



P R E S S
Releases

Medica 2008

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Here we are again.....

We agree – there is a large selection of topics, and judging the true importance and novelty of a product can be difficult.

Join us for a different experience – you will not only find a competent contact person to discuss all the topics presented in the enclosed product information pages, but you can also experience the products and highlights live. You will get a glimpse of the »everyday life« of our instruments and systems, and you can take the opportunity to discuss the »hows and whys« with the experts.

Our exhibition program includes many novelties in a large variety of endoscopic applications. The KARL STORZ OR*chestrion* takes center stage, as an efficient O.R. management to optimize O.R. scheduling and to ensure more efficient information flow between operating rooms and hospital information systems.

Furthermore we will present the KARL STORZ OR1™. A modular system for the modern operating room that combines central control, digital documentation and data archiving, unlimited communication options and the latest innovations in medical technology – videoendoscopy, HD and telemedicine – in one unique conceptual design.

KARL STORZ Solutions GmbH, a company within the KARL STORZ Group, has solid and extensive know-how regarding systematic solutions for operating rooms and medical offices. We offer a tailored product and service portfolio, including competent consultation and financing.

You will find us in **Hall 10, at booth C22.**

Due to limited space availability, we will present new products to our clients in the LTU Arena. You can pick up an invitation at our main booth in Hall 10, booth C22.

Of course, we will also gladly send you additional information.

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Company Profile

Modern endoscopy has revolutionized medical diagnostics and surgical techniques. The name KARL STORZ has been closely linked with these developments. Established by Dr. med. h. c. Karl Storz in 1945, the KARL STORZ company – manufacturer of endoscopes and endoscopic instruments and units – celebrated its 60th anniversary in 2005. During these more than 60 years of resounding market presence, the company has evolved into a manufacturer known and appreciated worldwide for its quality and product innovations. From its headquarters in Tuttlingen (Germany), KARL STORZ has developed from a two-man business into a globally operating company. Today it employs more than 4,000 people worldwide, with more than 1,800 people alone working at the company's headquarters and production facility in Tuttlingen. Seven other production sites (in Europe and the USA) and 35 sales and marketing subsidiaries are located worldwide.

The corporate history of the family-owned KARL STORZ is an impressive example of how the company has succeeded over six decades to understand and identify the needs and requirements of customers and market trends and to implement these in terms of products and services by achieving technology leadership and by offering a comprehensive and adaptable range of endoscopic systems.

Taking a retrospective look at endoscopy, the method initially evolved from the fields of ear, nose and throat, bronchoscopy, urology and gynecology, eventually encompassing other specialties, in particular laparoscopy. Over the decades, endoscopy has been increasingly used in medical therapy. The term “minimally invasive surgery” was coined at the end of the eighties. This method is now widely used in many applications and various medical disciplines.

The early and promising focus on endoscopy by KARL STORZ began at a time when endoscopy was still at a very early stage of development. As early as 1953, Dr. med. h. c. Karl Storz designed and built his first endoscope, at that time still with the conventional optical system, and thus marked the beginning of endoscopy in his small business.

Working closely in intensive technical dialogue with leading physicians, the following decades saw the company inventing and developing products which decisively shaped and allowed the use of endoscopy in diagnosis and therapy to the extent we know today.

The early and pioneering inventions by Dr. Karl Storz – for instance, the extracorporeal electronic flash in 1956 and the cold light source in 1960 – set new and long-term standards for enhanced illumination and the resulting options of improved documentation.

1965 was the first year Dr. Karl Storz collaborated with the physicist Prof. Dr. Harold H. Hopkins. With the launch of the patented HOPKINS® rod-lens system, KARL STORZ was able to offer endoscopes in superior image quality and with brilliance, depth of focus, excellent resolution and true color rendition.



As early as 1966 KARL STORZ became active in the field of urology. In 1970, the company presented its ultrasound lithotripter, which allowed efficient and gentle stone fragmentation in the urinary system. In 1982, the automatically controlled high frequency electrosurgical unit AUTOCON® marked a breakthrough in transurethral resection, lowering the patient's current exposure by about 50%.

After the death of Dr. med. h. c. Karl Storz in 1996 Dr. h. c. mult. Sybill Storz took over the management as chief executive of the KARL STORZ group. Since then Dr. Sybill Storz proceeds the leadership in Research & Development and continues a successfully marketing strategy throughout the world. Since 1996 over 100 new patents could be registered and global turnover increased approximately by 15 – 20% each year.

The management of the family business has already been secured for the future. Karl-Christian Storz, Dr. Sybill Storz's son, has been responsible for various departments since 1996 and has been a member of management since 2005.

What began in the fifties and sixties as new techniques for improving illumination and documentation as well as creating previously unseen image quality, was pursued consistently in the 21st century.

Current product innovations include, for instance, the first fully digital camera platform IMAGE1™ (2002), the TRICAM® 3D imaging system (2003), bipolar resectoscopes for gynecology and urology (2004) and the transurethral operation simulator (2004).

Another key area of current development work is the complete OR solution OR1™, a unique concept for the integration of various techniques in the operating room. At the heart of the OR1™ concept is the direct central control of all surgical and peripheral devices via touch screen or speech control from within the sterile area. In this way, operating procedures are accelerated both before, during and after the intervention, and the risk of incorrect operation is reduced. An integrated digital recording system makes it easier to archive image, video and audio data from important operative procedures and results, both for patient documentation and scientific evaluations. Connection to the HIS (Hospital Information System) and PACS (Picture Archiving & Communication System) optimizes swift access to patient and image data.

The most recent invention is the IMAGE1™ HD (= High Definition) camera platform (2006). HD technology, known from the consumer product sector, also promises to be a qualitative breakthrough in endoscopic video documentation. It was for this reason that KARL STORZ developed a new video platform which allows the optimum use of HD technology: the new HD platform IMAGE1™ hub. This offers the user ultimate image quality for the ultra-precise rendition even of the finest tissue and vascular structures with the highest physical image resolution specified for HD of 1920 x 1080p pixels, equal to five times the image information available from today's PAL standard.



The potential of KARL STORZ in research and development lies in the fact that the company is capable of identifying trends and developments at a very early stage and implements these with its own intelligent approaches and solutions into successful products and systems. KARL STORZ accepts the crucial challenge of always keeping a finger on the pulse of current medical developments. The company continually provides fresh impetus, allowing technical innovations to be used for endoscopy or expanding the use of endoscopy into new and innovative fields.



Endoscopic treatment of peripheral nerve syndromes according to PD Dr. Kartik G. Krishnan

Endoscopic techniques are becoming more and more important in the surgical treatment of various syndromes. Continuous development and the availability of surgical instruments have resulted in the increasingly easy and fast performance of these techniques. In many surgical areas, minimally invasive techniques currently represent the gold standard; in other areas, they supplement open procedures for aesthetic reasons. The demand for minimally invasive surgical techniques is constantly increasing, especially in the area of peripheral nerve surgery.

Decompression procedures in solitary neuropathies should be based on the following guidelines:

- Decompression of all (including the potential) compression sites at the respective anatomical site
- Preservation of neural vascularity
- Facilitation of early mobilization of the associated joint

These goals are achieved in an elegant and safe manner with the minimally invasive endoscopic surgical technique developed by Dr. Krishnan. It permits viewing the structures to be manipulated and all of their branches and supplying vessels from a bird's eye view by using retractors and the appropriate 30° HOPKINS® II telescopes.



KRISHNAN retractors for peripheral nerve surgery



The retractors feature an ergonomic handle with integrated suction and are available in two sizes (8 mm and 15 mm). The endoscope is continuously adjustable and features excellent image quality. In addition, the entire system is autoclavable.

This technique offers the following advantages:

- Easy to handle and learn
- Permits treatment of all nerve compression syndromes, e.g., nerve decompression in the carpal tunnel, tarsal tunnel, cubital tunnel, Guyon's canal and supinator canal and treatment of meralgia paresthetica, lower thoracic aperture, etc.
- Permits transposition of nerves to a more favorable position, e.g., anterior transposition of the ulnar nerve
- No additional compression of the nerve canal during the decompression procedure (as opposed to the currently used ECTR)
- Constant monitoring of the respective nerve during manipulation
- Visual monitoring of the respective nerve branches and supplying vasa nervorum
- No risk of damaging the nerve during the procedure
- Short surgical time
- Reduced treatment cost
- Shorter hospital stay for patients (the procedures can be performed on an outpatient basis)
- Rapid patient recovery and return to occupational activities



More Highlights out of the Specialty Neuro-Endoscopy

In the past year KARL STORZ presented a range of innovative products that should be of interest to you as well.

Including:

- The new KASSAM / SNYDERMAN TAKE-APART® Bipolar Forceps
– Bleeding Management Techniques in Skull Base Surgery –
- “LOTTA™” Neuroendoscope
According to Prof. Dr. med. Schroeder for Intracranial Procedures
- Microinstruments for Neurosurgery According to Prof. Dr. med. Sepehrnia

For further details please visit our website at www.karlstorz.com.

In the section Human Medicine, Highlights, Neuro-Endoscopy you will find detailed information about above mentioned topics.



GELLRICH Bone Preparation Block

The bone preparation block is an important instrument in the preparation of bone transplants for reconstructive bone surgery. It can be used for modifying corticocancellous transplants from the iliac crest and the inner or outer table of the calvaria, or small bone transplants from the jaw regions themselves.

For small transplants from the jaw, both simple block shapes from the retromolar or chin region and complexly curved bone transplants, e.g. from the alveolar ridge, are used.

Until now it was a clinical problem to make sliding holes or countersunk holes for a screw head, or to divide or smooth transplants in such a way as to avoid any risk of injury to the surgeon. The advantages of the bone preparation block are that it permits controlled, safe preparation of a bone transplant and that the water used for cooling can be easily removed by suction. Furthermore, this instrument requires only simple care and maintenance.





More Highlights out of the Specialty Oral and Maxillofacial Surgery

In the past year KARL STORZ presented a range of innovative products that should be of interest to you as well.

Including:

- ERLANGEN Miniaturendoscope
- UNIDRIVE® OMFS
The Multifunction Device for Oral and Maxillofacial Surgery

For further details please visit our website at www.karlstorz.com.
In the section Human Medicine, Highlights, Oral and Maxillofacial Surgery you will find detailed information about above mentioned topics.



ENT

The new complete demountable forceps series „SinuFIT“ and „LaryngoFIT“ of KARL STORZ

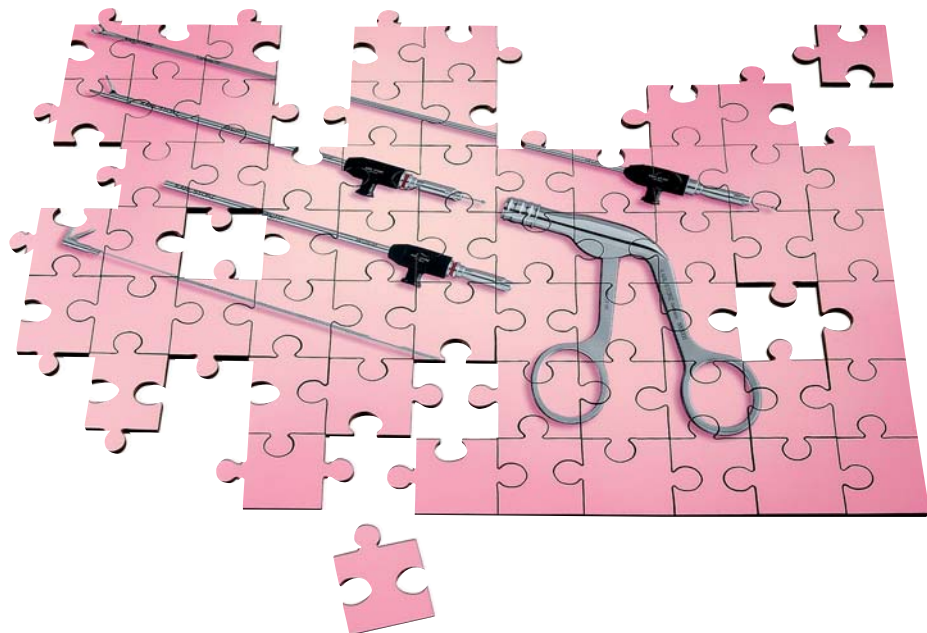
Do you think your instruments are not clean after sterilization?

You can forget these doubts confidently because KARL STORZ has brought the area of instrument hygiene with an innovation to perfection. With the use of the worldwide first demountable ENT forceps series „SinuFIT“ and „LaryngoFIT“, you can be sure that your instruments correspond to the highest level of disinfection.

The forceps series „SinuFIT“ and „LaryngoFIT“ are effortless to disassemble and therefore easy clean. After cleaning the parts of the instruments, they can be easily reassembled.

The ergonomic design makes it possible to do long operations and they give you the tactile feedback you already know from KARL STORZ instruments. Due to the fine and accurate jaws, it is possible to work easily in the finest parts of the human body.

Another important point is the efficiency. Because you can combine all handles, outer sheaths and inserts so that you need less handles than working elements. This will bring you economical benefits – less costs but improved quality.





The second Generation of the KARL STORZ LED Technology

KARL STORZ has succeeded in optimizing again the already existing LED Technology. Due to intensive research in this field, a significant enhancement of the system was possible. This new technique allows nearly twice the amount of light intensity than before.

Look and see.

Because of the new LED Technology we can offer more without changing the existing external characteristics. Thanks to new LED technology, energy consumption is considerably lower than with conventional headlights. Furthermore there is no need to change lamps any more as LEDs have a significant longer service life (50,000 hours). The battery-operated version uses ordinary 3-Volt batteries; a rechargeable version is available as an alternative, and uses a durable Li-Ion rechargeable battery.

The updated LED Technology is integrated in LED headlights, in the battery light source for rigid and flexible endoscopes as well as in the mobile stroboscope μ -PULSAR from KARL STORZ.





ENT

More Highlights out of the Specialty ENT

In the past year KARL STORZ presented a range of innovative products that should be of interest to you as well.

Including:

- The New Otologic Surgery Simulation System
- KARL STORZ Surgical Cockpit Navigation Panel Unit (KSSC NPU)

For further details please visit our website at www.karlstorz.com.

In the section Human Medicine, Highlights, Ear, Nose, Throat you will find detailed information about above mentioned topics.



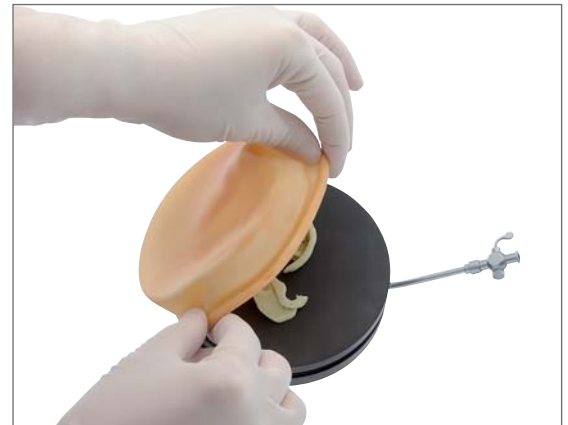
Auricle Reconstruction acc. to FIRMIN

Auricular reconstruction is one of the most complicated procedures in reconstructive surgery due to the difficulties in imitating the shape of the auricle. The result very much depends on the harmonious contours of the reconstructed auricular framework. Autologous rib cartilage is frequently used for the reconstruction. The major advantage of this method is its very natural cosmetic and functional result.

KARL STORZ has developed special instruments for auricle reconstruction together with Dr. Françoise Firmin from Paris.

For training purposes KARL STORZ has developed a special training model in collaboration with Dr. FIRMIN of Paris to facilitate training the complicated auricular reconstruction. This model permits the step-by-step reconstruction of an auricle from cartilage substitution material.

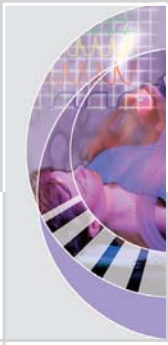
The training model consists of a round base plate connected to a mechanical suction cup that is controlled via a syringe. The auricle is reconstructed from the polystyrol foam plate with the instruments specially assorted for auricular reconstruction and also recommended by Dr. FIRMIN.



After the auricle is crafted, its aesthetics are assessed. A vacuum system is employed for this purpose. The auricle crafted from cartilage substitute is placed on the base plate and covered with a rubber diaphragm; the vacuum draws the rubber diaphragm over the artificial auricle.

The aesthetics of the crafted auricle can thus be reviewed under a taut layer of skin. This is ultimately necessary for testing the aesthetic quality of the prepared auricle.

KARL STORZ offers suitable instruments as well as a training model for one of the most difficult procedures in plastic reconstructive surgery.



The C-MAC Video Laryngoscope System

Based on 10 years of experience in the field of video laryngoscopy and more than 60 years of experience in endoscopy, the KARL STORZ C-MAC is the result of uniting various technical disciplines. Strict attention was paid to the actual market needs, such as hygiene, mobility, universality, robustness and system integratability in the future. The system was designed for both routine hospital use in the OR, intensive care and the emergency room and for pre-hospital use in road and air ambulances.

The KARL STORZ C-MAC system features a total weight of less than 1.5 kg and a battery life of more than 2 hours (corresponding to approx. 200 intubations). Powerful, rechargeable lithium-ion batteries are at the core of its smart power management.



The system is ready to use within a few seconds. The laryngoscopes are made from stainless steel and feature the well-established ergonomic handle, which permitted further optimization of the blade height.

The laryngoscopes have been significantly flattened at the proximal end, resulting in major additional ergonomic advantages during use. The blade shape corresponds to the English Macintosh blade size 3 and 4 and thus exhibits a curvature of approx. 60°. The laryngoscope corresponds to the European closed version and thus meets the strictest hygienic demands. The CMOS chip angle of view is approx. 80°. Illumination consists of a high power LED. Its warmth practically prevents fogging of the telescope. The blade tip can always be seen during use for optimal navigation. Freeze-frame images and video sequences from the laryngoscope can be stored.

The monitor is made of impact-resistant ABS plastic and is splash-proof (IP41); the connectors are located on the back side such that they cannot be knocked off, and additional accessories can also be attached here via the VESA 75 standard. The monitor is characterized by its high speed with a resolution of 800 x 640 pixels. The data are stored on a SD CARD both in JPG and MPEG 4 format. Menus are not required.

In the future, additional components can be connected via the E module. The system can be stored in cordura-like material and thus meets the customary pre-hospital standard.



Endoscopic Radial Artery Harvesting

The use of the radial artery in myocardial revascularization has shown better clinical results, greater transplant patency and fewer late cardiac events compared to the great saphenous vein.^{1,2} Since the rediscovery of the radial artery as a second-choice vessel in arterial myocardial revascularization, its endoscopic harvest has been the subject of great interest, in hopes of realizing the same advantages as in endoscopic vein harvesting.

The endoscopic technique for harvesting the radial artery offers the following advantages compared to the open procedure:

- Fewer neurological complications
- Fewer wound complications
- Fewer wound infections
- Fewer hematomas
- Superior aesthetic results

In addition, patients are more satisfied with the endoscopic technique, especially with the length of the surgical wound, as compared with the conventional procedure.

Special characteristics of the BISLERI endoscopic artery retractor:

- Autoclavable, stainless steel instrument
- HOPKINS® II, 45° endoscope for optimal visualization of the surgical field
- Ergonomic handle
- Special design of front and back side
- Special channel for smoke evacuation or CO₂ insufflation
- Tunnel-like design

In this new retractor system, the name KARL STORZ once again stands for gentle patient care, reusability and cost reduction.



¹ ACAR C, et al., Revival of the radial artery for coronary artery bypass grafting. Ann Thorac Surg. 1992; 54: 652-60

² MUNERETTO C, BISLERI G, ET AL. Left internal thoracic artery-radial artery composite grafts as the technique of choice for myocardial revascularization in elderly patients: a prospective randomized evaluation. J Thorac Cardiovasc Surg 2004; 127: 179-84



The 5 mm HOPKINS® II Large Format Telescopes and FULL HD in Thoracic Surgery

With the introduction of video-assisted techniques to modern surgery, the gradual renaissance of thoracoscopy began in the 1980s. Separate-lung and one-lung ventilation combined with video-assisted surgical techniques allow nearly all intrathoracic procedures to be performed via minimally invasive, video-assisted thoracoscopy.

Despite all these advances, postoperative pain, largely caused by camera and instrument trocars, remains a big problem in thoracoscopic procedures. KARL STORZ's 5 mm HOPKINS® II large format telescopes with their renowned excellent display even in the smallest devices are a key part of the triumph of video thoracoscopic surgery, as they combine in an ideal manner the advantages of thoracoscopic surgery with the necessary reduction in trocar sizes to minimize postoperative pain. They are offered in 0°, 30° and 45° angles of view.

The 5 mm HOPKINS® II large format telescope instruments are complemented by screw-on metal trocars in 4 cm, 6 cm and 8.5 cm lengths, permitting problem-free telescope gliding thanks to their small outside diameter and at the same time preventing much-feared trocar dislocation.

The mentioned excellent imaging with the 5 mm HOPKINS® II large format telescope together with the advantages of High Definition (HD) technology offers the highest standard in image input and display. The up to 6-fold greater input resolution of the cameras achieves greater detail and depth of field, and the 16:9 format enlarges the viewing field during image generation and is proven to enhance ergonomic viewing. The images' brilliant colors optimize the evaluation of findings.

Moreover, the lateral view is broadened by 32% when retracting the endoscope, while maintaining the same magnification as a standard system; in this manner, potential vertical information loss is restored and the lens stays clean.

Progressive scan in the KARL STORZ 1080p HD system ensures an extremely steady image without flickering or noise.

KARL STORZ FULL HD with the highest available image resolution of 1920 x 1080 pixels – the new standard in imaging endoscopy.





Instrument set for Video-Assisted Thoracoscopy (VAT) according to LINDER and HÜRTGEN

High-quality instruments that are geared to their specific purpose afford smooth and complication-free minimally invasive operations. At the same time, the instrument set should be manageable for the operator and the surgical instrument technician and render frequent instrument changes during an operation unnecessary.

The new video-assisted thoracoscopy set according to LINDER and HÜRTGEN was developed to fulfill these requirements and facilitate the performance of all common surgeries.

Flexible trocar cannulas allow the problem-free insertion of angled instruments. A thread profile on the sheath's exterior secures the position of the port cannula in the chest wall. The flexible sheaths only need to protrude slightly into the thoracic cavity without unintentionally slipping out. Blunt trocars are obligatory and prevent injury to a lung that is not completely collapsed or to intercostal vessels.

Angled instruments increase the reach of the instrument tip given the rigidity and special geometry of the thorax. To ensure low frictional resistance and a direct coupling of the handle and the jaws, the angle was moved to the instrument jaws, resulting in a straight shaft design.

The non-insulated handle of the grasping forceps has integrated ABSORBER1™ geometry. Increased closure of the handle increases the closing force at the instrument jaws slowly and gradually. This protects the tissue and allows the application of a more precise amount of force than conventional handles.

The size, profile and shape of the jaws are all designed to accommodate the sensitivity of the lung tissue and the specific needs of the thoracic surgeon. In addition to the double curved parenchymal forceps employed for lung wedge resection in the widely used three-port technique, a single curved parenchymal forceps allows insertion parallel to the stapler when using the two-port technique.





Flexible Video Endoscopy for Gastrointestinal Endoscopy

KARL STORZ flexible videoscopes permit gastrointestinal endoscopic examinations in an optical quality close to that of analog laparoscopy telescopes. The extensive product line includes flexible video gastroscopes, video colonoscopes and video sigmoidoscopes, as well as the sophisticated video duodenoscopes. The latter include a removable and sterilizable Albarran mechanism for enhanced cleanability and increased patient safety.



These products benefit all physicians working in gastrointestinal endoscopy, such as gastroenterologists, internists and surgeons specializing in gastrointestinal endoscopy or simply using it intraoperatively – including physicians working in private practice and in clinics.



An extremely compact video gastroscopy system: videoscope with video processor, cold light source, high-resolution TFT monitor, the digital documentation unit AIDA COMPACT II and the UNIMAT® 30 suction pump.

A proven video processor series, TELECAM®, offers enhanced imaging. Additionally, IMAGE1™ video processors and the IMAGE1 HUB™ that has compatibility for both, standard and high definition video equipment. Combined with the 16:9 HD monitor, laparoscopic and gastroenterologic images can be illustrated simultaneously. This feature offers superior advantages in hybrid procedures and in new operation techniques such as NOTES. The new Xenon light source, XENON 100 SCB, additionally enables the control in modern OR1™ operation room systems and also stands out with an ideal illumination.

The unique GASTRO PACK™ is a compact unit consisting of a light source, processor, monitor and documentation system, which can be used flexible in diverse applications. The mobility of the system ensures, that it can be used practically anywhere and wherever you like, such as right at the patient's bed.

Additionally new in the program: UNIMAT® 30 suction pump.

Ergonomic improvement due to less noise and less vibration. The UNIMAT® 30 is very powerful and suitable for medical use in the hospital, clinic and practise.



NOTES – Natural Orifice Transluminal Endoscopic Surgery

When the results of the first laparoscopic appendectomy were published in the early 1980s, there was some outrage in surgical circles. All tried and tested principles of open surgery seemed to have been questioned. Today, minimally invasive "keyhole surgery" is already the surgical standard. One or two telescopes and various additional trocars for instrument access permit even complicated procedures.

For the past few years, we have experienced the next step from minimally invasive surgery toward scar-less surgery via the use of natural orifices as accesses to the intraperitoneal space. The basic idea or goal of this development is to perform necessary procedures on abdominal organs using one or several endoscopes and reaching the abdominal cavity via a section of the gastrointestinal tract, transvaginally or even transvesically, rather than employing one or several incisions through the abdominal wall. Potential advantages of these procedures include the decreased surgical trauma with shorter postoperative healing times, no risk of incisional hernias, cosmetic reasons (no scars), reduced infection risk, and the opportunity to perform procedures on very obese patients.



The term NOTES was only coined a few years ago. By now, working groups such as NOSCAR, EURO-NOTES and D-NOTES have been established via the various American and European professional societies to coordinate further development. KARL STORZ participates in developing the respective products – depending on the access type - and implements the ideas generated in the working groups that are led by physicians. Many questions remain open. They relate to technical prerequisites, training concepts and opportunities and the question of assigning it to specific specialty areas. The current approach is intentionally interdisciplinary.



NOTES is only in its infancy. Major efforts are still required to significantly improve technical conditions. This is a particular challenge for industry to develop suitable endoscopes and new instruments for these surgical techniques in collaboration with physicians.

As a specialist for all types of endoscopes and minimally invasive medical products including flexible video endoscopy, KARL STORZ GmbH & Co. KG has focused on attending to this development for the past several years and intensively supports research on this topic. Initiatives have been founded world-wide to develop procedures and instruments for the transgastric, transvaginal, transvesical and transrectal approaches in close collaboration with the innovative family-owned company KARL STORZ. Facilitated by broad technological competence and many years of project experience, future solutions for NOTES applications are being developed in practice-oriented collaboration with interdisciplinary teams of medical experts.

However, since teaching and learning these techniques are definite challenges as well, the company also aims to promote training and continuing education in this area. The internationally renowned IRCAD Institute in Strasbourg, France, is exemplary, and its support is of primary concern. The same is true for other training centers that are being established. In addition, a research fund to support innovative NOTES research has been established.

In addition to the so-called “pure” NOTES idea to avoid any abdominal incision, Single Port Surgery, which uses the navel as an access, is also being developed in clinical application. In addition, the combined transvaginal, transumbilically supported removal of the gallbladder with rigid instruments has also been implemented in daily clinical practice.



“Easy Check” fetal blood analysis set according to OPPELT

The Easy Check fetal blood analysis set provides obstetrical facilities with an instrument permitting easy and safe drawing of small amounts of blood from the baby's scalp during birth. This set renders complicated instrument changes in difficult obstetrical situations unnecessary. The instrument is characterized by simple, one-handed operation and optimal illumination of the fetal scalp. An LED battery light source or a cold light source provides the needed illumination.

After an incision in the fetal scalp using a scalpel integrated in the instrument, a blood drop is collected in the integrated capillary tube. This blood sample is then examined in terms of pH value and oxygen content.



Special features:

- Increased fetal safety due to the scalpel's limited insertion depth
- Optimum illumination of the fetal scalp and the capillary tube
- Easy and one-handed operation
- Tiny shaft diameter
- Autoclavable



We recommend a combination of the fetal blood analysis set itself, a LED battery light source, which is screwed onto the proximal end of the fetal blood analysis set, a capillary tube and a scalpel, which both attach to the distal end of the instrument.

Alternatively, the Easy Check fetal blood analysis set according to OPPELT can also be used with a cold light source via a light cable.

A battery light source can also be employed via a light cable, but this does require an adapter between light source and light cable.



Ductoscopy

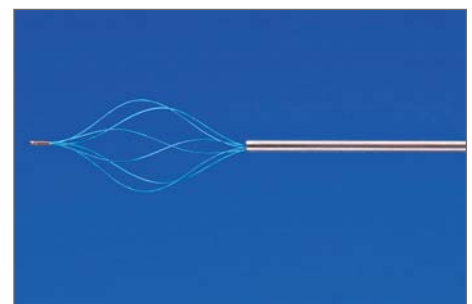
Secretion from the mammary ducts is considered a common associated symptom in breast disease. Therefore, there are a number of diagnostic procedures for closer examination, e.g. mammography, galactography or open biopsy. Ductoscopy could also play an increasingly important role in the context of early detection of breast cancer.



So-called ductoscopy or galactoscopy (breast duct endoscopy) refers to the endoscopic assessment of the mammary ducts. It is currently used for supplementary diagnostics of the female breast.

In this method, the mammary ducts of the female breast are optically examined and suspicious tissue is removed, if applicable, using small-diameter mini-endoscopes. Via the exact imaging and the option of targeted sample removal under view, surgical procedures, e.g. open biopsies, can be reduced to a very small area or ideally completely avoided in this minimally-invasive method.

The examination can be conducted under local or general anesthesia. Especially when conducting the procedure under local anesthesia, ductoscopy could represent a valuable addition to minimally-invasive diagnostics of the female breast.



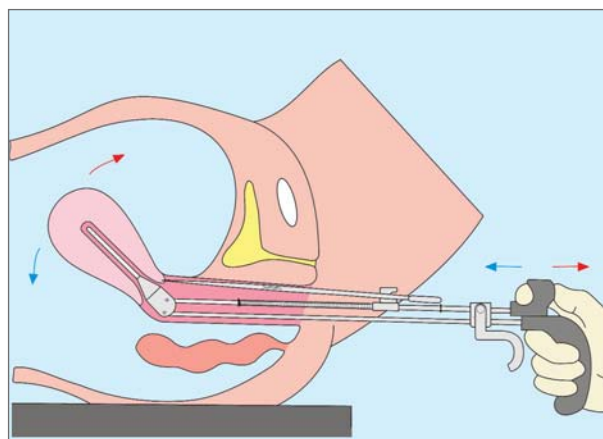


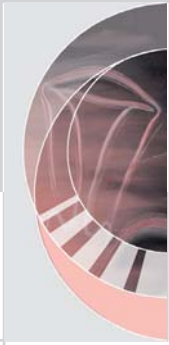
Uterus manipulator according to TINTARA

The removal of the uterus or hysterectomy is the most common surgical procedure in gynecology. Laparoscopic hysterectomy techniques, i.e. uterus removals using endoscopic procedures such as total laparoscopic hysterectomy (TLH) and laparoscopic supracervical hysterectomy (LASH), are becoming more common. They increasingly replace traditional abdominal hysterectomy (AH), the removal of the uterus using an abdominal incision. In addition, procedures such as laparoscopic adnexal surgery and diagnostic laparoscopy are becoming increasingly important.



The key to all these procedures is a special instrument called uterus manipulator. It creates the tension required for anatomic surgery, mobilizes the uterus and provides good visualization of the surgical field. Furthermore, some manipulators offer a chromopertubation option. This permits the examination of the patency of the oviducts via injection of a colored solution (methylene blue) into the uterine cavity. This procedure is largely performed in fertility patients.





Thus, a good uterus manipulator must meet the following requirements:

- Multifunctionality
- Universal use
- Ergonomic design and
- Easy handling and cleaning

The uterus manipulator according to TINTARA by KARL STORZ combines all these characteristics in one instrument.



More Highlights out of the Specialty Gynecology

In the past year KARL STORZ presented a range of innovative products that should be of interest to you as well.

Including:

- Bipolar Resectoscope
- ROTOCUT™ G1 – The new generation of morcellators!

For further details please visit our website at www.karlstorz.com.

In the section Human Medicine, Highlights, Gynecology you will find detailed information about above mentioned topics.



**One step ahead again...
On the road to the sterile dimension with KARL STORZ**

KARL STORZ is the first endoscope manufacturer to offer an innovation that inhibits instrument colonization by bacterial pathogens - with guaranteed long-term effect.

The new SILVERscope product line includes the flexible video cystoscope with high-resolution chip in the endoscope tip and all flexible cysto-fiberscopes.

SILVERscope – what is that?

Cavities such as flexible cystoscopes' working channels are hard-to-reach areas for cleaning, disinfection and drying because of their small size.

The antimicrobial and biocompatible coating of the working channels of flexible KARL STORZ cystoscopes leads to proven reduction in bacterial contamination. The targeted and dosed release of the silver ions present in the working channel causes the desired antimicrobial effect in the moist environment, counteracting microbial growth in the endoscope.



Take the challenge to meet hygiene standards and increase patient safety together with KARL STORZ.



Why make do with less information?...
The KARL STORZ video cystoscope

The clear advantages of the optical system, such as ergonomic handling and a better overview through full image view, render the video cystoscope a multi-purpose instrument meeting highest demands in the hospital and the medical office.

In addition to conventional cystoscopy, the inspection of the kidney is another application area. A sealing adapter developed especially for this purpose is fixed onto the shaft of the nephroscope prior to introduction of the video cystoscope into the renal anatomy; it prevents the unwanted escape of fluid at all times.

KARL STORZ always offers solutions tailored to your needs...

The enhanced compatibility of the flexible video cystoscope allows you to link it to the TELE PACK™ mobile documentation unit, the analog camera control unit TELECAM® SL II or to the high-resolution digital IMAGE1™ video platform.





KARL STORZ's Complete Solution for Urinary Calculus Therapy

Complete solutions from KARL STORZ, including mutually compatible units and instruments, simplify daily clinical routine and offer the user a wide treatment spectrum with optimized material usage.

The units:

KARL STORZ offers you a 10W Holmium specially designed for lithotherapy: This is a YAG laser, which is also excellent for soft tissue application. The ultrasonic system (CALCUSON™) and the pneumatic system (CALCUSPLIT™) complete the stone fragmentation product range.

The instruments:

Based on indication and selected type of lithotherapy, KARL STORZ offers the appropriate instruments for cystoscopy, uretero-renaloscopy and percutaneous nephrolithotomy.



The FLEX-X 2 flexible uretero-renaloscope

The flexible uretero-renaloscope FLEX-X 2 efficiently supports lithotherapy, even in the hard-to-reach lower renal calices. Some of the features rendering this endoscope unique include the very small sheath size of 7.5 Fr., the torsion-proof shaft and the distal tip's protection against potential thermal damage from laser applications.



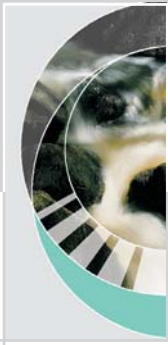
The new small-diameter uretero- renoscope

A new addition to the product range is the rigid uretero-renoscope measuring only 7 Fr. at the distal tip. Despite its small size, the user is always guaranteed an optimal endoscopic image, even in laser applications, thanks to the separate irrigation channel and the first-rate fiber optics system.



In the area of percutaneous nephrolithotomy, KARL STORZ offers an innovative solution with the new miniature PCN system, which can disintegrate stones in combination with CALCULASE™ or other lithotripsy systems. Stone fragments can even be extracted without the use of auxiliary instruments (forceps, stone baskets, etc.).



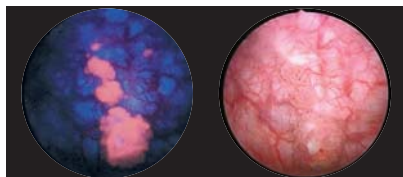


Photodynamic Diagnostics (PDD) of Carcinomata of the Bladder

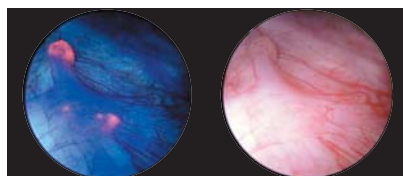
In 1995, KARL STORZ achieved a milestone in urology when introducing the PDD system for the early detection of carcinomata of the bladder. The PDD system developed by KARL STORZ was used in all studies for the European licensing of Hexvix®.

With continued advancements and KARL STORZ's efforts to promote technologies that benefit patients and care providers, the KARL STORZ PDD system has become the most frequently used system for photodynamic diagnostics of carcinomata of the bladder. The system consists of several components designed to work together: The powerful light source (D-Light C), in connection with a suitable fluid light cable, special endoscopes and a 3-chip endoscopic camera, which represents the newest KARL STORZ development in this area and which is characterized by much greater light sensitivity and excellent color contrast, as compared with other 1-chip and 3-chip cameras available on the market.

Several clinical studies have demonstrated that the use of PDD reduces the rate of recurrence in tumor patients by approximately 30%, when compared to conventional cystoscopy and bladder carcinoma resection. This significantly improves the treatment of carcinomata of the bladder.

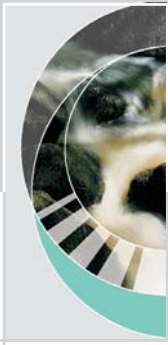


Exophytic tumors of varying sizes (pTaG1)



Small exophytic tumor with small satellite tumors





Pediatric Urology: Covering the Entire Treatment Spectrum with two Systems

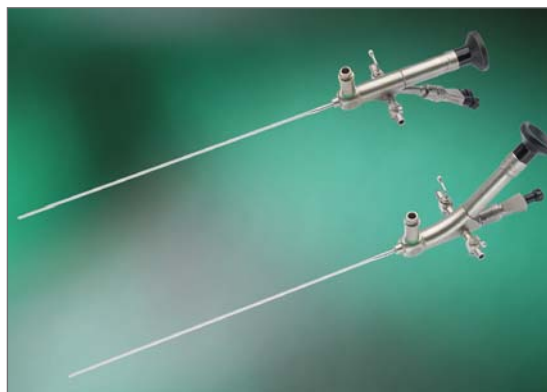
Children are special, and they pose special challenges, as well. The KARL STORZ pediatric instruments meet the requirements of the latest procedures: delivering smaller instruments and reduced postoperative pain. KARL STORZ offers an exceptional selection of pediatric instruments for diverse indications.

The thin pediatric system covers the entire treatment spectrum in the lower urinary tract, including cystoscopy, urethrotomy, resection, as well as the treatment of vesicourethral reflux.

The use of only one telescope for the entire range of procedures and of one working element for both urethrotomy and resection render this system particularly attractive economically as well.



Its small shaft diameter increases patient comfort. For optimal treatment results, particularly in cases of vesicourethral reflux – the major indication in pediatric urology – the thin pediatric system includes a special reflux shaft, which permits precise targeted guidance of reflux needles.



The new pediatric uretero-renaloscopes expand the KARL STORZ product range in the area of pediatric urology and permit diagnosis and therapy of the upper urinary tract, as well.

Its small external diameter and stepless shaft shape result in less patient trauma. Together with its outstanding optical quality, this renders the pediatric uretero-renaloscopes a success for both the operator and the patient.



Documentation in the Field of Proctology – a hot Topic for Offices and Clinics

Approximately 50% of all adults are suffering at least once in their lifetime from a colorectal disease with corresponding pathology. By having a detailed analysis of the patient, the disease can be pinpointed and a first diagnosis can be made. KARL STORZ hand instruments for diagnostics and therapy of proctological disease are not only robust and easy to maintain – innovative solutions also allow the documentation of every clinical case.

With the PROCTOVISION® and RECTOVISION® System it is possible to have the documentation of each important step of the examination or the therapy standardised in all proctological as well as in rectoscopic examinations.



Dokumentation terminal TELE PACK™ with PROCTOVISION®
and RECTOVISION®

With simple handling these systems allow a detailed information of the patient and are also an important and effective tool when it comes to teaching and training of clinical fellows. By using the huge working channel you will have e.g. the possibility of using a rubber band ligation device with simultaneous video endoscopic documentation.



Cold light fountain LED NOVA™ 100

With our compact and multifunctional documentation terminal TELE PACK™ or the new cold light fountain LED NOVA™ 100, especially developed by KARL STORZ for the use in the field of proctology, you are very well equipped for proctological or rectoscopic cases.

The LED NOVA™ 100 cold light fountain convinces with the compact and lightweight construction and with an extremely long lifetime of the lamps (23 000 hours). As no more ventilation is needed for cooling there is absolutely no noise during the production of the cold light with a colour temperature of 5600 K.



More Highlights out of the Specialty Proctology

In the past year KARL STORZ presented a range of innovative products that should be of interest to you as well.

Including:

- KARL STORZ Video Surgical Rectoscope
For Transanal Endoscopic Operations (TEO™)
The Method of Choice for the Minimally Invasive Removal of Rectal Tumors

For further details please visit our website at www.karlstorz.com.

In the section Human Medicine, Highlights, Proctology you will find detailed information about above mentioned topic.



SHOULDER PRO Suture System

For an efficient suturing of soft tissue, especially in shoulder arthroscopy, we offer you a suture system that can be universally used – the SHOULDER PRO suture system. This new and patented suture system optimally meets your requirements.



The newly designed suture attachments offer the best available suture shutteling. In combination with the wheel for shutteling mono- and multifilament threads of the size USP0 up to USP2, the SHOULDER PRO suture system is one of the most reliable and simplest systems.

The selection of different suture attachments with several distal angles offers you the possibility of performing precise sutures in every arthroscopic shoulder surgery.





New Instruments for Shoulder Surgery SHOULDER PRO Series

In cooperation with well known surgeons a new series of hand instruments has been developed in order to complete our portfolio of instruments for shoulder surgery.



The new hand instruments for the shoulder surgery are characterised by an additional bending at the distal end of the sheath. Therefore the modification of this distal end provides an enlarged operating range in the joint to the surgeon.

With a little dead weight and an ergonomic formed short handle, the instruments are unbeatable in handling.

Beside the Elevatoriums and standard raspatories, the SHOULDER PRO Series also provides a bilateral hewed rasp. Hence this bilateral hewed rasp combines a Glenoid- as well as a S.L.A.P. rasp in one instrument.

The SHOULDER PRO line of hand instruments meets all the requirements of a surgeon for shoulder arthroscopy.





PRO LINE Shaver Blades for the POWERSHAVER SL

In cooperation with Prof. Gerber (Zürich, CH) a new series of shaver blades has been developed – the PRO LINE shaver blades.

The new blades feature inner blades with a unique design of three cutting edges. This means the blade has now six cutting edges. This allows an efficient and increased amount of tissue resection. The special cutting edge geometry enables the resection of bone. The increased amount of cutting edges slices the resected material into smaller pieces, optimizing the evacuation of debridement.





More Highlights out of the Specialty Arthroscopy and Sports Medicine

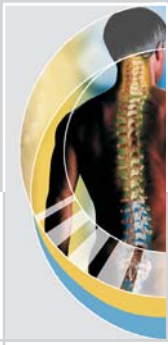
In the past year KARL STORZ presented a range of innovative products that should be of interest to you as well.

Including:

- Titanium Anchors for use in Reconstructive Surgery
- Instruments for Anatomical Double Bundle Reconstruction of the Anterior Cruciate Ligament

For further details please visit our website at www.karlstorz.com.

In the section Human Medicine, Highlights, Arthroscopy and Sports Medicine you will find detailed information about above mentioned topics.



EasyGO! – The new endoscopic spine system for the treatment of intervertebral disk prolapse and spinal canal stenoses

Lumbar and cervical disk prolapse and spinal canal stenoses are very common conditions these days.

Today, open surgery can be avoided in many cases by using so-called minimally invasive methods. These surgical techniques are considered particularly innovative and easy on the patient, since they offer potential advantages such as small incisions, limited tissue trauma, improved visualization and illumination, shortened in-patient stays and faster convalescence. Patients can often resume their normal activities more quickly; lengthy rehabilitation is seldom necessary and, importantly, the considerable scar-related risks are avoided.



The new spine system EasyGO! by KARL STORZ represents the collaborative development with Prof. Gaab (Nordstadt Krankenhaus Hannover) and PD Dr. Oertel (Klinikum der Johannes Gutenberg Universität Mainz) of a minimally invasive endoscopic surgical technique requiring only a small skin incision. The lesion is accessed via a dilatation system with dilators of increasing diameter. This prevents section of the muscles, with muscle fibers being carefully pushed apart and creating a small "tunnel" (tube), through which the procedure is performed. The surgical technique resembles microsurgery, but it is entirely under endoscopic control with the surgeon having a direct view of the site. The technique is easy to learn. KARL STORZ offers numerous classes and workshops for learning new endoscopic surgical techniques.

Advantages of EasyGO!:

For surgeons:

- Unsurpassed visualization of the anatomical structures, especially when EasyGO! is combined with the new KARL STORZ HD system
- Short learning curve via easy handling of the EasyGO!

For patients:

- Very low trauma due to small skin incisions and the minimally invasive access via the special dilatation system
- Resulting fast rehabilitation and good esthetic results

For hospitals:

- Shorter in-patient stays
- Resulting cost savings



**Because we Deeply care About the Little ones
– Special Instruments for Infant and Pediatric Surgery –**

All KARL STORZ instruments are characterized by the precision required to achieve successful results in our smallest patients. Reduced instrument diameter and an adapted instrument working length produce better postoperative results.

We have developed new trocars with silicone lip valve especially for pediatric surgery; thanks to their reduced weight, they are less top-heavy and ensure better support in the abdominal wall. Moreover, the new trocars are easy to clean and feature ergonomic handling.

In pediatric laparoscopes, millimeters matter. The HOPKINS® II rod lens system ensures a bright image, broad angles of view and high image sharpness in the entire field of view with telescopes as small as 2 mm in diameter. Numerous laparoscopes are now available, with diameters of 2 mm, 3 mm, 3.3 mm and 4 mm, and lengths from 14 to 26 cm.



Especially for the treatment of newborns and small children KARL STORZ developed a new 3 mm scope with a direction of view of 0° and 30°. Due to the outstanding image quality of the HOPKINS® II rod lens system and the working length of 14 cm, which is adapted to small patients, this scope is a good investment.

Many manufacturers do not focus on pediatrics. In contrast, KARL STORZ is setting new standards through its close collaboration with surgeons interested in advancing pediatric surgery.

Choose from a large selection of telescopes, trocars and instruments such as needle holders and first-class CLICKLINE® instruments.



The modular concept ensures complete compatibility of the pediatric instruments with the existing system for adults

The comprehensive line of highly specialized instruments and devices is backed by a company that actively strives to meet the increasing demands of pediatric endoscopic surgery. This is also reflected by the large number of training and continuing education classes sponsored by KARL STORZ.

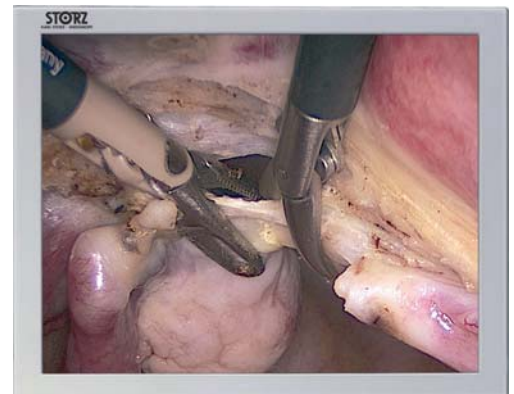


KARL STORZ FULL HD Platform IMAGE1 HD HUB™

In the economy, innovation is required to ensure a viable future. Companies develop new markets and create jobs for the future with new products, modern technologies and techniques - this is also true in medical technology.

In the context of “Innovations in Medical Technology”, experts have intensively discussed the topic of HD technology, an area in which KARL STORZ offers a user-oriented cross-specialty endoscopy platform.

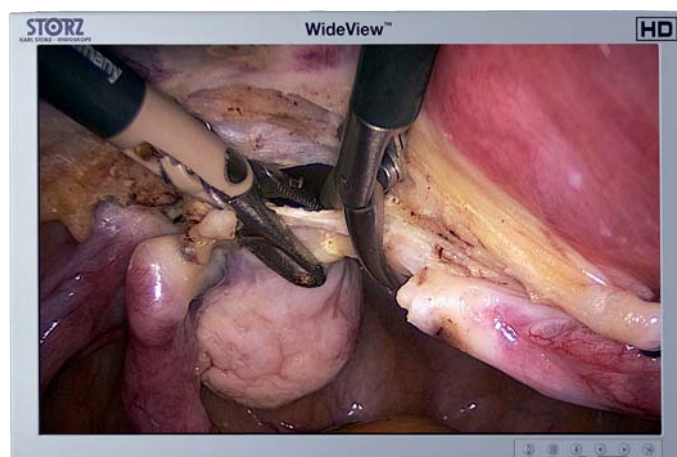
High definition (HD) technology, known from HDTV in consumer products, promises substantial improvements in quality in endoscopic video documentation as well. Therefore, KARL STORZ already designed the existing video platform IMAGE1™ with an “open architecture for new video technologies” at the time of its market launch in 2001 and equipped it with “HD-Ready” which now permits every user to make a minor upgrade to take maximum advantage of HD technology:



5:4 display

Best Image Quality:

The new HD platform IMAGE1 HUB™ HD affords the user highest image quality for the precise display of even the finest tissue and vessel structures with the maximum physical image resolution specified for HD at 1920 x 1080p pixels, which constitutes a 5-fold increase in image information compared with the current PAL standard.



16:10 wide screen display



16:10 The “Safety-Plus” in image width:

The 16:10 wide screen display improves orientation, affording early instrument detection and optimized instrument guidance, especially in the difficult lateral area. The upper and lower image edges are not cropped in the process, permitting consistent control and view of the needle, even in difficult ligatures.

Consistent superior viewing conditions are a prerequisite for the optimal course of any surgery. They are guaranteed by the IMAGE1 HUB™ HD video system and by the largest LCD monitors approved for medical applications worldwide, ranging from 23 inch to 55 inches in diagonal size.

Sharp display without delay:

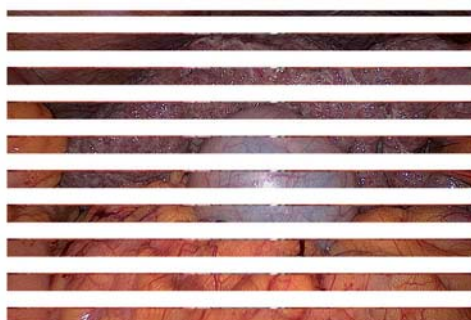
The faster reaction time of the new LCD elements featured by the full-HD monitor generation ensures a smooth image sequence even with very rapid camera movements; this is made possible by the 1080p progressive scan format employed by the IMAGE1 HUB™ HD. Only progressive scan permits flat screen monitors to display 50 full images per second directly and without delaying deinterlacing (conversion from interlaced to progressive scan via an algorithm), resulting in a faster and sharper display. The image generation time is nearly cut in half, resulting in a consistently smooth and sharp image.

KARL STORZ is once again the first manufacturer of video cameras for medical use to take advantage of the full-HD progressive scan in genuine full-HD resolution.

Full image viewing with less fatigue:

In addition to the above-mentioned delay-free display, the 1080p technology (p for progressive scan) employed by the IMAGE1™ hub platform affords every user of KARL STORZ IMAGE1 HUB™ HD cameras twice the image information in the 50 Hertz mode, when compared with systems working in the 1080i mode (i for interlaced scan).

The progressive scan method displays full images, while the interlaced scan method only displays half images of even- or odd-numbered lines in 50 Hertz or 60 Hertz cycles (see image).



The interlaced display method (half images) displays 25/30* overlapping “half images” per second.



In progressive scan (full image method), 50/60* “complete images” are displayed per second.



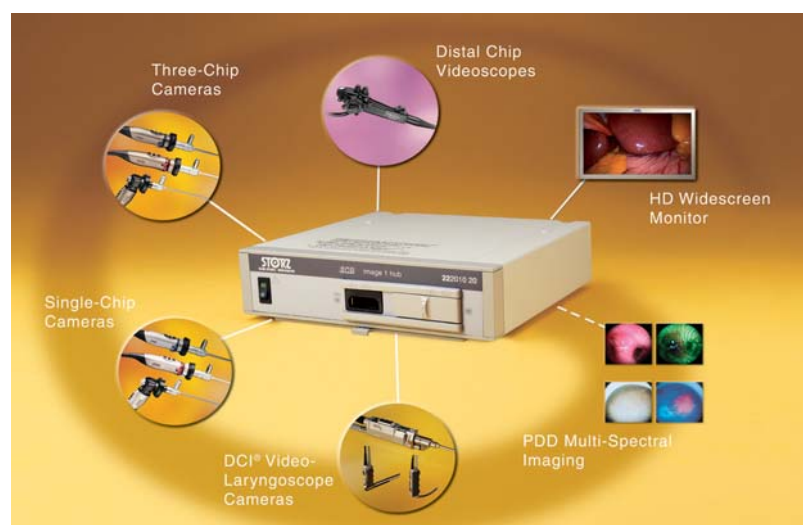
Interlaced display therefore always contains only half of the image data of the high-quality progressive scan method. Progressive scan's higher quality is especially obvious when storing still images.

Lifelike 1:1 color display with “quasi 3D effect”:

The use of the latest high-definition 3-chip CCD sensors employed in KARL STORZ IMAGE1™ 3-chip HD camera heads guarantees a lifelike color display with the greatest color brilliance. The high color contrast ensures better spatial 3-dimensional view.

Multidisciplinary use:

Cross-specialty multidisciplinary application via flexible connection options for conventional standard definition (SD) 1-chip and 3-chip camera heads – including swinging head models – and high definition (HD) 3-chip camera heads, which are also available as photodynamic diagnostics (PDD) and autofluorescence (AF) models.





The picture-in-picture display integrated into the HD monitors and the capability to control cold light sources and soon also insufflators via the programmable camera head keys facilitate its multidisciplinary use, as does the integrated digital Moiré filter for straightforward fiberscope use and video endoscope compatibility such as with the latest product with distal-chip-technology – the TIPCAM1™.



TIPCAM1™ camera

Your video system is guaranteed to hold its value as it is upgradeable:

The later integration of future technologies is made possible by the one-of-its-kind open architecture of modular slide-in technology in the IMAGE1 HUB™ HD system.

Savings included:

The ability to simply upgrade and expand the system in the future essentially means significant future savings, compared to purchasing new equipment all over again.

Its compatibility with existing IMAGE1™ camera heads and the world renowned HD compatible HOPKINS® II telescopes also contribute to this characteristic.

OR1™ compatible via SCB:

Since the KARL STORZ IMAGE1 HUB™ HD system, even in the standard version, is ready to be integrated into the OR1™ via SCB, the path is clear for the expansion into the OR of the future, the OR1™ HD.



Under the sign of the cube: OR1™ at the Medica

At the Medica 2008 in Düsseldorf, KARL STORZ presents OR1™ – a completely integrated OR solution for modern hospitals. From November 19 - 22, 2008, the comprehensive OR1™ system will be presented to trade fair visitors virtually and physically both at the trade fair booth (Hall 10, Booth C22) and at the nearby LTU arena. The OR1™ team will provide information about numerous innovations that render the OR1™'s operation even easier and more efficient.

For the first time, the complex OR1™ offerings will be represented by their own visual – the blue OR1™ cube. As a perfect shape, the cube symbolizes the completely integrated OR as a perfectly coordinated complete solution.

All sides considered, OR1™ technology from KARL STORZ offers distinct advantages. The OR is no longer seen as a stand-alone solution, but is linked to the entire clinical network via digital technology. This results in a fully integrated OR solution – and all from a single source.

The OR1™ solution from KARL STORZ is based on a completely new, comprehensive system concept. Endoscopic units, room lighting, documentation, telemedical applications, telephone and communication are all directly controlled from within the sterile area. This enables continuous documentation via text or images. During surgery, a second opinion can easily be obtained using modern audio-visual technology or telemedicine can be used for training purposes. All endoscopic units and OR lighting are fitted ergonomically on overhead mounting systems. Units and cables do not touch the floor so that the OR team has full freedom of movement. All unit settings can be configured individually to suit the user or surgical intervention. Once stored, these can be retrieved within seconds as required to reduce changeover times.

Like a perfect dice, there are six sides to the OR and each side represents a performance module: The OR1™ room stands for centralized control; the OR software module *ORchestrion* for optimized work processes; and HD technology for revolutionary viewing quality. Another side signifies our instrument service *ENDOPROTECT1™*; and yet another our professional partner, MedPlan, a bespoke contractor for hospital and OR planning that designs, develops and delivers turnkey medical facilities.

The last side is reserved for KARL STORZ SOLUTIONS, who support you in every project phase from the first consultation through to financing. No matter how you roll the dice, OR1™ performance modules always provide the winning combination.



OR1™ – the Integrated OR

STORZ
KARL STORZ – ENDOSKOPE

KARL STORZ IRIS essential

With IRIS essential, KARL STORZ offers a new type of integration, which combines effectiveness with essential functionalities needed in a minimally invasive operating room. IRIS essential provides the user with a routing system that covers everything from the S-video signal to HD routing. The use of fiber glass cables reduces the amount of cables to a minimum and makes them more manageable for the user.

Owing to its modular design, the system can be expanded at any time, rendering it completely future-proof and upgradeable.

Special features:

- KARL STORZ housing
- Intuitive operation via a 19" touch screen monitor
- From S-video to HD-routing
- Upgradeable at any time
- Routing to up to three monitors
- HD-capable compact system



KARL STORZ AIDA® S³

The new AIDA S3 system by KARL STORZ was developed to offer surgeons a high degree of safety and quality control of the generated data. The recorded image and video data can be stored on the AIDA S3 system for a pre-defined time frame and are thus easily available for various purposes (e.g., presentations, research and patient marketing).

Further, the system offers the option of editing, labeling the available image and video material after storage and cutting the video files to the desired length.

Data manipulation

The authorized user can add markings such as lines, arrows, circles, and – in case of still images – text labels to the generated image and video data. Markings that are not needed can be removed or modified at any time. In addition, the system permits the user to change the format of marking options; for example, the color, font weight, line type and text size can be modified. The user can also cut video files to the desired length or generate new still images from existing video files. After editing is completed, the system saves the modified image or video file as a file and allows the user to review it.

Data storage:

- USB stick
- CD or DVD
- Printout of desired still images
- Network storage via DICOM and/or HL7 interfaces

Special features:

- Storage of image and video files
- Editing and marking image and video files
- Compact design in the KARL STORZ format
- Easy and intuitive operation
- Long-term archiving on DVD, CD-ROM, USB stick or network path, DICOM, HL7



KARL STORZ AIDA® compact HD – one system, endless possibilities – in FULL HD

AIDA compact HD from KARL STORZ unites all functions required for an integrated and precise image documentation of your endoscopic and open procedures in a single system. The user friendly operation of AIDA compact HD additionally facilitates the user to capture still images, video and audio sequences directly from the sterile area. The subsequent handling of the stored patient data is easy thanks to the optional connection to the KIS and PACS system.

Comment your individual work at the push of a button – dictation is also possible during the intervention.

Ergonomic operation

- The design, optimized to be in tune with the workflow, integrates all work procedures for image and video documentation for the intervention in two clearly arranged system screens
- Optimized, rapid recording of patients' data in the system
- Comfortable operation directly from the sterile area via touch screen, speech control, camera head buttons and/or foot switch
- The live preview of the camera image on the touch screen facilitates an immediate quality check of the recorded data

Data acquisition

Images, video sequences and spoken comments can be recorded during an examination or intervention on command by either pressing the on screen button, via speech control or by operating the foot switches or camera head buttons.

The data entry can be carried out with a standard keyboard or using the touch screen keyboard.

Flexible post-editing

Still images and video sequences are displayed on the editing screen as well as in the left-hand bar in miniature form. All recorded material is therefore clearly identifiable.

In the editing screen, the still images, video and audio sequences can be previewed before final archiving. Unrequired data can be easily deleted.

Furthermore, the images, video and audio sequences can be renamed and given meaningful names. A selection list which can be preset ensures quicker working. For entering key terms and explanatory notes on interesting details of the procedure, the user has a commentary field at his disposal.

It is also possible to create an acoustic operation report directly by means of speech input while observing the recorded images and video data. The edited data on the procedure can be printed at this stage. Multiple printing of the document is possible.



Efficient data archiving

After conclusion of the procedure, KARL STORZ AIDA® compact HD efficiently saves all captured and selected data on DVD, CD-ROM, USB stick, external/internal hard drive and/or on the network or FTP server. Further, it can optionally be connected via the interface package AIDA communication HL7 and/or DICOM to store the captured patient data directly on the PACS or KIS server. Non-saved data are automatically saved on the AIDA system until they have been successfully saved otherwise.



Special features

- Digital storage of still images with a resolution of 1920x1080p, of video sequences in 720p and of audio files
- Sterile, ergonomic operation via touch screen, voice control, camera head keys and/or foot switch
- Efficient archiving on DVD, CD-ROM or USB stick, multisession and multipatient
- Optional network storage
- Optional connection to PACS, RIS and KIS
- Automatic generation of standard reports
- Computer and monitor approved for use in the OR area in accordance with EN 60601-1
- Compatible with KARL STORZ Communication Bus (SCB) and OR1™ connect series

Discover the KARL STORZ AIDA® compact HD System – The new documentation possibility in FULL HD from KARL STORZ in Hall 10, Booth C22.



**KARL STORZ ORchestrion
– Profit Center OP**

KARL STORZ, the market leader in integrated operating room technologies with its OR1™ product line, now takes integration management to a new level with its new ORchestrion.

Efficient O.R. management is based on successful harmonization of all processes and integrated components, combined with seamless connectivity with hospital information systems. The KARL STORZ ORchestrion system enables hospitals to optimize O.R. scheduling and time usage of staff members, and ensures more efficient information flow between operating rooms and hospital information systems. By optimizing the rhythms of operating room usage, hospital gain higher throughput in surgical department and are able to offer high-quality care to more patients.

Using standardized interfaces, ORchestrion can be embedded easily and simply into existing hospital IT structures. Its modular system design meets individual hospital requirements and offers a dynamic platform to accommodate future developments and enhancements. KARL STORZ has also developed an innovative tiered approach to service with remote connectivity to facilitate remote diagnostics and service as well as convenient software upgrades.



ORchestrion creates transparency in an increasingly important part of the hospital: the OR. Transparency is a critical prerequisite for efficiency and revenue-increasing measures designed to secure and financially stabilize a profitable hospital. A solution to this challenge is offered via the instruments. Harmonious and coordinated interactions between the instruments/ modules are the foundation of transparency and close

the circle with the extensive reporting, steering and controlling options available to hospital administrators.

the KARL STORZ ORchestrator is the key component of the ORchestrion, organizing and directing the functions of all other equipment and modules. It also provides intelligent integration of the various components as well as with hospital information systems.



Features and Benefits:

- Operating system
- Process management
- Integration into hospital IT
- Master data management
- Enables Service Management
- Supporting KARL STORZ AIDA® S³ – HD images and movie storage
- Interaction with external players (sterilizer, laboratory, physician, ...)

The OR*chestrator* provides centralized control of the following modules and control systems:

OR Resource Planner Module

- Manages medical resources inside and outside the OR
- Enables highly efficient planning of diagnosis, treatment and staff requirements
- Optimizes workflow and facilitates scheduling to avoid resource conflicts
- Increased OR throughput

OR Steering & Localisation Module

- Locates required staff and equipments resources
- Manages, or steers, resource usage to allow flexible planning
- Allows real-time, task-driven control of O.R. processes

OR Instrument Management Module

- Optimizes instrument use by automatically tracing instrument use
- Manages inventories by tracking storage details, as well as delivery, usage and maintenance of instruments
- Comprehensive management of instrument processing and sterilization

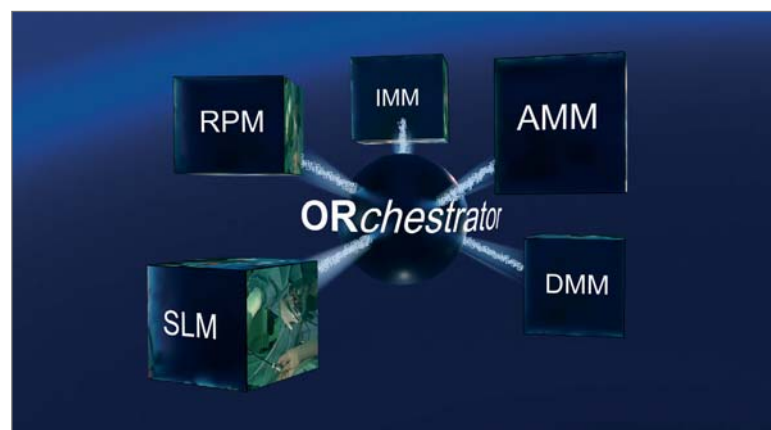


OR Document Management Module

- Provides centralized management and distribution control system for physician letters and reports
- Innovative query function simplifies report development
- Can automatically place endoscopic images recorded and archived by the AIDA system. It also allows drag-and-drop placement of images in reports with other systems.
- Promotes more efficient flow of information

OR Anesthesia Management Module

- Develops automated documentation of pre-, intra- and post-operative anesthesia data
- Including Live data and drug consumption



Discover the KARL STORZ ORchestrator System – The new integration management system from KARL STORZ in Hall 10 at booth C22.



KARL STORZ OR1™ SMART CONNECT – The new Compact Streaming Solution –

Comprehensive insight into OR events requires media technology adapted to current requirements. The new compact telemedicine series KARL STORZ OR1™ SMART CONNECT was developed for this specific purpose, facilitating communication from the OR.

SMART CONNECT can meet the desire for a quick and easy second opinion; for example, it facilitates observation and comments of the ongoing surgery from the physician's office. In certain situations, the physical presence of the physician can be substituted with his or her virtual presence, which can be especially helpful under time pressure.

Moreover, the diverse opportunities afforded by the telemedicine series permit more extensive and efficient training and continuing education. The term e-learning is becoming increasingly popular, and the virtual university is coming closer to reality. With SMART CONNECT, KARL STORZ provides the perfect support in this regard. Moreover, the student no longer needs to be physically present in the OR, which on one hand contributes to a calm and more concentrated OR environment and on the other hand reduces the risk of infection for the patient.

Special features:

- Live operations for teaching and training purposes or to get a second opinion can be easily set up by the push of a button.
- A cost-effective solution in telemedicine
- The design of the OR1™ SMART CONNECT series permits its placement on the equipment cart and on ceiling supply units. This renders the telemedicine series mobile and flexible.

The new OR1™ SMART CONNECT product line, which permits easy communication from the OR to the physician's office, the lecture hall or to the hospital network in general is available in three versions:

SMART CONNECT 1 employs a CAT5 line to establish a room-to-room connection. A selected analog video signal such as that from an endoscopic camera, room camera or ultrasound device can be transmitted from the OR to the physician's office. A total of four video sources can be connected, and one is selected for transmission by the push of a button. The audio communication between the OR and, e.g., the physician's office is bidirectional. The user in the OR retains unlimited mobility thanks to a wireless microphone.



SMART CONNECT 2 links the OR to the hospital network. Again, four analog video signal sources can be connected, and one is selected and fed into the hospital network as a digital stream. The video stream can then be viewed in rooms with network access. Audio communication is bidirectional. For example, the operator may make comments, and the conference partner can ask questions. The wireless microphone guarantees freedom of motion for the user in the OR. A monitor may be connected to a separate monitor port to check the image sent.

SMART CONNECT 3 allows the feeding of different video signals, such as analog video (S-video), digital video (SDI) and computer signals (RGBHV) to the hospital network. The signal to be transmitted is selected via a touch screen integrated into the SMART CONNECT 3. The video stream can be viewed in other rooms, such as lecture hall, physician's office, etc. Once again, the system permits bidirectional audio communication between the OR and the conference partner. The image feed can be checked on a monitor connected via a separate monitor port.



MedPlan Engineering – maximum efficiency in the OR

MedPlan Engineering AG operates worldwide to provide project-oriented solutions at different levels of operating room and hospital operations. In addition to project planning, the company from Schaffhausen, Switzerland, guarantees efficient coordination of various interests during realization in its role as general contractor or total services contractor.

The current cost pressure in the health sector and the political pressure by health insurance companies require strict optimization of operational procedures and floor plans in hospitals, particularly in operating rooms. This translates into reducing the time required for individual processes and surgical procedures and increasing the number of surgeries. Felix Aries, CEO of MedPlan Engineering, established in 2004 in Schaffhausen, is convinced that this trend will become even more pronounced in the future. For that reason, MedPlan Engineering focuses on all aspects that render processes more efficient in operating rooms – and the company also builds and equips complete operating rooms. At the same time, the architect focuses on risk and error reduction in the operational and interventional area. Patient safety must be guaranteed at all times.

High demands, innovative solutions

MedPlan Engineering meets these high demands with integrated operational concepts. The Schaffhausen based company plans and realizes integrated operating rooms based on the internationally leading OR1™ concept by KARL STORZ, Tuttlingen, and complements it in cooperation with additional partners in medical technology and instrument engineering. Operating rooms designed in this manner provide high efficiency with the most modern medical devices in a comfortable atmosphere for both physicians and patients. For Felix Aries, the challenge is clear: “The usability of individual components must be improved and integrated into the overall technological, operational and architectural plans.”

Clear core competencies

MedPlan Engineering offers its customers high-quality services in three clearly defined core areas. First, MedPlan Engineering implements standard solutions for operating rooms based on the OR1™ concept. Second, MedPlan Engineering is an expert partner for comprehensive, integrated operating room concepts that meet today's high demands – from optimizing surgical procedures and technical networking in the operating room to ensuring ergonomic work sites. The solutions provided by the Schaffhausen company are precisely tailored to the needs of each individual hospital. In addition, the solutions are always modular in design to maintain flexibility in terms of system expansion. The third MedPlan Engineering competence area involves workflow concepts: Specialists analyze workflow, prepare customer-oriented recommendations and thus facilitate improvements in efficiency.



MedPlan Engineering AG

Established: 2004

Location: Schaffhausen, Switzerland

Owner: Joint venture between KARL STORZ GmbH & Co. KG (D-Tuttlingen) and Architechnic Holding Switzerland / ABR + Partner Architekten, Schaffhausen

CEO: Felix Aries

Employees: 18

Core activities: Planning and realization of medical technology und structural solutions at different levels of operating room and hospital operations

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Systematic solutions for the operating room and the medical office – all from one source

KARL STORZ Solutions GmbH, a company within the KARL STORZ Group, has solid and extensive know-how regarding systematic solutions for operating rooms and medical offices. The company offers a tailored product and service portfolio, including competent consultation and financing based on 60 years of KARL STORZ experience.



KARL STORZ is a world market leader in minimally invasive surgery. The Tuttlingen family business is managed by Dr. h. c. mult. Sybill Storz and her son, Karl-Christian Storz. Its range of products and services has continuously increased for more than 60 years, thanks to its own product developments, cooperation with customers and partners, and new solutions for maintenance and repair on the one hand, and through innovative business models involving use agreements on the other.

The resulting comprehensive solutions offered to customers are now combined under one strategic roof in a newly established company, rendering them more effective.

Dr. h. c. mult. Sybill Storz explains, “With KARL STORZ Solutions GmbH, we are continuing our company’s tradition of being a reliable partner to our customers and offering individualized solutions for the various stringent demands encountered in today’s and tomorrow’s health sector.”

KARL STORZ Solutions GmbH, located in Berlin, Germany, is a 100% subsidiary of KARL STORZ GmbH & Co. KG. It offers complete system solutions for the operating room and the medical office. Its product portfolio is based on the KARL STORZ product range, but it also offers tables, lamps, ceiling supply units, disinfection, anesthesia, X-ray, CT and ultrasound products for the operating room via partner companies to meet customer demands. KARL STORZ Solutions GmbH acts as the sole, competent customer contact and is responsible for the delivery of all equipment and for all services, such as maintenance, repair, processing, training and logistics. In addition, it offers individualized financing plans, such as use agreements per flat rate, reinvestment plans or pay-per-procedure solutions.

Organizational and management consultation for customers represents a particularly important company activity. Together with its partners, KARL STORZ Solutions GmbH offers software solutions to optimize, plan, steer and control patient throughput in the hospital and to efficiently utilize capacities in all departments, especially in the area of personnel and equipment use. Moreover, KARL STORZ Solutions GmbH offers turn-key hospitals in collaboration with its partners.

Dr. Matthias Hondl, general manager of KARL STORZ Solutions GmbH comments, "With this product and service portfolio, we strive to provide KARL STORZ customers with the diamond standard in complete solutions and to position ourselves at the very top of the Champions League."

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