

HEINE BETA® 200 LED Retinoscope
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HEINE BETA® 200 LED Retinoscope

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These instructions apply to the following products of the HEINE Retinoscope series: BETA® 200 LED, BETA® 200.




Please read and follow these instructions for use of and keep them for future reference.

Intended Use


The HEINE® Retinoscope is a hand-held, non-invasive, internally powered medical device. It is intended for the transient measuring of the refraction (objective refraction) of the eye.


The device may only be used by qualified medical personnel and in professional healthcare facilities.

For U.S. only:

 Federal law restricts this device to sale by or on the order of a Physician or Practitioner.

Warnings and Safety Information

 **CAUTION!** This symbol indicates potential hazardous situations. Ignoring the corresponding instructions may lead to dangerous situations of mild to moderate extent. (Background color yellow; foreground color black).

 **NOTE!** This symbol indicates valuable advice in terms of installation, operation, maintenance or repair. Notes are important, but not related to hazardous situations.

Product overview

- 1 Connector (only XHL)
- 2 Bulb cover (only XHL)
- 3 Control ring
- 4 ParaStop
- 5 Brow rest
- 6 Brow rest
- 7 Fixation card
- 8 Orange filter (only XHL)



Setting up

To set up the HEINE® Retinoscope, plug the instrument head into the HEINE® supply handle.

Verify that the lamp voltage complies with the supply voltage of the handle. The coloured marking on the bottom of the XHL lamp shows you the lamp voltage:

White ring = HEINE XHL® 2.5 V bulb

only for use with the HEINE BETA® battery handle

Red ring = HEINE XHL® 3.5 V bulb

only for use with the HEINE BETA® rechargeable handle and HEINE® wall unit

The supply voltage for the BETA 200 LED Retinoscope is 3.5 V.

Operation

Two different-length brow rests (5) and (6) are included with the instrument.

They can be removed and interchanged according to user preference. The control ring (3) is used to rotate the streak image through 360°. The lowest position gives a divergent beam, the highest position focuses the streak at a distance of ca. 25 cm in front of the retinoscope.

The ParaStop (4) limits the upward travel of the control ring to give a parallel beam of light at the top of its travel. To operate, move the button down. To disengage, push either the button or the control ring (3) upwards.

To convert the XHL Streak Retinoscope to a Spot Retinoscope simply change the streak bulb for a spot bulb (see options).

HEINE Retinoscopes are intended for a transient examination of less than < 5 minutes with a 15 minutes break until the next application.

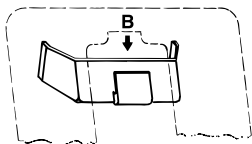
ANSI Z80.36-2016 Group 2 (LED)

CAUTION: – The light emitted from this instrument is potentially hazardous. The longer the duration of exposure, the greater is the risk of ocular damage. Exposure to light from this instrument when operated at maximum intensity will exceed the recommended maximum exposure (RME) of 2.2 J/cm², unless additional action is taken by the user to minimize exposure, after 1 min. The risk of retinal injury at an exposure of 2.2 J/cm² is not high, but because some patients may be more susceptible than others, caution is advised if this radiant exposure value is exceeded. However, because of a significant risk of injury at exposures exceeding 10 J/cm², the user should avoid exposures longer than 5 min.

If, after switching on the unit, a sharp drop in brightness is noticed, new batteries should be inserted or rechargeable batteries recharged.

The setup and operation of the HEINE handles are described in a separate instruction document.

Fixation Cards



The HEINE Fixation Cards for dynamic retinoscopy are attached to the retinoscope by means of a special mount.

- Slide the mount from the patient's side into the lateral grooves (A).
- Select a fixation card and hook it on from above (B).

When not using fixation cards the mount can be left on the retinoscope or can be removed by pulling it off.

Hygienic reprocessing

The instruction is available:

- online at www.heine.com
- in a paper version which you can request from the address listed

Maintenance

Changing the light source

- Verify that the lamp voltage complies with the supply voltage of the handle.
Allow the device to cool down before changing the bulb.

BETA 200 LED

With these devices, the LED cannot be changed.


BETA 200

- Unscrew the connector (1) and shake lightly to remove the bulb.
- Pull off the bulb cover (2).
- Wipe the glass body of the new replacement bulb with a clean cloth and replace the bulb cover.
- Insert the bulb into the retinoscope and replace the connector

Service

The device has no components serviceable by the end-user.


General Notes

 The warranty for the entire product is invalidated if non-genuine HEINE products or non-original parts are used and if repairs or modifications are made to the device by persons not authorized by HEINE.
For more information, please visit www.heine.com.

The expected life cycle, when the device is normal used and the warning and safety information as well as the maintenance instructions are observed, is up to 7 years. Beyond this period, the product may continue to be used if it is in a safe and good condition.

Store and use the device in dry and dust-free environments only.

General Warnings

 Check the correct operation of the device before use! Do not use the device if there are visible signs of damage or the light begins to flash.

Do not use the device in fire- or explosive risk area (e.g. oxygen saturated or anesthetic environments)



This product is not allowed to enter or be used in areas with strong magnetic fields e.g. MRI scanners.

Do not modify the device.

Use only original HEINE parts, spare parts, accessories and power sources.

Repairs shall only be carried out by qualified persons.

Disposal

 The product must be recycled as separated electrical and electronic devices.
 Please observe the relevant state-specific disposal regulations.

The appendix contains following tables

- Electromagnetic disturbances – Requirements and tests
- Technical specification
- Options
- Explanation of the used symbols