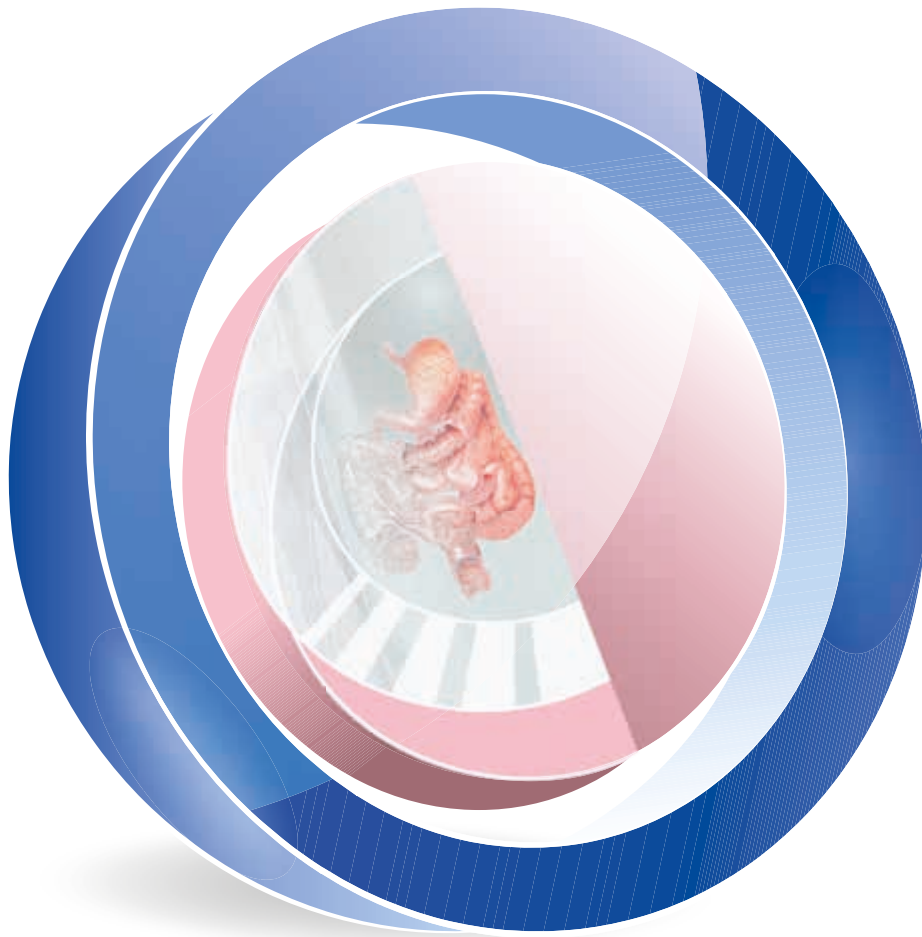


# Highlights 2018

Edition 1/2018



## Gastroenterology

**STORZ**  
KARL STORZ – ENDOSKOPE





## The KARL STORZ SILVER SCOPE® Series

The KARL STORZ SILVER SCOPE® series combines advanced technology, ergonomics, and durability to create a video endoscope that sets new standards. The product line offers three gastroscopes of different diameters, starting with the very small diameter slim gastroscope for transnasal insertion and for patients with stenoses. With its standard working channel and reduced outer diameter, the medium gastroscope is suitable for routine and pediatric use. The standard gastroscope is a reliable tool for daily routine and for interventions.

The outstanding duodenoscope has been further improved and now offers an Albarran module that can be removed for reprocessing. With this feature, the SILVER SCOPE® duodenoscope sets standards in hygiene and considerably reduces ERCP-related risks.

In colonoscopy, KARL STORZ offers an excellent selection of lengths, from the 40 cm long rectoscope to the 160 cm long colonoscope. The graduated rigidity and progressive insertion characteristics of the colonoscope insertion tube optimize advancement and improve patient safety. Reduced diameter endoscopes can be individually used in routine procedures and are also perfect for pediatric use. Various flexibilities are available as well for all working styles.

### All endoscopes of the SILVER SCOPE® series offer the following characteristics:

- Three innovative visualization technologies for easy tissue differentiation:
  - CLARA: Homogeneous illumination
  - CHROMA: Contrast enhancement
  - SPECTRA\*: Spectral color shift and color exchange
- Homogeneous image brightness, even under difficult lighting conditions
- LED illumination with the CO<sub>2</sub>MBI™ LED light source
- Air and CO<sub>2</sub> insufflation available
- Six functions on three individually programmable function keys
- Large deflection range for a complete view
- Full upward and downward compatibility with KARL STORZ video processors and light sources
- Fatigue-free working, even on long interventions
- With the endoscopes of the SILVER SCOPE® series, we recommend using the camera platform IMAGE1 S™ and the light source CO<sub>2</sub>MBI™ LED. Optimal component compatibility ensures the highest image quality and multiple visualization options.

\* SPECTRA: Not for sale in the U.S.



## Flexible SILVER SCOPE® Gastroscopes

### The flexible routine gastroscop

- The routine gastroscop is a reliable instrument for everyday use in gastroenterology. The 2.8 mm working channel allows the use of all instruments for diagnosis and intervention.
- Excellent deflection up to 210°

### The medium gastroscop for standard and pediatric use

- Elegant 7.8 mm outer diameter with 2.8 mm working channel
- Also suitable for pediatric applications
- Excellent deflection up to 210°

### The slim gastroscop for pediatric use and in case of stenoses

- Very slender sheath with 5.9 mm outer diameter and a 2.0 mm working channel
- Particularly well suited for examinations in very young patients and patients with stenoses
- Excellent deflection up to 210°

13821 PKSK/NKSK  
Routine Gastroscope

**Flexible Video Gastroscope**

Sheath outer diameter: 9.3 mm  
Working length: 1100 mm  
Working channel diameter: 2.8 mm  
Direction of view: 0°  
Max. deflection up/down: 210°/100°  
Max. deflection left/right: 120°/120°

13823 PKSK/NKSK  
Medium Gastroscope

**Flexible Video Gastroscope, with reduced outer diameter**


Sheath outer diameter: 7.8 mm  
Working length: 1100 mm  
Working channel diameter: 2.8 mm  
Direction of view: 0°  
Max. deflection up/down: 210°/100°  
Max. deflection left/right: 120°/120°

13820 PKSK/NKSK  
Slim Gastroscope


**Flexible Video Gastroscope**

Sheath outer diameter: 5.9 mm  
Working length: 1100 mm  
Working channel diameter: 2 mm  
Direction of view: 0°  
Max. deflection up/down: 210°/100°  
Max. deflection left/right: 120°/120°


**To clean endoscopes 13821 PKSK/NKSK and 13823 PKSK/NKSK, the following brush is recommended:**

110952-50\* **Cleaning Brush**, with double-sided brush, length 250 cm,   
brush diameter 3.2 mm, unsterile, for single use, package of 50,  
for use with flexible endoscopes with working channel diameters 2.6-3 mm

**To clean endoscopes 13820 PKSK/NKSK, the following brushes are recommended for the working/suction channel in the insertion tube:**

110942-50\* **Cleaning Brush**, with double-sided brush, length 160 cm,   
brush diameter 2.6 mm, unsterile, for single use, package of 50,  
for use with flexible endoscopes with working channel diameters 2-2.3 mm

**To clean the suction channel in the insertion tube, the following brush is recommended:**

110962-50\* **Cleaning Brush**, with double-sided brush, length 230 cm,   
brush diameter 4.5 mm, unsterile, for single use, package of 50,  
for use with flexible endoscopes with working channel diameters 3.2-4.2 mm



## Interventional Gastroscope with Two Working/Suction Channels



- For interventional and emergency gastroscopy
- Two working channels, 2.8 mm and 3.8 mm in diameter, with slender insertion sheath
- Additional water jet channel with LUER-Lock connector
- Simultaneous working and suction
- Complex procedures can be performed with two instruments simultaneously
- New suction valve with the choice of three suction options:
  - Suction through the 3.8 mm channel
  - Suction through the 2.8 mm channel
  - Simultaneous suction through both channels for maximum suction performance

13826 PKSK/NKSK Gastroscope with Water Jet Channel	<b>Interventional Gastroscope with Double Channel</b> Sheath outer diameter: 12 mm Working length: 1100 mm Working channel diameter: 3.8 mm and 2.8 mm Direction of view: 0° Max. deflection up/down: 210°/100° Max. deflection left/right: 120°/120°
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With the endoscope, we recommend using the camera platform IMAGE1 S™ and the light source CO<sub>2</sub>MBI™ LED. Optimal component compatibility ensures the highest image quality and multiple visualization options.

**Pages 16 and 17 show the recommended instruments for KARL STORZ routine colonoscopes. Additional items are available on the KARL STORZ website.**

**The following brushes are recommended for cleaning the Interventional Gastroscope 13826 PKSK/NKSK**

- 110962-50\* **Cleaning Brush**, with double-sided brush, length 230 cm, brush diameter 4.5 mm, unsterile, for single use, package of 50, for use with flexible endoscopes with working channel diameters 3.2-4.2 mm 
- 110952-50\* **Cleaning Brush**, with double-sided brush, length 250 cm, brush diameter 3.2 mm, unsterile, for single use, package of 50, for use with flexible endoscopes with working channel diameters 2.6-3 mm 

**The following brushes are recommended for brushing the water jet channel of the Interventional Gastroscope 13826 PKSK/NKSK**

- 110920-10\* **Biofilm Removal Device Cleaning Brush**, flocked, length 200 cm, unsterile, for single use, package of 10, for use with flexible endoscopes with a working channel diameter of 1.2 mm 
- 110932-50\* **Cleaning Brush**, length 200 cm, brush diameter 1.7 mm, unsterile, for single use, package of 50, for use with flexible endoscopes with working channel diameters 1.2-1.5 mm 





## An Outstanding Duodenoscopy System: The Answer to Therapeutic and Hygiene Challenges

- Optimal reprocessing ensured through close collaboration with leading international hygiene institutes
- Unparalleled removable and autoclavable Albarran module for perfect hygiene results
- Albarran channel can be rinsed and brushed without compromises
- Hygiene is no longer a problem in ERCP thanks to the detachable Albarran module
- Efficient 4.2 mm working channel





13885 PKSK/NKSK Duodenoscope	<b>Flexible Video Duodenoscope</b> Sheath outer diameter: 12.6 mm Working length: 1260 mm Working channel diameter: 4.2 mm Direction of view: 5° retro Max. deflection up/down: 120°/90° Max. deflection left/right: 90°/110°
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**Pages 16 and 17 show instruments recommended for Duodenoscope 13885 PKSK/NKSK.**

**The following brushes are recommended for cleaning the duodenoscope**

- 110962-50\* **Cleaning Brush**, with double-sided brush, length 230 cm, brush diameter 4.5 mm, unsterile, for single use, package of 50, for use with flexible endoscopes with working channel diameters 3.2-4.2 mm


- 110920-10\* **Biofilm Removal Device Cleaning Brush**, flocked, length 200 cm, unsterile, for single use, package of 10, for use with flexible endoscopes with a working channel diameter of 1.2 mm


- 110932-50\* **Cleaning Brush**, length 200 cm, brush diameter 1.7 mm, unsterile, for single use, package of 50, for use with flexible endoscopes with working channel diameters 1.2-1.5 mm







## Flexible SILVER SCOPE® Colonoscopes

- Three innovative visualization technologies for easy tissue differentiation:
  - CLARA: Homogeneous illumination
  - CHROMA: Contrast enhancement
  - SPECTRA\*: Spectral color shift and color exchange
- Homogeneous image brightness, even under difficult lighting conditions
- Available in two working lengths and with two insertion characteristics
- Excellent deflection, tight radius
- Brushable water jet channel in colonoscopes with a working length of 1600 mm

\* SPECTRA: Not for sale in the U.S.

13924 PKSK/NKSK Routine Colonoscope	<b>Flexible Video Colonoscope</b> Sheath outer diameter: 12.9 mm Working length: 1400 mm Working channel diameter: 3.8 mm Direction of view: 0° Max. deflection up/down: 180°/180° Max. deflection left/right: 160°/160°
13925 PKSK/NKSK Routine Colonoscope with Water Jet Channel	<b>Flexible Video Colonoscope</b> Sheath outer diameter: 12.9 mm Working length: 1600 mm Working channel diameter: 3.8 mm Direction of view: 0° Max. deflection up/down: 180°/180° Max. deflection left/right: 160°/160°
13924 HPKSK/HNKSK Stiffened Routine Colonoscope	<b>Flexible Video Colonoscope, with progressive insertion characteristics with flexibility increasing towards the endoscope tip</b> Sheath outer diameter: 12.9 mm Working length: 1400 mm Working channel diameter: 3.8 mm Direction of view: 0° Max. deflection up/down: 180°/180° Max. deflection left/right: 160°/160°
13925 HPKSK/HNKSK Stiffened Routine Colonoscope with Water Jet Channel	<b>Flexible Video Colonoscope, with progressive insertion characteristics with flexibility increasing towards the endoscope tip</b> Sheath outer diameter: 12.9 mm Working length: 1600 mm Working channel diameter: 3.8 mm Direction of view: 0° Max. deflection up/down: 80°/180° Max. deflection left/right: 160°/160°

**Pages 16 and 17 show instruments recommended for KARL STORZ routine colonoscopes. Further products can be found on the KARL STORZ website.**

**The following brush is recommended for cleaning the water jet channel of Colonoscopes 13925 PKSK/NKSK and 13925 HPKSK/HNKSK**

110920-10\* **Biofilm Removal Device Cleaning Brush**, flocked, length 200 cm, unsterile, for single use, package of 10, for use with flexible endoscopes with a working channel diameter of 1.2 mm





## Slim Colonoscope, also Suitable for Pediatric Applications

- Elegant 11.2 mm outer diameter with 3.4 mm working channel
- Enhanced endoscope flexibility for greater patient comfort
- Excellent deflection up to 210°
- Three innovative visualization technologies for easy tissue differentiation:
  - CLARA: Homogeneous illumination
  - CHROMA: Contrast enhancement
  - SPECTRA\*: Spectral color shift and color exchange
- CO<sub>2</sub> insufflation prevents postoperative pain
- The brushable water jet channel provides optimal hygiene results
- Available in three different lengths




\* SPECTRA: Not for sale in the U.S.

<p>13920 PKSK/NKSK Sigmoidoscope with Water Jet Channel</p>	<p><b>Flexible Video Sigmoidoscope, with reduced outer diameter</b></p> <p>Sheath outer diameter: 11.2 mm Working length: 800 mm Working channel diameter: 3.4 mm Direction of view: 0° Max. deflection up/down: 210°/180° Max. deflection left/right: 160°/160°</p>
<p>13926 PKSK/NKSK Slim Colonoscope with Water Jet Channel</p>	<p><b>Flexible Video Colonoscope, with reduced outer diameter</b></p> <p>Sheath outer diameter: 11.2 mm Working length: 1330 mm Working channel diameter: 3.4 mm Direction of view: 0° Max. deflection up/down: 210°/180° Max. deflection left/right: 160°/160°</p>
<p>13927 PKSK/NKSK Slim Colonoscope with Water Jet Channel</p>	<p><b>Flexible Video Colonoscope, with reduced outer diameter</b></p> <p>Sheath outer diameter: 11.2 mm Working length: 1530 mm Working channel diameter: 3.4 mm Direction of view: 0° Max. deflection up/down: 210°/180° Max. deflection left/right: 160°/160°</p>

We recommend the use of the IMAGE1 S™ camera platform and the CO<sub>2</sub>MBI™ LED light source with the endoscope.

**Pages 16 and 17 show instruments recommended for KARL STORZ slim colonoscopes and the sigmoidoscope. Further products can be found on the KARL STORZ website.**

**The following brushes are recommended for cleaning the slim colonoscopes and the sigmoidoscope**

- 110962-50\* **Cleaning Brush**, with double-sided brush, length 230 cm, brush diameter 4.5 mm, unsterile, for single use, package of 50, for use with flexible endoscopes with working channel diameters 3.2-4.2 mm 
- 110920-10\* **Biofilm Removal Device Cleaning Brush**, flocked, length 200 cm, unsterile, for single use, package of 10, for use with flexible endoscopes with a working channel diameter of 1.2 mm 
- 110932-50\* **Cleaning Brush**, length 200 cm, brush diameter 1.7 mm, unsterile, for single use, package of 50, for use with flexible endoscopes with working channel diameters 1.2-1.5 mm 



## KARL STORZ TROIDL SILVER SCOPE® Flexible Rectoscope

The flexible TROIDL SILVER SCOPE® rectoscope combines the fundamental advantages of flexible endoscopy with the application possibilities of rectoscopy.

### Special Features:

- Working length of 40 cm ensures easy handling
- Up to 210° inversion improves visualization and, consequently, diagnostic and therapeutic options thanks to forward and retrograde viewing
- Field of application especially suited for surgical conditions and procedures in the rectal area
- Fatigue-free work thanks to ergonomically shaped control unit
- Possibility to combine rigid and flexible endoscopy thanks to modular IMAGE1 S™ camera platform

13912 PKSK/NKSK	TROIDL <b>Rectoscope</b> ,	
	Sheath diameter:	11.8 mm
	Working length:	400 mm
	Working channel diameter:	3.4 mm
	Direction of view:	0°
	Max. deflection up/down:	210°/100°
	Max. deflection left/right:	120°/120°

**Pages 16 and 17 show instruments recommended for the TROIDL rectoscope from KARL STORZ. Further products can be found on the KARL STORZ website.**

**The following brush is recommended for cleaning the rectoscope**

110962-50\* **Cleaning Brush**, with double-sided brush, length 230 cm, brush diameter 4.5 mm, unsterile, for single use, package of 50, for use with flexible endoscopes with working channel diameters 3.2-4.2 mm





## Flexible Accessories and Instruments for Diagnostic and Therapeutic Use in Gastroenterological Endoscopy

### MTP-brand KARL STORZ products

KARL STORZ offers a wide range of single-use products for daily use in gastroenterology.

- Standard papillotomes as well as dual-lumen and triple-lumen papillotomes for any user preference. Triple-lumen papillotomes for the use of guide wires and the application of contrast agents in separate channels
- Biopsy forceps with sheath to reduce frictional resistance in the channel and to protect the channel entrance
- Biopsy forceps without spike for optimal tissue yield
- Biopsy forceps with spike for better grip in hard-to-access areas, such as in case of esophageal stricture



The following instruments (selection) are recommended for use with KARL STORZ endoscopes.

**For gastroscopy with channels as of diameter 2.8 mm (selection)  
each offered in packages of 10**



- 110270-10\* **Biopsy Forceps, with oval jaws and spike**, working length 180 cm, sterile, for single use
- 110272-10\* **Biopsy Forceps, with oval jaws**, working length 180 cm, sterile, for single use
- 110280-10\* **Biopsy Forceps, with oval jaws and spike**, coated, working length 180 cm, sterile, for single use
- 110230-10\* **Injection Needle, in plastic tube**, needle diameter 0.7 mm, needle length 6 mm, working length 180 cm, sterile, for single use
- 110232-10\* **Injection Needle, in plastic tube**, needle diameter 0.9 mm, needle length 6 mm, working length 180 cm, sterile, for single use

**For colonoscopy (selection): each offered in packages of 10**



- 110271-10\* **Biopsy Forceps, with oval jaws and spike**, working length 230 cm, sterile, for single use
- 110273-10\* **Biopsy Forceps, with oval jaws**, working length 230 cm, sterile, for single use
- 110281-10\* **Biopsy Forceps, with oval jaws and spike**, coated, working length 230 cm, sterile, for single use
- 110231-10\* **Injection Needle, in plastic tube**, needle diameter 0.7 mm, needle length 6 mm, working length 230 cm, sterile, for single use
- 110221-10\* **Oval Polypectomy Snare**, diameter 30 mm, working length 230 cm, KARL STORZ HF connector, sterile, for single use
- 110225-10\* **Asymmetric Polypectomy Snare**, diameter 25 mm, working length 230 cm, standard HF connector, sterile, for single use

**For ERCP: each offered in packages of 5**



- 110213-05\* **Papillotome**, filiform, single lumen, cutting wire length 25 mm, including handle, working length 200 cm, standard HF connector, sterile, for single use, for use with flexible endoscopes with working channels as of diameter 2.2 mm
- 110214-05\* **Papillotome**, filiform, double lumen, cutting wire length 20 mm, for guide wire 0.035", including handle, working length 200 cm, standard HF connector, sterile, for single use, for use with flexible endoscopes with working channels as of diameter 2.8 mm
- 110217-05\* **Papillotome**, filiform, triple lumen, cutting wire length 20 mm, for guide wire 0.035", including handle, working length 200 cm, standard HF connector, sterile, for single use, for use with flexible endoscopes with working channels as of diameter 2.8 mm

Further products can be found on the KARL STORZ website.





## IMAGE1 S™ – As Individual as your Requirements

IMAGE1 S™ is the core technology of the KARL STORZ gastroenterology system: Efficient, innovative and brilliant. Through color adjustments, the image quality has been tailored to the special needs in gastroenterology. Combining the camera and light source via the KARL STORZ Communication Bus (SCB) guarantees consistent, optimal illumination of both deep spaces and the near range.

- Modular system for both flexible and rigid endoscopy
- Three innovative visualization technologies for easy tissue differentiation: CLARA, CHROMA and SPECTRA\*
- Side-by-side view allows real-time comparison of the white light image and visualization modes
- Automatic light source control
- Multiple source management: Simultaneous control, display, documentation of image information from two connected image sources (e.g., for hybrid interventions)

\* SPECTRA: Not for sale in the U.S.

**The following components are recommended for use with the IMAGE1 S™ system in gastroenterology**

- TC 200EN **IMAGE1 S CONNECT™**, connect module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated KARL STORZ-SCB and digital Image Processing Module, power supply 100-120 VAC/200-240 VAC, 50/60 Hz
- TC 301 **IMAGE1 S™ X-LINK**, link module, for use with flexible video endoscopes, power supply 100-120 VAC/200-240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT™ TC 200EN
- TC 013 **IMAGE1 S™ Video Endoscope Adaptor 90°**, color systems PAL/NTSC, angled 90°, length 50 cm, for use with IMAGE1 S™ X-LINK TC 301
- TC 009 **USB Adaptor**, for ACC 1 and ACC 2, for use in conjunction with IMAGE1 S CONNECT™ and AIDA™ HD

**For use with the aforementioned video gastroscopes, video colonoscopes and the video duodenoscope.**



## CO<sub>2</sub>mbi™ LED Cold Light Fountain

- Two-in-one solution combines an LED light source and air/CO<sub>2</sub> insufflator in one unit
- Long LED module service life provides significant cost reductions
- Manually adjustable light intensity
- Optimal light yield with high-efficiency LED
- CO<sub>2</sub> insufflation for greater patient comfort
- Choice of three insufflation modes: 100% CO<sub>2</sub> mode, regular room air, CO<sub>2</sub> /air mode
- Integrated pump with two power levels for rapid insufflation
- Display with interactive icons
- Touch screen can also be controlled with wet gloves

**The following components are recommended for use with CO<sub>2</sub>MBI™ LED**

TL 100S1 **Cold Light Fountain CO<sub>2</sub>MBI™ LED SCB**, with high-performance LED, integrated KARL STORZ-SCB and integrated insufflation pump for air and CO<sub>2</sub> insufflation, for use with KARL STORZ video endoscopes, power supply 100-240 VAC, 50/60 Hz including:

**Irrigation Bottle Holder**

**Holding Ring**, for water bottles

**Water Bottle**

**Irrigation Adaptor**, for water bottles

**SCB Connecting Cable**

**Universal Wrench**

**For CO<sub>2</sub> supply, one of the following tubes must be selected**

**20400021 CO<sub>2</sub> High Pressure Tube**, American connection/German connection, length 55 cm

**20400027 CO<sub>2</sub> High Pressure Tube**, American connection/German connection, length 102 cm

**20400022 CO<sub>2</sub> High Pressure Tube**, American connection/Pin-Index connection, length 55 cm

**20400028 CO<sub>2</sub> High Pressure Tube**, American connection/Pin-Index connection, length 102 cm

**20400222 CO<sub>2</sub> High Pressure Tube**, American connection/ISO connection, length 102 cm

UI 001 **Low Pressure Tube**, for the central CO<sub>2</sub> gas supply, length 150 cm

UI 002 **Low Pressure Tube**, for the central CO<sub>2</sub> gas supply, length 300 cm

UI 003 **Low Pressure Tube**, for the central CO<sub>2</sub> gas supply, length 600 cm

**For use with the aforementioned video gastroscopes, video colonoscopes and the video duodenoscope.**



## TELE PACK X GI

- Portable all-in-one system combines a monitor, video processor, LED light source, documentation unit and insufflation pump in one unit
- The high level of integration provides flexibility and independence
- For use in the emergency room, intensive care unit and outpatient settings, e.g., in nursing homes/rehab
- Compatible with all current KARL STORZ gastro-, colono- and duodenoscopes
- A light cable adaptor allows the unit to be used with rigid endoscopes
- Network function can be integrated as a software update in all inventory systems

**The following components are recommended for use with the TELE PACK X GI in gastroenterology**

TP 200EN **TELE PACK X GI**, endoscopic video unit for use with all KARL STORZ TELECAM one-chip camera heads and video endoscopes, with integrated insufflation pump, incl. LED light source similar to Xenon technology, with integrated digital Image Processing Module, 15" LCD TFT monitor with LED backlight, USB/SD memory module, color systems PAL/NTSC, power supply 100-240 VAC, 50/60 Hz

including:

**Water Bottle**

**Irrigation Adaptor**, for water bottle

**USB Silicone Keyboard**, with touchpad, US-English character set

**USB Flash Drive**, 32 GB

**SD Card**, 32 GB

**Mains Cord**, length 300 cm

**20 2130 70 Video Connecting Cable**, for use between KARL STORZ video endoscopes and TELECAM camera control units or TELE PACK video units

**For use with the aforementioned video gastroscopes, video colonoscopes and the video duodenoscope.**

**It is recommended to check the suitability of the product for the intended procedure prior to use.**



**STORZ**  
KARL STORZ—ENDOSKOPE

THE DIAMOND STANDARD



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