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<https://hs.nt-rt.ru> || [hbs@nt-rt.ru](mailto:hbs@nt-rt.ru)

HS 3-1000

## Enjoy technology

Latest technology, ergonomics, and flexibility are combined in HAAG-STREIT SURGICAL's operating system HS 3-1000.



HS HI-R 1000

# The masterpiece

“The optics on HS Hi-R 1000 are the best I have ever used. Additionally, it is extremely innovative as is apparent with the unique SensoServo Drive system which enable the user to move the scope with minimal effort, locks it in place immediately after moving, and avoids the need for balancing.”

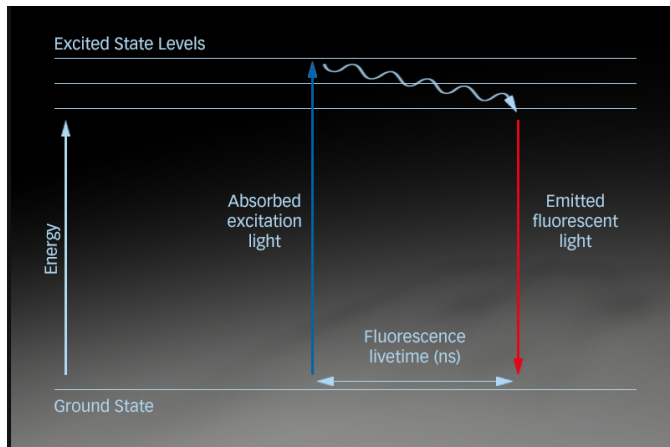
SENSOSERVO DRIVE

## Motorized Movement

The SensoServo system of HS Hi-R 1000 uses ‘fly-by-wire’ technology to move the microscope in all directions with utmost precision and requiring minimal force. Though this technology also the balancing remains permanently stable even when changing the positioning of the microscope or e.g. shifting the stereoscopic observer scope from left to right.



These characteristics are achieved via the SensoGrips that are activated as soon as the brake release buttons are pressed. They detect the pressure and control the motor movement in the microscope's joints accordingly. Individual movement characteristics can be chosen ranging from enhanced friction to feather-light.



## FLUORESCENCE

# Enhance visibility

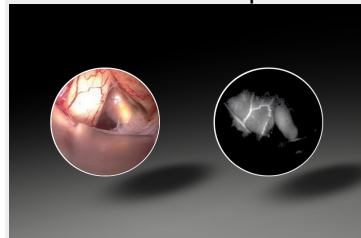
Specific illumination and filtering can make the invisible visible when fluorescent effects are allocatable through relevant dyes. In the operating system HS 3-1000 HAAG-STREIT SURGICAL offers fluorescence equipment for ICG.

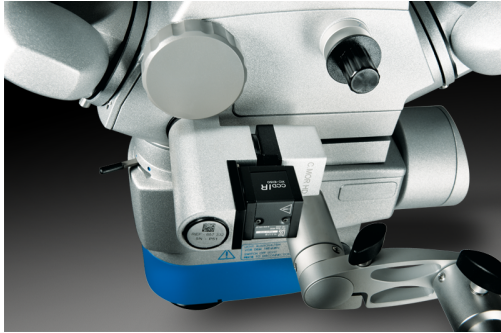
## ICG FLUORESCENCE

# Intraoperative fluorescence angiography

ICG is used for intraoperative angiographies, particularly in neurosurgery for detecting stenoses, leakages, and aneurysms.

Following the injection of the ICG solution in the patient's bloodstream, the vessels become visible when the ICG flows by. Now, all irregularities can be seen on the unique M.DIS that is mounted in direct view of the surgeon and the HS MIOS displays.

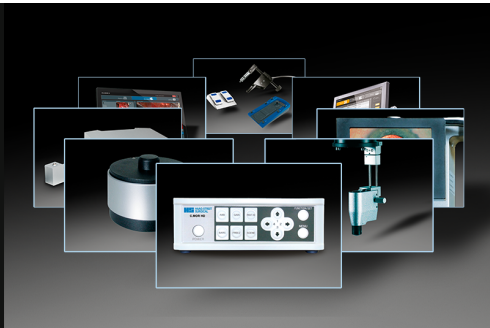




ICG FLUORESCENCE

## Equipped to function

Indocyanine green, abbreviated ICG, is a medical dye that emits infrared fluorescence when illuminated with light of the appropriate wavelengths. The microsurgical operating system equipped for ICG application includes a special infrared camera (in addition to the VIS camera) for detecting the ICG fluorescence and displaying it on the screen. Activation is easily controlled via the handles or the software.



ACCESSORIES

## Possibilities on demand

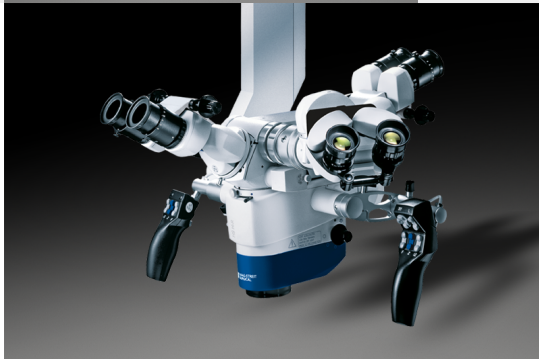
Depending on the demand, the operating microscope HS 3-1000 can be configured in a modular way. Various optional accessories are available.



## IMAGE INJECTION

# Enrich your vision

Often, more information is needed than what hits the eye through the oculars of the operating microscope. In these situations extra information are provided in both oculars by our image injection system C.INJECT 1000. Featuring high definition, data can be injected in exceptional HD resolution into the oculars as an overlay to the live view or as a full image.



## SECONDARY OBSERVATION

# Flexibility

When working together the right accessory is needed:

- Lateral observer scope with inclinable eyepiece head and image rotation for the assistant's optimal comfort.

- C.DUO offers face-to-face observation for two surgeons, lateral ports, and a separate camera connection. Eyepieces are fully rotatable for ergonomic positioning when tilting of the microscope.
- To suit differences in height among surgeons various eyepiece heads allows best ergonomics.

HS MIOS 5

## Comprehensive yet intuitive recording

The prime functions of HS MIOS 5 are the recording of operation scenes as well as the capturing and recording of snapshots, together with proper identification of patient and hospital data. Images and video streams can be stored on DVD-R/-RW, HDD, USB flash drive, and external USB hard disk drive or transmitted to the hospital PACS via DICOM.



C.MOR HD / HD<sup>3</sup>

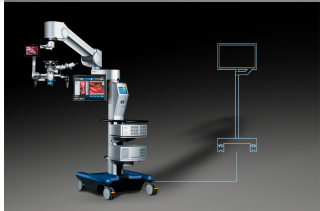
## Compact HD camera

C.MOR HD is a full HD color video camera designed for the HAAG-STREIT SURGICAL microscope. Its ultra-compact camera head houses a 1/3" CMOS sensor that meets very high standards. In its 1 and 3-chip version, images are crisp and sharp. Different user settings allow individual adjustments.

M.FOCUS

## Best focusing results

Automatic focusing is available with the HS MIOS 5 software module M.FOCUS. Benefit from best focusing results with an active focus area that is adjustable in size and position.



NAVIGATION

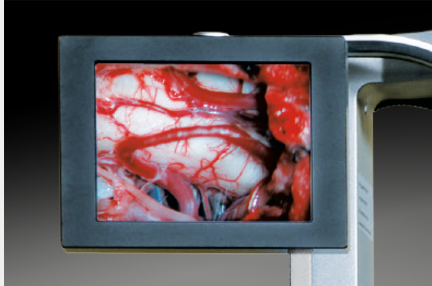
## Open interface

The HS 3-1000 provides an open interface for connection with navigation systems. It supports pointer functions, image superimposition via C.INJECT 1000 as well as control of focus and positioning by the navigation system.

M.DIS AND C.MON HD

## Display

Best control of the camera image and additional opportunities for observation are provided through monitors. Those may be mounted directly to the microscope head to serve the surgeon and the assistant (M.DIS) or on the floor stand for further staff (C.MON HD).



MOUTH AND FOOT SWITCHES

## Hands-free operation

The positioning of the microscope is normally operated using the handles. In addition, mouth and foot switches are also available. While the mouth switch allows the microscope to be moved during positioning, the smaller foot switch EF 2000 regulates focus and zoom settings. 14 partly programmable functions can be controlled with EF 5000 and the wireless EF 5001.

### MAGNIFEYE

## Seeing each detail

The MAGNIFEYE can be added to meet the highest demands in terms of up to 24x magnification. When using high magnification, you also benefit from the motorized X-Y movement HS Hi-R 1000 is offering for precise horizontal movements. These are easily controlled via the hand switch.



FS 3-43

## Perfect reach, stability, flexibility

With its extreme arm length of 1600 mm the floor stand FS 3-43 allows great flexibility for positioning in the OR. The automatic balancing easily and fast adjusts the system when accessories are changed. Additional holders for foot switches, trays for camera control units, and a high resolution monitor or other accessories may be attached to the column.

### FLOOR STAND CONTROL

## At a glance

The floor stand is computer-controlled via a touch screen. Here illumination and balancing can be controlled. Additionally, the individual start settings of the microscope parameters can be programmed for each surgeon.



300 W XENON

## Powerful light

For easy access, the 300 W xenon light source is located externally underneath the push bar. The upper housing contains a spare light module. The xenon light sources contain filters to protect the surgeon's eyes and the patient's tissue against ultraviolet and infrared radiation.

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