

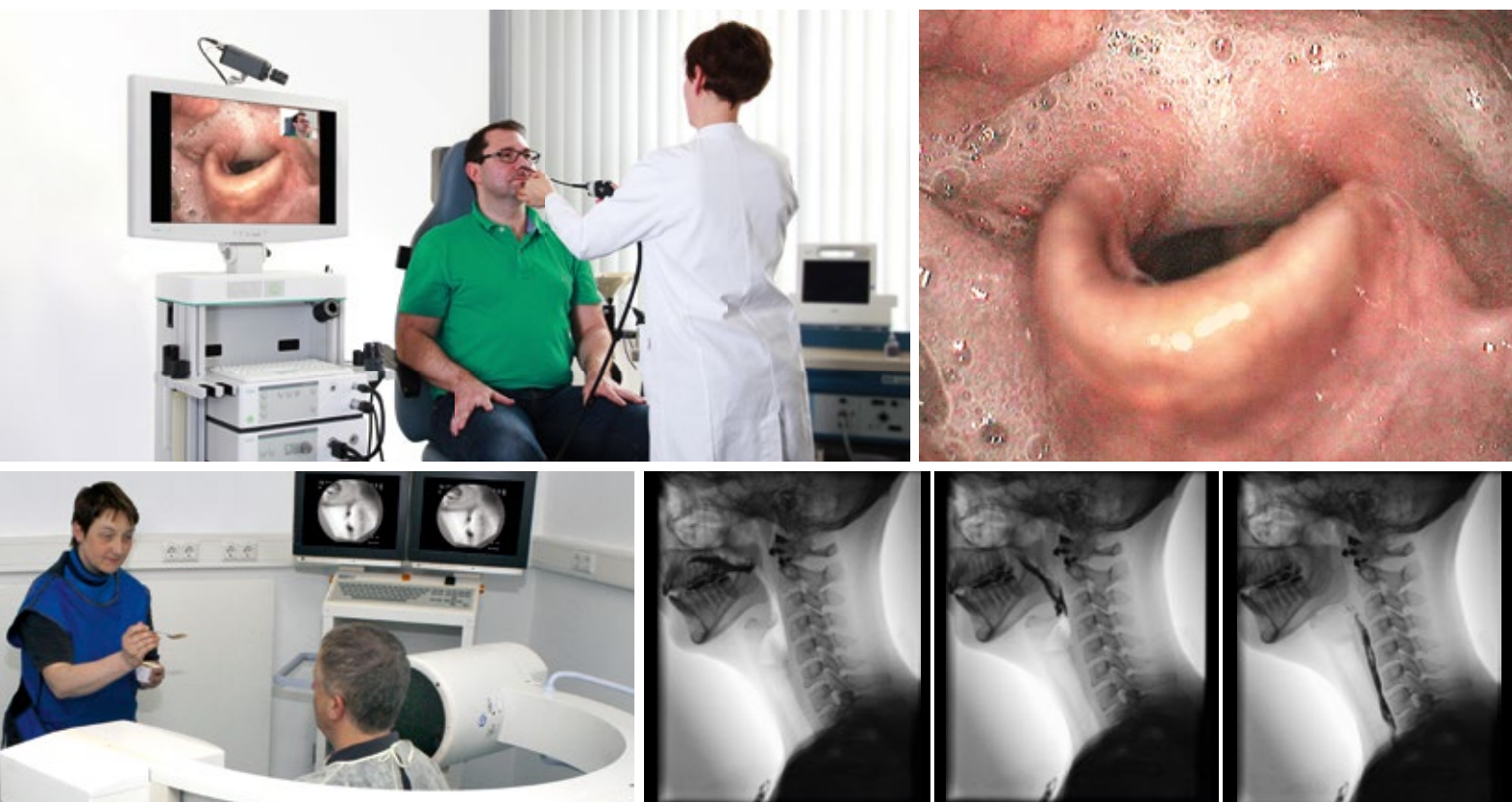
# Swallowing Diagnostics

The right system for every situation



*See more than others.*

XION's swallowing diagnostics systems do justice to very diverse areas of application. From bedside examinations with the mobile EndoPORTABLE or the easily manoeuvrable EndoCOMPACT to the versatile EndoSTROB and all the way to video fluoroscopic analysis with the MATRIX data station.



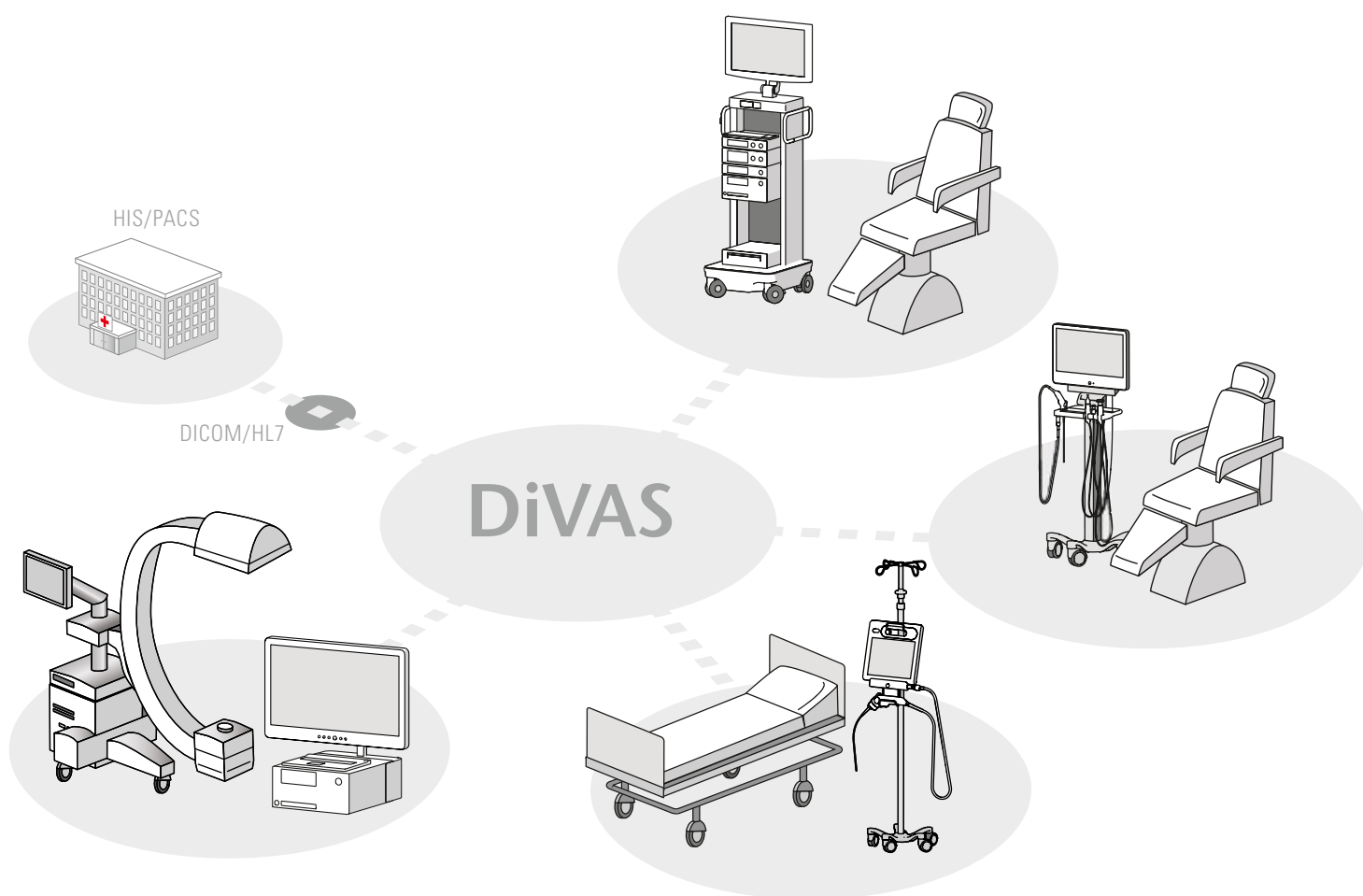
## At the bed, in the outpatient clinic and in radiology

The place and type of a dysphagia examination will vary according to symptoms and severity. This places demands on medical staff and medical technology. Our systems are designed for the widest range of examination situations – from temporary bedside applications in the stroke ward, to examinations in the outpatient clinic, all the way to video fluoroscopy.

## In close contact with daily hospital routine

XION's endoscopic systems have been developed on the basis of many years of experience and an intensive exchange with clinical users. We can thus produce technology that really helps users and is applied in leading hospitals worldwide.

No matter where the diagnosis is performed in the hospital – our system ensures the centralized storage of data so that it can be accessed and shared by the right offices. The multifunctional system optimizes workflow and facilitates uniform and efficient analysis of findings, documentation and reporting.



## DiVAS – the digital video archiving and analysis software

The modular DiVAS software is scalable from a mobile single user version to a network solution. All video, image, audio, and measurement data are centrally recorded, processed and archived. This is supplemented by a complete patient management system.

## DiVAS supports communication within the entire hospital

Integration into the hospital information system (HIS) and the picture archiving and communication system (PACS) is implemented by means of standard interfaces such as DICOM and HL7. Unrestricted communication and data compatibility is thus assured.

Lightweight, highly performant and featuring an abundant service life – the EndoPORTABLE is perfect for mobile applications. Together with the video nasopharyngoscope, it is quickly there where the patient needs it. The DiVAS software ensures easy handling and documentation.

### Quickly on site and ready for extended use

The powerful features of the EndoPORTABLE are particularly advantageous when speed is of the essence and access is not so easy: In stroke stations, on the campus of a university hospital, on the premises of a home for the elderly. The built-in rechargeable battery has a long life and thus ensures mains-independent operation. The EndoPORTABLE is used locally, and data is automatically synchronized with the central network. The DiVAS software acquires all data and assigns it to the respective patient records.





XION's ergonomic video nasopharyngoscope not only fits better in the user's hand, but makes the examination easier for all involved. With an integrated camera and light source in its handle, it is easy to use and transport; with a tube diameter of only 3.5 mm, the examination is less stressful for the patient.

**XION Video Nasopharyngoscope Ergo EV-NC**  
This easy-to-use instrument integrates optics, camera electronics, light source, microphone, and all control elements.

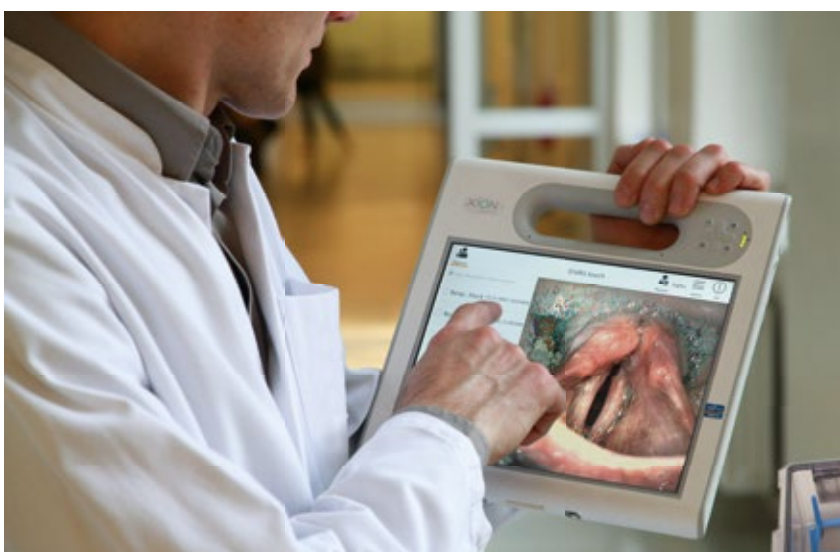
### Sterile container and sterile cover

The sterile container facilitates transportation of the sterile endoscope to the patient and safe return of the contaminated endoscope after its application.

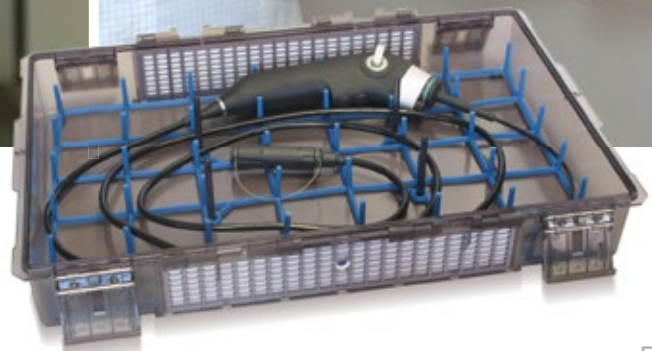
Sterile covers for the shaft of the video nasopharyngoscope are also available from XION.



2012



- Easy to attach, e.g. to an infusion stand
- 4 hours battery life, fast recharge
- Sterile cover for the XION Video Nasopharyngoscope
- Safe transport in the sterile container



The EndoCOMPACT is a mobile endoscopy unit for ENT. It can serve as a standalone or it can be integrated into the existing office facilities. Easily manoeuvrable, the EndoCOMPACT is ideal for swallowing diagnostics applications anywhere in the hospital.



EndoCOMPACT with

- Video nasopharyngoscope
- Video otoscope
- LED illumination head with microphone and compact camera

### Extensive functionality at a good price

Besides swallowing diagnostics, the EndoCOMPACT also supports stroboscopy and voice diagnostics. The system's good handling and excellent price/performance ratio are particularly noteworthy.



reddot award 2014  
winner



The EndoCOMPACT works as a mobile unit as well as part of the existing examination unit. A swivel arm and wall adapter facilitate a wide range of integration choices into the individual workday.

The EndoCOMPACT merges all the endoscopic devices needed for daily ENT routine into a user-friendly complete system. When a device is taken from its holder, it is automatically activated; when it is returned, the system performs a playback. The buttons on the handle provide easy control.



### Design and software that cut the workload

The ergonomic design and user-friendly software optimize the entire workflow: The number of control steps are reduced to a minimum, patient data is easy to manage. All video, image, audio and measurement data are recorded, archived and evaluated. Documentations such as medical reports can be generated automatically.



In addition to dysphagia screening and stroboscopy, the EndoSTROB system also supports all other endoscopic applications. The uninterrupted power supply ensures a high degree of mobility, while the DiVAS software facilitates live broadcasts, HIS and PACS integration, and ease of use.



## See more, diagnose with greater precision

The EndoSTROB offers photo and video data in standard and high definition – with highest colour fidelity and brightness, and a large range of contrast. The high quality of the images and the picture-in-picture function lead to better examination results. Together with the audio technology and the DiVAS software, swallowing diagnostics, endoscopy and stroboscopy are possible.

## XION trolley with intelligent control centre

The XION trolley combines its components into a coherent system featuring highest functionality. The central control, the powerful networking and the DiVAS software enhance workflow.

Integrated device holders and pre-heaters support a comfortable workflow. External devices such as surgical microscopes and additional monitors can be controlled through easily accessible interfaces. The isolating transformer with insulation monitor ensures safety.

- EndoSTROB with
- Video Nasopharyngoscope Ergo EV-N
  - EndoSTROB HD camera
  - MATRIX LED duo light source
  - MATRIX DS data station
  - XION equipment trolley



The EndoSTROB system is extremely user-friendly: The location of the buttons in the handle is ergonomically ideal, and the reduction to a single cable also facilitates easy handling. XION's patented light intensity control excludes burns.



### XION Video Nasopharyngoscope

Flexible video nasopharyngoscopes from XION deliver high-resolution images of impressive quality. Thanks to an ergonomic hand grip, image sensor with global shutter technology and an integrated microphone, they are particularly suitable for swallowing diagnostics and laryngostroboscopy.



### XION Video Laryngoscope

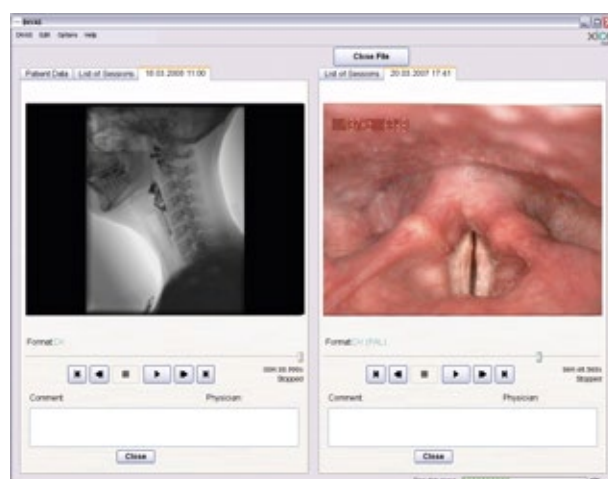
The sleek design significantly improves acceptance by the patient and thus also the results of the examination. All control elements for photo and video recordings are easily accessible with the thumb. The integrated microphone is located in a fixed position and therefore delivers reproducible measurement results.



Endoscopic and video-fluoroscopic methods for the diagnosis of dysphagia complement each other perfectly. DiVAS software support for both methods facilitates easy diagnosis and control.



XION MATRIX DS data station



**Split screen: view two recordings next to each other**  
Being able to compare two recordings ensures optimum assessment and follow-up, particularly with complementary diagnostic procedures VFSS and FEES.

## Video-fluoroscopic examination

VFSS (video-fluoroscopic swallowing study) and FEES (flexible endoscopic evaluation of swallowing) complement each other perfectly. The XION MATRIX DS data station acquires, processes, evaluates and saves not only endoscopic data, but also the video signals of the C-arm, both analogue as well as digital. The entire process of swallowing is thus recorded as a video using x-rays. The evaluation is processed by means of the video-fluoroscopy protocol and is handled by the DiVAS software.

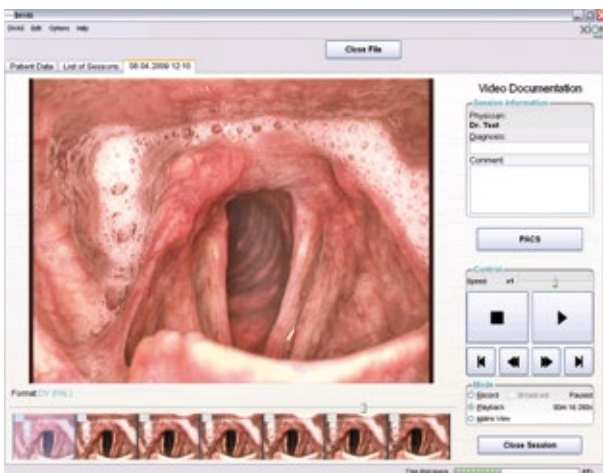
## Assess images easily with DiVAS

The DiVAS software provides tools for easily recording, archiving and evaluating video and audio sequences, individual images and measurement data. All data are collected automatically, a live display in full screen format is possible, and the cutting function is easy. Video and image data can be easily exported for treatment documentation, presentations, and training.

The intuitive user guidance of DiVAS software adapts to your workflow and makes reports clear and comparable. Together with the automatic plausibility checks, much time for diagnostic analysis and administration is saved.

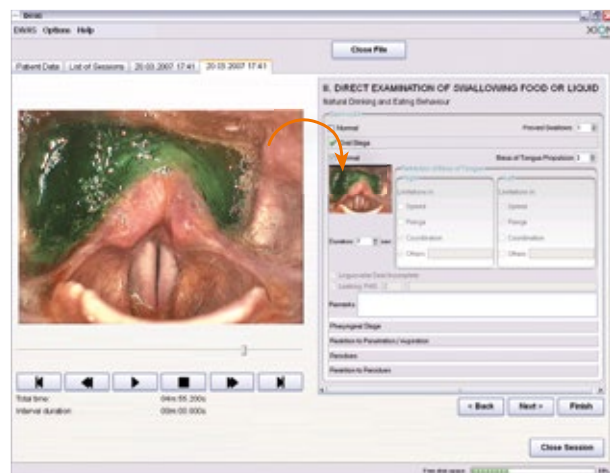
## Secure data capture and documentation: DiVAS logs and monitors

The recordings are saved in patient records as sessions together with the name of the examiner, session data and freely editable comments. For each parameter being assessed, the DiVAS software provides diagnostic lists about the physiology and pathology of the swallowing process. Appropriate criteria are selected with a mouse click, while individual additional information can be entered in text boxes at any time.



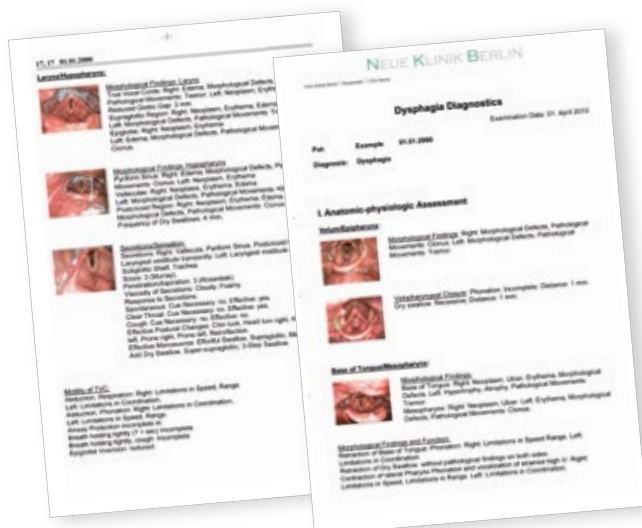
### Single-image accurate representation of the swallowing process

A slow-motion representation facilitates objective assessment and evaluation based on three criteria: 1. Changes in morphological structures, 2. Speed and coordination of the movement processes, 3. Proof of residues, penetration and aspiration.



### Simultaneously view examination and evaluation

The simultaneous presentation of the examination video and the evaluation makes analysis easier, saves time, and unifies the findings. Conclusive images can easily be dragged & dropped into the evaluation.



### Automatic documentation and reporting

By automatically generating a summary in the form of a medical report, all assessed parameters, the image material and the diagnostic results with individual remarks and therapy recommendations are comprehensively documented.

We see to your work.  
From the big picture to the last detail.



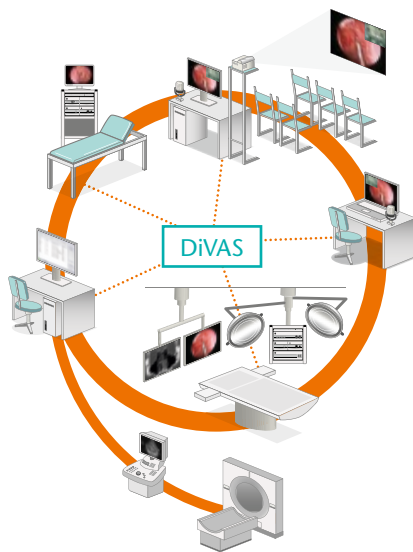
## Everything under control: The safe system with optimum handling

All modules of a XION system are perfectly matched to each other. Devices, optics and instruments form a unit that adapts to your way of working and supports your workflow. Technology from XION helps you to cope with the increasingly complex daily hospital routine.



## Everything in view: The information hub for your patient data

DiVAS software ensures valid, comfortable and fast diagnostic findings, their documentation and patient-related data storage. Your diagnostic and treatment data are recorded, analysed and archived. The modular design facilitates adaptation to your current and future needs. Your daily workflow is optimized and thus safer, so that you will have more time for your patients – now and in future.



## Everything in flow: The network that makes your hospital more efficient

XION systems can be networked and integrated into the HIS and PACS via standard interfaces (DICOM, HL7). All data are thus automatically, centrally and paperlessly stored. All video, image, audio and other patient data can be accessed from any workstation. Our live video conference system facilitates operating-room communication for second opinions or educational purposes. XION networks thus improve your workflow.

## Everything from one source: Endoscopy systems since 1991

XION develops and manufactures devices, endoscopes and instruments for ENT, arthroscopy, laparoscopy and hysteroscopy. In close cooperation with leading hospitals, XION creates practical and user-friendly system solutions. Well-established and interdisciplinary expertise in the fields of precision mechanics, optics, electronics and software are our basis for setting new standards in endoscopy. All products are manufactured at XION headquarters in Berlin, Germany and sold worldwide through an international network of branch offices and dealers.

