30.120	C-002.30.120
XHL Xenon Halogen spare bulb	X-001.88.069	X-002.88.070
Set complete with BETA 200 S Ophthalmoscope, 1 spare bulb in hard case, with:	2.5V	3.5 V
BETA battery handle	C-261.10.118	
BETA R rechargeable handle		C-261.20.376
same, with Lithium-lon battery		C-261.27.376
BETA TR rechargeable handle and transformer		C-261.20.384
same, with Lithium-lon battery		C-261.27.384
BETA NT rechargeable handle (NiMH) and NT 300 charger		C-261.20.420
same, with <b>BETA</b> L rechargeable handle with Lithium-Ion battery		C-261.29.420



BETA 200 Streak-Retinoscope	2.5V	3.5 V
BETA 200 Streak Retinoscope with XHL Xenon Halogen bulb, detachable brow rest,		
without handle	C-001.15.353	C-002.15.353
XHL Xenon Halogen spare bulb for Streak Retinoscope	X-001.88.087	X-002.88.089
XHL Xenon Halogen spare bulb to convert to <b>Spot Retinoscope</b>	X-001.88.088	X-002.88.090
Bulb holder		C-000.15.355
Bulb-cover		C-000.15.356
Detachable brow rest for spectacle-wearers		C-000.15.357
Orange filter for light-sensitive patients		C-000.15.359
Fixation cards with holder for dynamic retinoscopy		C-000.15.360
Set complete with BETA 200 Streak Retinoscope,		
1 spare bulb in hard case, detachable brow rest, with:	2.5V	3.5 V
BETA battery handle	C-034.10.118*	
BETA R rechargeable handle		C-034.20.376
same, with Lithium-lon battery		C-034.27.376
BETA TR rechargeable handle and transformer		C-034.20.384





# Set complete with BETA 200 S Ophthalmoscope, BETA 200 Streak Retinoscope,

same, with Lithium-Ion battery

BETA NT rechargeable handle (NiMH) and NT 300 charger

same, with <a>®</a> BETA L rechargeable handle with Lithium-Ion battery

detachable brow rest, 1 spare bulb in hard case, with:	2.5 V	3.5 V
BETA battery handle	C-262.10.118	
BETA R rechargeable handle		C-262.20.376
same, with Lithium-Ion battery		C-262.27.376
BETA TR rechargeable handle and transformer		C-262.20.384
same, with Lithium-lon battery		C-262.27.384
BETA NT rechargeable handle (NiMH) and NT 300 charger		C-262.20.420
same, with 9 BETA L rechargeable handle with Lithium-Ion battery		C-262.29.420

**(B)**: Rechargeable handle with charge status display in the bottom insert.



C-034.27.384

C-034.20.420

C-034.29.420

 $<sup>^{\</sup>star}$  Available with large battery handle **X-001.99.120** (doesn't fit into hard cases). Please specify with your order.



We reserve the right to change specification without notice.



Tel: +30 23510 79750 / +30 210 5750572 e-mail: info@optohellas.com

www.optohellas.com