



made  
in  
Germany

# ENT Camera Systems



## Endoscopy camera system AC-10

Low-cost entry level model for rigid ENT endoscopy with digital signal processing.

- 1/2" Sony-CCD hyperpower head with 440.000 pixel in plastic case
- 3 m cable with high quality LEMO plug
- Automatic gain control and high-speed shutter (1/100.000)
- One-Touch Whitebalance Button
- Y / C and composite (USB 2.0 optional)
- Widerange power input 110/230 Volt, 50/60 Hz
- Measurements: approx. W 280 mm x H 95 mm x D 245 mm
- "BF" application part



## Endoscopy camera system AC-20

Standard endoscopy camera for rigid ENT endoscopy and laparoscopic procedures with digital signal processing.

- 1/2" Sony-CCD hyperpower head with 440.000 pixel in plastic case
- 3 m cable with high quality LEMO plug
- Automatic gain control and high-speed shutter (1/100.000)
- One-Touch Whitebalance Button
- AGC switchover
- Y / C and composite (USB 2.0 optional)
- Widerange power output 110/230 Volt, 50/60 Hz
- Measurements: approx. W 280 mm x H 95 mm x D 245 mm
- "BF" application part

## Endoscopy camera system AC-30

Middle-class endoscopy camera for rigid and flexible ENT endoscopy with digital signal processing

- 1/2" Sony-CCD hyperpower head with 440.000 pixel in plastic case
- 3 m cable with high quality LEMO plug
- Automatic gain control and high-speed shutter (1/100.000)

- One-Touch Whitebalance Button
- AGC switchover
- Window switchover
- Anti-Moiré switching for flexible endoscopes
- Y / C and composite (USB 2.0 optional)
- Widerange power input 110/230 Volt, 50/60 Hz
- Measurements: approx. W 280 mm x H 95 mm x D 245 mm
- "BF" application part



**Endoscopy camera system with 3,5" LCD device  
AC-40 HD**



High class endoscopy camera system for rigid / flexible ENT endoscopic and laparoscopic procedures with digital signal processing and integrated video recorder.

- 1/2" Sony-CCD hyper-power head with 440.000 pixel in plastic case
- 3 m cable with high quality LEMO plug
- 3,5" LCD control device
- Automatic gain control and high-speed shutter (1/100.000)
- One-Touch Whitebalance Button
- AGC switchover
- Window switchover
- Anti-moiree switching for flexible endoscopes
- SDI output
- Widerange power input 110/230 Volt, 50/60 Hz
- Measurement: approx. W 280 mm x H 95 mm x D 245 mm
- "BF" application part

**Output:**

Y/C and composite  
USB (USB 2.0 optional)  
YPbPr

**Optional:**

HDMI up to 1080p/i  
Memory with snapshot  
MP4 video recording / replay on USB-stick or SDD-harddisk

Tested CE according to MPG IEC 60601.

Optics and optical fibre cables are available optionally as well as an USB 2.0 output and PC based digital image documentation.

# ENT Camera Systems



## Endoscopy camera AC-10

USB 2.0 camera to connect with PC / Laptop

- 1/3" Sony-CCD sensor
- Resolution: 752 x 582 px / PAL (440.000 px)
- Scanning system: 2:1 interlaced
- Digital video output: USB 2.0 standard
- Windows XP / Windows 7 compatible
- Power: 5 V / 2.5 W / 300 mA
- 3 m cable
- Measurements: 90 mm x 32 mm without TV coupler  
125 mm x 55 mm with TV coupler
- Optional: Analogue video output CVBS, Y/C
- Compatible with Endostore Digital Picture & Documentation Software



## Endoscopy camera AC-15 HD

USB 3.0 camera to connect with PC / Laptop

- 1/3" Sony-HD with 1.3 megapixel
- Resolution: 1280 x 1024 px
- CMOS sensor
- 30 fps
- 5 m cable
- Digital video output: USB 3.0 standard
- Windows XP / Windows 7 compatible
- Power: 5 V / 2.5 W / 500 mA
- Measurements: 90 mm x 32 mm without TV-coupler  
125 mm x 55 mm with TV-coupler
- Optional: HDMI out
- Compatible with Endostore Digital Picture & Documentation Software





## Endoscopy systems accessories

Our ACENDIS product range of rigid and flexible endoscopy offers compact objectives with different angles available in viewing directions of 0°, 30°, 70°. We also offer a range of compatible fibre optic cables and flexible camera cables, as well as everything from cleaning brushes to polyp traps.



# ENT Light Sources



## Halogen light source AH-240-2

Standard light source with two switchable outputs

- 2 x 150 W halogen light source with phase shift control
- Osram XENOPHOT lamps
- Smooth brightness regulation
- Durability > approx. 100 h
- Thermo regulated LOW NOISE cooling
- Fibre optic connection "WOLF" compatible
- Power input 230 Volt, 50/60 Hz, 200 W
- Measurements: approx. W 280 mm x H 95 mm x D 245 mm
- "BF" application parts
- Weight approx. 4 Kg



## XENON lightsource AX-100

High performance light source with XENON light, single output

- OSRAM XENON lamp XBO-R-100W-45 by Osram
- Daylight spectrum
- Durability approx. 500 h
- Brightness regulation in 3 steps
- Light output comparable to a 800 W halogen light source
- Measurements: approx. W 280 mm x H 95 mm x D 245 mm
- Widerange power input 110 / 230 Volt
- "WOLF" fibre optic connection
- "BF" application parts
- Weight approx. 3 Kg



## LED light source ALED-500

Modern LED standard light source, single output

- Latest high power LED technology with daylight spectrum
- Light output comparable to 200 W halogen light (approx. 55000 Lux)
- Smooth brightness regulation
- Durability > approx. 10000 h
- Thermo regulated LOW NOISE cooling
- Fibre optic connection "WOLF" compatible
- Power input 230 Volt, 50/60 Hz, 200 W
- Measurements: approx. W 280 mm x H 95 mm x D 245 mm
- Widerange power input 110/230 Volt, 50/60 Hz, 65 W
- "BF" application parts
- Weight approx. 4 Kg

It is possible to equip some of the light sources with air compressors and Olympus connector.

Tested CE according to MPG IEC 60601.

Optics and optical fibre cables are available optionally as well as an USB 2.0 output and PC based digital image documentation.



**LED light source  
ALED-3**

LED handheld light source

- LED: High-end power LED
- Length: 113 mm
- Diameter: 30 mm
- Weight: 120 g
- Light flux: 110 lm
- Battery: 1,5 V AA-Battery
- Capacity: 2.6 Wh
- Light ON time: ca. 3 h
- Splashproof



**LED light source  
ALED-5**

LED handheld light source

- LED: High-end power LED
- Length: 115 mm
- Weight: 130 g
- Light flux: 210 lm
- Battery: 1 x AA Li-Ion 3,7 V with USB charger / power supply
- Capacity: 2.6 Wh
- Light ON time: ca. 3 h
- Splashproof

**LED light source  
ALED-500D**

Modern LED standard light source, single output

- Latest high power LED technology with daylight spectrum
- Light output comparable to 200 W halogen light (approx. 55.000 Lux)
- Smooth brightness regulation
- Durability > approx. 10000 h
- Thermo regulated LOW NOISE cooling

- Fibre optic connection "Wolf" compatible
- "Lifetime" counter
- Electronical light control with LED-intensity control
- Light cable sensor and "automatic off", if light cable is disconnected
- Widerange power input 110/230 Volt, 50/60 Hz , 65 W
- Measurements: approx. W 280 mm x H 95 mm x D 245 mm
- "BF" application parts
- Weight approx. 4 kg



\* It is possible to equip some of the light sources with air compressors and Olympus connector.  
Tested CE according to MPG IEC 60601.

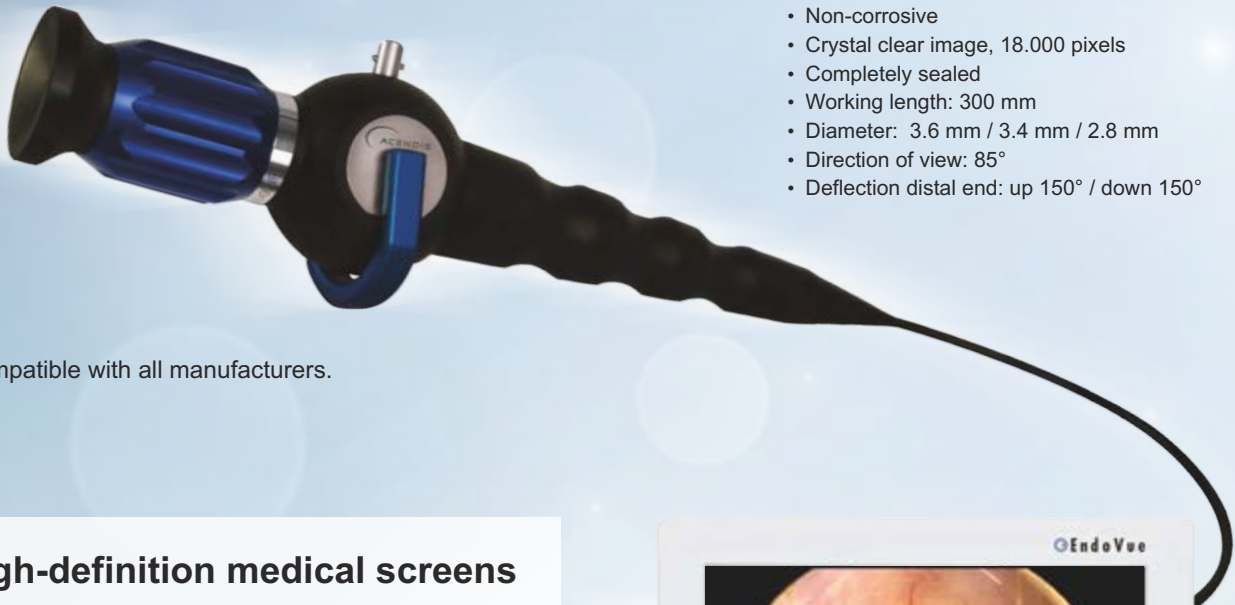
# Optics and Accessories

## Mobile rhino laryngoscopes

The new German-made fibre-optic nasopharyngoscope compound-lens optical system gives a crystal clear image.

The extremely thin entry tube is highly flexible and precise in less accessible regions.

The object being examined is illuminated by two light guides. The flexible entry tube moves precisely to the command of an ergonomically designed well-balanced handpiece. Standard connection is sealed from moisture.



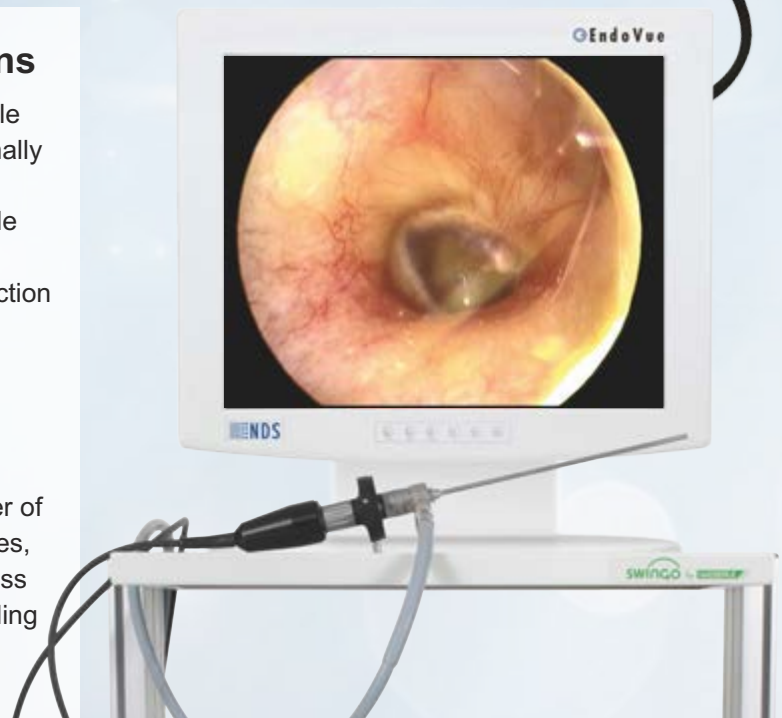
- Cover lens of sapphire glass
- Non-corrosive
- Crystal clear image, 18.000 pixels
- Completely sealed
- Working length: 300 mm
- Diameter: 3.6 mm / 3.4 mm / 2.8 mm
- Direction of view: 85°
- Deflection distal end: up 150° / down 150°

Compatible with all manufacturers.

## High-definition medical screens

The screens are capable of displaying multiple image modalities and are designed for minimally invasive surgery. They are lightweight with flexible input design for easy installation, while proprietary factory colour-calibration ensures reliable, consistent, authentic image reproduction instantly. Our medical screens offer high-definition with exceptional contrast and true-colour reproduction, with outstanding image quality for better diagnoses.

They can display images from a large number of sources, such as flexible and rigid endoscopes, ultrasound, PACS, etc. and also have a fanless cooling system to minimize the risk of spreading airborne contaminants near the sterile field.



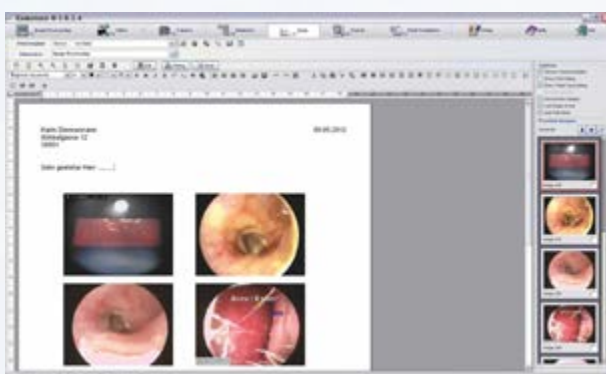


## Software for digital picture documentation & archiving

Endostore is a software package we developed especially for the use in digital image filing. The software is compatible to all versions of Windows. Endostore offers its user the possibility to organise, to file and to edit the accumulated data from different image producing devices, such as endoscopy cameras or photo cameras (i.e. for microscopy), much faster and more flexible than before. It also helps you to relate those data to the matching patient. Every image can be optimised for many different uses without altering the original image. The data can be optimised for a high resolution print reproduction and afterwards be used with different adjustments for patient files, in presentations or for the circulation of the data to the patient or colleagues.

If a video camera is connected to your PC, you can watch the live video feed on your monitor (max. HD quality). For the comfortable saving of the images it is possible to connect a foot switch to your PC. Because of the integrated data base an easy and effective filing of the recorded images is guaranteed.

The relevant data is kept small to ensure the intuitive use of the software so that the flow of work in your medical practice gets optimised.



Endostore offers basic digital image processing functions such as sharpener, colour correction, edge enhancement, histogram equalization and colour adjustment. If this is not sufficient in some cases, it is possible to save the images in file formats compatible to common image editing programs such as Adobe® Photoshop® for further image processing.

Of course the complete recording and filing is also possible in HD quality.

### ENT treatment unit BASIC PLUS

The BASIC PLUS line is built up around the ENT diagnosis and treatment unit which is available in three different widths. All versions may be used as a "stand-alone" system or may be extended as desired with additional modules (e.g. endoscopy centre, instrument cabinet, desk attachment, plateau etc.).



### ENT examination and treatment chair SIT 4

Use of high-quality materials and clear lines make this examination and treatment chair unique in both form and function.



**ENT treatment unit  
SMART**

The mobile ENT unit SMART has been designed to meet the requirements of the widest range of applications. It may be used for inpatient bedside treatment, in operating theatres, outpatient clinics and in private practices.



**Instruments and accessories**

Small instrument set ENT, economy





### AUDIO

The AUDIO is an advanced audiometer which permits the performance of all classical diagnostic tests, such as air conduction, bone conduction and speech audiometry.

### TYMP

An invaluable middle ear diagnosis by means of tympanometry and stapes reflex measurement is a standard procedure in a modern ENT practice. Otopront's TYMP meets all the technical requirements of an up-to-date middle ear analyzer: It works quickly and reliably and is remarkably easy to handle and care for in routine use.



### VARIO Water

This caloric stimulator has been manufactured for use in both clinics and GPs practices. The high degree of automation shortens the time consuming aspects of vestibular examination. The rest, count and irrigating periods can be set exactly, or else appropriately adjusted, using the automatic timer and logic system.



### DIGITAL 5

This ultrasound unit is an easy to operate and likewise user-friendly sinus echoscope with maximum sensitivity and noise suppression for diagnoses of the sinuses.

### VAC 18

The portable suction unit VAC 18 is designed for versatile use in hospitals, practices and home care. The unit operates very quietly and the smooth outer surfaces facilitate ease of cleaning.



### TE-OAE

As a world first, the Otopront TE-OAE is pioneering in the evaluation of otoacoustic emission measurements results. All measured data are classified according to signal statistic and signal dynamic features. The result is transmitted to an expert system in the form of parameter vectors.

### PES 2

The PES 2 represents a new generation of high-performance systems for endoscopic diagnosis. The combination of sophisticated camera technology and digital bit map memory lends innovative support to medical procedures.



### LED head light

The ultra bright and compact LED head light for powerful, co-axial illumination.



## SDM 60

The SDM 60 is a high-quality and easily-maintained examination microscope that can be used in the operating theatre. It is equipped with a floor stand and has three levels of magnification.



## SOM<sup>®</sup> 62

There are a variety of different floor stands available for the SOM<sup>®</sup> 62 depending on its application.



### **SOM® 32**

Except for ceiling mounting, the SOM® 32 is identical to the SOM® 22. The prerequisite for ceiling mounting is a stable concrete ceiling.

### **SOM® 22**

The SOM® 22 is the version for wall installation and for utilisation with ENT units. When used in combination with a column, this version can also be used for mounting on ENT units provided by all leading manufacturers.



## Showroom Operating Theatre



We offer the whole range of medical devices.



## ACENDIS SHOWROOM

Hannover

Get a first look at our range in our showroom in Hannover, Germany. Our specialised personnel will answer your questions and help you to find the right products for your project.



## Showroom Ultrasound and Endoscopy



We present the latest devices.

## ACENDIS SHOWROOMS

Germany

Visit our showrooms and those of our partners in Germany and Europe.  
We coordinate your appointments and accompany you to provide  
the ultimate in service, consulting and comfort.





## UltraView headlight

The UltraView headlight provides the surgeon with the ultimate in comfort, visibility and flexibility.

- Cordless technology
- Excellent visibility
- Lightweight and comfortable
- Three levels of brightness
- Consistent white light

