



# **GASTROENTEROLOGY**

**2nd EDITION 1/2010 US**

Chapter			Pages
1	GASTROSCOPES, Size 9 – 12 mm ESOPHARYNGOSCOPE, Size 3.5 mm EsophyX® TIF®	GE-VG-INTRO, GE-VG	1-20
2	DUODENOSCOPES, Size 11.8 – 12.6 mm	GE-VD-INTRO, GE-VD	21-38
3	SIGMOIDOSCOPIES, COLOSCOPES, RECTOSCOPE Size 10.6 – 13 mm	GE-VC-INTRO, GE-VC	39-56
4	GASTRO PACK®	GE-GP	57-62
5	ACCESSORIES FOR FLEXIBLE ENDOSCOPES	GE-ACC	63-82
6	UNITS AND ACCESSORIES FOR GASTROENTEROLOGY	GE-UNITS INTRO, GE-UNITS	U 1-26
7	RECTOSCOPY – RIGID	GE-REC, CLICKLINE-INTRO	83-98
8	PROCTOSCOPY	GE-PRO	99-116
9	SPARE PARTS FOR GASTROENTEROLOGY	GE-SP	SP 1-14



**THE WORLD OF ENDOSCOPY**

**GASTROENTEROLOGY**

**2nd EDITION 1/2010 US**

## Important information for U.S. customers

### Note:

Certain devices and references made herein to specific indications of use may have not received clearance or approval by the United States Food and Drug Administration. Practitioners in the United States should first consult with their local KARL STORZ representative in order to ascertain product availability and specific labeling claims. Federal (USA) law restricts certain devices referenced herein to sale, distribution, and use by, or on the order of a physician, dentist, veterinarian, or other practitioner licensed by the law of the State in which she/he practices to use or order the use of the device.

## Important Notes:

Endoscopes and accessories contained in this catalog have been designed in part with the cooperation of physicians and are manufactured by the KARL STORZ group. If subcontractors are hired to manufacture individual components, these are made according to proprietary KARL STORZ plans or drawings. Furthermore, these products are subject to strict quality and control guidelines of the KARL STORZ group. Both contractual and general legal provisions prohibit subcontractors from supplying components manufactured by order of KARL STORZ to competitors.

Any assumptions that competitors' endoscopes and accessories are acquired from the same suppliers as the KARL STORZ products are not correct. Moreover, endoscopes and instruments provided by competitors are not manufactured according to the design specifications of KARL STORZ. This means it cannot be assumed that these endoscopes and accessories – even if they look identical on the outside – are constructed in the same manner and have been tested according to the same criteria.

### Standardized Design and Labeling

KARL STORZ participates both in national and international bodies involved in the development of standards for endoscopes and endoscopic accessories. Standardized design and development therefore have long been implemented consistently by KARL STORZ. The user can rest assured that all products by the KARL STORZ group have been designed and constructed not only in compliance with strict internal quality guidelines, but also with international standards. All data relevant for safe use, such as viewing direction, sizes and diameters, or notes regarding sterilization of telescopes, are applied to the instruments, have been formulated according to international standards, and therefore provide reliable information.

As we constantly seek to improve and modify our products, we reserve the right to make changes in design that vary from catalog descriptions.

### Original or Counterfeit

KARL STORZ products are name brand articles renowned around the world and represent the state of the art in important areas of healthcare. A large number of "copy cat" products are currently being offered in many markets. These products are designed intentionally to resemble KARL STORZ products and use marketing strategies that at least point out their compatibility with KARL STORZ products. These products are by no means genuine products, since genuine KARL STORZ products are sold worldwide exclusively under the name of KARL STORZ, which appears on the packaging and the product. In the absence of such labeling, the product is not from KARL STORZ.

KARL STORZ, therefore, is unable to ensure that such products are actually compatible with genuine KARL STORZ products or can be used with them without injury to the patient.

## KARL STORZ Items Not Available In The U.S. July, 2010

### Pending 510(k) / PMA Not Currently Available For Sale In The U.S.

Chapter	Description	Section	Page
1	Esopharyngoscope	GE-VG 8 A	12
1	GASTRO PACK®	GE-VG 9, GE-VC 11	13, 53
2	Micro Duodeno Endoscope	GE-VD 9	33
2	FRIMBERGER Duodenoscopy	GE-VD 9	33
3	UNIMAT® 30	GE-VC 11, GE-UNITS 3 A	53, U 7
6	AUTOCON® 200	GE-UNITS 12	U 16
8	Ligature Instrument	GE-PRO 12 A-14 A	110-112
10	OR1™ connect S2+	OR1-ERG 7	OR 17

**Note:** References made herein to specific endoscopic procedures or techniques represent the opinions and/or experiences of the named physician(s). KARL STORZ Endoscopy-America, Inc. neither warrants nor represents the appropriateness or efficacy of said procedures. Physicians are encouraged to consult medical literature regarding techniques, compliances, and hazards prior to performance of any endoscopic procedure.

**Note:** Some items are pending 510(k). Please contact KARL STORZ Customer Services at (800) 421-0837 regarding the current regulatory status of products above.

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Prices are subject to change without notice. Nevertheless, prices in effect at the time that an order is accepted will prevail. Written quotations are valid for 60 days unless otherwise specified. All applicable taxes, as well as shipping and/or handling charges, will be added to the invoice. KSEA reports all discounts in accordance with 42 CFR §1001.952(h).

#### **3. TERMS**

Shipments are F.O.B. shipping point, freight prepaid by KSEA and added to the invoice. Unless modified in writing, invoices are due and payable upon receipt; net 30 days. A finance charge may be assessed on all unpaid balances over 30 days equal to one and one-half percent (1-1/2%) per month, or the maximum amount allowed by law, whichever is less. Any and all collection expenses, including reasonable attorneys fees, which are incurred by KSEA to secure payment of any sums due from Customer and/or to effectuate repossession of products purchased from KSEA, but not paid for, will be borne by Customer. All controversies, disputes and claims, shall be adjudicated by a court of competent jurisdiction within the County of Los Angeles, State of California or the United States District Court, Central District of California, which courts shall have exclusive jurisdiction of such matters. All transactions by and between Customer and KSEA shall be governed by and construed in accordance with the laws of the State of California. The invalidity or unenforceability of any of the within Terms and Conditions will not effect the validity or enforceability of any other or remaining Term or Condition hereof. The within Terms and Conditions apply to products that are supplied to Customer as samples or loans from KSEA. Amounts payable to KSEA for the purchase, lease, or rent of products and/or services are not subject to withholding, set-off, or counter-claim under any circumstances without prior written consent of KSEA.

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#### **5. SHIPPING**

Although KARL STORZ products are carefully packed to minimize in-transit damage, all shipments should be carefully examined upon receipt and if a product is damaged, Customer must document the nature and extent of the damage and immediately contact KSEA. If concealed loss or damage is discovered, Customer must retain all packing materials and immediately notify KSEA, requesting an inspection. If shipments are received short, Customer must contact KSEA's Customer Support Department at once. KSEA reserves the right to make partial shipments on any Order. Invoices for partial shipments are payable upon receipt. KSEA is not liable for any damages caused by or attributable to delays and/or non-delivery due to any cause whatsoever.

#### **6. RETURN POLICY**

A return merchandise authorization (RMA) must be obtained from KSEA's Customer Support Department prior to returning any products. When phoning or writing KSEA, for an RMA, the Customer Support Representative must be provided with: (1) Customer name and number, as it appears on the invoice; (2) the telephone number and the person to contact; (3) the applicable P.O. number; (4) the KARL STORZ catalog number and, if applicable, the serial number for each product; and, (5) the reason for the return. KSEA reserves the right to refuse or return any products sent back to KSEA without prior authorization of its Customer Support Department. Returns must be carefully packed and shipped pre-paid to KSEA, attn: RMA number. KSEA's Customer Support Department will provide the return address and the RMA number. When returning products, Customer should include a copy of the original invoice or packing slip to ensure prompt issuing of credit. Full credit will only be issued for products that are returned within 30 days of invoice date and so long as such items are unused, in resalable condition and in their original product container. All products returned after 30 days from the date of invoice are subject to a 15% restocking fee. Shipping charges will be reimbursed, restocking fees will not be charged and full credit will be given if the return was due to an error on the part of KSEA. The following products may not be returned for credit or exchanged: (1) products held longer than 90 days from invoice date; (2) sterile packaged products where the package is opened and/or damaged; (3) discontinued products; (4) instruments that are etched or engraved by Customer; (5) products damaged by the Customer; (6) products purchased "as is" or as demo products; and, (7) used products. In order to prevent the transmission of disease to the medical facilities' and/or KSEA's personnel, all products must be cleaned and then sterilized and/or disinfected before sending such products back to KSEA, who reserves the right to return unclean and contaminated products to the Customer. Additionally, if any product becomes damaged and is not immediately returned, KSEA assumes no responsibility or liability for Customer's continued use of that damaged product. KSEA does not guarantee the performance, and may decline to repair or accept for repair/exchange, any product that has been repaired, modified and/or altered by any person or entity other than KSEA or an authorized repair facility of KSEA.



## 7. REPAIR PROGRAM

If repairs become necessary, for other than damages incurred during initial shipment, the Customer must follow the RMA procedure set forth in the "Return Policy" in Section 6, above. Warranty repairs will be made without charge (see "Warranty Policy," section 8 below, for covered repairs). All other repairs are subject to KSEA's applicable standard repair or exchange charges. If requested, Customer will be advised of the estimated cost of the repair work or a product exchange before it is undertaken. All repairs carry a 90 day warranty. Exchange products carry the applicable KARL STORZ product warranty. If the damaged product is not returned within thirty (30) days of receipt of the replacement product, Customer will be invoiced for the full list price of the replacement. KSEA reserves the right to refuse or return any product sent back without prior authorization of KSEA's Customer Support Department.

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## **GASTROSCOPES**

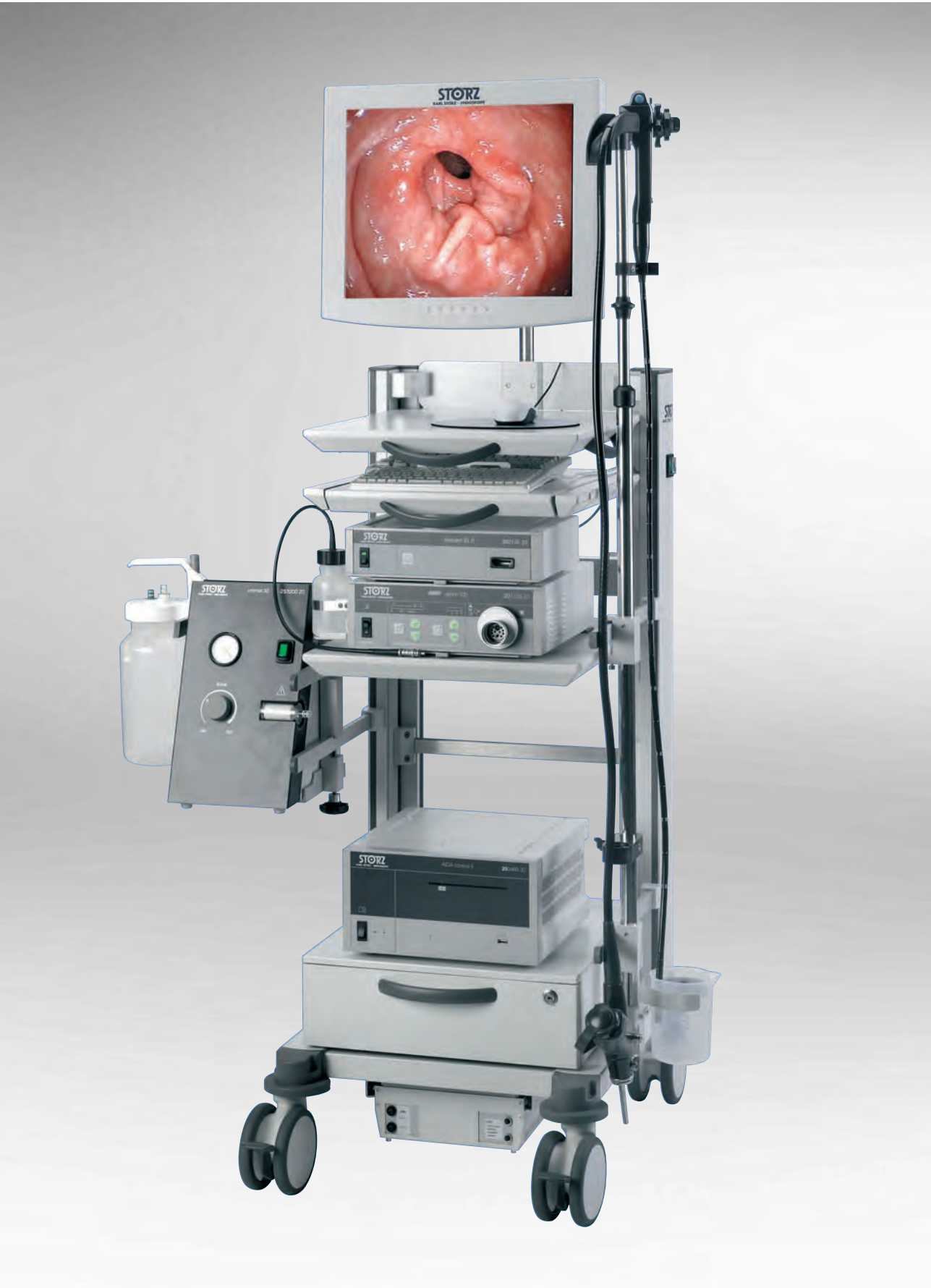
Size 9 - 12 mm

## **ESOPHARYNGOSCOPE**

Size 3.5 mm

**EsophyX® TIF®**





1-042



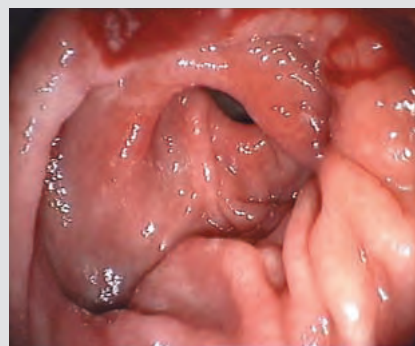
**Fig. 1:** Antrum with pylorus



**Fig. 2:** Normal mucosa in the lower stomach



**Fig. 3:** Biopsy of the antrum



**Fig. 4:** Antrum with peristaltic movement

# Gastrosopes

1 or 2 working channels

KARL STORZ's new video endoscope range sets new standards for image quality. Utilization of the very latest in digital processing technology, high resolution CCD chips, and an enhanced optical system results in endoscopes that produce images with unique clarity. The images are distinguished by excellent brightness, resolution, size and depth of field. By incorporating two

diametrically opposed light bundles and intelligent digital processor control, evenly illuminated images are provided, even under difficult lighting conditions.

Using endoscopes with two working channels supports certain interventions, for example, hemostasis by means of clip application, thus enabling simultaneous operation of the grasping forceps and clip applicator.

## Special features:

- High resolution, true color video images
- Large depth of field
- Evenly illuminated, bright images, even under difficult lighting conditions
- 140° wide angle optics with high light transmitting capacity
- Enhanced easy to operate controls
- Optimal position of control functions
- Torsion-proof, 3-step insertion sheath with active and passive sections for optimal handling
- Optimal instrument passage even at extreme angles
- Robust supply tube with standard connection



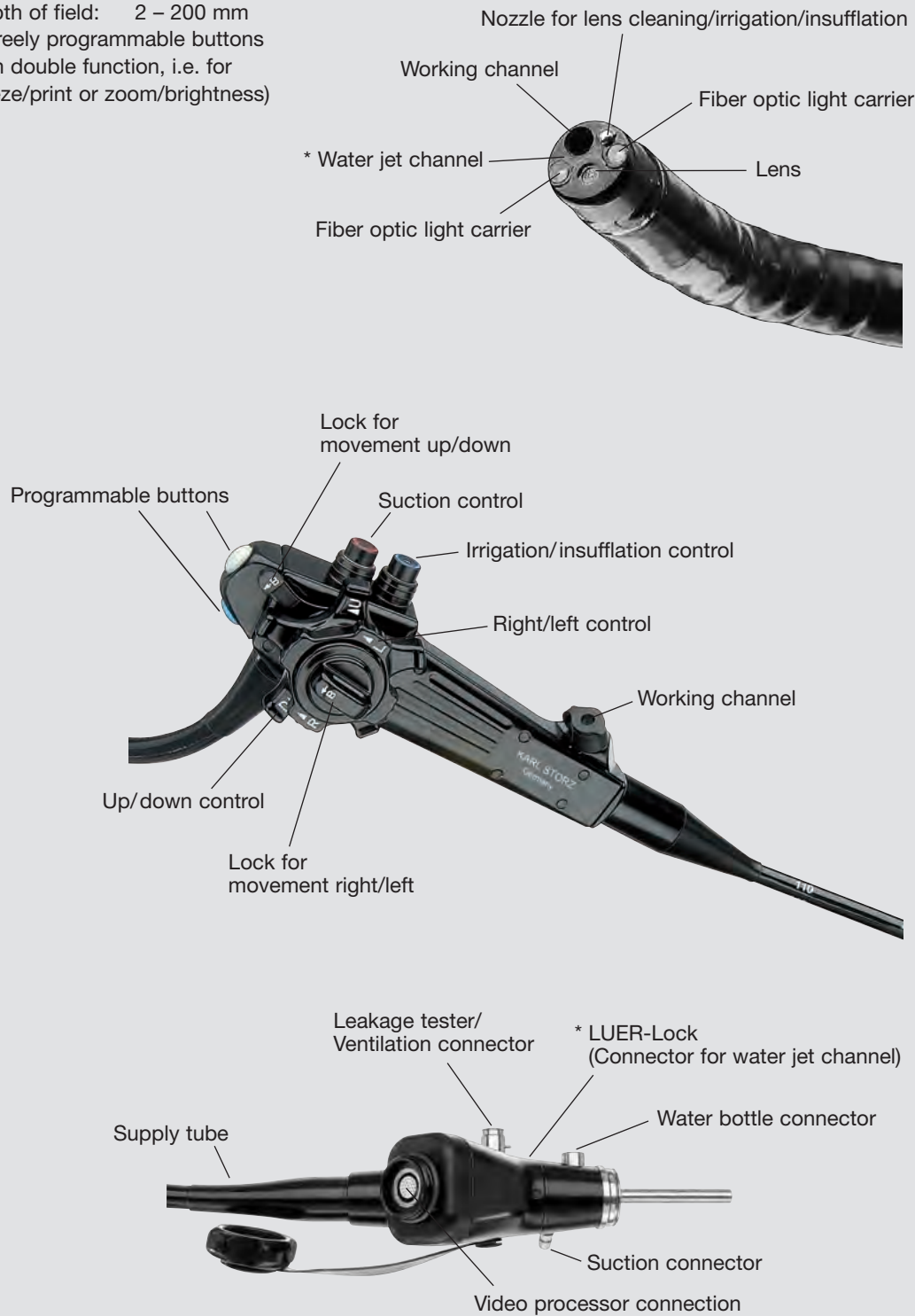


# Gastrosopes

1 working channel

**Specifications:**

Field of view: 140°  
Depth of field: 2 – 200 mm  
(2 freely programmable buttons  
with double function, i.e. for  
freeze/print or zoom/brightness)



\* for 13807 PKS/NKS only



# Gastrosopes

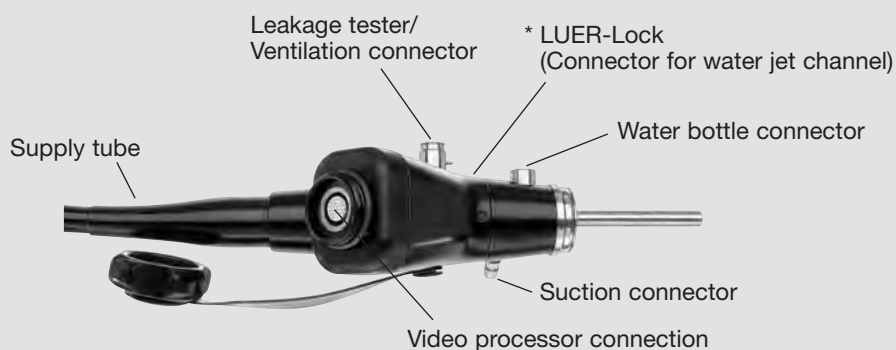
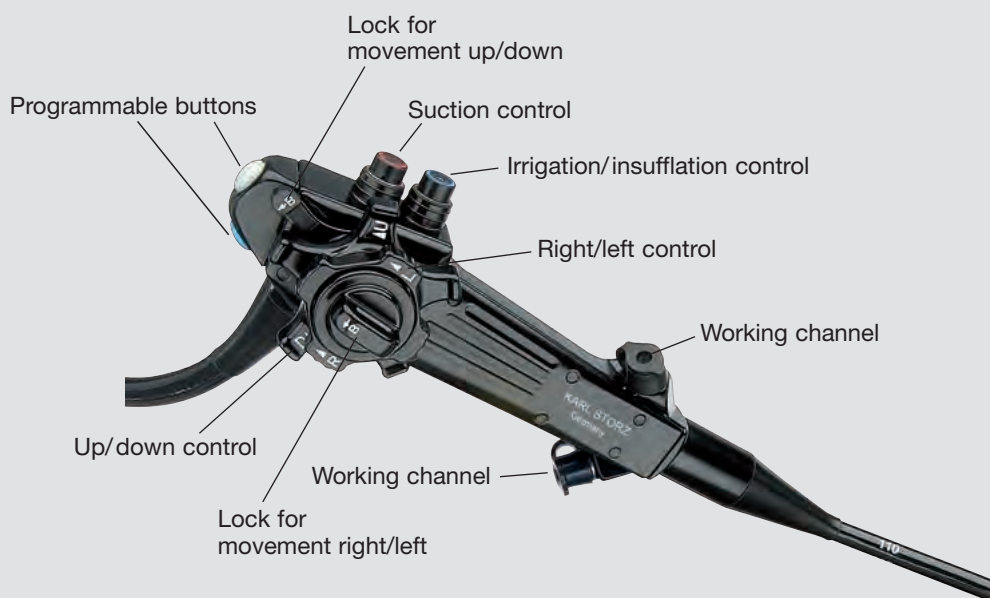
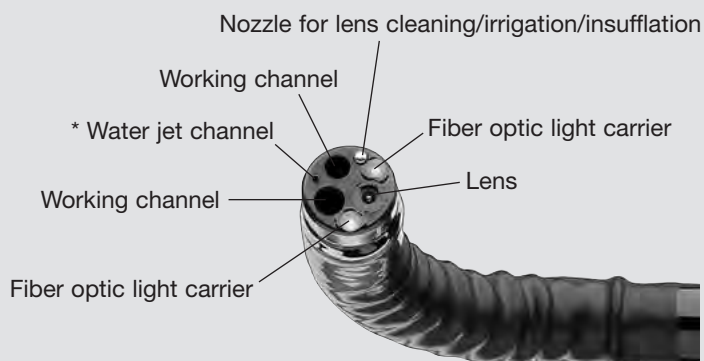
2 working channels

## Specifications:

Field of view: 140°

Depth of field: 2 – 200 mm

(2 freely programmable buttons with double function, i.e. for freeze/print or zoom/brightness)

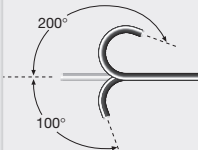
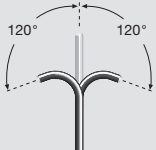
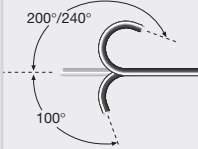
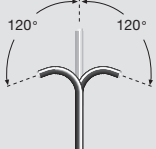
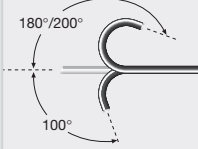
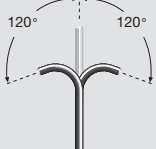
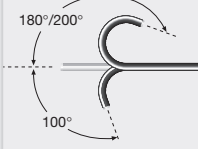
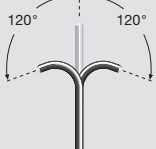
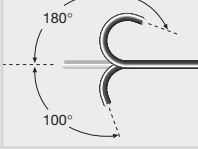
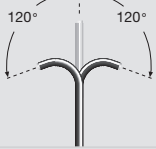
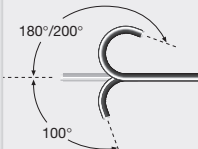
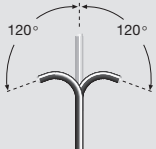


# Gastrosopes

## Overview

Flexible Gastrosopes	Type	Order No.		Sheath Diameter	Working Channel Diameter	Working Length	
		PAL	NTSC				
9 mm x 110 cm	Diagnostic Gastroscope	13800 PKS	13800 NKS	9 mm	2.2 mm	110 cm	
9.7 mm x 110 cm	Routine Gastroscope	13801 PKS	13801 NKS	9.7 mm	2.8 mm	110 cm	
11.2 mm x 110 cm	Therapeutic Gastroscope	13804 PKS	13804 NKS	11.2 mm	3.8 mm	110 cm	
12 mm x 110 cm	Therapeutic Gastroscope with water jet channel	13807 PKS	13807 NKS	12 mm	4.2 mm	110 cm	
10.7 mm x 220 cm	Enteroscope	13808 PKS	13808 NKS	10.7 mm	2.8 mm	220 cm	
12 mm x 110 cm	Double Channel Gastroscope with water jet channel	13806 PKS	13806 NKS	12 mm	2.8 mm 3.4 mm	110 cm	

Accessories included in delivery and optional accessories see pages 18-19

	Distal Tip Outer Diameter	Deflection up/down	Deflection left/right	Field of View	Depth of Field	Accessories included	
						Biopsy Forceps	Cleaning Brush
	9.5 mm			140°	2 – 200 mm	11001 LN	27651 G 27651 H
	9.8 mm			140°	2 – 200 mm	13250 LN	27651 H
	11.2 mm			140°	2 – 200 mm	13250 LP	27651 H
	12 mm			140°	2 – 200 mm	13250 LP	27651 H
	10.7 mm			140°	2 – 200 mm	13250 XL	27651 I
	12 mm			140°	2 – 200 mm	13250 LP	27651 H

**Esophago-Fiberscope**, for adults, without working channel,  
working length 76 cm, diameter 3.5 mm

### Special features:

- Possibility of inversion up to 200°
- A cm-scale with special markings for every 5 and 10 cm – can be read as distance between the optical window to the vestibule of the nose (Fig. 1)
- Every 10 cm the distance from the optical window is visible as a figure beside the marking, e. g. 30 cm = 3; 50 cm = 5 or 70 cm = 7. This means that the height and caudal-cranial extent of a pathological process can be determined with an accuracy of up to less than 1 cm in the esophagus. This procedure is suitable for measuring extensive alterations.
- When the distal end is curved backwards by 200°, a 2.5 cm-scale is visible in the optical window on the fiberscope. The cm-scale is positioned in inversion beside the pathological process. The extension is read and recorded with the video-endoscope (Fig. 2). It allows measuring the length of a change in the esophagus with an accuracy up to  $\pm 1$  mm, whilst eliminating the parallax error. This procedure is suitable for measuring smaller processes outside the sphincter regions.
- The possibility of long-term endoscopy is comparable to pH-metry or impedancometry.

### Fields of application

- Laryngopharynx
- Upper Esophageal Sphincter (UES)
- Cardia or Lower Esophageal Sphincter (LES)

### Applications

- Stress endoscopy
- Polysomnoscopy
- Tracheobronchoscopy
- Combined endoscopy

### Handling

The fiberscope is introduced transnasally. It is inserted into the pharynx under visual control. During this maneuver the functions of breathing, speaking, singing, coughing, swallowing water, liquid and solid food, etc. can be examined in the nose, rhinopharynx, velopharynx, oropharynx and larynx or laryngopharynx. This endoscopic procedure can be performed on adults without any medication. Administering decongestant nose drops with the addition of a few drops of e.g. oxybuprocaine (Novosine) is only advisable in the case of allergic patients and children on account of increased sensitivity or the narrower nasal passage.

To aid passage through the upper esophageal sphincter, the patient is given a glass of plain water (non-carbonated) and a straw. Once the optical window of the fiberscope is positioned above the postcricoid region, the endoscope passes the upper sphincter after the first sip of water. This takes advantage of the physiological hypesthesia which occurs through the act of swallowing. The patient virtually drinks the fiberscope. With the help of the patient, the optical window reaches the lower esophageal sphincter. Drinking plain water enables the fiberscope to pass through the cardia. Stomach gas (Fig. 3), the stomach's contents and the stomach wall can then be visualized via mucosal relief.

### Field of application

#### Stress endoscopy

Following the transnasal introduction of the endoscope into the esophagus, the functions of the stomach, esophagus, pharynx and larynx can be simultaneously recorded with an ECG under the same conditions as a stress electrocardiogram. As the symptoms for cardiac disorders and gastric reflux are similar, differential diagnosis is important in this case. Respiration and reflux disorders in the esophagus, pharynx and larynx as well as resulting electrocardiographic changes are documented during an exercise stress test.

#### Polysomnoscopy (sleep endoscopy in conjunction with polysomnography)

Similar to stress endoscopy, a new diagnostic sleep endoscopy has been developed which combines polysomnography with somnoscopy (sleep endoscopy) on-line. The fiberscope is introduced as described above. In the sleep laboratory, the mechanisms of obstruction in the velopharynx, oropharynx and larynx regions that are observed and recorded during sleep endoscopy can be correlated on-line with polysomnographic data. This shows that there is a direct correlation between causes recorded by means of sleep registration and polysomnographic findings. Consequently, the significance of laryngeal obstruction mechanisms, which are responsible for 22% of all snoring and OSAHS problems, could be established. For the first time, a pretherapeutic diagnostic technique allows a prognosis on a postoperative outcome. This offers the possibility of objective quality control of the performed therapy during post-therapeutic follow-up.

A C-PAP or B-PAP machine is set up or adjusted under polysomnoscopic control. This ensures that OSAHS patients receive a higher standard of treatment.

## Tracheobronchoscopy

Out-patient tracheobronchoscopy can be performed on patients (including children) in a sitting position. Following administration of decongestant nose drops and nasal decongestion, e.g. 2% oxybuprocaine is inhaled deeply through an atomizer. This maneuver is repeated every 2 minutes. One waits for about 4 minutes until the patient confirms anesthesia. The fiberscope is advanced to the vocal cord level and oxybuprocaine is applied as drops to the tracheal mucosa. It is then possible to advance to the tracheo-bronchial tree.

## Combined endoscopy

### (Functional analysis under visual control)

Using a Steri-Strip (6 mm × 50 mm = half-length (3M)), a Sleuth catheter (impedancometry) and a pH meter probe or manometer probe, for example, are placed in parallel (piggyback) on the fiberscope and mounted on the side of the fiberscope with cm-markings (up to 70 cm). The tip of the catheter or the probe must be visible in the optical window even when the endoscope is deflected. Following nasal decongestion, the piggyback system is inserted into the side of the nose which offers the most space for maneuver. After reaching the pharynx, the system passes the upper sphincter as described above. The plaster should not be wrapped around the instruments more than twice (max. 50 mm = half-length) so that it comes off easily in the stomach. Gentle counter-rotation of both piggyback components enables this fixation to be detached more quickly in the stomach.

## Benefits of combined endoscopy:

- Introduction of probe or catheter under visual control, i.e. without gagging and without accidentally entering the larynx or the trachea
- Visualization of sensor position (sensor of the pH probe in the gaseous space of the stomach with correct pH values, but false interpretation)
- Visualization of the sensor or catheter position (i.e. kinked catheter in the esophagus)
- Prevention of blind measuring and, consequently, false interpretations via visualization and measurements

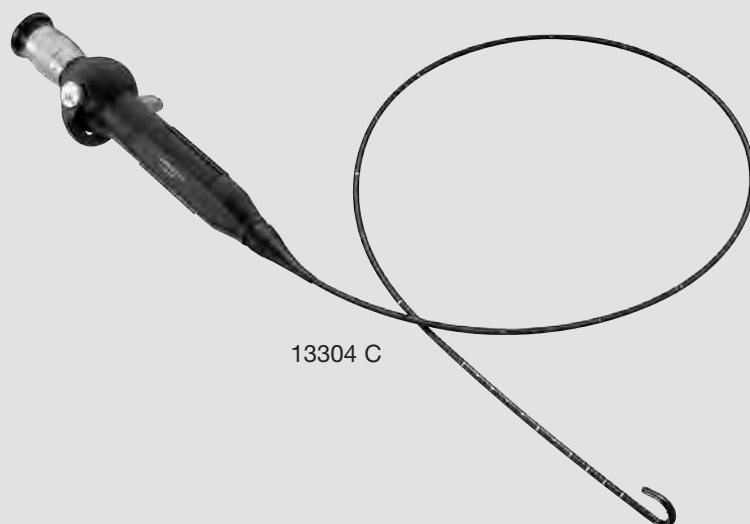
This new endoscopic technique offers improved functional diagnostics which is now performed under visualization in contrast to previous blind introduction. This opens up new dimensions and several possibilities for understanding mechanisms and pathomechanisms, for preventive medicine, and to develop more specific therapy plans.

A patient's case history and food diary (when, what, where, how long) – which records the type, time of day, and duration of food and drink consumption as well as any complaints – helps shorten the time required to perform medical examinations. Indications are also provided for, i.e. impedance measurement combined with pH-metry and/or simultaneous endoscopic long-term functional analysis. A more specific diagnosis can prevent the indiscriminate use of antacids and similar medications.

*Prof. Dr. I. F. HERRMANN,  
European Hospital,  
Rome, Italy*

# HERRMANN Esopharyngoscope

for functional diagnostics in otorhinolaryngology

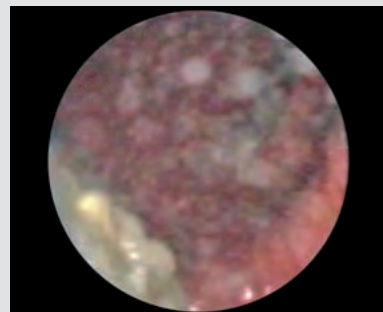
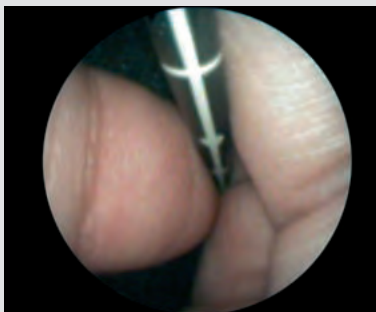


13304 C

13304 C	<b>HERRMANN Esopharyngoscope</b>
	Direction of view: 0°
	Angle of view: 70°
	Working length: 76 cm
	Outer diameter: 3.5 mm
	Deflection up/down: 200°/100°

## Following accessories included:

11025 E	<b>Pressure Compensation Cap</b> , for ventilation during gas sterilization
13242 XL	<b>Leakage Tester</b> , with bulb and manometer
13272	<b>Mouth Piece</b>
27677 BB	<b>Case</b>



**Figs. 1 and 2:** The endoscopic image shows the 2.5 cm-scale in inversion.

**Fig. 3:** Particles fly around like snow through the gaseous space of the stomach. Stomach gas can be made visible.



# GASTRO PACK®

Configuration Example

## Special features:

- Transportable
- World power supply 100 – 240 VAC, 50/60 Hz
- When using the KARL STORZ TELECAM® Camera Head with Parfocal Zoom Lens, 25 – 50 mm focal length (included in set 20 0430 01-020/20 0431 01-020), a large image is displayed on the monitor, independently of the telescope used.
- Anti-grid and anti-moiré filter integrated
- Camera Control Unit compatible with:
  - TELECAM® camera heads
  - DCI® systems without autorotation function
  - HEADCAM
  - KARL STORZ video endoscopes
- Camera Head
 

The TELECAM® camera head used for video documentation fits standard eyepieces of rigid and flexible endoscopes as well as microscopes without additional adaptors.



25 0430 11 **GASTRO PACK®**, color system **PAL**, with integrated digital Image Processing Module, power supply 100 – 240 VAC, 50/60 Hz

20 2120 30 **TELECAM® One-Chip Camera Head**, color system **PAL**, soakable, gas-sterilizable, with integrated Parfocal Zoom Lens,  $f = 25 - 50$  mm (2x), 2 freely programmable camera head buttons

13304 C **HERRMANN Esopharyngoscope**  
 Direction of view: 0°  
 Angle of view: 70°  
 Working length: 76 cm  
 Outer diameter: 3.5 mm  
 Deflection up/down: 200°/100°

495 NL **Fiber Optic Light Cable**, diameter 3.5 mm, length 180 cm

495 KS **Adaptor**, for standard KARL STORZ fiber optic light cables (not 495 NCS)



Optional accessories for **GASTRO PACK®** see page 62

**STORZ**  
KARL STORZ — ENDOSKOPE  
**Gastroscope 13800 PKS**

EndoGastric Solutions®  
**EsophyX® TIF®**  
Transoral Incisionless Fundoplication



**GERD?**  
**The flexible solution!**  
**(Transoral Incisionless Fundoplication)**



Gastroscope 13800 PKS/NKS is ideally suited for treating chronic acid reflux, also known as Gastroesophageal Reflux Disease (GERD).

## EsophyX® Procedure

Results from clinical studies have shown that the KARL STORZ Gastroscope 13800 PKS/NKS is ideally matched to the EsophyX® system.

EsophyX® TIF® was developed to emulate more invasive surgical techniques, but from within and completely without incisions and visible scars. The FDA cleared EsophyX® device is completely incisionless and is performed through the mouth, rather than through an abdominal incision. Typically lasting no more than 30 – 45 minutes, the procedure is performed under general anesthesia and reconstructs the antireflux barrier to restore the competency of the gastroesophageal junction. Most patients can go home the next day and return to work within a few days.

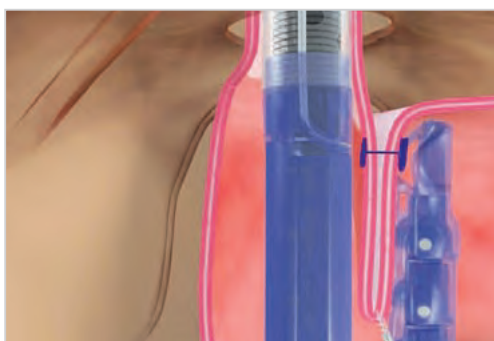
GERD? Not a problem with KARL STORZ endoscopes and EndoGastric solutions!



**Step 1:** The specially designed EsophyX® device enters the esophagus through the mouth and is positioned at the junction of the stomach and esophagus.



**Step 2:** The device pulls and fastens a tissue fold.



**Step 3:** Step 2 is repeated multiple times to reconstruct a robust, tight valve that prevents the reflux of stomach contents up into the esophagus, resulting in the effective elimination of GERD.



**Fig. 1:** Cardia during inversion gastroscopy; diagnostic findings before EsophyX® therapy (patient with reflux but without hernia)



**Fig. 2:** Inserted EsophyX® system: The tissue retractor pulls and fastens the cardia.



**Fig. 3:** A suture anchor (blue) is placed on the anterior side using a flexible puncture needle, fastening the esophagus with the stomach wall.



**Fig. 4:** Same step is repeated on the posterior side as in Fig. 3.



**Fig. 5:** After first sutures are placed, suture fixation continues in the dorsal direction by rotating the EsophyX® device.



**Fig. 6:** Cardia is again grasped with the tissue retractor, which is rotated into the stomach wall, and double-stitched transmurial suturing is repeated.

# Basic Set for Gastroscopey

Recommended Set

13801 PKS **Routine Gastroscope**, 9.7 mm x 110 cm, color system **PAL**, sheath diameter 9.7 mm, working channel diameter 2.8 mm, distal tip outer diameter 9.8 mm, deflection up 200°/240°, deflection down 100°, deflection left/right 120°/120°, field of view 140°, depth of field 2 – 200 mm, working length 110 cm

**Accessories included:**

**Case**

**Pressure Compensation Cap**, for ventilation

**Leakage Tester**

**Rubber Leaflet Valve**, for working channel, package of 10

**Bite Protector**

**Tube**, for suction/irrigation

**Y-Tube**, for irrigation/suction

**Cleaning Valve**

**Instrument Oil**

**Biopsy Forceps**, oval, double action jaws, diameter 2.3 mm, length 180 cm

**Cleaning Brush**, diameter 5 mm, length 230 cm

**Valve Brush**, for video endoscopes, with thumb ring for brushing the valve cavity, diameter 12 mm, length 50 mm

**Protective Film**, for transporting flexible endoscopes

**Video Connecting Cable**

13801 NKS **Same**, color system **NTSC**

9519 N **19" KARL STORZ TFT Flat Screen**, desktop with pedestal

20213011U **TELECAM® SL II Camera Control Unit**, color systems **PAL/NTSC**

20132601-1 **Cold Light Fountain XENON 100 SCB**, incl. integrated insufflation pump, water bottle and bottle holder

**NEW** 25320001 **UNIMAT® 30, Suction Pump Set**, power supply: 230 VAC, 50/60 Hz

**consisting of:**

**UNIMAT® 30**

**Bacterial Filter**

**Secretion Bottle**, 2 l

**Bottle Cap**, with grip

**Connecting Tube**, short

**Patient Tube**

**Overflow Case**

**Mains Cord**

**VACUsafe Promotion Pack Suction**

**NEW** 29005 GI **Mobile Videocart**

**consisting of:**

**Basic Videocart**, rides on 4 antistatic dual wheels, 2 equipped with locking brakes, 2 fixed shelves, 1 with push handles, main switch in side boom, 1x drawer unit with lock, integrated cable conduit in both booms, 2x horizontal cable conduits, 1 with cable manager, 1x set of non-sliding stands for units, 1x pull-out keyboard at the front, 1x video endoscope intake, 1x video endoscope plug intake, 1x tube clip, 1x monitor holder VESA 75/100, 4x equipment rails, 6x mains cords, 3x 200 cm and 3x 100 cm, isolation transformer 230 VAC (50/60 Hz) 1200 VA with 6 plug-in slots and 6 grounding plugs

**Dimensions:**

Videocart: 530 x 1200 x 645 mm (w x h x d), shelf: 430 x 480 mm (w x d), caster diameter: 125 mm




Following accessories included:

	13991 SS	<b>Irrigation Tube</b>
	13991 YS	<b>Y-Irrigation Tube</b>
	11025 XE	<b>Pressure Compensation Cap</b> , for ventilation during gas sterilization
	13242 LX	<b>Leakage Tester</b>
	13991 DA	<b>Rubber Leaflet Valve</b> , for working channel, package of 10
	13991 RV	<b>Cleaning Valve</b>
	13991 LV	<b>Suction Valve</b>
	13991 SV	<b>Air/Water Valve</b>
	13991 VB	<b>Valve Brush</b> , for video endoscopes, with thumb ring for brushing the valve cavity, diameter 12 mm, length 50 mm
	27677 KV	<b>Case</b>
	27656 B	<b>Instrument Oil</b> , 50 ml
	13272 B	<b>Mouth Piece</b> , autoclavable
	20 2130 70	<b>Video Connecting Cable</b>

**Additional accessories** see chapter 5, ACCESSORIES



Instrument-specific accessories, see table pages 8-9:

	11001 LN	<b>Biopsy Forceps</b> , flexible, round cupped jaws, oval, diameter 1.8 mm, working length 200 cm, for use with working channel as of size 2.2 mm
	13250 LN	<b>Biopsy Forceps</b> , flexible, round cupped jaws, oval, diameter 2.3 mm, working length 200 cm, for use with working channel as of size 2.8 mm
	13250 LP	<b>Biopsy Forceps</b> , flexible, round cupped jaws, oval, with spike, diameter 2.3 mm, working length 200 cm, for use with working channel as of size 2.8 mm
	13250 XL	<b>Same</b> , working length 300 cm
	27651 G	<b>Cleaning Brush</b> , flexible, diameter 3 mm, length 180 cm
	27651 H	<b>Same</b> , diameter 5 mm, length 230 cm
	27651 I	<b>Same</b> , diameter 5 mm, length 270 cm

**Additional accessories** see chapter 5, ACCESSORIES



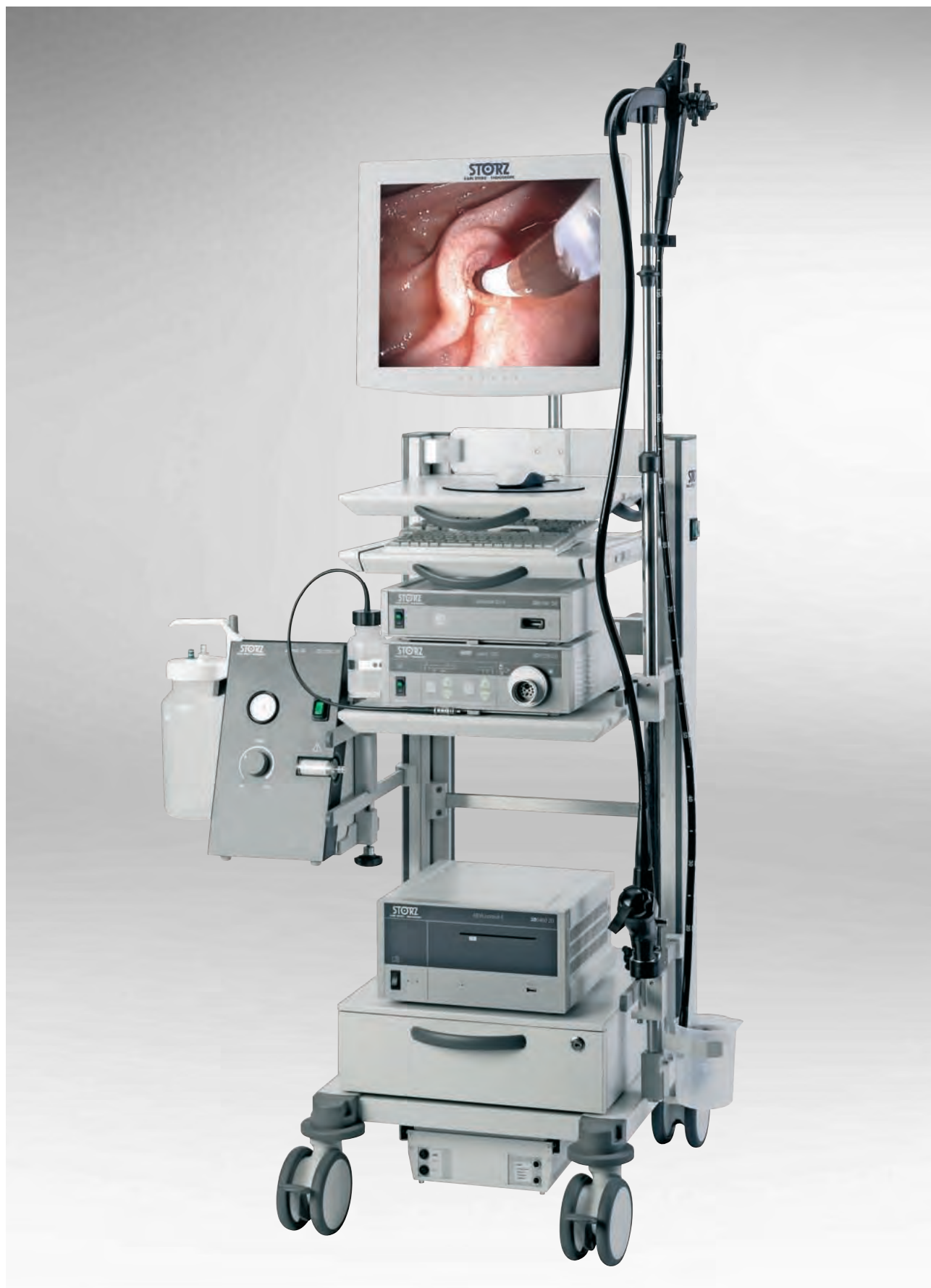


## **DUODENOSCOPES**

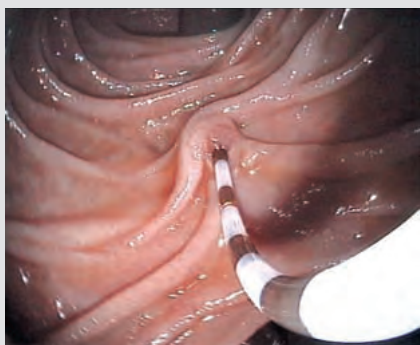
**Size 11.8 - 12.6 mm**



## Duodenoscopes



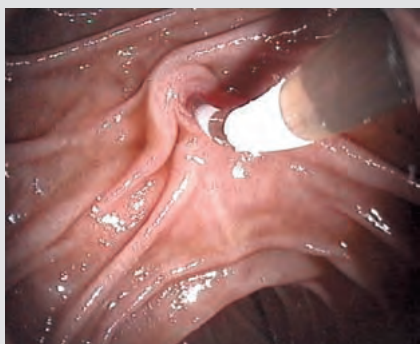
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**Fig. 1:** Probe of a Vater's papilla



**Fig. 2:** Papilla with probe



**Fig. 3:** Papilla with probe



## Duodenoscopes

The introduction of KARL STORZ's modular duodenoscope sets new hygienic standards for flexible endoscopy.

**The modular design offers further advantages:**

- The new improved Albarran deflector allows constant optimization of cleanability.
- Provides time and cost savings in case of necessary repairs
- Constant optimization of Albarran steering due to automatic adjustment

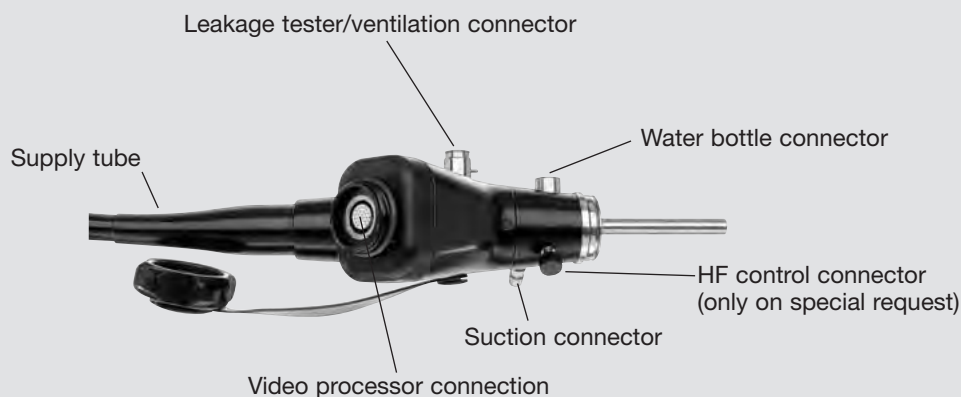
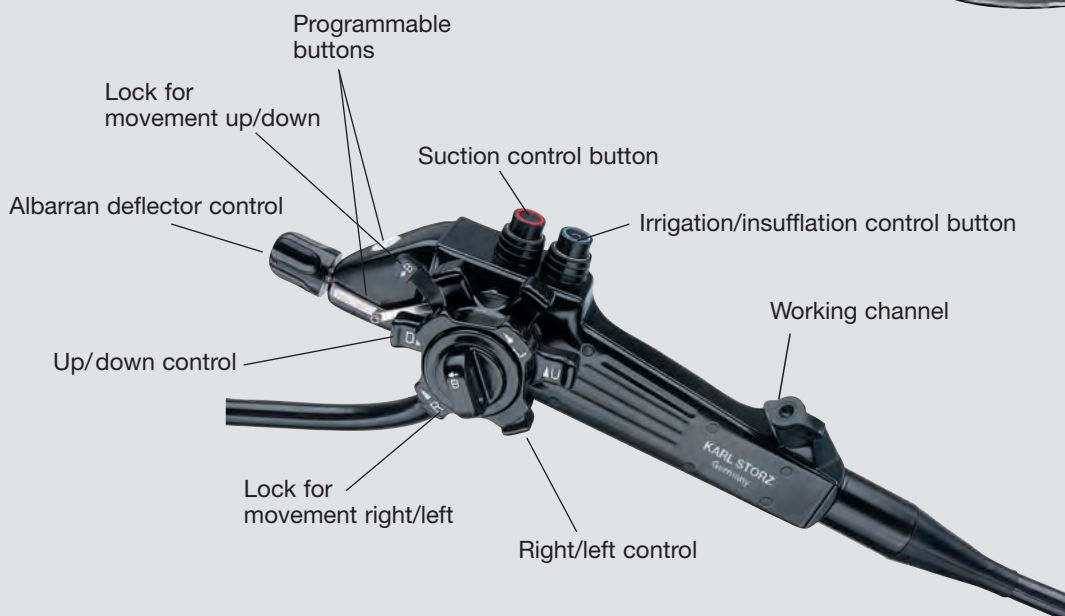
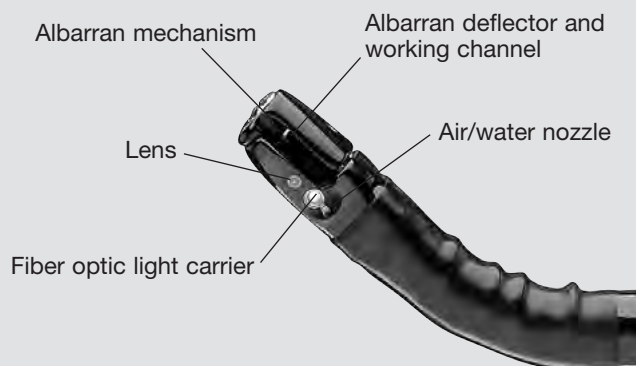
**Special Features:**

- High resolution, true colour video images
- 140° wide angle optics with high light transmitting capacity
- Large depth of field
- Uniform image brightness – even under difficult lighting conditions
- Enhanced control easy to operate
- Graduated, torsion-proof insertion sheath
- Instruments can be optimally inserted, even under difficult conditions
- Robust supply tube with standard connection
- Deflectable bridge module is easy to dismantle and autoclavable
- Significantly improved hygiene



## Specifications:

Field of view: 140°  
Depth of field: 2 – 60 mm  
(2 freely programmable buttons  
with double function, i.e. for  
freeze/print or zoom/brightness)



## Excellent properties of KARL STORZ duodenoscopes



The unique modular construction of KARL STORZ duodenoscopes offers the user considerable benefits and sets new hygiene standards in flexible endoscopy.

- The deflatable bridge module can be easily removed and dismantled for cleaning and disinfection.
- This new design feature enables previously inaccessible areas to be rinsed and cleaned, considerably reducing the risk of contamination to achieve excellent hygiene properties.
- Whereas the duodenoscope can be routinely disinfected in the cleaning machine, the deflatable bridge module can be cleaned in an ultrasound bath and subsequently sterilized in an autoclave to obtain 100% amicrobic conditions.
- In case of necessary repairs, the module can be removed and replaced by hospital staff without technical assistance. This saves considerable time and money.

**Additional accessories** see chapter 5, ACCESSORIES

Why should a method of mother-baby endoscopy in use since the 1970s now require a new version?

The reason is that only a few centers make use of the conventional method due to its technical limitations. Furthermore, mother-baby endoscopy is not used as often as it should considering the potential offered by this method. Direct visualization and endoscopic treatment of the pancreobiliary system is just as desirable as endoscopy in the gastrointestinal tract, which has largely replaced non-direct radiological techniques.

Mother-baby endoscopy has expanded the spectrum of diagnostic and therapeutic possibilities in ERCP. However, it still does not enjoy widespread use despite an evolutionary phase of three decades. Considering the wide range of diagnostic and therapeutic applications this method offers, it is not employed as often as would be expected in those clinics where it is available.

## Why is conventional mother-baby endoscopy so seldom used?

Mother-Baby Endoscopy (MBE) is an option for patients who are not suited for conventional ERCP. The reason MBE is rarely used is that technical difficulties apparent from the beginning have not been resolved satisfactorily. This is mainly due to the excessive length of the conventional baby-endoscope. It was not possible to avoid this problem until now as the baby-endoscope had to be inserted through the entire working channel of the duodenoscope ("mother-endoscope") in order to access the pancreobiliary system.

The excess length of the baby-endoscope results in awkward handling during cleaning and MBE. In addition, its restricted mobility in the pancreobiliary system is a major disadvantage. Consequently, suspect lesions are often inaccessible or difficult to access during biopsy. During laser or electrohydraulic lithotripsy of large stones that cannot be removed with other methods, the probe position on the concrement is often suboptimal. This results in laser or electrohydraulic procedures that are difficult or cumbersome. A particular disadvantage is that the side branches of the biliary system can only be intubated if they do not deviate too far from the direction of the main bile duct. Furthermore, access is frequently achieved through complex positioning with a guide wire beforehand. The mobility of the baby-endoscope in a duct intubated in this manner is practically non-existent.

## The New FRIMBERGER Mother-Baby System

These problems can be minimized or prevented in a surprisingly simple way: **by reducing the size of the baby-endoscope!** The new **short baby-endoscope** version only measures 98 cm. Due to the reduced size, the baby-endoscope can no longer be introduced to the pancreobiliary system via the duodenoscope. Instead it is positioned through a side port (Fig. 1) in the mother-endoscope sheath. The side port is mounted on the duodenoscope, approx. 70 cm from the distal tip and is simply an additional opening in the working channel. The side port can be covered with a cap (Fig. 5).

When the position of the duodenoscope is adjusted after reaching the papilla, the side port is located outside the patient, approx 5 – 15 cm extraoral. If not required during ERCP, it remains covered and the duodenoscope offers all the options of conventional ERCP. Should a problem arise during diagnostic or therapeutic ERCP, the cap can be removed with a special tool (Fig. 5) and the baby-endoscope can be passed through the side port. The short size of the baby-endoscope makes it easy and convenient to handle and offers more agility in the pancreobiliary system than was possible up to now. Furthermore, previously inaccessible side branches can now be intubated.

## Experiences with the mother-baby system

Experience with the new mother-baby system, primarily in the pancreobiliary system, has been extremely positive. The baby-endoscope could be introduced into the ductal system of all patients where passage was not hindered by a high-grade stricture. Handling of the new short baby-endoscope was much easier than the extralong "old" baby-endoscope. Its outstanding agility in the pancreobiliary system offered the user a greater degree of freedom in the pancreobiliary system than the "old" extralong scope, making examination much easier. The unproblematic handling and agility has resulted in the new MBE becoming a standard procedure in day-to-day clinical routine so that, for example, diagnostic ambiguity in ERCP can be resolved much faster than ever before. This procedure should benefit quite a few patients.

## Which instruments can be introduced through the short baby-endoscope?

The working channel of the new baby-endoscope is 1.5 mm larger than the previous baby-endoscope, allowing the use of larger-caliber instruments. The biopsy forceps (Fig. 3) is used for tissue diagnostics. Electrohydraulic or laser probes are used for the fragmentation of large stones (Fig. 4).

*Prof. Dr. med. E. FRIMBERGER*



**Fig. 1:** Side port on the duodenoscope for inserting the baby-endoscope



**Fig. 2:** Adjustable hub mechanism for positioning laser probes



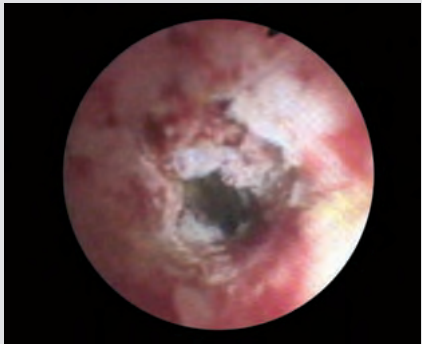
**Fig. 3:** Baby-endoscope with open biopsy forceps



**Fig. 4:** Baby-endoscope with endotherapy instrument



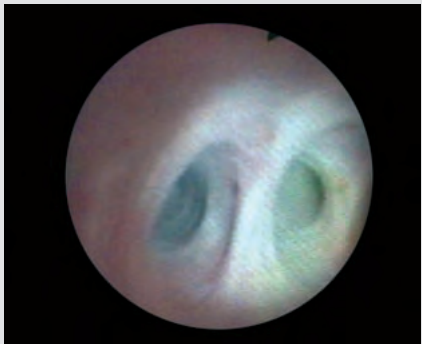
**Fig. 5:** Side port with tool



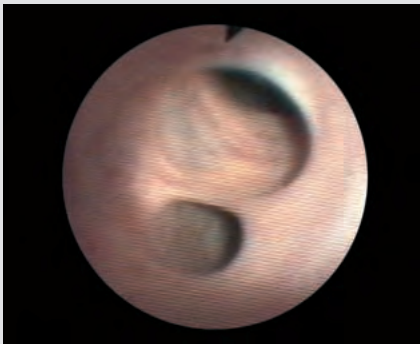
**Fig. 1:** Stenosing tumor in the hepatocholedochus area almost distal to the hepatic fork



**Fig. 2:** Inconspicuous biliary system, duct branches in the right hepaticus



**Fig. 3:** Inconspicuous biliary system, duct branches in the right hepaticus



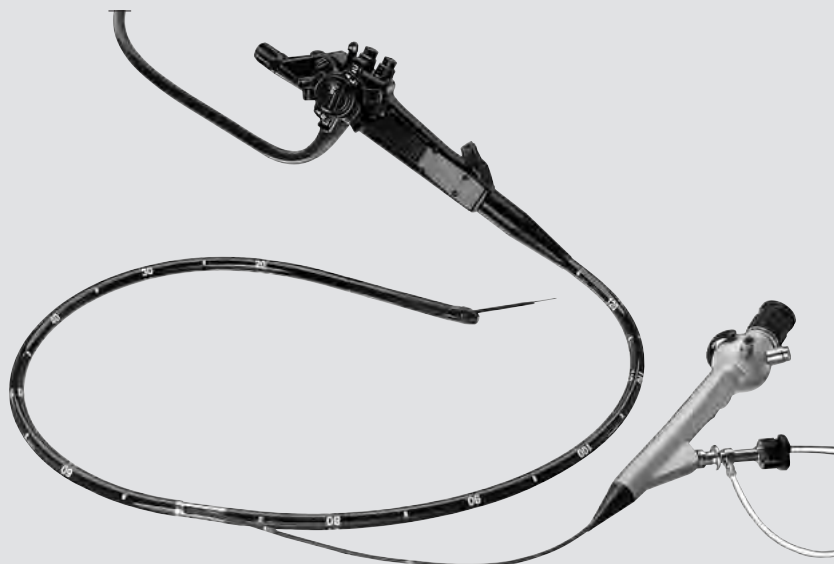
**Fig. 4:** Inconspicuous biliary system, duct branches in the right hepaticus



**Fig. 5:** Inconspicuous biliary system, duct branches in the right hepaticus

## Special features:

- New, ergonomic control body ensures easy, fatigue-free work
- Innovative cholangioscope access at the 70 cm mark of the insertion tube allows unique navigation and steering of the cholangioscope
- Enhanced and improved diagnostic and therapeutic possibilities during ERCP, even in the case of critical findings
- Greater patient acceptance
- Optimized deflection wheels offer maximum control



13883 PKS

13883 PKS	<b>FRIMBERGER Duodenoscope System,</b> 2 freely programmable, easy-to-access remote control buttons i.e. for freeze/print, zoom/brightness
	Sheath diameter: 12.6 mm
	Working channel diameter: 4.2 mm
	Working length: 125 cm
	Distal tip outer diameter: 13 mm
	Deflection up/down: 120°/90°
	Deflection left/right: 90°/110°
	Direction of view: 5° retro
	Field of view: 140°
	Depth of field: 2 – 60 mm

## Following accessories included::

13250 LP	<b>Biopsy Forceps,</b> flexible, round cupped jaws, oval, with spike, diameter 2.3 mm, working length 200 cm, for use with working channel as of size 2.8 mm
27651 H	<b>Cleaning Brush,</b> flexible, diameter 5 mm, length 230 cm
27651 F	<b>Cleaning Brush,</b> flexible, for working channel, diameter 2.5 mm, length 180 cm



# FRIMBERGER Duodenoscopy System <sup>NEW</sup>

Configuration Example

**STORZ**  
KARL STORZ — ENDOSKOPE



20 2130 11U **TELECAM® SL II Camera Control Unit**, color systems **PAL/NTSC**

13883 PKS **FRIMBERGER Duodenoscope System**, 2 freely programmable, easy-to-access remote control buttons i.e. for freeze/print, zoom/brightness  
 Sheath diameter: 12.6 mm  
 Working channel diameter: 4.2 mm  
 Working length: 125 cm  
 Distal tip outer diameter: 13 mm  
 Deflection up/down: 120°/90°  
 Deflection left/right: 90°/110°  
 Direction of view: 5° retro  
 Field of view: 140°  
 Depth of field: 2 – 60 mm

20 1326 01-1 **Cold Light Fountain XENON 100 SCB**, incl. integrated insufflation pump, water bottle and bottle holder

29005 GI **Mobile Videocart**

25 0440 11U **GASTRO PACK®**, color system **PAL**, endoscopic video unit

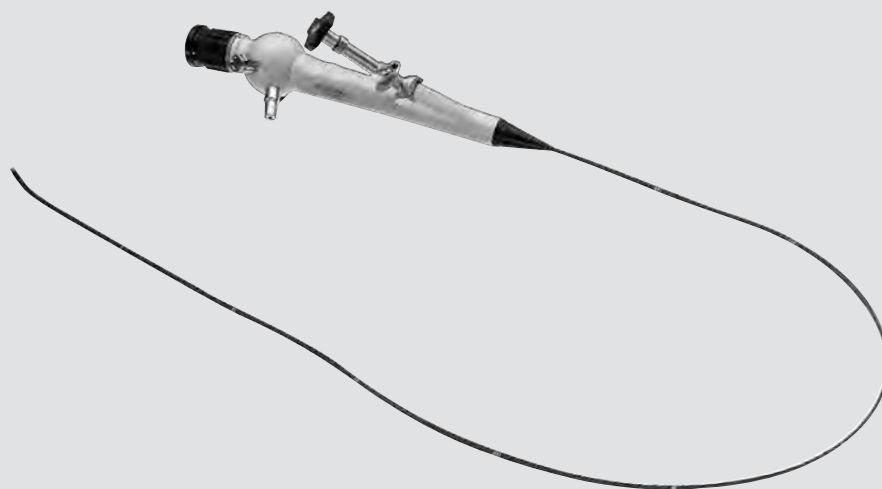
20 2120 30 **TELECAM® One-Chip Camera Head**, color system **PAL**, soakable, gas-sterilizable, with integrated Parfocal Zoom Lens, f = 25 – 50 mm (2x), 2 freely programmable camera head buttons

13700 CKS **Baby-Endoscope, Micro Endoscope**, steerable  
 Sheath diameter: 3.4 mm  
 Working channel diameter: 1.4 mm  
 Distal tip outer diameter: 3.4 mm  
 Working length: 95 cm  
 Deflection up/down: 130°/90°  
 Field of view: 100°

495 NL **Fiber Optic Light Cable**, diameter 3.5 mm, length 180 cm

495 KS **Adaptor**, for standard KARL STORZ fiber optic light cables (not 495 NCS)

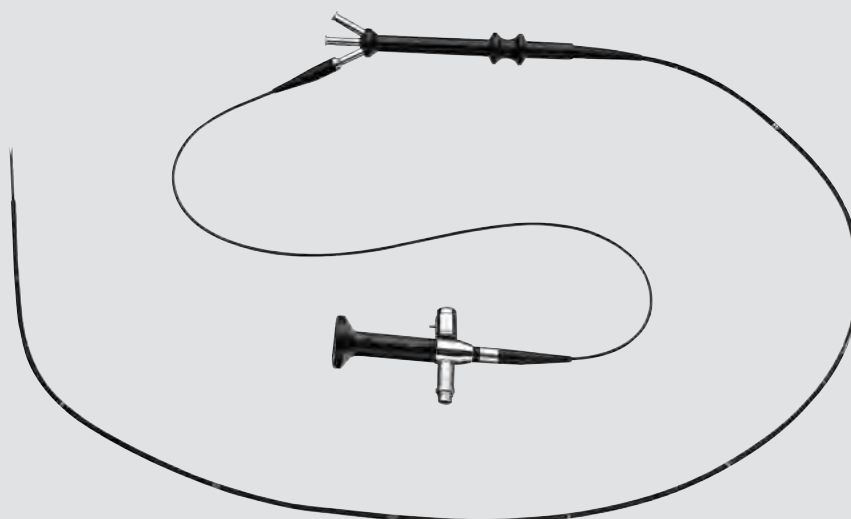
Accessories included in delivery and optional accessories see pages 36-37



13700 CKS

**13700 CKS Baby-Endoscope, Micro Endoscope,**  
steerable

Sheath diameter:	3.4 mm
Working channel diameter:	1.4 mm
Distal tip outer diameter:	3.4 mm
Working length:	95 cm
Deflection up/down:	130°/90°
Field of view:	100°



13701 CKS

**13701 CKS Slim Baby-Endoscope, Micro Endoscope,**  
steerable, with tapered tip

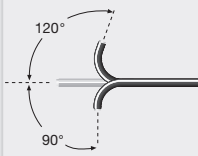
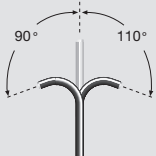
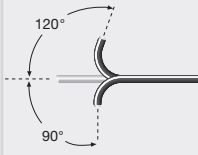
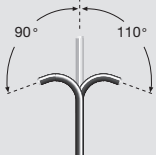
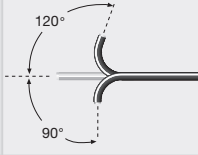
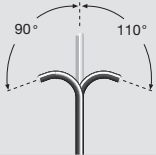
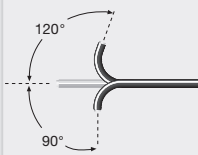
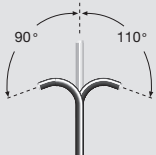
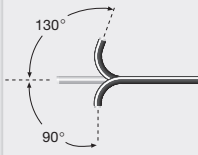
Sheath diameter:	3.5 mm
Working channel diameter:	1.2 mm
Irrigation channel:	0.6 mm
Distal tip outer diameter:	2.35 mm
Working length:	96 cm, torsion-stable
Deflection:	1x 90°
Direction of view:	0°
Field of view:	70°

# Duodenoscopes

## Overview

Product	Type	Order No.		Sheath Diameter	Working Channel Diameter	Working Length	
		PAL	NTSC				
Duodenoscopes							
11.8 mm x 125 cm	Diagnostic Duodenoscope	13880 PKS	13880 NKS	11.8 mm	3.2 mm	125 cm	
12.6 mm x 125 cm	Therapeutic Duodenoscope	13881 PKS	13881 NKS	12.6 mm	3.8 mm	125 cm	
12.6 mm x 125 cm	Therapeutic Duodenoscope	13882 PKS	13882 NKS	12.6 mm	4.2 mm	125 cm	
FRIMBERGER Duodenoscope System							
12.6 mm x 125 cm	FRIMBERGER Duodenoscope System	13883 PKS	–	12.6 mm	4.2 mm	125 cm	
FRIMBERGER Cholangioscopes for the Duodenoscope System							
3.4 mm x 95 cm	Baby-Endoscope, Micro Endoscope	13700 CKS	–	3.4 mm	1.4 mm	95 cm	
3.5 mm x 96 cm	Slim Baby-Endoscope, Micro Endoscope	13701 CKS	–	3.5 mm	1.2 mm	96 cm	



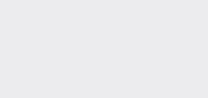

Accessories included in delivery and optional accessories see pages 36-37

Distal Tip Outer Diameter	Deflection up/down	Deflection left/right	Direction of View	Field of View	Depth of Field	Accessories included	
						Biopsy Forceps	Cleaning Brush
12.2 mm			5° retro	140°	2 – 60 mm	13250 LP	27651 H 27651 F
13 mm			5° retro	140°	2 – 60 mm	13250 LP	27651 H 27651 F
13 mm			5° retro	140°	2 – 60 mm	13250 LP	27651 H 27651 F
13 mm			5° retro	140°	2 – 60 mm	13250 LP	27651 H 27651 F
3.4 mm		–	–	100°	–	–	–
2.35 mm	1x 90°	–	0°	70°	–	–	–



Following accessories included:

	13991 AS	<b>Irrigation Tube</b> , for Albarran mechanism
	13991 SS	<b>Irrigation Tube</b>
	13991 YS	<b>Y-Irrigation Tube</b>
	11025 XE	<b>Pressure Compensation Cap</b> , for ventilation during gas sterilization
	13242 LX	<b>Leakage Tester</b>
	13991 DA	<b>Rubber Leaflet Valve</b> , for working channel, package of 10
	13991 PS	<b>Irrigation Tube</b> , for Albarran deflector, for manual and machine cleaning
	13991 RV	<b>Cleaning Valve</b>
	13991 LV	<b>Suction Valve</b>
	13991 SV	<b>Air/Water Valve</b>
	13991 VB	<b>Valve Brush</b> , for video endoscopes, with thumb ring for brushing the valve cavity, diameter 12 mm, length 50 mm
	27677 KV	<b>Case</b>
	27656 B	<b>Instrument Oil</b> , 50 ml



Following accessories included:

	13272 B	<b>Mouth Piece, autoclavable</b>
	13991 SB	<b>Key 1.3 mm</b> , for deflectable bridge module
	13991 ED	<b>Cap</b> , for ground connector (on special request)
	20 2130 70	<b>Video Connecting Cable</b>

Following accessories are available for the FRIMBERGER duodenoscope system:

	13991 SPA	<b>Side-Port Cover</b> , for the FRIMBERGER duodenoscope system
	13991 SPS	<b>Side-Port Key</b> , for the FRIMBERGER duodenoscope system

Instrument-specific accessories see table pages 34-35:

	13250 LP	<b>Biopsy Forceps</b> , flexible, round cupped jaws, oval, with spike, diameter 2.3 mm, working length 200 cm, for use with working channel as of size 2.8 mm
	27651 H 27651 F	<b>Cleaning Brush</b> , flexible, diameter 5 mm, length 230 cm <b>Same</b> , diameter 2.5 mm, length 180 cm

**Additional accessories** see chapter 5, ACCESSORIES



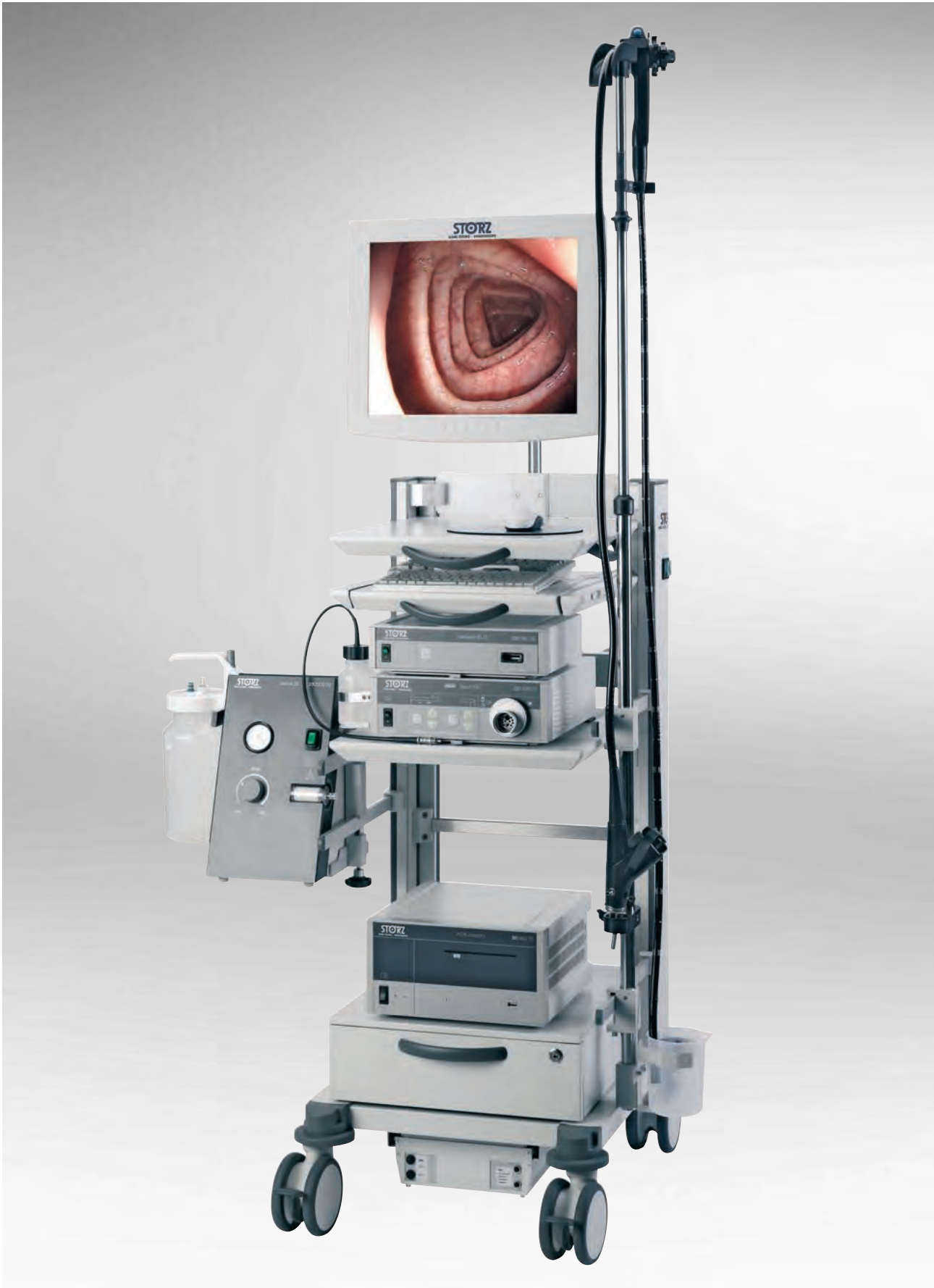




**SIGMOIDOSCOPES**  
**COLOSCOPES**  
**RECTOSCOPE**  
Size 10.6 - 13 mm



# Sigmoidoscopes, Coloscopes, Rectoscope



1-043



**Fig. 1:** Inconspicuous mucosa in the distal sigmoid colon



**Fig. 2:** Inconspicuous mucosa in the transverse colon



**Fig. 3:** Normal vascular structure in the transverse colon



**Fig. 4:** Biopsy of the mucous membrane (liver flexure)



**Fig. 5:** Rectal hemorrhage



**Fig. 6:** Ascending colon



# Sigmoidoscopes, Coloscopes, Rectoscope

KARL STORZ's new video endoscope range sets new standards for image quality. Utilization of the very latest in digital processing technology, high resolution CCD chips, and an enhanced optical system results in endoscopes that produce images with unique clarity. The images are distinguished by excellent brightness, resolution, size and depth of field. By incorporating two

diametrically opposed light bundles and intelligent digital processor control, evenly illuminated images are provided, even under difficult lighting conditions.

Using endoscopes with two working channels supports certain interventions, for example, hemostasis by means of clip application, thus enabling simultaneous operation of the grasping forceps and clip applicator.

## Special features:

- High resolution, true color video images
- Large depth of field
- Evenly illuminated, bright images, even under difficult lighting conditions
- 140° wide angle optics with high light transmitting capacity
- Enhanced easy to operate controls
- Optimal position of control functions
- Torsion-proof, 3-step insertion sheath with active and passive sections for optimal handling
- Optimal instrument passage even at extreme angles
- Robust supply tube with standard connection



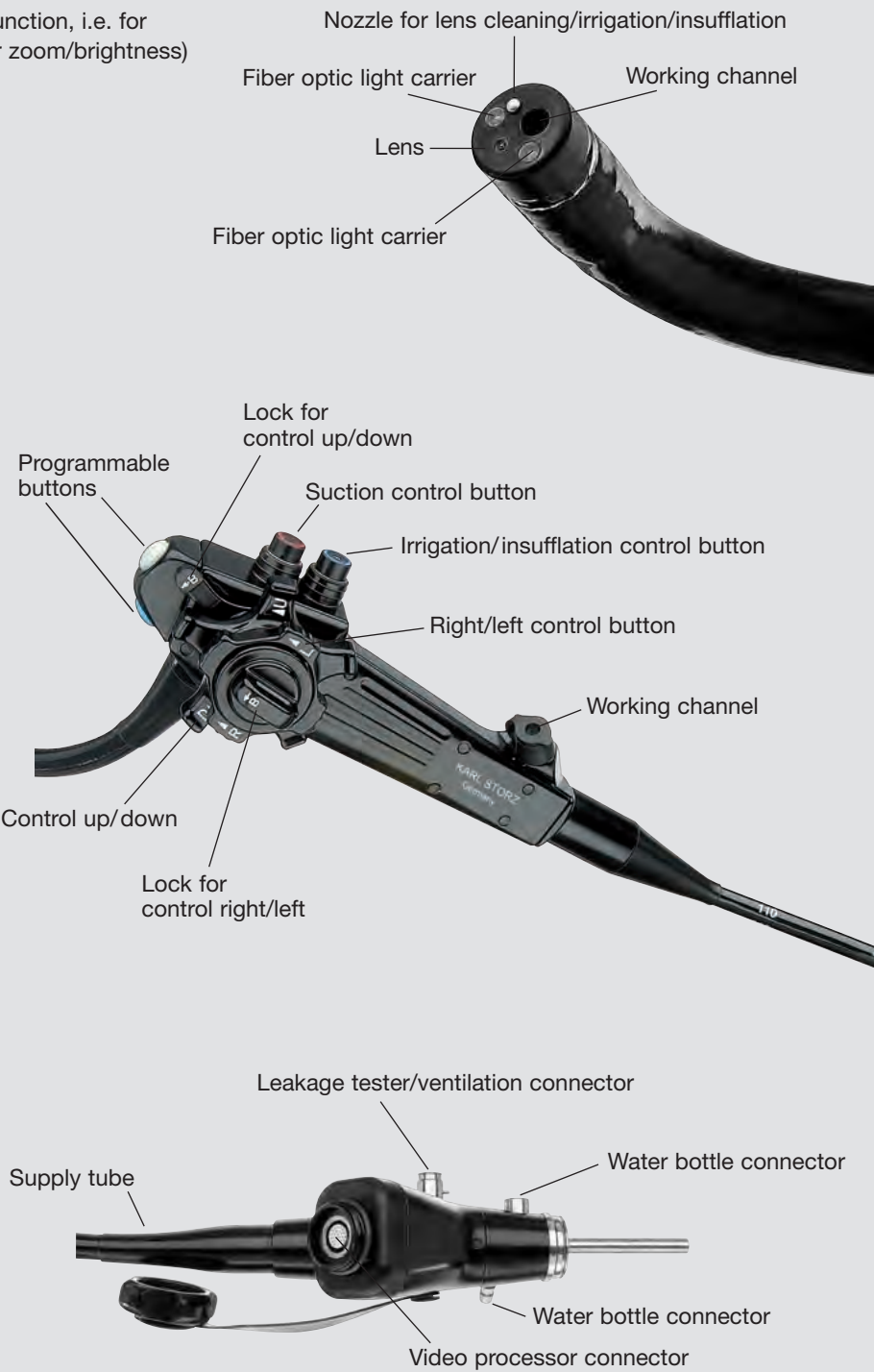


# Sigmoidoscopes, Coloscopes

1 Working Channel

**Specifications:**

Field of view: 140°  
Depth of field: 2 – 200 mm  
(2 freely programmable buttons  
with double function, i.e. for  
freeze/print or zoom/brightness)



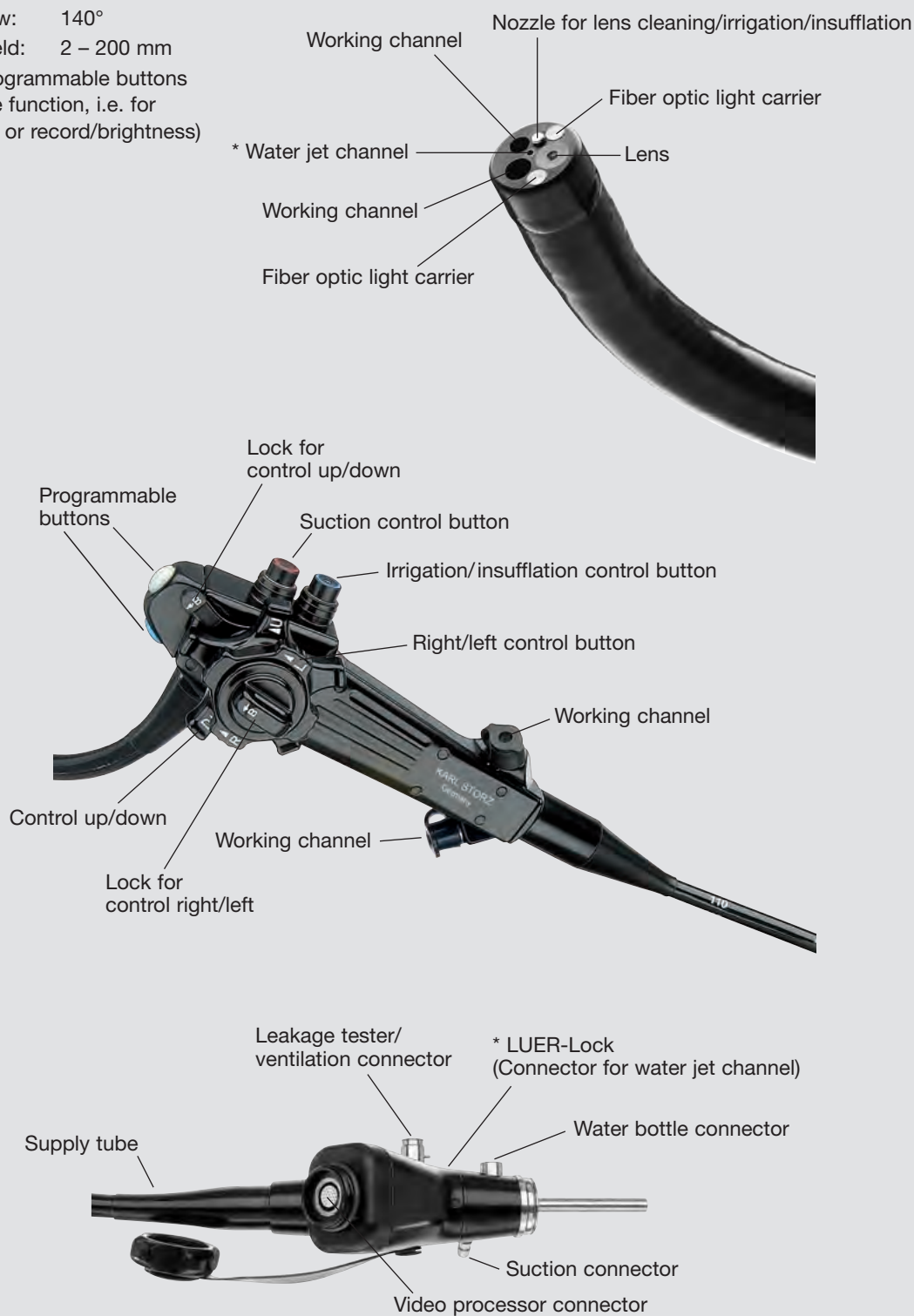
1-044

### Specifications:

Field of view: 140°

Depth of field: 2 – 200 mm

(2 freely programmable buttons with double function, i.e. for freeze/print or record/brightness)



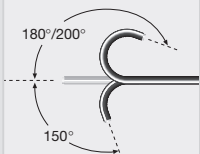
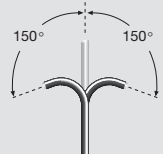
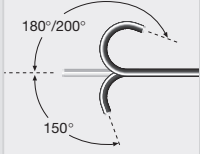
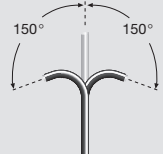

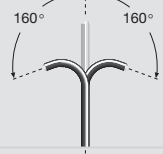
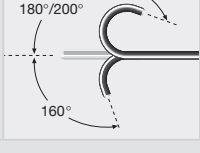
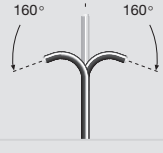
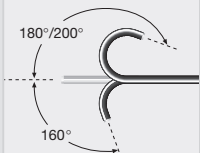
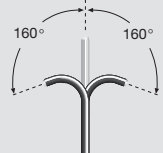
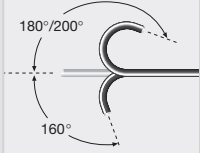
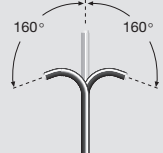
\* for 13910 and 13911 PKS/NKS only

# Coloscopes

## Overview

Product	Type	Order No.		Sheath Diameter	Working Channel Diameter	Working Length	
		PAL	NTSC				
Coloscopes							
10.6 mm x 140 cm	Slender Coloscope	13906 PKS	13906 NKS	10.6 mm	2.8 mm	140 cm	
10.6 mm x 160 cm	Slender Coloscope	13907 PKS	13907 NKS	10.6 mm	2.8 mm	160 cm	
13 mm x 140 cm	Routine Coloscope	13904 PKS	13904 NKS	13 mm	3.8 mm	140 cm	
13 mm x 160 cm	Routine Coloscope	13905 PKS	13905 NKS	13 mm	3.8 mm	160 cm	
Therapy Coloscopes							
13 mm x 140 cm	Double Channel Coloscope with water jet channel	13910 PKS	13910 NKS	13 mm	2.8 mm 3.8 mm	140 cm	
13 mm x 160 cm	Double Channel Coloscope with water jet channel	13911 PKS	13911 NKS	13 mm	2.8 mm 3.8 mm	160 cm	

Accessories included and optional accessories see pages 55-56

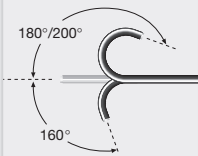
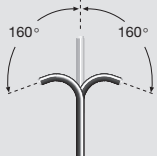
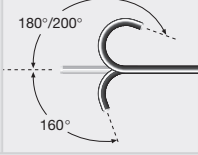
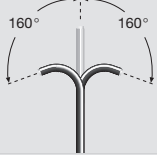
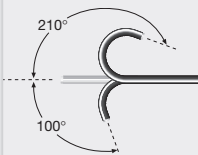
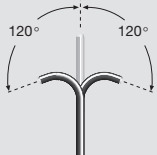
	Distal Tip Outer Diameter	Deflection up/down	Deflection left/right	Field of View	Depth of Field	Accessories included	
						Biopsy Forceps	Cleaning Brush
	12.2 mm			140°	2 – 200 mm	13250 XN	27651 H
	12.2 mm			140°	2 – 200 mm	13250 XN	27651 H
	15 mm			140°	2 – 200 mm	13250 XN	27651 H
	15 mm			140°	2 – 200 mm	13250 XN	27651 H
	15 mm			140°	2 – 200 mm	13250 XN	27651 H
	15 mm			140°	2 – 200 mm	13250 XN	27651 H

# Sigmoidoscopes, Rectoscope

## Overview

Product	Type	Order No.		Sheath Diameter	Working Channel Diameter	Working Length	
		PAL	NTSC				
Sigmoidoscopes							
12.3 mm x 70 cm	Sigmoidoscope	13900 PKS	13900 NKS	12.3 mm	3.4 mm	70 cm	
13 mm x 70 cm	Sigmoidoscope	13901 PKS	13901 NKS	13 mm	3.8 mm	70 cm	
Rectoscope							
11.8 mm x 40 cm	TROIDL Rectoscope	13912 PKS	13912 NKS	11.8 mm	3.2 mm	40 cm	

Accessories included and optional accessories see pages 55-56

	Distal Tip Outer Diameter	Deflection up/down	Deflection left/right	Field of View	Depth of Field	Accessories included	
						Biopsy Forceps	Cleaning Brush
	12.2 mm			140°	2 – 200 mm	13250 KP	27651 H
	15.1 mm			140°	2 – 200 mm	13250 KP	27651 H
	11.8 mm			140°	2 – 200 mm	–	–





## Special features:

- The flexible rectoscope generally offers all the benefits of flexible endoscopes:
  - Optimal visualization, i.e. magnification
  - Sharp imagery
  - Possibility of observation with a video system
  - Optimal control
  - Documentation
- The decisive advantage of this instrument is the possibility, despite extreme flexion, i.e. to pass the injection cannula through the working channel without difficulty.
- Inversion increases visualization and, consequently, diagnostic and therapeutic possibilities, through pro- and retrograde viewing.
- Combined short size and inversion increases practicality
- The reduced size and/or length ensures easy handling (high practicality) in diagnosis and therapy.
- The short instrument length facilitates and/or enables injection of the tenacious sclerosis agent. A major benefit.
- This results in less traumatic treatment for the patient and less discomfort in a particularly sensitive area. A decisive advantage!

## Range of application:

1. This application offers less traumatic access to body cavities/orifices, providing similar benefits as flexible endoscopy.

The anorectal area provides the surgeon or general practitioner with the ideal scope for diagnosis and treatment.

A concrete diagnosis in the rectum and anal channel (polyps, ulcers, carcinoma, hemorrhoids, and even fissures and fistulae) is offered.

The surgeon has the possibility to determine pre- and intraoperative resection limits in the distal rectum and – what is very important – to monitor and document completed anastomosis.

This is all performed in the OR with minimal effort.

2. The injection treatment of hemorrhoids I – II, perhaps even grade III, is in the foreground of this therapy.

This includes the possibility of dilating various stenoses in the distal colorectum.

Similar to standard flexible colonoscopes, i.e. polyps can be removed with a snare or hemorrhage sources can be treated by injection.

3. The practicality of this “short” flexible endoscope could make it suitable for use in the abdomen using cannulas and particularly in thoracoscopy, not to mention problems in gynecology.

## Field of application:

Specially suited for the diagnosis of surgical illnesses and surgical procedures in the rectal area (polyps, ulcers, carcinoma, anastomoses, stenoses, hemorrhoids, fissures, fistula).

## Summary:

The flexible rectoscope offers all the benefits of flexible endoscopy. The short size of the instrument enhances these benefits with the correct indication.

Its ease of use (general practicality) results in less trauma for the patient in comparison to standard technologies.

The physician can, therefore, treat the patient precisely and relatively quickly with minimal discomfort.

*Prof. Dr. med. Dr. h. c. H. TROIDL*

# TROIDL Rectoscope, flexible <sup>NEW</sup>



13912 PKS	<b>TROIDL Rectoscope, color system PAL</b>
	Direction of view: 0°
	Sheath diameter: 11.8 mm
	Working channel diameter: 3.2 mm
	Working length: 40 cm
	Distal tip outer diameter: 11.8 mm
	Deflection up/down: 210°/100°
	Deflection left/right: 120°/120°
	Field of view: 140°
	Depth of field: 2 – 200 mm
13912 NKS	<b>Same, color system NTSC</b>

## Following accessories included:

**Case**

**Pressure Compensation Cap**, for ventilation

**Leakage Tester**

**Rubber Leaflet Valve**, for working channel, package of 10

**Tube for Suction/Irrigation**

**Y-Tube for Irrigation/Suction**

**Cleaning Valve**

**Instrument Oil**

**Cleaning Brush**

**Valve Brush**

**Protective Film**, for transporting flexible endoscopes

**Video Connecting Cable**

# GASTRO PACK®

Configuration Example

## Special features:

- Transportable
- World power supply 100 – 240 VAC, 50/60 Hz
- Anti-grid and anti-moiré filter integrated
- Extremely sharp full screen display on 12" TFT monitor
- Camera Control Unit compatible with:
  - TELECAM® camera heads
  - DCI® systems without autorotation function
  - HEADCAM
  - KARL STORZ video endoscopes
- Best possible flexibility for new applications



25 0430 11

**GASTRO PACK®**, color system **PAL**, with integrated digital Image Processing Module, power supply 100 – 240 VAC, 50/60 Hz

13912 PKS

**TROIDL Rectoscope**, color system **PAL**

Direction of view: 0°  
 Sheath diameter: 11.8 mm  
 Working channel diameter: 3.2 mm  
 Working length: 40 cm  
 Distal tip outer diameter: 11.8 mm  
 Deflection up/down: 210°/100°  
 Deflection left/right: 120°/120°  
 Field of view: 140°  
 Depth of field: 2 – 200 mm

25 3200 01

**UNIMAT® 30, Suction Pump Set**, power supply 230 VAC, 50/60 Hz

consisting of:

25 3200 20 **UNIMAT® 30**  
 25 3200 80 **Bacterial Filter**  
 25 3200 81 **Secretion Bottle, 2 l**  
 25 3200 82 **Bottle Cap, with grip**  
 25 3200 83 **Connecting Tube, short**  
 25 3200 84 **Patient Tube**  
 25 3200 85 **Overflow Case**  
 400 A **Mains Cord, length 300 cm**  
 mtp\* **VACUsafe Promotion Pack Suction**

# Basic Set for Coloscopy

Recommended Set

13904 PKS **Routine Coloscope**, 13 mm x 140 cm, color system **PAL**, sheath diameter 13 mm, working channel diameter 3.8 mm, distal tip outer diameter 15 mm, deflection up 180°/200°, deflection down 160°, deflection left/right 160°/160°, field of view 140°, depth of view 2 – 200 mm, working length 140 cm

**Accessories included:**

**Case**

**Pressure Compensation Cap**, for ventilation

**Leakage Tester**

**Rubber Leaflet Valve**, for working channel, package of 10

**Tube**, for suction/irrigation

**Y-Tube**, for irrigation/suction

**Cleaning Valve**

**Instrument Oil**

**Biopsy Forceps**, oval, with spike, double action jaws, diameter 2.3 mm, length 230 cm

**Cleaning Brush**, diameter 5 mm, length 230 cm

**Valve Brush**, for video endoscopes, with thumb ring for brushing the valve cavity, diameter 12 mm, length 50 mm

**Protective Film**, for transporting flexible endoscopes

**Video Connecting Cable**

13904 NKS **Same**, color system **NTSC**

9519 N **19" KARL STORZ TFT Flat Screen**, desktop with pedestal

20 2130 11U **TELECAM® SL II Camera Control Unit**, color systems **PAL/NTSC**

20 1326 01-1 **Cold Light Fountain XENON 100 SCB**, incl. integrated insufflation pump, water bottle and bottle holder

**NEW** 25 3200 01 **UNIMAT® 30, Suction Pump Set**, power supply: 230 VAC, 50/60 Hz

**consisting of:**

**UNIMAT® 30**

**Bacterial Filter**

**Secretion Bottle**, 2 l

**Bottle Cap**, with grip

**Connecting Tube**, short

**Patient Tube**

**Overflow Case**

**Mains Cord**

**VACUsafe Promotion Pack Suction**

**NEW** 29005 GI **Mobile Videocart**

**consisting of:**

**Basic Videocart**, rides on 4 antistatic dual wheels, 2 equipped with locking brakes, 2 fixed shelves, 1 with push handles, main switch in side boom, 1x drawer unit with lock, integrated cable conduit in both booms, 2x horizontal cable conduits, 1 with cable manager, 1x set of non-sliding stands for units, 1x pull-out keyboard at the front, 1x video endoscope intake, 1x video endoscope plug intake, 1x tube clip, 1x monitor holder VESA 75/100, 4x equipment rails, 6x mains cords, 3x 200 cm and 3x 100 cm, isolation transformer 230 VAC (50/60 Hz) 1200 VA with 6 plug-in slots and 6 grounding plugs

**Dimensions:**

Videocart: 530 x 1200 x 645 mm (w x h x d), shelf: 430 x 480 mm (w x d), caster diameter: 125 mm

# Accessories

for Sigmoidoscopes, Coloscopes, Rectoscope

## Following accessories included:



	13991 SS	<b>Irrigation Tube</b>
	13991 YS	<b>Y-Irrigation Tube</b>
	11025 XE	<b>Pressure Compensation Cap</b> , for ventilation during gas sterilization
	13242 LX	<b>Leakage Tester</b>
	13991 DA	<b>Rubber Leaflet Valve</b> , for working channel, package of 10
	13991 RV	<b>Cleaning Valve</b>
	13991 LV	<b>Suction Valve</b>
	13991 SV	<b>Air/Water Valve</b>
	13991 VB	<b>Valve Brush</b> , for video endoscopes, with thumb ring for brushing the valve cavity, diameter 12 mm, length 50 mm
	27677 KV	<b>Case</b>
	27656 B	<b>Instrument Oil</b> , 50 ml
	20 2130 70	<b>Video Connecting Cable</b>

**Additional accessories** see chapter 5, ACCESSORIES

Accessories

for Sigmoidoscopes, Coloscopes, Rectoscope

Instrument-specific accessories see table pages 46-49:

	13250 KP	<b>Biopsy Forceps</b> , round cupped jaws, oval, with spike, flexible, double action jaws, diameter 2.3 mm, length 120 cm
	13250 XN	<b>Same</b> , length 230 cm
	27651 H	<b>Cleaning Brush</b> , flexible, diameter 5 mm, length 230 cm

Additional accessories see chapter 5, ACCESSORIES





**GASTRO PACK®**



GASTRO PACK® combines an image processor, a monitor, a documentation unit, an insufflation pump, a keyboard and a light source in a compact housing.

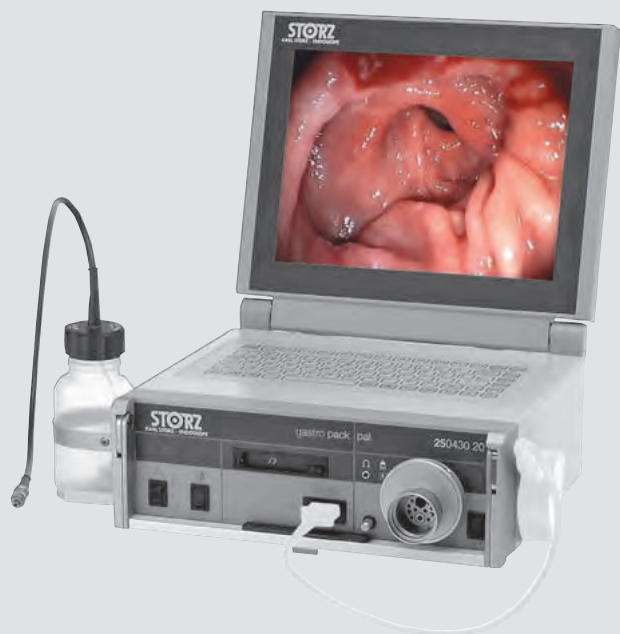
The unit is compatible with all existing KARL STORZ video endoscopes and video bronchoscopes.

## Special features:

- Display or hide date
- Display or hide time
- Stopwatch function
- Image archiving during intervention
- Automatic archiving of patient and endoscopy data
- Adjustable print data, with or without patient data
- Freely programmable endoscopy buttons
- Automatic white balance
- Automatic exposure control
- Video output
- Video input
- 12" color TFT flat screen
- Memory card
- Integrated light source with 5500 K color temperature
- Innovative Solarc® lamp technology
- Adjustable insufflation pump with 3 performance levels



With monitor and integrated keyboard



25 0430 11

**25 0430 11**     **GASTRO PACK®**, color system **PAL**, endoscopic video unit, for use with analog one-chip camera heads and **KARL STORZ** video endoscopes, incl. Solarc® light source, integrated insufflation pump, integrated keyboard, integrated digital Image Processing Module, firmly mounted foldable 12" LCD TFT monitor and PCMCIA memory card, power supply 100 – 240 VAC, 50/60 Hz or 12VDC

**consisting of:**

- 25 0430 20**     **GASTRO PACK® Control Unit, PAL**
- 13992 BS**     **Water Bottle**
- 20 1000 31**     **Irrigation Bottle Holder**
- 20 0410 32**     **PCMCIA Memory Card, 64 MB**
- 400 A**     **Mains Cord, length 300 cm**
- 547 S**     **S-Video (Y/C) Connecting Cable, length 180 cm**
- 536 MK**     **BNC/BNC Video Cable, length 180 cm**

**25 0431 11**     **Same, color system NTSC**  
**consisting of (deviates from 25 0430 11):**  
**25 0431 20**     **GASTRO PACK® Control Unit, NTSC**

**Specifications:**

Dimensions w x h x d	305 x 148 x 358 mm (folded)	Weight	7.6 kg
		Power supply	100 – 240 VAC, 50/60 Hz or 12VDC



25 0440 11

**25 0440 11U** **GASTRO PACK®**, color system **PAL**, endoscopic video unit, for use with analog one-chip camera heads and **KARL STORZ** video endoscopes, incl. Solarc® light source, integrated insufflation pump, integrated digital Image Processing Module, PCMCIA memory module, external keyboard with US-English character set, power supply 100 – 240 VAC, 50/60 Hz or 12VDC

**consisting of:**

- 25 0440 20** **GASTRO PACK® Control Unit, PAL**
- 13992 BS** **Water Bottle**
- 20 1000 31** **Irrigation Bottle Holder**
- 20 0410 32** **PCMCIA Memory Card, 64 MB**
- 400 A** **Mains Cord, length 300 cm**
- 547 S** **S-Video (Y/C) Connecting Cable, length 180 cm**
- 536 MK** **BNC/BNC Video Cable, length 180 cm**
- 20 2002 31U** **Keyboard, with US-English character set**

**25 0441 11U** **Same**, color system **NTSC**  
**consisting of (deviates from 25 0440 11):**  
**25 0441 20** **GASTRO PACK® Control Unit, NTSC**  
**20 2002 31U** **Keyboard, with US-English character set**

**Specifications:**

Dimensions w x h x d	305 x 111 x 261 mm (without monitor)	Weight	5 kg
		Power supply	100 – 240 VAC, 50/60 Hz or 12VDC



13991 HV     **Holder**, with glue strip for safe storage of  
Video Connecting Cable **20 2130 70**



13991 SW     **Irrigation Adaptor**, for water bottle



13992 BS     **Water Bottle**, 250 ml



**25 0430 25**     **Solarc® Spare Lamp** , 24 Watt, for use with  
GASTRO PACK® **25 0430 20**, **25 0431 20**,  
**25 0440 20** and **25 0441 20**





## **ACCESSORIES FOR FLEXIBLE ENDOSCOPES**

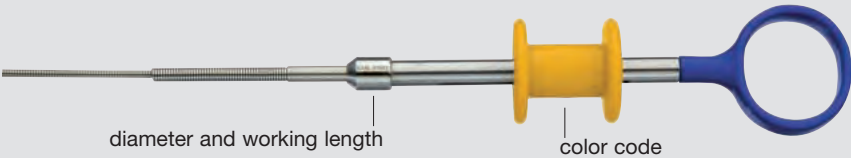




# Accessories for Flexible Endoscopes

## Color Coding

The introduction of color coding for KARL STORZ endoscopes and flexible accessories enables faster and easier instrument identification. Endoscopic accessories are color coded by means of a spindle in a specific color.

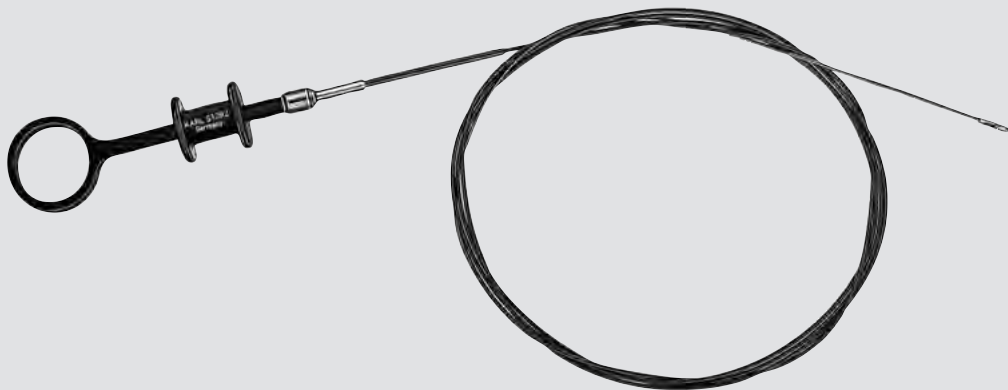


Color Code	Working channel with min. diameter
black	1.0 mm
white	1.2 mm
purple	1.7 mm
blue	2.0 mm
green	2.6 mm
yellow	2.8 mm
orange	3.7 mm
pink	> 5.0 mm

Color Code	Outer diameter of accessories
white	1.0 mm
purple	1.2 mm
blue	1.6 mm
green	1.8 mm
green	2.1 mm
yellow	2.3 mm
yellow	2.5 mm
orange	3.0 mm
orange	3.4 mm

# Accessories for Flexible Endoscopes

Biopsy Forceps, reusable



	round cupped jaws, fenestrated	round cupped jaws, with spike, fenestrated	round cupped jaws, oval, fenestrated	round cupped jaws, oval, with spike, fenestrated
Working length				

**Diameter 1.8 mm – for use with working channels as of size 2.2 mm**

120 cm	11001 KL	11001 KM	11001 KN	11001 KP
160 cm	11001 ML	11001 MM	11001 MN	11001 MP
200 cm	11001 LL	11001 LM	11001 LN	11001 LP

**Diameter 2.3 mm – for use with working channels as of size 2.8 mm**

120 cm	13250 KL	13250 KM	13250 KN	13250 KP
160 cm	13250 ML	13250 MM	13250 MN	13250 MP
200 cm	13250 LL	13250 LM	13250 LN	13250 LP
230 cm	–	–	–	13250 XN
300 cm	–	–	–	13250 XL

# Accessories for Flexible Endoscopes

Grasping Forceps, reusable



	alligator jaws	alligator jaws, round	universal, round cupped jaws, serrated	alligator jaws, serrated, with 3x 4 teeth	serrated, with 1x 2 teeth
Working length					

**Diameter 1.8 mm – for use with working channels as of size 2.2 mm**

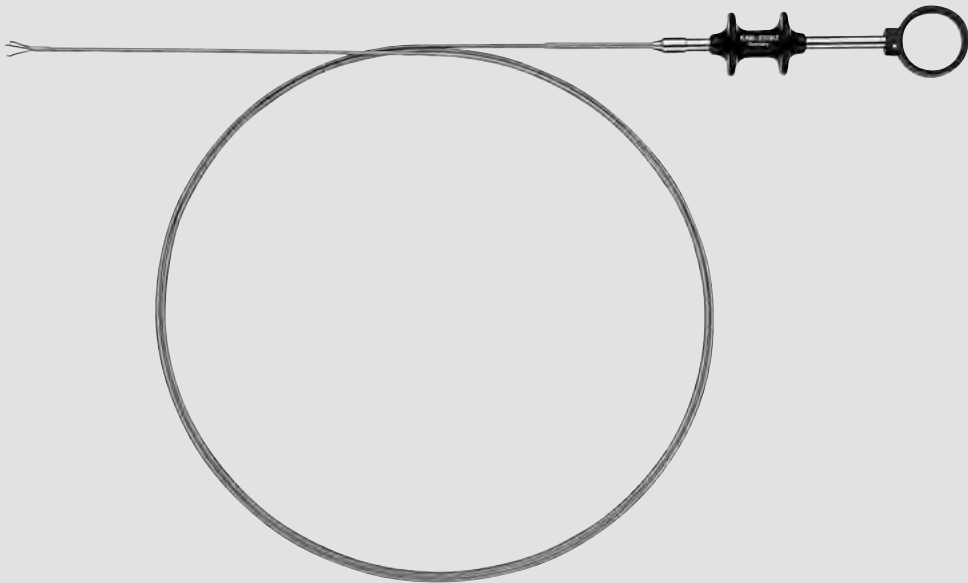
120 cm	11002 KS	11002 KT	11002 KU	11002 KX	11002 KZ
160 cm	11002 MS	11002 MT	11002 MU	11002 MX	11002 MZ
200 cm	11002 LS	11002 LT	11002 LU	11002 LX	11002 LZ

**Diameter 2.3 mm – for use with working channels as of size 2.8 mm**

120 cm	13252 KS	13252 KT	13252 KU	13252 KX	13252 KZ
160 cm	13252 MS	13252 MT	13252 MU	13252 MX	13252 MZ
200 cm	13252 LS	13252 LT	13252 LU	13252 LX	13252 LZ

# Accessories for Flexible Endoscopes

Grasping Forceps, reusable



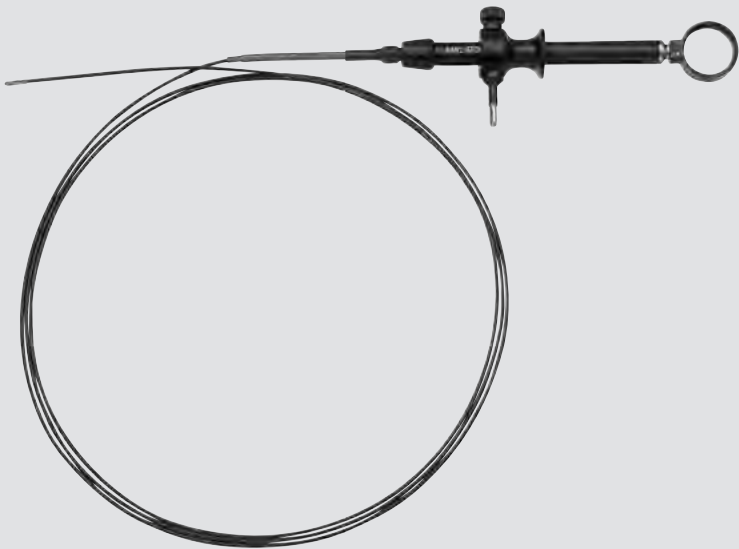
	with 2 spring- action jaws, 1x 2 teeth, sharp	with 2 spring- action jaws, 2x 2 teeth, sharp	with 2 spring- action jaws, serrated	with 3 spring- action claws, sharp	with 3 spring- action claws, blunt
Working length					

Diameter 2.5 mm – for use with working channels as of size 3.2 mm

120 cm	13253 KF	13253 KG	13253 KH	13253 KJ	13253 KK
160 cm	13253 MF	13253 MG	13253 MH	13253 MJ	13253 MK
200 cm	13253 LF	13253 LG	13253 LH	13253 LJ	13253 LK
230 cm	13253 EF	13253 EG	13253 EH	13253 EJ	13253 EK

Accessories for Flexible Endoscopes

Biopsy Forceps, insulated, reusable,  
for use with High Frequency Surgery Units



KARL STORZ HF Connector, 4 mm, instrument side

Working length	Complete Instrument, with Handle	Spare Forceps

Diameter 1.8 mm – for use with working channels as of size 2.2 mm

160 cm	13751 M	13751 ME
230 cm	13751 L	13751 LE

Diameter 2.3 mm – for use with working channels as of size 2.8 mm

160 cm	13752 M	13752 ME
230 cm	13752 L	13752 LE



13773 H

13773 H      **Handle, only,**  
reusable

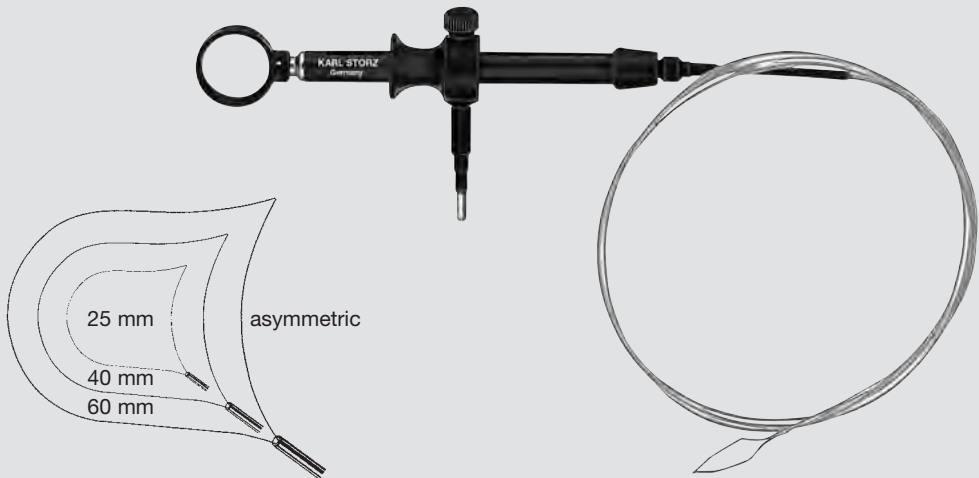
High Frequency Surgery Units, see chapter 6, UNITS

# Accessories for Flexible Endoscopes

Polypectomy Snares, insulated, reusable,  
for use with High Frequency Surgery Units

Special features:

- Easy-to-use mechanism
  - Forms snare automatically
- Multifilament cutting wire
  - Asymmetric opening



Diameter 2.4 mm – for use with working channels as of size 2.8 mm  
KARL STORZ HF connector, 4 mm, instrument side

Working length	Complete Instrument	Spare Snares, reusable	Spare Tubes
Polypectomy Snare, complete, with Handle 13773 H, snare size 25 mm			
120 cm	13773 KD	13273 RD	13273 TU
160 cm	13773 MD	13273 SD	13273 TV
200 cm	13773 LD	13273 TD	13273 TW
Polypectomy Snare, complete, with Handle 13774 H, snare size 40 mm			
160 cm	13773 ME	13273 SE	13273 TZ
200 cm	13773 LE	13273 TE	13273 TX
Polypectomy Snare, complete, with Handle 13774 H, snare size 60 mm			
160 cm	13773 MF	13273 SF	13273 TZ
200 cm	13773 LF	13273 TF	13273 TX



13774 H

13774 H      **Handle, only,  
reusable**



13773 H

13773 H      **Handle, only,  
reusable**

High Frequency Surgery Units, see chapter 6, UNITS

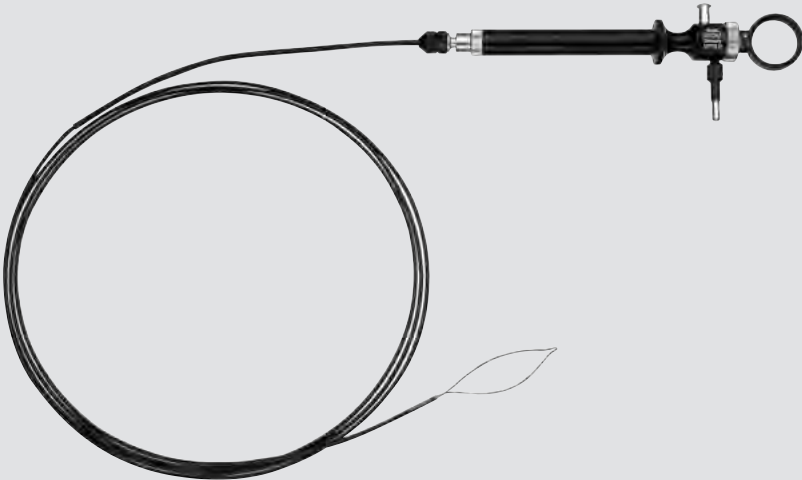


# Accessories for Flexible Endoscopes

Polypectomy Snares, insulated, reusable,  
for use with High Frequency Surgery Units

Special features:

- Easy-to-use mechanism
  - Irrigation adaptor with LUER
- Horizontal positioning of the snare to handle always guaranteed
  - Monofilament cutting wire



Oval Diathermy Loops  
Diameter 2.3 mm – for use with working channels as of size 2.8 mm  
KARL STORZ HF Connector, 4 mm, instrument side

Working length			Spare Tubes
	25 mm	15 mm	
	oval	oval	

Polypectomy Snares, complete, with Handle 13775 H		
150 cm	13775 A	13775 B
250 cm	13776 A	13776 B

Spare Snares, reusable			
150 cm	13275 W	13275 U	13275 S
250 cm	13276 W	13276 U	13276 S



13775 H      **Handle**, only, reusable



13275 K      **Adaptor**, connects tube with handle

High Frequency Surgery Units, see chapter 6, UNITS

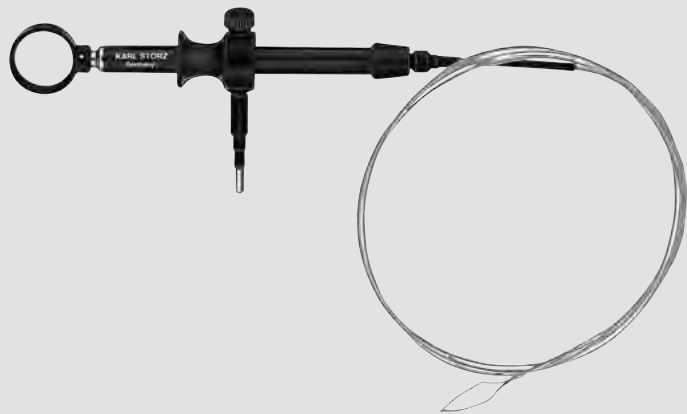
# Accessories for Flexible Endoscopes

Polypectomy Snares, insulated, reusable,  
for use with High Frequency Surgery Units



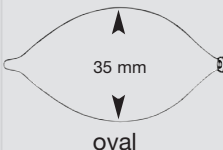
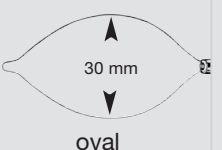
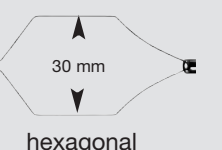
Special features:

- Easy-to-use mechanism
- Multifilament cutting wire



Oval Diathermy Loops

Diameter 2.4 mm – for use with working channels as of size 2.8 mm  
KARL STORZ HF Connector, 4 mm, instrument side

Working length	 35 mm oval	 30 mm oval	 30 mm hexagonal	Spare Tubes
----------------	--	--	--	-------------

Polypectomy Snares, complete, with Handle 13773 H

120 cm	–	13773 KB	13773 KC
160 cm	13773 MA	13773 MB	13773 MC
200 cm	13773 LA	13773 LB	13773 LC

Spare Snares

120 cm	–	13273 RB	13273 RC	13273 TR
160 cm	13273 SA	13273 SB	13273 SC	13273 TS
200 cm	13273 TA	13273 TB	13273 TC	13273 TT

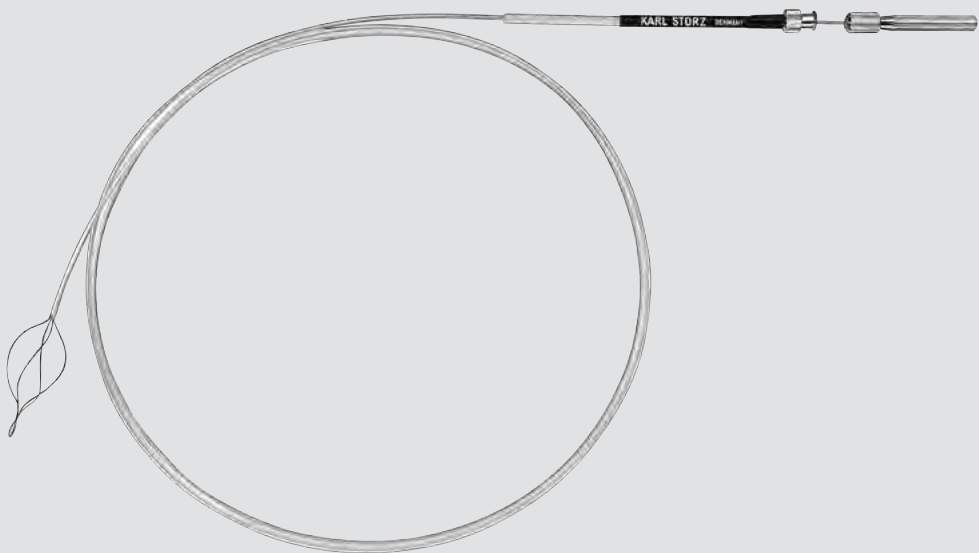


13773 H      **Handle, only, reusable**

High Frequency Surgery Units, see chapter 6, UNITS

# Accessories for Flexible Endoscopes

Foreign Body Baskets, reusable



Dormia Baskets, with 4 monofilament wires  
Diameter 2.2 mm – for use with working channels as of size 2.8 mm

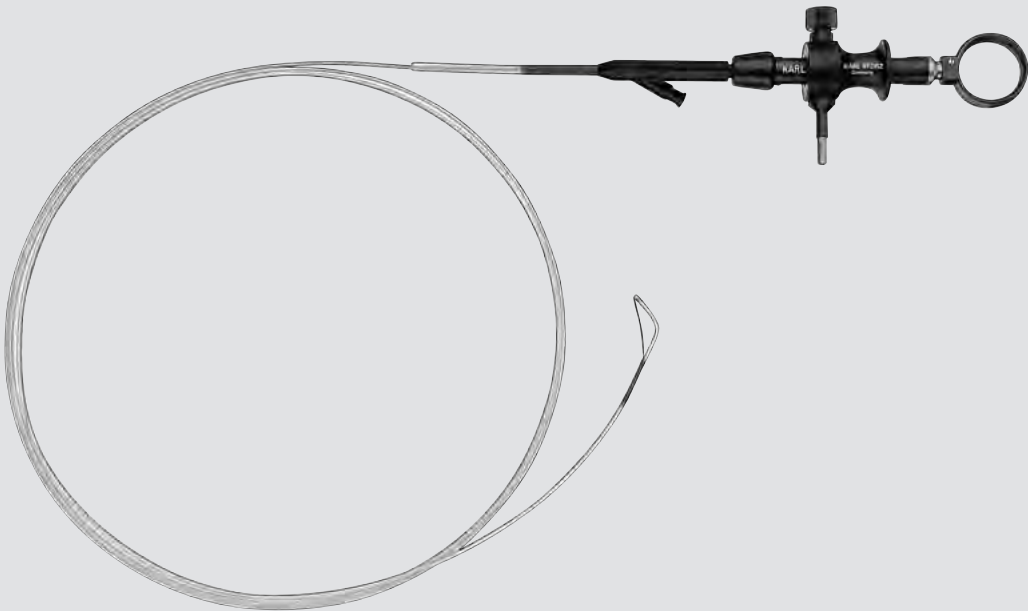
Working length	Order No. complete, with Handle 13278 HA	Spare Foreign Body Basket	Spare Tubes
120 cm	13278 KA	13278 RA	13278 RB
160 cm	13278 MA	13278 SA	13278 SB
200 cm	13278 LA	13278 TA	13278 TB



13278 HA      **Handle**, only,  
reusable

# Accessories for Flexible Endoscopes

Papillotomes, Sphincterotomes, reusable,  
for use with High Frequency Surgery Units



Diameter 2.1 mm – for use with working channels as of size 2.8 mm, working length 200 cm  
KARL STORZ HF Connector, 4 mm, instrument side

Shape		Incision length	Order No. complete with Handle 13773 K	Spare Snare with Tubing
	filiform	40 mm	13777 LA	13277 TA
	filiform	30 mm	13777 LB	13277 TB
	standard	20 mm	13777 LC	13277 TC
	precut	30 mm	13777 LD	13277 TD
	precut	20 mm	13777 LE	13277 TE



13773 K

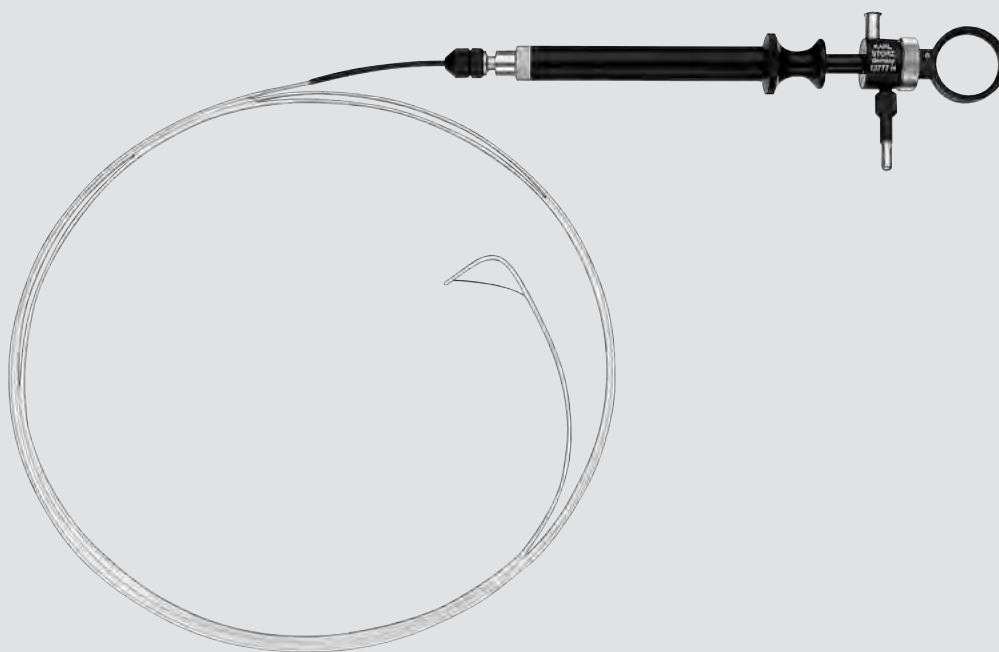
Handle, only,  
reusable

High Frequency Surgery Units, see chapter 6, UNITS

# Accessories for Flexible Endoscopes

Papillotomes, reusable,  
for use with High Frequency Surgery Units

KARL STORZ HF Connector, 4 mm, instrument side



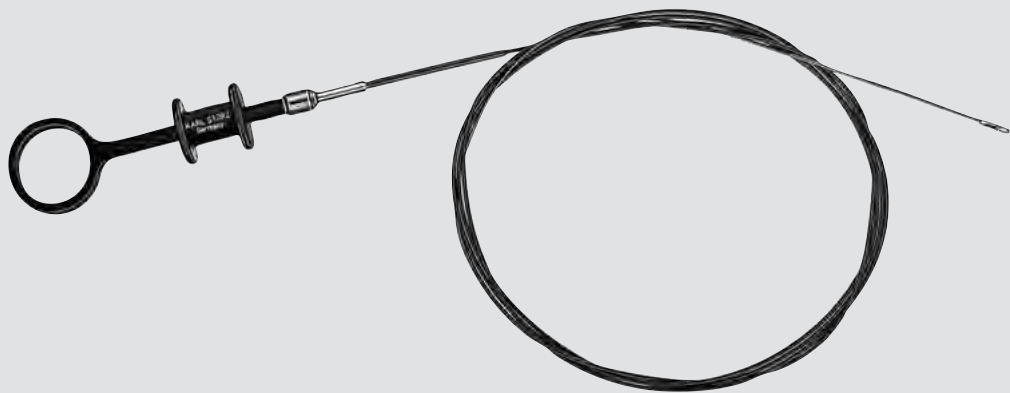
- |          |   |
|----------|---|
| 13777 AA | <b>DEMLING-CLASSEN-SEUBERTH Papillotome Blade</b> , reusable, with Handle 13777 H, diameter 1.7 mm, length 200 cm, with spare snare, spare outer tube |
| 13277 SW | <b>Outer Tube</b> , with snare, length 200 cm   |
| 13275 K  | <b>Adaptor</b> , connects tube with handle  |
| 13777 H  | <b>Handle</b> , only, reusable, for use with Papillotome Blade 13777 AA   |

**High Frequency Surgery Units**, see chapter 6, UNITS

# Accessories for Flexible Endoscopes

Scissors, reusable,  
Cytology Brushes

## Scissors



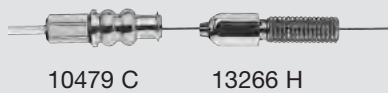
- 13254 MS    **Scissors**, diameter 2.2 mm, length 160 cm
- 13254 LS    **Scissors**, diameter 2.2 mm, length 200 cm

## Cytology Brushes

Diameter 2.2 mm – for use with  
working channels as of 2.8 mm

Working length	Cytology Brushes, complete
120 cm	13266 K
160 cm	13266 M
200 cm	13266 L

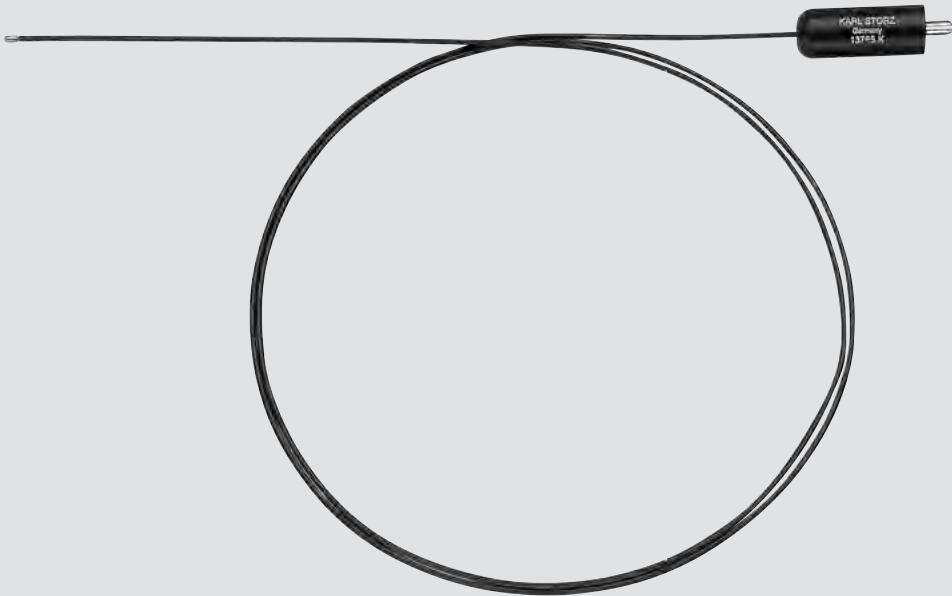
Outer Tubes, only, package of 10	Brushes, only, package of 10
13266 SK	13266 KE
13266 SM	13266 ME
13266 SL	13266 LE



- 10479 C    **Adaptor**, for Suction Catheter  
10468 C and 10478 C
- 13266 H    **Handle**, for Brush 11007 BS

# Accessories for Flexible Endoscopes

Coagulating Electrodes,  
for use with High Frequency Surgery Units



KARL STORZ HF Connector, 4 mm, instrument side

Diameter 1.8 mm – for use with  
working channels as of size 2.8 mm

unipolar

Working length	unipolar
120 cm	13765 K
160 cm	13765 M
200 cm	13765 L

Diameter 2.2 mm – for use with  
working channels as of size 2.8 mm

bipolar

Working length	bipolar
120 cm	13267 KB
160 cm	13267 MB
200 cm	13267 LB

1-042

High Frequency Surgery Units, see chapter 6, UNITS



Accessories for Flexible Endoscopes

Biopsy Forceps



Working length 200 cm, sterile

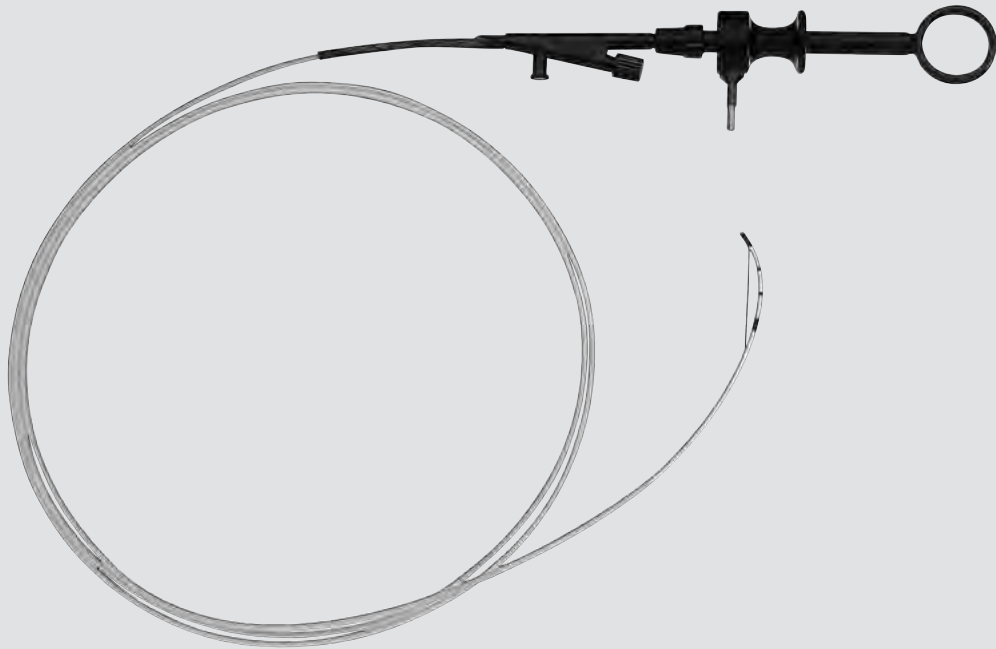
Biopsy Forceps, package of 10	for use with working channels as of dia.	Diameter	Order No. complete with Handle
	2.8 mm	2.3 mm	110270-10*
			110271-10*
	2.8 mm	2.3 mm	110272-10*
			110273-10*
	2 mm	1.7 mm	110274-10*



mtp medical technical promotion gmbh,  
Take-Off GewerbePark 46, D-78579 Neuhausen ob Eck, Germany

# Accessories for Flexible Endoscopes

Single-Use Papillotomes, Polypectomy Snares,  
for use with High Frequency Surgery Units



KARL STORZ HF Connector, 4 mm, instrument side, working length 200 cm, sterile

Papillotome, filiform, package of 5	for use with working channels as of size	Incision length	Order No. complete with Handle
	2.2 mm	25 mm	110210-05*
	2.8 mm	25 mm guide wire 4000 mm	110211-05*
Polypectomy Snares, package of 10	for use with working channels as of size	Loop diameter/length	Order No. complete with Handle
	2.2 mm	30/1800 mm	110220-10*
	2.8 mm	30/2300 mm	110221-10*

\* mtp medical technical promotion gmbh,  
Take-Off GewerbePark 46, D-78579 Neuhausen ob Eck, Germany

High Frequency Surgery Units, see chapter 6, UNITS

# Accessories for Flexible Endoscopes

Single-Use Papillotomes, Polypectomy Snares,  
for use with High Frequency Surgery Units




Standard HF Connector, 3 mm, instrument side, working length 200 cm, sterile

Papillotome, filiform, package of 5	for use with working channels as of size	Incision length	Order No. complete with Handle
	2.8 mm	20 mm	110214-05*
			110217-05*
	2.2 mm	25 mm	110213-05*
	2.8 mm		110215-05*
	2.8 mm		110218-05*
	2.8 mm	30 mm	110216-05*
			110219-05*

Standard HF Connector, 3 mm, instrument side, working length 230 cm, sterile

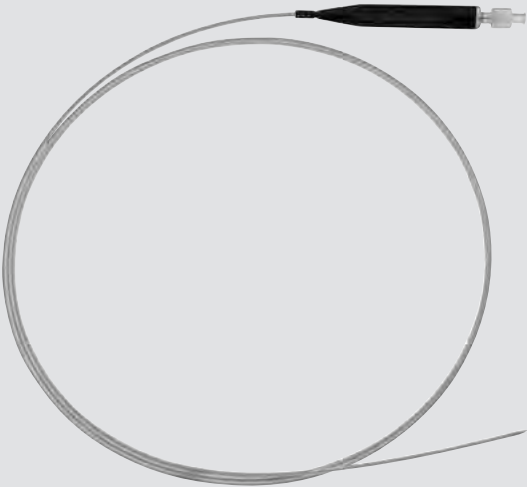
Polypectomy Snares, package of 10	for use with working channels as of size	Loop diameter	Order No. complete with Handle
	2.8 mm	20 mm	110222-10*
	2.8 mm	30 mm	110224-10*
	2.8 mm	25 mm	110225-10*

\*  mtp medical technical promotion gmbh,  
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High Frequency Surgery Units, see chapter 6, UNITS

# Accessories for Flexible Endoscopes

Single-Use Injection Needles, Cytology Brushes, Bite Protector



Single-Use Injection Needles, sterile, package of 10  
for use with working channels as of diameter 2.8 mm

Working length	Needle diameter	Needle length 6 mm
180 cm	0.7 mm	110230-10*
230 cm	0.7 mm	110231-10*
180 cm	0.9 mm	110232-10*
230 cm	0.9 mm	110233-10*

Cytology Brushes, sterile, package of 10

Working length	
----------------	--

for use with working channels as of diameter 2.2 mm


180 cm	110240-10*
--------	------------

for use with working channels as of diameter 2.8 mm

230 cm	110241-10*
--------	------------

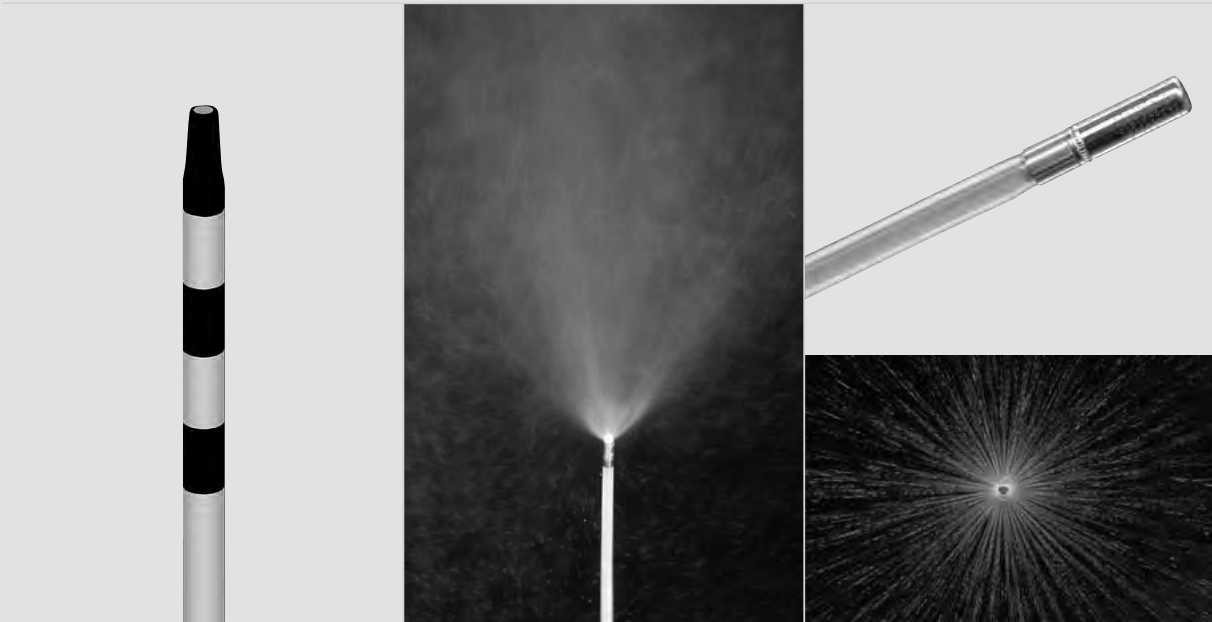


110250-50\* **Bite Protector**, with rubber strap

\*  mtp medical technical promotion gmbh,  
Take-Off GewerbePark 46, D-78579 Neuhausen ob Eck, Germany

# Accessories for Flexible Endoscopes

ERCP Catheter, Spray Catheters and Spray Probes



for working channels as of diameter 2.2 mm	for working channels as of diameter 2.2 mm	for working channels as of diameter 2.8 mm
110260-05* <b>ERCP Catheter</b> , with filiform tip, for single use, length 200 cm	110261-10* <b>Spray Catheter</b> , axial, for single use, length 180 cm 110262-10* <b>Same</b> , length 230 cm	13670 SP <b>Spray Probe</b> , radial, length 180 cm 13671 SP <b>Same</b> , length 230 cm

\*

mtp

medical technical promotion gmbh

mtp medical technical promotion gmbh

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Fax: +49/74 67/9 45 04-99

# **UNITS AND ACCESSORIES FOR GASTROENTEROLOGY**



**SUCTION SYSTEM  
HIGH FREQUENCY SURGERY UNITS**





## ■ SUCTION SYSTEM

## ■ HIGH FREQUENCY SURGERY UNITS

SUCTION SYSTEM

HIGH FREQUENCY SURGERY UNITS

The units manufactured by KARL STORZ combine long-lasting precision mechanics with state-of-the-art micro-electronic programmable controls. At KARL STORZ, the greatest emphasis is placed on user and patient safety. The quality assurance system of KARL STORZ is certified in accordance with the requirements of ISO 9001/EN 46001. It guarantees constant quality testing in the selection of materials and components. At the end of each manufacturing process, tests are carried out with automatic measuring and testing systems developed specially for this purpose. The results are recorded and logged. That gives each device a distinct "fingerprint" that can be checked at any time before and after it is delivered to the customer.

The standardized, modular design of KARL STORZ units was developed based on extensive ergonomic studies and is conceived for ease of care and cleaning and user-friendly practice, as well as to meet the demands of the special hygienic standards required in surgery. Clearly laid out adjacent function keys and displays guarantee efficient operation and make it easier to constantly monitor actual and set parameters. Acoustic and visual warning signals also assist the user. The settings can be changed manually at any time. Automatic microelectronic control systems guarantee optimum operating conditions and therefore relieve the surgeon in his work who can then fully concentrate on medical procedures.

**The overall KARL STORZ product line includes the following categories of units with accessories:**

- Insufflators
- Suction and Irrigation Systems
- Motor Systems
- Lithotripsy Systems
- High Frequency Surgery Units
- Trainers





# Table of Contents

GASTROENTEROLOGY

## TABLE OF CONTENTS

Table of Contents	I
Alphabetical and Numerical Index	II

## SUCTION SYSTEM

UNIMAT® 30 – Perfected Construction	U 6-U 7
UNIMAT® 30 – Suction System, recommended System Configuration	U 8
UNIMAT® 30 – System Components	U 9
Optional Accessories – for UNIMAT® 30	U 10

## HIGH FREQUENCY SURGERY UNITS

The New AUTOCON®II 400 SCB HF UNIT	U 12
AUTOCON®II 400 SCB – Safety Aspects and Main Features	U 13-U 15
AUTOCON®II 400 SCB, AUTOCON® 200 – Special Features	U 16
AUTOCON®II 400 SCB – Specifications	U 17
AUTOCON®II 400 SCB – High Frequency Surgery Units, recommended System Configuration	U 18
AUTOCON®II 400 SCB – System Components	U 19
AUTOCON® 200 – High Frequency Surgery Units, recommended System Configuration	U 20
AUTOCON® 200 – System Components	U 21
Optional Accessories – for AUTOCON®II 400 SCB and AUTOCON® 200	U 22
Accessories – Unipolar and Bipolar High Frequency Cords	U 23
Accessories – High Frequency Cords, for use with bipolar coagulating instruments	U 24
Accessories – High Frequency Cords, for use with bipolar forceps	U 25

# Alphabetical and Numerical Index

## GASTROENTEROLOGY

<b>A</b>		<b>M</b>	
Adaptor	U 20	Mains Cord	U 8, U 10, U 20
Aspirator	U 10		
AUTOCON® 200	U 20	<b>N</b>	
AUTOCON®II 400 SCB	U 18	Neutral Electrode	U 22
<b>B</b>		<b>O</b>	
Bipolar High Frequency Cord	U 23, U 24, U 25	One-Pedal Footswitch	U 22
Bipolar Universal High Frequency Cord	U 25	Overflow Case	U 8, U 10
Bottle Cap	U 8, U 10	<b>P</b>	
<b>C</b>		Patient Tube	U 8, U 10
Connecting Cable	U 22	<b>S</b>	
Connecting Tube	U 8, U 10	Secretion Bottle	U 8, U 10
<b>E</b>		<b>T</b>	
Electrode Handle	U 22	Three-Pedal Footswitch	U 22
<b>H</b>		Two-Pedal Footswitch	U 22
High Frequency Cable	U 22	<b>U</b>	
High Frequency Cord	U 22	UNIMAT® 30	U 8
Hydrophobic Bacterial Filter	U 8, U 10	Unipolar High Frequency Cord	U 23

10432 N	U 10	20535220-116	U 18	27170	U 23
10432 T	U 10	25320001	U 8	27801	U 22
20013130	U 22	25320001C	U 8	27802	U 22
20013330	U 22	25320020	U 8	27805	U 22
20013830	U 22	25320080	U 8, U 10	27806	U 22
20013831	U 22	25320081	U 8, U 10	27806 UR	U 22
20013832	U 22	25320082	U 8, U 10	27806 US	U 22
20522501	U 20	25320083	U 8, U 10	27809	U 20
20522501 C	U 20	25320084	U 8, U 10	29005 PH	U 10
20522501-010	U 20	25320085	U 8, U 10	400 A	U 8, U 10, U 20
20522501C010	U 20	26002 M	U 23	847000	U 24
20522520	U 20	26004 M	U 23	847000 A	U 24
20522520 C	U 20	26005 M	U 23	847000 E	U 24
20522520-010	U 20	26006 M	U 23	847000 M	U 24
20522520C010	U 20	26176 L	U 23	847000 V	U 24
20535201-111	U 18	26176 LA	U 23	847002 A	U 25
20535201-112	U 18	26176 LE	U 23	847002 E	U 25
20535201-115	U 18	26176 LM	U 23	847002 M	U 25
20535201-116	U 18	26176 LV	U 23	847002 U	U 25
20535220-111	U 18	26520043	U 22	847002 V	U 25
20535220-112	U 18	26520045	U 22	860021 E	U 22
20535220-115	U 18	26520046	U 22		



## ■ SUCTION SYSTEM

**NEW** UNIMAT® 30



- **Enhanced ergonomics**

Less noise and vibration allows the KARL STORZ UNIMAT® 30 to create a pleasant atmosphere conducive to medical examinations, enabling stress-free and concentrated work.

- **Efficient and reliable**

The UNIMAT® 30 is very efficient and is suitable for use in the doctor's office, clinic or hospital.

- **Suction within seconds**

Fast vacuum build-up makes the UNIMAT® 30 the pump of choice for all applications requiring quick suction.

- **Always ready at hand**

The UNIMAT® 30 has a practical, integrated handle for uncomplicated and flexible transportation.

- **Integration in your endoscopy unit**

The pump can be mounted either on a videocart or a wall rail.



Special features:

- High suction performance of 30 l/min
  - Particularly low noise and vibration
  - Fast vacuum build-up to 85 kPa
  - Maintenance-free cylinder/piston system
- Very easy to use
  - Hydrophobic bacterial filter protects pump
  - Problem-free cleaning
  - For use in the doctor's office or hospital



25 3200 20

- 25 3200 01

**UNIMAT® 30, Suction Pump Set,**  
power supply 230 VAC, 50/60 Hz  
**consisting of:**

25 3200 20

**UNIMAT® 30**

25 3200 80

**Bacterial Filter**

25 3200 81

**Secretion Bottle, 2 l**

25 3200 82

**Bottle Cap, with grip**

25 3200 83

**Connecting Tube, short**

25 3200 84

**Patient Tube**

25 3200 85

**Overflow Case**

400 A

**Mains Cord, length 300 cm**

mtp\*

**VACUsafe Promotion Pack Suction**
- 25 3200 01C

**Same, power supply 115 VAC, 50/60 Hz**

Specifications:

Suction Performance	30 l/min
Vacuum	up to 85 kPa, 640 mmHg
Power Supply	115/230 VAC, 50/60 Hz
Dimensions w x h x d	245 x 345 x 282 mm
Weight	7 kg
Certified to	IEC 601-1, CE label acc. to MDD

Rated Power/ Power Consumption	1A, 100 Watt (115 VAC) 0.45 A, 100 Watt (230 VAC)
Protection Class	Protection class I, BF, IPX 1
Inspections and certificates:	MDD 93/42 EWG, EN 60601-1, EN 60601-1-2, EN 10079-1, ISO 9001, UL 2601-1

\*

mtp medical technical promotion gmbh,

Take-Off GewerbePark 46, D-78579 Neuhausen ob Eck, Germany

Optional Accessories for the UNIMAT® 30 see page U 10

UNIT SIDE

PATIENT SIDE



Connecting Tube, short



25 3200 83

Bacterial Filter  
Secretion Bottle  
Bottle Cap  
Overflow Case



25 3200 80  
25 3200 81  
25 3200 82  
25 3200 85

Patient Tube










25 3200 84









# Optional Accessories

for UNIMAT® 30

## Accessories

	<b>for Bronchoscopy:</b>
	10432 N <b>Aspirator</b> , for collecting secretions, with cut-off hole, with Spare Glass 10432 E, can be connected to suction tubes or suction catheter
	10432 T <b>Same</b> , without cut-off hole
	25 3200 80 <b>Bacterial Filter</b>
	25 3200 81 <b>Secretion Bottle</b> , 2 l
	25 3200 82 <b>Bottle Cap</b> , with grip
	25 3200 85 <b>Overflow Case</b>
	25 3200 83 <b>Connecting Tube</b> , short
	25 3200 84 <b>Patient Tube</b>
	400 A <b>Mains Cord</b> , length 300 cm
	29005 PH <b>Pump Holder</b> , for attaching suction pump UNIMAT® 30 25 3200 01 to videocart, for mounting to 2 Standard Equipment Rails 29003 GS

## Single-Use Accessories from mtp\*

	<b>VACUsafe Canister</b> , 1.5 l, 2 l and 3 l
	<b>VACUsafe Suction Bag</b> , 1.5 l, 2 l, 3 l, with filter for single use, color code: green
	<b>Gelling Granulate</b> , in 20 g bag
	<b>VACUsafe Suction Tube</b> , with red and blue multiadaptor for single use, unsterile, length 170 cm
	<b>VACUsafe Connecting Tube</b> , with green multiadaptors, unsterile, length 30 cm
	<b>VACUsafe Canister Holder</b> , for 25 x 10 mm and 34 x 8 mm rails



## ■ HIGH FREQUENCY SURGERY UNITS

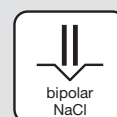
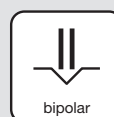
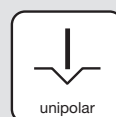
**AUTOCON® II 400 SCB**

**AUTOCON® 200**

# The New AUTOCON® II 400 SCB HF Unit

## Special features:

- For interdisciplinary use
- The world's first HF unit with a user-friendly, easy-to-disinfect touch screen
- Equipped with 2 bipolar or 2 unipolar HF outputs
- CF outputs for maximum patient and user safety
- Permanent monitoring of the neutral electrode during unipolar use
- 2 footpedals can be connected
- Automatic activation or via handswitch or footswitch
- Self-test for maximum patient and user safety
- Connection sockets individually selectable according to user requirements
- Logical arrangement and color coding of the control elements make the unit extremely simple to operate



# AUTOCON® II 400 SCB

## Safety Aspects and Main Features

### Integrated voltage stability control or arc control

The two state-of-the-art generators both guarantee optimal surgical cutting and coagulation power that adapts continuously to the particular indication, especially when there are wide variations in the tissue structures and tissue impedances. At the press of a button, the operator can switch between arc control (TOP Cut mode) and voltage stability control (POWER Cut mode).

### TOP Cut mode

In this mode, the HF energy required for a cutting effect is automatically reduced to the necessary physical minimum in each individual case. The electric arc always remains at a constant level, thus ensuring a uniform surgical effect. Given precise operation, this offers a clear safety advantage and produces a cut that conserves tissue and reduces stress for the patient.

This increased safety with the AUTOCON® II 400 SCB unit is achieved by using the latest and fastest micro-processor and sensor technology, which enables the unit to capture all the important parameters, such as variable incision speed, geometry of the active electrode, different impedance behavior of biological tissue types and fluids, and transition and contact resistances. This data is then used to adjust the HF power output and HF voltage. This means that the operator is not restricted in his work or obliged to adapt to the HF unit. On the contrary, the HF unit adapts optimally to all the user's application and operating techniques.

### POWER Cut mode with constant HF voltage and power

This mode ensures a uniform surgical effect and consistent cutting efficiency over a wide impedance range and many different tissue types.

### RAM system – return electrode application monitoring

This safety system continuously monitors the contact quality between the neutral electrode and the patient's skin, and additionally indicates it with symbols. If the contact surface area decreases, the safety system gives an early visual and acoustic alarm, thus preventing a burn under the application site of the patient electrode. To increase the contact reliability of the neutral electrode, the user can prevent the application of single-faced electrodes.

### Gastro Cut and Papillo Cut

These two new resection modes, which were specially developed by KARL STORZ for use in flexible endoscopy, permit a fractionated, and controlled cut with no bleeding. The special HF generator technology allows controlled output of cutting and coagulation pulse current. Both the pulse sequence and the pulse speed can be set separately and specifically for each mode.

### LF/HF leakage currents

Stray currents and the associated risk of burns are minimized by design measures.



# AUTOCON® II 400 SCB

Safety Aspects and Main Features

**STORZ**  
**KARL STORZ — ENDOSKOPE**

## SCB- and OR1™-compatible

The units are designed for integration in the KARL STORZ Communication Bus (SCB). Full integratability of the HF unit in the networked, and even speech-controlled, operating room of the future is already a standard feature (system requirement: RUI software release 2009001-26 or later).

## C-Cut mode and LAP-C-CUT mode – the intermittent coagulation-cutting mode with AUTOCON® II 400 SCB

Designed for blood-free cutting during laparoscopy and when using irrigation liquids, the electric current is specially modulated and offers a reproducible coagulation current with high cutting efficiency. This makes time-consuming subsequent coagulation a thing of the past. Using the C-Cut mode thus reduces the need for blood transfusions and saves surgery time. The result is an overall reduction in operating costs, and for the patient it means additional protection.

## Bipolar generator with 370 W HF power

This outstanding performance range allows the unit to be used in conjunction with the newly developed bipolar special and standard accessories. This high-end unit is even suitable for indications using irrigation liquids, which in the past could only be performed with special-purpose HF systems. The safety of the bipolar technology from KARL STORZ eliminates the need for applying a neutral electrode, including for interventions which used to be standard unipolar procedures.

## Unipolar generator with 300 W HF power

With a peak power of 300 watts, the AUTOCON® II 400 SCB is ideally equipped for interventions in all areas of use.

## Precise power setting and power limitation

Exact fine tuning in 1 W steps is provided for interventions requiring maximum precision with very low power.

## Up to 8 hemostatic effects

Individual selection of up to 8 hemostatic effects for unipolar and bipolar cutting, each with up to 370 W output, permits optimal control of coagulation and the surgical effect in every situation.

## Forceps auto-start function

When the forceps tips contact the tissue, bipolar coagulation is activated automatically after a freely adjustable delay of up to 9.9 seconds.

## 6.5" touch screen

The color touch screen makes the AUTOCON® II 400 SCB the world's first HF unit with this new, user-friendly operating technology. It also offers the important advantage of very easy cleaning and wipe-down disinfection.

## 100 program memories

Simple programming of the indication-related unit parameters makes the AUTOCON® II 400 SCB easy and intuitive to operate because all the programs can be stored in numeric order or text-based with user name and indication. The stored programs can be called up in the indication list at the touch of a button.



# AUTOCON® II 400 SCB

Safety Aspects and Main Features

## Bipolar coagulation auto-stop function

Automatic power shutdown when the coagulation procedure has been ended.

## Self-test program

A comprehensive software safety concept ensures smooth, safe use after switching on. Detected component faults are indicated by an error code display, enabling rapid troubleshooting. The self-test also includ-

es the connected accessories for the specific purpose of minimizing waiting times in preoperative work-up.

## Software upgrade

The service port on the back of the unit allows the HF functions of the AUTOCON® II 400 SCB to be expanded economically for future forms of HF treatment. This means that the AUTOCON® II 400 SCB is always up-to-date.





# AUTOCON® II 400 SCB, AUTOCON® 200

## Special Features

Special features:	AUTOCON® II 400 SCB	AUTOCON® 200
Degree of coagulation (effect) can be preselected in several steps: The degree of coagulation measures extent of coagulation depth	●	●
Soft coagulation and/or standard coagulation: Coagulation with unmodulated HF voltage (Up < 200 V); the coagulation electrode can be positioned in direct contact with the tissue without damaging deeper layers of tissue through carbonization	●	●
Forced coagulation: coagulation with modulated HF voltage (Up > 500 V); to reach deeper coagulation zones, electric arcs are generated between the active coagulation electrode and the tissue. Damage to deeper layers of tissue through carbonization has to be tolerated.	●	●
Autostart function: Manual adjustment of operating time limit for bipolar coagulation	●	-
Voltage-regulated cutting	●	●
Service port for software updates and HF functionality upgrades	●	-
Separate papillo-cut and gastro-cut functions enable fractionated cutting with regulated HF current at different cutting speeds for flexible endoscopy	●	-
Autostart function for bipolar coagulation: Automatic activation of coagulation current as soon as coagulation electrode touches tissue with both branches	●	●
Activation of HF functions via footswitch or manual control switch	●	●
Bipolar resection with KARL STORZ bipolar electrotomes	●	-
Bipolar application with NaCl irrigation solutions	●	-
Modular connecting sockets for unipolar and bipolar applications can be selected according to individual requirements	●	-
100 applications can be stored	●	-
Convenient use via 6.5" Touch Screen	●	-
Switchover function enables switching between two modes within a user program via a footswitch from the sterile OR area	●	-
Compatible with KARL STORZ Communication Bus (KARL STORZ-SCB®)	●	-
Interdisciplinary use	●	-
Spray coagulation: Coagulation with modulated HF voltage (Up > 500 V); very long arc enables coagulation of large and bleeding areas of tissue without contact to tissue surface	●	-
Arc-controlled cutting, unipolar	●	-

# AUTOCON® II 400 SCB

## Specifications

HF Modes	Effects	P max. at 500 Ohm	V <sub>p</sub> max. at 500 Ohm	Crest Factor	Arc Control	Voltage Control
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### Unipolar

TOP-Cut	8	300	950	1.4	●	–
POWER-Cut	8	300	740	1.4	–	●
C-Cut	8	200	1450	3.0	–	●
LAP-C-Cut	8	200	1450	3.0 – 3.8	–	●
Gastro-Cut	4	200	880	1.4	–	●
Papillo-Cut	4	200	880	1.4	–	●
Standard Coag	8	200 (at 50 Ohm)	190	1.4	–	●
Forced Coag	4	120	1800	6.0	–	●
Spray Coag	2	120	4300	7.4	–	●

### Bipolar

Bipolar-Cut	8	100	740	1.4	–	●
Saline-C-Cut	8	370	770	1.4	–	●
Saline-Time-C-Cut	8 time 0.1-1 sec.	370	770	1.4	–	●
Saline Coag	8	200 (at 50 Ohm)	190	1.4	–	●
Saline-Time-Coag	8 time 0.1-1 sec.	200 (at 50 Ohm)	190	1.4	–	●
Bipolar Soft Coag	8	120 (at 75 Ohm)	190	1.4	–	●
Bipolar Soft with Auto-Stop	8	120 (at 75 Ohm)	190	1.4	–	●
Bi-Vascular-Safe	8	120 (at 75 Ohm)	190	1.4	–	●

### Specifications:

Safety Systems	<ul style="list-style-type: none"> <li>- Automatic Self-Test</li> <li>- Maldosage</li> <li>- Neutral Electrode Safety System (dynamic, two-part, one- and two-part NE)</li> <li>- LF/HF Leakage Current Monitor</li> <li>- Activation Time</li> <li>- Deactivable HF</li> </ul>	Power Supply	<b>20 5352 20-11x:</b> 230 VAC, 50/60 Hz <b>20 5352 20U11x:</b> 115 VAC, 50/60 Hz
		Dimensions w x h x d	448 x 164 x 345 mm
		Weight	10 kg
		Certified to:	IEC 601-1, CE acc. to MDD










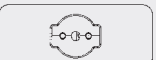




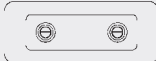


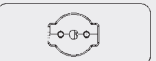
AUTOCON® II 400 SCB

High Frequency Surgery Units,  
recommended System Configuration



20 5352 20-11x

- 20 5352 01-11x **AUTOCON®II 400 SCB**  
consisting of:  
20 5352 20-11x **AUTOCON®II 400 with KARL STORZ-SCB®**,  
power supply 230 VAC, 50/60 Hz  
400 A **Mains Cord**  
20 0901 70 **SCB Connecting Cable**, length 100 cm

AUTOCON® II 400 SCB Set	AUTOCON® II 400 SCB	Socket Position			
		1	2	3	4
Standard					
20 5352 01-111	20 5352 20-111	Bipolar 	Bipolar 	Unipolar 3-pin and Erbe 	Neutral Electr. 6.3 mm jack 
20 5352 01-112	20 5352 20-112	Bipolar US-2-pin 	Bipolar US-2-pin 	Unipolar 3-pin and Bovie 	Neutral Electr. 2-pin 
High-End					
20 5352 01-115	20 5352 20-115	Bipolar 	Bipolar Multifunction 	Unipolar 3-pin and Erbe 	Neutral Electr. 6.3 mm jack 
20 5352 01-116	20 5352 20-116	Bipolar US-2-pin 	Bipolar Multifunction 	Unipolar 3-pin and Bovie 	Neutral Electr. 2-pin 

Optional accessories for AUTOCON®II 400 SCB see page U 22

# AUTOCON® II 400 SCB

System Components

Three-Pedal Footswitch



20 0138 31

Two-Pedal Footswitch



20 0138 30

One-Pedal Footswitch



20 0138 32

UNIT SIDE

PATIENT SIDE



Unipolar High Frequency Cord



26 5200 45

Handle



26 5200 43

Unipolar High Frequency Cord



26005 M

Unipolar High Frequency Cord



26002 GI

Connecting Cable



27806

Knife Electrode



26 5200 36

Coagulating Electrode



13267 LB

Single-Use Products



mtp\*

Neutral Electrode



27805

HIGH FREQUENCY SURGERY UNITS

9-051

\*



mtp medical technical promotion gmbh,  
Take-Off GewerbePark 46, D-78579 Neuhausen ob Eck, Germany



20 5225 20 / 20 5225 20 C / 20 5225 20-010 / 20 5225 20C010

- 20 5225 01

**AUTOCON® 200**  
consisting of:  
20 5225 20 **AUTOCON® 200**,  
power supply  
200 – 240 VAC, 50/60 Hz  
400 A **Mains Cord**  
27809 **Adaptor**, for unipolar HF  
output, diameter 4/5 mm

- 20 5225 01-010

**AUTOCON® 200**  
consisting of:  
20 5225 20-010 **AUTOCON® 200**,  
with ENDOCUT function,  
power supply  
200 – 240 VAC, 50/60 Hz  
400 A **Mains Cord**  
27809 **Adaptor**, for unipolar HF  
output, diameter 4/5 mm

- 20 5225 01 C

**AUTOCON® 200**  
consisting of:  
20 5225 20 C **AUTOCON® 200**,  
power supply  
100 – 120 VAC, 50/60 Hz  
400 A **Mains Cord**  
27809 **Adaptor**, for unipolar HF  
output, diameter 4/5 mm

- 20 5225 01C010

**AUTOCON® 200**  
consisting of:  
20 5225 20C010 **AUTOCON® 200**,  
with ENDOCUT function,  
power supply  
100 – 120 VAC, 50/60 Hz  
400 A **Mains Cord**  
27809 **Adaptor**, for unipolar HF  
output, diameter 4/5 mm

Specifications:

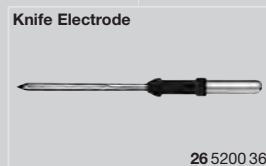
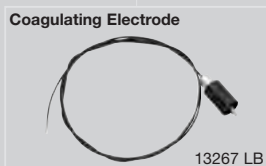
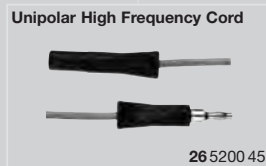
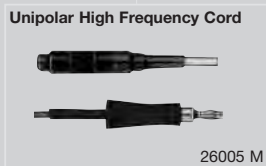
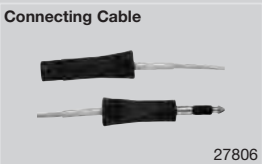
HF Rated Power	<div><div>- <b>Cutting</b> unipolar: 200 Watt/500 Ohm</div><div>- <b>Coagulation</b> unipolar soft: 120 Watt/125 Ohm unipolar standard: 120 Watt/350 Ohm bipolar: 120 Watt/125 Ohm</div></div>
Max. Voltage	<div><div>- <b>Cutting</b> unipolar: Vp=600 Volt</div><div>- <b>Coagulation</b> unipolar soft: Vp=190 Volt unipolar standard: Vp=1300 Volt bipolar: Vp=190 Volt</div></div>
Output Control	<div><div>- <b>Cutting</b> unipolar: automatic voltage control</div><div>- <b>Coagulation</b> unipolar soft: automatic voltage control unipolar standard: pulse modulation bipolar: automatic voltage control</div></div>

Degree of coagulation	<b>Cutting</b> 4 steps
Autostart	<b>Coagulation</b> bipolar
Autostop	<b>Coagulation</b> unipolar soft
Safety Systems	<div><div>- permanent power control</div><div>- maldosage</div><div>- neutral electrode safety system</div><div>- automatic self-test</div></div>
Power supply	100-120 VAC or 200-240 VAC, 50/60 Hz
Dimensions w x h x d	305 x 164 x 345 mm
Weight	7.7 kg
Certified to:	IEC 601-1, CE acc. to MDD


Optional Accessories for AUTOCON® 200 see page U 22

# AUTOCON® 200

System Components



HIGH FREQUENCY SURGERY UNITS

\*  mtp medical technical promotion gmbh,  
Take-Off GewerbePark 46, D-78579 Neuhausen ob Eck, Germany

## Optional Accessories

for AUTOCON® II 400 SCB and AUTOCON® 200

			for use with	
			AUTOCON® II 400 SCB	AUTOCON® 200
	20 0138 31	<b>Three-Pedal Footswitch</b> , with switch function for switching between mode levels A and B, for use with 20 5352 20-11x	●	—
	20 0138 30	<b>Two-Pedal Footswitch</b> , for use with 20 5352 20-11x	●	—
	20 0138 32	<b>One-Pedal Footswitch</b> , for activating coagulation, for use with 20 5352 20-11x	●	—
	20 0133 30	<b>Two-Pedal Footswitch</b> , for controlling the coagulation and cutting function	—	●
	20 0131 30	<b>One-Pedal Footswitch</b> , for controlling the coagulation function	—	●
	27805	<b>Neutral Electrode</b> , of conductive silicone with 2 rubber ties for attachment, contact surface A = 500 cm², for use with Connecting Cable 27806	●	●
	860021 E	<b>Neutral Electrode</b> , made of conductive silicone, with 1 rubber strap for fastening contact face, A = 187 cm² surface area, for use with Connecting Cable 27806	—	●
	27806	<b>Connecting Cable</b> , for connecting Neutral Electrodes 27805 and 860021 E, length 400 cm	-111 -115	●
	27806 UR	<b>Connecting Cable</b> , for connecting Neutral Electrode 27805	-112 -116	—
	27806 US	<b>Connecting Cable</b> , for connecting Neutral Electrode 27802	-112 -116	—
	27802	<b>Neutral Electrode</b> , for single use, contact face divided into two, A = 169 cm², package of 50, Connecting Cable 27801 is required, for use with AUTOCON® 50/200/350 and AUTOCON® II 400 SCB all versions	●	●
	27801	<b>Connecting Cable</b> , to connect Neutral Electrode 27802, length 500 cm	-111 -115	●
	26 5200 43	<b>Electrode Handle</b> , with 2 buttons for activating the unipolar generator, for use with AUTOCON® II, yellow button: unipolar cutting, blue button: unipolar coagulation (Cable 26 5200 45 required)	●	●
	26 5200 45	<b>High Frequency Cable</b> , for Electrode Handle 26 5200 43, length 400 cm	-111 -115	●
	26 5200 46	<b>High Frequency Cable</b> , for Electrode Handle 26 5200 43, length 300 cm, for use with AUTOCON® II 400 SCB 20 5352 20-111 and 20 5352 20-115	-111 -115	●

# Accessories


## Unipolar and Bipolar High Frequency Cords

### Unipolar High Frequency Cords

KARL STORZ  
Instrument

High Frequency  
Surgery Units

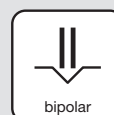







	26002 M	<b>Unipolar High Frequency Cord</b> , with 4 mm plug for HF unit, models <b>KARL STORZ</b> , Erbe type T, older models and Ellman, length 300 cm
	26004 M	<b>Unipolar High Frequency Cord</b> , with 4 mm plug for HF unit, models Berchtold and Martin, length 300 cm
	26005 M	<b>Unipolar High Frequency Cord</b> , with 5 mm plug for HF unit, models <b>KARL STORZ</b> AUTOCON® system (50, 200, 350), AUTOCON® II 400 SCB (111, 115) and Erbe type ICC, length 300 cm
	26006 M	<b>Unipolar High Frequency Cord</b> , with 8 mm plug for HF unit, models <b>KARL STORZ</b> AUTOCON® II 400 SCB (112, 116) and Valleylab, length 300 cm
	27170	<b>Unipolar High Frequency Cord</b> , with 4 mm plug for HF unit, models <b>KARL STORZ</b> and Erbe type T, older models, with 3 mm instrument connection, length 300 cm

### Bipolar High Frequency Cords

KARL STORZ  
Instrument

High Frequency  
Surgery Units



	26176 LE	<b>Bipolar High Frequency Cord</b> , to <b>KARL STORZ</b> Coagulator 26021 B/C/D, 860021 B/C/D, 27810 B/C/D, 28810 B/C/D, AUTOCON® system (50, 200, 350), AUTOCON® II 400 SCB system (111, 113, 115) and Erbe-Coagulator, T- and ICC-row, length 300 cm
	26176 LM	<b>Bipolar High Frequency Cord</b> , for Martin and Berchtold coagulators, length 300 cm
	26176 L	<b>Bipolar High Frequency Cord</b> , with 2x 4 mm banana plug for <b>KARL STORZ</b> Coagulator 26020 XA/XB and Ellman, length 300 cm
	26176 LA	<b>Bipolar High Frequency Cord</b> , with 2x 4 mm banana plug for <b>KARL STORZ</b> Coagulator 26020 XA/XB and Valleylab, length 300 cm
	26176 LV	<b>Bipolar High Frequency Cord</b> , for <b>KARL STORZ</b> AUTOCON® II 400 SCB (112, 114, 116) and Valleylab coagulators, length 300 cm

**Please note:** All high frequency cords of this page are delivered with a length of 300 cm. If a length of 500 cm is requested please add letter **L** to the part number, e. g. 26002 **ML**, 26176 **LVL**.

Accessories

High Frequency Cords,  
for use with bipolar coagulating instruments

Bipolar High Frequency Cords

KARL STORZ  
Instrument

High Frequency  
Surgery Units



	847000 E	<b>Bipolar High Frequency Cord</b> , to <b>KARL STORZ</b> Coagulator 26021 B/C/D, 860021 B/C/D, 27810 B/C/D, 28810 B/C/D, AUTOCON® system (50, 200, 350), AUTOCON®II 400 SCB system (111, 113, 115) and Erbe-Coagulator, T- and ICC-row, length 300 cm
	847000	<b>Bipolar High Frequency Cord</b> , with 2x 4 mm banana plug to <b>KARL STORZ</b> Coagulator 26020 XA/XB for <b>KARL STORZ</b> bipolar coagulation forceps, length 300 cm
	847000 A	<b>Bipolar High Frequency Cord</b> , with 2x 4 mm banana plug for <b>KARL STORZ</b> Coagulator 26020 XA/XB and Valleylab, length 300 cm
	847000 M	<b>Bipolar High Frequency Cord</b> , for Martin and Berchtold coagulators, length 300 cm
	847000 V	<b>Bipolar High Frequency Cord</b> , for <b>KARL STORZ</b> AUTOCON®II 400 SCB system (112, 114, 116), Valleylab coagulator, length 300 cm

**Please note:**  
All high frequency cords on this page are delivered with a length of 300 cm.



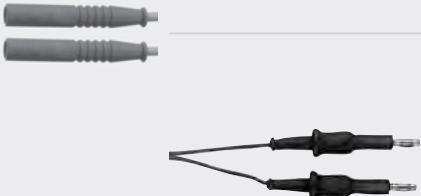

# Accessories

High Frequency Cords,  
for use with bipolar forceps


## Bipolar High Frequency Cords



KARL STORZ High Frequency  
Instrument Surgery Units

	847002 E	<b>Bipolar High Frequency Cord</b> , for <b>KARL STORZ</b> Coagulator 26021 B/C/D, 860021 B/C/D, 27810 B/C/D, 28810 B/C/D, AUTOCON® system (50, 200, 350), AUTOCON® II 400 SCB system (111, 113, 115) and Erbe coagulator, T and ICC series, with two 2 mm cable sockets for <b>KARL STORZ</b> Bipolar Suction Forceps 461010, 461015 and Bipolar Forceps 8615 A/AS, length 450 cm
	847002 M	<b>Bipolar High Frequency Cord</b> , for Martin and Berchtold coagulator, with two 2 mm cable sockets for <b>KARL STORZ</b> Bipolar Suction Forceps 461010, 461015 and Bipolar Forceps 8615 A/AS, length 450 cm
	847002 A	<b>Bipolar High Frequency Cord</b> , with 2x 4 mm banana plug for <b>KARL STORZ</b> coagulator 26020 XA/XB, with two 2 mm cable sockets for <b>KARL STORZ</b> Bipolar Suction Forceps 461010, 461015 and Bipolar Forceps 8615 A/AS, length 450 cm
	847002 V	<b>Bipolar High Frequency Cord</b> , for <b>KARL STORZ</b> AUTOCON®II 400 SCB system (112, 114, 116), Valleylab coagulator, with two 2 mm cable sockets for <b>KARL STORZ</b> Bipolar Suction Forceps 461010, 461015 and Bipolar Forceps 8615 A/AS, length 450 cm

KARL STORZ High Frequency  
Instrument Surgery Units

	847002 U	<b>Bipolar Universal High Frequency Cord</b> , one side with two 2 mm cable sockets for <b>KARL STORZ</b> Bipolar Suction Forceps 461010, 461015 and Bipolar Forceps 8615 A/AS, other side with standard pin for connection to all current forceps bipolar cords, length 40 cm
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for use with Bipolar High Frequency Cord 847000 or 847000 A/E/M/V see page U 24








**RECTOSCOPY - RIGID**






HEINKEL Rectoscope Tubes


Order No.	Outer diameter	Working length	with Obturator
24918	12 mm	20 cm	24918 O
24916	16 mm	20 cm	24916 O
24914	16 mm	30 cm	24914 O
24915	18 mm	25 cm	24915 O
24913	18 mm	30 cm	24913 O
24912	20 mm	20 cm	24912 O
24911	20 mm	25 cm	24911 O
24910	20 mm	30 cm	24910 O
24919	24 mm	20 cm	24919 O



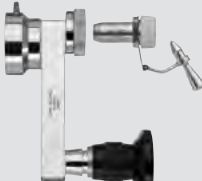
24910 – 24919




24920




24920 FK




24931 N



24920 FK



249 B



40924

24920

**Illumination Head Unit**, for HEINKEL rectoscope tubes, with fiber optic light transmission, LUER-Lock hub for rubber insufflation bulb, including Glass Window Plug 24920 FK

24920 FK

**Glass Window Plug**, for Illumination Head 24920

249 B

**Cover Glass**, for Glass Window Plug 24920 FK

24931 N

**Adjustable Magnifier**, for Illumination Head Unit 24920, with sealing cap, for use with instruments size 10 mm, including Reducer 24931 B, for use with instruments size 5 mm

**NEW** 40924

**Rubber Insufflation Bulb**, with detachable tube, with LUER-Lock  
consisting of:  
40924 B      **Rubber Ball**  
40924 S      **Rubber Tube**

**Please note:** HEINKEL Rectoscope Tubes with a working length > 20 cm can only be used with instruments with a working length > 30 cm.

**Light Sources** see catalog TELEPRESENCE

# Rectoscope for Video Documentation and Coevally Treatment

RECTOVISION®

**STORZ**  
KARL STORZ — ENDOSKOPE

## Possibilities for Documentation in Rectoscopy KARL STORZ RECTOVISION® System

### Option 1

Lower gastrointestinal tract  
(colon and rectum) and rigid rectoscopes

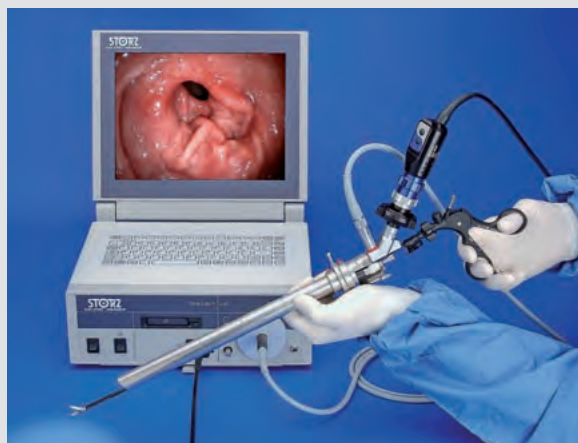
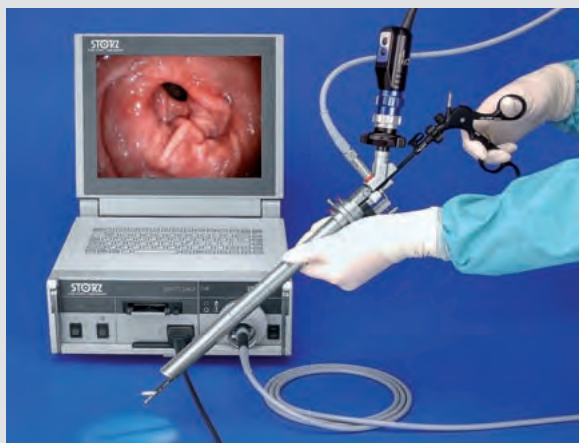
GASTRO PACK® and RECTOVISION®  
with basic instrument set

Can be expanded to include flexible video  
endoscopes

### Option 2

Rigid rectoscopes

TELE PACK™ and RECTOVISION®  
with basic instrument set



**Recommended Sets** see pages 97-98

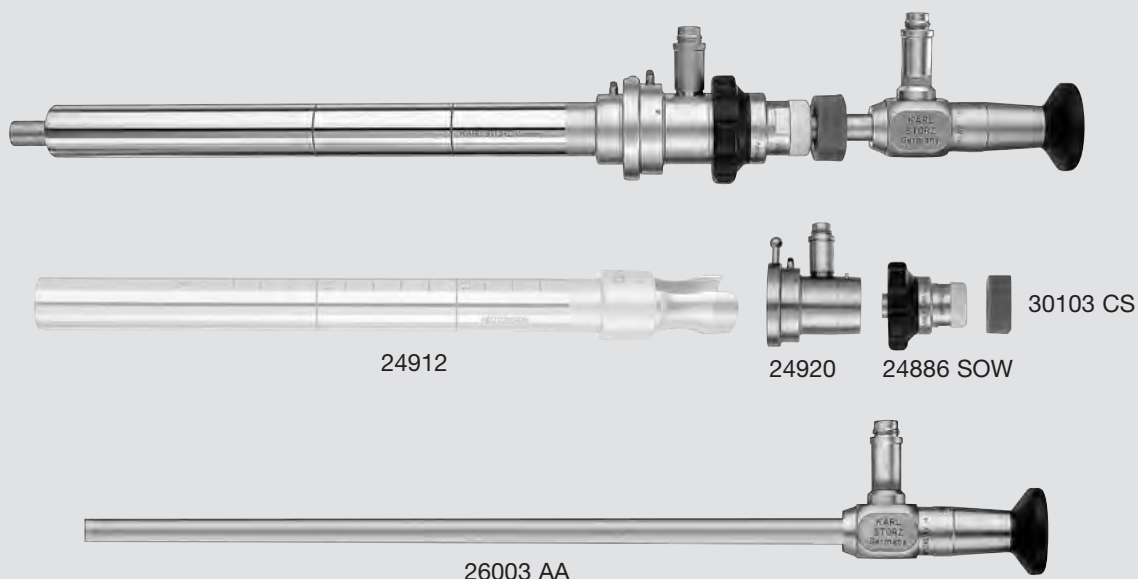
# Rectoscope for Video Documentation

RECTOVISION®

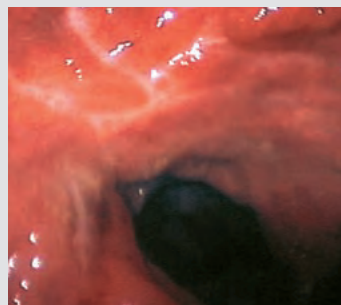
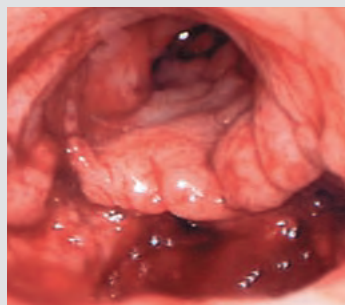
**STORZ**  
KARL STORZ — ENDOSKOPE

The combination of laparoscopic and rectoscopic technologies permits an extraordinarily good intraluminal visualization and documentation in patients with colo-proctological procedures. Video rectoscopy

is a simple, convenient procedure with the possibility of demonstrating findings in a clear, graphic manner, resulting in a high degree of patient acceptance.



- 26003 AA **HOPKINS® Straight Forward Telescope 0°**, enlarged view, diameter 10 mm, length 31 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green
- 24912 **HEINKEL Rectoscope Tube**, outer diameter 20 mm, working length 20 cm, with Obturator 24912 O
- 24920 **Illumination Head Unit**, for HEINKEL rectoscope tubes, with fiber optic light transmission, LUER-Lock hub for rubber insufflation bulb, including Glass Window Plug 24920 FK
- 24886 SOW **Airtight Sliding Cap**, for centering a 10 mm telescope in HEINKEL rectoscope tubes ≥ 20 mm during documentation
- 30103 CS **Telescope Stopper**, sterile, size 11 mm, for single use, package of 12



**Video Documentation Systems and Light Sources** see catalog TELEPRESENCE  
**Digital Storage Media** see catalog KARL STORZ OR1™

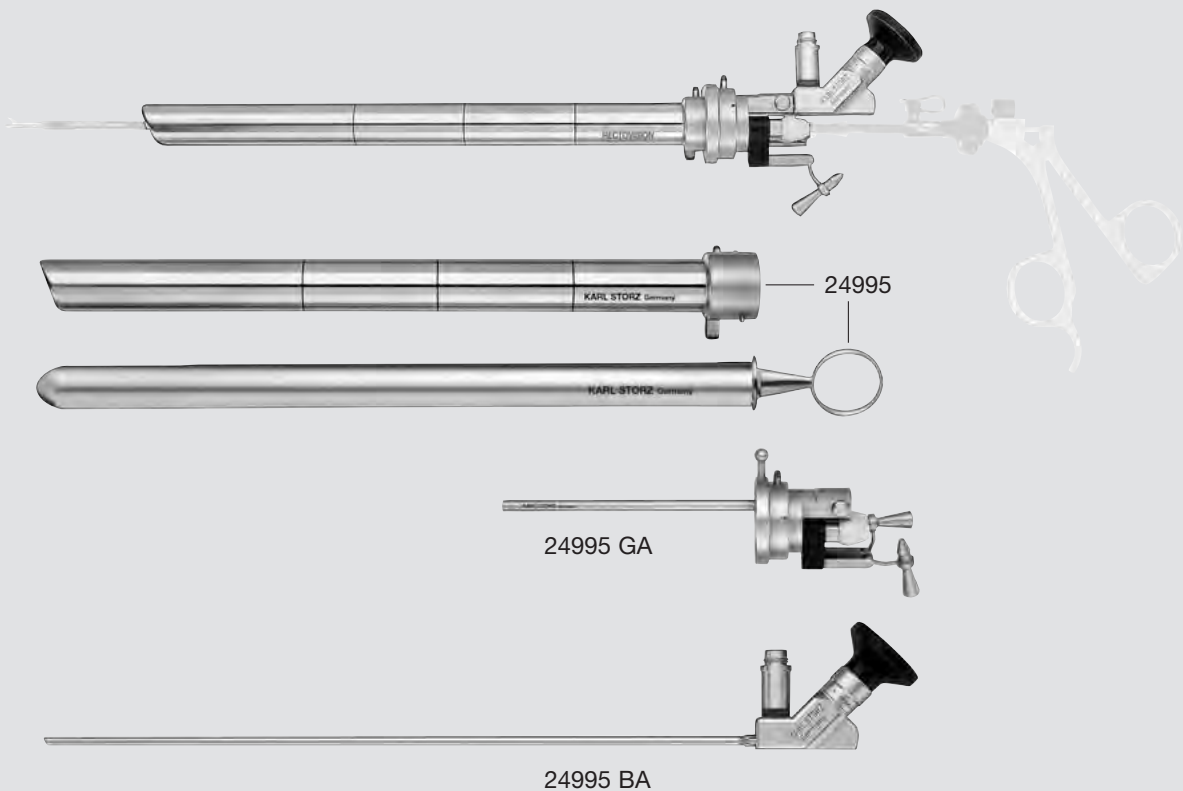
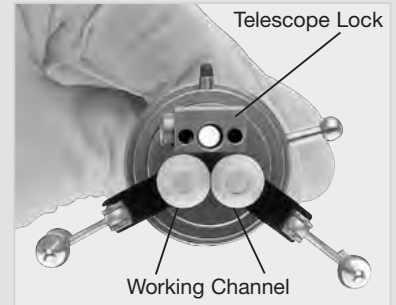
# Rectoscope for Video Documentation and Coevally Treatment

RECTOVISION®

**STORZ**  
KARL STORZ — ENDOSKOPE

## Special Features:

- **HOPKINS®** rod lens system for excellent illumination and natural color reproduction
- Clear, high-resolution display of even the smallest details over the entire field of view
- Clinical tests confirmed the excellent image quality both on direct view and in connection with a KARL STORZ Endovision® video camera, as well as excellent suitability for teaching purposes
- Autoclavable
- Noticeably reduced cleaning times
- Compatible for **CLICK'line** instruments size 5 mm and length  $\geq 36$  cm



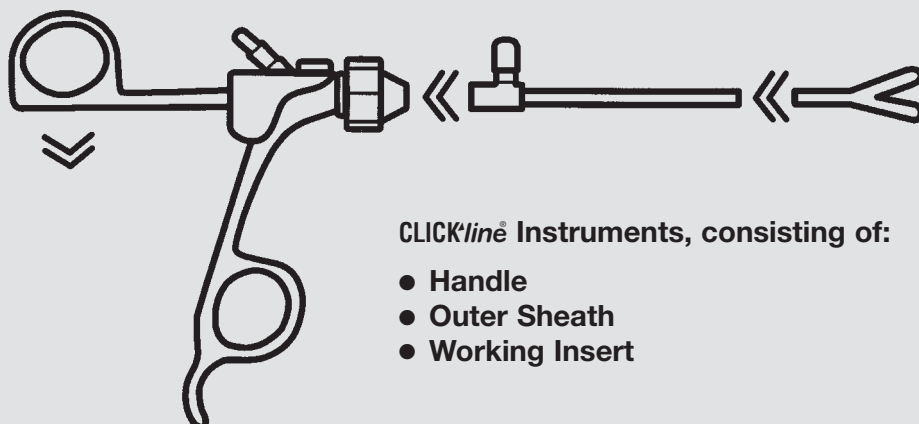
- |          |   |
|----------|---|
| 24995    | <b>Rectoscope Tube</b> , outer diameter 20 mm, length 25 cm, LUER-Lock hub for rubber insufflation bulb, with Obturator 24995 O   |
| 24995 GA | <b>Working Attachment</b> , with locking ring for Rectoscope Tube 24995 and 2 channels for instruments with diameters up to 5 mm  |
| 24995 BA | <b>HOPKINS® Forward-Oblique Telescope 30°</b> , with 45° angled eyepiece, diameter 4 mm, length 28.5 cm, for use with Rectoscope Tube 24995 and Working Attachment 24995 GA |

## Please note:

Offset **CLICK'line** Instruments, Biopsy Forceps 25227/25228, Sponge Forceps 25215/25216 and Snare Guides 25731/25732 are not suitable for use with Working Attachment 24995 GA.

**Video Documentation Systems and Light Sources** see catalog TELEPRESENCE  
**Digital Storage Media** see catalog KARL STORZ OR1™



**CLICK'line® Instruments, consisting of:**

- Handle
- Outer Sheath
- Working Insert

**Nothing could be simpler!**

The **CLICK'line®** series continues the development of instruments which have proven their value for years. The simplicity of handling and ease with which the instruments can be cleaned has been improved, in particular in respect of assembly and disassembly.

When the rear handle is positioned horizontally, the handle can be separated from the outer sheath and the working insert at the press of a button. Reassembly is equally reliable and quick. The high frequency connection is mounted in a 45° angle on the upper side of the handle, thereby ergonomically guiding the high frequency cable away from the field of operation.

**Available in size 2 to 10 mm, CLICK'line® instruments can be completely disassembled into separate components:**

- Handle
- Outer sheath/outer sheath with working insert
- Working insert

**This unique, reusable two/three-piece design offers the surgeon the following benefits:**

- Available in size 5 with lengths 30, 36 and 43 cm
- Choice of handle styles
- Fully rotational 360° sheath facilitates easy access in all clinical situations
- No hidden spaces that can trap blood or tissue debris
- Can be dismantled at the press of a button – reducing instrument cleaning time considerably
- Completely autoclavable design
- Cost-effective – reusable instruments reduce OR costs per case and simplify inventory management, eliminating the need to store large quantities of disposable instruments
- Environmentally correct, i.e. if damage occurs, only the component with the defect needs to be replaced – not the entire instrument
- Convenient and ergonomic handling
- Cleaning port allows the instrument to be cleaned without disassembly

**Due to the modular CLICK'line® system, the user can individually assemble the desired instrument at any time.**

## Handles, with and without connector pin for unipolar coagulation



33121 **Plastic Handle**, insulated, without ratchet



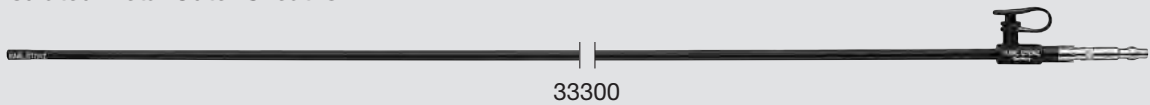
33125 **Metal Handle**, insulated, without ratchet



33131 **Metal Handle**, without ratchet

## Size 5 mm

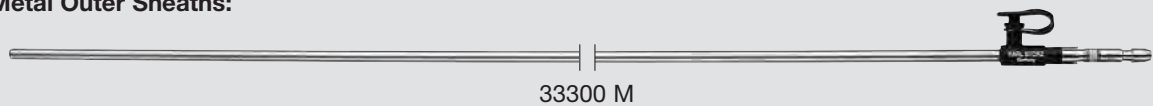
### Insulated Metal Outer Sheaths:



with LUER-Lock connector for cleaning	length
33300	36 cm
33400	43 cm

without LUER-Lock connector	length
33300 W	36 cm
33400 W	43 cm

### Metal Outer Sheaths:



with LUER-Lock connector for cleaning	length
33300 M	36 cm
33400 M	43 cm

without LUER-Lock connector	length
33300 MW	36 cm
33400 MW	43 cm

### Please note:

Metal Outer Sheaths may only be used with handles without connectors for unipolar coagulation.

## Plugs and Accessories for Handles



33120

**Rotating Wheel**, for **CLICKline®** handles, **autoclavable**, package of 5, **makes rotation of outer sheath more comfortable**



33131 F

**Spring**, for **Handle 33131**, to obtain a **self-retaining effect** the spring has to be manually attached to the handle, **autoclavable**

33131 S

**Spring**, for **Handle 33131**, to obtain a **spreading effect** the spring has to be manually attached to the handle, **autoclavable**



29100

**Plug**, for Luer-Lock connection for cleaning, **black**, **autoclavable**, package of 10

29100 A

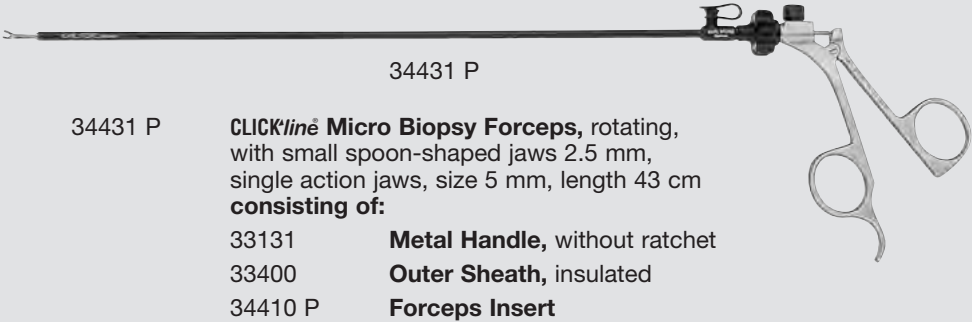
**Color Coded Plug**, for Luer-Lock connection for cleaning, **red, green, black**, 10 each, package of 30, **for easier identification of jaws on the OR table**

# User Information

For easy location of the correct catalog number  
for the required CLICKline Instrument

### How to find the required instrument:

- (a) Select the required **instrument size** and the required type of **jaws**
- (b) Select the required **handle style**
  - **Metal Handles:** without connector pin for unipolar coagulation, against a **blue** background in the table
  - **Insulated Handles:** with connector pin for unipolar coagulation, against a **red** background in the table
- (c) The catalog number for the complete instrument can be found at the point where the horizontal line of the respective working length intersects with the vertical column of the required handle.



## Rectoscopy

CLICKline Biopsy Forceps, rotating, dismantling,  
with and without connector for unipolar coagulation

Size 5

Length	Handle		
	33121	33125	33131
36 cm			
43 cm			
(a) Single action jaws:			
(b) ↓			
Insert No.	Order Number of the Complete Instrument		
34410 PP	34421 PP	34425 PP	34431 PP (c)
CLICKline Micro Biopsy Forceps, small jaws			




### Please note:

For CLICKline instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** is **not** on the instrument. Instruments with **insulated handles with connector pin** for unipolar coagulation, are shown against the **red background**, instruments with **handles without connector pin** for unipolar coagulation are shown against the **blue background**. The color **green** indicates the **lengths**.

# Biopsy Forceps and Biopsy Punches

CLICK'line® – rotating, dismantling, with and without connector pin  
for unipolar coagulation

Size 5 mm

Length	Handle		
	33121	33125	33131
36 cm			
43 cm			

Single action jaws:

Insert No.	Order Number of the Complete Instrument		
34310 P	34321 P	34325 P	34331 P
34410 P	34421 P	34425 P	34431 P



CLICK'line® Micro Biopsy Forceps, small jaws

34310 B	34321 B	34325 B	34331 B
34410 B	34421 B	34425 B	34431 B



CLICK'line® Biopsy Forceps, medium jaws,  
standard model for mucosa biopsy

34310 MB	34321 MB	34325 MB	34331 MB
34410 MB	34421 MB	34425 MB	34431 MB



CLICK'line® MANHES Biopsy Forceps, large jaws

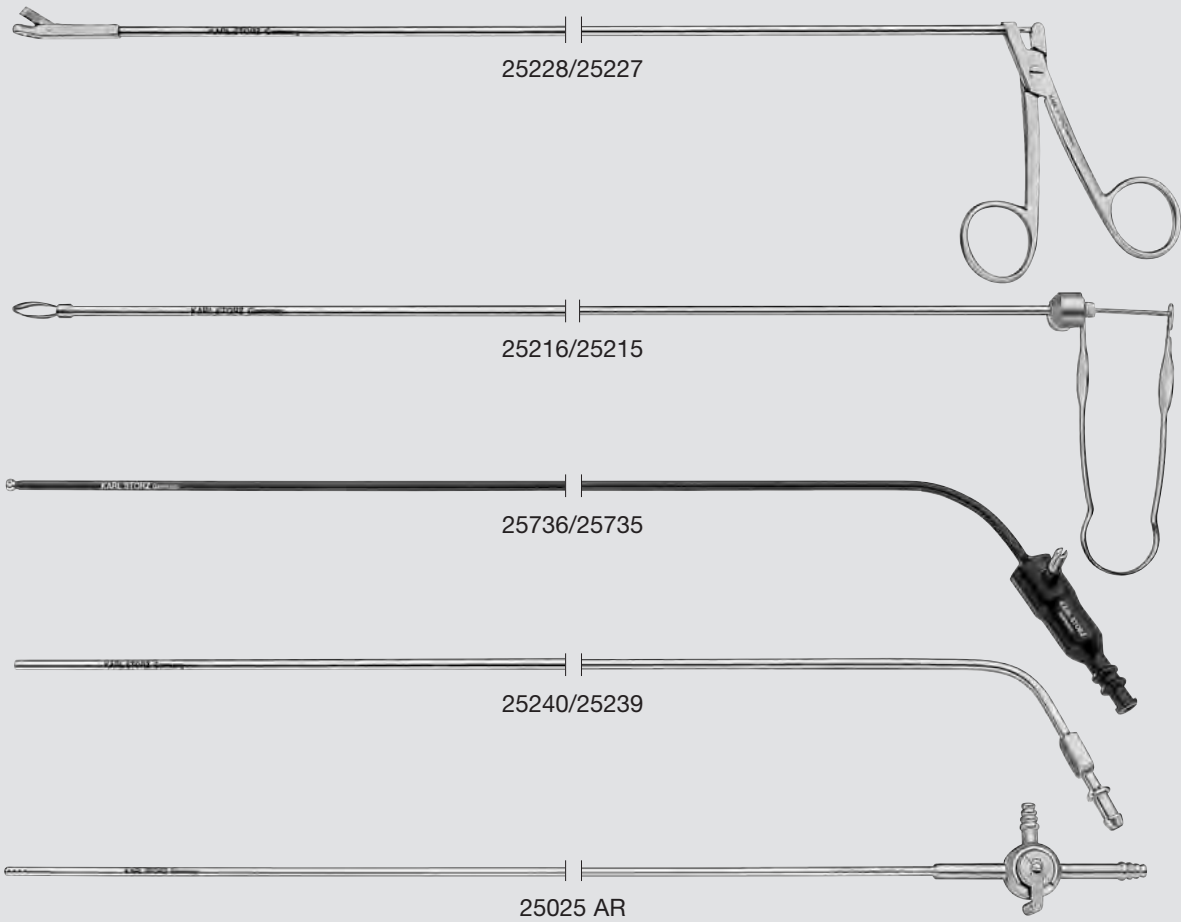
34310 DH	34321 DH	34325 DH	34331 DH
34410 DH	34421 DH	34425 DH	34431 DH



CLICK'line® Biopsy Punch, through-cutting

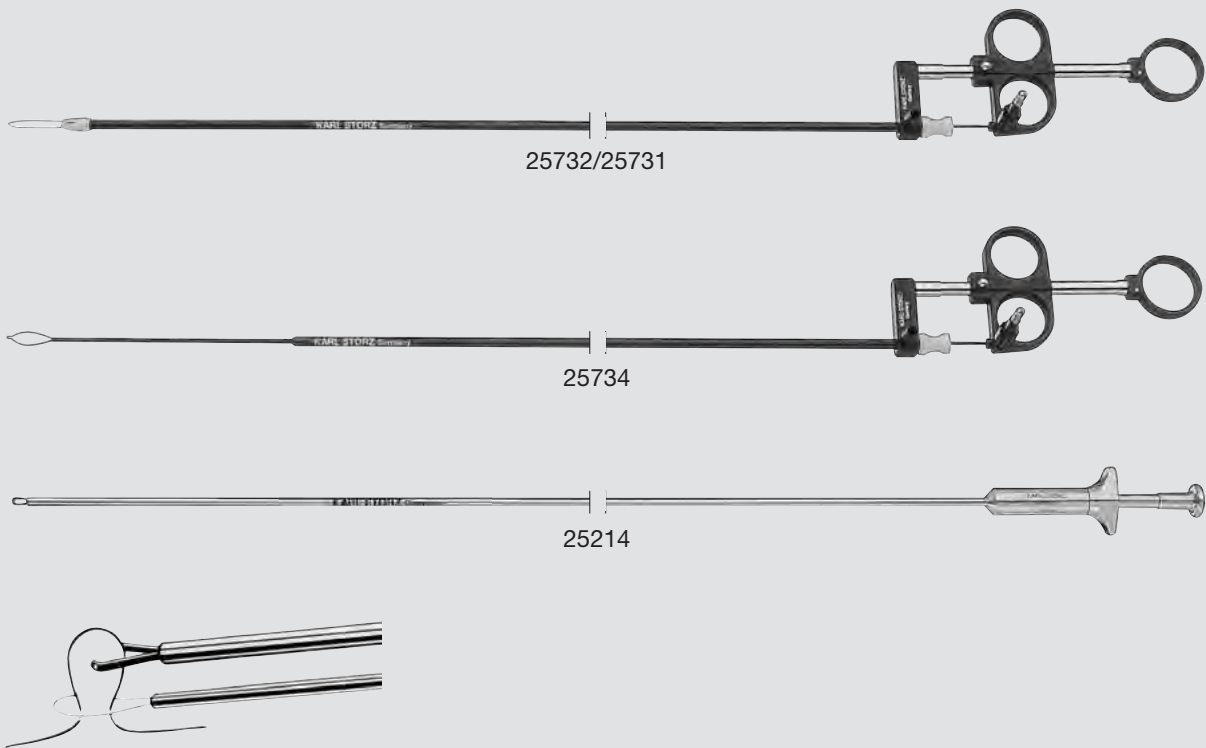
**Please note:** Further CLICK'line instruments on request  
**High Frequency Surgery Units and Cords** see chapter 6, UNITS

# Biopsy Forceps, Sponge Forceps, Suction Tubes



Distal End	Order No.	Description	Working Length
	25228	<b>Biopsy Forceps</b> , through-cutting, single action jaws, angled jaws	30 cm
	25227		40 cm
	25216	<b>Sponge Forceps</b>	30 cm
	25215		40 cm
	25736	<b>Suction and Coagulation Tube</b> , insulated, with connector for unipolar coagulation	30 cm
	25735		40 cm
	25240	<b>Suction Tube</b> , with cut-off hole	30 cm
	25239		40 cm
	25025 AR	<b>Suction and Irrigation Tube</b> , with two-way stopcock for single-hand control	43 cm

High Frequency Surgery Units and Cords, Suction System see chapter 6, UNITS



Distal End	Order No.	Description	Working Length
	25732	<b>Snare Guide</b> , insulated, with connector for unipolar coagulation	30 cm
	25731		40 cm
	25734	<b>Snare Guide</b> , insulated, with connector for unipolar coagulation, with self-forming wire snare	40 cm
	25214	<b>Polyp Grasping Forceps</b> , for use with snare guide	40 cm

**Wire Snares:**

- 25233 **Wire Snare**, for Snare Guides 25731 and 25732, package of 25
- 25234 A **Wire Snare**, single, for Snare Guide 25734

High Frequency Surgery Units and High Frequency Cords see chapter 6, UNITS

# Basic Set for Rectoscopy

## Recommended Set

for documentation with RECTOVISION®

in conjunction with TELE PACK™ and GASTRO PACK®

### TELE PACK™ and RECTOVISION® Basic Instrument Set

**20 0430 20-020 TELE PACK™ Control Unit**, with integrated digital Image Processing Module

**24995 Rectoscope Tube**, outer diameter 20 mm, length 25 cm, LUER-Lock hub for rubber insufflation bulb, with Obturator 24995 O

**24995 GA Working Attachment**, with locking ring for Rectoscope Tube 24995 and 2 channels for instruments with diameters up to 5 mm

**24995 BA HOPKINS® Forward-Oblique Telescope 30°**, with 45° angled eyepiece, diameter 4 mm, length 28.5 cm, for use with Rectoscope Tube 24995 and Working Attachment 24995 GA

### GASTRO PACK® and RECTOVISION® Basic Instrument Set

**25 0430 11 GASTRO PACK®**, color system **PAL**, endoscopic video unit for use with analog one-chip camera heads and **KARL STORZ** video endoscopes, incl. Solarc® light source, integrated insufflation pump, integrated keyboard, integrated digital Image Processing Module, firmly mounted foldable 12" LCD TFT monitor and PCMCIA memory card, power supply 100 – 240 VAC, 50/60 Hz or 12VDC

**20 2120 30 TELECAM® One-Chip Camera Head**, color system **PAL**, soakable, gas-sterilizable, with integrated Parfocal Zoom Lens, f = 25 – 50 mm (2x), 2 freely programmable camera head buttons

**495 NL Fiber Optic Light Cable**, diameter 3.5 mm, length 180 cm

**495 KS Adaptor**, for standard KARL STORZ fiber optic light cables (not 495 NCS)

**24995 Rectoscope Tube**, outer diameter 20 mm, length 25 cm, LUER-Lock hub for rubber insufflation bulb, with Obturator 24995 O

**24995 GA Working Attachment**, with locking ring for Rectoscope Tube 24995 and 2 channels for instruments with diameters up to 5 mm

**24995 BA HOPKINS® Forward-Oblique Telescope 30°**, with 45° angled eyepiece, diameter 4 mm, length 28.5 cm, for use with Rectoscope Tube 24995 and Working Attachment 24995 GA



# Basic Set for Rectoscopy

Recommended Set  
without documentation possibilities

## LED NOVA™ 100

- 20 1610 01 **KARL STORZ Cold Light Fountain LED NOVA™ 100**,  
with LED lamp and KARL STORZ light connection,  
power supply 230 VAC, 50/60 Hz  
**consisting of:**  
20 1610 20 **LED NOVA™ 100**  
400 A **Mains Cord**
- 495 NL **Fiber Optic Light Cable**, diameter 3.5 mm, length 180 cm

## Rectoscopy Basic Instrument Set

### Rectoscopes for Children:

- 24916 **HEINKEL Rectoscope Tube**, outer diameter 16 mm,  
working length 20 cm, with Obturator 24916 O
- 24918 **HEINKEL Rectoscope Tube**, outer diameter 12 mm,  
working length 20 cm, with Obturator 24918 O
- 24920 **Illumination Head Unit**, for HEINKEL rectoscope tubes,  
with fiber optic light transmission, LUER-Lock hub for rubber  
insufflation bulb, including Glass Window Plug 24920 FK
- 40924 **Rubber Insufflation Bulb**, with detachable tube, with LUER-Lock
- 25216 **Sponge Forceps**, working length 30 cm
- 25240 **Suction Tube**, with cut-off hole, working length 30 cm
- 34321 B **CLICK'line® Biopsy Forceps**, rotating, insulated, with connector pin  
for unipolar coagulation, with LUER-Lock irrigation connector for  
cleaning, single action jaws, medium jaws, standard model for  
mucosa biopsy, size 5 mm, length 36 cm  
**consisting of:**  
33121 **Plastic Handle**, without ratchet  
33300 **Metal Outer Sheath**, insulated  
34310 B **Forceps Insert**

### Rectoscopes for Adults:

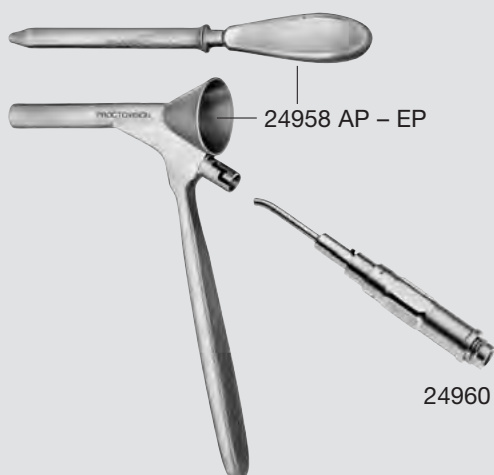
- 24910 **HEINKEL Rectoscope Tube**, outer diameter 20 mm,  
working length 30 cm, with Obturator 24910 O
- 24914 **HEINKEL Rectoscope Tube**, outer diameter 16 mm,  
working length 30 cm, with Obturator 24914 O
- 24920 **Illumination Head Unit**, for HEINKEL rectoscope tubes,  
with fiber optic light transmission, LUER-Lock hub for rubber  
insufflation bulb, including Glass Window Plug 24920 FK
- 40924 **Rubber Insufflation Bulb**, with detachable tube, with LUER-Lock
- 25216 **Sponge Forceps**, working length 30 cm
- 25239 **Suction Tube**, with cut-off hole, working length 40 cm
- 34321 B **CLICK'line® Biopsy Forceps**, rotating, insulated, with connector  
pin for unipolar coagulation, with LUER-Lock irrigation  
connector for cleaning, single action jaws, medium jaws,  
standard model for mucosa biopsy, size 5 mm, length 36 cm  
**consisting of:**  
33121 **Plastic Handle**, without ratchet  
33300 **Metal Outer Sheath**, insulated  
34310 B **Forceps Insert**



# PROCTOSCOPY



## Proctoscopes for Children and Adults



### MORGAN Pediatric Proctoscope Tubes

- 24958 AP MORGAN Pediatric Proctoscope Tube, outer diameter 9.5 mm, working length 6.5 cm, with Obturator 24958 AO
- 24958 DP MORGAN Pediatric Proctoscope Tube, outer diameter 11 mm, working length 11 cm, with Obturator 24958 DO
- 24958 EP MORGAN Pediatric Proctoscope Tube, outer diameter 13 mm, working length 11 cm, with Obturator 24958 EO



### MORGAN Proctoscope Tubes

- 24950 MORGAN Proctoscope Tube, outer diameter 17 mm, working length 6.5 cm, with Obturator 24950 ON
- 24951 MORGAN Proctoscope Tube, outer diameter 17 mm, working length 8 cm, with Obturator 24951 ON
- 24952 MORGAN Proctoscope Tube, outer diameter 20 mm, working length 6.5 cm, with Obturator 24952 ON
- 24953 MORGAN Proctoscope Tube, outer diameter 20 mm, working length 8 cm, with Obturator 24953 ON
- 24956 MORGAN Proctoscope Tube, outer diameter 20 mm, working length 15 cm, with Obturator 24956 ON
- 24954 MORGAN Proctoscope Tube, outer diameter 24 mm, working length 6.5 cm, with Obturator 24954 ON
- 24955 MORGAN Proctoscope Tube, outer diameter 24 mm, working length 8 cm, with Obturator 24955 ON
- 24957 MORGAN Proctoscope Tube, outer diameter 30 mm, working length 8 cm, with Obturator 24957 ON
- 24959 MORGAN Proctoscope Tube, outer diameter 27 mm, working length 7 cm, with obturator 24959 ON
- 24960 Fiber Optic Light Carrier, with fiber optic light cable connector



- 24970 Insertion Tube, with lateral opening and mirror, for use with 24954 and 24955

Light Sources see catalog TELEPRESENCE

# Proctoscopes for Video Documentation and Coeval Treatment

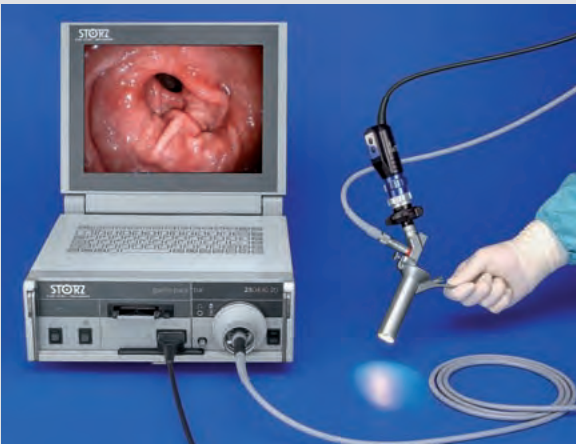
Proctovision®



## Possibilities for Documentation in Proctology KARL STORZ Proctovision® System

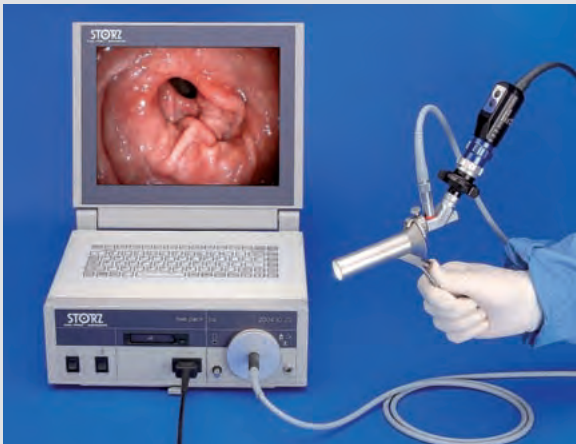
### Option 1

Lower gastrointestinal tract  
(colon and rectum) and rigid proctoscopes  
GASTRO PACK® and Proctovision®  
with basic instrument set  
Can be expanded to include flexible video  
endoscopes



### Option 2

Rigid proctoscopes  
TELE PACK™ and Proctovision®  
with basic instrument set



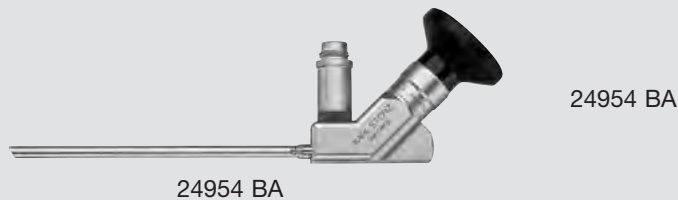
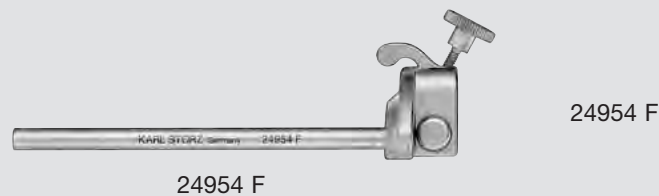
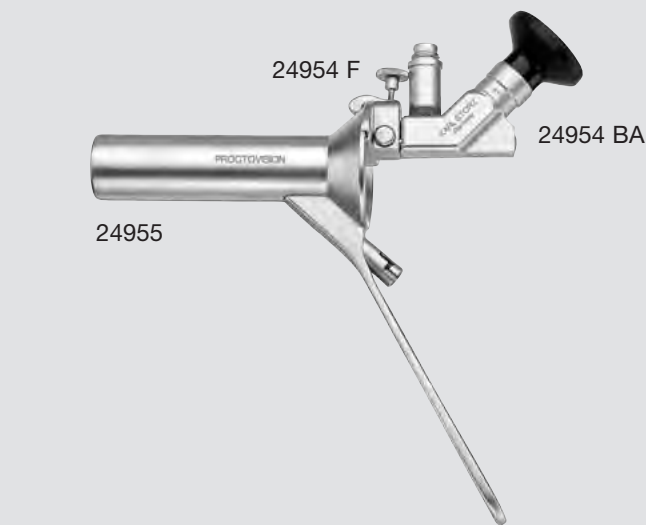
**Recommended Sets** see pages 115-116

# Proctoscopes for Video Documentation and Coeval Treatment

Proctovision®

Video endoscopic techniques used in proctoscopy enable an extraordinarily good visualization of the patient's anal channel. Video proctoscopy is easy to perform and provides excellent opportunities for documenting diagnosis and therapy of proctologic diseases; enables an understandable, graphically

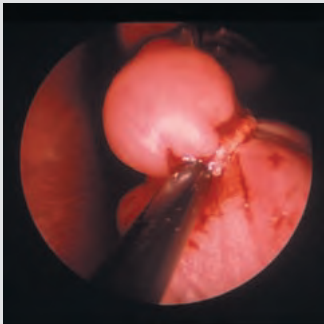
illustrated explanation to the patient; and an effective aid for proctology training. The large work channel enables, for instance, the insertion of instruments for rubber band ligation while allowing simultaneous video endoscopic documentation.



**Working Attachment**, for use with MORGAN Proctoscope Tube 24955 and **HOPKINS®** Telescope 24954 BA

**HOPKINS® Forward-Oblique Telescope 30°**, with oblique view, diameter 4 mm, length 9.5 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

**MORGAN Proctoscope Tube**, outer diameter 24 mm, working length 8 cm, with Obturator 24955 ON

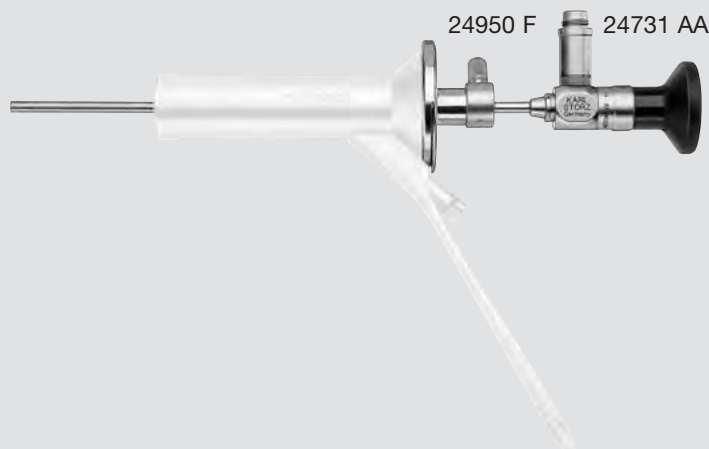


**Video Documentation Systems and Light Sources** see catalog TELEPRESENCE  
**Digital Storage Media** see catalog KARL STORZ OR1™



# Proctoscopy

Proctovision®,  
Proctoscope Accessories for Video Documentation



24958 J

24958 J

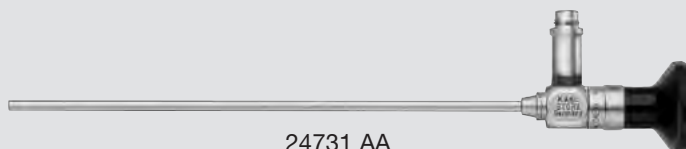
**Adaptor**, for **HOPKINSII**® Telescope 24731 AA,  
for use with MORGAN Pediatric Proctoscope  
Tubes 24958 AP – EP



24950 F

24950 F

**Adaptor**, for **HOPKINSII**® Telescope 24731 AA,  
for use with MORGAN Proctoscope  
Tubes 24950 – 24951



24731 AA

24731 AA

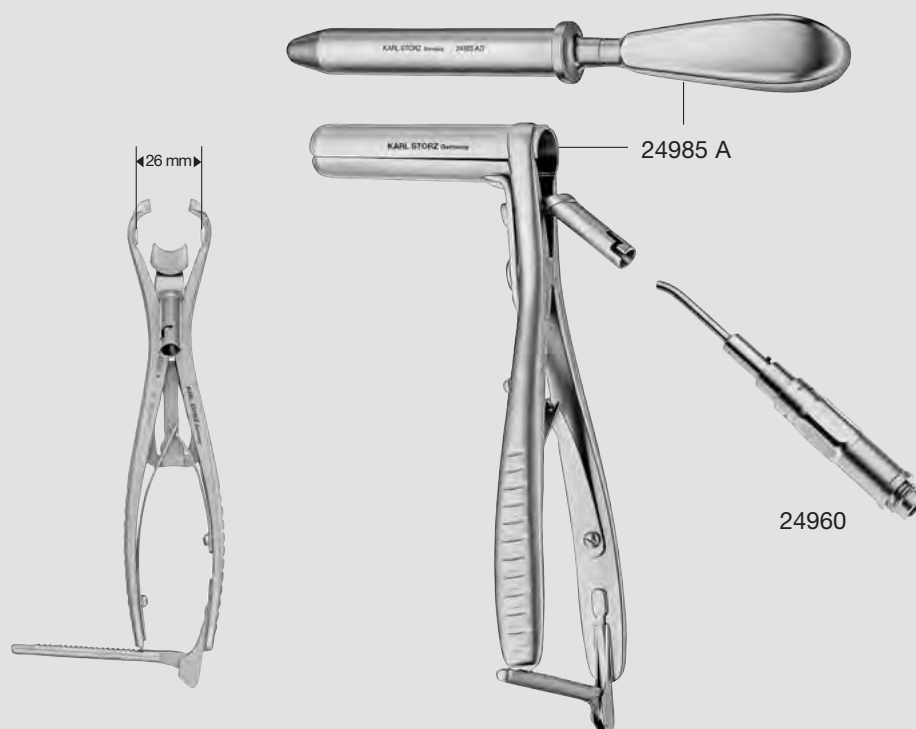
**HOPKINSII**® **Straight Forward Telescope 0°**,  
enlarged view, diameter 4 mm, length 18 cm,  
**autoclavable**, fiber optic light transmission  
incorporated,  
color code: green

**Light Sources** see catalog TELEPRESENCE

# Anal Distending Speculum

## Special features:

- No edges
- Obturator ensures atraumatic insertion
- With holder for fiber optic light carrier
- Easy to handle



- |          |   |
|----------|---|
| 24985 A  | <b>Anal Distending Speculum</b> , for anal examinations, with 3 blades, holder for Fiber Optic Light Carrier 24960, outer diameter 18 mm, working length 6 cm, with Obturator 24985 AO, <b>with ratchet</b> |
| 24985 AS | <b>Same, without ratchet, with adjusting screw</b>  |
| 24960    | <b>Fiber Optic Light Carrier</b> , with fiber optic light cable connector   |

**Light Sources and Fiber Optic Light Cables** see catalog TELEPRESENCE



# Anal Distending Speculum

AUCKLAND EASI Model

This instrument's design allows a controlled, atraumatic insertion of round staplers through the sphincter. The use of this retractor was found to be very effective with respect to avoiding the risk of a dissection of the distal transversal stapling line, if the head part of the round

stapler abruptly overcomes the resistance of the sphincter. This instrument is especially useful for extremely low colorectal anastomoses and reconstructive proctocolectomy with ileal pouch-anal anastomosis using the double-stapling technique.

*Prof. B. PARRY, M.D.,  
Auckland, New Zealand*

## Special Features:

- Blade spread 40 mm
- Atraumatic stapler insertion aid for reanastomosis
- Blunt obturator for atraumatic speculum insertion
- Simple fixation and loosening using a rocker lever lock
- Rounded edges



24981

**AUCKLAND EASI Anal Distending Speculum**,  
for anal examinations, with 3 blades,  
outer diameter 27 mm, working length 6 cm,  
with Obturator 24981 O, **with ratchet**

# Anal Retractor – Distending Speculum



24982 A



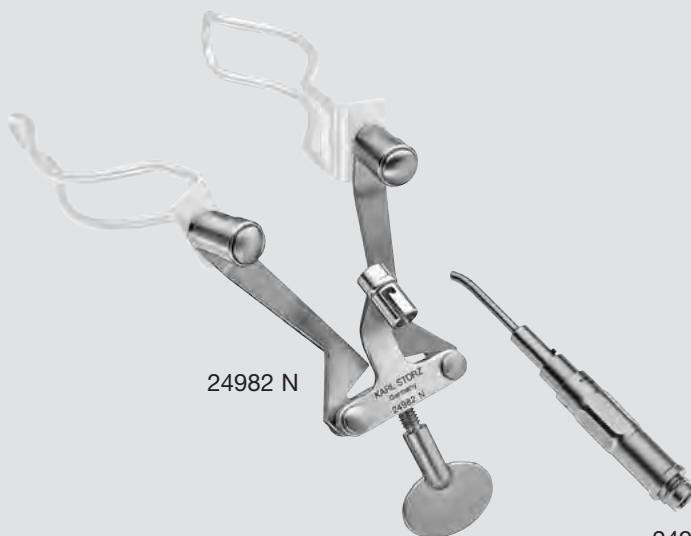
24982 B



24982 C



24982 D



24982 N

24960

- 24982 N **Anal Retractor and Distending Speculum,** basic model without blades, with holder for Fiber Optic Light Carrier 24960
- 24982 A **Blade Pair, “PARKS Retractor type”,** only, tapered blades, working length 7.5 cm
- 24982 B **Same,** working length 9.5 cm
- 24982 C **Blade Pair,** only, tapered blades, slim size, working length 9.5 cm
- 24982 D **Blade Pair,** only, fenestrated, working length 10 cm
- 24960 **Fiber Optic Light Carrier,** with fiber optic light cable connector

**Light Sources and Fiber Optic Light Cables** see catalog TELEPRESENCE

Biopsy Punch, Sponge Holder,  
Snare Guide

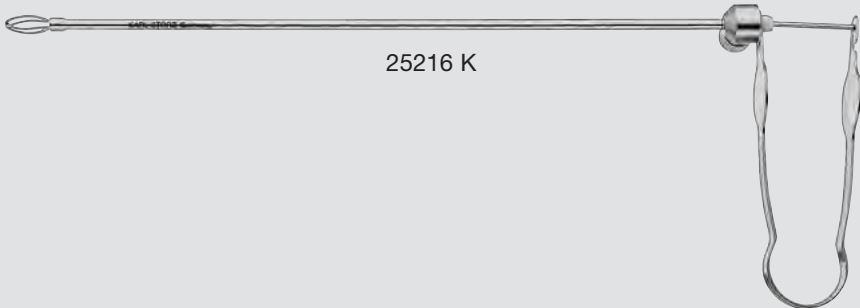


25166 SA



25166 SA

**PROCTOFORCE III TAKE-APART® Punch Forceps**,  
working length 20 cm  
**consisting of:**  
25169 A      **Handle**  
25066 SA     **Forceps Insert**  
25166 LL     **Cleaning Adaptor**

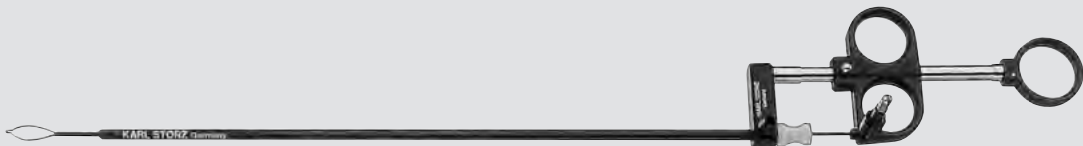


25216 K



25216 K

**Sponge Holder**, working length 20 cm



25734 K



25734 K

**Snare Guide**, insulated, with connector  
pin for unipolar coagulation, with self-  
opening snare, working length 20 cm

25234 AK

**Wire Snare**, for use with  
Snare Guide 25734 K

High Frequency Units and Cords, see chapter 6, UNITS

# Instruments for Sclerosis, Fistula Hooks



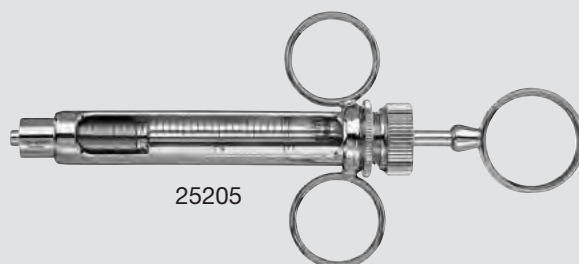
25195

- 25195      **ARNOLD Fistula Hook**, length 19 cm  
25196      **Same**, with distal bore, diameter 0.5 mm



25200

- 25200      **Swab Forceps**, length 20 cm



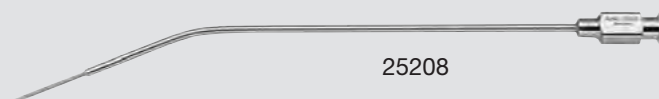
25205

- 25205      **GABRIEL Syringe**, 3 ml, LUER-Lock  
25205 E      **Replacement Cylinder**, for Syringe 25205



25207

- 25207      **Injection Needle**, straight, LUER-Lock, tip diameter 1 mm,  
working length 14 cm, for use with Syringe 25205  
25207 B      **Same**, with thin tip diameter, diameter 0.6 mm



25208

- 25208      **Injection Needle**, angled, LUER-Lock,  
tip diameter 1 mm, working length 14 cm,  
for use with Syringe 25205  
25208 B      **Same**, with thin tip diameter, diameter 0.6 mm

# Hemorrhoid Ligature

## Special Features:

- Replaceable, ergonomic handle with integrated mechanical vacuum pump
- Easy to handle
- Robust, smooth-running mechanics
- Mobile use possible
- Use of conventional handles for connecting external pump possible

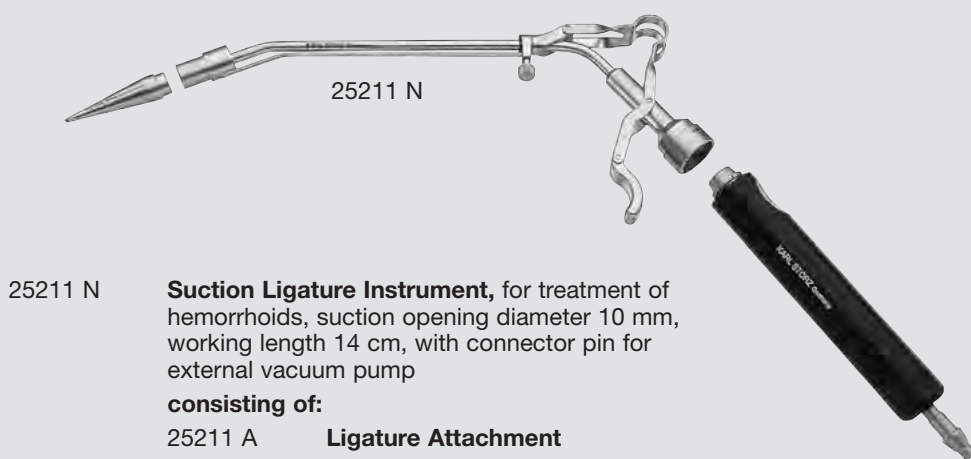


25211 NS

**Suction Ligature Instrument**, for treatment of hemorrhoids, suction opening diameter 10 mm, working length 14 cm, **with integrated vacuum pump**

**consisting of:**

- |          |   |
|----------|---|
| 25211 A  | <b>Ligature Attachment</b>                          |
| 25210 GS | <b>Handle</b>                                       |
| 25211 KA | <b>Loading Cone</b>                                 |
| 25210 RP | <b>Ligature Ring</b> , extra strong, package of 100 |



25211 N

**Suction Ligature Instrument**, for treatment of hemorrhoids, suction opening diameter 10 mm, working length 14 cm, with connector pin for external vacuum pump

**consisting of:**

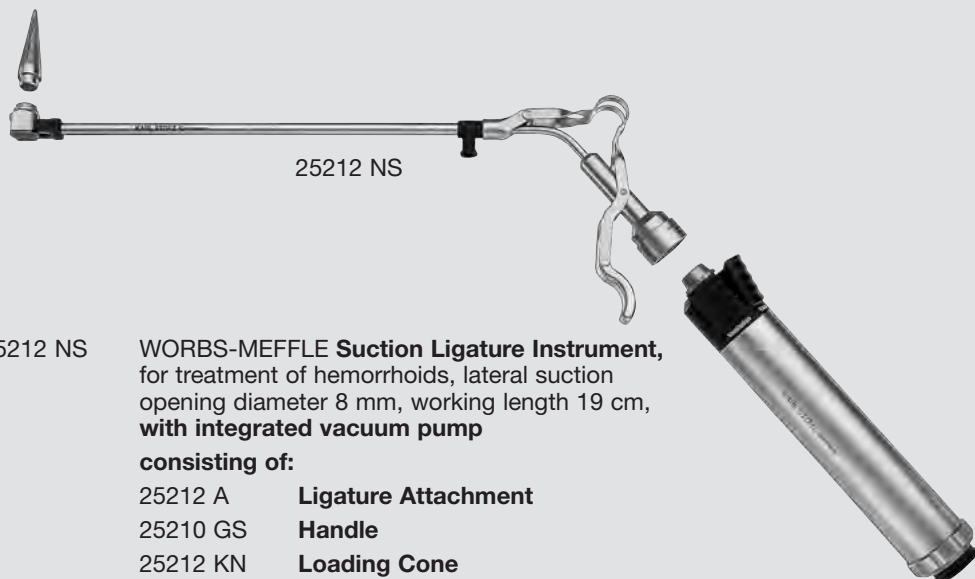
- |          |   |
|----------|---|
| 25211 A  | <b>Ligature Attachment</b>                          |
| 25210 G  | <b>Handle</b>                                       |
| 25211 KA | <b>Loading Cone</b>                                 |
| 25210 RP | <b>Ligature Ring</b> , extra strong, package of 100 |

Ligature Instruments 25211 NS/N can only be used with proctoscopes as of size 24 mm (24954, 24955, 24957).

## Hemorrhoid Ligature

### Special Features:

- Replaceable, ergonomic handle with integrated mechanical vacuum pump
- Easy to handle
- Robust, smooth-running mechanics
- Mobile use possible
- Use of conventional handles for connecting external pump possible



25212 NS

**WORBS-MEFFLE Suction Ligature Instrument**, for treatment of hemorrhoids, lateral suction opening diameter 8 mm, working length 19 cm, **with integrated vacuum pump**

**consisting of:**

- |          |   |
|----------|---|
| 25212 A  | <b>Ligature Attachment</b>                          |
| 25210 GS | <b>Handle</b>                                       |
| 25212 KN | <b>Loading Cone</b>                                 |
| 25210 RP | <b>Ligature Ring</b> , extra strong, package of 100 |



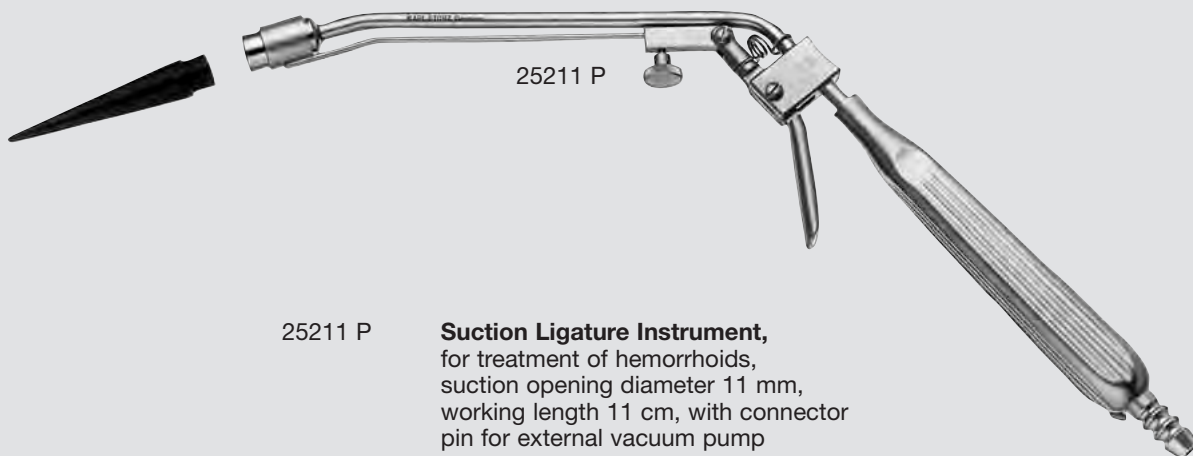
25212 N

**WORBS-MEFFLE Suction Ligature Instrument**, for treatment of hemorrhoids, lateral suction opening diameter 8 mm, working length 19 cm, **with connector pin for external vacuum pump**

**consisting of:**

- |          |   |
|----------|---|
| 25212 A  | <b>Ligature Attachment</b>                          |
| 25210 G  | <b>Handle</b>                                       |
| 25212 KN | <b>Loading Cone</b>                                 |
| 25210 RP | <b>Ligature Ring</b> , extra strong, package of 100 |

Ligature Instruments 25212 NS/N can only be used with proctoscopes as of size 24 mm (24954, 24955, 24957).

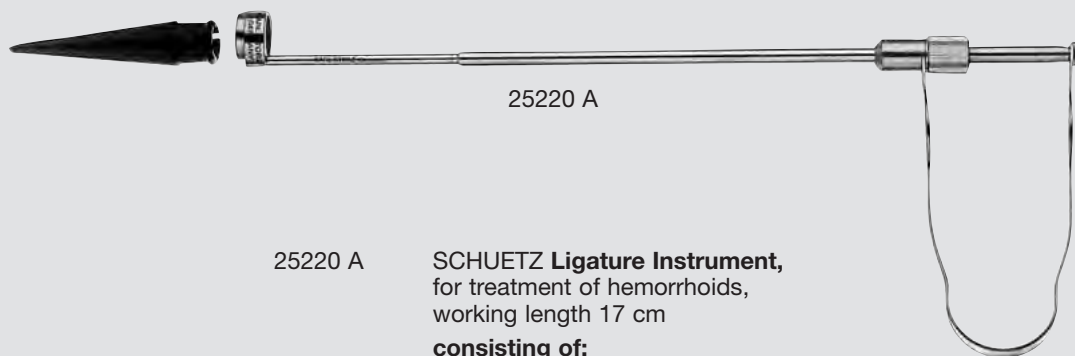


25211 P

**Suction Ligature Instrument,**  
for treatment of hemorrhoids,  
suction opening diameter 11 mm,  
working length 11 cm, with connector  
pin for external vacuum pump

**consisting of:**

- 25211 KP **Loading Cone**
- 25210 RP **Ligature Ring,** extra  
strong, package of 100



25220 A

25220 A

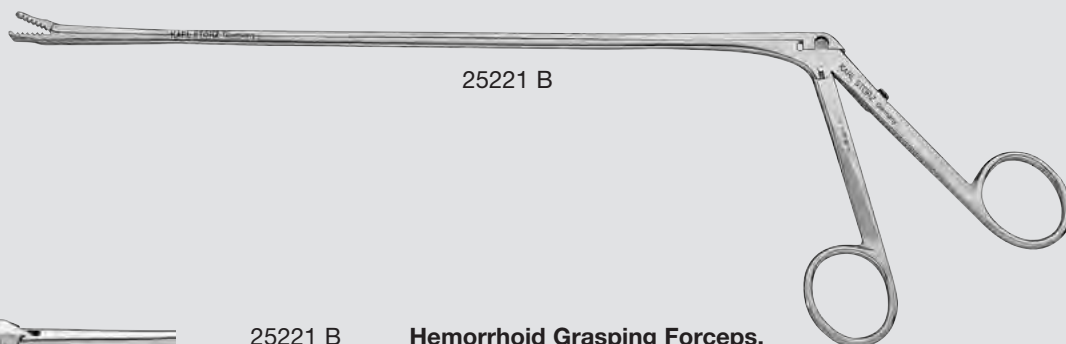
**SCHUETZ Ligature Instrument,**  
for treatment of hemorrhoids,  
working length 17 cm

**consisting of:**

- 25220 KA **Loading Cone**
- 25210 R **Ligature Ring,**  
package of 100

Ligature Instrument 25211 P can be used with proctoscopes as of size 24 mm (24954, 24955, 24957).  
Ligature Instrument 25220 A can be used with proctoscopes as of size 17 mm.

# Hemorrhoid Ligature

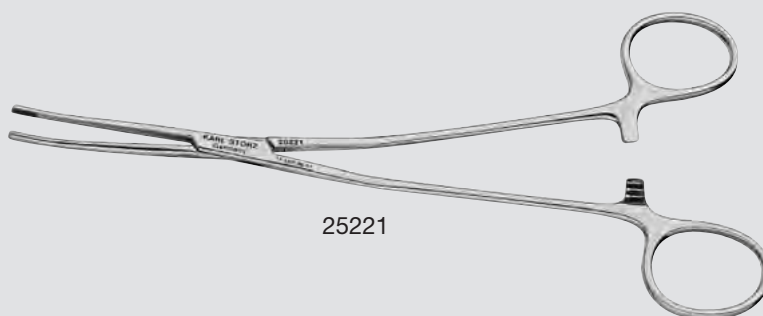


25221 B



25221 B

**Hemorrhoid Grasping Forceps,**  
working length 25 cm, for use with  
Ligature Instrument 25220 A



25221



25221

**Hemorrhoid Grasping Forceps,**  
working length 16 cm, for use with  
Ligature Instrument 25220 A



# MEFFLE Hemorrhoid Ligature Instrument <sup>NEW</sup>

with integrated grasping forceps

**STORZ**  
KARL STORZ — ENDOSKOPE



24980 L



24980 F



24980 A



25220 KA

## MEFFLE Hemorrhoid Ligature Instrument consisting of:

### Working length 6.5 cm:

- 24954 MORGAN **Proctoscope Tube**, outer diameter 24 mm, working length 6.5 cm, with Obturator 24955 ON
- 24980 L MEFFLE **Ligature Instrument**
- 24980 F **Hemorrhoid Grasping Forceps**, angular, for use with MEFFLE Ligature Instrument 24980 L
- 24980 A **Adaptor**, for use with Ligature Insert 24980 L and MORGAN Proctoscope Tube 24954
- 25220 KA **Cone**, for loading rings

### Working length 8 cm:

- 24955 MORGAN **Proctoscope Tube**, outer diameter 24 mm, working length 8 cm, with Obturator 24955 ON
- 24980 L MEFFLE **Ligature Instrument**
- 24980 F **Hemorrhoid Grasping Forceps**, angular, for use with MEFFLE Ligature Instrument 24980 L
- 25220 KA **Cone**, for loading rings

# Basic Sets for Proctoscopy

## Recommended Set

for documentation with Proctovision®

in conjunction with TELE PACK™ and GASTRO PACK®

### TELE PACK™ and Proctovision® Basic Instrument Set

- 20 0430 20-020 TELE PACK™ Control Unit**, with integrated digital Image Processing Module
- 24955 **MORGAN Proctoscope Tube**, outer diameter 24 mm, working length 8 cm, with Obturator 24955 ON
- 24954 F **Working Attachment**, for use with MORGAN Proctoscope Tube 24955 and **HOPKINSIII®** Telescope 24954 BA
- 24954 BA **HOPKINSIII® Forward-Oblique Telescope 30°**, with oblique view, diameter 4 mm, length 9.5 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

### GASTRO PACK® and Proctovision® Basic Instrument Set

- 25 0430 11 GASTRO PACK®**, color system **PAL**, endoscopic video unit for use with analog one-chip camera heads and **KARL STORZ** video endoscopes, incl. Solarc® light source, integrated insufflation pump, integrated keyboard, integrated digital Image Processing Module, firmly mounted foldable 12" LCD TFT monitor and PCMCIA memory card, power supply 100 – 240 VAC, 50/60 Hz or 12VDC
- 20 2120 30 TELECAM® One-Chip Camera Head**, color system **PAL**, soakable, gas-sterilizable, with integrated Parfocal Zoom Lens, f = 25 – 50 mm (2x), 2 freely programmable camera head buttons
- 495 NL **Fiber Optic Light Cable**, diameter 3.5 mm, length 180 cm
- 495 KS **Adaptor**, for standard KARL STORZ fiber optic light cables (not 495 NCS)
- 24955 **MORGAN Proctoscope Tube**, outer diameter 24 mm, working length 8 cm, with Obturator 24955 ON
- 24954 F **Working Attachment**, for use with MORGAN Proctoscope Tube 24955 and **HOPKINSIII®** Telescope 24954 BA
- 24954 BA **HOPKINSIII® Forward-Oblique Telescope 30°**, with oblique view, diameter 4 mm, length 9.5 cm, **autoclavable**, fiber optic light transmission incorporated, color code: red

# Basic Sets for Proctoscopy

Recommended Set  
without documentation possibilities

## LED NOVA™ 100

- 20 1610 01 **KARL STORZ Cold Light Fountain LED NOVA™ 100**,  
with LED lamp and KARL STORZ light connection,  
power supply 230 VAC, 50/60 Hz  
**consisting of:**  
20 1610 20 **LED NOVA™ 100**  
400 A **Mains Cord**  
495 NL **Fiber Optic Light Cable**, diameter 3.5 mm, length 180 cm

## Basic Instrument Set for Proctoscopy

### Proctoscopes for Children:

- 24958 DP **MORGAN Pediatric Proctoscope Tube**, outer diameter 11 mm,  
working length 11 cm, with Obturator 24958 DO  
24958 AP **MORGAN Pediatric Proctoscope Tube**, outer diameter 9.5 mm,  
working length 6.5 cm, with Obturator 24958 AO  
24960 **Fiber Optic Light Carrier**, with fiber optic light cable connector  
25200 **Swab Forceps**, length 20 cm  
25195 **ARNOLD Fistula Hook**, length 19 cm

### Proctoscopes for Adults:

- 24954 **MORGAN Proctoscope Tube**, outer diameter 24 mm,  
working length 6.5 cm, with Obturator 24954 ON  
24950 **Same**, outer diameter 17 mm, with Obturator 24950 ON  
24960 **Fiber Optic Light Carrier**, with fiber optic light cable connector  
25200 **Swab Forceps**, length 20 cm  
25195 **ARNOLD Fistula Hook**, length 19 cm

## Hemorrhoid Ligature Instrument

- 24954 **MORGAN Proctoscope Tube**, outer diameter 24 mm,  
working length 6.5 cm, with Obturator 24954 ON  
24960 **Fiber Optic Light Carrier**, with fiber optic light cable connector  
25200 **Swab Forceps**, length 20 cm  
25195 **ARNOLD Fistula Hook**, length 19 cm  
25211 NS **Suction Ligature Instrument**, for treatment of hemorrhoids,  
suction opening diameter 10 mm, working length 14 cm,  
**with integrated vacuum pump**  
**consisting of:**  
25211 A **Ligature Attachment**  
25210 GS **Handle**  
25211 KA **Loading Cone**  
25210 RP **Ligature Ring**, extra strong, package of 100

### alternative:

- 24980 F **Hemorrhoid Grasping Forceps**, angular, for use  
with MEFFLE Ligature Instrument 24980 L  
24980 A **Adaptor**, for use with Ligature Insert 24980 L and  
MORGAN Proctoscope Tube 24954  
24980 L **MEFFLE Ligature Instrument**  
25220 KA **Cone**, for loading rings  
24955 **MORGAN Proctoscope Tube**, outer diameter 24 mm,  
working length 8 cm, with Obturator 24955 ON  
24954 **MORGAN Proctoscope Tube**, outer diameter 24 mm,  
working length 6.5 cm, with Obturator 24954 ON

The image is a composite. The left two-thirds of the image has a solid pink background. Scattered across this background are numerous small, metallic, cylindrical and ring-shaped components, which appear to be spare parts for medical equipment. These parts are arranged in a somewhat chaotic but organized manner, with some larger components like a valve and a long threaded rod being more prominent. The right third of the image is a vertical strip with a light blue background. It features a detailed anatomical illustration of the human digestive system, specifically the stomach and the coiled small and large intestines, rendered in a realistic, slightly textured style.

## **SPARE PARTS FOR GASTROENTEROLOGY**



# Introduction

Spare parts are available for instruments which are subject to a considerable amount of wear and tear resulting from repeated use in everyday practice. The “spare parts” chapter concerning each discipline list all spare parts available for a specific instrument. These are:

- a) classified under the respective instrument and
- b) can be ordered as a separate product.

For easy location and reference, spare parts are assigned to the order number of the entire instrument or unit.

## Exchange

Instructions for use are provided with each spare part to ensure smooth exchange. These instructions can also be accessed via our internet portal – [karlstorz.com](http://karlstorz.com)

## Hotline

Queries concerning products, exchange, maintenance and cleaning can be addressed to the KARL STORZ EP1 Hotline: 07461/708-490, daily between 8 and 18 h.



*Spare parts as assigned to entire instrument*



*Illustration of spare parts*

Product	Catalog page	Spare parts
13992 BS <b>Water Bottle</b>	60-62	13991 SW <b>Irrigation Adaptor</b> , for water bottle
		5926500 <b>O-Ring</b> , water bottle seal, 6.1 x 1.6 mm

*Spare parts assigned to instrument with catalog page reference and order numbers for individual spare parts*

INSTRUMENTS

Gastrosopes	SP 5-SP 8
Sigmoidoscopes	SP 5-SP 8
Coloscopes	SP 5-SP 8
Duodenoscopes	SP 9-SP 11

UNITS AND ACCESSORIES

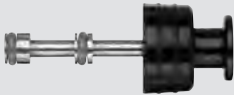
Cold Light Fountain XENON 100	SP 12
Suction System UNIMAT® 30	SP 13
High Frequency Surgery Units	
AUTOCON®II 400 SCB, AUTOCON® 200	SP 14

Product	Page	Product	Page	Product	Page
10432 E	SP 13	13901 NKS	SP 6	2027690	SP 14
10432 N	SP 13	13901 PKS	SP 6	2028090	SP 14
10432 T	SP 13	13904 NKS	SP 6	20522520	SP 14
1069400	SP 13	13904 PKS	SP 6	20522520-010	SP 14
1069500	SP 13	13905 NKS	SP 6	20522520C	SP 14
1069600	SP 12	13905 PKS	SP 6	20522520C010	SP 14
11025 XE	SP 6, SP 10	13906 NKS	SP 6	20535220U11	SP 14
1120008200	SP 10, SP 11	13906 PKS	SP 6	25320020	SP 13
1120008400	SP 10, SP 11	13907 NKS	SP 6	25320020C	SP 13
1190008200	SP 11	13907 PKS	SP 6	25320080	SP 13
13242 LX	SP 6, SP 7, SP 10	13910 NKS	SP 6	25320081	SP 13
13800 NKS	SP 6	13910 PKS	SP 6	25320082	SP 13
13800 PKS	SP 6	13911 NKS	SP 6	25320083	SP 13
13801 NKS	SP 6	13911 PKS	SP 6	25320084	SP 13
13801 PKS	SP 6	13991 DA	SP 6, SP 10	25320085	SP 13
13804 NKS	SP 6	13991 LV	SP 6, SP 7, SP 10	27809	SP 14
13804 PKS	SP 6	13991 RV	SP 6, SP 8, SP 10	29100	SP 6, SP 10
13806 NKS	SP 6	13991 SV	SP 6, SP 8, SP 10	400 A	SP 12, SP 14
13806 PKS	SP 6	13991 SW	SP 6, SP 8, SP 10, SP 12	5500735	SP 7
13807 NKS	SP 6	13992 BS	SP 8, SP 12	5907900	SP 7
13807 PKS	SP 6	1538068201	SP 11	5910600	SP 12
13808 NKS	SP 6	1550008201	SP 11	5925300	SP 7
13808 PKS	SP 6	20090170	SP 14	5925600	SP 7
13880 NKS	SP 10	20100031	SP 12	5925900	SP 8
13880 PKS	SP 10	20132501	SP 12	5926500	SP 6, SP 10
13881 NKS	SP 10	20132520	SP 12	5927500	SP 8
13881 PKS	SP 10	20132526	SP 12	5927600	SP 8
13882 NKS	SP 10	20132580	SP 12	5931500	SP 8
13882 PKS	SP 10	20132601-1	SP 12	5934400	SP 8
13900 NKS	SP 6	20132620-1	SP 12	6860290	SP 13
13900 PKS	SP 6				





**Rubber Leaflet Valve**



**Cleaning Valve**



**Suction Valve**



**Air/Water Valve**



**Pressure Compensation Cap**



**Leakage Tester**



**Irrigation Adaptor**



**O-Ring**

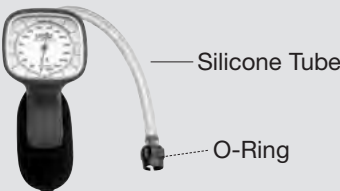


**Plug,  
LUER-Lock connection**



# Gastrosopes, Sigmoidoscopes, Coloscopes

Product		Catalog page	Spare parts
Gastrosopes			13991 DA <b>Rubber Leaflet Valve</b> , for working channel, package of 10  13991 RV <b>Cleaning Valve</b> , reusable 13991 LV <b>Suction Valve</b> , reusable 13991 SV <b>Air/Water Valve</b> , reusable  11025 XE <b>Pressure Compensation Cap</b> , for ventilation during gas sterilization  13242 LX <b>Leakage Tester</b> , with bulb and manometer  13991 SW <b>Irrigation Adaptor</b> , for water bottle  5926500 <b>O-Ring</b> , water bottle seal, 6.1 x 1.6 mm  29100 <b>Plug</b> , for LUER-Lock connection for cleaning, black, <b>autoclavable</b> , package of 10
PAL			
13800 PKS	<b>Diagnostic Gastroscope</b>	8-9	
13801 PKS	<b>Routine Gastroscope</b>	8-9, 17	
13804 PKS	<b>Therapeutic Gastroscope</b>	8-9	
13807 PKS	<b>Therapeutic Gastroscope</b>	8-9	
13808 PKS	<b>Enteroscope</b>	8-9	
13806 PKS	<b>Double Channel Gastroscope</b>	8-9	
NTSC			
13800 NKS	<b>Diagnostic Gastroscope</b>	8-9	
13801 NKS	<b>Routine Gastroscope</b>	8-9, 17	
13804 NKS	<b>Therapeutic Gastroscope</b>	8-9	
13807 NKS	<b>Therapeutic Gastroscope</b>	8-9	
13808 NKS	<b>Enteroscope</b>	8-9	
13806 NKS	<b>Double Channel Gastroscope</b>	8-9	
Sigmoidoscopes			
PAL			
13900 PKS	<b>Sigmoidoscope</b>	48-49	
13901 PKS	<b>Sigmoidoscope</b>	48-49	
NTSC			
13900 NKS	<b>Sigmoidoscope</b>	48-49	
13901 NKS	<b>Sigmoidoscope</b>	48-49	
Coloscopes			
PAL			
13906 PKS	<b>Slender Coloscope</b>	46-47	
13907 PKS	<b>Slender Coloscope</b>	46-47	
13904 PKS	<b>Routine Coloscope</b>	46-47, 54	
13905 PKS	<b>Routine Coloscope</b>	46-47	
NTSC			
13906 NKS	<b>Slender Coloscope</b>	46-47	
13907 NKS	<b>Slender Coloscope</b>	46-47	
13904 NKS	<b>Routine Coloscope</b>	46-47, 54	
13905 NKS	<b>Routine Coloscope</b>	46-47	
PAL			
13910 PKS	<b>Double Channel Coloscope</b>	46-47	
13911 PKS	<b>Double Channel Coloscope</b>	46-47	
NTSC			
13910 NKS	<b>Double Channel Coloscope</b>	46-47	
13911 NKS	<b>Double Channel Coloscope</b>	46-47	

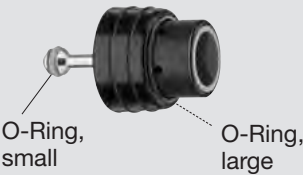


Silicone Tube



O-Ring

Product		Catalog page	Spare parts
13242 LX	Leakage Tester	18, 36, 55	5500735 Silicone Tube 5907900 O-Ring



O-Ring, large  
5925600



O-Ring, small  
5925300

Product		Catalog page	Spare parts
13991 LV	Suction Valve	18, 36, 55	5925600 O-Ring, large, red, 2.5 x 1.5 mm 5925300 O-Ring, small, red, 2 x 1.5 mm

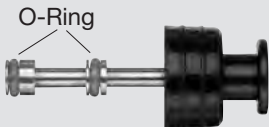


Irrigation Adaptor



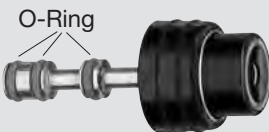
O-Ring

Product		Catalog page	Spare parts
13992 BS	Water Bottle	60-62	13991 SW Irrigation Adaptor, for water bottle 5934400 O-Ring, water bottle seal, 6.1 x 1.6 mm



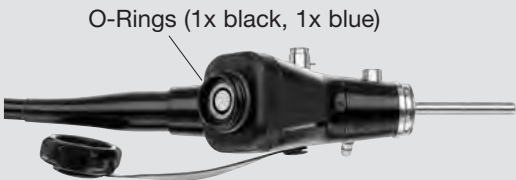
O-Ring

Product		Catalog page	Spare parts
13991 RV	Cleaning Valve	18, 36, 55	5931500 O-Ring



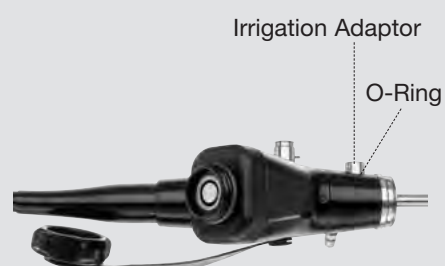
O-Ring

Product		Catalog page	Spare parts
13991 SV	Air/Water Valve	18, 36, 55	5925900 O-Ring, red, 3.1 x 1.6 mm



O-Ring

Product		Catalog page	Spare parts
O-Rings for Sealing Cap (video cable connection)		–	5927600 O-Ring, blue, top, 26 x 3.5 mm 5927500 O-Ring, black, bottom, 23 x 1.5 mm



**Rubber Leaflet Valve**



**Cleaning Valve**



**Suction Valve**



**Air/Water Valve**



**Pressure Compensation Cap**



**Leakage Tester**



**Irrigation Adaptor**



**O-Ring**



**Plug,  
LUER-Lock connection**



**Albarran Deflector**

# Duodenoscopes

Product	Catalog page	Spare parts
<b>PAL</b>		
13880 PKS <b>Diagnostic Duodenoscope</b>	34-35	13991 DA <b>Rubber Leaflet Valve</b> , for working channel, package of 10
<b>NTSC</b>		13991 RV <b>Cleaning Valve</b> , reusable
13880 NKS <b>Diagnostic Duodenoscope</b>	34-35	13991 LV <b>Suction Valve</b> , reusable
		13991 SV <b>Air/Water Valve</b> , reusable
		11025 XE <b>Pressure Compensation Cap</b> , for ventilation during gas sterilization
		13242 LX <b>Leakage Tester</b> , with bulb and manometer
		13991 SW <b>Irrigation Adaptor</b> , for water bottle
		5926500 <b>O-Ring</b> , water bottle seal, 6.1 x 1.6 mm
		29100 <b>Plug</b> , for LUER-Lock connection for cleaning, black, <b>autoclavable</b> , package of 10
		1120008400 <b>Albarran Deflector</b>
<b>PAL</b>		
13881 PKS <b>Therapeutic Duodenoscope</b>	34-35	13991 DA <b>Rubber Leaflet Valve</b> , for working channel, package of 10
13882 PKS <b>Therapeutic Duodenoscope</b>	34-35	13991 RV <b>Cleaning Valve</b> , reusable
<b>NTSC</b>		13991 LV <b>Suction Valve</b> , reusable
13881 NKS <b>Therapeutic Duodenoscope</b>	34-35	13991 SV <b>Air/Water Valve</b> , reusable
13882 NKS <b>Therapeutic Duodenoscope</b>	34-35	11025 XE <b>Pressure Compensation Cap</b> , for ventilation during gas sterilization
		13242 LX <b>Leakage Tester</b> , with bulb and manometer
		13991 SW <b>Irrigation Adaptor</b> , for water bottle
		5926500 <b>O-Ring</b> , water bottle seal, 6.1 x 1.6 mm
		29100 <b>Plug</b> , for LUER-Lock connection for cleaning, black, <b>autoclavable</b> , package of 10
		1120008200 <b>Albarran Deflector</b>



Albarran Cable Control Guide



Albarran Collet



Albarran Screw Cap

Product	Catalog page	Spare parts
1120008400 Albarran Deflector, for 13880 PKS/NKS	–	1190008200 Albarran Cable Control Guide
1120008200 Albarran Deflector, for 13881 PKS/NKS, 13882 PKS/NKS	–	1538068201 Albarran Collet
		1550008201 Albarran Screw Cap

# Cold Light Fountain XENON 100



XENON Spare Lamp



Air Filter

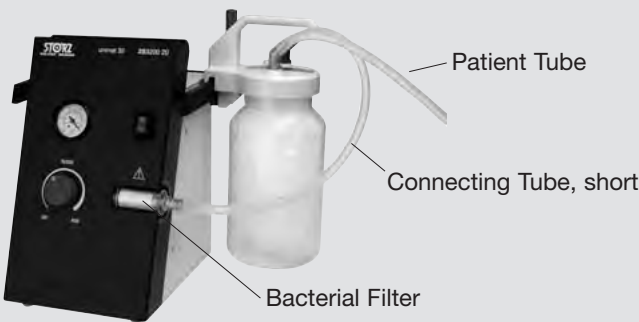


O-Ring

Product		Catalog page	Spare parts	
20 1325 01	Cold Light Fountain XENON 100	–	20 1325 26	XENON Spare Lamp, 100 W, 15 V
	consisting of:		20 1325 80	Air Filter
20 1325 20	Cold Light Fountain XENON 100		5910600	O-Ring, 3 x 1.5 mm
400 A	Mains Cord			
13991 SW	Irrigation Adaptor			
13992 BS	Water Bottle	17, 54	1069600	Mains Fuse, 110 – 120/220 – 240 VAC, T 3.15 AL 250 V, package of 10
20 1000 31	Irrigation Bottle Holder		20 1325 26	XENON Spare Lamp,, 100 W, 15 V
20 1326 01-1	Cold Light Fountain XENON 100 SCB		20 1325 80	Air Filter
	consisting of:		5910600	O-Ring, 3 x 1.5 mm
20 1326 20-1	Cold Light Fountain XENON 100,			
	with KARL STORZ-SCB®			
400 A	Mains Cord			
13991 SW	Irrigation Adaptor			
13992 BS	Water Bottle			
20 1000 31	Irrigation Bottle Holder			

# Suction System

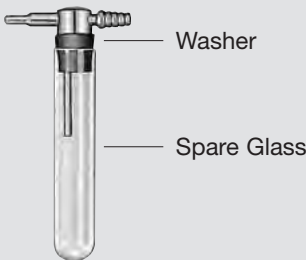
UNIMAT® 30



25 3200 20

Product	Catalog page	Spare parts
25 3200 20 UNIMAT® 30, 230 VAC	U 8	1069400 Mains Fuse, T 0.63 A, L 250 V 25 3200 80 Bacterial Filter 25 3200 83 Connecting Tube, short 25 3200 84 Patient Tube
25 3200 20C UNIMAT® 30, 115 VAC	U 8	1069500 Mains Fuse, T 1.6 A, L 250 V 25 3200 80 Bacterial Filter 25 3200 83 Connecting Tube, short 25 3200 84 Patient Tube

## Accessories with spare parts:



Product	Catalog page	Spare parts
10432 N Aspirator	U 10	6860290 Washer
10432 T Aspirator	U 10	10432 E Spare Glass



Product	Catalog page	Spare parts
25 3200 81 Secretion Bottle	U 10	25 3200 82 Bottle Cap, with grip 25 3200 85 Overflow Case



# High Frequency Surgery Units

AUTOCON® II 400 SCB, AUTOCON® 200



20 5352 20-11x/20 5352 20U11

Product	Catalog page	Spare parts	
20 5352 20-11x AUTOCON® II 400 SCB	U 18	2027690	Mains Fuse, 100 – 240 VAC, T 4.0 AL (SB), package of 10
		400 A	Mains Cord, length 300 cm
		20 0901 70	SCB Connecting Cable, length 100 cm
20 5352 20U11 AUTOCON® II 400 SCB	U 18	2028090	Mains Fuse, 100 – 120 VAC, T 8,0 AL (SB), Packung zu 10 Stück
		400 A	Mains Cord, length 300 cm
		20 0901 70	SCB Connecting Cable, length 100 cm



20 5225 20/20 5225 20 C/20 5225 20-010/20 5225 20C010

Product	Catalog page	Spare parts	
20 5225 20 AUTOCON® 200 20 5225 20-010	U 20	2027690	Mains Fuse, 100 – 240 VAC, T 4.0 AL (SB), package of 10
		400 A	Mains Cord, length 300 cm
		27809	Adaptor, for unipolar HF output, diameter 4/5 mm
20 5225 20C AUTOCON® 200 20 5225 20C010	U 20	2028090	Mains Fuse, 100 – 120 VAC, T 8.0 AL (SB), package of 10
		400 A	Mains Cord, length 300 cm
		27809	Adaptor, for unipolar HF output, diameter 4/5 mm