

The Slit Lamp Reinvented for the 21st Century

The Elara 900 brings the finest details into sharp focus while streamlining workflow and enhancing ergonomics.

by Iqbal (Ike) K. Ahmed, MD, FRCSC; Gerd U. Auffarth, MD, PhD, FEBO; David Goldblum, MD; Maria Kugelberg, MD, PhD; Sunil Mamtora, MBBS; Filomena Ribeiro MD, PhD, FEBO

Haag-Streit has been a leader in the development of precision measuring instruments for more than 165 years, and since the 1930s, the company has been doing pioneering work in ophthalmology. In 2025, they introduced the Elara 900 slit lamp (Figure 1), with the promise that you will see more, work smarter, and feel better. Does the Elara 900 deliver on this promise? To find out, we spoke to the people who know it best: Elara's first global users.

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Legendary Optics to "P-Type" Illumination

Haag-Streit's legendary Swiss-made optics are synonymous with precision, and the company consistently innovates to deliver next-level visualization.

One such innovation is the Elara 900's projector ("P-Type") light source, a new type of illumination that can emit colors across the entire visible spectrum, allowing you to select different color temperatures for individual pathologies. By offering more illumination modes than traditional light sources, the Elara 900 creates high-resolution, high-contrast images that aid in identifying ocular structures.

"Haag-Streit optics have been great all along, but what's different with the Elara

900 is how the light is projected as opposed to the traditional LED light," said Iqbal (Ike) K. Ahmed, MD. "Compared to my other slit lamps, the clarity and crispness of the Elara 900 is next level. It provides a real interpretation of color and clarity that enhances the appearance of the eye."

As Gerd U. Auffarth, MD, PhD, noted, "A better view helps us make an accurate diagnosis, which can be documented and saved for comparison at the patient's next follow-up visit. With the Elara 900, the process is sleek, fast, and efficient. I think it's a win-win situation for both doctor and patient."

High-resolution 3D Images and Video Capture

The Elara 900 preserves every ocular detail in high-resolution for review and comparison, and its dual camera setup allows for optional 3D video and image capture up to 4K (Figure 2). Having integrated imaging and video recording capabilities makes it possible for every patient to have a detailed ophthalmic photographic record of their care.

"With the Elara 900, I can capture high-resolution images and videos with one click, and within seconds, I can search that patient's hospital number, their surname, their details, and send all of their information to the medical record," said Sunil Mamtora, MBBS. "To me, that sets the Elara 900 apart from other slit lamps."

Maria Kugelberg, MD, PhD, appreciates the Elara 900 not only for documentation but also for keeping patients apprised of their ocular status. "It's revolutionary that you can document over time," she said. "You can capture images and easily show the patient what their problem is, or you can compare the current images with previous images that are saved in the system."

David Goldblum, MD, agreed. "That's the beauty of having an imaging device that enables you to see if a disease is progressing or if it's responding favorably to therapy,"

he said. "This is particularly important when managing complex cases over time."

Stereoscopic visualization with the Elara 900 is also beneficial for professional education and collaboration. "The Elara 900 has excellent image quality, very good contrast, and new ways of using light," said Filomena Ribeiro, MD, PhD. By activating multiple megapixel sensors simultaneously, examiners may capture content not only in 3D, but in high-resolution 4K. "Being able to see with exceptional depth and clarity and being able to share that vision with my colleagues and students is quite an advantage."

WORK SMARTER

"Presets" Streamline Your Workflow

With the Elara 900's digital "presets," you can summarize up to six individual examination scenarios into a single operation to customize and streamline your examination workflow.

"With the digital 'presets,' I don't have to spend time manually changing the filters, the light, or the slit," Prof. Ribeiro said. "With a turn of the 'preset' wheel, I can apply optimized settings that I've defined and stay focused on the examination."

Prof. Auffarth noted, "When we use the Elara 900 'presets,' the examination goes smoother, faster, and automatically."

Motorized Functions for Smooth Transitions

With the Elara 900's motorized height adjustment, you can reposition quickly and precisely with minimal manual effort. In addition, the motorized magnification changer enables you to make seamless adjustments directly from the joystick. These quick transitions make patient assessments more efficient and potentially reduce examination time.

"The first thing I noticed with the Elara 900 is how easy it is to adapt the slit lamp for different users," Prof. Ribeiro said. "What also impressed me was that I can adjust



Figure 1. The Elara 900.



Figure 2. The Elara 900's high-resolution imaging facilitates patient education, as well as collaboration with colleagues, students, and referring doctors.

the magnification directly with the joystick without interrupting the examination. These may be small features, but they make a difference because they make the workflow much smoother.”

Efficient Documentation With 1-Click Functionality

The Elara 900 instantly records high-resolution images and videos with a single click of the joystick button. Images and videos can also be reviewed directly on the integrated screen. What’s more, Elara 900 can be integrated into many different environments, such as EyeSuite or EMR systems that support the DICOM modality workflow. This allows for captured content to

be directly assigned to the correct patient file, all while working within the device.

“Imagine if you could have the same workflow with your slit lamp that you have when you take photos of your food and send them to Instagram,” Dr. Mamtora said. “That’s what the Elara 900 brings, and I think that’s the most powerful change that we’re going to see in our slit lamp examinations.”

FEEL BETTER Optimized Control Layout

To improve comfort and ease-of-use, the Elara 900’s controls are intuitively positioned around the joystick with a smart layout that enables you to make essential adjustments without shifting hand position. Moreover, the distance from the ocular to the focus lens is reduced by 23% compared to slit lamps with a similar feature set. Bringing the patient closer further reduces physical strain during an examination.

Optimized Viewing Angle & Smooth Positioning

The Elara 900’s inclined eyepiece encourages a natural head and neck position helping to reduce fatigue, and its motorized height adjustment lessens the repeated lifting movements that can strain the wrist and forearm.

“Ergonomics is a very important feature, and it’s not just about comfort,” Prof. Ribeiro said. “We are prone to developing ‘slit lamp slump’ by frequently bending the neck forward and back. If we don’t address

this, we can develop chronic problems that could potentially shorten our careers. Not only will proper ergonomics help protect us against chronic pain and support our career sustainability, but I believe it also has a direct impact on the quality of our care.”

Enhanced Patient Comfort

The Elara 900 is designed with the comfort of both the patient and the examiner in mind. It prioritizes proper positioning with a height-adjustable chinrest, and the spacious headrest creates more room, reducing pressure on the upper body.

“I have found that the headrest is more comfortable for patients, even those with a bigger body frame,” Prof. Ribeiro said. “This allows for smoother examinations and more positive outcomes.”

CONCLUSION

Reinventing the slit lamp to meet the challenges of the future required both creative design and technological innovation. The global users we interviewed unanimously praised the Elara 900’s ability to help them see more, work smarter, and feel better.

As Dr. Ahmed summarized: “The Elara 900 has finally brought the slit lamp into the 21st century. With digitization, automation, and ‘presets,’ it gives us efficient and accurate documentation with good ergonomics. With these advancements, the slit lamp becomes a powerful diagnostic tool, more than just an observational tool.” ■

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