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# Haag-Streit Surgical ALLEGRA 900

Precise and quick



# Enjoy the ease

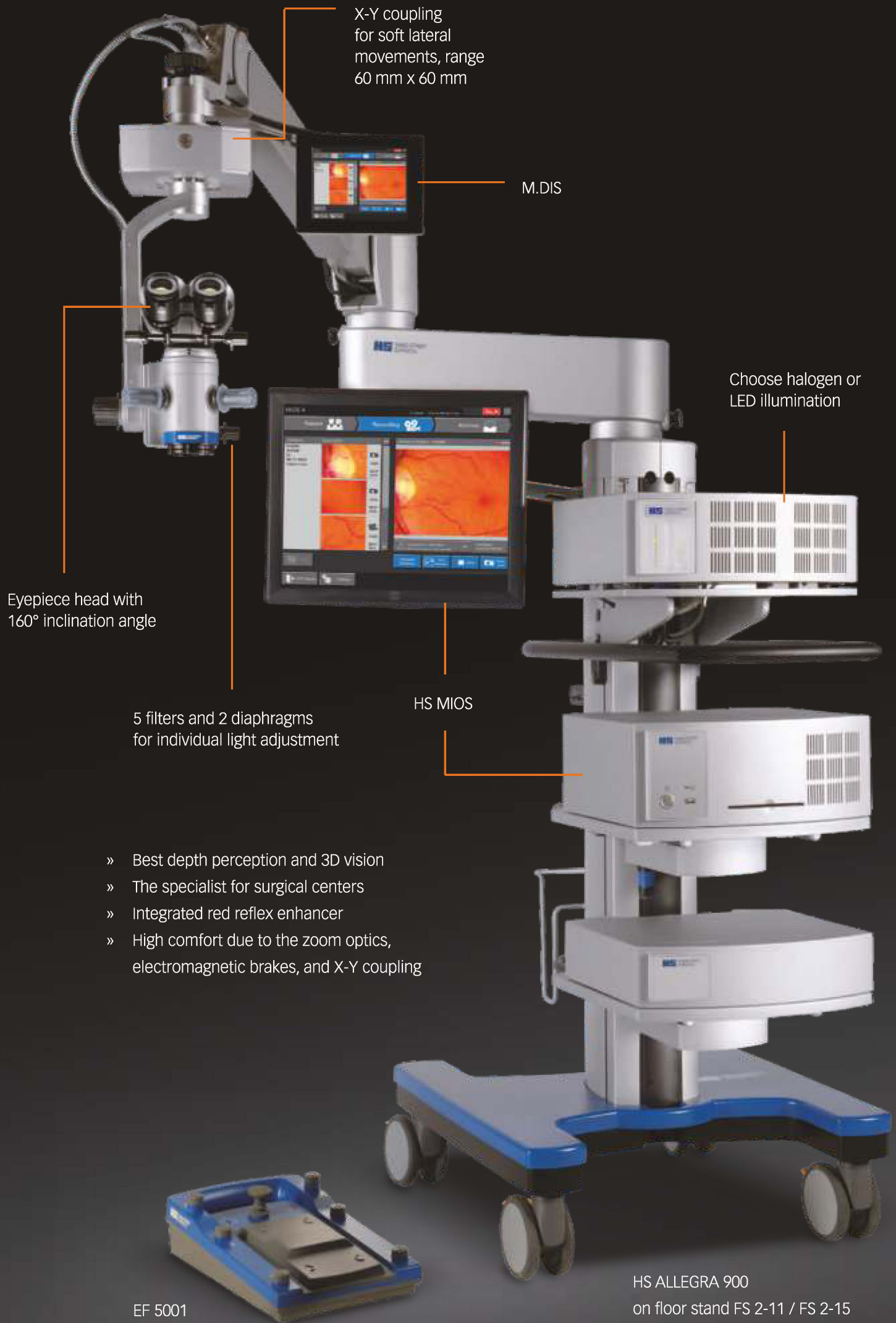


## Our HIGHLIGHTS:

HS ALLEGRA 900 is optimized for surgical procedures in day clinics, surgical centers, and hospitals. It is mainly recommended to be used for ophthalmic, ENT, and reconstructive surgery.

With its newly designed electromagnetic brake, the microscope is exceptionally easy to move but stable in the working position. It is equipped with 1:6 zoom, X-Y coupling, inclinable eyepiece head, and 10x wide angle oculars. In ophthalmic surgery a red reflex enhancer provides ideal recognition of the capsula.

Optionally, HS ALLEGRA 900 is available with an integrated video camera module (1 CCD).



X-Y coupling  
for soft lateral  
movements, range  
60 mm x 60 mm

M.DIS

Choose halogen or  
LED illumination

Eyepiece head with  
160° inclination angle

5 filters and 2 diaphragms  
for individual light adjustment

HS MIOS

- » Best depth perception and 3D vision
- » The specialist for surgical centers
- » Integrated red reflex enhancer
- » High comfort due to the zoom optics,  
electromagnetic brakes, and X-Y coupling

EF 5001

HS ALLEGRA 900  
on floor stand FS 2-11 / FS 2-15



# Optics, light & accessories

The apochromatic optics provides a sharp and contrasty image for the surgeon at any zoom setting. Due to the large stereo base of 25 mm, a unique depth perception is achieved.

A special advantage for multidisciplinary use is the large inclination range of  $-8^{\circ}$  to  $+100^{\circ}$ , e.g. in ophthalmology and ENT – even laryngoscopy as well as ear examinations and surgeries are possible.

In addition to the motorized focusing device, HS ALLEGRA 900 contains an X-Y coupling for horizontal tracking in ophthalmology. As a standard, the microscope is equipped with a 200 mm front lens. Other lenses up to 400 mm focal lengths, and especially a 175 mm lens, can be chosen.

The microscope always remains balanced. No springs need to be tightened, no knobs turned. The electromagnetic brake retains the microscope safely in its working position.

## Accessories

To facilitate the alignment of toric IOLs during operation, TOCULAR is recommended. Also the KERATOSCOPE and EIBOS 2, the non-contact wide-angle ophthalmoscope for vitreoretinal surgery, are available.

For coobservation HAAG-STREIT SURGICAL offers various observer scopes, attached via a beam splitter. Furthermore, the high-resolution monitor M.DIS with touch functionality can be mounted to the microscope arm. It allows viewing and controlling of video recordings and snapshots during surgery.

## inTrAOperATive liGHT mAnA Gement

HS ALLEGRA 900 contains a filter disk for daylight, softlight, UV protection (yellow filter), blue light (excitation of fluorescence), and green light (better recognition of blood vessels). In addition, two spot diaphragms are integrated against glare.



EIBOS 2



KERATOSCOPE



TOCULAR



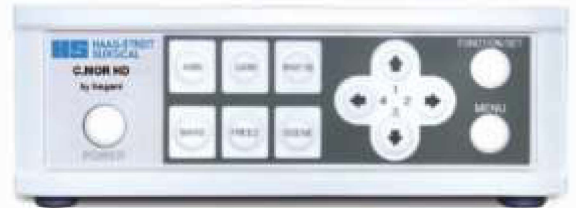
Turning knob for the filter disk



# Imaging

## c.mOr HD

C.MOR HD is a full HD color video camera adjusted to the HAAG-STREIT SURGICAL microscope. Its ultra compact camera head houses a 1/3" CMOS sensor that fulfills high demands. With a resolution of 900 TV lines and an S/N ratio of 500 dB images are crisp and sharp. Different user settings allow individual adjustments.



## c.mOn HD

With its flat design and the size of 21.5" the brilliant HD monitor C.MON HD can easily be attached to the microscope's floor stand. Its touch function accepts operation even with medical gloves. Due to the planar screen and glass surface it allows easy disinfection. For the safety of the system C.MON HD is fully medical approved.



## HS miOS

MIOS stands for Microscope Imaging and Operation-System. Its prime functions are recording of operation scenes, capturing and recording of snapshots, together with proper identification of patients and hospital data. Images and video streams can be stored on DVD-R/-RW, HDD, USB stick, and external USB hard disk drive or transmitted to the hospital PACS via DICOM.





## Floor stand solutions



### HiGH-Tech SOLuTiOnS

Electromagnetic brakes in the floor stands FS 2-21 (halogen) and FS 2-25 (LED) support the smooth movements of HS ALLEGRA 900. A holder for a foot switch can be mounted directly to the column as can trays (with transformers) for camera control units or other equipment. The front side accepts a high-resolution monitor (optional).

Both versions are computer-controlled with a graphic display for programming the individual start settings of the operating surgeons and the surgical procedures. The microscope parameters, brightness, and the carrying weight of the articulated arm are also adjustable and controlled on the graphic display.

The shape and internal reinforcements of the columns make the floor stands extremely stable against vibrations. The cables are inside a cable duct. A plastic surface protects the base of the floor stand against corrosive liquids.

HS ALLEGRA 900  
on floor stand FS 2-21 / FS 2-25



## **meCHAnicAl SOLuTiOnS**

The floor stands FS 2-11 (halogen) and FS 2-15 (LED) are equipped with newly designed mechanical brakes, which are preadjusted in the factory for free-floating movements and for stable working positions. The light source is mounted externally for easy access. A tray (with transformer) to carry a camera control unit may be attached to the column.

For only little space in the operating room and systems with few accessories, HAAG-STREIT SURGICAL offers the floor stand FS 1-12 with mechanical brakes and two 150 W halogen light sources with a quick switchover mechanism.

The newly designed foot switches EF 5000 and EF 5001 are recommended for hands-free control of the microscope functions. While EF 5000 is connected to the floor stand via cable, EF 5001 controls 14 functions of the microscope wireless via Bluetooth.



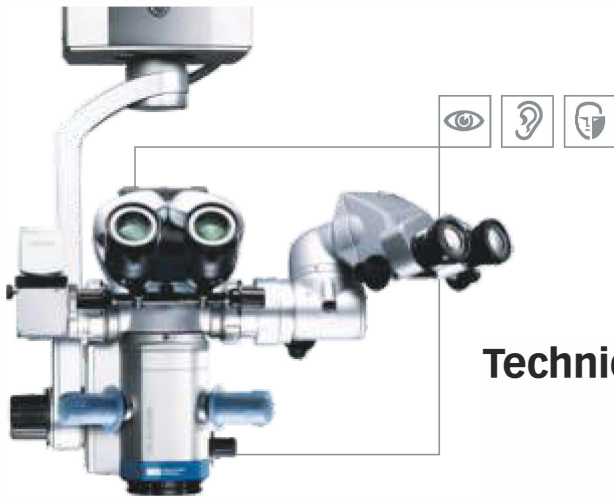
HS ALLEGRA 900  
on floor stand FS 1-12



HS ALLEGRA 900  
on floor stand FS 2-11 / FS 2-15



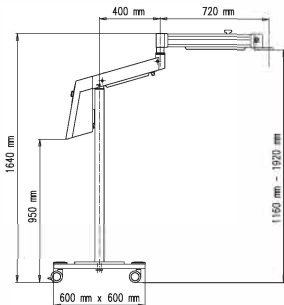
Foot switches EF 5000 and  
EF 5001 with 14 functions



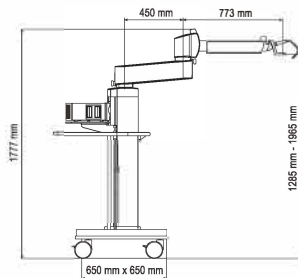
## Technical Data HS ALLEGRA 900

### Microscope HS AlleGrA 900

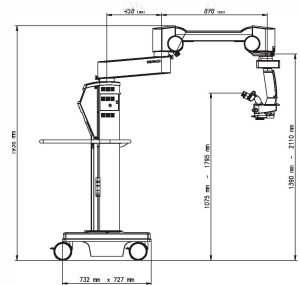
Optics	apochromatic
Stereo base	25 mm
Focusing	-30 mm to +20 mm
Working distance	200 mm, more lenses available
Magnification (Mot. zoom 1:6)	4.3x to 25.7x
Diameter of visual field	8.2 mm to 49.0 mm
Illuminated field	3 mm to 60 mm
Inclinable eyepiece head (10x wide angle oculars)	160°
Diopter settings	-8 D to +5 D
Inclination angles	-8° to +100°
X-Y coupling	60 mm x 60 mm
Brakes	electromagnetic
Filter disk	2 diaphragms, 5 filters
Weight (without accessories)	7.4 kg



Floor stand  
FS 1-12



Floor stands  
FS 2-11 / FS 2-15



Floor stands  
FS 2-21 / FS 2-25

Floor stands	FS 1-12	FS 2-11	FS 2-15	FS 2-21	FS 2-25
Arm reach (max.)	1120 mm	1223 mm		1320 mm	
Swivel area	2 x 360°	2 x 270°			
Door height	1640 mm	1777 mm		1936 mm	
Floor stand carriage	600 mm x 600 mm	650 mm x 650 mm		732 mm x 727 mm	
Carrying capacity	4.5 kg to 9.0 kg	4.5 kg to 15.0 kg		5.5 kg to 17.0 kg	
Brakes	mechanical	mechanical, preadjusted		electromagnetic	
Balancing	mechanical			mechanical, sensor-aided	
Height at oculars	839 mm to 1599 mm	964 mm to 1644 mm		1069 mm to 1789 mm	
Illumination	2 x 150 W halogen	2 x 150 W halogen	2 x 50 W LED	2 x 150 W halogen	2 x 50 W LED
Protection filter	UV, IR				
Operating voltage	100 VAC to 240 VAC				
Max. power consumption	400 VA	600 VA	450 VA	1200 VA	1000 VA
Weight	80 kg	198 kg		240 kg	
Foot switch	14 functions	14 functions		14 functions	

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