



# Anesthesiology and Emergency Medicine

## MANAGING AIRWAYS

**KARL STORZ offers a wide variety of instruments and solutions to ensure that airway management is successful.**

**The broad range of KARL STORZ products puts every opportunity at your fingertips – for dealing with standard as well as the unexpected difficult airway. Additionally, all of our fiberscopes are powered by LED battery light sources, ensuring that, even in an emergency, you'll never be left in the dark.**

### See the Difference

Successful airway intubation and management can quite literally make the difference between life and death. KARL STORZ offers a whole range of instruments that can minimize the complications of managing difficult airways and at the same time provide optimal visualization.

### Versatility

Airway management is not confined to a single location. In paramedic emergency situations, in emergency rooms, pre-operative rooms and the OR, and through to intensive care units, physicians are repeatedly, and often unexpectedly, confronted with the challenges of a difficult airway.

KARL STORZ offers you mobile and practical solutions for managing these situations, wherever and whenever they occur.





## Teaching and Training

KARL STORZ offers systems and solutions for training and further education in essential techniques, in particular in the area of difficult airway management.

Video-assisted learning, such as using video laryngoscopy, promotes recognition of problem situations at an early stage and helps provide appropriate training.

## Managing Airways

### For the Greatest Challenges

Spinal injuries, trauma patients, maxillofacial injuries – you can count on KARL STORZ products to help you master the most difficult airway conditions. We are the only company that offers such a comprehensive range of endoscopic solutions for difficult airway management situations.



# KARL STORZ Laryngoscopes:

## Solutions Tailored to Meet Your Needs

KARL STORZ offers you a wide range of laryngoscopes, designed to suit your requirements. Beware of cheap imitations and inferior quality.

KARL STORZ is the only manufacturer in the world that supplies laryngoscope blades capable of withstanding hundreds of cleaning cycles with only a negligible reduction in light intensity.

**Durability that pays off in the long term!**



### Product Diversity

From MACINTOSH standard shapes through to MILLER or FOREGGER, we have all current shapes and sizes.



### Highest Quality

The use of highest-quality materials, coupled with skilled craftsmanship and decades of experience in the development and manufacture of technical medical instruments, guarantee the high quality and durability of KARL STORZ laryngoscopes.



### Specialized Solutions

Blades for special applications, e.g. adipose patients or the DOERGES universal emergency blade, make our laryngoscope range unique.



**LED-POWERED**  
**> 50 lumen/100,000 lux**

# Laryngoscopes



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KARL STORZ — ENDOSKOPE

THE DIAMOND STANDARD

# KARL STORZ Intubation Fiberscopes:

## For the Greatest Flexibility

Today, flexible intubation fiberscopes represent the “gold standard” for mastering difficult intubation situations.

It is of utmost importance that the fiberscope is specially designed to meet the unique demands of anesthesia and intensive care.



### Optimal in Every Situation

KARL STORZ offers a broad range of intubation fiberscopes with a variety of external diameters, tailor-made for the special requirements of intubation. With a range including 2.8 mm, 3.7 mm, and 5.2 mm, the selection provides the freedom of movement you need for optimal working conditions.



### C-CAM™

With the newly developed C-CAM™ you can get everything you need to visualize your Airway Management interface with a system. In addition to the video laryngoscope blades you can now connect various flexible intubation fiberscopes and BONFILS or BRAMBRINK retromolar intubation endoscopes. Now, the C-MAC® is a system for Airway Management.



### Innovative use of Proven Quality

All of our intubation fiberscopes are equipped with the successful, high quality optical systems from KARL STORZ. They offer you optimum visualization, even when working with small external diameters. Speaking of visualization, all of our intubation fiberscopes are compatible with KARL STORZ LED battery light sources.



# Fiberscopes



## BONFILS & BRAMBRINK Intubation Endoscopes:

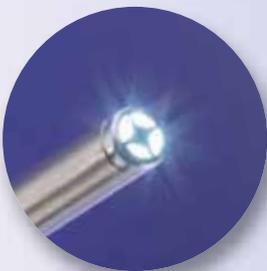
### The Instruments for Experts Always at Hand!

With the BONFILS intubation fiberscope, KARL STORZ offers a proven alternative for managing difficult airways. We particularly recommend this instrument when the oral aperture is very restricted, for spinal injuries or where movement of the head is restricted. The endotracheal tube is positioned quickly and safely under direct visualization. The instrument is portable, convenient to handle and easy to clean.



#### Individual All-purpose Design

Today, as a result of continuing research and the further development of endoscopy, KARL STORZ offers a wide range of instruments based on the design of BONFILS & BRAMBRINK. They include 2.0 mm instruments for children, through to 3.5 mm, up to 5.0 mm instruments for adults.



#### Universal use

The LED battery light source ensures that the instruments are ready for use around the clock – everywhere and anywhere. The fact that it is quickly ready for use and suitable for a variety of insertion techniques makes the BONFILS instrument particularly suitable for unexpected difficult airway conditions.



#### Safe Handling for Patient Protection

The practical tube holder enables you to supply oxygen for a short time while bringing the tube into the correct position. Secretions can also be cleared from the instrument tip by increasing the current flow.

**NEW: Silver Line –**  
autoclavable

# Intubation Endoscopes



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## Neonatal and Pediatric Airway Management:

### When Small Things Make a Big Difference

Customized airway management solutions from Laryngoscopes, Flexible Intubation Fiberscopes, BONFILS/BRAMBRINK Intubation Endoscopes to Video Laryngoscopes.

The product line for these sensitive areas is continuously developed with the latest technologies. Sophisticated instruments for delicate young lives are the result.



#### C-MAC<sup>®</sup> PM and MILLER Blades

The MACINTOSH Blade size 2 has been available for the C-MAC<sup>®</sup> Video Laryngoscope System since 2010. Now the portfolio is enlarged through the MILLER sizes 1 and 0. Additionally, the Pocket Monitor fits the pediatric blades.



#### Special Laryngoscope Blades

Laryngoscope blades for neonatology and pediatrics are distinguished by their adaptation to the special anatomy of premature babies and infants.



#### Retromolar Intubation

BONFILS & BRAMBRINK Intubation Endoscopes are particularly advantageous for very small oral apertures – enabling safe insertion under visual control!



# Pediatric Endoscopes



## C-MAC®:

### The new Generation of KARL STORZ Video Laryngoscopes

When KARL STORZ, one of the first companies to manufacture video laryngoscopes, decides to continue its highly successful DCI® video intubation product family with a new generation of video laryngoscopes, customers can rest assured that this will involve more than just superficial updates to the existing chip technology.

The operations, however, have been consistently simplified, resulting in a new system, which has been reduced to what is most necessary and sensible for daily routine, training, teaching and difficult airway management. Especially with the new D-BLADE, the C-MAC® offers maximum safety.

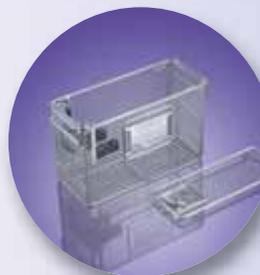
### 3Ts\* – Essential for Secure Video Laryngoscopy



- ① **TIP:** Visualized blade tip for improved orientation
- ② **TARGET:** Improved viewing of the target structure
- ③ **TUBE:** Insertion of the tube is possible without guiding stylet

\*Preconditions for secure video laryngoscopy are that the *Tip*, *Target* and *Tube* can be identified on the monitor.

### Easy Reprocessing



Qualified and validated for the following low temperature reprocessing methods up to a max. of 60°C:

- Manual/automated cleaning and disinfection (HLD)
- Sterilization with Steris® AMSCO V-PRO 1, Sterrad® (50S, 100S, 200, NX, 100NX) and EtO gas

### Simplified Data Transfer

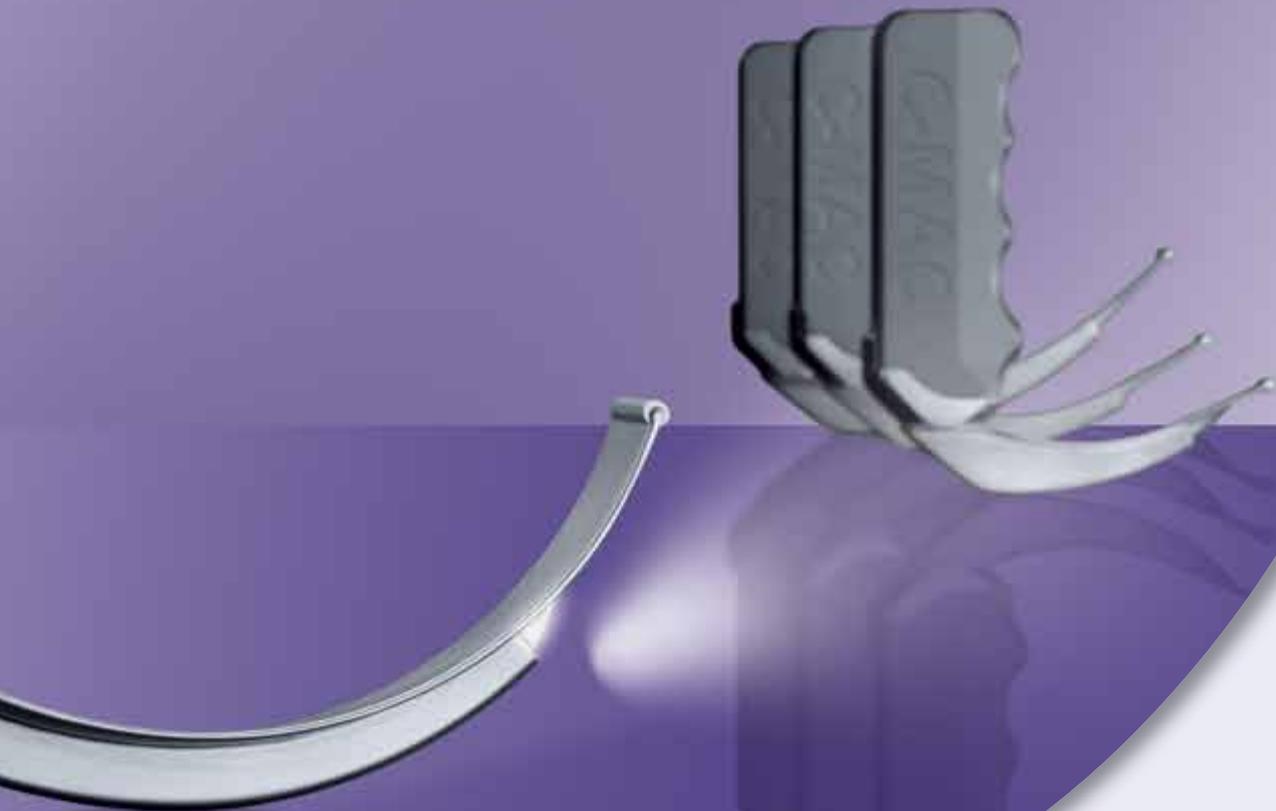


The C-MAC® system is equipped with an SD memory card. No additional cabling or software to transfer the stored data is required. Video sequences and still images can be saved in MPEG4 or JPEG format.



10 Year Anniversary  
MACINTOSH  
Video Laryngoscope

# C-MAC® Video Laryngoscopes



## C-MAC® PM – The Pocket Monitor

**Mobility is our Passion...  
...and the Highest Requirements  
of Hygiene our Standard!**

The new C-MAC® PM is so small, flexible and mobile that it fits into any pocket. This video laryngoscope is as easy to use as a direct laryngoscope, yet offers all the advantages of indirect laryngoscopy.

Robust and easy to handle, the C-MAC® PM is suitable for preclinical use. Moreover, its compactness makes it ideal for various emergency situations. The pocket monitor was specifically developed for special preclinical and clinical emergency situations.

Its 2.4" monitor delivers a contrast-rich image even in bright sunlight. Consequently, it is the ideal complement to the C-MAC® system.



### Intelligent Power Management

After one hour's operating time the C-MAC® Pocket Monitor with capacity control can be recharged by the charging unit.



### RTCA / DO-160F

The C-MAC® Pocket Monitor passed the international test of environmental conditions and test procedures for Airborne Equipment. Proven by SAAB Technologies, Sweden, Oct. 20, 2011. The DO-160F is recognized as ISO 7137. Additionally, the PM conforms to the Military Standard (MIL STD 461).

### Open-To-Intubate Display



(no additional on/off buttons)

**Highest Protection  
Class IPX8**  
High Level Disinfection Validated

PM Video  
Laryngoscopes



# Flexible Intubation Video Endoscopes

## Defining your Vision

The new flexible 5.5 x 65 intubation video endoscope from KARL STORZ sets a new direction for airway management. The convenient 4:3 rectangular image format provides a better overview of the working area. Similar to the C-MAC® video laryngoscope, the 5.5 x 65 scope delivers clear, pixel-free images without a moiré pattern. The 5.5 x 65 endoscope can be directly connected to the C-MAC® monitor. This enables a changeover to the video laryngoscope in a short time, if necessary.

The flexible 5.5 x 65 intubation video endoscope is a further component within the C-MAC® system.

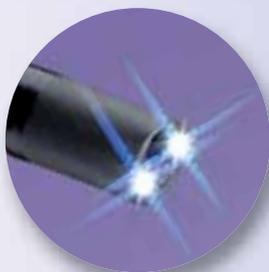
The first flexible endoscope to display full-frame 4:3 imaging, replacing the circular and rectangular display windows and effectively bringing an end to the era of tunnel vision.



### Video control

Optimal button positioning at the proximal end of the handle allows flexible and fast video control and documentation.

- Video recording
- White balance
- Image recording



### Distal tip

Due to the Distal Chip Technology the user enjoys a full-format direct video imaging in convenient 4:3 format. The integrated illumination via high power LEDs ensures the necessary light capacity. Besides, the flexible intubation video endoscope includes a 2.3 mm working channel. This is the end of tunnel vision.



Flexible fiberoptic



Competitor



KARL STORZ

Intubation Video  
Endoscopes



## ICU and Emergency Medicine with KARL STORZ

Difficult airway intubations – anticipated or unexpected – are always an exceptional situation.

In the operating room environment, it is relatively easy to ensure that instruments are available at short notice. For difficult airway intubations that do not occur in this familiar environment, e.g. in an Intensive Care Unit (ICU), this is considerably more difficult and may be virtually impossible under practical circumstances.

Today, where intubation difficulties of this nature are foreseeable, fiberoptic intubation is viewed as the “gold standard”.

In addition to a flexible intubation fiberscope (3.7 x 65 mm) and a BONFILS rigid intubation endoscope, KARL STORZ Airway Management Sets also provide laryngeal masks, Combitube® and instruments for coniotomy. There is also enough room in the case to store your own aids. Mobility is supported with a battery-operated LED light source.

The C-MAC®, due to its portability, is securing a role as part of the daily routine in ICUs, emergency rooms and pre-hospital settings.



### Anytime and Anywhere

The LIPP/GOLECKI case for the Airway Management Set is the ideal portable solution for quick and flexible intubation at any location.

The lightweight, robust case with compact dimensions is well-organized for the quick location of instruments.



### C-MAC® in HEMS EMI Compatibility Test report (EASA.21J.266)

The verification of the Electromagnetic compatibility of the C-MAC® system was done on January 30 2009 by the German Air Rescue Service (DRF) for the following helicopters: EC135, EC145, BK117B2.



ICU and  
Emergency  
Medicine

# Airway Management Set

Lipp / Golecki

11300 B

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## Intubation Set -C22-, ULM Model

### Video Laryngoscopy for (H)EMS

Positive experiences with the C-MAC<sup>®</sup> quickly led to its use in emergency medicine. The portability of the C-MAC<sup>®</sup> was further developed to create the C-MAC<sup>®</sup> PM (pocket monitor) which features a high-contrast display directly at the laryngoscope handle. Meanwhile the C-MAC<sup>®</sup> PM is a standard laryngoscope on the CHRISTOPH 22 rescue helicopter. Whereas intubation with the MACINTOSH blades 2, 3 and 4 are almost always successful, the use of a malleable intubation catheter is a useful aid for intubation with a curved D-BLADE. In addition to the MILLER blades in sizes 0 and 1, this tool is also included in the instrument set on the CHRISTOPH 22 helicopter.



#### Plan B “High-Power LED”

In addition to state-of-the-art technology, the “high-power LED” standard laryngoscope provides an alternative option if required.



#### BOEDEKER Forceps Small Idea - Great Impact

The shape of the MAGILL forceps has been adapted to the blade shape of a MACINTOSH laryngoscope to have optimal vision and handling with the C-MAC<sup>®</sup> Video Laryngoscope.



#### Intubation Set -C22-

The new, robust and water-resistant intubation bag -C22- offers clearly arranged storage for the C-MAC<sup>®</sup> PM in the emergency backpack. It also provides ample space for the aforementioned blades, a malleable intubation catheter, a set of tubes and fixing material.



CHRISTOPH 22  
Intubation Set



## C-CAM™ and C-HUB™

C-CAM™ transforms the C-MAC® video laryngoscope into an all-round system unit for complete airway management. C-CAM™ is a high-grade CMOS camera with VGA resolution which can be connected to all KARL STORZ endoscopes with eyepieces. Illumination is ensured through the Power-LED battery light sources. Consequently, this is the first battery-powered video system to guarantee high-quality documentation. KARL STORZ has once again proven that high quality and mobility are not mutually exclusive.

The C-HUB™ is the interface for computer and/or monitor connectivity. The signal from the front end is transmitted directly to a computer or monitor with the aid of the C-HUB™. The enhanced output can be directly linked to any computer via a USB/S-VHS connection. Thanks to the safety offered by galvanic isolation in the C-HUB™, medical products can now be connected to non-medical products (e.g. computer/monitor).



### C-CAM™

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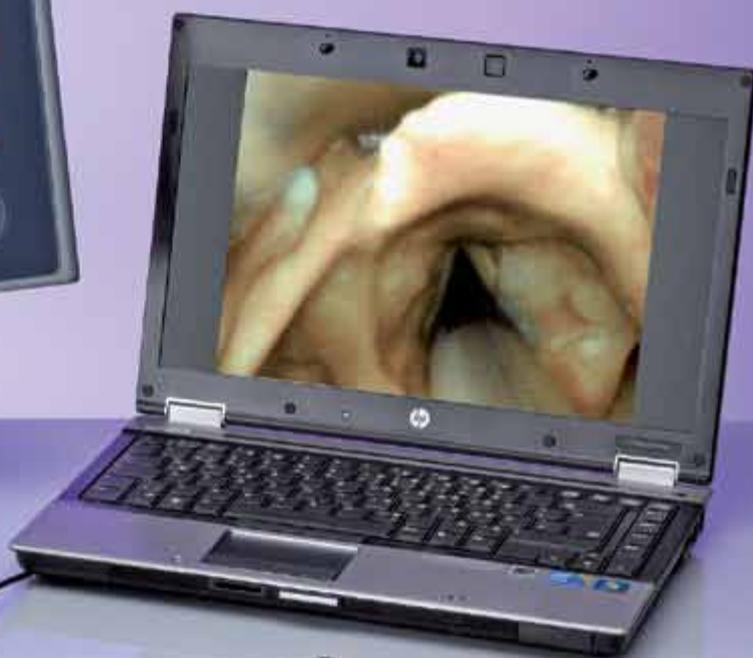


### C-HUB™

C-HUB™ is the perfect signal converter from C-MAC®/C-CAM™ to USB or S-Video.

- ① Power connection
- ② USB out
- ③ S-Video out

C-CAM™ and  
C-HUB™

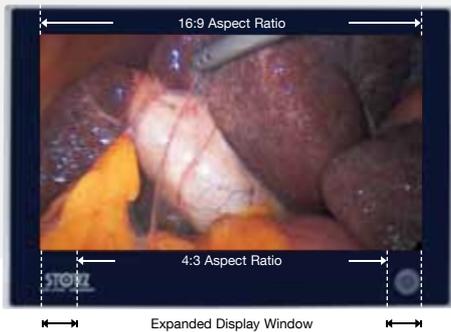


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# Why have Tunnel Vision when Panoramic Viewing is Possible?

Enjoy Natural Viewing with KARL STORZ FULL HD



## Best image display

IMAGE 1 HD offers superior images with a wide, more natural 16:9 format. A resolution of 1920 x 1080 pixels for FULL HD produces the maximum in medical imaging.



## Wide spectrum

The IMAGE 1 platform makes KARL STORZ FULL HD technology available to most surgical specialties – from gastroenterology, urology and ENT to orthopedics, gynecology, neurosurgery through to general surgery.

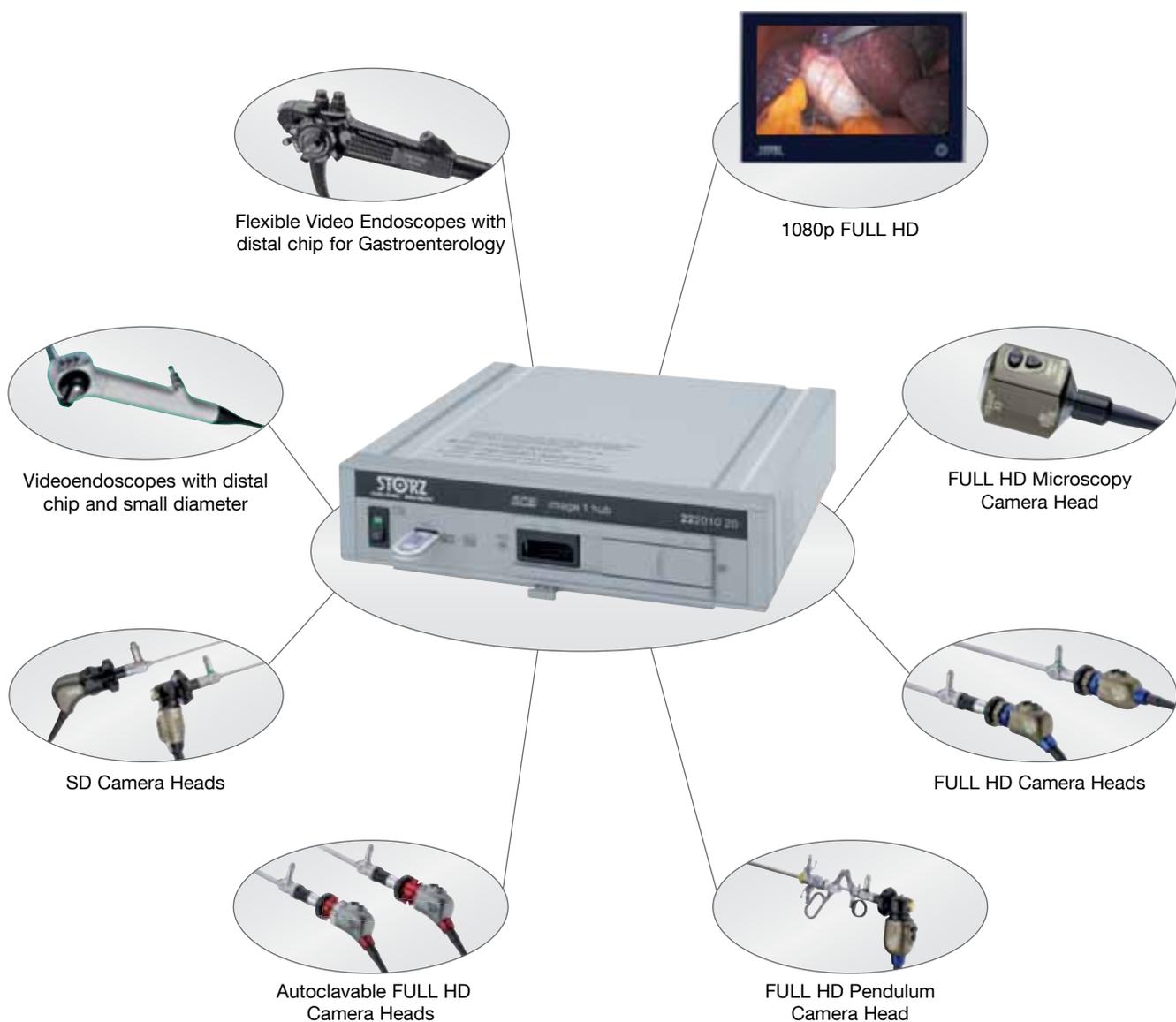


## High value retention

The IMAGE 1 camera platform provides long-term investment protection through backward and forward compatibility.

## The optimal visualization platform

The IMAGE 1 HD platform provides flexibility for various FULL HD and standard definition camera heads as well as video endoscopes with distal chips and DCI®-D1 camera heads.



# KARL STORZ OR1™ NEO

Connect, Control, Capture with a Simple Touch of a Button!



With more than 10 years of experience in medical integration and more than 65 years of experience in medical technology, KARL STORZ defines OR integration as a combination of three different elements that are fused to form a single concept – OR1™ NEO:

- Centralised control of the entire OR to manage endoscopic and peripheral devices and to view, display, document and communicate information from video and other data sources inside and outside the OR
- Ergonomic and user-friendly design to optimize the workflow and comfort and make for a modern and convenient workplace
- Connectivity to enhance audio-visual communication from the OR – whether for teleconferencing, for teaching residents or for telesurgery – and to network with hospital systems such as PACS, HIS or RIS

## SCB control NEO – Efficient and intuitive control of medical devices

The Realistic User Interface of the selected unit reduces user errors, saves time and offers additional safety. All unit settings (presets) 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 and to eliminate the possibility of incorrectly configured device parameters.



## AIDA compact NEO – Professional data-capturing and documentation in simple steps

The new and multifunctional design of the documentation system AIDA compact NEO provides limitless possibilities from the central control unit. It makes it easier and quicker to record still images, videos and audio files – in HD quality, of course – and facilitates creating doctors' letters and documentation.



## AV system NEO – Flexible communication technology inside and outside the OR

The new generation of the AV system NEO features a flexible, modular structure. Features and options are clearly defined and variable. The design enables you to choose the functionality needed for your specific environment, while allowing for future upgrades or enhancements. All telemedicine functions are operated via the central touch screen. The new design of the user interface enables easy and intuitive handling of the functions.



# KARL STORZ Manufacturer Service



## Full Service at First Hand

The name KARL STORZ is regarded as a guarantor for top-quality endoscopes and instruments worldwide. To maintain these quality standards as long as possible – and, consequently, maximum patient and user safety – KARL STORZ developed the special service program: ENDOPROTECT1.

ENDOPROTECT1 from KARL STORZ provides a comprehensive range of safe and cost-effective services to meet all the needs of endoscopic equipment.

ENDOPROTECT1 offers threefold protection:

- Protection of the patient against potential safety risks thanks to professional refurbishment services as well as regular maintenance and safety checks.
- Protection of the clinic against instrument risks and costly OR downtime thanks to the repair-exchange service and personnel that undergo regular training; protection of the user by maintaining the highest standards of repair quality and high operational safety when using KARL STORZ products.
- Protection of investment by maintaining value in the long term by preserving original manufacturer quality and full performance capacity.

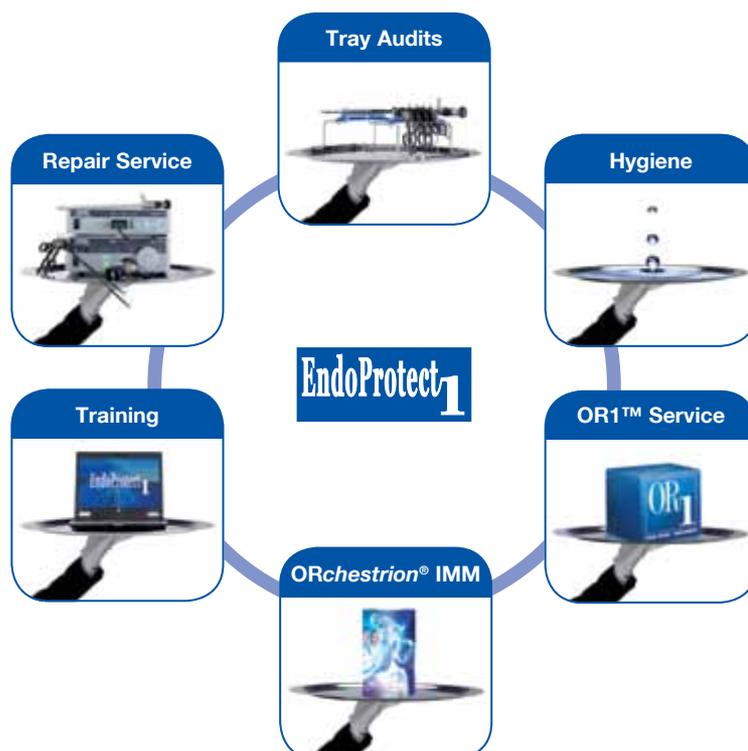
# The ENDOPROTECT1 Service Program



## Modular – safe – economical

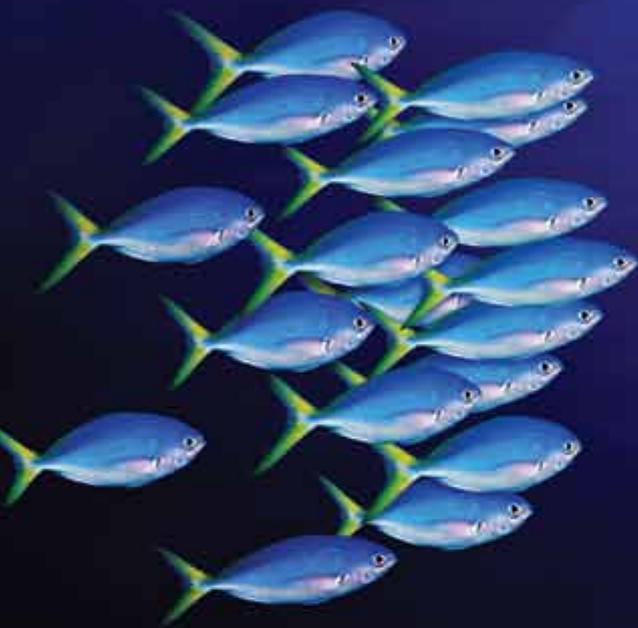
ENDOPROTECT1 consists of six service modules that complement one another and meet the varied demands in daily endoscopic practice. The flexible use of the various services financially protects customers and ensures maximum availability of their investments.

- Repair service
  - Individual support
  - Original manufacturer quality
  - Newest technologies
- Tray audits
  - Analysis
  - Optimization
  - Long-term preservation
- Training
  - Preventing malfunctions
  - Ensuring successful learning
  - Taking independent action
- OR1™ service
  - Maintenance & service
  - On-site support
  - Comprehensive user support
- Hygiene
  - Processing & care
  - Innovative storage systems
  - Support in hygiene questions
- ORchestrion® IMM
  - Creating transparency
  - Benefitting from cost savings
  - Increasing patient safety



# In a Sea of Imitations

The Original



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**YES, I'm interested in KARL STORZ FULL HD.**

- Please send me more information about the KARL STORZ HD Platform.
- Please contact me to arrange a date with your customer service.

**YES, I'm interested in KARL STORZ 3D.**

- Please send me more information about KARL STORZ 3D.
- Please contact me to arrange a date with your customer service.

**YES, I'm interested in KARL STORZ OR1™.**

- Please send me more information about KARL STORZ OR1™.
- Please contact me to arrange a date with your customer service.

**YES, I'm interested in the KARL STORZ ENDOPROTECT1 program.**

Please send me more information about KARL STORZ ENDOPROTECT1.

**YES, I'm interested in the KARL STORZ training program.**

Please send me more information about training from KARL STORZ.

**YES, I'm interested in both new and successfully proven products in Anesthesiology.**

Please send me further information on the following products/services:

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**My contact information:**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Hospital

\_\_\_\_\_  
Department

\_\_\_\_\_  
Address

\_\_\_\_\_  
City

\_\_\_\_\_  
Country

\_\_\_\_\_  
Phone

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Fax

\_\_\_\_\_  
Email address



...evolution continues

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