

# Personal experiences with the Haag-Streit slit lamp BP 900 and the new IM 600 Imaging Module

By Michael Wyss and Dr. Michael Bärtschi

The slit lamp Biomicroscope is the most important instrument for Optometrists and Ophthalmologists for their daily work on patients. The three key factors for comfortable operation with this major device are: precise mechanics, excellent optics and an intuitive imaging solution. We evaluated the revised Haag-Streit slit lamp BP 900 with the integrated new Imaging Module IM 600 and took a close look at how Haag-Streit meets these requirements in their latest developments.

## Precision of Movements

The BP 900 features a top-quality cross-slide mechanism, which provides smooth and effortless movement. This allows precise positioning of the Biomicroscope, as well as of the illumination unit. This is an essential requirement for following the corneal curvature, while observing details of the anterior segment in higher magnification.

## Optical Quality

As expected from Haag-Streit, the optical quality of the microscope is outstanding. The incorporated three magnifications (10x/16x/25x) are convenient to cover most magnification demands in an optometric practice. Surprisingly, probably due to the new LED illumination and the high quality optic components, even endothelium cells become visible within 25x magnification.

The wide aperture optics provide an excellent binocular view. This allows long hours of ergonomic operation without headache or eye strain.

The beam splitter of the camera module can be switched off providing 100% of light to the observer oculars, rather than 30% when the camera mode is switched on. This becomes very handy if crisp vision and bright observation area is needed for details during very high magnification observation (e.g. Microcysts, Endothelium cells). Additionally, it is a real boost during posterior segment analysis, where 3D observation is of great help.

The LED illumination produces a very bright and perfectly sharp slit beam. This ensures optimal illumination of details in diagnosis from the anterior segment as well as the posterior segment. The wide 14mm slit beam, is very beneficial for fitting bigger scleral lenses or any soft contact lenses. The whole anterior segment/contact lens relationship can be observed at a glance.

## Imaging Solution



Image 2: Control panel



Image 1: BP 900 with IM 600

Integrated digital imaging is becoming increasingly important for eye diagnosis, follow-up and patient compliance management. The IM 600 is a nicely integrated imaging module, which provides images and live stream videos in pleasant quality. The EasyTouch release module offers control over the camera as well as the illumination of the slit lamp. Additionally, the integrated backlighter can be adjusted directly there as well, which greatly supports the workflow and ensures best illumination in all imaging applications.

Image capture is released via a large button placed in front of the joystick and can be blindly operated. On either side are two smaller

buttons. During capture mode, these may be toggled to adjust the auto-settings of exposure and brightness of the image.

A real beauty of the new Haag Streit imaging technology is the “History Trigger” function. It contains a ring-buffer which automatically records the previous seconds until the moment of capture in real time. If for some reason the captured image is not adequate, the two buttons at the side of the release bar allow scrolling back through preceding presentations, enabling to select the optimum image.

The EyeSuite software allows efficient image editing and provides a well-structured patient management system. This makes the software a very good team player for daily practice.

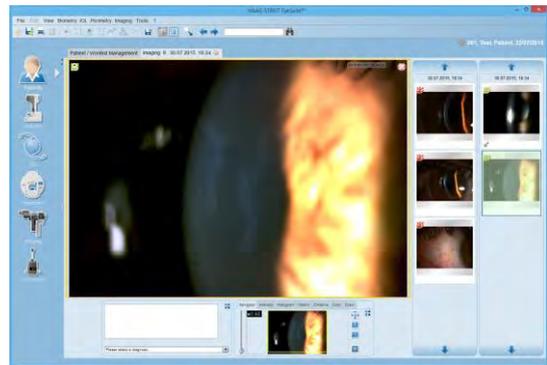


Image 3: EyeSuite Software

## Summary

The BP 900 slit lamp with IM 600 Imaging Module is a high quality system with an excellent balance between mechanics, optics and image capturing. We believe that this system is an excellent choice for any Optometrist taking his profession seriously.

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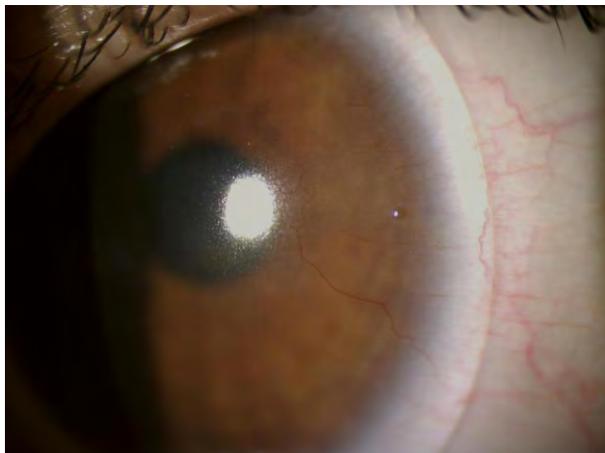


Image 7: Deep corneal Neovascularisation after autoimmune reaction, treated with scleral lens

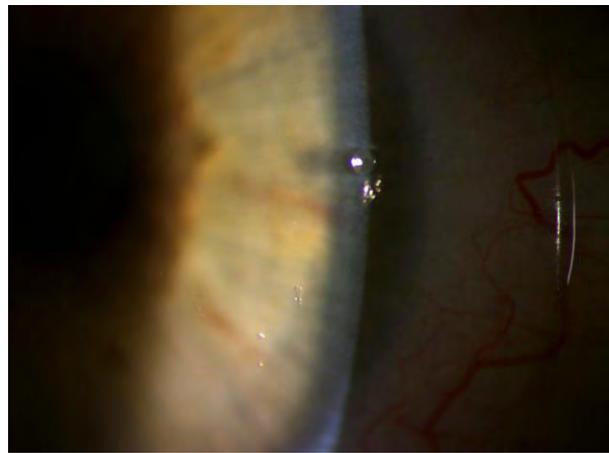


Image 6: Detail of a toric contact lens surface



Image 5: High magnification of lipid deposition on a contact lens surface



Image 4: Bulbar Conjunctiva overview