



HS ALLEGRA 590

The specialist for dual use



Tradition and innovation – Since 1858 visionary thinking and a fascination with technology have guided us to develop innovative products of outstanding reliability: Anticipating trends to improve quality of life.

 **HAAG-STREIT**
SURGICAL

Enjoy the Ease



OUR HIGHLIGHTS:

The operating microscope HS ALLEGRA 590 is optimized for both ophthalmic and ENT surgery in day clinics, surgical centers, and hospitals.

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

For utmost flexibility the microscope is designed to rotate cardanically around its center of gravity in all directions, requiring only minimal force. The microscope always remains balanced. No springs need to be tightened, no knobs turned. The electromagnetic brakes retain the microscope safely in the required working position.

A video camera is integrated. This reduces the length of the microscope, supports ergonomic positioning, and makes it easier to clean.





Touch panel for user settings and system control

High-resolution monitor

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

M.DIS

Eyepiece head with 160° inclination angle

Light source: LED or halogen

Ergonomic hand grips to control magnification, zoom, light, X-Y coupling, and operation mode

- » The specialist for dual use in ophthalmology and ENT
- » Best depth perception and 3D vision
- » High comfort due to zoom optics, electromagnetic brakes, and X-Y coupling
- » Integrated camera

HS ALLEGRA 590
on floor stand FS 2-21 / FS 2-25



Movability, accessoires & light

The large inclination range of -30° to $+120^{\circ}$ and the lateral tilt of $\pm 45^{\circ}$ are particularly important in ENT for examination and surgical procedures in deep cavities and narrow canals. As in most surgical cases active assistance is not needed, secondary observation is possible via monitor.

In addition to the motorized focusing device, the microscope is equipped with an X-Y coupling for horizontal tracking in ophthalmology. As a standard, HS ALLEGRA 590 is equipped with a 200 mm front lens. Other lenses of 175 mm to 400 mm focal lengths can also be chosen.

Two ergonomic hand grips with function buttons for zoom, focus, illumination, and brake release facilitate control of the microscope. Switching from ophthalmology to ENT mode is easily done at the push of a button on the hand grips as well.

A red reflex enhancer is integrated for ophthalmic surgery. HAAG-STREIT SURGICAL recommends two particularly useful accessories: TOCULAR for alignment of toric IOLs and EIBOS 2 for non-contact wide-angle ophthalmoscopy in vitreoretinal surgery. Both devices can easily be attached to the microscope.

M.DIS

For coobservation, the high-resolution monitor M.DIS can be mounted directly to the microscope arm. The balance of the microscope will not be affected when moving the monitor during operation. M.DIS, equipped with a touch screen, allows viewing and controlling of video recordings and snapshots during operation.

INTRAOPERATIVE LIGHT MANAGEMENT

HS ALLEGRA 590 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



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 flash drive, and external USB hard disk drive or transmitted to the hospital PACS via DICOM.





Floor stand solutions



HS ALLEGRA 590
on floor stand FS 2-21 / FS 2-25

HIGH-TECH SOLUTIONS

Electromagnetic brakes in the floor stands FS 2-21 (halogen) and FS 2-25 (LED) support the smooth movements of the microscope. 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 to program the individual start settings of the operating surgeons and the surgical procedures as

well as to control the microscope parameters, brightness, and the carrying weight of the articulated arm.

The shape and internal reinforcements of the column make the floor stand extremely stable against vibrations. The cables are completely covered, guided from an easily accessible cable duct in the column through the arm system up to the microscope suspension. A plastic surface protects the base of the floor stand against corrosive liquids.



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 as well as stable working positions. The light source is mounted externally for easy access. A tray (with transformer) to carry a camera control unit may be fixed to the column.

HANDS-FREE OPERATION

HAAG-STREIT SURGICAL recommends its newly designed foot switches. While EF 5000 is connected to the floor stand via cable, EF 5001 controls 14 functions of the microscope wireless via Bluetooth.



Foot switches EF 5000 and EF 5001 with 14 functions

HS ALLEGRA 590
on floor stand FS 2-11 / FS 2-15

HAAG-STREIT SURGICAL GmbH

Rosengarten 10
 D-22880 Wedel, Germany
 Telephone +49-4103-709 04
 Fax +49-4103-709 355
 info@haag-streit-surgical.com
 www.haag-streit-surgical.com

Members of HAAG-STREIT Group

HAAG-STREIT Holding AG www.haag-streit-holding.com	HAAG-STREIT Deutschland GmbH www.haag-streit.de
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HAAG-STREIT SURGICAL distributes products manufactured by MÖLLER-WEDEL through dedicated representatives as well as national sister companies globally.



While all certifications are ongoing for HAAG-STREIT-SURGICAL, MÖLLER-WEDEL maintains a Quality Management System for Medical Products according to ISO 13485. MÖLLER-WEDEL is not only developing innovative products but also producing them conscious to the environment. Fulfilling an Environmental Management System according to ISO 14001 is the guide line. Both, the Quality as well as the Environmental Management System, are certified by TÜV.



All products are conform to the EC guidelines and thus CE labeled.



HS ALLEGRA 590

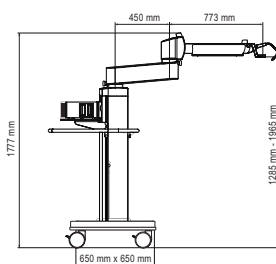
Technical Data



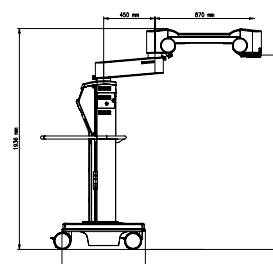


Technical Data HS ALLEGRA 590

Microscope HS ALLEGRA 590	In ophthalmology mode	In ENT mode
Optics	apochromatic	
Stereo base	25 mm	
Focusing	-30 mm to +20 mm	+/- 10 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	fix	-30° to +120°
Lateral tilt	fix	+/- 45°
X-Y coupling	60 mm x 60 mm	
Brakes	electromagnetic	
Filter disk	2 diaphragms, 5 filters	
Camera	integrated: 1 CCD	
Weight (without accessories)	9.5 kg	



Floor stands
FS 2-11 / FS 2-15



Floor stands
FS 2-21 / FS 2-25

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

Ceiling units on request. Subject to alterations