THORAX

3rd EDITION 1/2011 US

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STORZ

THE WORLD OF ENDOSCOPY

THORAX

3rd EDITION 1/2011 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.

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KARL STORZ — ENDOSKOPE

KARL STORZ Items Not Available in the U.S.
September 2011

Pending 510(k) / PMA Not Currently Available for Sale in the U.S.

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13304 C	CMOS Video Esopharyngoscope	ESO	17
11900 AP	Video Bronchoscope for Autofluorescence	BRO-VIDEO	42
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15006 B	“ULTRA STOP” Antifog Solution	BRO-ACC	86
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15006 D	“ULTRA STOP” Antifog Solution	BRO-ACC	86
20 2130 11U1	TELECAM SL II FI SCB Camera Control Unit	BRO-AF	95
20 1336 01-133	Cold Light Fountain D-LIGHT C/AF SCB	BRO-AF	96
49100 LS	Fiberoptic Light Carrier Extension	VATS-RET	189
28272 EC	ENDOCRANE™, piezoregulated Holding Arm	LHT	220
26 4305 08-1	ENDOFLATOR® SCB	THOR-UNITS	U 4
20 3210 08	DUOMAT®	THOR-UNITS	U 12

Please note:

26 4305 08-1 ENDOFLATOR® SCB is 510(k) cleared for laparoscopic surgical and diagnostic procedures.

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.

KARL STORZ — ENDOSKOPE

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2. PRICES
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).

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Until Customer has paid KSEA in full for all products purchased pursuant to an order, KSEA shall have, and Customer hereby grants to KSEA, a security interest in all products purchased, pursuant to such order, and in all proceeds therefrom (including that which Customer receives as payment from an insurer or third party for or as a result of any damage to or loss of said products), to secure payment of the entire purchase price for all products sold, shipped and delivered to Customer pursuant to such order, and to secure all costs, expenses or other charges relating thereto which are payable by Customer to KSEA. Customer is required to execute and deliver such documents, as required and requested by KSEA, to perfect KSEA's security interest(s) and Customer authorizes KSEA to prepare, execute, deliver, file and/or record, on behalf of Customer, any and all documents that are required, necessary and/or appropriate to protect, preserve and/or enforce KSEA's security interest(s) in the products sold, shipped and delivered to Customer pursuant to such order.

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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.

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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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BASIC SETS

Esophagoscopy for Adults

Basic Set

12060 A	ROBERTS-JESBERG **Esophagoscope,** oval, size 12 x 16, length 50 cm
12060 C	**Same,** size 10 x 14
12061 A	**Fiber Optic Light Carrier,** for use with esophagoscopes, length 50 cm
12060 B	ROBERTS-JESBERG **Esophagoscope,** oval, size 12 x 16, length 30 cm
12060 D	**Same,** size 10 x 14
12060 F	**Same,** size 8 x 12
12061 B	**Fiber Optic Light Carrier,** for use with esophagoscopes, length 30 cm
12060 S	ROBERTS-JESBERG **Hypopharyngoscope,** oval, size 10 x 14, length 20 cm
12061 C	**Fiber Optic Light Carrier,** for use with hypopharyngoscopes, length 20 cm
12070	**Handle,** for esophagoscopes

Recommended accessories for esophagoscopes with a length of 50 cm

12015 AA	**HOPKINS® Straight Forward Telescope 0°,** diameter 5.5 mm, length 53 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
12016 M	**Optical Forceps,** alligator, large jaws, for hard foreign bodies
12016 L	**Optical Forceps,** spoon-shaped, round, for biopsy
10381 AL	**Suction Tube,** with rubber tip, straight, diameter 4 mm, working length 55 cm
3x 10384 AL	**Cotton Carrier,** working length 55 cm
10387 AL	**Sponge Holder,** with spring handle, working length 55 cm

Recommended accessories for esophagoscopes and hypopharyngoscopes with lengths of 30 and 20 cm

10324 AA	**HOPKINS® Straight Forward Telescope 0°,** diameter 2.9 mm, length 36 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
10378 HF	**Optical Forceps,** alligator, for grasping hard foreign bodies, with spring-action handle
10378 L	**Optical Forceps,** spoon-shaped, for biopsy
10381 B	**Suction Tube,** with rubber tip, straight, diameter 2 mm, working length 35 cm
3x 10384 B	**Cotton Applicator,** working length 35 cm
10387 B	**Sponge Holder,** with spring handle, working length 35 cm

3-11

Esophagoscopy for Children with Proximal Illumination

Basic Set

KARL STORZ — ENDOSKOPE

	10324 AA	**HOPKINS® Straight Forward Telescope 0°,** diameter 2.9 mm, length 36 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
	12030 A	**Esophagoscope Tube,** size 6, length 30 cm
	12030 B	**Same,** size 5
	12030 C	**Same,** size 4
	10101 FA	**Prismatic Light Deflector, autoclavable,** with connection to fiber optic light cable
	10338 N	**Rubber Telescope Guide,** for use with telescopes and optical forceps
	10378 KF	**Optical Forceps,** with KILLIAN bean jaws, for grasping peanuts and soft foreign bodies, with spring-action handle, for use with HOPKINS® Telescope 10324 A
	10378 HF	**Optical Forceps,** alligator, for grasping hard foreign bodies, with spring-action handle, for use with HOPKINS® Telescope 10324 A
	10381 B	**Suction Tube,** with rubber tip, straight, diameter 2 mm, working length 35 cm
3x	10384 B	**Cotton Applicator,** working length 35 cm
	10387 B	**Sponge Holder,** with spring handle, working length 35 cm

3-11

Bronchoscopy for Adults with Proximal Illumination

Basic Set

KARL STORZ — ENDOSKOPE

	10320 AA	**HOPKINS® Straight Forward Telescope 0°,** diameter 5.5 mm, length 50 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
	10320 BA	**HOPKINS® Forward-Oblique Telescope 30°,** diameter 5.5 mm, length 50 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red
	10318 BP	**Bronchoscope Tube Universal,** with proximal illumination, size 8.5, length 43 cm
	10318 CP	**Same,** size 7.5
	10318 DP	**Same,** size 6.5
	10101 FA	**Prismatic Light Deflector, autoclavable,** with connection to fiber optic light cable
	10314 P	FLUVOG **Adaptor,** with sliding glass window plug, sealing cap, notched lens and keyhole opening, movable
	10318 K	**Injection Cannula,** for positive pressure assisted ventilation system, LUER-Lock, outer diameter 3.5 mm
	10318 S	**Instrument Guide,** for suction catheter
	10924 D	**Adaptor,** for respirator
	10350 HF	**Optical Forceps,** alligator, for hard foreign bodies, large jaws, with spring-action handle
	10350 KF	**Optical Forceps,** for peanuts and soft foreign bodies, with spring-action handle
	10350 L	**Optical Forceps,** round cupped jaws, for biopsy
	10381 A	**Suction Tube,** with rubber tip, straight, diameter 4 mm, working length 50 cm
	10382 A	**Suction Tube,** with rubber tip, curved, diameter 4 mm, working length 50 cm
	10432 N	**Aspirator,** for collecting secretions, can be connected to suction tubes or suction catheters
2x	10432 E	**Spare Glass,** for Aspirator 10432 N
3x	10384 A	**Cotton Applicator,** working length 50 cm
	10387 A	**Sponge Holder,** with spring handle, working length 50 cm

3-11

Bronchoscopy for Children with Proximal Illumination

Basic Set

KARL STORZ — ENDOSKOPE

10324 AA	**HOPKINS® Straight Forward Telescope 0°,** diameter 2.9 mm, length 36 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
10339 A	DOESEL-HUZLY **Bronchoscope,** size 6, length 30 cm
10339 BB	**Same,** size 4.5
10339 C	**Same,** size 4
10339 CD	**Same,** size 3.5
10101 FA	**Prismatic Light Deflector, autoclavable,** fiber optic light transmission incorporated
10338 P	FLUVOG **Adaptor,** with sliding glass window plug, sealing cap, notched lens and keyhole opening, movable
10318 K	**Injection Cannula,** for positive pressure assisted ventilation system, LUER-Lock, outer diameter 3.5 mm
10338 S	**Guide Piece,** for suction catheter, short, bronchoscope for children and infants
10924 D	**Adaptor,** for respirator
10378 CF	**Optical Forceps,** 2x 2 teeth, for grasping coins and flat foreign bodies, with spring-action handle, for use with HOPKINS® Telescope 10324 AA and Bronchoscopes 10339 A – DD
10378 KF	**Optical Forceps,** with KILLIAN bean jaws, for grasping peanuts and soft foreign bodies, with spring-action handle, for use with HOPKINS® Telescope 10324 AA and Bronchoscopes 10339 A – DD
10378 HF	**Optical Forceps,** alligator jaws, for grasping hard foreign bodies, with spring-action handle, for use with HOPKINS® Telescope 10324 AA and Bronchoscopes 10339 A – DD
10386 B	**Foreign Body Basket,** with ring handle, working length 35 cm
10389 B	**Cytology Brush,** with ring handle, working length 35 cm
10381 B	**Suction Tube,** with rubber tip, straight, diameter 2 mm, working length 35 cm
10382 B	**Suction Tube,** with rubber tip, curved, diameter 2 mm, working length 35 cm
10432 N	**Aspirator,** for collecting secretions, can be connected to suction tubes or suction catheters
2x 10432 E	**Spare Glass,** for Aspirator 10432 N
2x 10384 B	**Cotton Applicator,** working length 35 cm
10387 B	**Sponge Holder,** with spring handle, working length 35 cm

Flexible Video Autofluorescence Bronchoscopy

Basic Set

KARL STORZ — ENDOSKOPE

20 1336 01-133	**Cold Light Fountain D-LIGHT C/AF SCB,** high-performance light unit for photodynamic diagnosis (PDD), autofluorescence (AF) and standard endoscopic diagnosis
20 2130 11U1	**TELECAM SL II FI SCB Camera Control Unit,** color systems **PAL/NTSC,** with integrated Image Processing Module, suitable for fluorescence applications
11900 AP	**Video Bronchoscope for Autofluorescence and White Light Diagnosis,** color system **PAL,** including mounted Suction Unit 11900 AE, for use with TELECAM SL II FI SCB **20** 2130 11U1 including: **Case** **Video Connecting Cable** **Mouth Piece** **Biopsy Forceps,** spoon-shaped, round, flexible, double action jaws, diameter 1.8 mm, working length 120 cm **Leakage Tester,** with bulb and manometer **Pressure Compensation Cap,** for ventilation during gas sterilization **Cleaning Brush,** flexible, length 100 cm **Irrigation Tube,** for working channel **Instrument Oil,** 50 ml **Protective Film,** for transporting endoscopes
11900 AN	**Same, NTSC**
487 VE	**Adaptor,** for connecting KARL STORZ light sources to KARL STORZ video endoscopes

3-11

Mediastinoscopy

Basic Set

LINDER/HÜRTGEN **Distending DCI® Video Mediastinoscope**

10972 SP	LINDER/HÜRTGEN **Distending DCI® Video Mediastinoscope,** length 20 cm
10970 BA	**DCI® HOPKINS® Forward-Oblique Telescope 30°,** diameter 4 mm, length 14 cm, **autoclavable**
22 2000 11U102	**IMAGE 1 HUB™ Camera Control Unit SCB,** with SDI module, color systems **PAL/NTSC**
22 2600 31-3	**IMAGE1 D1 One-Chip DCI® Camera Head,** f = 16 mm
495 DC	**DCI® Fiber Optic Light Cable,** diameter 3.5 mm, length 320 cm

LERUT **DCI® Video Mediastinoscope**

10971 MV	LERUT **DCI® Video Mediastinoscope,** length 15 cm
10970 BA	**DCI® HOPKINS® Forward-Oblique Telescope 30°,** diameter 4 mm, length 14 cm, **autoclavable**
22 2000 11U102	**IMAGE 1 HUB™ Camera Control Unit SCB,** with SDI module, color systems **PAL/NTSC**
22 2600 31-3	**IMAGE1 D1 One-Chip DCI® Camera Head,** f = 16 mm
495 DC	**DCI® Fiber Optic Light Cable,** diameter 3.5 mm, length 320 cm

Operating Instruments

10970 EN	**Coagulating Suction Tube,** insulated, with connector pin for unipolar coagulation, diameter 5 mm, length 20 cm
	or
10970 ENL	**Coagulating Suction Tube,** insulated, with connector pin for unipolar coagulation, diameter 5 mm, length 30 cm
10972 EN	**Coagulating Suction Tube,** distally curved, insulated, with connector pin for unipolar coagulation, angled handle, diameter 5 mm, length 20 cm
	or
10972 ENL	**Coagulating Suction Tube,** distally curved, insulated, with connector pin for unipolar coagulation, angled handle, diameter 5 mm, length 30 cm
10971 GO	**Media*FIT*™ Biopsy Forceps,** dismantling, oval jaws, size 8 x 16 mm, length 21 cm
10971 GR	**Media*FIT*™ Biopsy Forceps,** dismantling, spoon-shaped jaws, jaw diameter 5 mm, length 21 cm
10971 ML	**Media*FIT*™** MAASSEN **Sponge and Dissecting Forceps,** dismantling, size 5 mm, length 30 cm
10970 P	**Aspiration Cannula,** with 12 injection cannulas, length 20 cm
10970 PS	**Silicone Tubing,** with LUER-Lock adaptor, for connecting Aspiration Cannula 10970 P/PL to LUER-Lock suction syringe
8665 R	**Clip Forceps,** jaws curved to right, working length 22 cm
8665 T	**Clip,** titanium LT 200, medium, 5 mm, sterile, package of 36 cartridges with 6 clips each

Single-puncture Thoracoscopy

Basic Set

KARL STORZ — ENDOSKOPE

26072 BA	**HOPKINS® II Forward-Oblique Telescope 30°,** enlarged view, diameter 4 mm, length 29 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red
30120 NOL	**Trocar,** flexible, with blunt tip, with integrated silicone leaflet valve, **autoclavable,** size 6 mm, working length 8.5 cm including: **Cannula,** flexible **Trocar only**
	or
40120 NAL	**Trocar,** flexible, with blunt tip, without valve, **autoclavable,** size 6 mm, working length 8.5 cm including: **Cannula,** flexible **Trocar only**
26072 A	**Optical Biopsy Forceps,** double action jaws
26072 SU	**Optical Suction Tube**
26072 TK	**Optical Powder Blower**

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Video-Assisted Thoracoscopic Surgery (VATS)

Basic Set

KARL STORZ — ENDOSKOPE

Set recommended by LINDER M. D. **and** HÜRTGEN M. D.

	26046 FA	**HOPKINS® II Telescope 45°,** enlarged view, diameter 5 mm, length 29 cm, **autoclavable,** fiber optic light transmission incorporated, color code: black
	40160 CD	**Trocar,** with blunt tip, size 6 mm, working length 6 cm
3x	40123 NAL	**Trocar,** flexible, with blunt tip, size 11 mm, working length 8.5 cm
2x	40120 NAL	**Trocar,** flexible, with blunt tip, size 6 mm, working length 8.5 cm
	43237 LGF	CLICK*line* **Parenchymal Forceps,** atraumatic, single action jaws, straight jaws, size 5 mm, length 28 cm, metal Y-handle, with ABSORBER1® geometry, axial, with 4 locking positions
	43237 LSF	CLICK*line* **Parenchymal Forceps,** atraumatic, single action jaws, double curved jaws, size 5 mm, length 28 cm, metal Y-handle, with ABSORBER1® geometry, axial, with 4 locking positions
	43237 LHF	CLICK*line* **Lung Forceps,** atraumatic, single action jaws, single curved jaws, size 5 mm, length 28 cm, metal Y-handle, with ABSORBER1® geometry, axial, with 4 locking positions
	43244 LLP	CLICK*line* **Lung Forceps,** atraumatic, single action jaws, curved jaws, fenestrated, size 5 mm, length 28 cm, MOURET metal handle, with hemostat style ratchet, axial, with 4 locking positions
	43244 LRP	CLICK*line* **Lung Nodule Forceps,** atraumatic, single action jaws, curved jaws, fenestrated, size 5 mm, length 28 cm, MOURET metal handle, with hemostat style ratchet, axial, with 4 locking positions
	43231 LVS	CLICK*line* **Parenchymal Forceps,** atraumatic, single action jaws, curved jaws, size 5 mm, length 28 cm, metal handle, with lateral locking button, for use with linear stapler
	43227 LKP	CLICK*line* KELLY **Dissecting Forceps,** double action jaws, curved jaws, size 5 mm, length 28 cm, metal Y-handle, insulated, axial, with connector pin for unipolar coagulation
	43227 LMP	CLICK*line* **Scissors,** double action blades, curved blades, size 5 mm, length 28 cm, metal Y-handle, insulated, axial, with connector pin for unipolar coagulation
	43227 MTP	CLICK*line* **Scissors,** distally angled outer sheath, scissor blades open parallel to angulation, size 5 mm, length 28 cm, metal Y-handle, insulated, axial, with connector pin for unipolar coagulation
	43227 DUP	CLICK*line* **Biopsy Forceps,** distally angled outer sheath, single action jaws, size 5 mm, length 28 cm, metal Y-handle, insulated, axial, with connector pin for unipolar coagulation
	43244 MFP	CLICK*line* MANHES **Grasping Forceps,** atraumatic, single action jaws, straight jaws, size 5 mm, length 28 cm, MOURET metal handle, with hemostat style ratchet, axial, with 4 locking positions
	40170 LB	**Coagulating Suction Tube,** distally angled sheath, with connector pin for unipolar coagulation
		or
	40270 LB	**Coagulating Suction Tube,** distally angled sheath, with connector pin for bipolar coagulation
	30804	**Handle with Trumpet Valve,** for irrigation or suction, for use with Coagulating Suction Tubes 40170 LB and 40270 LB
	40360 LH	**Suction and Irrigation Tube,** with lateral holes, distally angled sheath, size 5 mm, length 28 cm
	40560 LH	**Suction and Irrigation Tube,** with lateral holes, distally angled sheath, size 10 mm, length 28 cm
2x	30805	**Handle with Two-Way Stopcock,** for irrigation or suction
	40775 LF	**Dissecting Electrode,** L-shaped, insulated, with connector pin for unipolar coagulation, distally angled sheath, size 5 mm, length 28 cm
	40175 LT	**Palpation Probe and Knot Tier,** distally angled sheath
	30173 FPL	**Macro Needle Holder,** dismantling, with tungsten carbide inserts, ergonomic pistol-grip handle, with disengageable ratchet, ratchet position left, single action jaws, straight jaws, size 5 mm, length 33 cm

3-11

Video Assisted Sympathectomy

Basic Set

KARL STORZ — ENDOSKOPE

Set recommended by HECKER, M. D.

26046 BA	**HOPKINS® II Forward-Oblique Telescope 30°,** enlarged view, diameter 5 mm, length 29 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red
2x 40120 NAL	**Trocar,** flexible, with blunt tip, size 6 mm, working length 8.5 cm
34221 MS	CLICK*line*® METZENBAUM **Scissors,** double action jaws, size 5 mm, length 30 cm, plastic handle, with connector pin for unipolar coagulation
43227 LUP	CLICK*line*® **Scissors,** distally angled sheath, double action jaws, scissor blades open horizontally to angulation, size 5 mm, length 28 cm, metal Y-handle, insulated, axial, with 4 locking positions, with connector pin for unipolar coagulation
33221 MD	CLICK*line*® KELLY **Dissecting and Grasping Forceps,** double action jaws, size 5 mm, length 30 cm, plastic handle, with connector pin for unipolar coagulation
43227 LKP	CLICK*line*® KELLY **Dissecting Forceps,** double action jaws, curved jaws, size 5 mm, length 28 cm, metal Y-handle, insulated, axial, with 4 locking positions, with connector pin for unipolar coagulation
43237 LLR	CLICK*line*® **Lung Forceps,** atraumatic, single action jaws, curved jaws, fenestrated, size 5 mm, length 28 cm, metal Y-handle, with ratchet, axial, with 4 locking positions
40400 G	**Grasping Forceps,** with ratchet, self-opening, fenestrated jaws, S-shaped, medial joint, length 33 cm
26778 UF	**Coagulating and Dissecting Electrode,** L-shaped, insulated, with connector pin for unipolar coagulation, size 5 mm, length 43 cm
26772 UF	**Coagulating and Dissecting Electrode,** L-shaped, insulated, with connector pin for unipolar coagulation, size 5 mm, length 30 cm
40775 LF	**Dissecting Electrode,** L-shaped, insulated, with connector pin for unipolar coagulation, distally angled sheath, size 5 mm, length 28 cm

3-11

Video Assisted Mini-Thoracotomy

Basic Set

KARL STORZ — ENDOSKOPE

Set recommended by Prof. GIUDICELLI, Prof. FUENTES **and** OTTOMANI, M. D.

26003 AA	**HOPKINS® II Straight Forward Telescope 0°**, enlarged view, diameter 10 mm, length 31 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
40103 CD	**Trocar,** with blunt tip, size 11 mm, working length 6 cm
40103 AB	**Trocar,** with blunt tip, size 11 mm, working length 4 cm
40110 A	GIUDICELLI/FUENTES/OTTOMANI **Rib Spreader,** self-retaining, blade depth 40 mm, blade width 30 mm
	or
40110 B	GIUDICELLI/FUENTES/OTTOMANI **Rib Spreader,** self-retaining, blade depth 60 mm, blade width 30 mm
495 CD	**Percutaneous Fiber Optic Light Cable,** length 300 cm, with three percutaneous illumination ports, each 5 mm in diameter and 5 cm in length
40400 A	**Forceps,** atraumatic, bayonet-shaped, insulated, length 22 cm
40400 B	**Forceps,** with multiple teeth, bayonet-shaped, insulated, length 22 cm
40400 F	**Dissecting Forceps,** with ratchet, self-opening, S-shaped, medial joint, length 28 cm
40400 H	**Grasping Forceps,** with ratchet, self-opening, fenestrated jaws, S-shaped, medial joint, length 28 cm
40400 K	**Grasping Forceps,** with ratchet, self-opening, fenestrated jaws, curved, medial joint, length 28 cm
40500 C	**Dissecting Forceps,** S-shaped, medial joint, length 28 cm
40500 E	**Dissecting Forceps,** S-shaped, distal joint, length 28 cm
40600 A	**Retractor,** S-shaped, with 3 teeth, length 27 cm
40600 B	**Retractor,** distal end curved, with 3 teeth, length 27 cm
40600 D	**Lung Spatula,** S-shaped, length 27 cm
40360 LH	**Suction and Irrigation Tube,** with lateral holes, distally angled sheath, size 5 mm, length 28 cm
30805	**Handle with Two-Way Stopcock,** for suction and irrigation
40700 A	**Electrode,** knife tip, malleable, with connector pin for unipolar coagulation, length 40 cm
40600 E	**Needle Holder,** S-shaped, with ratchet, length 27 cm
40600 C	**Sling Passer,** length 25 cm
26596 T	**Knot Tier,** for extracorporeal knotting, size 5 mm, length 36 cm

Units for Thoracic Surgery

Basic Set

Units and Accessories:

29005 LAP	**Mobile Equipment Cart**
9526 NB	**26" HD Monitor**
22 2010 11U102	**IMAGE 1 HUB™ HD Camera Control Unit SCB,** with SDI module
22 2200 55-3	**IMAGE1 H3-Z Three-Chip HD Camera Head**
20 0409 13-EN	**KARL STORZ AIDA® compact NEO advanced**
20 1331 01-1	**Cold Light Fountain XENON 300 SCB**
495 NCS	**Fiber Optic Light Cable,** extremely heat-resistant, diameter 4.8 mm, length 250 cm
20 3210 08	**DUOMAT® Suction and Irrigation Pump,** accessories optional

optional:

26 4305 08-1	**Electronic CO_2 ENDOFLATOR® SCB,** optional accessories required
20 5352 01U11x	**High Frequency Generator AUTOCON® II 400 SCB,** accessories optional
20 0178 31	**Three-Pedal Footswitch**
29005 HFH	**Double Pedal Holder**
27805	**Neutral Electrode**
27806	**Neutral Electrode Connecting Cable**
26005 M	**Unipolar High Frequency Cord**
26176 LE	**Bipolar High Frequency Cord**
29005 KH	**Camera Holder**

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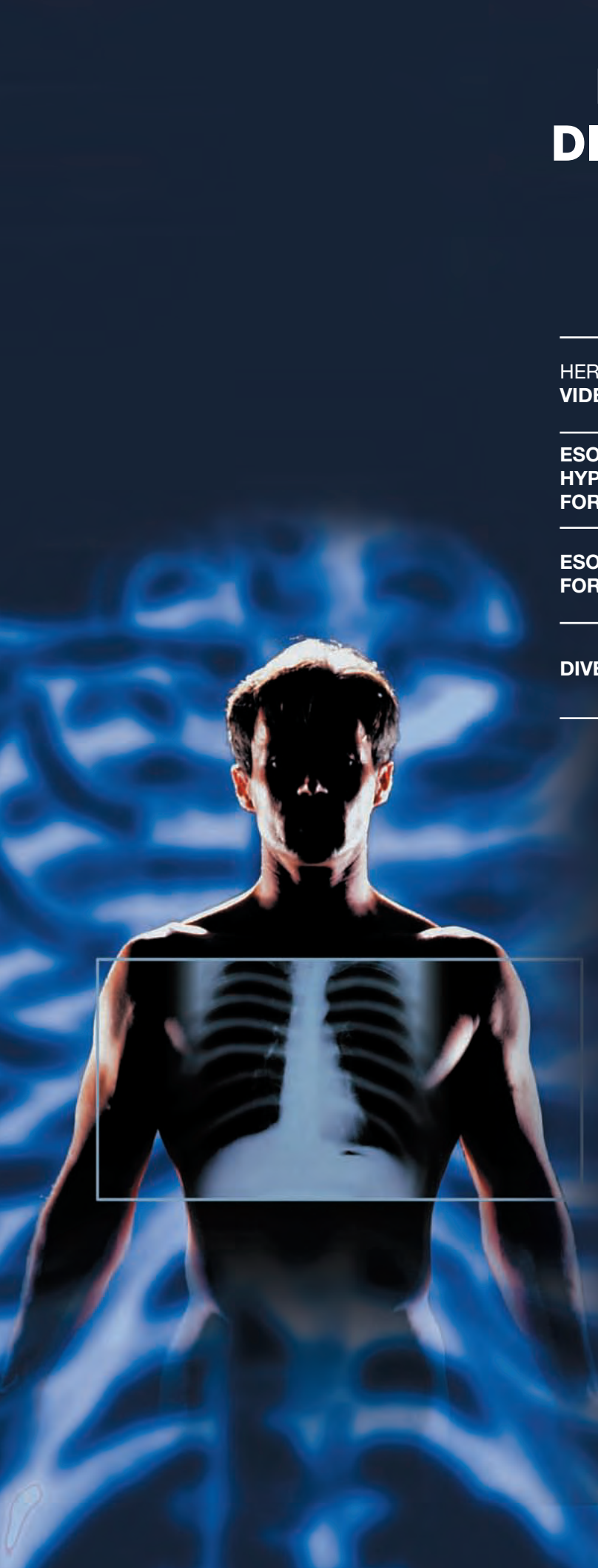
KARL STORZ IMAGE1 Video Camera Systems, Equipment Carts and Light Cables
see catalog TELEPRESENCE
KARL STORZ AIDA® compact NEO advanced see catalog KARL STORZ OR1™

ESOPHAGOSCOPY DIVERTICULOSCOPY



HERRMANN **CMOS VIDEO ESOPHARYNGOSCOPE** *NEW*	**14-17**
ESOPHAGOSCOPES AND HYPOPHARYNGOSCOPES FOR ADULTS	**18-21**
ESOPHAGOSCOPES FOR CHILDREN	**22-35**
DIVERTICULOSCOPES	**36-38**

HERRMANN **CMOS Video** NEW **Esopharyngoscope**

for Functional Diagnostics in Esophagoscopy

KARL STORZ — ENDOSKOPE

CMOS Video Esopharyngoscope for adults, without working channel, working length 75 cm, diameter 3.7 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
- 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 sheath. The cm-scale is positioned in inversion beside the pathological process. The extension is read and recorded with the video-endoscope. It allows measuring the length of a change in the esophagus with an accuracy up to ±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 video esopharyngoscope 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 video esopharyngoscope is positioned above the postcricoidal 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 endoscope. With the help of the patient, the optical window reaches the lower esophageal sphincter. Drinking plain water enables the endoscope to pass through the cardia. Stomach gas, 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 or 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 video esopharyngoscope 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.

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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 video esophagoscope 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 tracheobronchial tree.

Combined endoscopy
(Functional analysis under visual control)

Using a Steri-Strip (6 × 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 video esopharyngoscope 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 **CMOS Video Esopharyngoscope** NEW

for Functional Diagnostics in Esophagoscopy

KARL STORZ — ENDOSKOPE

The **CMOS video esopharyngoscope** features a compact and mobile solution thanks to its integrated light source and camera control unit.

Combined with the lightweight Monitor 8402 ZX, the **CMOS video esophagoscope** provides a convenient and fast solution for the doctor's office, house calls or consultation purposes.

Special Features:

- **Mobility thanks to all-in-one solution – the lightweight monitor combined with the CMOS video esopharyngoscope offer quick installation and great flexibility**
- **CMOS chip technology for good image quality**
- **Optimal field of view for excellent visualization of pathologies**
- **Large angle of view for optimal orientation**
- **Integrated LED light source for optimal illumination**
- **Sensitive yet robust control through ergonomic handle**
- **Waterproof, fully immersible for cleaning and disinfection**
- **Sterilizable via EtO gas, Sterrad® and Steris® System 1**

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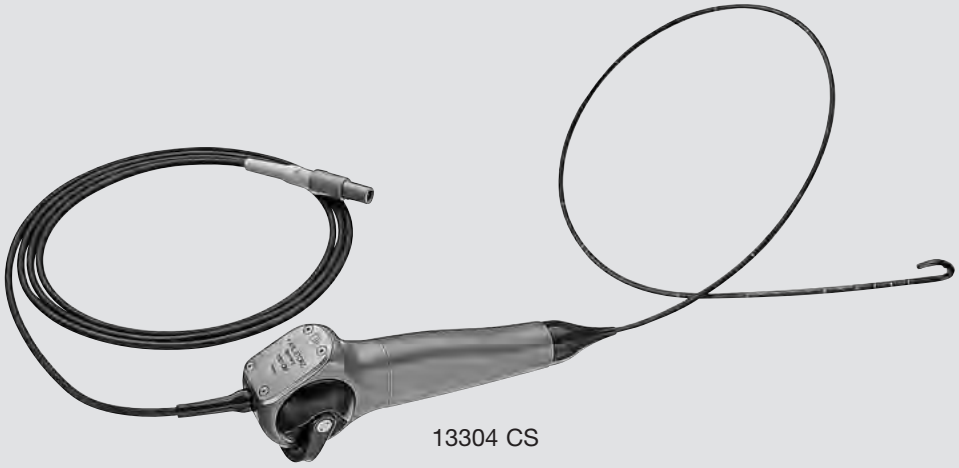
HERRMANN **CMOS Video Esopharyngoscope** NEW

for Functional Diagnostics in Esophagoscopy

KARL STORZ — ENDOSKOPE



13304 CS

8402 ZX

13304 CSK	**CMOS Video Esopharyngoscope KIT,** for use with Monitor 8402 ZX	
	Direction of view:	0°
	Angle of view:	85°
	Working length:	75 cm
	Outer diameter:	3.7 mm
	Deflection up/down:	200°/100°

The following accessories are included:

13304 CS	**CMOS Video Esopharyngoscope**
13242 XL	**Leakage Tester,** with bulb and manometer
11025 E	**Pressure Compensation Cap,** for ventilation during gas sterilization
27677 FV	**Case**

13304 CSM	**CMOS Video Esopharyngoscope with Monitor**	
	Direction of view:	0°
	Angle of view:	85°
	Working length:	75 cm
	Outer diameter:	3.7 mm
	Deflection up/down:	200°/100°

The following accessories are included:

13304 CSK	**CMOS Video Esopharyngoscope KIT**
8402 ZX	**Monitor,** for CMOS endoscopes

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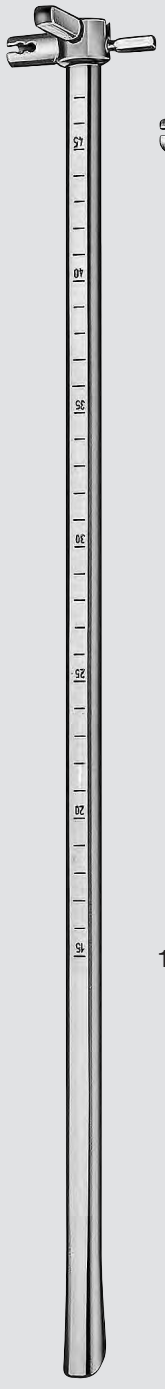
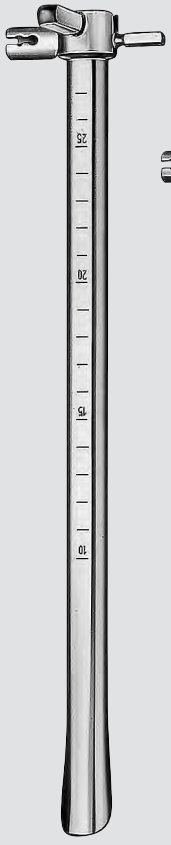
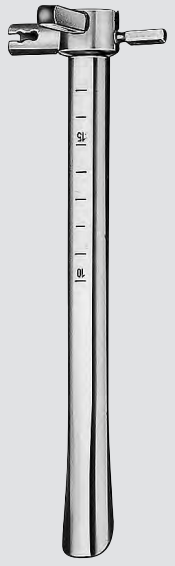
ROBERTS-JESBERG
Esophagoscopes and Hypopharyngoscopes
for Distal and Proximal Illumination



12060 A/C/E



12060 B/D/F/H



12060 R/S/T

Size 12 x 16

12060 AX	ROBERTS-JESBERG **Esophagoscope,** oval, size 12 x 16, length 55 cm
12060 A	**Same,** length 50 cm
12060 AW	**Same,** length 45 cm
12060 AV	**Same,** length 40 cm
12060 AU	**Same,** length 35 cm
12060 B	**Same,** length 30 cm

Size 10 x 14

12060 C	ROBERTS-JESBERG **Esophagoscope,** oval, size 10 x 14 mm, length 50 cm
12060 CV	**Same,** length 40 cm
12060 D	**Same,** length 30 cm

Size 8 x 12

12060 E	ROBERTS-JESBERG **Esophagoscope,** oval, size 8 x 12, length 50 cm
12060 EV	**Same,** length 40 cm
12060 F	**Same,** length 30 cm

Size 7 x 9

12060 H	ROBERTS-JESBERG **Esophagoscope,** oval, size 7 x 9, length 30 cm

Hypopharyngoscopes, length 20 cm

12060 R	ROBERTS-JESBERG **Hypopharyngoscope,** oval, size 12 x 16, length 20 cm
12060 S	**Same,** size 10 x 14
12060 T	**Same,** size 8 x 12

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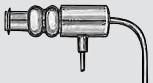
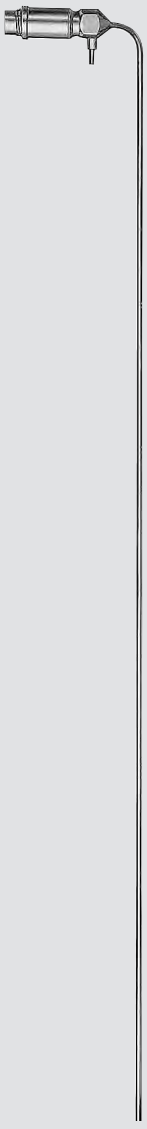
10101 FA

12061 A – C

12062 A – C





For proximal illumination

10101 FA	**Prismatic Light Deflector, autoclavable,** with connection to fiber optic light cable

For distal illumination

12061 A	**Fiber Optic Light Carrier,** for use with esophagoscopes, length 50 cm
12061 AX	**Same,** for use with esophagoscopes, length 55 cm
12061 AW	**Same,** for use with esophagoscopes, length 45 cm
12061 AV	**Same,** for use with esophagoscopes, length 40 cm
12061 AU	**Same,** for use with esophagoscopes, length 35 cm
12061 B	**Same,** for use with esophagoscopes, length 30 cm
12061 C	**Fiber Optic Light Carrier,** for use with hypopharyngoscopes, length 20 cm

Additional Accessories

12062 A	**Insertable Suction Tube,** for use with esophagoscopes, outer diameter 2 mm, length 50 cm
12062 AX	**Same,** for use with esophagoscopes, length 55 cm
12062 B	**Same,** for use with esophagoscopes, length 30 cm
12062 C	**Insertable Suction Tube,** for use with hypopharyngoscopes, outer diameter 2 mm, length 20 cm
10338 TA	**Adjustable Magnifier, autoclavable,** swing-away type, with plug connection
12070	**Handle,** for esophagoscopes

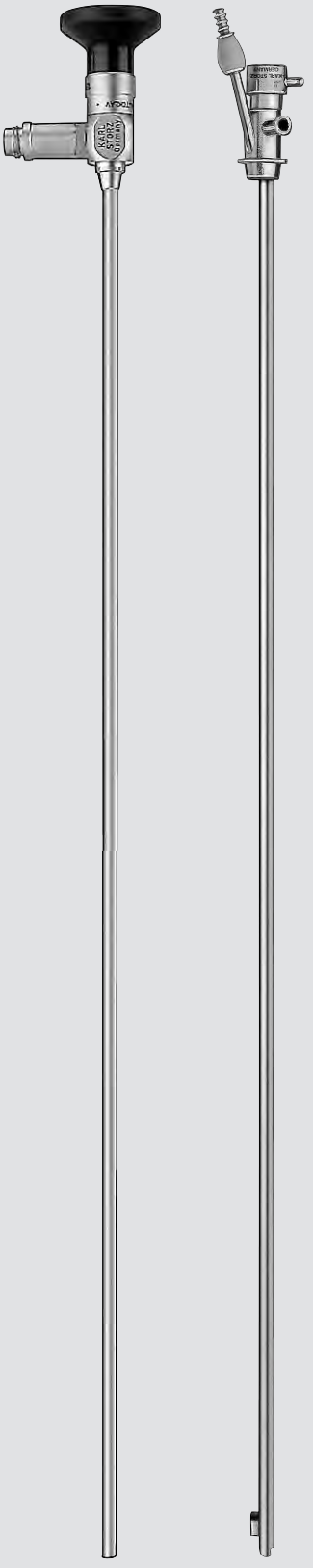
10338 TA

12070

11-98i

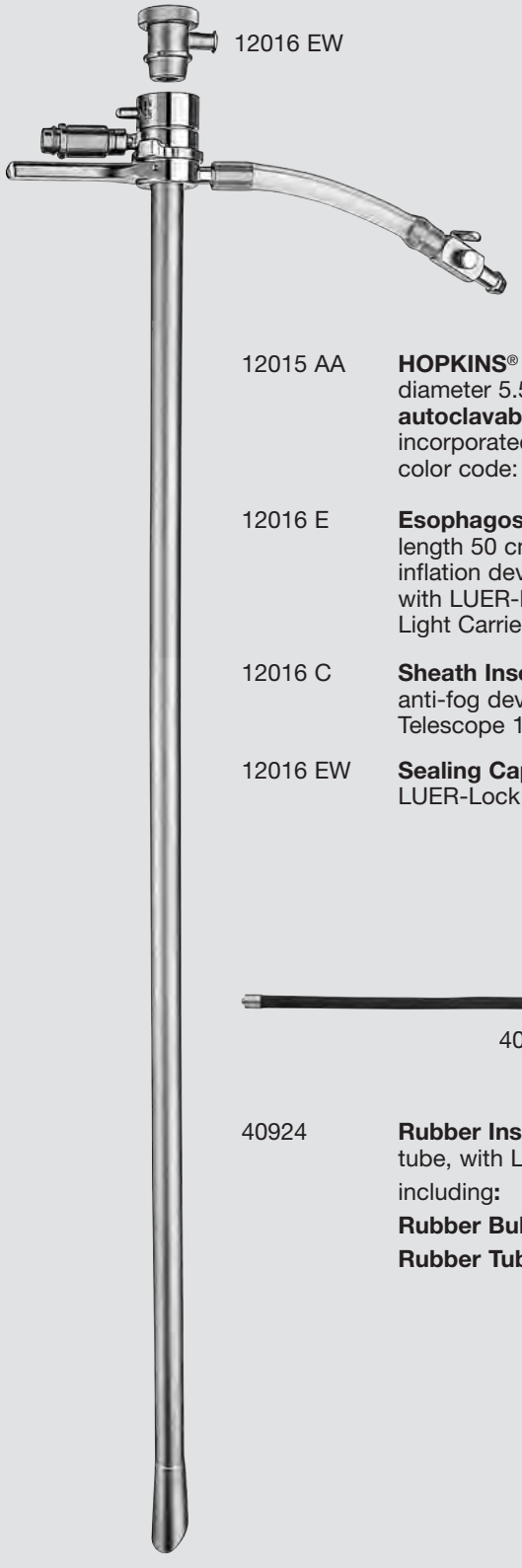
Optical Esophagoscope

with Suction Channel and Air Inflation Device



12015 AA

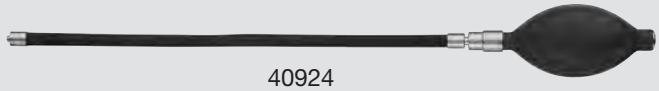
12016 C



12016 E

12016 EW

12015 AA	**HOPKINS® Straight Forward Telescope 0°,** diameter 5.5 mm, length 53 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
12016 E	**Esophagoscope Tube,** size 11, working length 50 cm, with suction channel and air inflation device, including glass window plug with LUER-Lock 12016 EW, with Fiber Optic Light Carrier 12016 EM, with Tube 12016 EF
12016 C	**Sheath Insert,** with working channel and anti-fog device, for use with HOPKINS® Telescope 12015 AA
12016 EW	**Sealing Cap,** with window and LUER-Lock cone



40924

40924	**Rubber Insufflation Bulb,** with detachable tube, with LUER-Lock including**:** **Rubber Bulb** **Rubber Tube**

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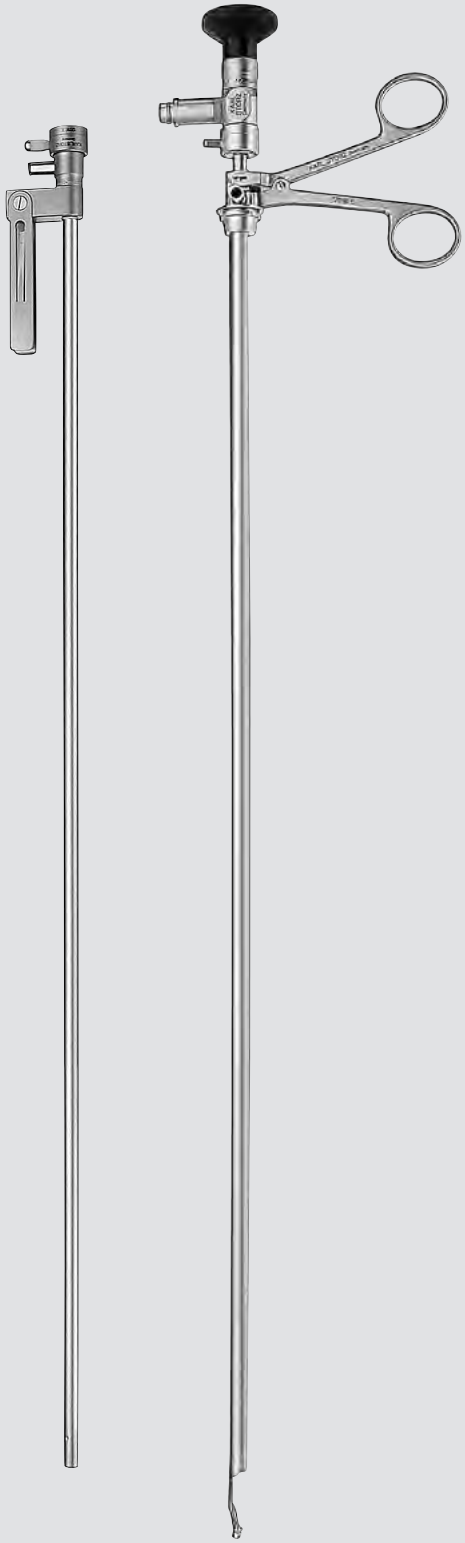
Components see chapter 13, SPARE PARTS AND ACCESSORIES

Optical Forceps and Injection Needle

12015 AA



12016 X

12016 L

Instruments for use with HOPKINS® Telescope 12015 AA

12016 K	**Optical Peanut Forceps,** for large chunks of meat and soft foreign bodies
12016 L	**Optical Forceps,** spoon-shaped, round, for biopsy
12016 M	**Optical Forceps,** alligator, large jaws, for hard foreign bodies
12016 N	**Optical Forceps,** universal, for biopsy, for foreign bodies and removal of denatured tissue
12016 X	**Telescope Guide,** for use with 50 cm Esophagoscopes 12060 A/C/E and HOPKINS® Telescope 12015 AA

12016 K 12016 L 12016 M 12016 N

11-98

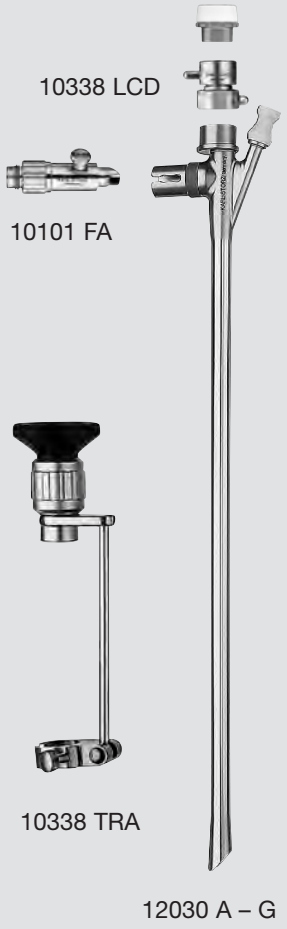
Pediatric Esophagoscopes

with Proximal Illumination

KARL STORZ — ENDOSKOPE

Special Features:

- **Absence of distal light carrier does not restrict inner diameter**
- **Prismatic Light Deflector 10101 FA inserted proximally ensures best illumination and enables full use of lumen through operating instruments**
- **Excellent view of operation area**
- **Lateral channel for introduction of instruments and catheters**



12030 A	**Esophagoscope Tube,** size 6, length 30 cm
12030 B	**Same,** size 5
12030 C	**Same,** size 4
12030 F	**Esophagoscope Tube,** size 3.5 mm, length 18.5 cm
12030 G	**Same,** size 3
10101 FA	**Prismatic Light Deflector, autoclavable,** with connection to fiber optic light cable
10338 TRA	**Adjustable Magnifier, autoclavable,** swing-away type, with ring adaption
10338 N	**Rubber Telescope Guide,** for use with telescopes and optical forceps
10338 LCD	**Telescope Bridge,** for fixed position between bronchoscope and telescope

For use through lateral working channel of esophagoscopes, lengths 30 and 18.5 cm, under control of HOPKINS® Telescopes 10324 AA, 10020 ATA and 10018 AA:

10338 U	**Forceps,** alligator, spoon-shaped, single action jaws, semiflexible, sheath diameter 1 mm, working length 35 cm
10338 X	**Forceps,** spoon-shaped, for biopsy, single action jaws, semiflexible, sheath diameter 1 mm, working length 35 cm
10468 B	**Suction Catheter,** 7 Fr., with Adaptor 10479 B
10468 C	**Suction Catheter,** 6 Fr., with Adaptor 10479 C
10468 D	**Suction Catheter,** 5 Fr., with Adaptor 10479 F

11-98$_3$

Optical Forceps and Scissors

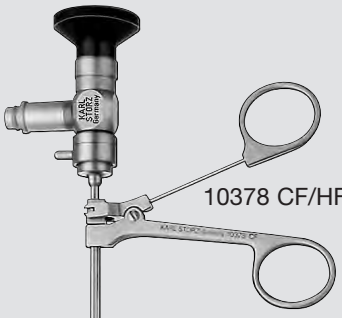
for Pediatric Esophagoscopes size 6 – 3.5, length 30 cm – 18.5 cm

KARL STORZ — ENDOSKOPE

Special Features:

- **Newly designed forceps for hard and soft foreign bodies enable removal under precise optical control not previously possible.**
- **Small size of forceps allows them to be introduced through pediatric esophagoscopes as of size 3.5 cm and in lengths 30 – 18.5 cm**
- **Foreign bodies can be removed quickly and with utmost safety.**
- **Better assessment of the depth of cut when taking biopsies**

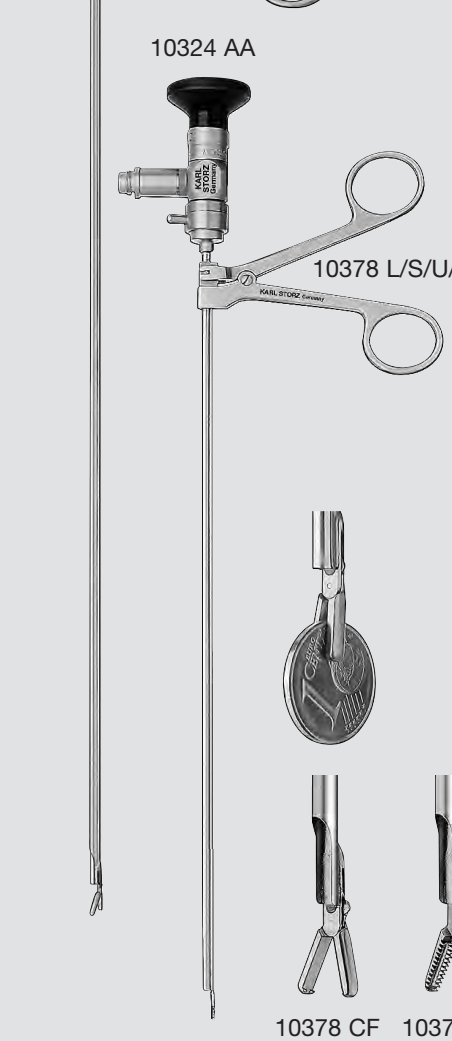
10324 AA



10378 CF/HF/KF/KSF

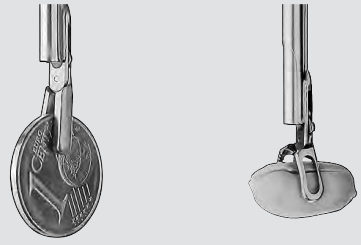
10324 AA

10378 L/S/U/M



For use with Esophagoscopes 12030 A – C:

10324 AA	**HOPKINS® Straight Forward Telescope 0°,** diameter 2.9 mm, length 36 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
10378 CF	**Optical Forceps,** 2x 2 teeth, for grasping coins and flat foreign bodies, with spring-action handle
10378 HF	**Optical Forceps,** alligator, for grasping hard foreign bodies, with spring-action handle
10378 KF	**Optical Forceps,** with KILLIAN bean jaws, for grasping peanuts and soft foreign bodies, with spring-action handle
NEW 10378 KSF	**Optical Forceps,** VANCOUVER model, for grasping peanut fragments and soft foreign bodies, with spring-action handle
10378 L	**Optical Forceps,** spoon-shaped, for biopsy
10378 S	**Optical Scissors**
10378 U	**Optical Forceps,** universal, for biopsy and foreign bodies removal
10378 M	**Optical Forceps,** spoon-shaped, oval, for biopsy, large model



10378 CF 10378 HF 10378 KF 10378 KSF 10378 L 10378 S 10378 U 10378 M

6-03₂

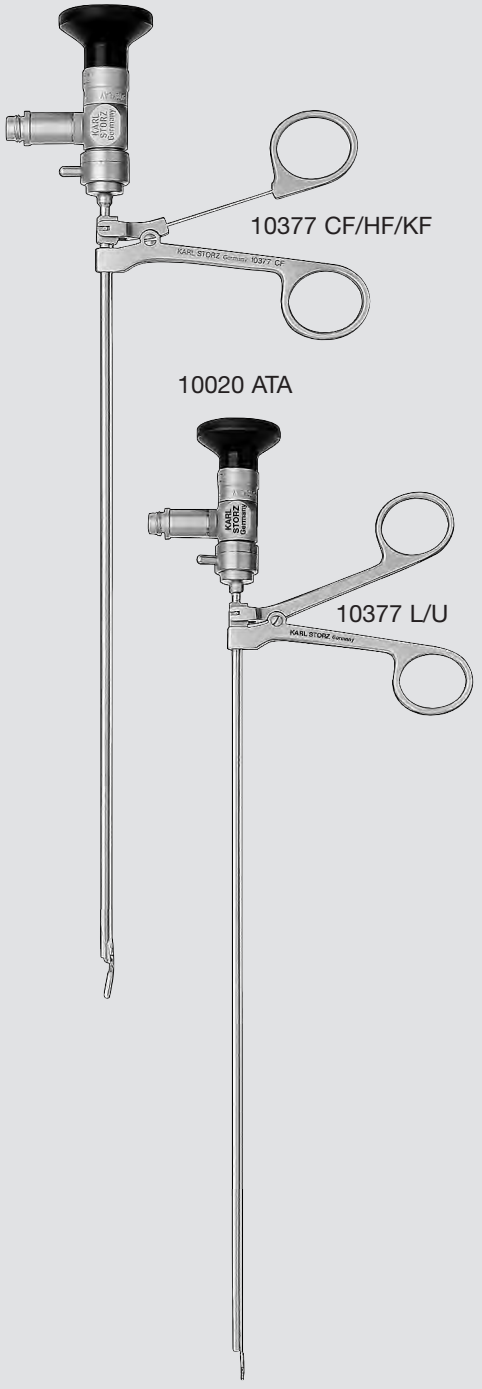
Optical Forceps

for Pediatric Esophagoscopes size 3.5, length 18.5 cm

Special Features:

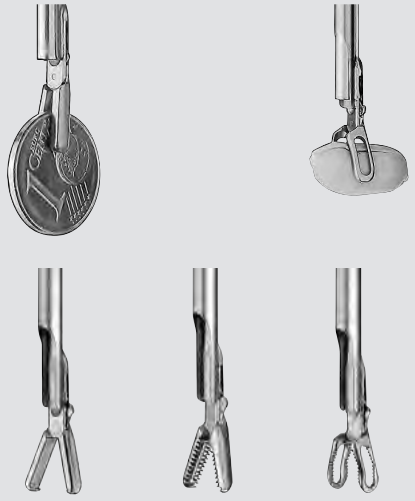
- **Newly designed forceps for hard and soft foreign bodies enable removal under precise optical control not previously possible.**
- **Foreign bodies can be removed quickly and with utmost safety**
- **Better assessment of the depth of cut when taking biopsies**

10020 ATA



For use with Esophagoscope 12030 F:

10020 ATA	**HOPKINS® Straight Forward Telescope 0°,** diameter 2.9 mm, length 30 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
10377 CF	**Optical Forceps,** 2x 2 teeth, for grasping coins and flat foreign bodies, with spring-action handle
10377 HF	**Optical Forceps,** alligator, for grasping hard foreign bodies, with spring-action handle
10377 KF	**Optical Forceps,** with KILLIAN bean jaws, for grasping peanuts and soft foreign bodies, with spring-action handle
10377 L	**Optical Forceps,** spoon-shaped, for biopsy
10377 U	**Optical Forceps,** universal, for biopsy and foreign bodies removal



10377 CF | 10377 HF | 10377 KF | 10377 L | 10377 U

6-031

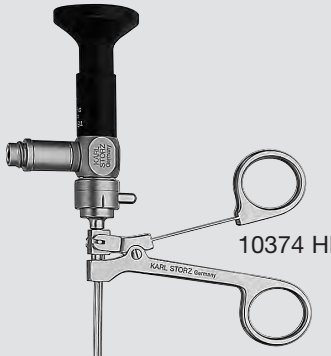
Optical Forceps

for Pediatric Esophagoscopes size 3.5 – 3, length 18.5 cm

Special Features:

- **Small size of forceps allows them to be introduced through pediatric bronchoscopes as of size 3 and a length of 18.5 cm**
- **Foreign bodies can be removed quickly and with utmost safety**
- **Better assessment of the depth of cut when taking biopsies**

10030 AA



10374 HF

10030 AA

10374 L

NEW 10030 AA **Miniature Straight Forward Telescope 0°,** semirigid, **autoclavable,** fiber optic light transmission incorporated,
Direction of view: 0°
Angle of view: 90°
Working length: 30.6 cm
Outer diameter: 1.3 mm
Color code: green

NEW 10374 HF **Optical Forceps,** with alligator jaws, for grasping hard foreign bodies, with spring-action handle

NEW 10374 L **Optical Forceps,** spoon-shaped, for biopsy

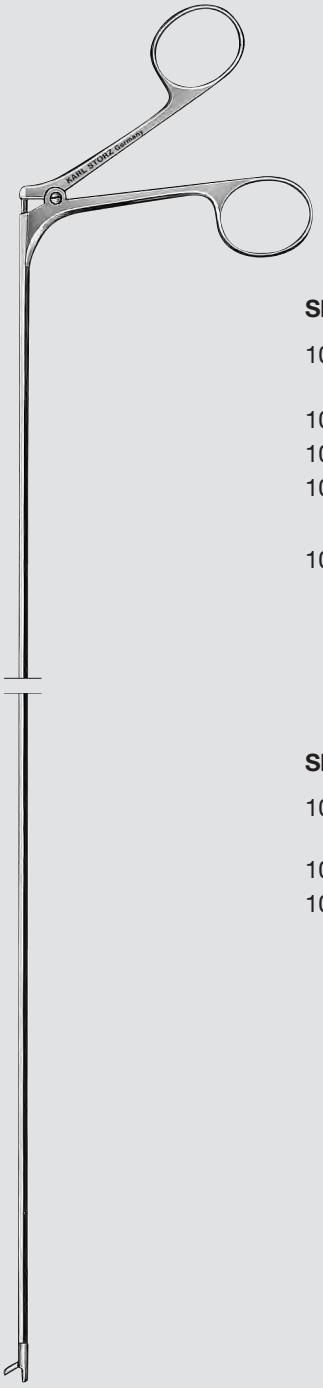
10374 HF

10374 L

3-11

Forceps and Scissors for Esophagoscopy

Single action jaws

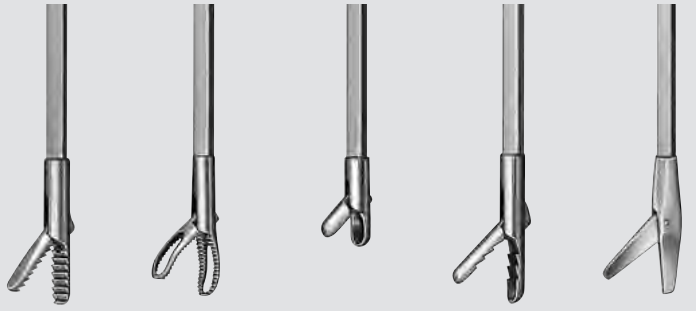


Sheath diameter 2.5 mm, working length 55 cm

10366 HL	**Forceps,** alligator, for hard foreign bodies, single action jaws, sheath diameter 2.5 mm, working length 55 cm
10366 KL	**Same,** for peanuts and soft foreign bodies
10366 LL	**Same,** spoon-shaped, round, for biopsy
10366 UL	**Same,** universal, for biopsy and foreign bodies removal
10366 SL	**Scissors,** straight, for trituration of bone

Sheath diameter 2.5 mm, working length 35 cm

10367 H	**Forceps,** alligator, for hard foreign bodies, single action jaws, sheath diameter 2.5 mm, working length 35 cm
10367 K	**Same,** for peanuts and soft foreign bodies
10367 L	**Same,** spoon-shaped, round, for biopsy

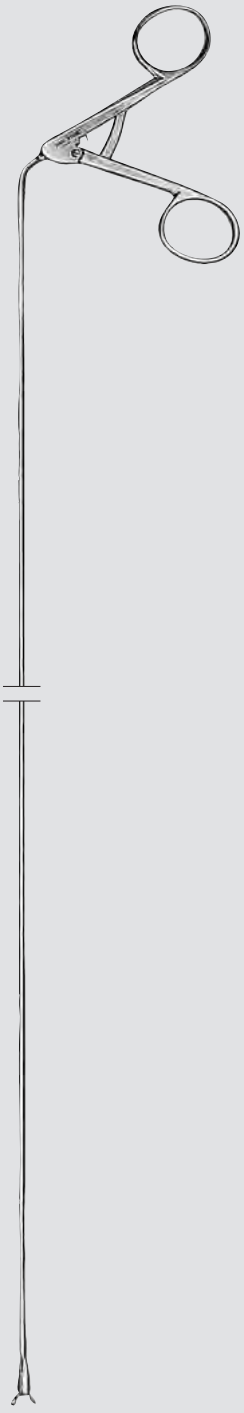


10366 HL 10367 H	10366 KL 10367 K	10366 LL 10367 L	10366 UL	10366 SL

11-98$_2$

Esophagoscopic Forceps

Double action jaws



Sheath diameter 2.5 mm, working length 55 cm

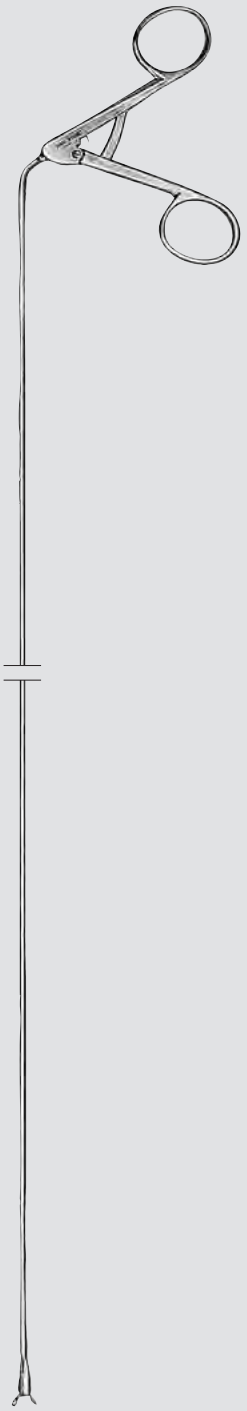
10370 HL	**Forceps,** alligator, for hard foreign bodies, double action jaws, sheath diameter 2.5 mm, working length 55 cm
10370 JL	**Same,** pointed, serrated, for coins and flat foreign bodies
10370 KL	**Same,** for peanuts and soft foreign bodies
10370 LL	**Same,** spoon-shaped, round, for biopsy

10370 HL 10370 JL 10370 KL 10370 LL

11-98₂

Esophagoscopic Forceps

Double action jaws



Sheath diameter 2 mm, working length 45 cm

10371 HL	**Forceps,** alligator, for hard foreign bodies, double action jaws, sheath diameter 2 mm, working length 45 cm
10371 KL	**Same,** for peanuts and soft foreign bodies
10371 LL	**Same,** spoon-shaped, round, for biopsy
10371 UL	**Same,** universal, for biopsy and foreign bodies removal

Sheath diameter 2 mm, working length 35 cm

10371 H	**Forceps,** alligator, for hard foreign bodies, double action jaws, sheath diameter 2 mm, working length 35 cm
10371 J	**Same,** pointed, serrated, for coins and flat foreign bodies
10371 K	**Same,** for peanuts and soft foreign bodies
10371 L	**Same,** spoon-shaped, round, for biopsy
10371 P	**Same,** spoon-shaped, oval, fenestrated, for biopsy and foreign bodies removal
10371 U	**Same,** universal, for biopsy and foreign bodies removal

10371 HL
10371 H

10371 J

10371 KL
10371 K

10371 LL
10371 L

10371 P

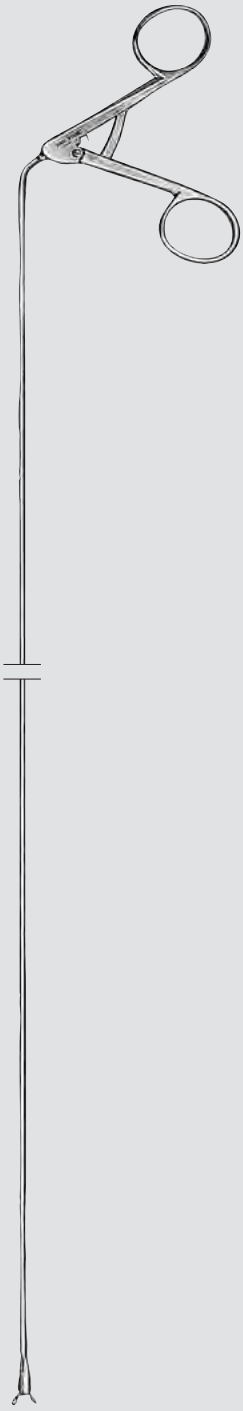
10371 UL
10371 U

11-98$_2$

Esophagoscopic Forceps

Double action jaws

KARL STORZ — ENDOSKOPE



Sheath diameter 1.5 mm, working length 35 cm

10372 HL	**Forceps,** alligator, for hard foreign bodies, double action jaws, sheath diameter 1.5 mm, working length 35 cm
10372 JL	**Same,** pointed, serrated, for coins and flat foreign bodies
10372 KL	**Same,** for peanuts and soft foreign bodies
10372 LL	**Same,** spoon-shaped, round, for biopsy
10372 UL	**Same,** universal, for biopsy and foreign bodies removal

Sheath diameter 1.5 mm, working length 25 cm

10372 H	**Forceps,** alligator, for hard foreign bodies, double action jaws, sheath diameter 1.5 mm, working length 25 cm
10372 K	**Same,** for peanuts and soft foreign bodies

10372 HL
10372 H

10372 JL

10372 KL
10372 K

10372 LL

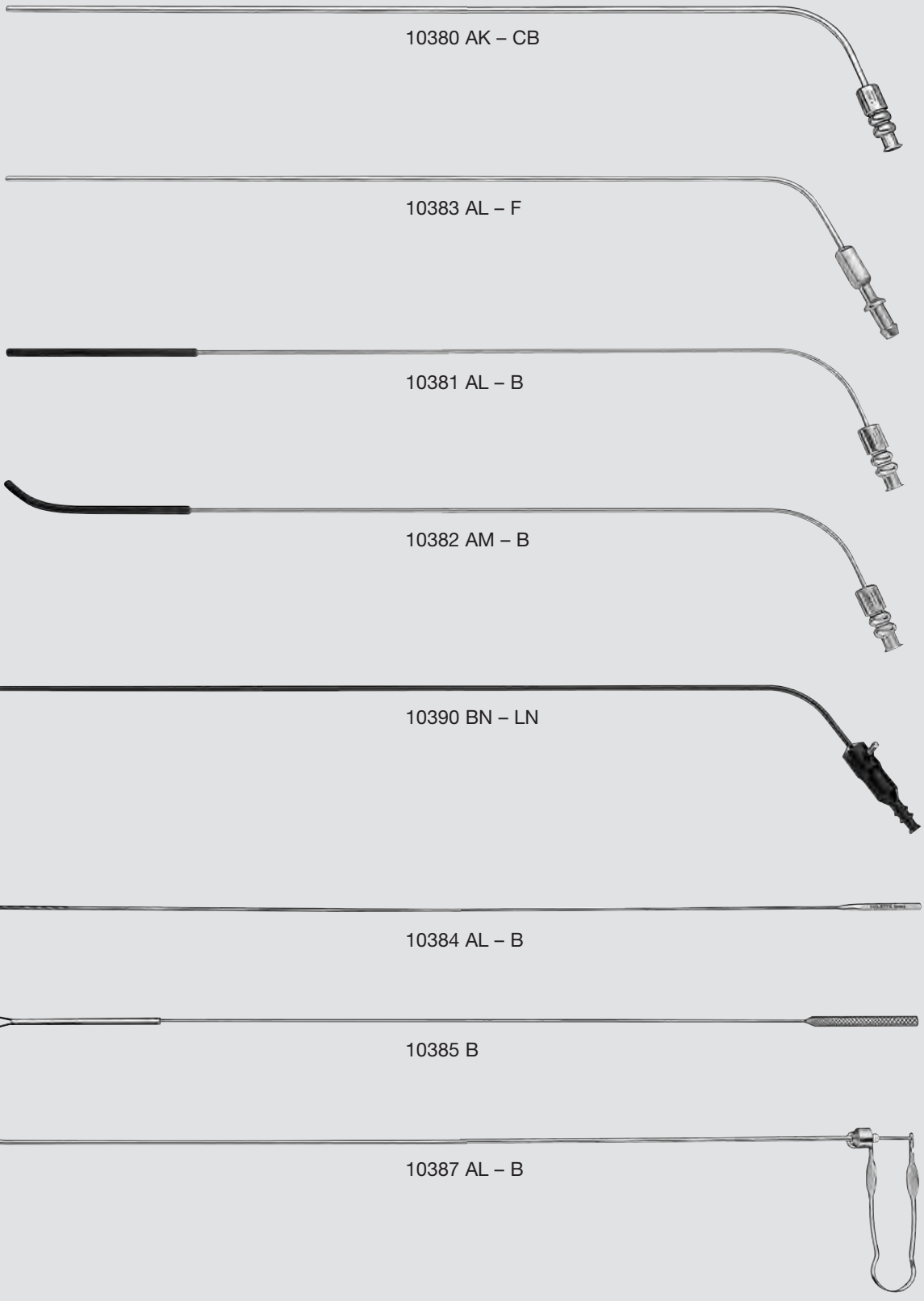
10372 UL

11-98₂

Accessories for Esophagoscopy

Suction Tubes, Cotton Carriers and Sponge Holders

KARL STORZ — ENDOSKOPE



10380 AK – CB

10383 AL – F

10381 AL – B

10382 AM – B

10390 BN – LN

10384 AL – B

10385 B

10387 AL – B

11-98

Accessories for Esophagoscopy

Suction Tubes, Cotton Carriers and Sponge Holders

KARL STORZ — ENDOSKOPE

Working length 60 cm

10380 AX	**Suction Tube,** diameter 4 mm
10384 AX	**Cotton Carrier**

Working length 55 cm

10380 AL	**Suction Tube,** diameter 4 mm
10383 AL	**Same,** with cut-off hole
10381 AL	**Suction Tube,** with rubber tip, straight, diameter 4 mm
10390 LN	**Coagulating Suction Tube,** insulated, with connector pin for unipolar coagulation, diameter 4 mm
10384 AL	**Cotton Carrier**
10387 AL	**Sponge Holder,** with spring handle

Working length 45 cm

10380 AM	**Suction Tube,** diameter 4 mm
10381 AM	**Suction Tube,** with rubber tip, straight, diameter 4 mm
10381 BL	**Same,** diameter 2 mm
10382 AM	**Same,** curved
10383 AM	**Suction Tube,** with cut-off hole, diameter 3 mm

Working length 35 cm

10380 CB	**Suction Tube,** diameter 2 mm
10380 B	**Same,** diameter 3 mm
10380 AK	**Same,** diameter 4 mm
10383 B	**Suction Tube,** with cut-off hole, diameter 3 mm
10383 BL	**Same,** diameter 5.5 mm
10381 B	**Suction Tube,** straight, with rubber tip, diameter 2 mm
10382 B	**Same,** curved
10390 BN	**Coagulating Suction Tube,** insulated, with connector pin for unipolar coagulation, diameter 3 mm
10384 B	**Cotton Applicator**
10385 B	**Sponge Holder**
10387 B	**Sponge Holder,** with spring handle

Working length 30 cm

10383 DD	**Suction Tube,** with cut-off hole, diameter 2 mm
10383 F	**Same,** diameter 3 mm

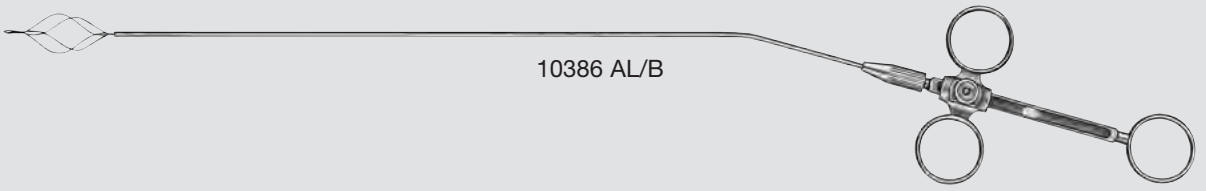
Working length 25 cm

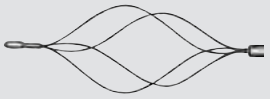
10380 C	**Suction Tube,** diameter 2 mm

11-98₂

Accessories for Esophagoscopy

Foreign Body Baskets

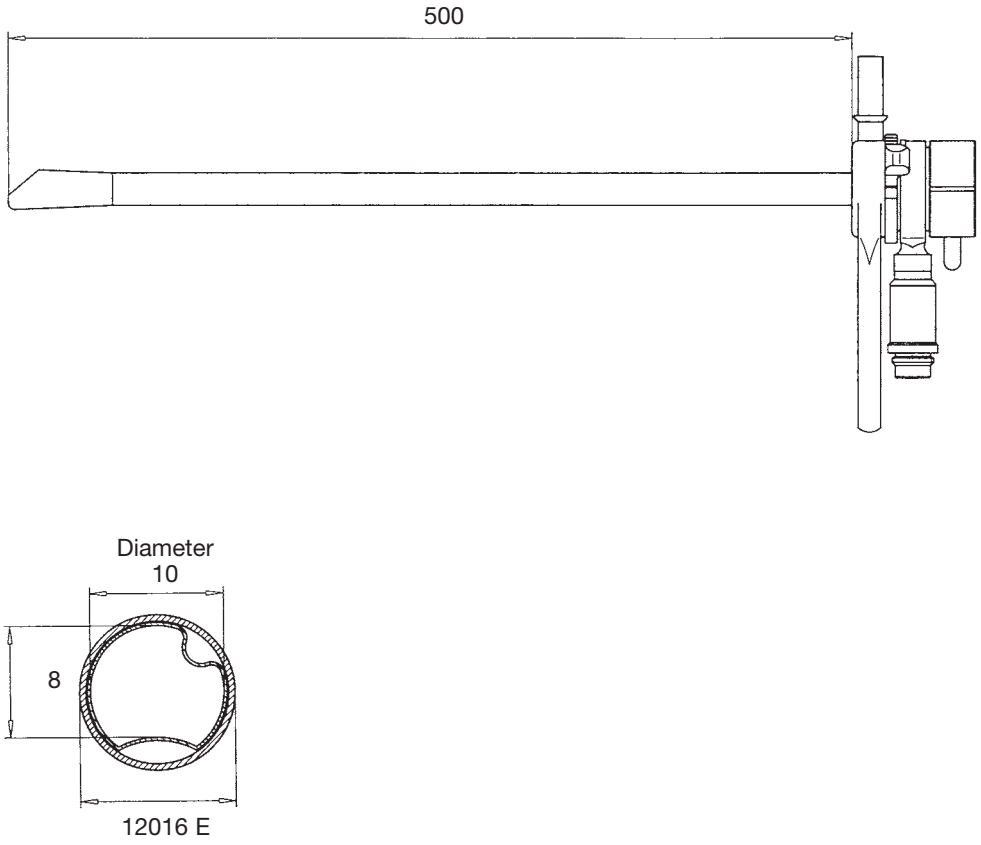




10386 AL	**Foreign Body Basket,** with ring handle, working length 55 cm
10386 B	**Same,** working length 35 cm

3-11

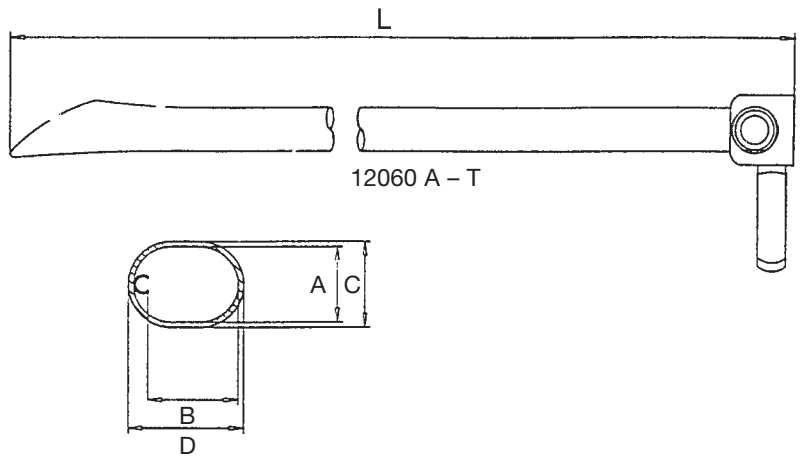
Dimensions
of Esophagoscope 12016 E



Art. No.	Working Length	Outer Diameter Size	Telescopes	Optical Forceps
12016 E	50 cm	11	12015 AA	12016 K, 12016 L, 12016 M, 12016 N, with 12015 AA

11-98

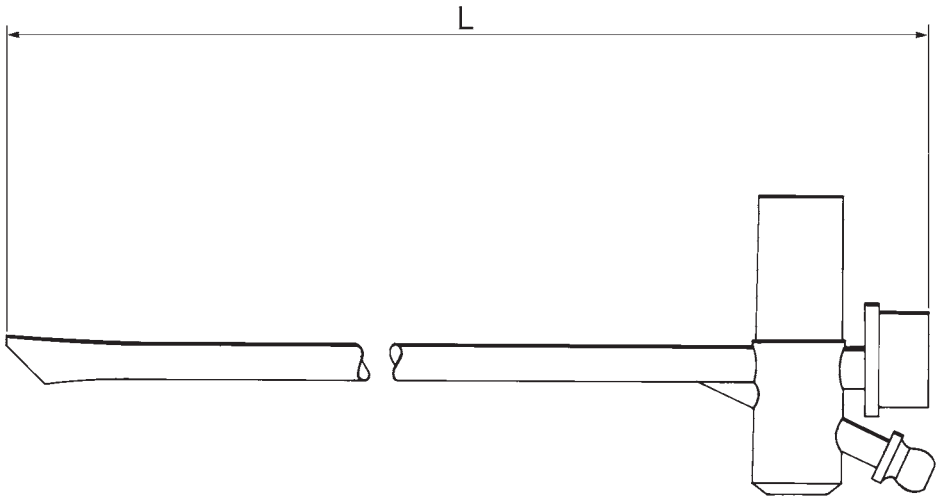
Dimensions of Esophagoscope 12060



Art. No.	Total Length – L –	Inner Diameter Size – A x B –	Outer Diameter Size – C x D –	Telescopes	Optical Forceps
12060 A	50 cm	11 x 12	12 x 16	12015 AA with 12016 X	12016 K, 12016 L, 12016 M, 12016 N, with 12015 AA
12060 AU	35 cm	11 x 12	12 x 16	12015 AA	
12060 AV	40 cm	11 x 12	12 x 16	12015 AA	
12060 AW	45 cm	11 x 12	12 x 16	12015 AA	
12060 AX	55 cm	11 x 12	12 x 16	12015 AA	–
12060 B	30 cm	11 x 12	12 x 16	10324 AA	10378 CF, 10378 HF, 10378 KF, 10378 KSF, 10378 L, 10378 U, 10378 S, with 10324 AA
12060 C	50 cm	9 x 10	10 x 14	12015 AA with 12016 X	12016 K, 12016 L, 12016 M, 12016 N, with 12015 AA
12060 CV	40 cm	9 x 10	10 x 14	12015 AA	
12060 CX	55 cm	9 x 10	10 x 14	12015 AA	–
12060 D	30 cm	9 x 10	10 x 14	10324 AA	10378 CF, 10378 HF, 10378 KF, 10378 KSF, 10378 L, 10378 U, 10378 S, with 10324 AA
12060 E	50 cm	7 x 8	8 x 12	12015 AA with 12016 X	12016 K, 12016 L, 12016 M, 12016 N, with 12015 AA
12060 EV	40 cm	7 x 8	8 x 12	12015 AA	
12060 F	30 cm	7 x 8	8 x 12	10324 AA	10378 CF, 10378 HF, 10378 KF, 10378 KSF, 10378 L, 10378 U, 10378 S, with 10324 AA
12060 H	30 cm	6 x 6	7 x 9	10324 AA	
12060 R	20 cm	11 x 12	12 x 16	10324 AA	
12060 S	20 cm	9 x 10	10 x 14	10324 AA	
12060 T	20 cm	7 x 8	8 x 12	10324 AA	

11-98

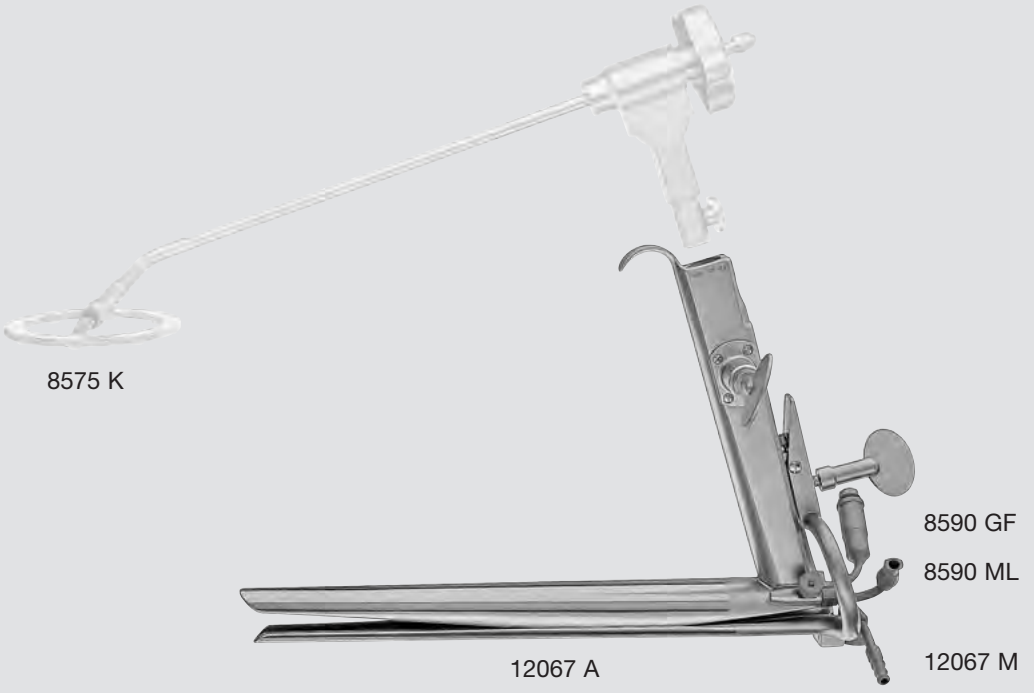
Dimensions of Esophagoscope 12030



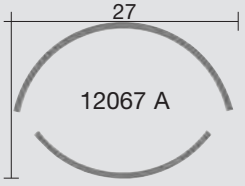
Art. No.	Size	Total Length – L –	Telescopes	Optical Forceps
12030 A	6	30 cm	10324 AA	10378 CF, 10378 HF, 10378 KF, 10378 KSF, 10378 L, 10378 U, 10378 M, 10378 S, with 10324 AA
12030 B	5	30 cm	10324 AA	
12030 C	4	30 cm	10324 AA	
12030 F	3.5	18.5 cm	10020 ATA, 10018 AA	10377 CF, 10377 HF, 10377 KF, 10377 L, 10377 U, with 10020 ATA
12030 G	3	18.5 cm	10018 AA	10374 HF, 10374 L with 10030 AA

11-98

WEERDA **Distending Diverticuloscope for CO_2 LASER Technique**

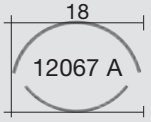


Outer dimensions in mm:
proximal:



Spread: max. 40
min. 29

distal:



Spread: max. 65
min. 7

12067 A	WEERDA **Distending Diverticuloscope,** length 24 cm, with adaption for Suction Tube 12067 M
	Proximal size open: max. 40 x 27 mm min. 29 x 27 mm
	Distal size open: max. 65 x 18 mm min. 7 x 18 mm
8590 GF	**Fiber Optic Light Carrier,** for distal illumination, working length 14 cm
8590 ML	**Suction Tube,** to remove vapor, for LASER treatment, outer diameter 3 mm
12067 M	**Suction Tube,** to remove vapor, flat, size 6 x 3 mm
8575 K	**Laryngoscope Holder and Chest Support,** GÖTTINGEN model, with adjustment wheel including: **Support Rod,** movable, with metal ring, diameter 9 cm, length 34 cm
	or
8575 KC	BENJAMIN-PARSONS **Laryngoscope Holder and Chest Support,** GÖTTINGEN model, with adjustment wheel including: BENJAMIN-PARSONS **Support Rod,** movable, with metal ring, diameter 12 cm and 2 lateral set screws, length 34 cm

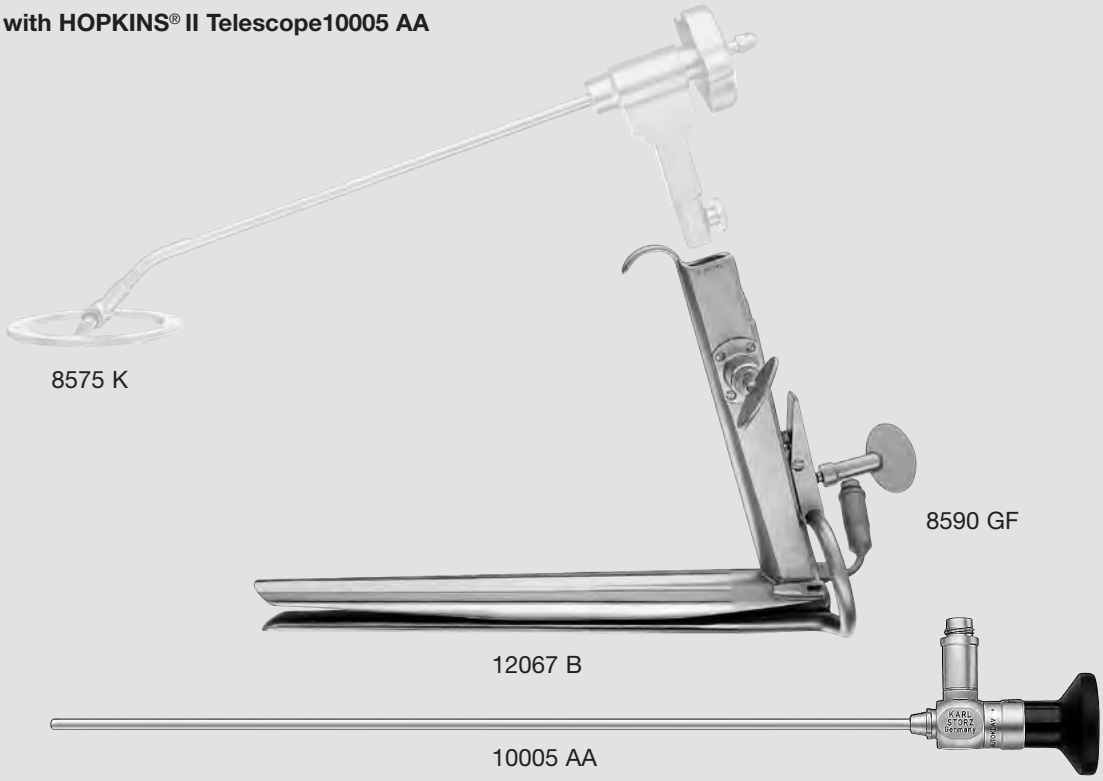
2-09$_6$

Components see chapter 13, SPARE PARTS AND ACCESSORIES

WEERDA **Distending Diverticuloscope for Stapling Technique**

KARL STORZ — ENDOSKOPE

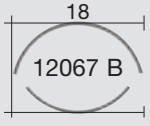
For use with HOPKINS® II Telescope10005 AA



Outer dimensions in mm:
proximal:

Spread: max. 40
min. 29

distal:



Spread: max. 65
min. 7

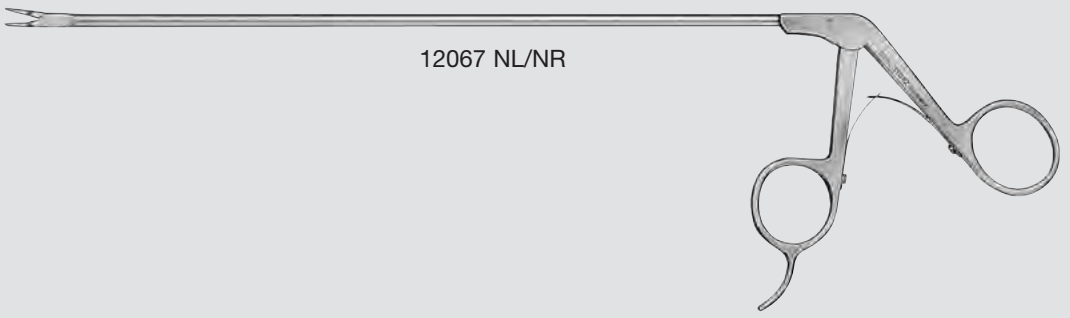
12067 B	WEERDA **Distending Diverticuloscope,** length 24 cm, without adaptor for Suction Tube 12067 M Proximal size open: max. 40 x 27 mm min. 29 x 27 mm Distal size open: max. 65 x 18 mm min. 7 x 18 mm
10005 AA	**HOPKINS® II Straight Forward Telescope 0°,** enlarged view, diameter 4 mm, length 30 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
8590 GF	**Fiber Optic Light Carrier,** for distal illumination, working length 14 cm
8575 K	**Laryngoscope Holder and Chest Support,** GÖTTINGEN model, with adjustment wheel including: **Support Rod,** movable, with metal ring, diameter 9 cm, length 34 cm
	or
8575 KC	BENJAMIN-PARSONS **Laryngoscope Holder and Chest Support,** GÖTTINGEN model, with adjustment wheel including: BENJAMIN-PARSONS **Support Rod,** movable, with metal ring, diameter 12 cm and 2 lateral set screws, length 34 cm

Components see chapter 13, SPARE PARTS AND ACCESSORIES

11-98₂

Instruments for Diverticuloscopes

Clip Forceps



12067 NL/NR

12067 NL — **Clip Forceps,** jaws curved to left, working length 30 cm, for use with Clip 8665 T

12067 NR — **Same,** jaws curved to right

8665 T — **Clip,** titanium LT 200, medium, 5 mm, sterile, package of 36 cartridges with 6 clips each, for use with Forceps 8665 L/R, 12067 NL/NR

3-11

BRONCHOSCOPY TRACHEOSCOPY

FLEXIBLE BRONCHOSCOPES	40-57
RIGID BRONCHOSCOPES FOR ADULTS	58-70
RIGID BRONCHOSCOPES FOR CHILDREN	71-89

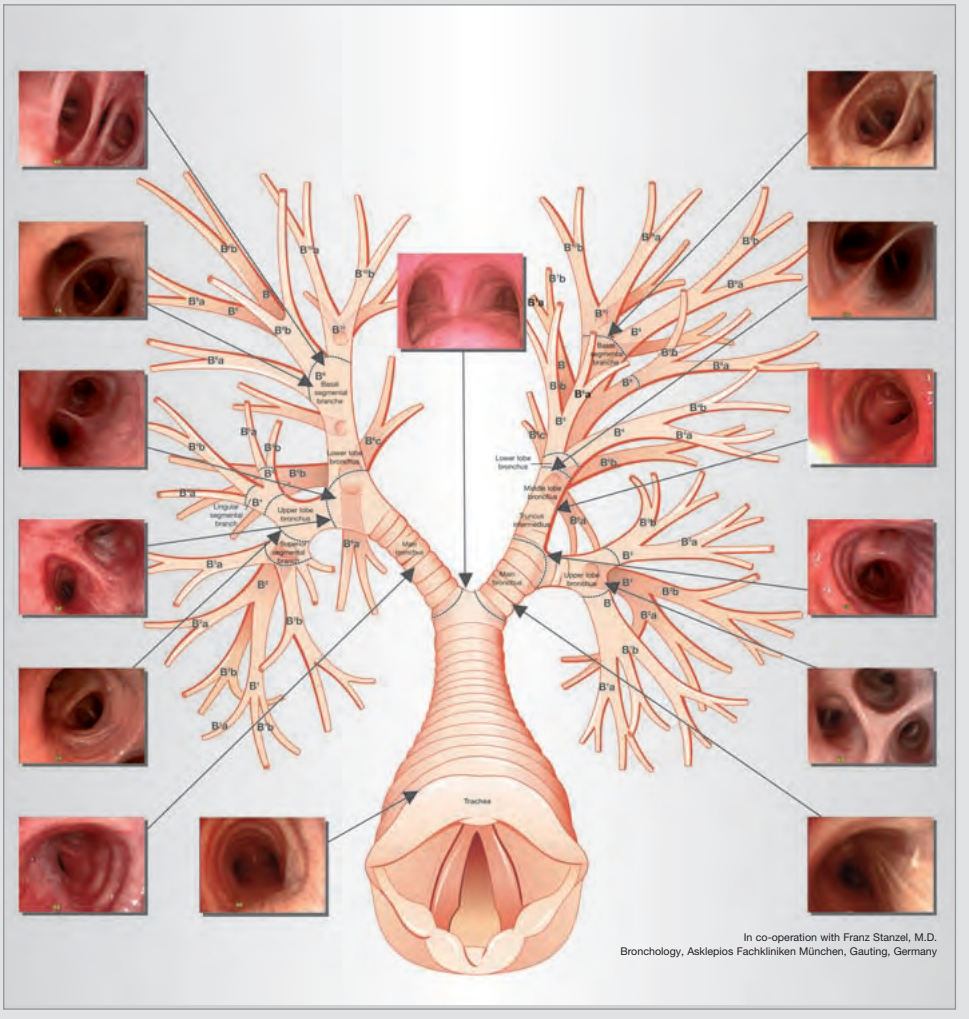
Bronchoscopy

Indications for flexible bronchoscopy:

- For routine examinations
- Treatment of acute respiratory problems in the intensive care unit
- Suction under visual control
- Use of catheters and brushes for cytology
- For obtaining secretions for bacteriological tests
- Localization of bleeding sites in the case of hemoptysis
- Functional examination when respiratory tract is unstable
- Therapeutic suction and irrigation
- Transbronchial lung biopsy
- Selective bronchiography
- Autofluorescence and photodynamic diagnosis

Indications for rigid bronchoscopy:

- Hemoptysis
- Tracheal stenosis
- Foreign body removal
- All bronchological interventions such as bougienage, removal of threads, hemostasis by means of electrocautery or laser
- Laser treatment
- Removal of tumors
- Confirmation of cell type in the case of previous, non-diagnostic fiber-optic bronchoscopy
- Removal of excess fibrin, mucous plugs
- Bronchography
- Autofluorescence and photodynamic diagnosis



In co-operation with Franz Stanzel, M.D.
Bronchology, Asklepios Fachkliniken München, Gauting, Germany

11-98$_2$

Video Bronchoscope for Autofluorescence NEW

for use with TELECAM SL II FI SCB 20 2130 11U1

KARL STORZ is expanding its line of flexible bronchoscopes with the new video bronchoscope with a distal chip for autofluorescence diagnosis. Users who no longer wish to miss out on the high image quality of videoscopes can now take advantage of the quality products of KARL STORZ in this field, too.

Whereas in the past comparatively heavy fiber optic endoscopes with a separate camera head were used in video endoscopy, this system delivers excellent color fidelity in both the white light and autofluorescence modes. An integrated button on the handle of the video bronchoscope allows rapid switching between the white light and the blue light modes.

In combination with the TELECAM SL II FI SCB control unit and the D-LIGHT C/AF, the new video bronchoscope for autofluorescence diagnosis offers outstanding image sharpness as well as excellent brightness and representation of detail.

Further information and accessories for the video bronchoscope for autofluorescence
see chapter 4, AUTOFLUORESCENCE

3-11

Video Bronchoscope for Autofluorescence NEW

for use with TELECAM SL II FI SCB 20 213 011U1

KARL STORZ — ENDOSKOPE

11900 AP

11900 AP **Video Bronchoscope for Autofluorescence and White Light Diagnosis,** color system **PAL,** including mounted Suction Unit 11900 AE, for use with TELECAM SL II FI SCB **20** 2130 11U1

Working channel:	2.3 mm
Direction of view:	0°
Angle of view:	120°
Deflection:	up 180°, down 100°
Depth of view:	3 – 50 mm
Working length:	61 cm
Outer diameter:	6.2 mm

11900 AN **Same, NTSC**

Following accessories included:

27677 KV	**Case**
20 2130 70	**Video Connecting Cable**
13272	**Mouth Piece**
11001 KL	**Biopsy Forceps,** spoon-shaped, round, flexible, double action jaws, diameter 1.8 mm, working length 120 cm
13242 LX	**Leakage Tester,** with blower and manometer
11025 XE	**Pressure Compensation Cap,** for ventilation during gas sterilization
27651 B	**Cleaning Brush,** flexible, length 100 cm
13991 SS	**Irrigation Tube,** for working channel
27656 B	**Instrument Oil,** 50 ml
13990 SFN	**Protective Film**

3-11

Optional accessories see pages 52-53

Further information and accessories for the video bronchoscope for autofluorescence see chapter 4, AUTOFLUORESCENCE

Video Bronchoscope

for use with TELECAM SL II SCB 20 2130 11
and TELE PACK 20 0430 12-020/20 0431 12-020

KARL STORZ — ENDOSKOPE

11900 BP

11900 BP **Video Bronchoscope, PAL,** including mounted Suction Unit 11900 AE, for use with TELECAM SL II SCB **20** 2130 11 and TELE PACK **20** 0430 12-020

Working channel:	2.3 mm
Direction of view:	0°
Angle of view:	120°
Deflection:	up 180°, down 100°
Depth of view:	3 – 50 mm
Working length:	61 cm
Outer diameter:	6.2 mm

11900 BN **Same, NTSC,** for use with TELECAM SL II SCB **20** 2130 11 and TELE PACK **20** 0431 12-020

Following accessories included:

27677 KV	**Case**
20 2130 70	**Video Connecting Cable**
13272	**Mouth Piece**
11001 KL	**Biopsy Forceps,** spoon-shaped, round, flexible, double action jaws, diameter 1.8 mm, working length 120 cm
13242 LX	**Leakage Tester,** with blower and manometer
11025 XE	**Pressure Compensation Cap,** for ventilation during gas sterilization
27651 B	**Cleaning Brush,** flexible, length 100 cm
13991 SS	**Irrigation Tube,** for working channel
27656 B	**Instrument Oil,** 50 ml
13990 SFN	**Protective Film**

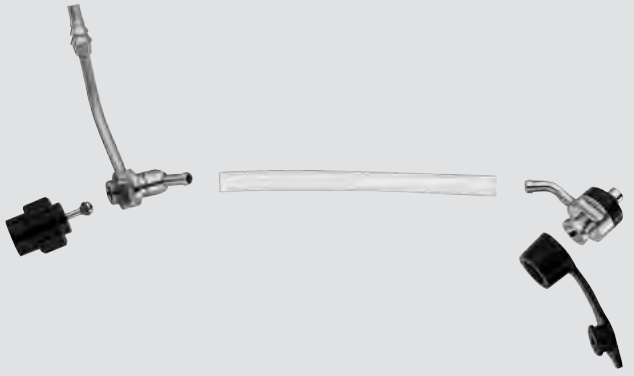
3-11

Optional accessories see pages 52-53

Further camera systems and light sources suitable for use with video bronchoscopes
see catalog TELEPRESENCE

Video Bronchoscope

for use with TELECAM SL II SCB 20 2130 11
and TELE PACK 20 0430 12-020/20 0431 12-020



11900 AE	**Suction Unit,** set for Video Bronchoscopes 11900 AP/AN and 11900 BP/BN, **autoclavable** including: **Suction Valve** **Valve Adaptor** **Connecting Cable,** package of 10 **Suction Cylinder** **Rubber Leaflet Valve,** package of 10

Please note:
Further instruments suitable for use with Video Bronchoscopes 11900 AP/AN and 11900 BP/BN with diameter ≤ 1.8 mm, see pages 50-55

TELECAM camera systems see catalog TELEPRESENCE

Components see chapter 13, SPARE PARTS AND ACCESSORIES

5-04

TELE PACK – The Mobile Compact Solution

Documentation Terminal for Video Bronchoscope

Because of the large number and size of units needed, such as camera, light source, printer and monitor, doctors frequently encounter space problems. The **TELE PACK** documentation terminal by KARL STORZ offers the perfect solution for these problems.

TELE PACK provides a multifunctional and compact solution that has been designed for all fields of specialty – use it as an endoscopic video unit in the ER, as a compact system at the doctor's office or as a secondary system in the OR. KARL STORZ **TELE PACK** comprises the following functional units:

- **Camera Control Unit**
- **Cold Light Source: 24 watt HiLux high performance light source**
- **Storage of image and audio data on a PCMCIA memory card**
- **Integrated LCD color monitor**
- **Integrated keyboard**

Additional Features:

- **Still image**
- **World power supply 100 – 240 VAC, 50/60 Hz**
- **Connector for external monitor and additional peripheral units, e.g. video recorder, video printer etc.**

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TELE PACK – The Mobile Compact Solution

Documentation Terminal for Video Bronchoscope

20 0430 12-020 **PAL** **KARL STORZ TELE PACK**

including:

CF Memory Card, 128 MB, incl. PCMCIA adaptor

Mains Cord

BNC/BNC Video Cable, length 180 cm

S-Video (Y/C) Connecting Cable, length 180 cm

Adaptor, for connecting video bronchoscopes to TELE PACK

20 0431 12-020 **NTSC** **KARL STORZ TELE PACK**

including:

CF Memory Card, 128 MB, incl. PCMCIA adaptor

Mains Cord

BNC/BNC Video Cable, length 180 cm

S-Video (Y/C) Connecting Cable, length 180 cm

Adaptor, for connecting the video bronchoscope to TELE PACK

Specifications:

Power input	72 W
Power supply	100-240 VAC, 50/60 Hz/12VDC
Dimensions w x h x d	305 x 145 x 285 mm (folded)
Weight	5.6 kg
Video output	- Composite signal at BNC socket - S-Video signal to 4-pin Mini-DIN socket (2x)
Video input	Composite signal at BNC socket
Input	Keyboard input for character generator and control functions at 6-pin Mini-DIN socket
Control output	2x 3.5 mm stereo jack plug (ACC 1, ACC 2)

Illumination	- Lamp type: light arc lamp (HiLux) - Color temperature: 5500 K - Power output: 24 W
Storage format	- Number of pixels in BMP (PAL): 768 x 600 - Number of pixels (NTSC): 640 x 508
TFT color display	12" monitor
LCD display	16-bit color depth
LCD display resolution	800 x 600
Certified to:	IEC 601-1, 601-2-18, CSA 22.2 No. 601, UL 2601 and CE according to MDD, protection class 1/BF

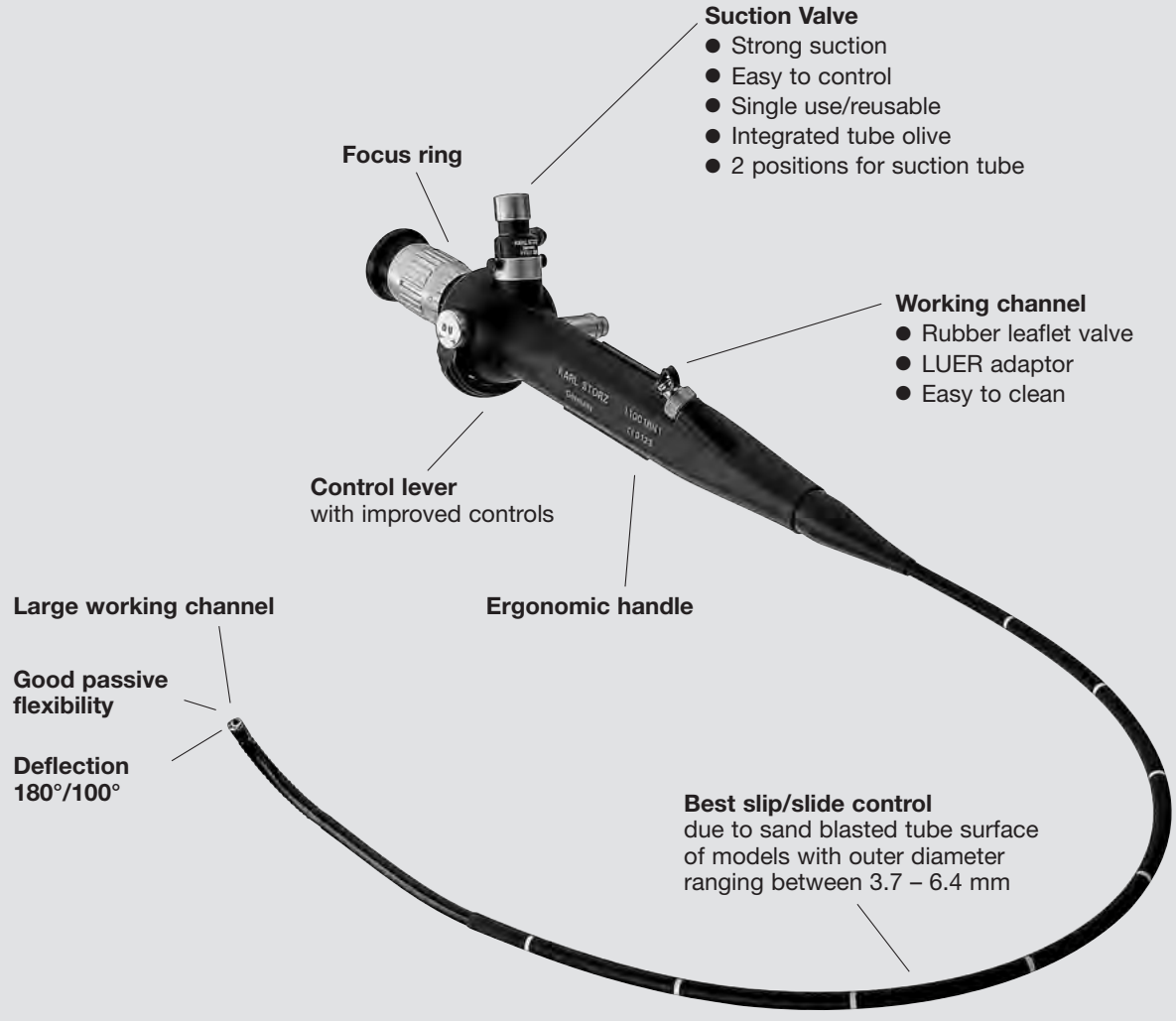
3-11

Components see chapter 13, SPARE PARTS AND ACCESSORIES

Broncho-Fiberscopes

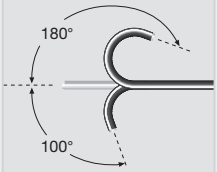
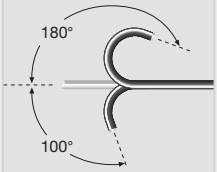
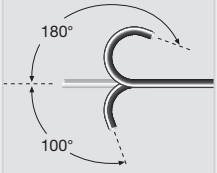
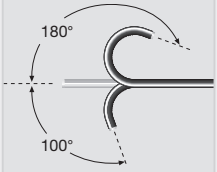
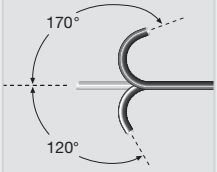
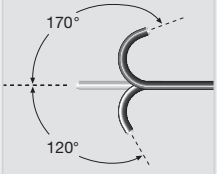
Special Features:

- **Large viewing angle and movable distal tip facilitates orientation**
- **Working channel for the use of operating instruments**
- **Functional: simultaneous suction and application of medication via removable suction valve**
- **Waterproof, fully immersible for cleaning and disinfection**
- **Simple leakage test takes only a few minutes and requires no additional accessories**
- **Gas-sterilizable with EtO and FO gas, Steris® and Sterrad®**
- **Recommended for use in conjunction with KARL STORZ ENDOVISION® TELECAM SL II PDD SCB System**
- **Exceptional optical quality of both lens and fiber optic image transmission bundle**
- **Resistant construction and robust mechanical components ensure long life of the instrument.**



5-04₁

Broncho-Fiberscopes

Broncho-Fiberscopes	Art. No.		Deflection up/down	Direction of view	Angle of view
6.4 mm x 54 cm Broncho-Fiberscope	11004 BC			0°	110°
5.6 mm x 54 cm Broncho-Fiberscope	11009 BC			0°	110°
5 mm x 54 cm Broncho-Fiberscope for Adults	11001 BN			0°	110°
3.7 mm x 54 cm Broncho-Fiberscope for Children	11002 BD			0°	90°
2.8 mm x 54 cm Broncho-Fiberscope	11003 BC			0°	90°
2.8 mm x 70 cm Broncho-Fiberscope, for examining segmental bronchi	11005 BC			0°	90°

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Broncho-Fiberscopes for Autofluorescence see chapter 4, AUTOFLUORESCENCE
Accessories included in delivery and optional accessories see pages 50-55

	Working length	Total length	Working channel inner diameter	Distal tip outer diameter	Accessories (included in delivery)						
					Case	Pressure Comp. Cap	Leakage Tester	Mouth Piece	Cleaning Brush	Biopsy Forceps	Grasping Forceps
	54 cm	82 cm	2.8 mm	6.4 mm	27677 BB	11025 E	13242 XL	13272	27651 C	11001 KL	11002 KS
	54 cm	82 cm	2.6 mm	5.5 mm	27677 BB	11025 E	13242 XL	13272	27651 C	11001 KL	11002 KS
	54 cm	82 cm	2.3 mm	5.2 mm	27677 BB	11025 E	13242 XL	13272	27651 B	11001 KL	11002 KS
	54 cm	82 cm	1.5 mm	3.6 mm	27677 BB	11025 E	13242 XL	13272	27651 AL	11003 MA	11003 MB
	54 cm	82 cm	1.2 mm	2.5 mm	27677 BB	11025 E	13242 XL	13272	27651 AK	11003 MA	11003 MB
	70 cm	98 cm	1.2 mm	2.5 mm	27677 BB	11025 E	13242 XL	13272	27651 AL	11003 MA	11003 MB

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Accessories

for Broncho-Fiberscopes and Video Bronchoscopes

KARL STORZ — ENDOSKOPE

Accessories included			Dia-meter	Length	for use with							
					11004 BC	11009 BC	11001 BN	11002 BD	11003 BC	11005 BC	11900 AP/AN	11900 BP/BN
	11003 MB	**Grasping Forceps,** flexible, double action jaws	1 mm	110 cm	–	–	–	●	●	●	–	–
	11002 KS	**Grasping Forceps,** alligator, flexible, double action jaws	1.8 mm	120 cm	●	●	●	–	–	–	●	●
	11003 MA	**Biopsy Forceps,** oval, flexible, double action jaws	1 mm	110 cm	–	–	–	●	●	●	–	–
	11001 KL	**Biopsy Forceps,** spoon-shaped, round, flexible, double action jaws	1.8 mm	120 cm	●	●	●	–	–	–	●	●
	11025 E	**Pressure Compensation Cap,** for ventilation during gas sterilization			●	●	●	●	●	●	–	–
	11025 XE	**Same**			–	–	–	–	–	–	●	●
	13242 XL	**Leakage Tester,** with bulb and manometer			●	●	●	●	●	●	–	–
	13242 LX	**Same**			–	–	–	–	–	–	●	●
	13272	**Mouth Piece**			●	●	●	●	●	●	●	●

5-061

Accessories

for Broncho-Fiberscopes and Video Bronchoscopes

KARL STORZ — ENDOSKOPE

Accessories included			for use with							
			11004 BC	11009 BC	11001 BN	11002 BD	11003 BC	11005 BC	11900 AP/AN	11900 BP/BN
	27651 C	**Cleaning Brush,** round, flexible, outer diameter 4 mm, for working channel diameter 2.4 – 3.6 mm, length 230 cm	●	●	–	–	–	–	–	–
	27651 B	**Cleaning Brush,** round, flexible, outer diameter 3 mm, for working channel diameter 1.8 – 2.6 mm, length 100 cm	–	–	●	–	–	–	●	●
	27651 AL	**Cleaning Brush,** round, flexible, outer diameter 2 mm, for working channel diameter 1.2 – 1.8 mm, length 150 cm	–	–	–	●	–	●	–	–
	27651 AK	**Cleaning Brush,** round, flexible, outer diameter 2 mm, for working channel diameter 1.2 – 1.8 mm, length 75 cm	–	–	–	–	●	–	–	–
	20 2130 70	**Video Connecting Cable**	–	–	–	–	–	–	●	●
	13991 SS	**Irrigation Tube**	–	–	–	–	–	–	●	●
	27656 B	**Instrument Oil,** 50 ml, silicone-free	–	–	–	–	–	–	●	●
	13990 SFN	**Protective Film**	●	●	●	●	●	●	●	●

5-06

Optional Accessories

for Broncho-Fiberscopes and Video Bronchoscopes

KARL STORZ — ENDOSKOPE

			Dia-meter	Length	for use with							
					11004 BC	11009 BC	11001 BN	11002 BD	11003 BC	11005 BC	11900 AP/AN	11900 BP/BN
	11002 KT	**Grasping Forceps,** alligator, round, flexible, double action jaws	1.8 mm	120 cm	●	●	●	–	–	–	●	●
	11002 KU	**Grasping Forceps,** spoon-shaped, serrated, flexible, double action jaws	1.8 mm	120 cm	●	●	●	–	–	–	●	●
	11002 KX	**Grasping Forceps,** alligator, serrated, 3x 4 teeth, flexible, double action jaws	1.8 mm	120 cm	●	●	●	–	–	–	●	●
	11002 KZ	**Grasping Forceps,** serrated, 1x 2 teeth, flexible, double action jaws	1.8 mm	120 cm	●	●	●	–	–	–	●	●
	11001 KM	**Biopsy Forceps,** spoon-shaped, round, with spike, fenestrated, flexible, double action jaws	1.8 mm	120 cm	●	●	●	–	–	–	●	●
	11001 KN	**Biopsy Forceps,** spoon-shaped, oval, fenestrated, flexible, double action jaws	1.8 mm	120 cm	●	●	●	–	–	–	●	●
	11001 KP	**Biopsy Forceps,** spoon-shaped, oval, with spike, fenestrated, flexible, double action jaws	1.8 mm	120 cm	●	●	●	–	–	–	●	●
	13250 KL	**Biopsy Forceps,** spoon-shaped, round, fenestrated, flexible, double action jaws	2.3 mm	120 cm	●	●	–	–	–	–	–	–
	13252 KS	**Grasping Forceps,** alligator, flexible, double action jaws	2.3 mm	120 cm	●	●	–	–	–	–	–	–

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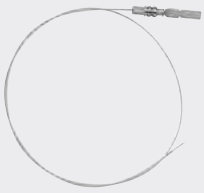
Optional Accessories

for Broncho-Fiberscopes and Video Bronchoscopes

KARL STORZ — ENDOSKOPE

			for use with							
			11004 BC	11009 BC	11001 BN	11002 BD	11003 BC	11005 BC	11900 AP/AN	11900 BP/BN
	10770 B	**Button Electrode,** flexible, with connector pin for unipolar coagulation, diameter 1.7 mm, length 80 cm	●	●	●	–	–	–	●	●
	11007 BS	**Brush,** for cytology, outer diameter 1.7 mm, working length 80 cm, with Handle 13266 H and Outer Tube 11007 S	●	●	●	–	–	–	●	●
	11007 E	**Brushes,** package of 10	●	●	●	–	–	–	●	●
	11007 S	**Outer Tube,** outer diameter 1.7 mm, working length 80 cm, for Brush 11007 BS, package of 10	●	●	●	–	–	–	●	●
	13266 H	**Handle,** for Brush 11007 BS	●	●	●	–	–	–	●	●
	11008	**Suction Catheter,** diameter 1.7 mm, length 100 cm, with Adaptor 10479 F	●	●	●	–	–	–	●	●

3-11

Optional Accessories

for Broncho-Fiberscopes

KARL STORZ — ENDOSKOPE

			for use with					
			11004 BC	11009 BC	11001 BN	11002 BD	11003 BC	11005 BC
	11008 E	**Catheter,** 5 Fr., without adaptor	●	●	●	–	–	–
	10479 F	**Adaptor,** for Suction Catheter 10468 D, 10478 D and 11008 E	●	●	●	–	–	–
	11301 CA	**Leaflet Valve,** for single use, package of 20	●	●	●	●	●	●
	11301 CB	**Suction Valve,** reusable	●	●	●	●	●	●
	11301 CD	**Irrigation Adaptor,** for suction valve attachment, for fiberscopes	●	●	●	●	●	●
	11301 CE	**Suction Valve,** for single use, package of 20	●	●	●	●	●	●
	11301 BM	**Adaptor,** for leakage test, for Belimed washer-disinfectors	●	●	●	●	●	●

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Optional Accessories

for Broncho-Fiberscopes

KARL STORZ — ENDOSKOPE

			for use with					
			11004 BC	11009 BC	11001 BN	11002 BD	11003 BC	11005 BC
	11301 FF2	**Adaptor for MIELE Cleaning Machines,** with security valve, for automatic leakage test of flexible KARL STORZ endoscopes	●	●	●	●	●	●
	11301 GG2	**Adaptor,** for cleaning and disinfecting the irrigation and working channels of flexible endoscopes, for MIELE-ETD washer-disinfectors	●	●	●	●	●	●
	11301 HH	**Adaptor for BHT Cleaning Machines,** for automatic leakage test of flexible KARL STORZ endoscopes	●	●	●	●	●	●
	11301 KK2	**Adaptor,** for working channel, for MIELE washer-disinfectors (ETD 03), 11301 FF2 and 11301 GG2 has to be added to order	●	●	●	●	●	●
	11301 D4	**LED Battery Light Source for Endoscopes,** with coarse thread, LED technology, can be connected to all KARL STORZ endoscopes, brightness > 50,000 lux, burning time > 120 min, weight approx. 150 g ready for use, **suitable for surface disinfection,** with 2 Photo Batteries 121306 P	●	●	●	●	●	●
	121306 P	**Photo Battery,** Lithium 3 V, CR 123 A						

3-11

UNIMAT® 30 NEW

Suction System,
recommended System Configuration

KARL STORZ — ENDOSKOPE

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 01 **UNIMAT® 30, Suction Pump Set,**
power supply 230 VAC, 50/60 Hz
including:
Bacterial Filter
Secretion Bottle, 2 l
Bottle Cap, with grip
Connecting Tube, short
Patient Tube
Overflow Case
Mains Cord, length 300 cm
VACUsafe Promotion Pack Suction*

25 3200 01C **Same,**
power supply 115 VAC, 50/60 Hz

Specifications:

Suction performance	30 l/min
Vacuum	up to 85kPa, 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 & certifications	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

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Optional accessories for UNIMAT® 30 see page 57
Components see chapter 13, SPARE PARTS AND ACCESSORIES

Optional Accessories

for UNIMAT® 30

KARL STORZ — ENDOSKOPE

Accessories

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

Single-use accessories from mtp*

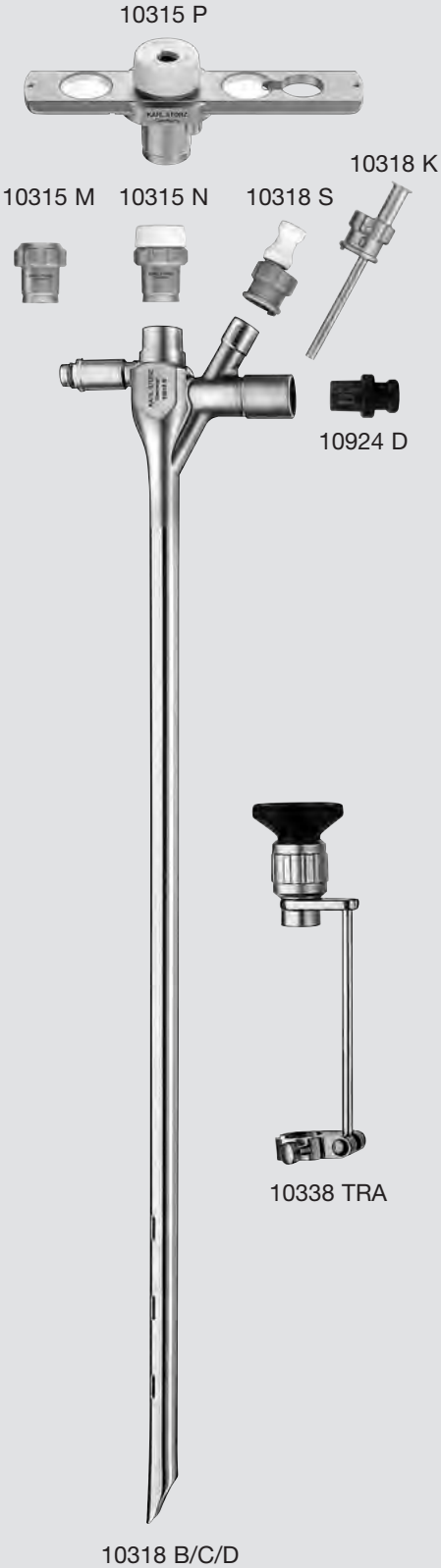
	VACUsafe Canister, 1.5 l, 2 l and 3 l
	VACUsafe Suction Bag, 1.5 l, 2 l, 3 l, with filter for single use, color code: green
	Gelling Granulate, in 20 g bag
	VACUsafe Suction Tube, with red and blue multiadaptor for single use, unsterile, length 170 cm
	VACUsafe Connecting Tube, with green multiadaptors,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

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

3-11

Universal Bronchoscopes for Adults

Standard model with fiber optic light carrier for distal illumination

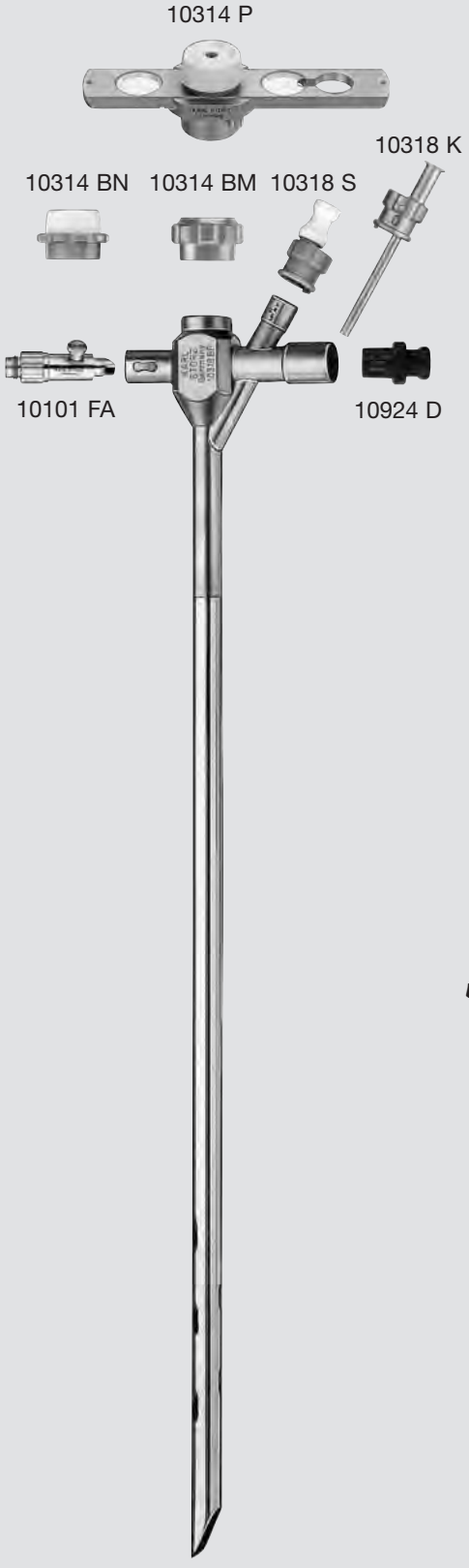


	10318 B	**Universal Bronchoscope,** with Fiber Optic Light Carrier 10318 L, size 8.5, length 43 cm
	10318 C	**Same,** size 7.5
	10318 D	**Same,** size 6.5
	10315 M	**Glass Window Plug**
	10315 N	**Rubber Telescope Guide**
	10315 P	FLUVOG **Adaptor,** with sliding glass window plug, sealing cap, notched lens and keyhole opening, movable
	10318 K	**Injection Cannula,** for positive pressure assisted ventilation system, LUER-Lock, outer diameter 3.5 mm
	10318 S	**Instrument Guide,** for suction catheter
	10338 TRA	**Adjustable Magnifier, autoclavable,** swing-away type, with ring adaption
	10924 D	**Adaptor,** for respirator
NEW	10924 DL	**Adaptor,** for respirator, long version

11-98$_3$

Universal Bronchoscopes for Adults

with proximal illumination



10318 BP/CP/DP

Special features:

- **Absence of distal light carrier does not restrict inner diameter**
- **Prismatic Light Deflector 10101 FA inserted proximally ensures best illumination and enables full use of lumen through operating instruments**
- **Excellent view of operation area**
- **Smooth lumen allows insertion of flexible bronchoscopes**

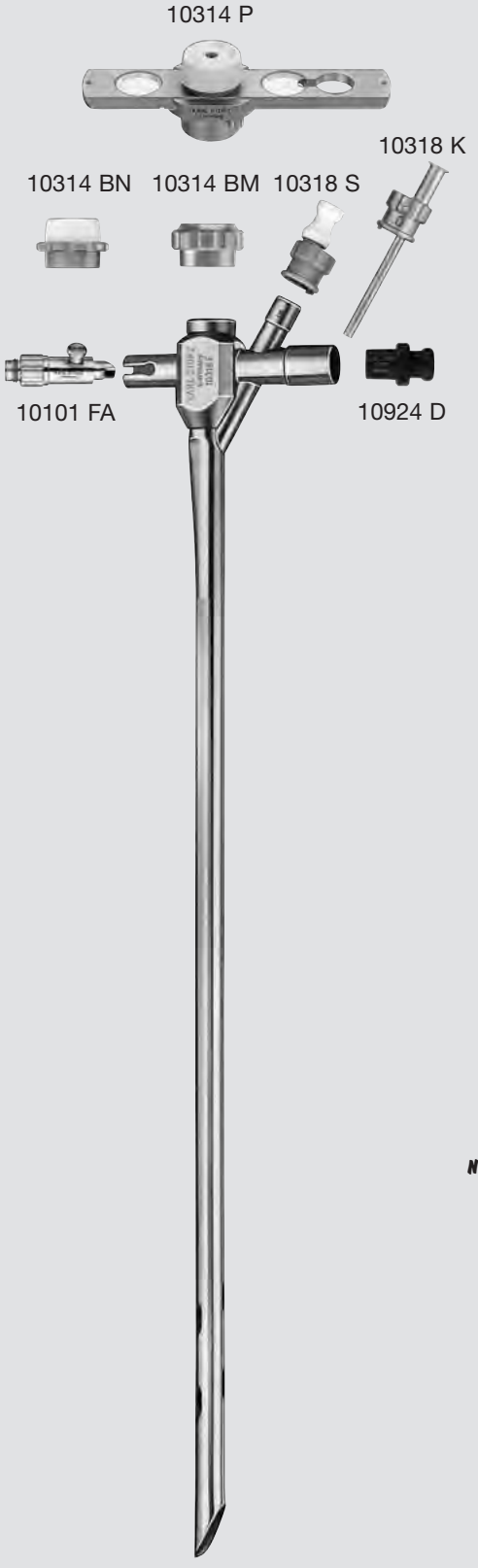
	10318 BP	**Bronchoscope Tube Universal,** without distal fiber optic light carrier, for use with proximally insertable Prismatic Light Deflector 10101 FA, size 8.5, length 43 cm
	10318 CP	**Same,** size 7.5
	10318 DP	**Same,** size 6.5
	10101 FA	**Prismatic Light Deflector, autoclavable,** with connection to fiber optic light cable
	10314 BM	**Glass Window Plug**
	10314 BN	**Rubber Telescope Guide**
	10314 P	FLUVOG **Adaptor,** with observation window, cap with rubber seal and with window, adjustable
	10318 K	**Injection Cannula,** for positive pressure assisted ventilation system, LUER-Lock, outer diameter 3.5 mm
	10318 S	**Instrument Guide,** for suction catheter
	10924 D	**Adaptor,** for respirator
NEW	10924 DL	**Adaptor,** for respirator, long version

11-98$_3$

Full Lumen Operating Tracheo-Bronchoscopes

with proximal illumination

KARL STORZ — ENDOSKOPE



Special features:

- **Absence of distal light carrier does not restrict inner diameter**
- **Prismatic Light Deflector 10101 FA inserted proximally ensures best illumination and enables full use of lumen through operating instruments**
- **Excellent view of operation area**
- **Round inner diameter allows insertion of bronchial bougies ranging between 30 up to 37 Fr.**
- **Especially suitable for the application of stents**
- **Distal end of tracheoscopes without lateral holes for more effective oxygen supply in the axial direction, i. e. in case of tumors in the upper tracheal area**

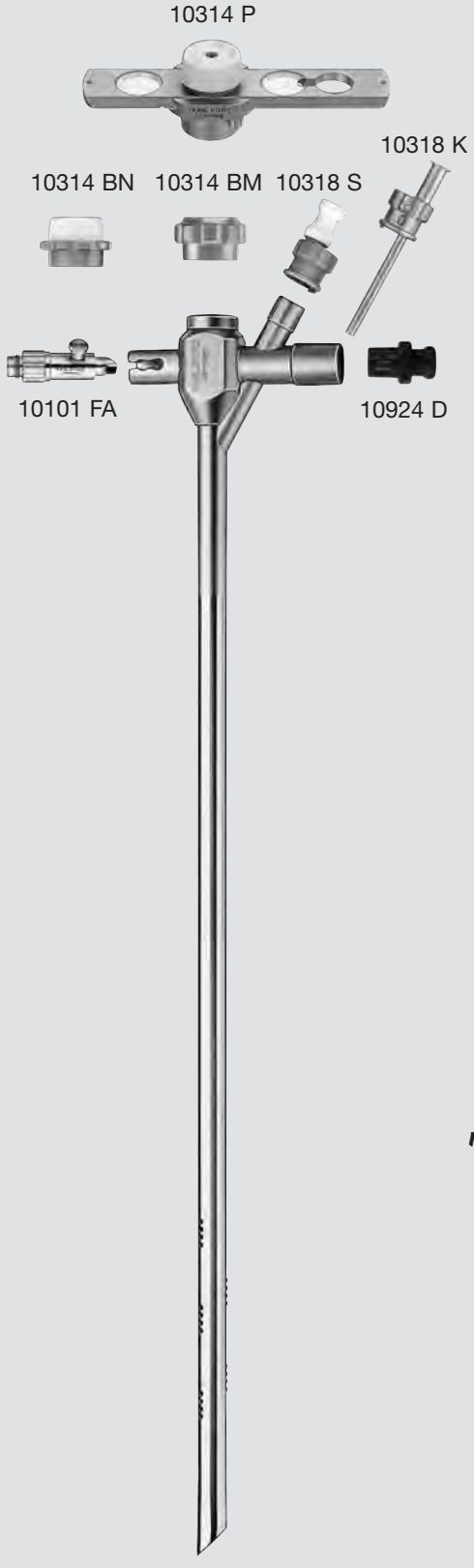
	10318 F	**Full Lumen Operating Tracheoscope,** size 12 mm, length 33 cm
	10318 FL	**Full Lumen Operating Bronchoscope,** size 12 mm, length 43 cm
	10318 G	**Full Lumen Operating Tracheoscope,** size 14 mm, length 33 cm
	10101 FA	**Prismatic Light Deflector, autoclavable,** with connection to fiber optic light cable
	10314 BM	**Glass Window Plug**
	10314 BN	**Rubber Telescope Guide**
	10314 P	FLUVOG **Adaptor,** with observation window, cap with rubber seal and with window, adjustable
	10318 K	**Injection Cannula,** for positive pressure assisted ventilation system, LUER-Lock, outer diameter 3.5 mm
	10318 S	**Instrument Guide,** for suction catheter
	10924 D	**Adaptor,** for respirator
NEW	10924 DL	**Adaptor,** for respirator, long version

Further tracheoscopes see catalog ENT, ESOPHAGOSCOPY – BRONCHOSCOPY, chapter 10, LARYNGOSCOPY

11-98$_3$

Full Lumen Operating Tracheo-Bronchoscopes

with proximal illumination



Special features:

- **Absence of distal light carrier does not restrict inner diameter**
- **Prismatic Light Deflector 10101 FA inserted proximally ensures best illumination and enables full use of lumen through operating instruments**
- **Excellent view of operation area**
- **Round inner diameter allows insertion of bronchial bougies ranging between 30 up to 37 Fr.**
- **Distal end beveled 45°, round airholes; especially suited for the application of stents.**

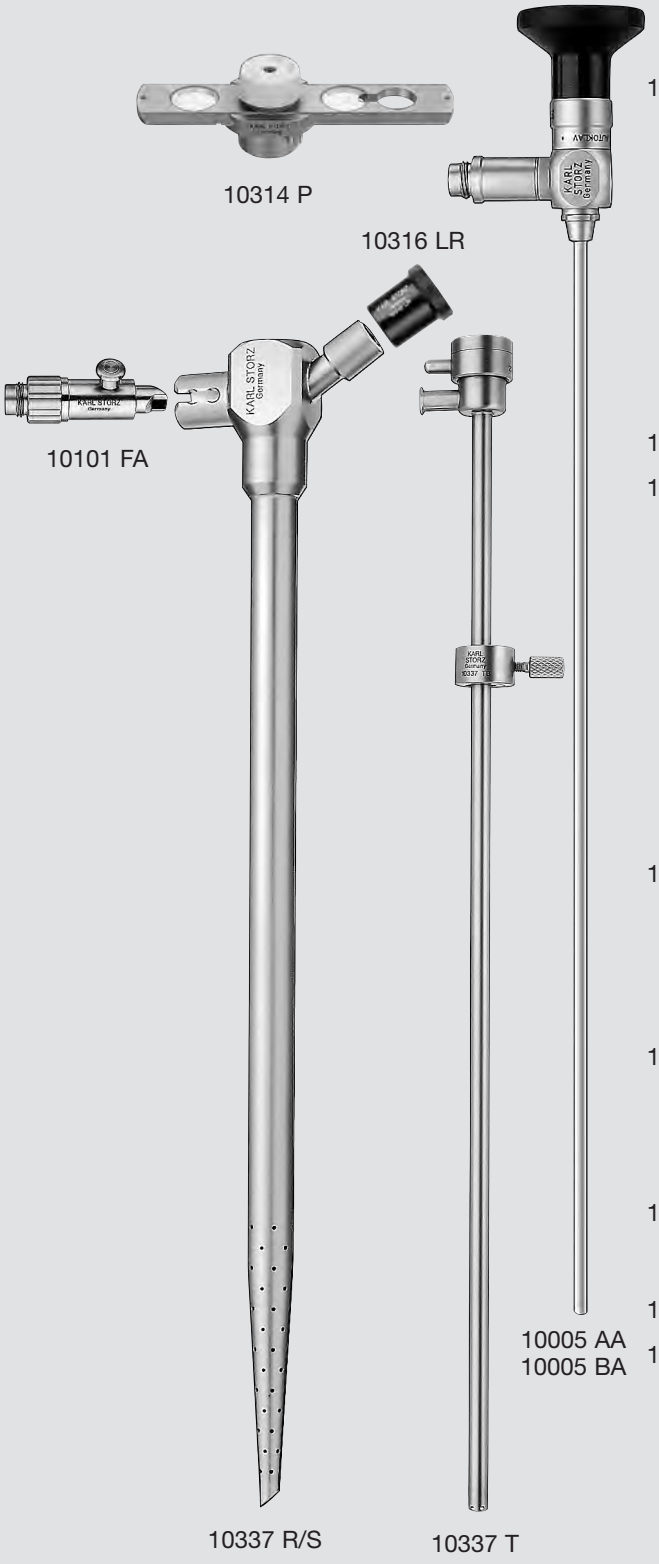
	10318 ER	**Full Lumen Operating Bronchoscope,** size 11 mm, length 43 cm, modified for application of stents, distal end with lateral airholes and 45° oblique beak, for use with Prismatic Light Deflector 10101 FA, color code: green
	10318 GL	**Same,** size 14 mm, color code: red
	10101 FA	**Prismatic Light Deflector, autoclavable,** with connection to fiber optic light cable
	10314 BM	**Glass Window Plug**
	10314 BN	**Rubber Telescope Guide**
	10314 P	FLUVOG **Adaptor,** with observation window, cap with rubber seal and with window, adjustable
	10318 K	**Injection Cannula,** for positive pressure assisted ventilation system, LUER-Lock, outer diameter 3.5 mm
	10318 S	**Instrument Guide,** for suction catheter
	10924 D	**Adaptor,** for respirator
NEW	10924 DL	**Adaptor,** for respirator, long version

11-98₂

Dilatation Tracheoscopes NEW

GRONINGEN Model

KARL STORZ — ENDOSKOPE



10337 R	**Optical Dilation Tracheoscope,** GRONINGEN model, rigid, with distance markings, for dilation for stenosis and tumors in the upper trachea, distal tapered with lateral ventilation holes, proximal with attachment for oxygen, outer diameter 12 mm, length 30 cm, for use with HOPKINS® II Telescopes 10005 AA and BA, Prismatic Light Deflector 10101 FA, Adaptor for Respirator 10316 LR and adjustable FLUVOG attachment, with window and Rubber Seal 10314 P
10337 S	**Same,** outer diameter 8 mm
10337 T	**Optical Intubation Tracheoscope,** GRONINGEN model including: **Sheath,** for insertion of endotracheal tubes under optical control, proximal with LUER-Lock and distal with lateral holes for anesthetic gases, outer diameter 5.5 mm, length 30 cm, for use with HOPKINS® II Telescopes 10005 AA and BA **Distance Ring,** with fixation screw for length adjustment of the endotracheal tubes
10005 AA	**HOPKINS® II Straight Forward Telescope 0°,** enlarged view, diameter 4 mm, length 30 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
10005 BA	**HOPKINS® II Forward-Oblique Telescope 30°,** enlarged view, diameter 4 mm, length 30 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red
10314 P	FLUVOG **Adaptor,** with observation window, cap with rubber seal and with window, adjustable
10316 LR	**Adaptor,** for respirator
10101 FA	**Prismatic Light Deflector, autoclavable,** with connection to fiber optic light cable

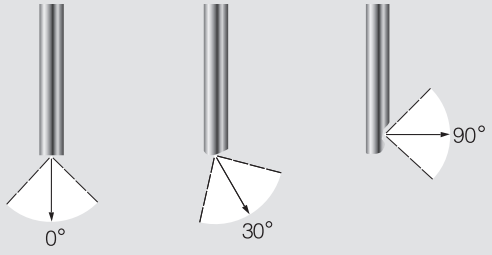
3-11

Components see chapter 13, SPARE PARTS AND ACCESSORIES

10320 AA

For use with Bronchoscopes 10318, Optical Forceps 10350 and Deflecting Device 10357

10320 AA	**HOPKINS® Straight Forward Telescope 0°,** diameter 5.5 mm, length 50 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
10320 BA	**HOPKINS® Forward-Oblique Telescope 30°,** diameter 5.5 mm, length 50 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red
10320 DA	**HOPKINS® Lateral Telescope 90°,** diameter 5.5 mm, length 50 cm, **autoclavable,** fiber optic light transmission incorporated, color code: blue



10320 AA 10320 BA 10320 DA

5-04

Telescopes for Autofluorescence and Photodynamic Diagnosis (PDD) see chapter 4, AUTOFLUORESCENCE

Optical Forceps

10320 AA/BA

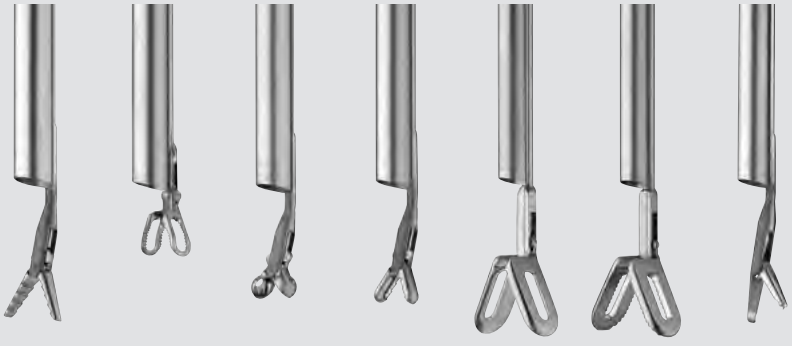
10350 L

Special features:

- **The jaws of the forceps and the region of biopsy are well visualized prior to and during the procedure.**
- **Foreign bodies can now be removed quickly under optical control.**
- **The spring-action handle of the grasping forceps prevents excess pressure being applied to the foreign body.**
- **The depth of cut during biopsy is much easier to assess.**

For use with HOPKINS® Telescopes 10320 AA/BA and Universal Bronchoscopes 10318 B – CP, size 8.5 up to 7.5

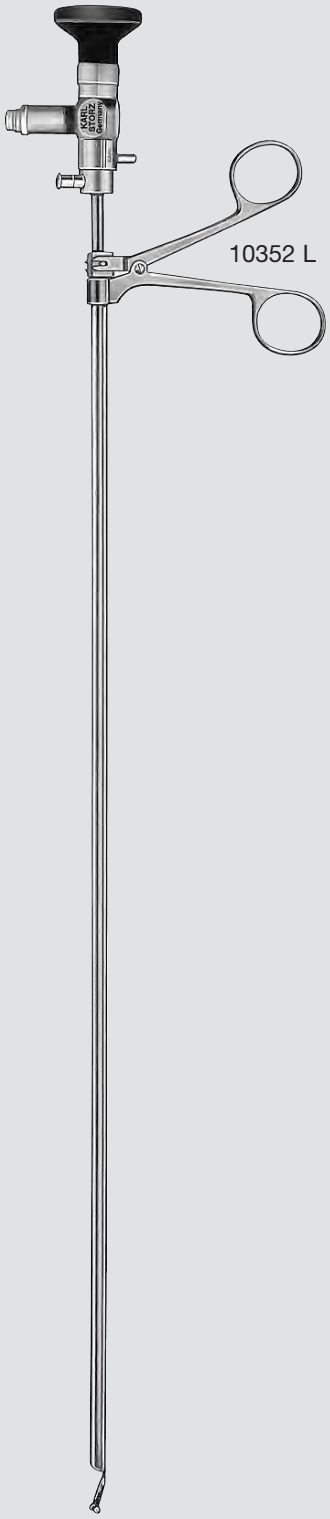
	10350 HF	**Optical Forceps,** alligator, for hard foreign bodies, large jaws, with spring-action handle
	10350 KF	**Optical Forceps,** for peanuts and soft foreign bodies, with spring-action handle
	10350 L	**Optical Forceps,** spoon-shaped, round, for biopsy
	10350 U	**Optical Forceps,** universal, for biopsy, for the removal of foreign bodies and denatured tissue
NEW	10350 M	**Optical Forceps,** large jaws, sharp, for removing large fragments of tissue, for use with HOPKINS® Telescope 10320 AA
NEW	10350 MS	**Optical Forceps,** large jaws, blunt, serrated, for removing large foreign bodies, for use with HOPKINS® Telescope 10320 AA
NEW	10350 ST	**Optical Forceps,** for repositioning and removing stents, one fixed jaw



10350 HF 10350 KF 10350 L 10350 U 10350 M 10350 MS 10350 ST

11-98$_3$

Optical Forceps



Special features:

- **The jaws of the forceps and the region of biopsy are well visualized prior to and during the procedure.**
- **Foreign bodies can now be removed quickly under optical control.**
- **The spring-action handle of the grasping forceps prevents excess pressure being applied to the foreign body.**
- **The depth of cut during biopsy is much easier to assess.**

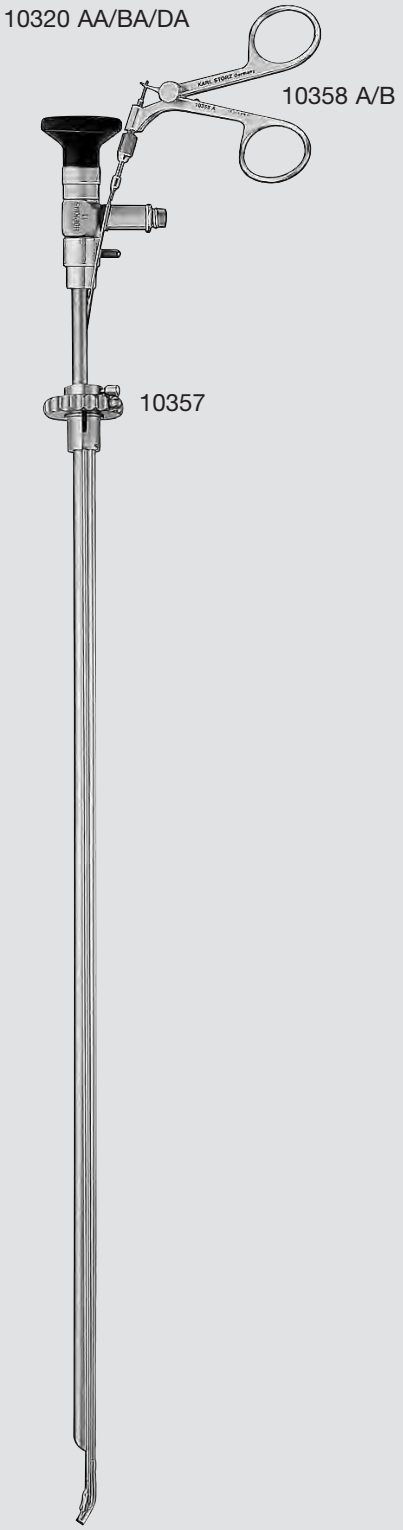
For use with HOPKINS® Telescope 10328 AA and Universal Bronchoscopes 10318 B – DP, size 8.5 to 6.5

	10328 AA	**HOPKINS® Straight Forward Telescope 0°,** diameter 4.5 mm, length 50 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
	10352 H	**Optical Forceps,** alligator, for hard foreign bodies
NEW	10352 KF	**Optical Forceps,** for peanuts and soft foreign bodies, with spring-action handle
	10352 L	**Optical Forceps,** spoon-shaped, round, for biopsy
	10352 U	**Optical Forceps,** universal, for biopsy, for removal of foreign bodies and denatured tissue

10352 H 10352 KF 10352 L 10352 U

11-98₂

Working length 43 cm



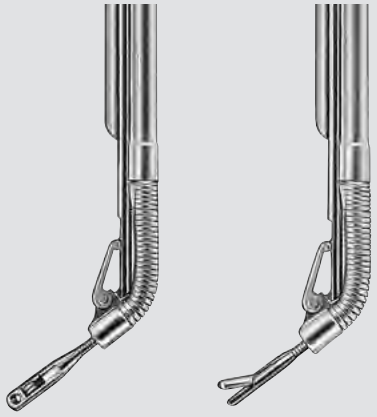
For use with Universal Bronchoscopes with distal illumination 10318 B/C, size 8.5 and 7.5 and HOPKINS® Telescopes 10320 AA/BA/DA

10357 **Deflecting Device,** with telescope guiding tube from proximal to distal end

Instruments for use with Deflecting Devices 10357:

10358 A **Flexible Forceps,** spoon-shaped, for biopsy, for removal of denaturated tissue, working length 60 cm

10358 B **Flexible Biopsy Forceps,** spoon-shaped, small size, for perbronchial lung biopsy, working length 65 cm



10357
10358 A

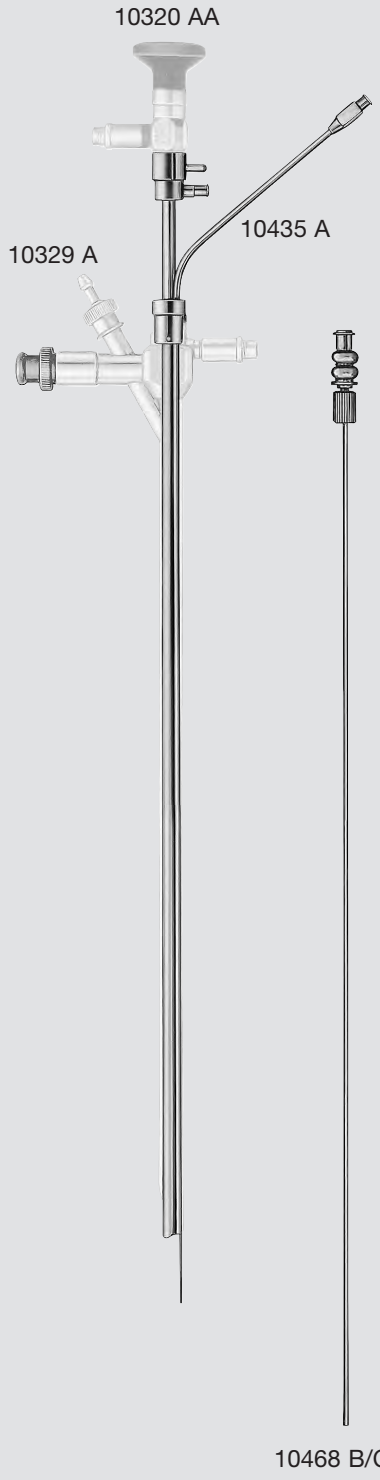
10357
10358 B

The jaws of the Flexible Biopsy Forceps 10358 A can be mechanically pressed against the intact mucosa. This enables collecting material which would slip off a conventional forceps during tangential grasping.

11-98₂

Rigid Instrument Guide

with Antifog System
Accessories



For use with HOPKINS® Telescope 10320 AA and Universal Bronchoscopes 10318 B – D, size 8.5 to 6.5

10329 A	**Instrument Guide,** with A. F. (anti-fog) device, can be attached to bronchoscope

Instruments for use with HOPKINS® Telescope 10320 AA and Instrument Guide 10329 A

10435 A	**Puncture Needle,** for puncture biopsy, diameter 1.4 mm, working length 48 cm, for histology
10468 B	**Suction Catheter,** 7 Fr., with Adaptor 10479 B
10468 C	**Same,** 6 Fr., with Adaptor 10479 C
10468 D	**Same,** 5 Fr., with Adaptor 10479 F
10478 D	**Suction Catheter,** 5 Fr., only, package of 6
10479 B	**Adaptor,** for Suction Catheter 10468 B/10478 B
10479 C	**Same,** for Suction Catheter 10468 C/10478 C
10479 F	**Same,** for Suction Catheter 10468 D/10478 D

Oxygen is directed at the lens through a channel in Instrument Guide 10329 A which prevents fogging of the telescope.

11-98₂

TONN **Stent Applicator**

Tracheobronchial stents are widely used in bronchology. Indications are primarily malignant and benign tracheobronchial stenoses, but may also include tracheo-esophageal fistula and, to a certain extent, tracheobronchial malacia. It concerns mostly patients who cannot undergo surgery for functional and/or prognostic reasons. Of the three basic stent types available, i.e. polymer, metal and hybrid, the DUMON silicone stent is the most commonly used worldwide[1]. Since the beginning of the 90s, this stent is available in various sizes and diameters, also as bifurcation stent. Within 10 years, the "Dumon stent" has de facto acquired "gold standard" status[2].

A rigid bronchoscope is required to facilitate stent placement. Not only does this instrument enable insertion of this so-called "foreign body", it also – if necessary – performs repositioning and extraction. Prior to stent placement, all other interventions, such as LASER treatment, tumor resection and stenosis dilatation, are performed.

The stenosis/fistula are then measured. A stent with the appropriate diameter and length is selected on the basis of existing endobronchial conditions. A "rule of thumb" is to select a stent that is approx. two millimeters thicker than the outer diameter of the bronchoscope with the largest diameter, which is to be passed through the stenosis. In the case of malignant stenosis, the distal and proximal end of the stent should be in between 0.5 cm and 1.0 cm longer than the stenosis, in order to pass it successfully.

The silicone stent must be folded before placement in the bronchial system. KARL STORZ has designed a special applicator system for this purpose. The stent to be deployed is first placed in the folding block, folded and then advanced through the applicator system. Care should be taken that the stent and applicator is lubricated with a lubricant suitable for use with endoscopes. The applicator system can then be pushed through the bronchoscope or tracheoscope. The stent is "released" when the applicator system and the broncho/tracheoscope is withdrawn. X-Ray control is often helpful, but not absolutely necessary. Should repositioning be required, the stent can be moved backwards and forwards with an optical foreign body forceps.

Silicone bifurcation stents can also be placed using this applicator system.

Please note: the FREITAG dynamic stents are not suitable for this applicator system. These require a stent forceps[2] specifically designed by KARL STORZ for this purpose.

References:
[1] Dumon JF: A dedicated tracheobronchial stent. Chest 1990;97:328-332
[2] Freitag L: „Tracheobronchiale Stents" in Interventional Bronchoscopy, 171-185, Karger, Basel, 2000

H. TONN, M.D.,
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Klinikum Hannover Oststadt,
Klinik für Pneumologie,
Hannover, Germany

Please note:

The TONN **Stent Applicators 10520, 10530, 10540 and 10550 are available from:**

NOVATECH SA
Z.I. Athélia III – Voie Antiope
13705 La Ciotat Cédex
FRANCE

Tel: +33 (0) 890 710 608
Fax: +33 (0) 890 710 609

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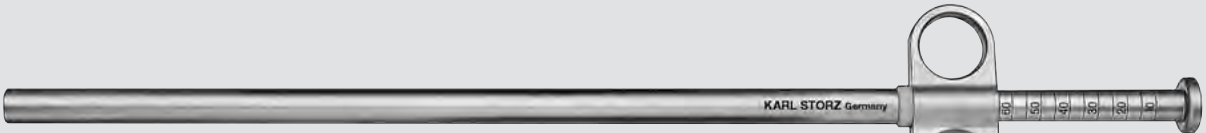
TONN **Stent Applicator**

10521/22/23, 10531/32/33, 10542, 10552

10524/10534/10544/10554



10525/10535/10545/10555

10526/10536/
10546/10556

10520 TONN **Stent Applicator,** for placement of DUMON tracheobronchial silicone stents with outer diameter 14 – 18 mm and max. 10 cm length, for use with Full Lumen Operating Tracheoscope 10318 GL, size 14 mm, length 43 cm, color code: blue

including:
Basic Block
Folding System
Clamping Rod
Loading Rod
Introducer Tube, with 2-ring handle
Pusher

10530 TONN **Stent Applicator,** for placement of DUMON tracheobronchial silicone stents with outer diameter 14 – 18 mm and max. 16 cm length, for use with Full Lumen Operating Tracheoscope 10318 GL, size 14 mm, length 43 cm, color code: red

including:
Basic Block
Folding System
Clamping Rod
Loading Rod
Introducer Tube, with 2-ring handle
Pusher

10540 TONN **Stent Applicator,** for placement of DUMON tracheobronchial silicone stents with outer diameter 8 – 13 mm and max. 10 cm length, for use with Full Lumen Operating Bronchoscope 10318 ER, size 11 mm, length 43 cm, color code: green

including:
Basic Block
Folding System
Clamping Rod
Loading Rod
Introducer Tube, with 2-ring handle
Pusher

10550 TONN **Stent Applicator,** for placement of DUMON tracheobronchial silicone stents with outer diameter 9 – 12 mm and max. 6 cm length, for use with Bronchoscope Tube Universal 10318 DP, size 6.5 mm, length 43 cm, color code: white

including:
Basic Block
Folding System
Clamping Rod
Loading Rod
Introducer Tube, with 2-ring handle
Pusher

Please note: TONN stent applicators are available from NOVATECH see page 68
Full Lumen Operating Tracheo-Bronchoscopes 10318 ER/GL see page 61
Components see chapter 13, SPARE PARTS AND ACCESSORIES

5-04₁

The Placement of Bifurcated Airway Stents – Technique and Instruments

The placement of airway stents has become an increasingly accepted means of palliation for patients with stenoses of the central airways. While straight silicone or metal stents are relatively easy to implant, placement of bifurcated stents seems to be more complicated.

Indications for the use of Dynamic-Stents are strictures and malacia of the trachea, tumor infiltration or compression of the bifurcation, or tracheoesophageal fistulas. The insertion method and the instrument developed especially for this procedure are presented here.

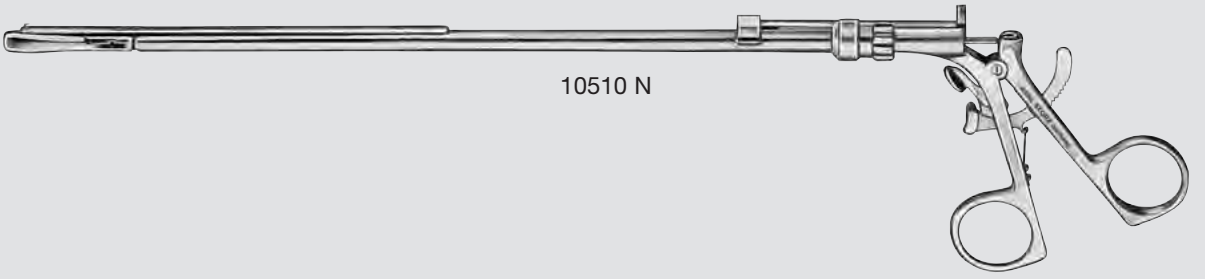
Rigid bronchoscopy is performed under general anesthesia with muscle paralysis. After photoresection of obstructing tissues or dilation of benign strictures the rigid bronchoscope/tracheoscope is removed and the larynx aperture is focused on with a normal laryngoscope.

The bifurcated stent is grasped from inside with a stent forceps. By closing the jaws the bronchial limbs of the stent are narrowed to facilitate the passage through the vocal cords and the stenosis. The stent is intubated with the forceps similarly to the intubation of an endotracheal tube. After passing the larynx and the compressed areas of the trachea the ratchet of the handle is released and the forceps is carefully opened. One can easily feel how the bronchial limbs glide into the main bronchi as the forceps saddles the carina. Then a movable pusher mounted on the instrument is used to anchor the stent while the grasping part of the stent is withdrawn. After complete removal of the forceps the patient is reintubated with a short bronchoscope or tracheoscope and stent position and function are checked. A thin flexible bronchoscope is used to aspirate any mucus and contrast medium if this has been used. Special care is taken that the right upper bronchial lobe is not blocked by the limb of the stent.

Although placement is usually possible without visual control it is further facilitated and safer under x-ray fluoroscopy. For very critical situations with tumor invasion close to the carina we used 4 ml of contrast medium to mark the narrowed trachea and the bifurcation. Under fluoroscopic control all stents could be positioned without complications. We have not seen a single tear or a perforation but one has to be aware of this potential hazard when placing a stent.

Theoretically placement of bifurcated stents with the method described could be performed without rigid bronchoscopy. Using the stent forceps, the whole procedure takes less than a minute. However, because of potential complications, we strongly recommend that only those surgeons and chest physicians should place stents who are familiar with all bronchoscopical techniques including rigid bronchoscopy.

Prof. L. FREITAG, M. D.,
D. GRESCHUCHNA, M. D.



10510 N

10510 N FREITAG **Stent Forceps,** for the placement of dynamic stents

including:

Handle, with ratchet
Outer Sheath
Forceps Insert
Pusher

Components see chapter 13, SPARE PARTS AND ACCESSORIES

11-98$_2$

Pediatric Bronchoscopes

with proximal illumination

Special Features:

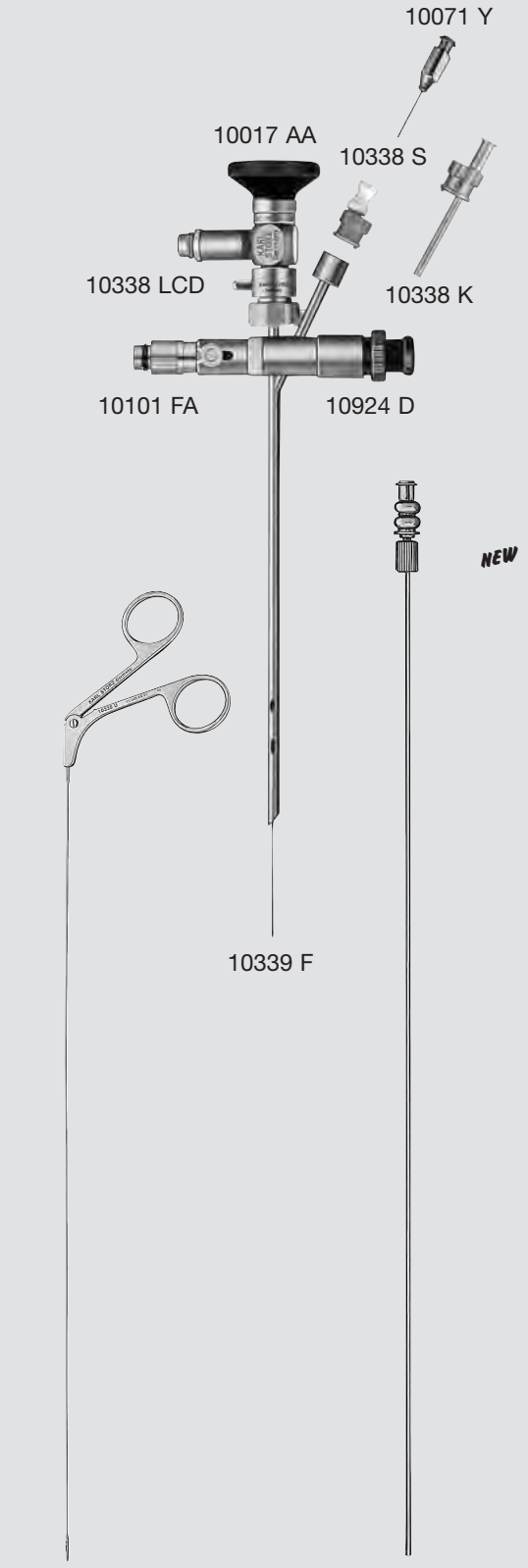
- **Absence of distal light carrier does not restrict inner diameter**
- **Prismatic Light Deflector 10101 FA inserted proximally ensures best illumination and enables full use of lumen through operating instruments**
- **Excellent view of operation area**
- **Lateral channel for introducing suction catheters and fine instruments**

10339 AL	DOESEL-HUZLY **Bronchoscope,** size 6, length 40 cm
10339 BL	**Same,** size 5
10339 A	DOESEL-HUZLY **Bronchoscope,** size 6, length 30 cm
10339 B	**Same,** size 5
10339 BB	**Same,** size 4.5
10339 C	**Same,** size 4
10339 G	**Same,** size 3.7
10339 CD	**Same,** size 3.5
10339 EEE	**Same,** size 3
10339 CC	DOESEL-HUZLY **Bronchoscope,** size 4, length 26 cm
10339 GG	**Same,** size 3.7
10339 DD	**Same,** size 3.5
10339 EE	**Same,** size 3
10339 D	DOESEL-HUZLY **Bronchoscope,** size 3.5, length 18.5 cm
10339 E	**Same,** size 3
10339 F	**Same,** size 2.5
10101 FA	**Prismatic Light Deflector, autoclavable,** with connection to fiber optic light cable
10338 M	**Glass Window Plug**
10338 N	**Rubber Telescope Guide,** for use with telescopes and optical forceps
10338 P	FLUVOG **Adaptor,** with sliding glass window plug, sealing cap, notched lens and keyhole opening, movable
10338 S	**Guide Piece,** for suction catheter, short, bronchoscope for children and infants
10338 TRA	**Adjustable Magnifier, autoclavable,** swing-away type, with ring adaption
10924 D	**Adaptor,** for respirator
NEW 10924 DL	**Adaptor,** for respirator, long version
10318 K	**Injection Cannula,** for positive pressure assisted ventilation system, LUER-Lock, outer diameter 3.5 mm
10338 K	**Injection Cannula,** for positive pressure assisted ventilation system, LUER-Lock, outer diameter 2.7 mm, for use with Bronchoscopes 10339 E/EE/F

1-99₃

Instrument Set for Neonates

for Endoscopic Treatment of Tracheo-Esophageal Fistulae

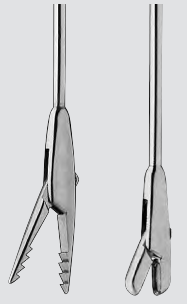


Instrument set for neonates for endoscopic treatment of tracheo-esophageal fistulae

10339 F	DOESEL-HUZLY **Bronchoscope,** size 2.5, length 18.5 cm
10101 FA	**Prismatic Light Deflector, autoclavable,** with connection to fiber optic light cable
10017 AA	**HOPKINS® II Straight Forward Telescope 0°,** diameter 1.9 and 2.1 mm, length 18 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green
10338 LCD	**Telescope Bridge,** for fixed position between bronchoscope and telescope
10071 Y	**Injection Cannula**
10338 S	**Guide Piece,** for suction catheter, short, bronchoscope for children and infants
10924 D	**Adaptor,** for respirator
NEW 10924 DL	**Adaptor,** for respirator, long version
10338 K	**Injection Cannula,** for positive pressure assisted ventilation system, LUER-Lock, outer diameter 2.7 mm, for use with Bronchoscopes 10339 E/EE/F

For use with working channel of Bronchoscopes 10339 A/B/BB/C – G, under control of HOPKINS® Telescopes 10324 AA/10020 ATA/10018 AA/10017 AA

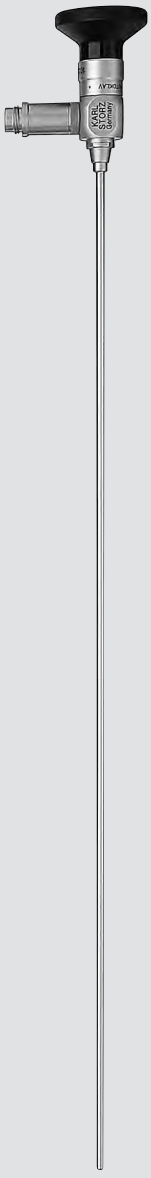
10338 U	**Forceps,** alligator, spoon-shaped, single action jaws, semiflexible, sheath diameter 1 mm, working length 35 cm
10338 X	**Forceps,** spoon-shaped, for biopsy, single action jaws, semiflexible, sheath diameter 1 mm, working length 35 cm
10468 B	**Suction Catheter,** 7 Fr., with Adaptor 10479 B
10468 D	**Suction Catheter,** 5 Fr., with Adaptor 10479 F



10338 U 10338 X

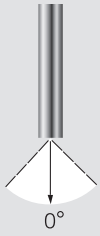
1-99$_3$

HOPKINS® Telescopes

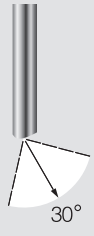


10338 LCD

10338 R/RK/RL



10018 AA
10020 ATA
10005 AA
10324 AA
10023 ABA



10324 BA

For use with 18.5 cm DOESEL-HUZLY **Bronchoscopes 10339 D/E,** telescope **can be fixed** in the bronchoscope when using Telescope Bridge 10338 LCD

10018 AA **HOPKINS® Straight Forward Telescope 0°,** diameter 2.7 mm, length 18 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green

For use with 30 cm DOESEL-HUZLY **Bronchoscopes 10339 A/B/BB/C/CD/G,** telescope **can be fixed** in the bronchoscope when using Telescope Bridge 10338 LCD

10020 ATA **HOPKINS® Straight Forward Telescope 0°,** diameter 2.9 mm, length 30 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green

10005 AA **HOPKINS® II Straight Forward Telescope 0°,** enlarged view, diameter 4 mm, length 30 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green

For use with 30 cm DOESEL-HUZLY **Bronchoscopes 10339 A/B/BB/C/CD/G,** telescope **adjustable** in the bronchoscope when using Rubber Telescope Guide 10338 N

10324 AA **HOPKINS® Straight Forward Telescope 0°,** diameter 2.9 mm, length 36 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green

10324 BA **HOPKINS® II Forward-Oblique Telescope 30°,** diameter 2.9 mm, length 36 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red

For use with 40 cm DOESEL-HUZLY **Bronchoscopes 10339 AL/BL,** telescope **adjustable** in the bronchoscope when using Rubber Telescope Guide 10338 N

10023 ABA **HOPKINS® Straight Forward Telescope 0°,** diameter 2.8 mm, length 44 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green

For use with Telescopes 10017/10018/10020/10005 AA

10338 LCD **Telescope Bridge,** for fixed position between bronchoscope and telescope

For use with Telescope 10324 AA

10338 RK **Telescope Bridge,** for fixed position between HOPKINS® Telescope 10324 AA and Bronchoscopes 10339 A/B/BB/C/CD/EEE/G

10338 RL **Telescope Bridge,** for fixed position between HOPKINS® Telescope 10324 AA and Bronchoscopes 10339 CC/DD/EE/GG

For use with Telescope 10005 AA

10338 R **Telescope Bridge,** for fixed position between HOPKINS® II Telescope 10005 AA and Bronchoscopes 10339 CC/GG

11-98₂

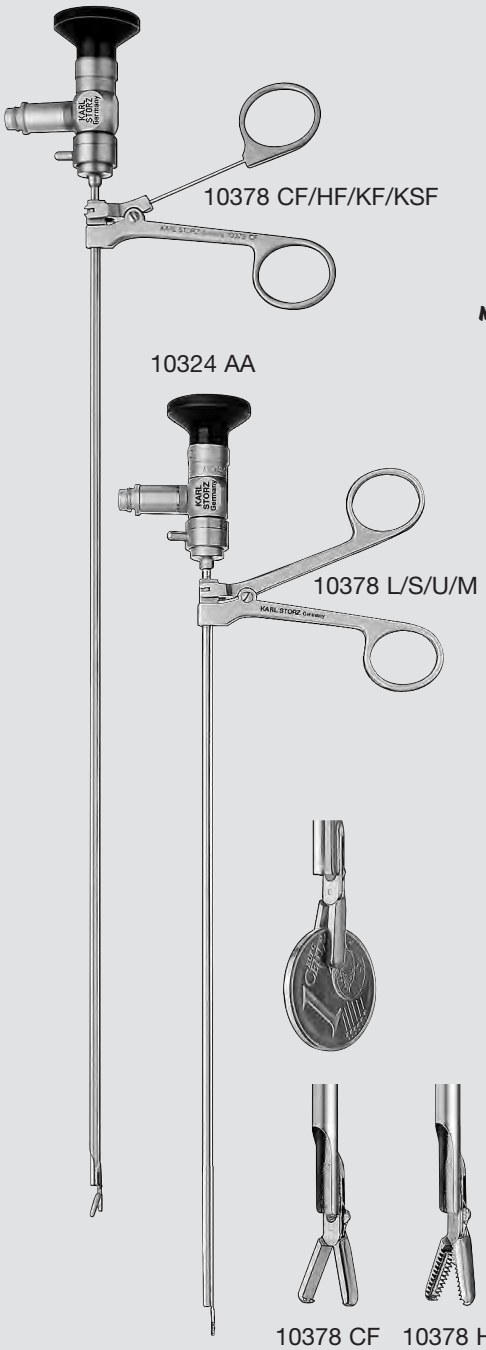
Optical Forceps and Scissors

for Pediatric Bronchoscopes size 6 – 3.5, length 30 cm – 18.5 cm

KARL STORZ — ENDOSKOPE

Special Features:

- **Newly designed forceps enable removing of foreign bodies under precise optical control not previously possible**
- **Small size of forceps allows them to be introduced through pediatric bronchoscopes as of size 3.5 and larger in lengths ranging from 18.5 up to 30 cm**
- **Foreign bodies can be removed quickly and with utmost safety**
- **Better assessment of the depth of cut when taking biopsies**



For use with HOPKINS® Telescope 10324 AA and Bronchoscopes 10339 A – CD

	10378 CF	**Optical Forceps,** 2x 2 teeth, for grasping coins and flat foreign bodies, with spring-action handle
	10378 HF	**Optical Forceps,** alligator, for grasping hard foreign bodies, with spring-action handle
	10378 KF	**Optical Forceps,** with KILLIAN bean jaws, for grasping peanuts and soft foreign bodies, with spring-action handle
NEW	10378 KSF	**Optical Forceps,** VANCOUVER model, for grasping peanut fragments and soft foreign bodies, with spring-action handle
	10378 L	**Optical Forceps,** spoon-shaped, for biopsy
	10378 S	**Optical Scissors**
	10378 U	**Optical Forceps,** universal, for biopsy and foreign bodies removal
	10378 M	**Optical Forceps,** spoon-shaped, oval, for biopsy, large model

1-99₂

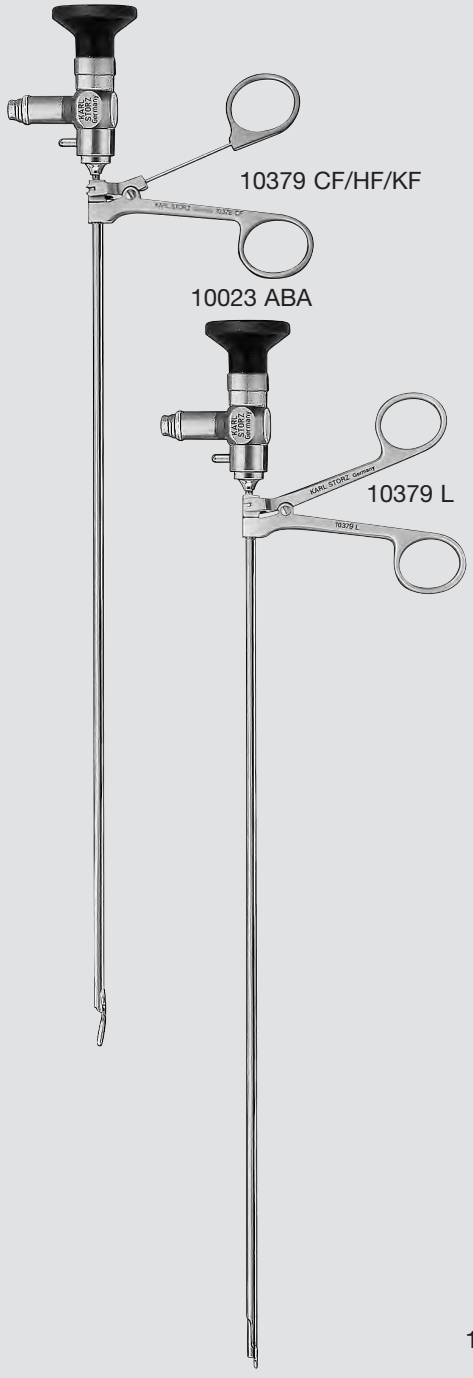
Optical Forceps

for Pediatric Bronchoscopes size 6 and 5, length 40 cm

KARL STORZ — ENDOSKOPE

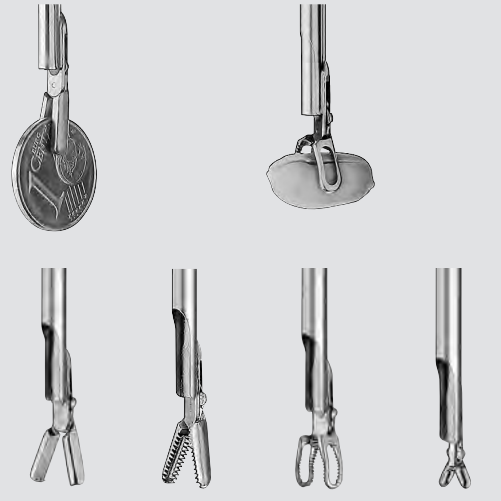
Special Features:

- **Newly designed forceps for hard and soft foreign bodies enable removal under precise optical control not previously possible.**
- **Foreign bodies can be removed quickly and with utmost safety.**
- **Better assessment of the depth of cut when taking biopsies**



For use with HOPKINS® Telescope 10023 ABA and Bronchoscopes 10339 A – CD

10379 CF	**Optical Forceps,** 2x 2 teeth, for grasping coins and flat foreign bodies, with spring-action handle
10379 HF	**Optical Forceps,** alligator, for grasping hard foreign bodies, with spring-action handle
10379 KF	**Optical Forceps,** with KILLIAN bean jaws, for grasping peanuts and soft foreign bodies, with spring-action handle
10379 L	**Optical Forceps,** spoon-shaped, for biopsy



10379 CF 10379 HF 10379 KF 10379 L

5-042

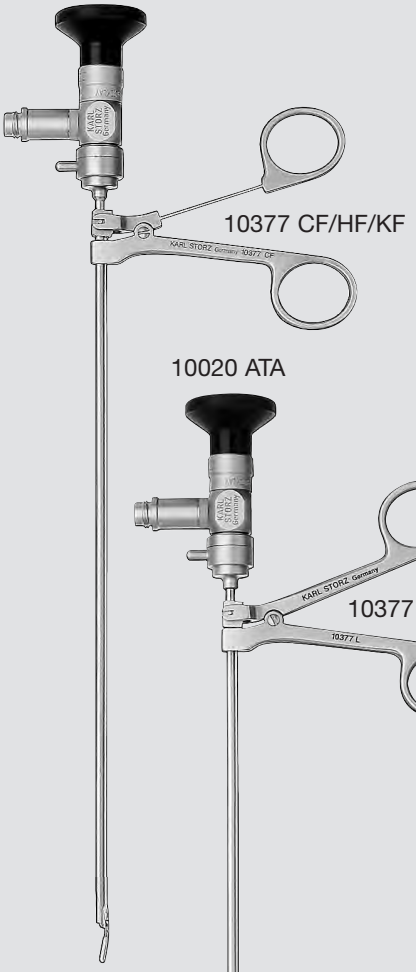
Optical Forceps

for Pediatric Bronchoscopes size 4 – 3.5, length 26 cm – 18.5 cm

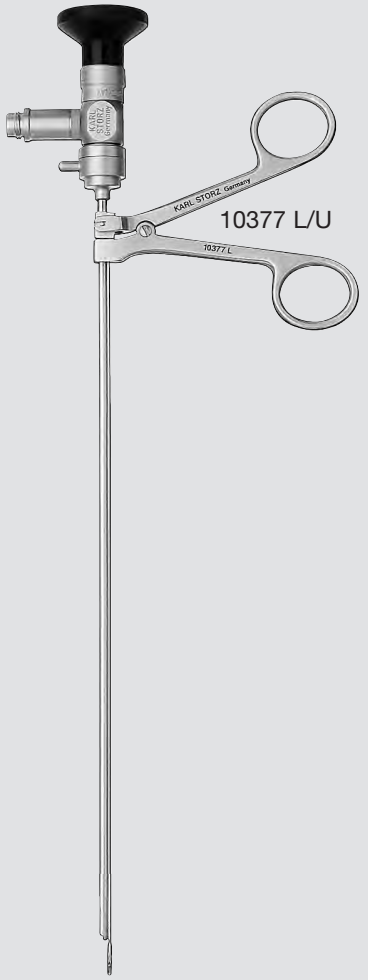
Special Features:

- **Newly designed forceps for hard and soft foreign bodies enable removal under precise optical control not previously possible.**
- **Small size of forceps allows them to be introduced through pediatric bronchoscopes as of size 3.5 cm and larger in lengths of 26 cm – 18.5 cm.**
- **Foreign bodies can be removed quickly and with utmost safety.**
- **Better assessment of the depth of cut when taking biopsies**

10020 ATA

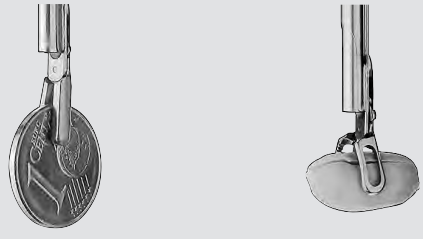


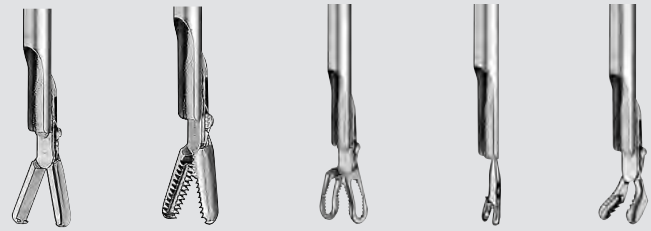
10020 ATA



For use with HOPKINS® Telescope 10020 ATA and Bronchoscopes 10339 CC/GG/DD/D

10377 CF	**Optical Forceps,** 2x 2 teeth, for grasping coins and flat foreign bodies, with spring-action handle
10377 HF	**Optical Forceps,** alligator, for grasping hard foreign bodies, with spring-action handle
10377 KF	**Optical Forceps,** with KILLIAN bean jaws, for grasping peanuts and soft foreign bodies, with spring-action handle
10377 L	**Optical Forceps,** spoon-shaped, for biopsy
10377 U	**Optical Forceps,** universal, for biopsy and foreign bodies removal





10377 CF | 10377 HF | 10377 KF | 10377 L | 10377 U

5-041

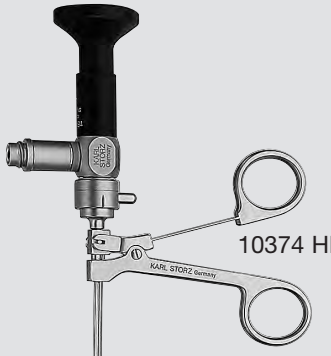
Optical Forceps

for Pediatric Bronchoscopes size 4 – 2.5, length 26 cm – 18.5 cm

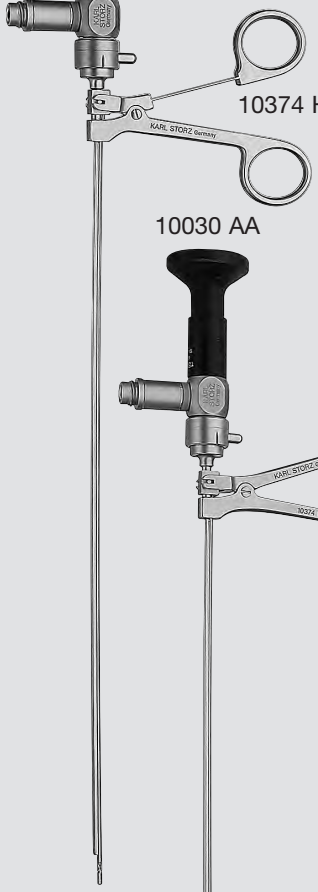
Special Features:

- **Small size of forceps allows them to be introduced through pediatric bronchoscopes as of size 2.5 and larger and in lengths ranging from 26 cm – 18.5 cm**
- **Foreign bodies can be removed quickly and with utmost safety**
- **Better assessment of the depth of cut when taking biopsies**

10030 AA



10374 HF



10030 AA

10374 L

For use with Bronchoscopes 10339 CC/GG/DD/EE/D/E/F

NEW 10030 AA **Miniature Straight Forward Telescope 0°,** semirigid, **autoclavable,** fiber optic light transmission incorporated,

Direction of view:	0°
Angle of view:	90°
Working length:	30.6 cm
Outer diameter:	1.3 mm
Color code:	green

NEW 10374 HF **Optical Forceps,** with alligator jaws, for grasping hard foreign bodies, with spring-action handle

NEW 10374 L **Optical Forceps,** spoon-shaped, for biopsy

10374 HF

10374 L

3-11

Forceps and Scissors for Bronchoscopy

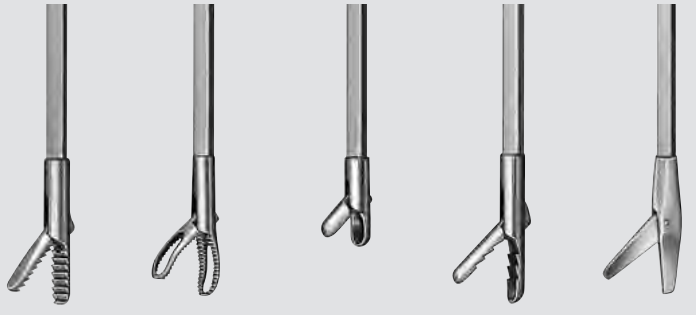
single action jaws

Sheath diameter 2.5 mm, working length 50 cm

10366 H	**Forceps,** alligator, for hard foreign bodies, single action jaws, sheath diameter 2.5 mm, working length 50 cm
10366 K	**Same,** for peanuts and soft foreign bodies
10366 L	**Same,** spoon-shaped, round, for biopsy
10366 U	**Same,** universal, for biopsy and foreign bodies removal
10366 S	**Scissors,** straight, for trituration of bone fragments

Sheath diameter 2.5 mm, working length 35 cm

10367 H	**Forceps,** alligator, for hard foreign bodies, single action jaws, sheath diameter 2.5 mm, working length 35 cm
10367 K	**Same,** for peanuts and soft foreign bodies
10367 L	**Same,** spoon-shaped, round, for biopsy



10366 H
10367 H

10366 K
10367 K

10366 L
10367 L

10366 U

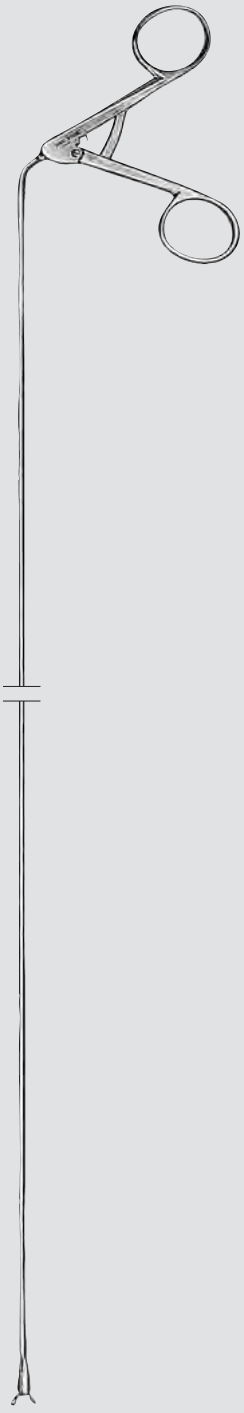
10366 S

5-04[1]

Forceps for Bronchoscopy

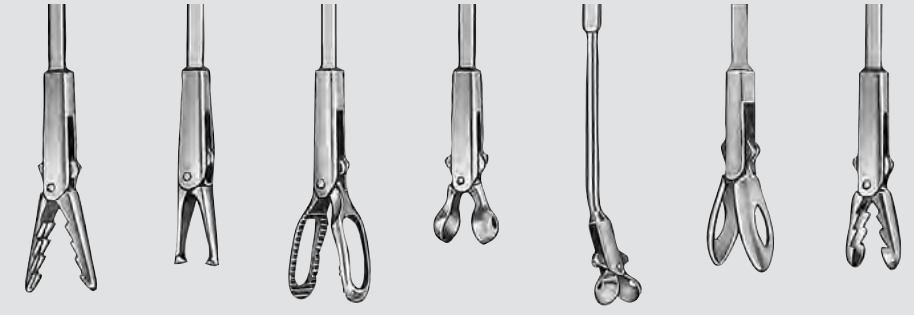
double action jaws

KARL STORZ — ENDOSKOPE



Sheath diameter 2.5 mm, working length 50 cm

10370 H	**Forceps,** alligator, for hard foreign bodies, double action jaws, sheath diameter 2.5 mm, working length 50 cm
10370 J	**Same,** pointed, serrated, for coins and flat foreign bodies
10370 K	**Same,** for peanuts and soft foreign bodies
10370 L	**Same,** spoon-shaped, round, for biopsy
10370 M	**Same,** spoon-shaped, round, for biopsy, malleable
10370 P	**Same,** with oval cupped jaws, fenestrated, for biopsy and foreign bodies
10370 U	**Same,** universal, for biopsy and foreign bodies removal



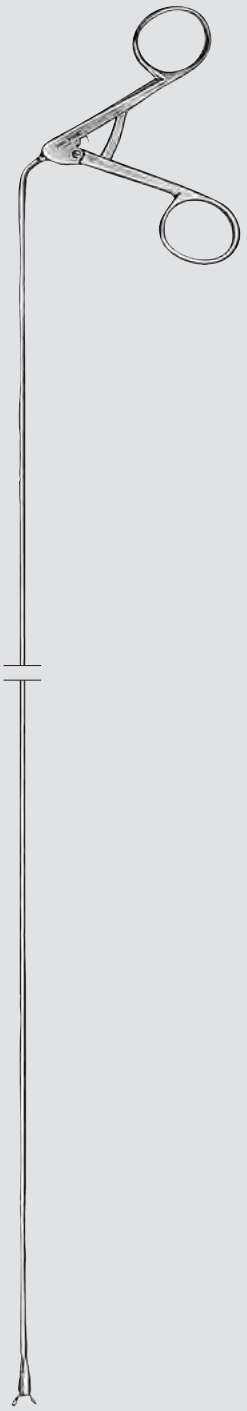
10370 H | 10370 J | 10370 K | 10370 L | 10370 M | 10370 P | 10370 U

5-04$_1$

Forceps for Bronchoscopy

double action jaws

KARL STORZ — ENDOSKOPE



Sheath diameter 2 mm, working length 45 cm

10371 HL	**Forceps,** alligator, for hard foreign bodies, double action jaws, sheath diameter 2 mm, working length 45 cm
10371 KL	**Same,** for peanuts and soft foreign bodies
10371 LL	**Same,** spoon-shaped, round, for biopsy
10371 UL	**Same,** universal, for biopsy and foreign bodies removal

Sheath diameter 2 mm, working length 35 cm

10371 H	**Forceps,** alligator, for hard foreign bodies, double action jaws, sheath diameter 2 mm, working length 35 cm
10371 J	**Same,** pointed, serrated, for coins and flat foreign bodies
10371 K	**Same,** for peanuts and soft foreign bodies
10371 L	**Same,** spoon-shaped, round, for biopsy
10371 P	**Same,** spoon-shaped, oval, fenestrated, for biopsy and foreign bodies removal
10371 U	**Same,** universal, for biopsy and foreign bodies removal

10371 HL
10371 H

10371 J

10371 KL
10371 K

10371 LL
10371 L

10371 P

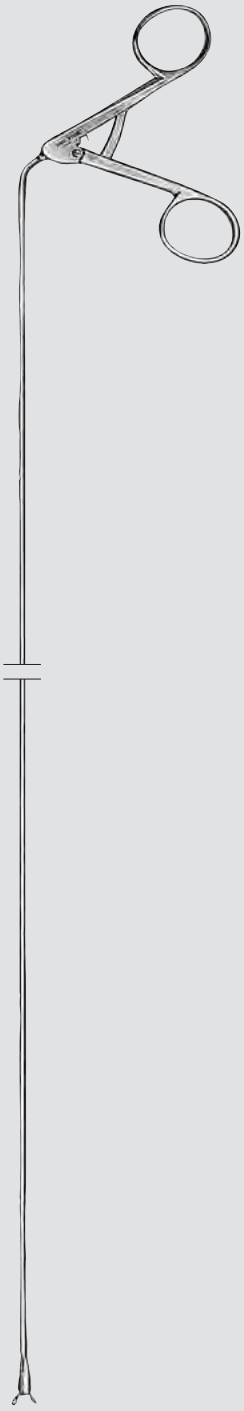
10371 UL
10371 U

5-04₁

Forceps for Bronchoscopy

double action jaws

KARL STORZ — ENDOSKOPE



Sheath diameter 1.5 mm, working length 35 cm

10372 HL	**Forceps,** alligator, for hard foreign bodies, double action jaws, sheath diameter 1.5 mm, working length 35 cm
10372 JL	**Same,** pointed, serrated, for coins and flat foreign bodies
10372 KL	**Same,** for peanuts and soft foreign bodies
10372 LL	**Same,** spoon-shaped, round, for biopsy
10372 UL	**Same,** universal, for biopsy and foreign bodies removal

Sheath diameter 1.5 mm, working length 25 cm

10372 H	**Forceps,** alligator, for hard foreign bodies, double action jaws, sheath diameter 1.5 mm, working length 25 cm
10372 K	**Same,** for peanuts and soft foreign bodies

10372 HL
10372 H

10372 JL

10372 KL
10372 K

10372 LL

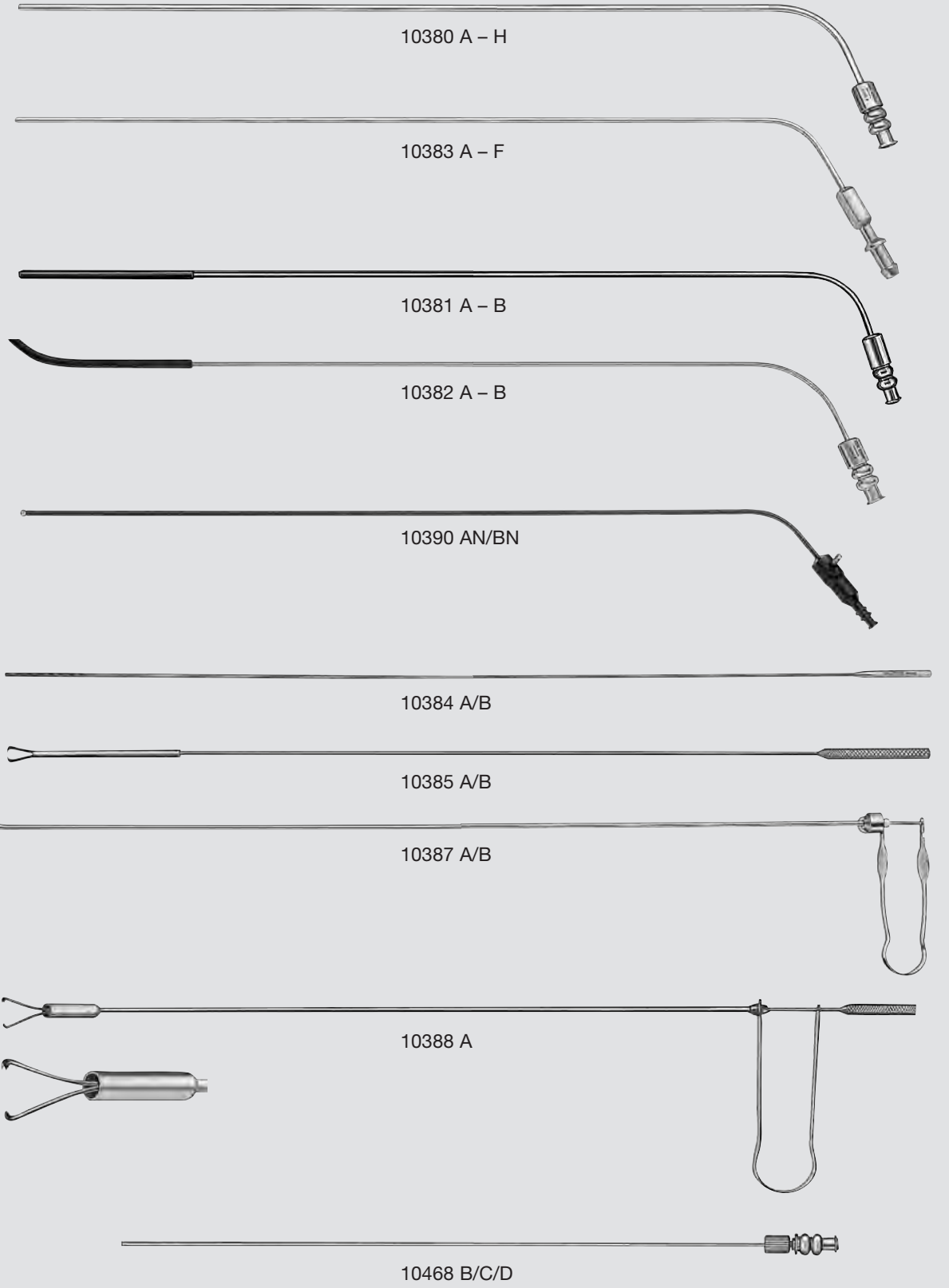
10372 UL

5-04$_1$

Accessories for Bronchoscopy

Suction Tubes, Cotton Carriers, Sponge Holders and Catheters

KARL STORZ — ENDOSKOPE



Description of instruments see page 83

3-11

Working length 50 cm

10380 A	**Suction Tube,** diameter 4 mm
10380 D	**Same,** diameter 2.5 mm
10380 H	**Same,** diameter 5 mm
10383 A	**Suction Tube,** with cut-off hole, diameter 4 mm
10381 A	**Suction Tube,** with rubber tip, straight, diameter 4 mm
10382 A	**Same,** curved
10390 AN	**Coagulation Suction Tube,** insulated, with connector pin for unipolar coagulation, diameter 4 mm
10384 A	**Cotton Applicator**
10385 A	**Sponge Holder**
10387 A	**Sponge Holder,** with spring handle
10388 A	**Sponge Holder,** for sterile smears

Working length 35 cm

10380 AK	**Suction Tube,** diameter 4 mm
10380 B	**Same,** diameter 3 mm
10380 CB	**Same,** diameter 2 mm
10383 B	**Suction Tube,** with cut-off hole, diameter 3 mm
10383 BL	**Same,** diameter 5.5 mm
10381 B	**Suction Tube,** with rubber tip, straight, diameter 2 mm
10382 B	**Same,** curved
10390 BN	**Coagulating Suction Tube,** insulated, with connector pin for unipolar coagulation, diameter 3 mm
10384 B	**Cotton Applicator**
10385 B	**Sponge Holder**
10387 B	**Sponge Holder,** with spring handle

Working length 30 cm

10383 DD	**Suction Tube,** with cut-off hole, diameter 2 mm
10383 F	**Same,** diameter 3 mm

Working length 25 cm

10380 C	**Suction Tube,** diameter 2 mm
10383 C	**Suction Tube,** with cut-off hole, diameter 2 mm
10383 CC	**Same,** diameter 1 mm
10383 D	**Same,** diameter 3 mm
10383 E	**Same,** diameter 4 mm

For use through the working channel under control of HOPKINS® telescope:

10468 B	**Suction Catheter,** 7 Fr., with Adaptor 10479 B
10468 C	**Same,** 6 Fr., with Adaptor 10479 C
10468 D	**Same,** 5 Fr., with Adaptor 10479 F

3-11

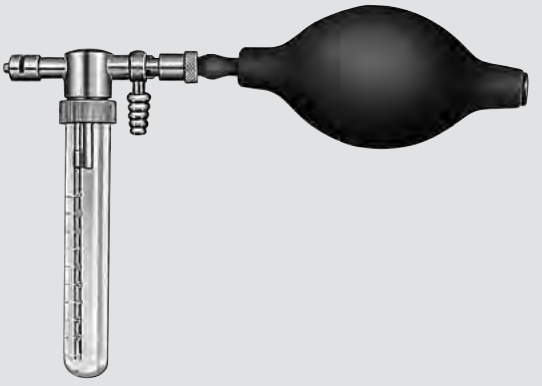
Accessories for Bronchoscopy

Instruments for aspiration, irrigation and puncture biopsy

10432 ED

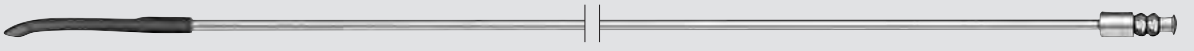
10432 N/T

10434 V



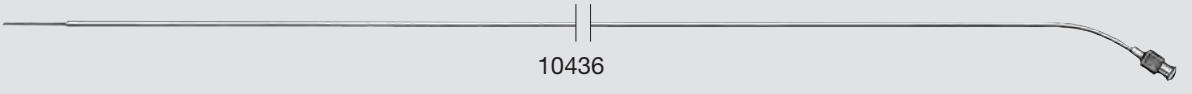
10434

10432 N	**Aspirator,** for collecting secretions, with cut-off hole, with Spare Glass 10432 E, can be connected to suction tubes or suction catheter
10432 T	**Same,** without cut-off hole
10432 ED	**Collection Device,** plastic, for single use, with lid, package of 100, for use with HUZLY Aspirator and Bronchus Irrigator 10434 and Intermediate Ring 10434 Z
10434	HUZLY **Aspirator and Bronchus Irrigator,** with Graduated Container 10455 A and Rubber Bulb 437000. After switching manifold from “Irrigation” to “Suction”, the injected irrigation fluid is immediately withdrawn again together with the bronchial secretion.



10434 A/B

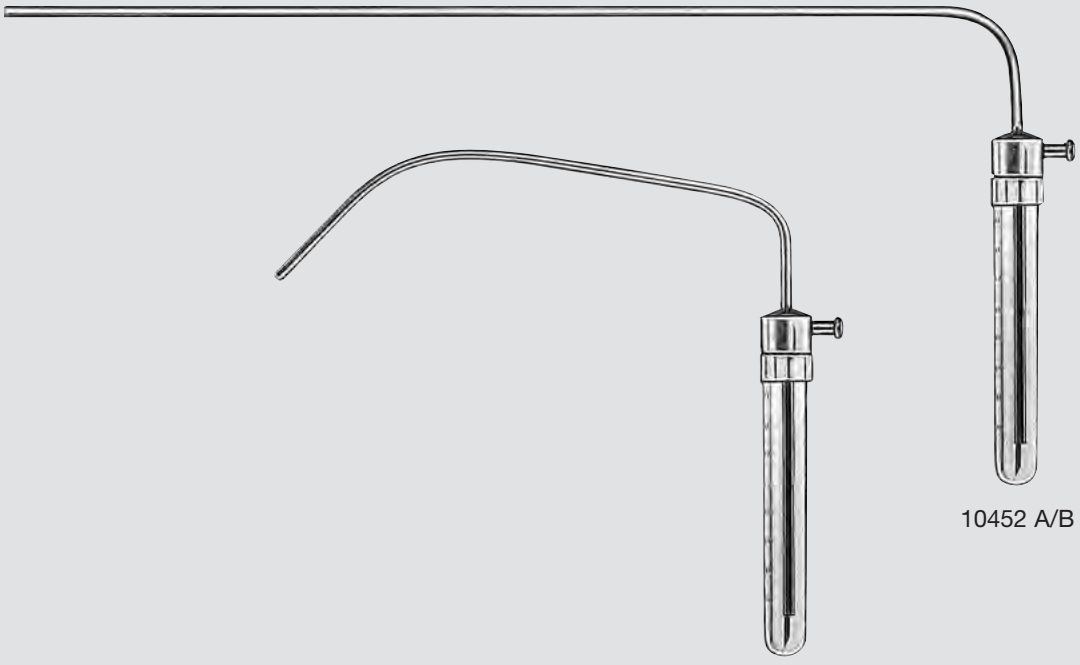
10434 A	**Suction Tube,** diameter 4 mm, length 50 cm, for use with HUZLY Aspirator and Bronchus Irrigator 10434
10434 B	**Same,** diameter 3 mm, length 35 cm



10436

10436	**Aspiration Biopsy Needle,** for transbronchial biopsy, distal straight, diameter 1.6 mm, working length 47 cm
10438	**Same,** distally angled

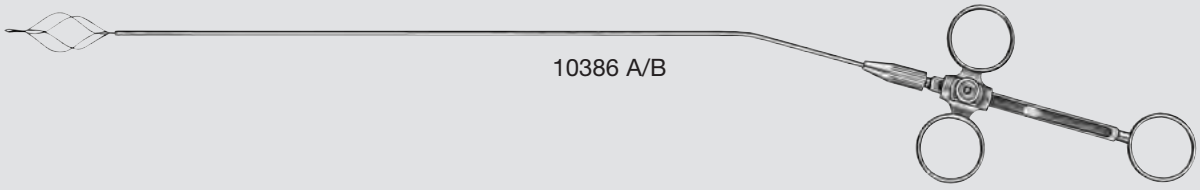
11-98$_3$



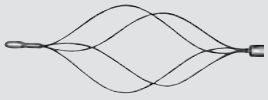
10452 A/B

10454

10452 A	**Bronchial Atomizer,** with Graduated Container 10455 A and Rubber Bulb 437000, length 50 cm
10452 B	**Same,** length 40 cm
10454	**Laryngeal Atomizer,** with Graduated Container 10455 A and Rubber Bulb 40924 H
10455 A	**Graduated Container,** only, **autoclavable,** for 10434, 10452 A/B and 10454



10386 A/B



10386 A	**Foreign Body Basket,** with ring handle, working length 50 cm
10386 B	**Same,** working length 35 cm

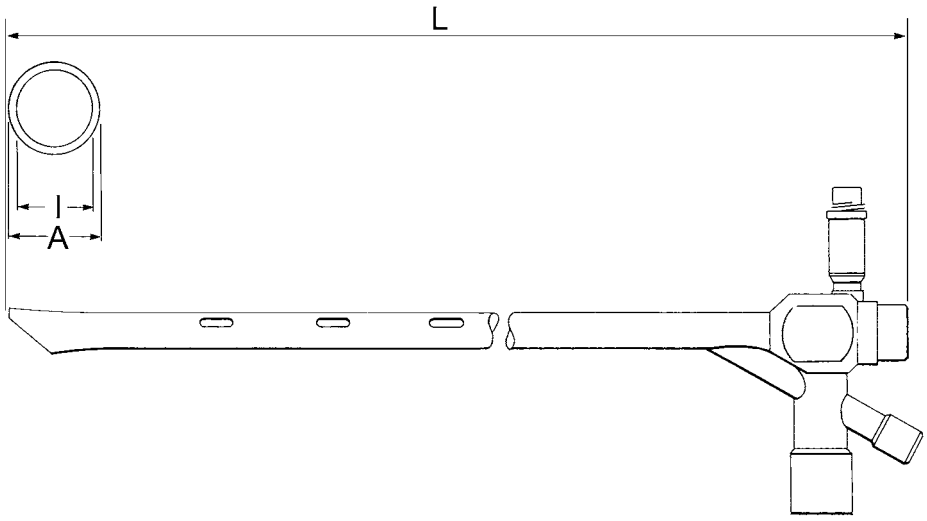
3-11

15006 B 15006 C 15006 D

15006 B	“ULTRA STOP” **Antifog Solution,** 25 ml, pipette bottle
15006 C	“ULTRA STOP” **Antifog Solution,** 30 ml, sterile, pierce bottle
15006 D	“ULTRA STOP” **Antifog Solution,** 15 ml, atomizer bottle

3-11

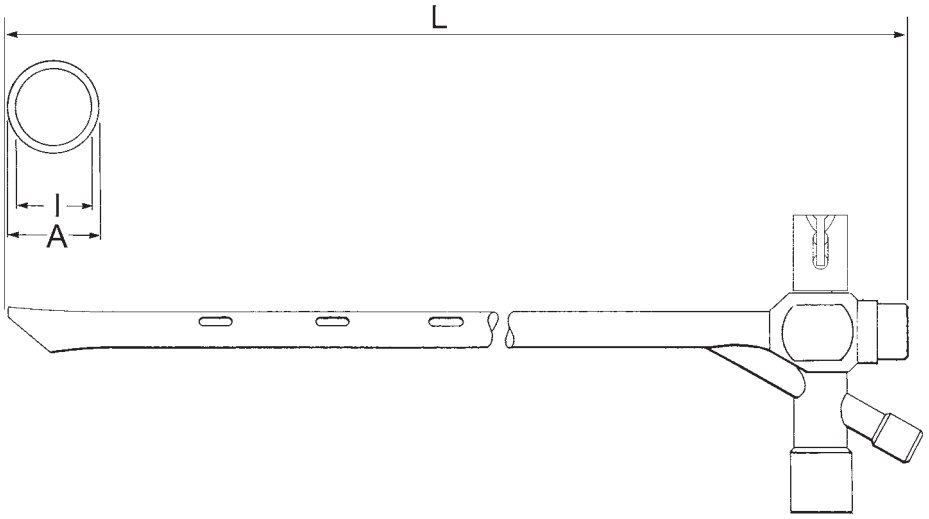
Dimensions of Universal Bronchoscopes



Art. No.	Size	Total Length – L –	Inner Diameter – I –	Outer Diameter – A –	Telescopes	Optical Forceps
10318 B	8.5	43 cm	10 mm	11 mm	10320	10350 HF, 10350 KF, 10350 L, 10350 ST, 10350 U, with 10320 AA, 10320 BA
10318 BP	8.5	43 cm	10 mm	11 mm	10320	10350 HF, 10350 KF, 10350 L, 10350 M, 10350 MS, 10350 ST, 10350 U, with 10320 AA, 10320 BA
10318 C 10318 CP	7.5	43 cm	9 mm	10 mm	10320	10350 HF, 10350 KF, 10350 L, 10350 ST, 10350 U, with 10320 AA, 10320 BA
10318 D 10318 DP	6.5	43 cm	8 mm	9 mm	10320	10352 H, 10352 L, 10352 KF, 10352 U, with 10328 AA, 10328 BA

11-98₂

Dimensions of Universal Bronchoscopes



Art. No.	Size	Total Length – L –	Inner Diameter – I –	Outer Diameter – A –	Telescopes	Optical Forceps
10318 G	14	33 cm	13 mm	14 mm	10320	10350 HF, 10350 KF, 10350 L, 10350 M, 10350 MS, 10350 ST, 10350 U, with 10320 AA, 10320 BA
10318 GL	14	43 cm	13 mm	14 mm	10320	
10318 ER	11	43 cm	10 mm	11 mm	10320	

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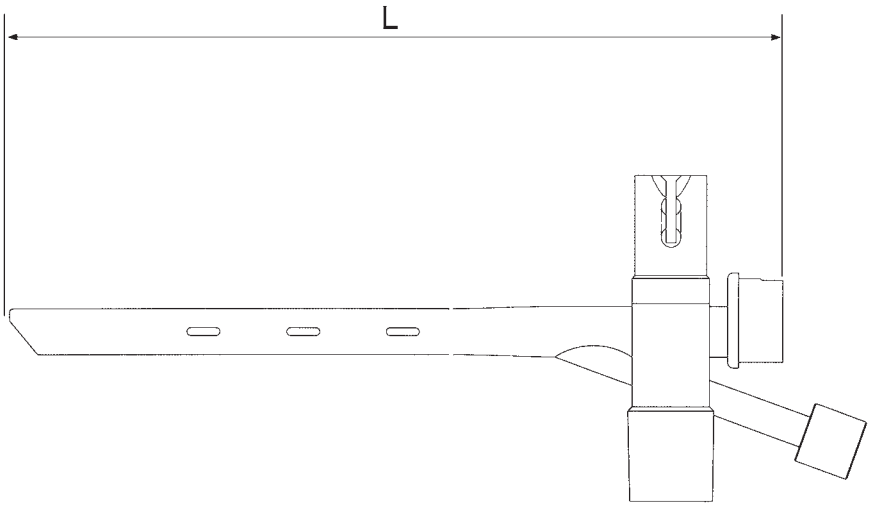
DOESEL-HUZLY
Dimensions of Pediatric Bronchoscopes
with proximal illumination



Art. No.	Size	Total Length – L –	Telescopes	Optical Forceps
10339 AL 10339 BL	6 5	40 cm 40 cm	10023 10023	10379 CF, 10379 HF, 10379 KF, 10379 L, with 10023 ABA
10339 A 10339 B 10339 BB 10339 C 10339 G 10339 CD	6 5 4.5 4 3.7 3.5	30 cm 30 cm 30 cm 30 cm 30 cm 30 cm	10324 10020	10378 CF, 10378 HF, 10378 KF, 10378 KSF, 10378 L, 10378 M, 10378 S, 10378 U, 10378 X, with 10324 AA
10339 EEE	3	30 cm	10324 10020	–
10339 CC 10339 GG 10339 DD	4 3.7 3.5	26 cm 26 cm 26 cm	10324 10020	10377 CF, 10377 HF, 10377 KF, 10377 L, 10377 U, with 10020 ATA
10339 EE	3	26 cm	10324 10020	10374 L, 10374 HF
10339 D	3.5	18.5 cm	10018 10020	10377 CF, 10377 HF, 10377 KF, 10377 L, 10377 U, with 10020 ATA
10339 E	3	18.5 cm	10018 10020 10030	10374 L, 10374 HF, with 10030 AA
10339 F	2.5	18.5 cm	10017 10018 10020 10030	10374 L, 10374 HF, with 10030 AA

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AUTOFLUORESCENCE

FLEXIBLE VIDEO BRONCHOSCOPE FOR AUTOFLUORESCENCE *NEW*	93-96
FLEXIBLE FIBER BRONCHOSCOPES FOR AUTOFLUORESCENCE	97-102
RIGID TELESCOPES FOR AUTOFLUORESCENCE	103
ACCESSORIES FOR AUTOFLUORESCENCE	104-115

Autofluorescence

The KARL STORZ autofluorescence endoscopy procedure provides a new diagnostic method for visualizing malignant and pre-malignant changes as early as possible. Patients only have a real chance of survival if bronchial carcinomas are diagnosed at an early stage. Due to its state-of-the-art technology, the system is compact and economically viable.

The distinguishing feature of this diagnostic system is the ability to switch from standard white light bronchoscopy into the autofluorescence diagnosis mode at any time by means of the special **D-LIGHT C (AF)** system in conjunction with specifically adapted flexible and rigid bronchoscopes. A feature of autofluorescence display is the combination of excitation and observation technique (German and international patents pending). An especially adapted endocamera (TRICAM® SL-PDD), which is 60 times more light-sensitive than a standard endocamera, complements the diagnostic system.

Autofluorescence utilizes a natural optical effect in the tissue. This examination mode does not involve any special pre-operative treatment of patients. Specifically adapted to the fluorescent structures in the submucosa, the **D-LIGHT C (AF)** system induces autofluorescence in the bronchial submucosa. The thickened epithelium near the area with the tumerous changes causes the light to be dimmer in the suspicious tumor area than in the healthy regions of the bronchial mucosa. This thickening of the epithelium, along with biochemical and tissue-specific causes, means that potentially tumorous areas are darker than the surrounding healthy tissue. Autofluorescence creates the colour contrast required to demarcate potentially tumorous areas.

In addition, the so-called **PDD Mode** offers an additional diagnosis mode which, for example, clearly displays blood vessels.

Previous and current studies show that **autofluorescence** is more effective than white light bronchoscopy alone for the early detection of bronchial carcinomas. Therefore more systematic biopsies can also be performed. Areas that appear to be normal under white light can be examined more closely and reveal clinical findings that would otherwise remain undetected or are easily overlooked.

Fluorescence diagnosis combined with our system for the early diagnosis of tumors is also used in other fields of application. In **ENT**[1] laryngeal carcinomas and their extent can be detected at an earlier stage and more accurately than when viewed with pure white light. In the **oral cavity**[2], carcinomas can be diagnosed more precisely by prior topical ALA sensitization as opposed to PDD. Since 1996, PDD has been regularly applied in **Urology**[3] to increase detection sensitivity of cystoscopy for bladder carcinomas in situ. In the field of **Gynecology**[4] the laparoscopic detection rate of endometritis following prior administration of oral ALA has been considerably improved, allowing more optimized treatment. **Neurosurgery**[5] also uses our components for open PDD-assisted glioblastoma resection.

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Video Bronchoscope for Autofluorescence NEW

for use with TELECAM SL II FI SCB 20 2130 11U1

KARL STORZ is expanding its line of flexible bronchoscopes with the new video bronchoscope with a distal chip for autofluorescence diagnosis. Users who no longer wish to miss out on the high image quality of videoscopes can now take advantage of the quality products of KARL STORZ in this field, too.

Whereas in the past comparatively heavy fiber optic endoscopes with a separate camera head were used in video endoscopy, this system delivers excellent color fidelity in both the white light and autofluorescence modes. An integrated button on the handle of the video bronchoscope allows rapid switching between the white light and the blue light modes.

In combination with the TELECAM SL II FI SCB control unit and the D-LIGHT C/AF, the new video bronchoscope for autofluorescence diagnosis offers outstanding image sharpness as well as excellent brightness and representation of detail.

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Video Bronchoscope for Autofluorescence NEW

for use with TELECAM SL II FI SCB 20 2130 11U1

KARL STORZ — ENDOSKOPE

11900 AP

11900 AP **Video Bronchoscope for Autofluorescence and White Light Diagnosis,** color system **PAL,** including mounted Suction Unit 11900 AE, for use with TELECAM SL II FI SCB **20** 2130 11U1

Working channel:	2.3 mm
Direction of view:	0°
Angle of view:	120°
Deflection:	up 180°, down 100°
Depth of view:	3 – 50 mm
Working length:	61 cm
Outer diameter:	6.2 mm

11900 AN **Same, NTSC**

Following accessories included:

27677 KV	**Case**
20 2130 70	**Video Connecting Cable**
13272	**Mouth Piece**
11001 KL	**Biopsy Forceps,** spoon-shaped, round, flexible, double action jaws, diameter 1.8 mm, working length 120 cm
13242 LX	**Leakage Tester,** with blower and manometer
11025 XE	**Pressure Compensation Cap,** for ventilation during gas sterilization
27651 B	**Cleaning Brush,** flexible, length 100 cm
13991 SS	**Irrigation Tube,** for working channel
27656 B	**Instrument Oil,** 50 ml
13990 SFN	**Protective Film**

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Optional accessories see pages 100-102

TELECAM SL II FI SCB NEW

for use with video bronchoscope for autofluorescence

KARL STORZ — ENDOSKOPE

202130 11U1	**TELECAM SL II FI SCB Camera Control Unit**

color systems **PAL/NTSC,** with integrated digital Image Processing Module, suitable for fluorescence applications,
power supply 100 – 240 VAC, 50/60 Hz

including:

Mains Cord

S-Video (Y/C) Connecting Cable, length 180 cm

Special RGBS Connecting Cable, length 180 cm

Connecting Cable, for controlling peripheral units, length 180 cm

SCB Connecting Cable, length 100 cm

Keyboard, with US-English character set

Specifications:

Video output	- Composite signal at BNC socket - S-Video signal to 4-pin Mini-DIN socket (2x) - RGB signal to 15-pin HD D-Sub socket
Input	Keyboard input for title generator and camera functions to 5-pin DIN socket
Control output	3.5 mm stereo jack plug (ACC 1, ACC 2, SCB)

Control Unit (CCU)	Dimensions: 305 x 88 x 254 mm (w x h x d)
Weight	2.7 kg
Power supply	100-240 VAC, 50/60 Hz
Certified to	IEC 601-1, 601-2-18, CSA 22.2 No. 601, UL 2601 and CE according to MDD, protection class 1/BF

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The system can be operated with KARL STORZ-SCB units.
Optional accessories for TELECAM SL II FI SCB see catalog TELEPRESENCE

Components see chapter 13, SPARE PARTS AND ACCESSORIES

D-LIGHT C/AF-System SCB

for use with video bronchoscope for autofluorescence

KARL STORZ — ENDOSKOPE

20 1336 01-133 **Cold Light Fountain D-LIGHT C/AF SCB**

power supply 100 – 125/220 – 240 VAC, 50/60 Hz
including:
Mains Cord
SCB Connecting Cable, length 100 cm
One-Pedal Footswitch, one-stage, for switch function

Accessories (required in conjunction with KARL STORZ video bronchoscopes)

487 KVE **Adaptor,** for KARL STORZ light sources for use with KARL STORZ video bronchoscopes

Optional accessories

495 KS **Adaptor,** for standard KARL STORZ fiber optic light cables (not 495 NCS) in conjunction with adaptor for KARL STORZ Video Bronchoscope 487 VE

Specifications:

Lamp type	XENON 15 V, 300 Watt
Color temperature	6000 K
Light outlets	1
Light intensity adjustment	continuously adjustable either via a membrane keyboard or KARL STORZ Communication Bus Signal

Dimensions w x h x d	305 x 165 x 335 mm
Weight	11 kg
Certified to:	IEC 601-1 and UL 544, protection class 1/CF

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Optional accessories for Cold Light Fountain D-LIGHT C/AF SCB, Spare Lamps and Spare Lamp Modules see catalog TELEPRESENCE
The system can be operated with KARL STORZ-SCB units.

Components see chapter 13, SPARE PARTS AND ACCESSORIES

Broncho-Fiberscopes for Autofluorescence

KARL STORZ — ENDOSKOPE

Special Features:

- **Large viewing angle and movable distal tip for better orientation**
- **Working channel for the use of operating instruments**
- **Functional: simultaneous suction and administration of medication via removable suction valve**
- **Waterproof, fully immersible for cleaning and disinfection**
- **Simple leakage test takes only a few minutes and requires no additional accessories**
- **Sterilizable via EtO and FO gas, Steris® and Sterrad®**
- **Recommended for use with KARL STORZ ENDOVISION® TRICAM® SL II PDD SCB System**
- **Exceptional optical quality of both lens and fiber optic image transmission bundle**
- **Resistant construction and robust mechanical components ensure long life of the instrument.**

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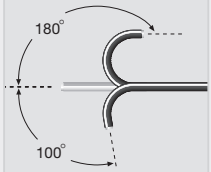
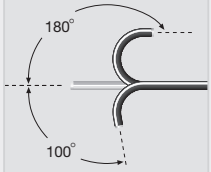
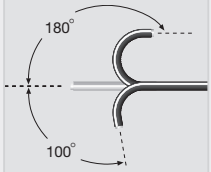
Broncho-Fiberscopes for Autofluorescence

Broncho-Fiberscopes (AF)	Part No.		Deflection up/down	Direction of view	Angle of view	Working length	
6.4 mm x 54 cm Broncho-Fiberscope	11004 BI			0°	110°	54 cm	
5.6 mm x 54 cm Broncho-Fiberscope	11009 BI			0°	110°	54 cm	
5 mm x 54 cm Broncho-Fiberscope	11001 BI			0°	110°	54 cm	

Fluid Light Cable for use with Broncho-Fiberscopes for Autofluorescence and Photodynamic Diagnosis (PDD)

495 FO **Fluid Light Cable,** diameter 3 mm, length 180 cm
495 FP **Fluid Light Cable,** diameter 3 mm, length 250 cm

39402 A **Plastic Container,** for gas or plasma sterilization and storage

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	Total length	Working channel inner diameter	Distal tip outer diameter	Accessories (included in delivery)						
				Case	Pressure Comp. Cap	Leakage Tester	Mouth Piece	Cleaning Brush	Biopsy Forceps	Grasping Forceps
	82 cm	2.8 mm	6.4 mm	27677 BB	11025 E	13242 XL	13272	27651 C	11001 KL	11002 KS
	82 cm	2.6 mm	5.5 mm	27677 BB	11025 E	13242 XL	13272	27651 C	11001 KL	11002 KS
	82 cm	2.3 mm	5.2 mm	27677 BB	11025 E	13242 XL	13272	27651 B	11001 KL	11002 KS

Accessories included in delivery:

27677 BB	**Case**
11025 E	**Pressure Compensation Cap,** for ventilation during gas sterilization
13242 XL	**Leakage Tester,** with bulb and manometer
13272	**Mouth Piece**
27651 B	**Cleaning Brush,** round, flexible, outer diameter 3 mm, for working channel diameter 1.8 – 2.6 mm, length 100 cm
27651 C	**Cleaning Brush,** round, flexible, outer diameter 4 mm, for working channel diameter 2.4 – 3.6 mm, length 230 cm
11001 KL	**Biopsy Forceps,** spoon-shaped, round, flexible, double action jaws, diameter 1.8 mm, working length 120 cm
11002 KS	**Grasping Forceps,** alligator jaws, flexible, double action jaws, diameter 1.8 mm, working length 120 cm

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Optional Accessories

for Flexible Bronchoscopes

			Dia.	Length	for use with: 11004 BI	11009 BI	11001 BI	11900 AP/AN
	11002 KT	**Grasping Forceps,** alligator jaws, round, flexible, double action jaws	1.8 mm	120 cm	●	●	●	●
	13252 KT		2.3 mm		●	●	–	–
	11002 KU	**Grasping Forceps,** spoon-shaped, serrated, flexible, double action jaws	1.8 mm	120 cm	●	●	●	●
	13252 KU		2.3 mm		●	●	–	–
	11002 KX	**Grasping Forceps,** alligator jaws, serrated, 3x 4 teeth, flexible, double action jaws	1.8 mm	120 cm	●	●	●	●
	13252 KX		2.3 mm		●	●	–	–
	11002 KZ	**Grasping Forceps,** serrated, 1x 2 teeth, flexible, double action jaws	1.8 mm	120 cm	●	●	●	●
	13252 KZ		2.3 mm		●	●	–	–
	11001 KM	**Biopsy Forceps,** spoon-shaped, round, with spike, fenestrated, flexible, double action jaws	1.8 mm	120 cm	●	●	●	●
	13250 KM		2.3 mm		●	●	–	–
	11001 KN	**Biopsy Forceps,** spoon-shaped, oval, fenestrated, flexible, double action jaws	1.8 mm	120 cm	●	●	●	●
	13250 KN		2.3 mm		●	●	–	–
	11001 KP	**Biopsy Forceps,** spoon-shaped, oval, with spike, fenestrated, flexible, double action jaws	1.8 mm	120 cm	●	●	●	●
	13250 KP		2.3 mm		●	●	–	–

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Further Accessories for Flexible Bronchoscopes see chapter 3, BRONCHOSCOPY

Optional Accessories

for Flexible Bronchoscopes

			for use with			
			11004 BI	11009 BI	11001 BI	11900 AP/AN
	10770 B	**Button Electrode,** flexible, with connector pin for unipolar coagulation, diameter 1.7 mm, length 80 cm	●	●	●	●
	11161 KE	**Coagulation Electrode,** unipolar, flexible, diameter 1 mm, length 110 cm	●	●	●	●
	11007 BS	**Brush,** for cytology, outer diameter 1.7 mm, working length 80 cm, with Handle 13266 H and Outer Tube 11007 S	●	●	●	●
	11007 E	**Brushes,** package of 10	●	●	●	●
	11007 S	**Outer Tube,** outer diameter 1.7 mm, working length 80 cm, for Brush 11007 BS, package of 10	●	●	●	●
	13266 H	**Handle,** for Brush 11007 BS	●	●	●	●
	11008	**Suction Catheter,** diameter 1.7 mm, length 100 cm, with Adaptor 10479 F	●	●	●	●
	11008 E	**Catheter,** 5 Fr., without adaptor	●	●	●	–
	10479 F	**Adaptor,** for Suction Catheter 10468 D, 10478 D and 11008 E	●	●	●	–

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Optional Accessories

for Flexible Bronchoscopes

KARL STORZ — ENDOSKOPE

			for use with		
			11004 BI	11009 BI	11001 BI
	11301 CA	**Leaflet Valve,** for single use, package of 20	●	●	●
	11301 CB	**Suction Valve,** reusable	●	●	●
	11301 CD	**Irrigation Adaptor,** for suction valve attachment, for fiberscopes	●	●	●
	11301 CE	**Suction Valve,** for single use, package of 20	●	●	●
	11301 BM	**Adaptor,** for leakage test, for Belimed washer-disinfectors	●	●	●
	11301 FF2	**Adaptor for MIELE Cleaning Machines,** with security valve, for automatic leakage test of flexible KARL STORZ endoscopes	●	●	●
	11301 GG2	**Adaptor,** for cleaning and disinfecting the irrigation and working channels of flexible endoscopes, for MIELE-ETD washer-disinfectors	●	●	●
	11301 HH	**Adaptor for BHT Cleaning Machines,** for automatic leakage test of flexible KARL STORZ endoscopes	●	●	●
	11301 KK2	**Adaptor,** for working channel, for MIELE washer-disinfectors (ETD 03), 11301 FF2 and 11301 GG2 has to be added to order	●	●	●

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HOPKINS® Telescopes for Autofluorescence

10320 AP – DP

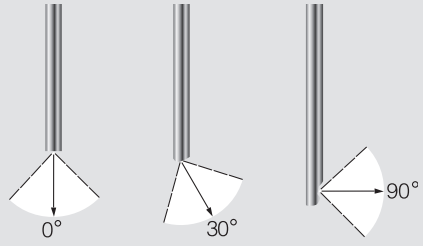
10320 AP **HOPKINS® Straight Forward Telescope 0°,** diameter 5.5 mm, length 50 cm, **autoclavable,** for autofluorescence diagnosis, fiber optic light transmission and filter wheel AF/WL incorporated, color code: green

10320 BP **HOPKINS® Forward-Oblique Telescope 30°,** diameter 5.5 mm, length 50 cm, **autoclavable,** for autofluorescence diagnosis, fiber optic light transmission and filter wheel AF/WL incorporated, color code: red

10320 DP **HOPKINS® Lateral Telescope 90°,** diameter 5.5 mm, length 50 cm, **autoclavable,** for autofluorescence diagnosis, fiber optic light transmission and filter wheel AF/WL incorporated, color code: blue

Fluid Light Cable for use with HOPKINS® Telescopes for Autofluorescence and Photodynamic Diagnosis (PDD):

495 FS **Fluid Light Cable,** diameter 2 mm, length 220 cm



10320 AP 10320 BP 10320 DP

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HOPKINS® Telescopes for use with Bronchoscopes
see chapter 3, BRONCHOSCOPY, TRACHEOSCOPY

TRICAM® SL II

Three-Chip Camera System, Color Systems PAL/NTSC, Digital Imaging Processor

TRICAM® SL II is the endoscopic video platform offered by KARL STORZ for all endoscopically assisted applications and video display of the highest image quality.

Thanks to its ergonomic, compact design, this CCD sensor technology separates the optical image of the 3-CCD image sensor into the three primary colors by means of a specially coated color prism.

Each individual CCD sensor receives a specific color with the maximum line representation.

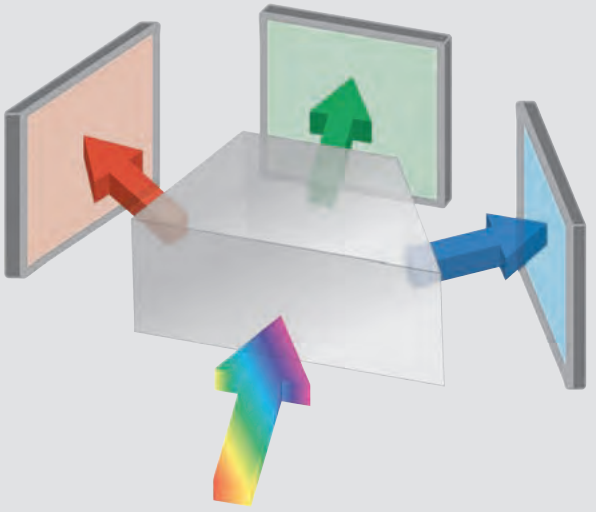
The separate processing of the primary color information red, green, and blue means that all colors can be optimally captured with this process. Furthermore, the use of all three CCD sensors offers up to three times more detail enhancement.

TRICAM® SL II offers a high degree of optoelectronic accuracy and precision.

Signals are processed by means of a digital image processor. The endoscopic image is produced true to the original image. The image processor also assumes automatic image optimization during continuously changing illumination and color conditions. Manual adjustment is therefore no longer necessary.

The user has several preassigned digital-optimization-filters at his disposal for adjustment to rigid, semirigid and flexible endoscopes at the touch of a button.

Video outputs such as Digital-Video (DV) and all analog signal variations are an integral feature of **TRICAM® SL II** standard equipment.



Special Features:

- **Best image quality and display due to 3-CCD sensor chip technology**
- **Enhanced signal quality through Digital Signal Processing (contrast and filter enhancement for rigid, semirigid and flexible endoscopes).**
- **Optimal image size display, regardless of the telescope used, thanks to patented Parfocal Optical Zoom Lens**
- **Simplified operation reduces camera movement, i.e. prevents damage to or soiling of the lens**
- **Constant illumination due to the auto-exposure system ensures seamless transitions between images, regardless of imaging area or available light**
- **Functionality at the touch of a button with easy-to-programme operating elements via intuitive control of all functions in the sterile area**
- **Parameters of the OR equipment used, light sources, etc. can be displayed and controlled (KARL STORZ Communication Bus) on the monitor**
- **Digital video output (DV) for digital recording**
- **Digital Zoom 1 – 2x can be adjusted to 4 levels**
- **“Freeze Frame” function can be activated via camera head buttons or an external footswitch**
- **Fluorescence imaging**

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TRICAM® SL II

Camera Control Unit SCB

KARL STORZ — ENDOSKOPE

20 2230 11U1	**Tricam® SL II Camera Control Unit SCB**

color systems **PAL/NTSC,** with **KARL STORZ-SCB** and integrated digital Image Processing Module

Mains Cord

Keyboard, with US-English character set

2x **Connecting Cable,** for controlling peripheral units, length 180 cm

BNC/BNC Video Cable, length 180 cm

S-Video (Y/C) Connecting Cable, length 180 cm

Special RGBS Connecting Cable, length 180 cm

SCB Connecting Cable, length 100 cm

DV Connecting Cable, 6 pin to 4 pin, length 450 cm

Specifications:

Video output	- Composite signal at BNC socket - S-Video signal to 4-pin Mini-DIN socket (2x) - RGBS signal to 4x BNC sockets - DV signal to 6-pin DV socket
Input	Keyboard input for character generator and control functions, 6-pin Mini-DIN socket
Control output/input	KARL STORZ-SCB to 6-pin Mini-DIN socket (2x), 3.5 mm stereo jack plug (ACC 1, ACC 2)

Camera Control Unit (CCU)	Dimensions: 305 x 88 x 254 mm (w x h x d)
Weight	2.7 kg
Power supply	100-240 VAC, 50/60 Hz
Certified to:	IEC 601-1, 601-2-18, CSA 22.2 No. 601, UL 2601, and CE acc. to MDD, protection class 1/BF

Optional Accessories for TRICAM® SL II see catalog TELEPRESENCE

Components see chapter 13, SPARE PARTS AND ACCESSORIES

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For use with TRICAM® SL II Camera Control Unit SCB 20 2230 11U1

TRICAM® PDD Three-Chip Pendulum Camera Head

20 2210 39 / **20** 2211 39

20 2210 39	**PAL**	**TRICAM® PDD Three-Chip Pendulum Camera Head**
20 2211 39	**NTSC**	

color systems **PAL/NTSC,** soakable, gas-sterilizable, with pendulum system and fixed focus, f = 14 mm, 2 freely programmable camera head buttons, for photodynamic early diagnosis

TRICAM® PDD Three-Chip Camera Head

20 2210 37 / **20** 2211 37

20 2210 37	**PAL**	**TRICAM® PDD Three-Chip Camera Head**
20 2211 37	**NTSC**	

color systems **PAL/NTSC,** soakable, gas-sterilizable, with integrated Parfocal Zoom Lens, f = 25 – 50 mm (2x), 2 freely programmable camera head buttons, for photodynamic early diagnosis

Specifications:

TRICAM® Camera Heads	**PDD Three-Chip Pendulum Camera Head**	**PDD Three-Chip Camera Head**
PAL	**20** 2210 39	**20** 2210 37
NTSC	**20** 2211 39	**20** 2211 37
Image sensor	3x ¼" CCD chip	3x ½" CCD chip
Pixels Output signal H x V	752 x 582 (PAL) 768 x 494 (NTSC)	752 x 582 (PAL) 768 x 494 (NTSC)
Resolution (horizontal)	min. 750 lines	min. 750 lines
Dimensions	Diameter 29-37 mm, length 117 mm	37 x 47 mm, length 124 mm
Weight	170 g	240 g
Min. sensitivity	F 1.4/3 Lux (standard)	F 1.4/3 Lux (standard)
Lens	Pendulum system, fixed focus, f = 14 mm	Integrated Parfocal Zoom Lens, f = 25-50 mm
Grip mechanism	Standard eyepiece adaptor	Standard eyepiece adaptor

Optional accessories for TRICAM® SL II see catalog TELEPRESENCE

5-06

D-LIGHT C/AF System SCB

KARL STORZ — ENDOSKOPE

Special Features:

- **For photodynamic early diagnosis in bronchoscopy**
- **Facility for switching between reduced white light, autofluorescence mode and Protoporphyrin IX fluorescence mode (optional)**
- **With integrated KARL STORZ Communication Bus (KARL STORZ-SCB)**

20 1336 01-133 **Cold Light Fountain D-LIGHT C/AF SCB**

power supply 100 – 125/220 – 240 VAC, 50/60 Hz
including:
Mains Cord
SCB Connecting Cable, length 100 cm
One-Pedal Footswitch, one-stage, for switch function

Specifications:

Lamp type	XENON 15 V, 300 Watt
Color temperature	6000 K
Light outlets	1
Light intensity adjustment	continuously adjustable, either via a membrane keyboard or KARL STORZ Communication Bus Signal

Dimensions w x h x d	305 x 165 x 335 mm
Weight	11 kg
Certified to	IEC 601-1 and UL 544, protection class 1/CF

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Spare Lamps and Spare Lamp Modules for Cold Light Fountains D-LIGHT C/AF SCB
see catalog TELEPRESENCE
The system can be operated with KARL STORZ-SCB units.

Components see chapter 13, SPARE PARTS AND ACCESSORIES

The Compact Documentation Solution

The new KARL STORZ AIDA® compact NEO advanced/standard system combines all the required functions for integrated and precise documentation in a single system. All functions are centrally controlled via touch screen, footswitch, camera head buttons or voice control directly from the sterile area.

AIDA compact NEO advanced/ standard: *Voice control*

Data Acquisition

AIDA compact NEO advanced/standard records still images, video sequences (in HD quality) and spoken comments of findings and intraoperative procedures directly from the sterile area. Recordings are activated at a finger tip via touch screen, voice control, footswitch or camera head buttons.

Live display of camera images on the touch screen enables immediate monitoring and selection of the recorded data.

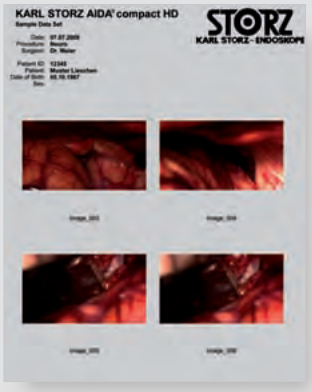
AIDA compact NEO advanced/ standard: *Review screen*

Flexible Review

Before final archiving, the saved data can be viewed or listened to and processed on the review screen. Data no longer required can be simply deleted.

Individual images, video and audio sequences can be renamed and given more meaningful names. A pre-defined selection list with keywords simplifies and speeds up data entry.

A voice entry of the case report can even be recorded while viewing video and image files.



AIDA compact NEO advanced/ standard: *Automatic creation of standard reports*

Automated Data Archiving

Once a treatment is completed, AIDA compact NEO advanced/standard automatically stores the data on a DVD, creates a standard report, and prints it as an overview if required.

AIDA compact NEO advanced/ standard: *Efficient archiving*

Multisession and Multipatient

Efficient data archiving is assured as the data of several patients can be saved on a DVD, a USB stick or optionally on Blu-ray.

3-11

Data Management and Documentation

KARL STORZ AIDA® compact NEO advanced/standard

KARL STORZ — ENDOSKOPE

Special features:

- **Digital storage of still images with a resolution of 1920 x 1080, video sequences in 720p and audio files**
- **DICOM/HL7 interface package**
- **Sterile, ergonomic operation via touch screen, voice control, camera head buttons and/or footswitch**
- **Automatic recognition of connected camera systems at HD-SDI/SD-SDI inputs (of IMAGE1 camera systems at SD-SDI input only)**
- **Efficient archiving on DVD, CD-ROM, USB stick and multipatient**
- **Network storage possible**
- **Optional connection to PACS, RIS and HIS**
- **Automatic creation of standard reports**
- **Computers and monitors for use in the OR area certified according to EN 60601-1**
- **Compatible with KARL STORZ Communication Bus (SCB) and OR1™ AV system NEO**
- **KARL STORZ AIDA® compact NEO advanced/standard as an attractive, digital alternative to video printers, video recorders and dictating machines**

20 0409 13-EN* **KARL STORZ AIDA® compact NEO advanced**

Documentation system for digital storage of still images, video sequences and audio files,
power supply 115/230 VAC, 50/60 Hz

including:

KARL STORZ AIDA® control NEO, with integrated DVD/CD writer, Blu-ray reading possible

AIDA compact HD Frame Grabber Card

PS/2 Compact Keyboard, US-English, with cover

KARL STORZ AIDA® compact NEO Software, with voice control and software protection

KARL STORZ USB Stick, 2 GB

2x **Connecting Cables,** for controlling peripheral units, length 180 cm

BNC/BNC Video Cable, length 180 cm

BNC Connecting Cable, length 30 cm

DVI-D Connecting Cable, length 180 cm

Mains Cord

Connecting Cable, Mini-DIN plug to BNC socket, length 150 cm

20 0409 12-EN* **KARL STORZ AIDA® compact NEO standard**

Documentation system for digital storage of still images, video sequences and audio files,
power supply 115/230 VAC, 50/60 Hz

* Available in the following languages: DE, ES, FR, IT, NL, NO, PT, PL, RU, DK, SE, JP, CN

Specifications:

Video systems	- PAL - NTSC
Signal inputs	- S-Video (Y/C) - Composite - RGB (standard only) - SD-SDI (standard only) - HD-SDI (standard only) - DVI-D (advanced only)
Image formats	- JPG - BMP

Video formats	- MPEG2
Audio formats	- WAV
Storage media	- DVD+R - DVD+RW - DVD-R - DVD-RW - CD-R - CD-RW - USB stick

3-11

Accessories

for AIDA compact NEO advanced/standard

KARL STORZ TFT Flat Screens

W29519 N

W29519 NB

KARL STORZ TFT Flat Screens	19"
Desktop with Pedestal	W29519 N
Wall-mounted with VESA 100-adaption	W29519 NB
Inputs:	
SDI	●
HD-SDI	●
RGBS	●
S-Video	●
Composite	●
SOG	●
DVI-D	●
Fiber Optic	–
VGA	●
Outputs:	
SDI	●
HD-SDI	●
RGBS	●
S-Video	●
Composite	●
DVI-D	●
Signal format displays:	
4:3	●
5:4	●
16:9	●
16:10	●
Picture-in-Picture (PiP, HD – SD)	●
Picture-in-Picture (PiP, HD – HD)	●
PAL/NTSC compatible	●
Picture-Perfect Technology	●

Accessories included in delivery:

400 A **Mains Cord,** length 300 cm
9419 PS **Power Supply**
9526 SF **Pedestal** 19", 24" and 26" monitors

3-11

W29519 N **19" KARL STORZ TFT Flat Screen**

Desktop with pedestal, color systems **PAL/NTSC,** max. screen resolution 1280 x 1024, power supply 100 – 240 VAC, 50/60 Hz

W29519 NB **19" KARL STORZ TFT Flat Screen**

Wall mounted with VESA 100 adaption, color systems **PAL/NTSC,** max. screen resolution 1280 x 1024, power supply 100 – 240 VAC, 50/60 Hz

including:

External 24VDC Power Supply

Mains Cord

Signal cables: S-Video, BNC, SXGA

Specifications:

KARL STORZ TFT Flat Screens	**19"**
Desktop with Pedestal	W29519 N
Wall-mounted with VESA 100-adaption	W29519 NB
Brightness	300 cd/m²
Max. viewing angle	178° vertical
Pixel distance	0.294 mm
Reaction time	10-16 ms
Contrast ratio	600:1
Mount	100 mm VESA
Weight	6.8 kg
Rated power	65 Watt
Operating conditions	0-38 °C
Storage	-20-60 °C
Relative humidity	5-85%, non-condensing
Dimensions w x h x d	465 x 400 x 98 mm
Power supply	100-240 VAC
Certified to	EN 60601-1, UL 60601-1, MDD 93/42/EEC, protection class IPX 1

3-11

Accessories

for AIDA compact NEO advanced/standard

KARL STORZ Touch Screens

20 0904 03/**20** 0904 06

20 0904 01/**20** 0904 05

KARL STORZ Touch Screens	**15"**	**19"**
Desktop with Pedestal	**20** 0904 03	**20** 0904 06
Wall-mounted with VESA 75/100-adaption	**20** 0904 01	**20** 0904 05
Inputs:		
VGA	●	●
SVGA	●	●
XGA	●	●
SXGA	–	●
Screen Diagonal:		
38 cm	●	–
48 cm	–	●
Max. Screen Resolution:		
1024 x 768	●	–
1280 x 1024	–	●

Specifications:

KARL STORZ Touch Screens	**15"**	**19"**
Desktop with Pedestal	**20** 0904 03	**20** 0904 06
Wall-mounted with VESA 75/100-adaption	**20** 0904 01	**20** 0904 05
Monitor type	TFT-LCD monitor with active matrix	TFT-LCD monitor with active matrix
Display	304 x 228 mm	376 x 301 mm
Touch Screen	AccuTouch	AccuTouch
Colors	16 million with pixel shading	16 million with pixel shading
Brightness	250 cd/m² (typ.)	250 cd/m² (typ.)
Viewing angle	Horizontal 80° Vertical 80°	Horizontal 85° Vertical 85°
Contrast ratio	400:1 (typ.)	500:1 (typ.)
Monitor reaction time	25 ms	25 ms
Pixel distance	0.30 mm	0.29 mm
Input signal level	0.7 Vpp	0.7 Vpp
Rated power	48 VA	90 VA
Connections	- D-Sub - VGA-compatible analog-RGBS	- D-Sub - VGA-compatible analog-RGBS
Power supply	100-240 VAC, 50/60 Hz	100-240 VAC, 50/60 Hz
Certified tot	EN 60601-1, CSA 22.2 No. 601.1, UL 2601-1	EN 60601-1, CSA 22.2 No. 601.1, UL 2601-1
Mechanical values	- Weight: max. 6.5 kg - Dimensions w x h x d: 375 x 356 x 205 mm	- Weight: max. 10.5 kg - Dimensions w x h x d: 432 x 467 x 251 mm

3-11

20 0904 01 **15" KARL STORZ Touch Screen**

Wall or swivel-arm mounting, VGA/SVGA/XGA,
resolution max. 1024 x 768 (XGA mode),
power supply 100 – 240 VAC, 50/60 Hz,
incl. 3 touch screen covers

including:

Touch Pen, for KARL STORZ touch screens

Adaptor, VESA 75

Signal cables: RS 232, SVGA

20 0904 03 **15" KARL STORZ Touch Screen**

Desktop, VGA/SVGA/XGA,
resolution max. 1024 x 768 (XGA mode),
power supply 100 – 240 VAC, 50/60 Hz,
incl. 3 touch screen covers

including:

Touch Pen, for KARL STORZ touch screens

Pedestal, for 15" KARL STORZ Touch Screen

Signal cables: RS 232, SVGA

20 0904 05 **19" KARL STORZ Touch Screen**

Wall or swivel-arm mounting, VGA/SVGA/XGA/SXGA,
resolution max. 1280 x 1024 (SXGA mode),
power supply 100 – 240 VAC, 50/60 Hz,
incl. 3 touch screen covers

including:

Touch Pen

Signal cables: RS 232, SVGA

20 0904 06 **19" KARL STORZ Touch Screen**

Desktop, VGA/SVGA/XGA/SXGA,
resolution max. 1280 x 1024 (SXGA mode),
power supply 100 – 240 VAC, 50/60 Hz,
incl. 3 touch screen covers

including:

Touch Pen

Pedestal

Signal cables: RS 232, SVGA

Accessories:

20 0904 81	**Mains Adaptor,** for 15" KARL STORZ Touch Screen **20** 0903 31, with 300 cm low voltage cable
20 0904 88	**Same,** with 10 m low voltage cable
20 0904 85	**Mains Adaptor,** for 19" KARL STORZ Touch Screen **20** 0904 37, with 300 cm low voltage cable
20 0904 89	**Same,** with 10 m low voltage cable
20 0903 86	**Touch Pen,** for KARL STORZ touch screens
20 0904 86	**Pedestal,** for 15" KARL STORZ Touch Screen **20** 0903 31
20 0904 87	**Pedestal,** for 19" KARL STORZ Touch Screen **20** 0903 37 and **20** 0904 37
041165-20*	**Sterile Cover,** for 15" KARL STORZ touch screen
041265-20*	**Sterile Cover,** for 19" KARL STORZ touch screen

3-11

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

Accessories

for AIDA compact NEO advanced/standard

KARL STORZ — ENDOSKOPE

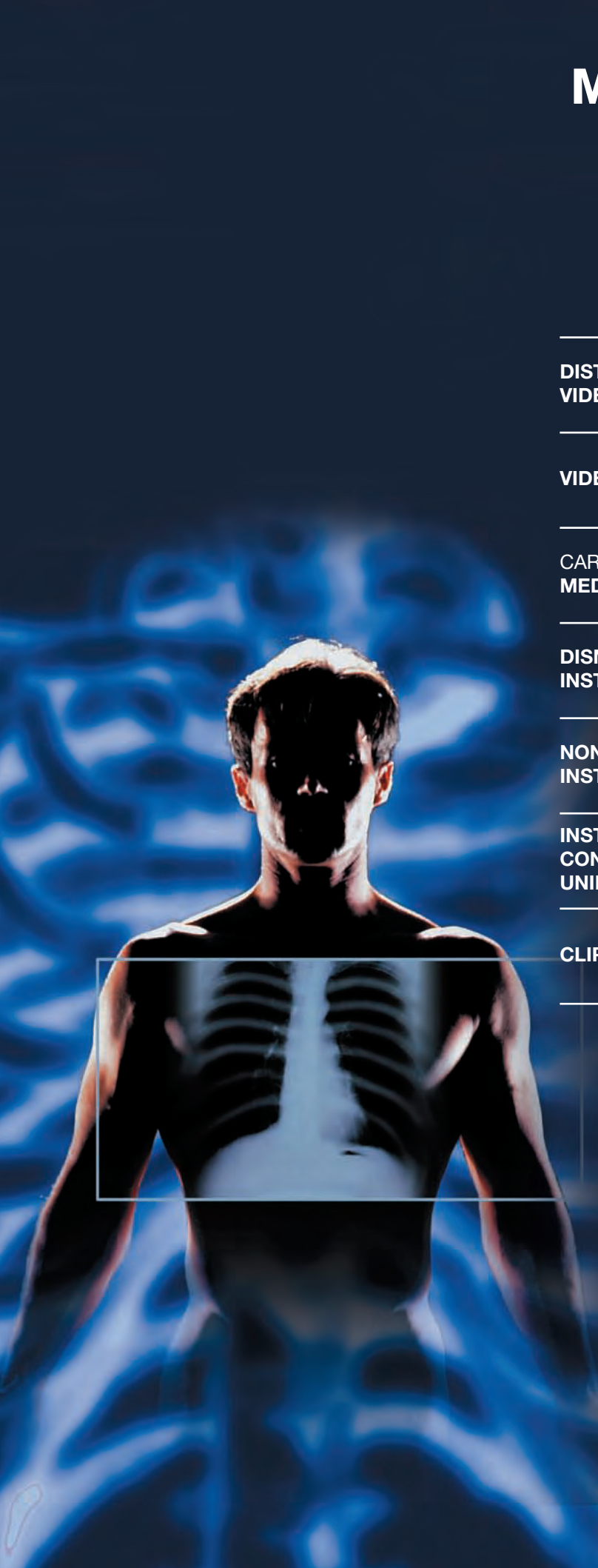
	29005 SZ	**Monitor Swivel Arm,** height and side adjustable, can be mounted on the left or on the right side, swivel range 180°, reach 600 mm, for side boom as of 800 mm, loading capacity max. 14 kg, with monitor holder VESA 75/100, for Equipment Cart 29005 LAP/GU/BAS
	20 0402 73	**Bar Code Scanner**
	9370 TQ	**Color Ink Jet Printer,** with horizontal paper feed, incl. mains cord, USB printer cable, length 200 cm, black and color ink jet cartridges
	9370 TP	**Photo Ink Jet Printer Paper,** for use with Printer 9370 TE/TH/TI/TL/TRN/TQ
	9371 LA	**Color Laser Printer,** including mains cord, USB printer cable, length 200 cm
	20 0902 34U	**PS/2 Compact Keyboard,** US-version, with cover
	20 0402 32	**PS/2 Silicone Keyboard,** German version, washable, disinfectable
	20 0104 30	**Two-Pedal Footswitch,** two-stage

5-06

	20 0402 72	**SVGA Connecting Cable,** length 600 cm
	20 0400 73	**RS 232 Connecting Cable,** length 600 cm
	20 0400 74	**Printer Cable,** length 300 cm
	20 0401 74	**Printer Cable,** length 500 cm
	20 0103 70	**Potential Equipotential Cable,** length 200 cm
	20 0102 70	**Potential Equipotential Cable,** length 500 cm
	W20475	**OR1™ Network Isolator,** for galvanic decoupling of units with RJ45 network connection (100 Mbit)
	20 0900 34	**Ethernet Network Board,** 10/100 Mbit/s
	20 0900 37	**Fiber Optic Network Board,** 100 Base-FX (SC)
	20 0901 71	**Fiber Optic Network Cable,** length 100 cm, LWL-patch cable with ST and SC plugs, configured
	20 0900 36	**Media Converter,** converts a ST-Port 100 Base-FX to a RJ45 100 Base-TX, including power supply
	20 0400 76	**RJ45 Network Cable,** length 500 cm
	20 2040 80	**CD-R,** 700 MB, package of 10
	20 2040 81	**DVD+RW,** 4.7 GB, package of 5
	20 2040 82	**DVD+R,** 4.7 GB, package of 10
	20 2040 83	**DVD-R,** 4.7 GB, package of 10

5-06

MEDIASTINOSCOPY



DISTENDING VIDEO MEDIASTINOSCOPE	**119-121**
VIDEO MEDIASTINOSCOPES	**122-123**
CARLENS **MEDIASTINOSCOPES**	**124**
DISMANTLING INSTRUMENTS	**125-126**
NON-DISMANTLING INSTRUMENTS	**127-128**
INSTRUMENTS WITH CONNECTOR PIN FOR UNIPOLAR COAGULATION	**129-130**
CLIP FORCEPS	**131**

DCI® Camera Systems

Special Features:

- **KARL STORZ ENDOVISION® DCI® Endoscopy System (Direct Coupled Interface)**
- **2 programmable function keys on the DCI® camera head for controlling camera functions and other peripheral units**
- **Compatible with KARL STORZ IMAGE1 and IMAGE 1 HUB™ HD camera control units**
- **Safe, simple and simultaneously operating image and light transmission**
- **Offers a consistent, optimum image size**
- **Ergonomic handling as DCI® camera is integrated in the DCI® video mediastinoscope handle**
- **Camera cover specifically adapted to the DCI® camera can be inserted with the camera into the handle**

22 2600 31-3 / **22** 2601 31-3

22 2600 31-3 **PAL** **IMAGE 1**
22 2601 31-3 **NTSC** **D1 One-Chip DCI® Camera Head**

color systems **PAL/NTSC,** soakable, gas-sterilizable, fixed focus, f = 16 mm, 2 freely programmable camera head buttons, **for use with DCI® HOPKINS® telescopes**

22 2010 11U1 **IMAGE 1 HUB™ HD Camera Control Unit SCB**

for use with IMAGE1 FULL HD and IMAGE1 standard one- and three-chip camera heads, max. resolution 1920 x 1080 pixels, with integrated **KARL STORZ-SCB** and integrated digital Image Processing Module, color systems **PAL/NTSC,** power supply 100 – 240 VAC, 50/60 Hz

including:

Mains Cord
S-Video (Y/C) Connecting Cable
2x **Connecting Cable,** for controlling peripheral units
DVI-D Connecting Cable
SCB Connecting Cable
Keyboard, with US English character set

22 2010 11U102 **Same, with SDI module**

including (deviates from **22** 2010 11-1):

IMAGE 1 HUB™ HD Camera Control Unit SCB, with SDI module
BNC/BNC Video Cable

Optional accessories for IMAGE1 system see catalog TELEPRESENCE
Components see chapter 13, SPARE PARTS AND ACCESSORIES

3-11

LINDER/HÜRTGEN **Distending DCI®** *NEW*
Video Mediastinoscope

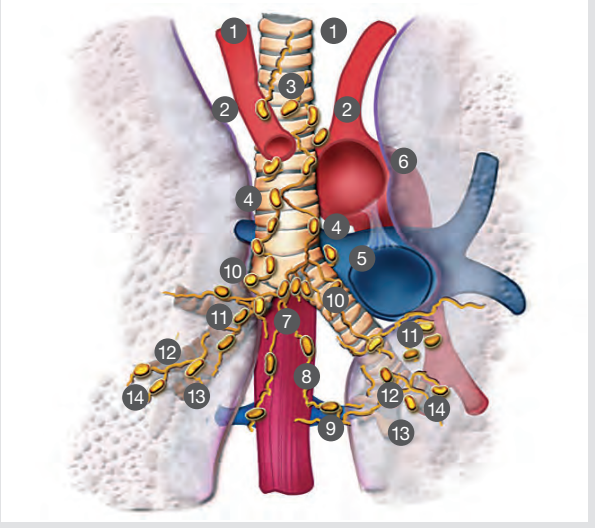
The mediastinoscopy method first used by Carlens in 1959 has developed from being a difficult and complicated method to an intervention under direct visual control with low mortality and morbidity due to the introduction of the video mediastinoscope.

Endoscopic visualization with the video mediastinoscope allows precise dissection of mediastinal structures and enhances diagnostic sensitivity. With the advancement of the method of classical diagnostic mediastinoscopy to video-assisted mediastinal lymphadenectomy (VAMLA), the demands made on the mediastinoscope has also increased. The new video mediastinoscope developed by KARL STORZ is an instrument that meets these requirements.

The new distending video mediastinoscope from KARL STORZ allows the surgical approach to be extended to single-handed use by turning the adjustment wheels in the handle, enabling complex endoscopic inter-ventions to be performed on the mediastinum.

Special Features:

- **Straightforward and ergonomic control of adjustment wheels for distension**
- **Ergonomic handle with slot for the DCI® camera head**
- **Holding arm integrated, bimanual work also possible**
- **Greater freedom of movement due to height adjustment of blade upper and underside**
- **Integrated irrigation and suction channels**
- **Atraumatic blade shape**
- **Special cover for DCI® camera; cover can be inserted with camera into the handle**



Superior Mediastinal Nodes
① Highest Mediastinal
② Upper Paratracheal
③ Pretracheal
④ Lower Paratracheal
⑤ Subaortic
⑥ Para-aortic

Inferior Mediastinal Nodes
⑦ Subcarinal
⑧ Paraesophageal
⑨ Pulmonary Ligament

N1 Lymph Nodes
⑩ Hilar
⑪ Interlobar
⑫ Lobar
⑬ Segmental
⑭ Subsegmental

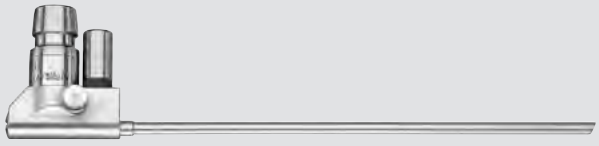
3-11

LINDER/HÜRTGEN **Distending DCI®** *NEW*
Video Mediastinoscope

KARL STORZ — ENDOSKOPE

10972 SP

10972 SP	LINDER/HÜRTGEN **Distending DCI®** **Video Mediastinoscope,** length 20 cm



10970 BA

10970 BA	**DCI® HOPKINS® Forward-Oblique Telescope 30°,** diameter 4 mm, length 14 cm, **autoclavable,** fiber optic light transmission incorporated, with 90° adaption to the DCI® video camera

495 DC	**Fiber Optic Light Cable,** diameter 3.5 mm, length 320 cm, for DCI® camera heads and DCI® telescopes

Please note:
As sterile covers for the KARL STORZ DCI® camera head, we recommend the use of elastic camera head covers by:

mtp medical technical promotion gmbh
Take-Off GewerbePark 46
D-78579 Neuhausen ob Eck
Germany
Telephone: +49/74 67/9 45 04-0
Fax: +49/74 67/9 45 04-99

3-11

LERUT **DCI**® **Video Mediastinoscope**

KARL STORZ — ENDOSKOPE

Optimization of a Tried and Tested Procedure

The development of video-assisted operative techniques in recent years has opened up new vistas in surgery. Although new fields of application are being included almost daily, the development of new instruments have mainly focused on the field of abdominal surgery and – to a lesser extent – thoracoscopy.

In conjunction with KARL STORZ, a mediastinoscope was designed which can create a video recording of a mediastinoscopy. As the instrument channel of the mediastinoscope remains unchanged, surgical intervention can still be performed under direct visual control. The in-built telescope also facilitates coupling a video camera and creating a video recording during the procedure.

Prof. T. LERUT, M. D.,
Leuven, Belgium

The advantages of this system are:

- The operation can also be performed under direct visual control even with the inserted telescope and video camera.
- Standard mediastinoscopy is, due to the narrow working channel, very difficult to teach. As simultaneous recording and display on a monitor is possible, several people can view the operation at the same time. This greatly improves the facility for teaching this procedure.
- Mediastinoscopy is accepted worldwide as the procedure of choice for staging lung cancer. However, the methods of obtaining biopsies seem to vary considerably. Recording the procedure would therefore result in more accurate diagnosis when the evaluation of diagnostic findings differ (e.g. as with focal lymph nodes).
- Widespread use of video recordings internationally could lead to a better understanding and standardization of the procedure.

Fig. 1: *Anterior surface of the trachea with tracheal rings, left tracheobronchial lymph nodes in situ*

Fig. 2: *Pretracheal lymph nodes – right paratracheal lymph nodes prior to removal*

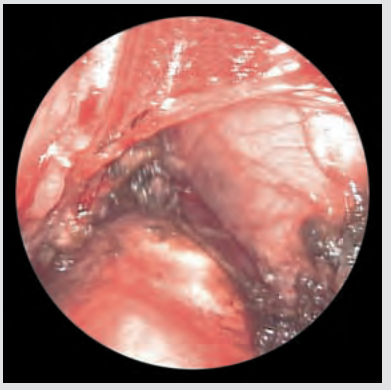


Fig. 3: *Pretracheal and paratracheal lymph nodes after removal (Fig. 2); view of the front surface of the trachea and the superior vena cava*

11-98$_2$

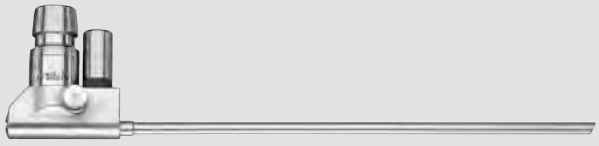
Images and captions courtesy of
Dr. S. EGGELING, Universitätsklinikum Freiburg, Abteilung Thoraxchirurgie, Germany

LERUT **DCI®** Video Mediastinoscope

10971 MV

10971 MVS

10971 MV	LERUT **DCI® Video Mediastinoscope,** with proximal lateral slit, length 15 cm
10971 MVS	LERUT **DCI® Video Mediastinoscope,** with uninterrupted lateral slit, length 15 cm



10970 BA

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mtp medical technical promotion gmbh
Take-Off GewerbePark 46
D-78579 Neuhausen ob Eck
Germany
Telephone: +49/74 67/9 45 04-0
Fax: +49/74 67/9 45 04-99

3-11

10970 A

10970 A	CARLENS **Mediastinoscope,** with proximal lateral slit, with Fiber Optic Light Carrier 10970 AE, length 13 cm
10970 B	CARLENS **Mediastinoscope,** with proximal lateral slit, with Fiber Optic Light Carrier 10970 BE, length 17 cm

3-11

Media*FIT*™ Forceps NEW

dismantling

With the new generation of **Media***FIT*™ instruments, the proven forceps in mediastinoscopy obtain improved ergonomics, preparation and user-friendliness.

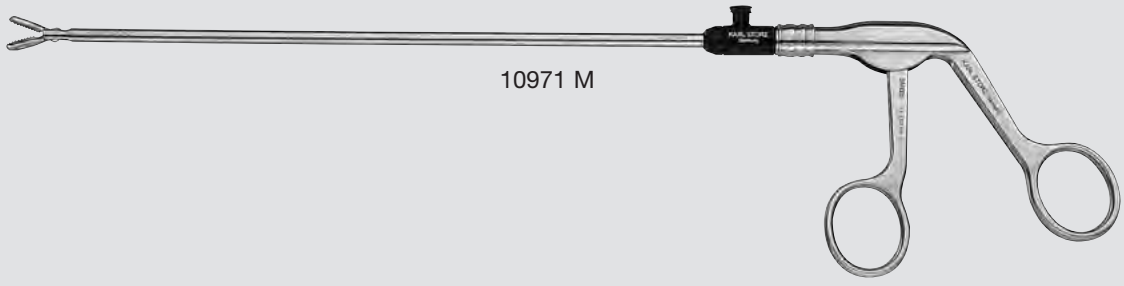
Completely detachable, the new **Media***FIT*™ forceps series meets the highest demands in instrument preparation. No more inaccessible channels or other dirt traps ensures cleaning, dissinfection and sterilization without residue. This makes perfect hygiene the easiest thing in the world – without compromising on the quality offered by conventional instruments.

Media*FIT*™ instruments not only meet the highest quality demands: the ergonomic handle design and a great variety of proven forceps inserts makes work easier and ensures that you will not miss your conventional instruments. The slim construction provides a clear view and full freedom of movement.

The dismantling system makes it possible to combine one handle with all jaw types. This enables a compact instrument setup as well as easy exchange/repair of individual components, providing significant economic benefits.

Special Features:

- **Slim construction provides a clear view and full freedom of movement**
- **Proven quality and jaw design of existing mediastinoscopy instruments for precise work**
- **Ergonomic handle design for comfortable use even over long periods of times**
- **Modular construction enables efficient and economic instrument use**
- **Can be completely disassembled into the following components:**
  – Handle
  – Outer sheath
  – Working insert
- **Instrument cleaning is straightforward and safe**
- **Autoclavable**



10971 M

3-11

Media*FIT*™ Forceps NEW

dismantling

KARL STORZ — ENDOSKOPE

Size 5 mm

Length	Handle
	550000
21 cm	

Working Insert	Order number of the complete instrument
10900 M	10971 M
⊢ 15 ⊣	**Media*FIT*™** MAASSEN **Sponge and Dissecting Forceps**
10900 GO	10971 GO
⊢ 24 ⊣	**Media*FIT*™ Biopsy Forceps,** oval jaws, size 8 x 16 mm
10900 GP	10971 GP
⊢ 20 ⊣	**Media*FIT*™ Biopsy Forceps,** oval jaws, size 6 x 12 mm
10900 GR	10971 GR
⊢ 8 ⊣	**Media*FIT*™ Biopsy Forceps,** spoon-shaped jaws, jaw diameter 5 mm

Media*FIT*™ Outer Sheath

10970

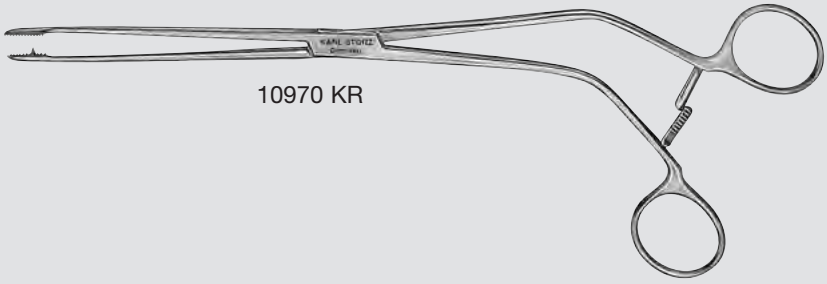
10970	**Media*FIT*™ Outer Sheath,** diameter 5 mm, length 21 cm

3-11

Please note:
For **Media*FIT*™** instruments only the **individual component parts** are numbered. The catalog number of the **entire instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **white** background of the table above.

Sponge and Dissecting Forceps

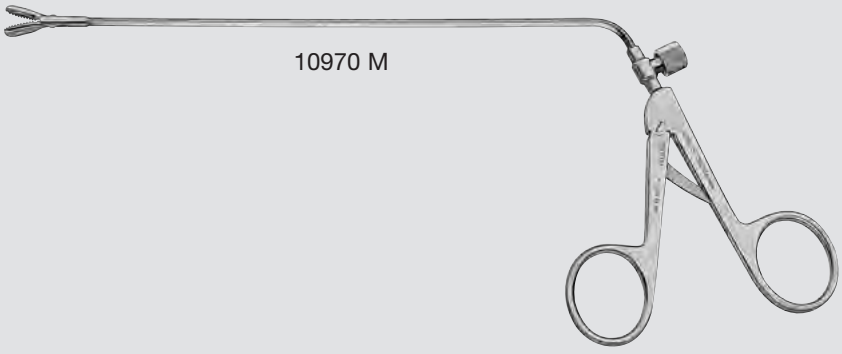
Lengths 20 and 30 cm



10970 KR

10970 K **Sponge and Dissecting Forceps,** length 20 cm

10970 KR **Sponge and Dissecting Forceps,** with ratchet, length 20 cm



10970 M

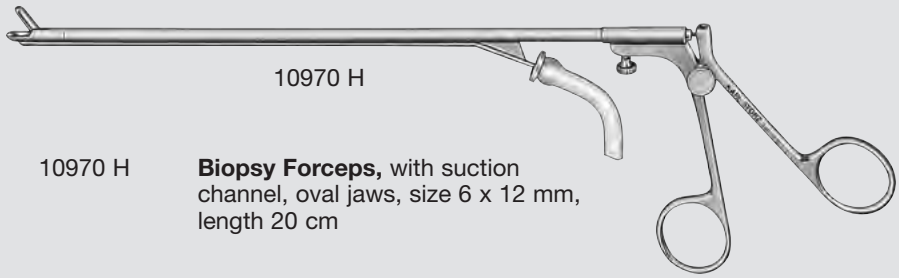
10970 M MAASSEN **Sponge and Dissecting Forceps,** length 20 cm

10970 ML **Same,** length 30 cm

11-98₃

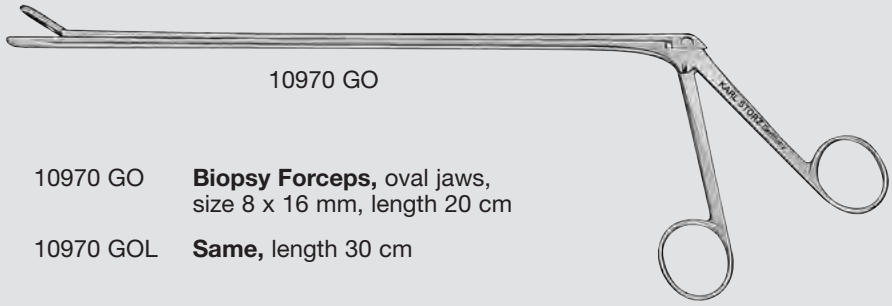
Biopsy Forceps

Length 20 and 30 cm



10970 H

10970 H **Biopsy Forceps,** with suction channel, oval jaws, size 6 x 12 mm, length 20 cm



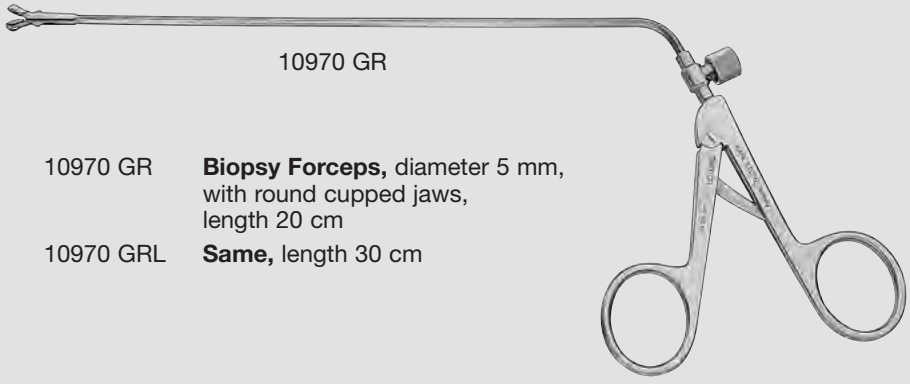
10970 GO

10970 GO **Biopsy Forceps,** oval jaws, size 8 x 16 mm, length 20 cm

10970 GOL **Same,** length 30 cm

10970 GP **Biopsy Forceps,** oval jaws, size 6 x 12 mm, length 20 cm

10970 GPL **Same,** length 30 cm



10970 GR

10970 GR **Biopsy Forceps,** diameter 5 mm, with round cupped jaws, length 20 cm

10970 GRL **Same,** length 30 cm

11-98$_2$

Biopsy Forceps, Scissors

CLICK'*line*® – rotating, dismantling, insulated, with connector pin for unipolar coagulation

KARL STORZ — ENDOSKOPE

Size 5 mm

unipolar

Length	Handle
	33151
25 cm	

Single action jaws

Working Insert	Order number of the complete instrument
34250 MB	34151 MB
15	CLICK'*line*® MANHES **Biopsy Forceps**

Double action jaws

33250 MK	33151 MK
12	CLICK'*line*® METZENBAUM **Scissors,** double action jaws, curved

CLICK'*line*® Metal Outer Sheath, insulated

33250

33250	CLICK'*line*® **Metal Outer Sheath, insulated,** with irrigation connector for cleaning, size 5 mm, length 25 cm

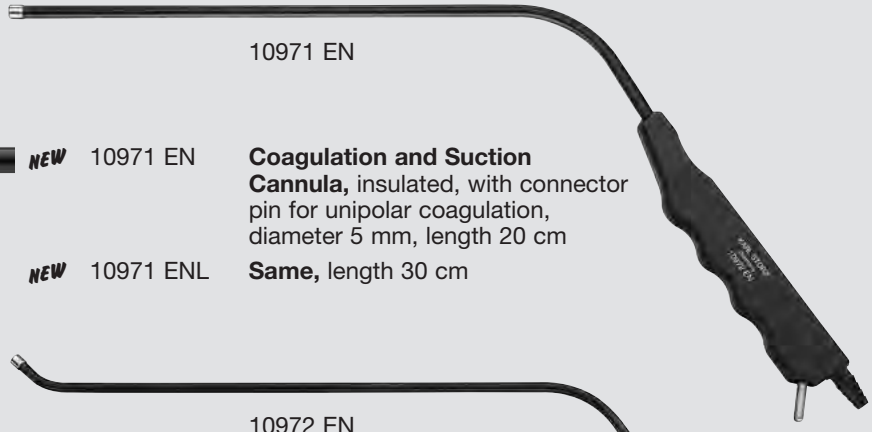
Please note:
For CLICK'*line*® instruments only the **individual component parts** are numbered. The number of the entire **instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **red** background of the table above.

3-11

Coagulating Suction Tubes, Aspiration Cannulas

Length 20 and 30 cm

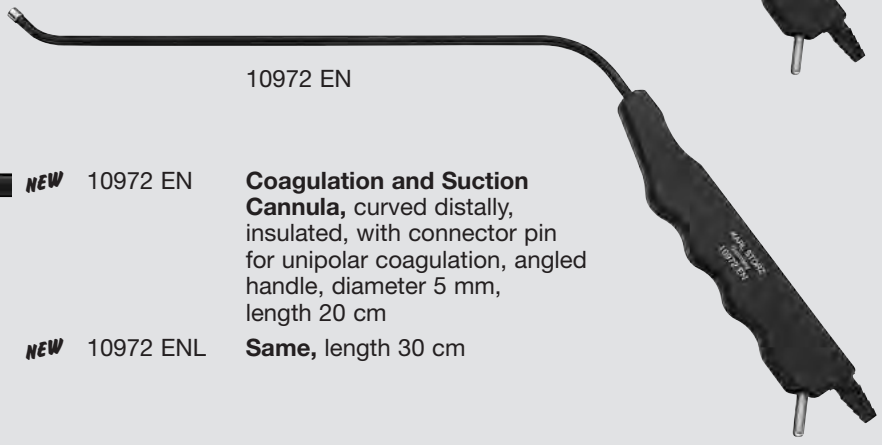
unipolar



10971 EN

NEW 10971 EN **Coagulation and Suction Cannula,** insulated, with connector pin for unipolar coagulation, diameter 5 mm, length 20 cm

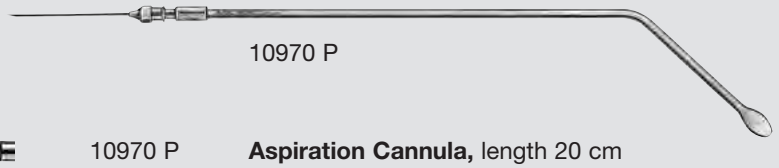
NEW 10971 ENL **Same,** length 30 cm



10972 EN

NEW 10972 EN **Coagulation and Suction Cannula,** curved distally, insulated, with connector pin for unipolar coagulation, angled handle, diameter 5 mm, length 20 cm

NEW 10972 ENL **Same,** length 30 cm



10970 P

10970 P **Aspiration Cannula,** length 20 cm
including:
Injection Needle, package of 12

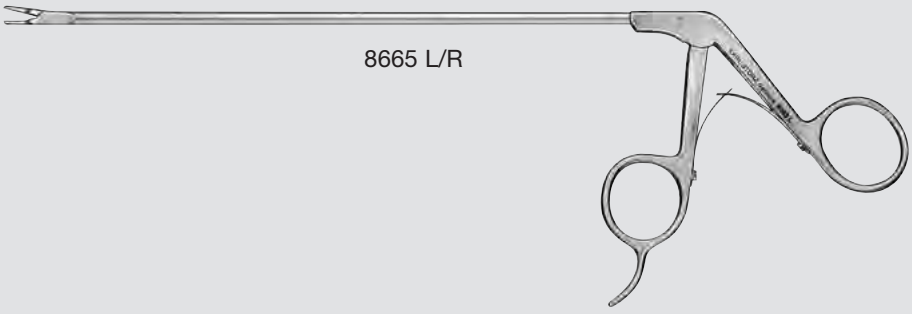
10970 PL **Aspiration Cannula,** length 30 cm
including:
Injection Needle, package of 12

10970 PS **Silicone Tubing,** with LUER-Lock adaptor, for connecting Aspiration Cannula 10970 P/PL to suction syringe

3-11

Components see chapter 13, SPARE PARTS AND ACCESSORIES

Clip Forceps



8665 L/R

8665 L	**Clip Forceps,** jaws angled to left, working length 22 cm, for use with Clip 8665 T
12067 NL	**Same,** working length 30 cm

8665 R	**Clip Forceps,** jaws angled to right, working length 22 cm, for use with Clip 8665 T
12067 NR	**Same,** working length 30 cm

8665 T	**Clip,** titanium LT 200, medium, 5 mm, sterile, package of 36 cartridges with 6 clips each, for use with Forceps 8665 L/R, 12067 NL/NR

SINGLE-PUNCTURE THORACOSCOPY

TELESCOPE AND OPTICAL INSTRUMENTS	135
TROCARS	136
ACCESSORIES	137-138

Single-Puncture Thoracoscopy

In diagnostic thoracoscopy, patients are often administered soporifics, sedatives, analgesics or local anesthetics intravenously. In contrast to surgical thoracoscopy, which is performed under general anesthesia, the patient is responsive during the entire procedure. Consequently, the objective is to cause the least inconvenience to the patient.

The new optical biopsy forceps with corresponding HOPKINS® telecope for diagnostic thoracoscopy allows work through an access port of only a few millimeters. The minimal diameter enables the introduction of the forceps into all **6 mm trocars.** Biopsies can be performed with the utmost precision under direct visual control.

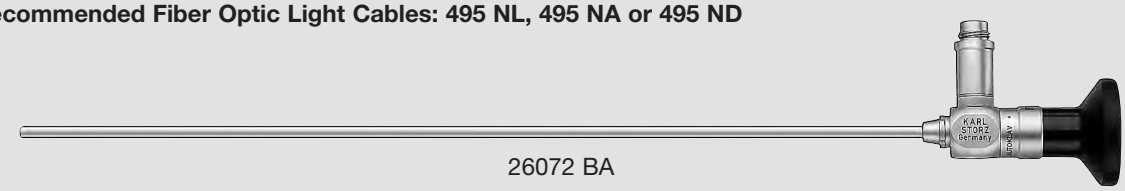
3-11

Telescope and Optical Instruments NEW

for the 1-Port Method

KARL STORZ — ENDOSKOPE

Diameter 4 mm, length 29 cm
for use with optical instruments
Recommended Fiber Optic Light Cables: 495 NL, 495 NA or 495 ND

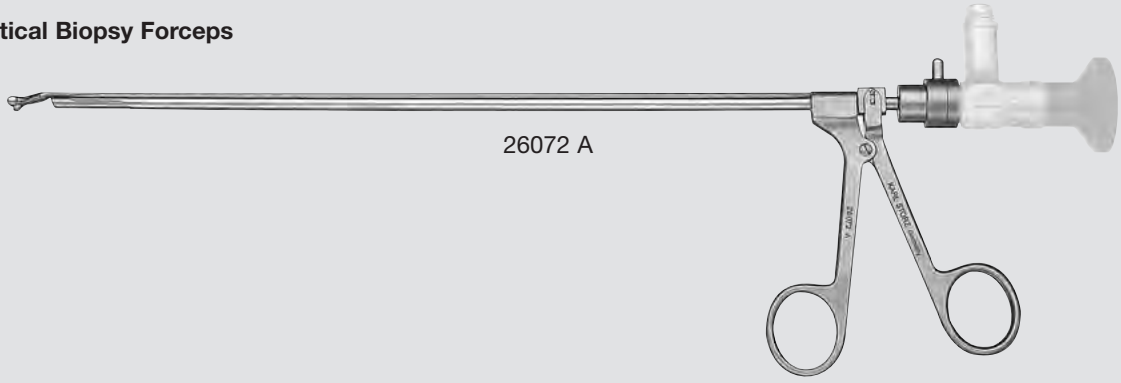


26072 BA

26072 BA — **HOPKINS® II Forward-Oblique Telescope 30°,** enlarged view, diameter 4 mm, length 29 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red

Size 5 mm
Trocar size 6 mm

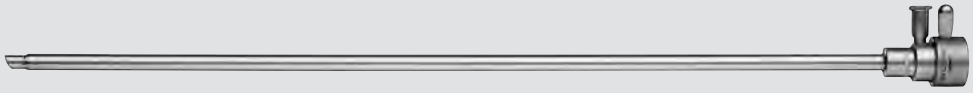
Optical Biopsy Forceps



26072 A

26072 A — **Optical Biopsy Forceps,** double action jaws, for use with HOPKINS® II Telescope 26072 BA

Optical Suction Tube



26072 SU

26072 SU — **Optical Suction Tube,** for use with HOPKINS® II Telescope 26072 BA

Optical Powder Blower

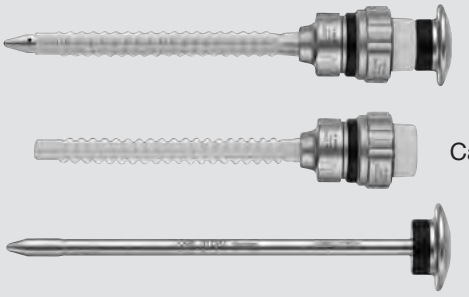
26072 TK — **Optical Powder Blower,** with atomizer and rubber bulb, for use with HOPKINS® II Telescope 26072 BA

Fiber Optic Light Cables see catalog TELEPRESENCE

3-11

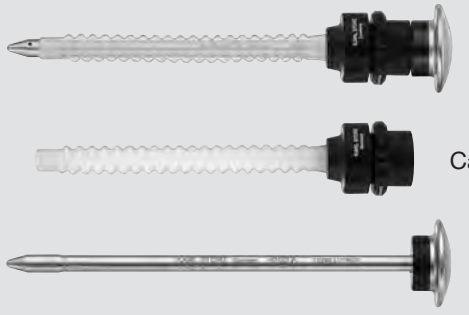
Trocars with Flexible Cannulas

Size 6 mm
with silicone leaflet valve



Size:		**6 mm**
Working length:		8.5 cm
Color code:		black
	Trocar, with blunt tip including: **Cannula,** flexible, with silicone leaflet valve **Trocar only**	**30120 NOL** 30120 NL 30120 NO
Accessories	**Plastic Cannula, autoclavable,** for flexible trocars, package of 5 	30120 X

Size 6 mm
without valve



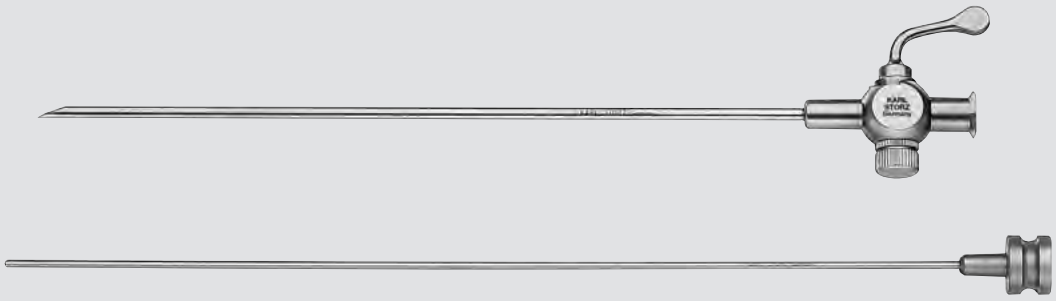
Size:		**6 mm**
Working length:		8.5 cm
Color code:		black
	Trocar, with blunt tip including: **Cannula,** flexible **Trocar only**	**40120 NAL** 40120 NL 40120 A
Accessories	**Plastic Cannula, autoclavable,** for flexible trocars, package of 5 	30120 X

3-11

Application Cannula for Thoracic Drainage, RAMEL **Pleurabiopsy Needle**

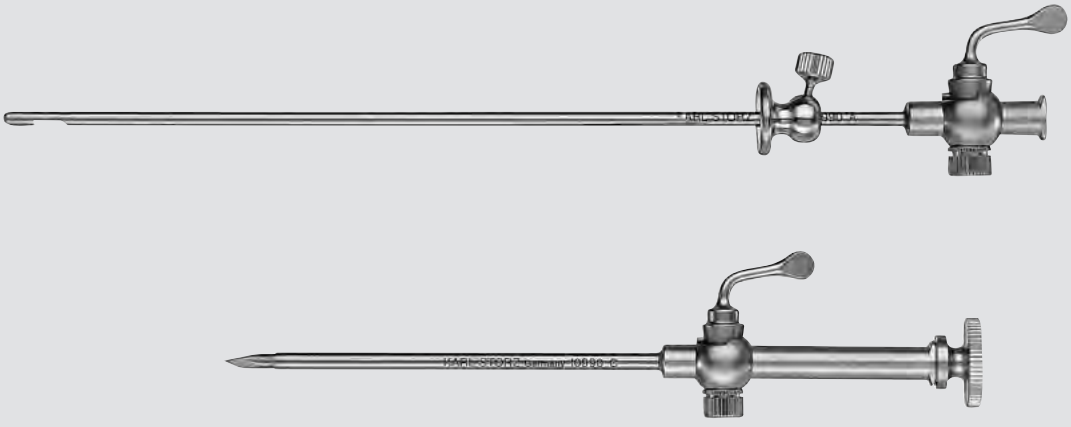
KARL STORZ — ENDOSKOPE

Application Cannula for Thoracic Drainage



NEW 10995 **Application Cannula for Thoracic Drainage**
including:
Outer Cannula, with insufflation stopcock, diameter 2.1 mm, length 15 cm
Inner Cannula, blunt tip, diameter 1.5 mm, length 16.5 cm

RAMEL **Pleurabiopsy Needle**



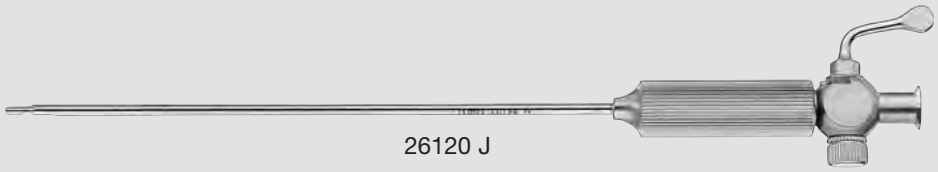
10990 RAMEL **Pleurabiopsy Needle**
including:
Biopsy Needle, with LUER-Lock, with stopcock
Rider, with stop screw
Cannula, with LUER-Lock, with stopcock, size 3 mm, working length 6.5 mm
Trocar only, with pyramidal tip

3-11

Components see chapter 13, SPARE PARTS AND ACCESSORIES

KARL STORZ — ENDOSKOPE

Pneumoperitoneum Needle

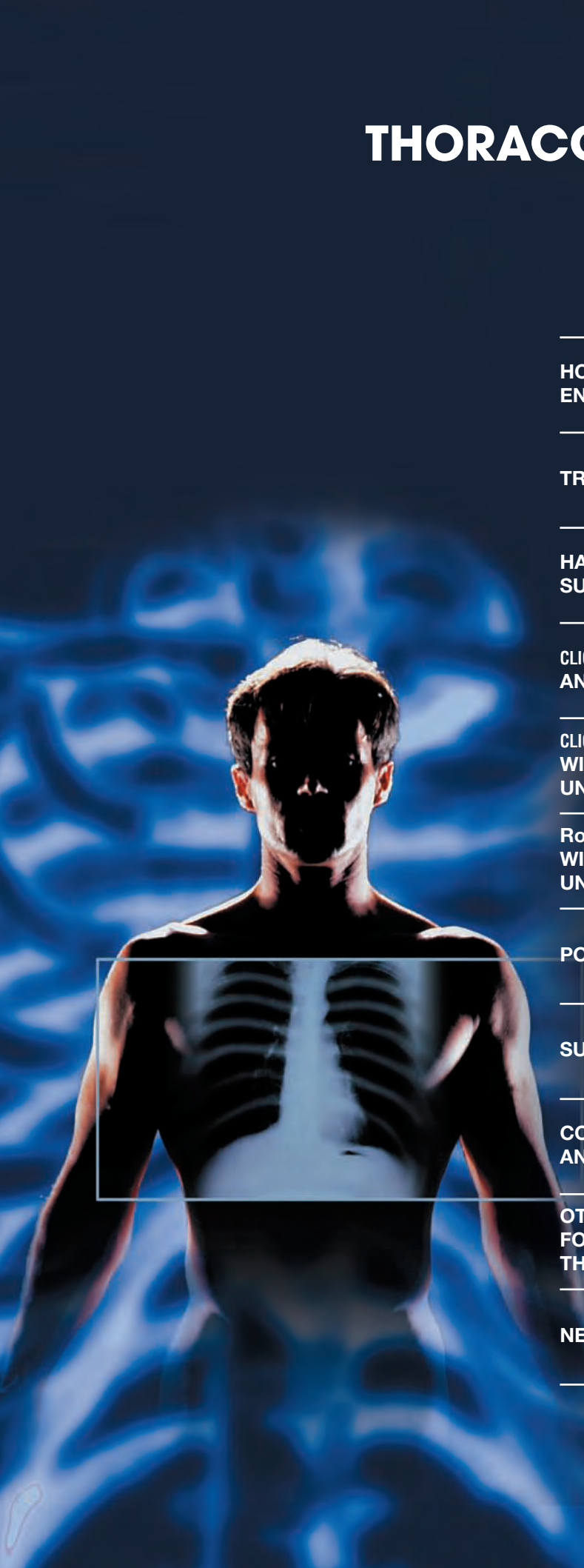


26120 J

26120 J	VERESS **Pneumoperitoneum Needle,** with spring-loaded blunt inner cannula, LUER-Lock, **autoclavable,** diameter 2.1 mm, length 10 cm

3-11

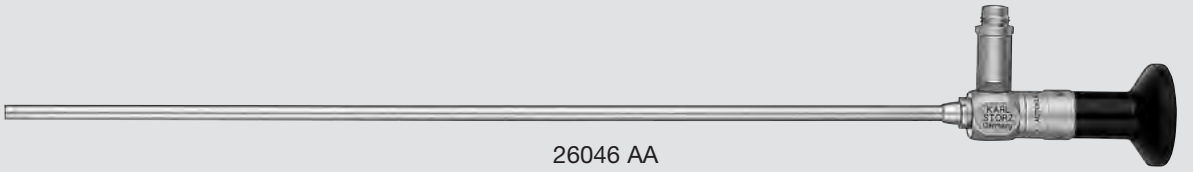
VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS)



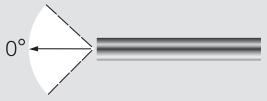
HOPKINS® II TELESCOPES AND ENDOCAMELEON®	140-144
TROCARS	145-148
HANDLES FOR THORACIC SURGERY	149-151
CLICK*line*® FORCEPS, DISSECTING AND GRASPING FORCEPS	152-156
CLICK*line*® FORCEPS AND SCISSORS WITH CONNECTOR PIN FOR UNIPOLAR COAGULATION	157-158
RoBi® FORCEPS AND SCISSORS WITH CONNECTOR PIN FOR UNIPOLAR COAGULATION	159-164
POWDER BLOWERS	165
SUCTION AND IRRIGATION TUBES	166-167
COAGULATION SUCTION TUBES AND DISSECTING ELECTRODES	168-169
OTHER INSTRUMENTS FOR VIDEO-ASSISTED THORACOSCOPIC SURGERY	170-171
NEEDLE HOLDERS	172-176

HOPKINS® II Telescopes

Diameter 5 mm, length 29 cm
Trocar size 6 mm
Recommended Fiber Optic Light Cables: 495 NL, 495 NA or 495 ND

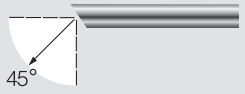


26046 AA



26046 AA **HOPKINS® II Straight Forward Telescope 0°,** enlarged view, diameter 5 mm, length 29 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green

26046 BA **HOPKINS® II Forward-Oblique Telescope 30°,** enlarged view, diameter 5 mm, length 29 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red



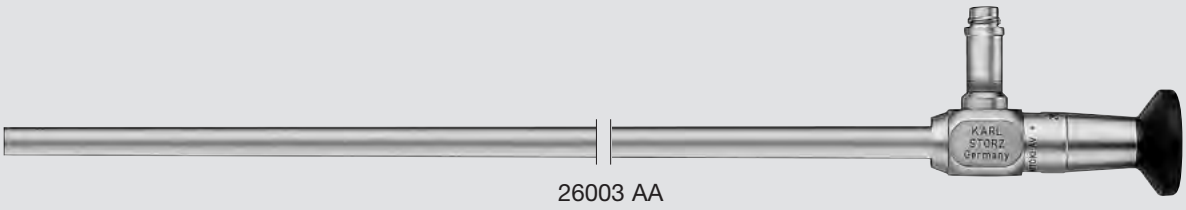
26046 FA **HOPKINS® II Telescope 45°,** enlarged view, diameter 5 mm, length 29 cm, **autoclavable,** fiber optic light transmission incorporated, color code: black

6-01$_3$

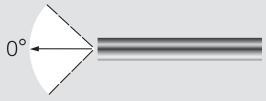
Trocars for use with telescopes diameter 5 mm see page 146
Fiber Optic Light Cables see catalog TELEPRESENCE

HOPKINS® II Telescopes

Diameter 10 mm, length 31 cm
Trocar size 11 mm
Recommended Fiber Optic Light Cables: 495 NB, 495 NCS or 495 NE

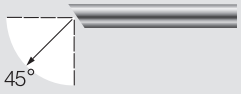


26003 AA



26003 AA — **HOPKINS® II Straight Forward Telescope 0°,** enlarged view, diameter 10 mm, length 31 cm, **autoclavable,** fiber optic light transmission incorporated,
color code: green

26003 BA — **HOPKINS® II Forward-Oblique Telescope 30°,** enlarged view, diameter 10 mm, length 31 cm, **autoclavable,** fiber optic light transmission incorporated,
color code: red



26003 FA — **HOPKINS® II Telescope 45°,** enlarged view, diameter 10 mm, length 31 cm, **autoclavable,** fiber optic light transmission incorporated,
color code: black

Trocars for use with telescopes diameter 10 mm see pages 146, 148
Fiber Optic Light Cables see catalog TELEPRESENCE

10-96₄

3-11

ENDOCAMELEON® NEW

KARL STORZ — ENDOSKOPE

EndoCAMeleon®

Telescope with variable direction of view

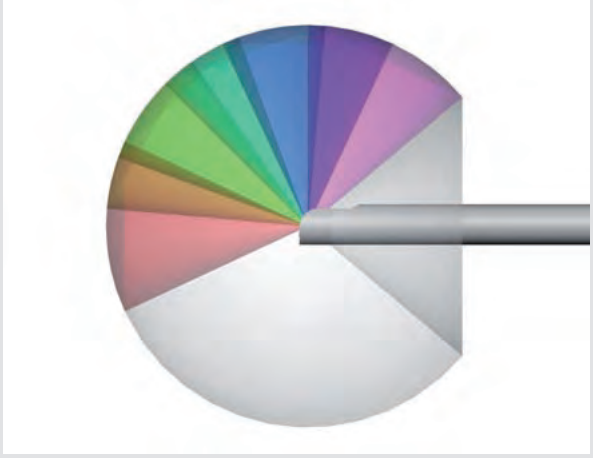
Until now, surgeons had to choose in advance which telescope or direction of view to use in a procedure. However, surgeons were restricted to the selected direction of view throughout surgery or had to perform an intraoperative telescope change during the procedure.

To prevent this predicament in the future, we developed the ENDOCAMELEON®: a telescope that allows you to adjust the desired direction of view – also during surgery – between 0° and 120°.

The ENDOCAMELEON® combines the user comfort of the proven 0° HOPKINS® telescope with the advantages and potential of a telescope featuring a variable direction of view – offering you the quality you expect from KARL STORZ telescopes.

The innovative ENDOCAMELEON® technology is not difficult to use and, due to the external moving parts, does not take up extra intracorporal space. Handling remains straightforward and ergonomic. Image alignment is the same as rigid telescopes: the direction of view is selected by simply turning the adjustment knob, making the system very intuitive to use. As the ENDOCAMELEON® is equipped with a standard eyepiece, the variable direction of view benefits all standard camera systems. Thanks to the HOPKINS® rod lens system, ENDOCAMELEON® also offers image quality that enables a useful application of three-chip cameras or HD camera systems.

To have the direction of view best suited for each situation available at all times offers the surgeon a higher degree of safety. With the ENDOCAMELEON® visual inspection of the entire surgical field is easily achieved. Control over instrument movement is possible throughout the entire procedure and hemorrhages can be visualized and controlled even in previously inaccessible areas. With a simple turn of the adjusting knob, the ENDOCAMELEON® enables the user to easily select the direction of view between 0° and 120° to suit all OR requirements.



ENDOCAMELEON® with variable direction of view, lateral view

ENDOCAMELEON® with variable direction of view, isometric view

3-11

ENDOCAMELEON® NEW

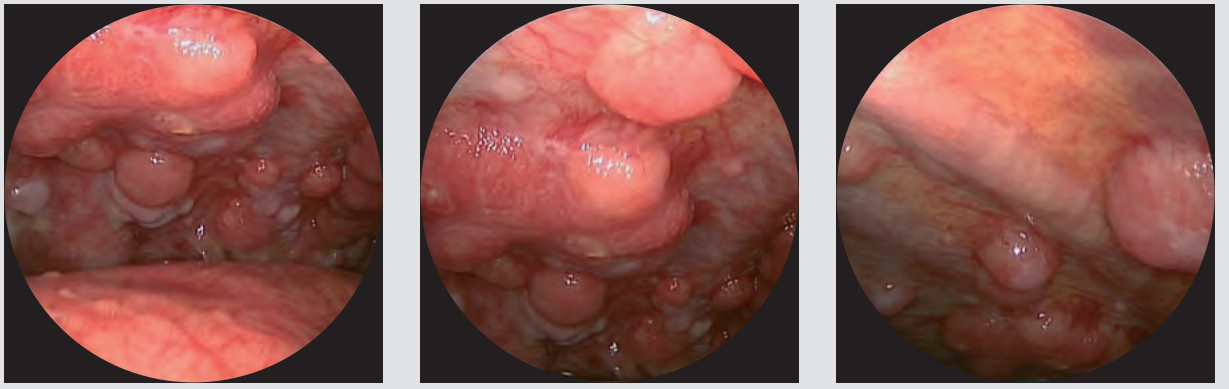
Diameter 10 mm, length 32 cm
Trocar size 11 mm
Recommended Fiber Optic Light Cables: 495 NB, 495 NCS or 495 NE

Special Features:

- **Variable direction of view 0° – 120°**
- **HOPKINS® telescope with unique rod lens system**
- **Easy-to-use adjusting knob for selecting the direction of view**
- **Rigid sheath with a diameter of 10 mm**

26003 AE

26003 AE	**ENDOCAMELEON® HOPKINS® Telescope,** diameter 10 mm, **length 32 cm, autoclavable,** variable direction of view from 0° – 120°, adjustment knob for selecting the desired direction of view, fiber optic light transmission incorporated, color code: gold



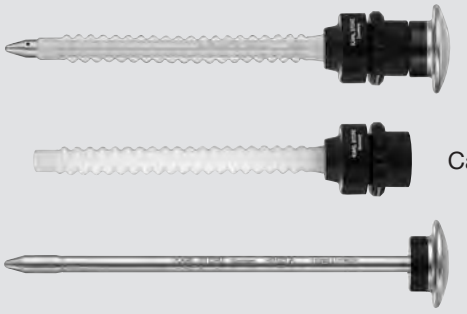
Images courtesy of
Dr. V. HAAS, HELIOS Klinikum Krefeld, Abteilung Thoraxchirurgie, Germany

3-11

Trocars for use with telescopes diameter 10 mm see pages 146, 148
Fiber Glass Light Cables see catalog TELEPRESENCE

Trocars with Flexible Cannulas

Sizes 6 and 11 mm



Size:		**6 mm**
Working length:		8.5 cm
Color code:		black
	Trocar, with blunt tip including: **Cannula,** flexible **Trocar only**	**40120 NAL** 40120 NL 40120 A
Accessories	**Plastic Cannula, autoclavable,** for flexible trocars, package of 5 	30120 X

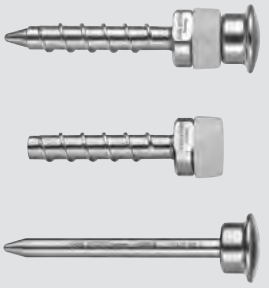
Size:		**11 mm**
Working length:		8.5 cm
Color code:		green
	Trocar, with blunt tip including: **Cannula,** flexible **Trocar only**	**40123 NAL** 40123 NL 40123 A
Accessories	**Plastic Cannula, autoclavable,** for flexible trocars, package of 5 	30123 X

Note: Instruments with curved jaws or distal angled sheaths should be used with trocars having flexible cannulas!

For **KARL STORZ trocars** only the individual components are numbered. The catalog number for the **entire assembled trocar**, as shown above in **bold** print, does not appear on the instrument.

3-11

Sizes 6, 11 and 13 mm

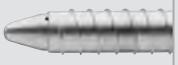


Cannula

Trocar only

Size:		**6 mm**	
Working length:		4 cm	6 cm
	Trocar, with blunt tip including:	**40160 AB**	**40160 CD**
	Cannula	40160 A	40160 C
	Trocar only	40160 B	40160 D

Size:		**11 mm**	
Working length:		4 cm	6 cm
	Trocar, with blunt tip including:	**40103 AB**	**40103 CD**
	Cannula	40103 A	40103 C
	Trocar only	40103 B	40103 D

Size:		**13 mm**	
Working length:		4 cm	6 cm
	**Trocar,** with blunt tip including:	**40107 AB**	**40107 CD**
	Cannula	40107 A	40107 C
	Trocar only	40107 B	40107 D

Note: Instruments with curved jaws or distal angled sheaths should be used with trocars having flexible cannulas!

For **KARL STORZ trocars** only the individual components are numbered. The catalog number for the **entire assembled trocar**, as shown above in **bold** print, does not appear on the instrument.

3-11

Trocars with 45° LUER-Lock Connector

HEIDELBERG **Model**

KARL STORZ — ENDOSKOPE

Size 11 mm

Fig. 1: *Introduction of trocar with 45° LUER-Lock connector*

Fig. 2: *A syringe is attached to the LUER-Lock connector*

Fig. 3: *Introduction of HOPKINS® telescope*

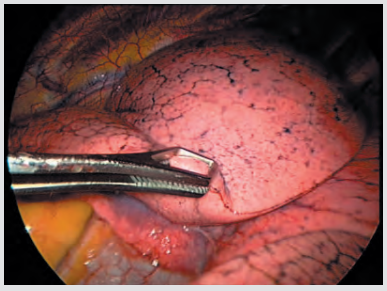


Fig. 4: *Clear image without blood residue on the HOPKINS® telescope*

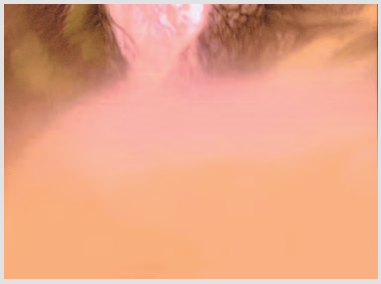


Fig. 5: *Blood residue on the HOPKINS® telescope following contact with the lung surface*

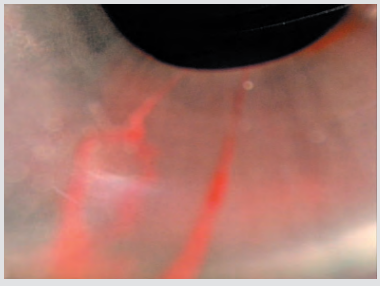


Fig. 6: *HOPKINS® telescope is withdrawn into the trocar channel and irrigation is performed with 10 ml NaCl under pressure. Clear visibility is restored; then the HOPKINS® telescope is advanced again*

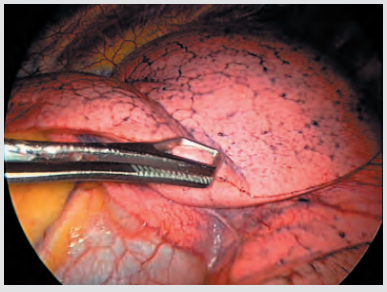


Fig. 7: *Dissection is continued without the need to readjust the HOPKINS® telescope, trocars or instruments*

Prof. Dr. H. DIENEMANN,
Thoraxchirurgie,
Thoraxklinik am Universitätsklinikum,
Heidelberg, Germany

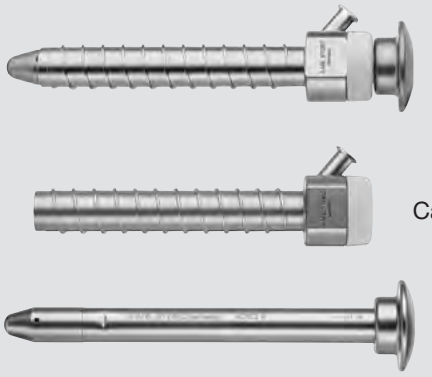
5-06

Trocars with 45° LUER-Lock Connector

HEIDELBERG **Model**

KARL STORZ — ENDOSKOPE

Size 11 mm



Cannula

Trocar only

Size:		**11 mm**
Working length:		8.5 cm
	Trocar, HEIDELBERG model, with blunt tip including: **Cannula,** with 45° LUER-Lock connector **Trocar only**	**40103 ELX** 40103 EL 40103 X

Note: Instruments with curved jaws or distal angled sheaths should be used with trocars having flexible cannulas!

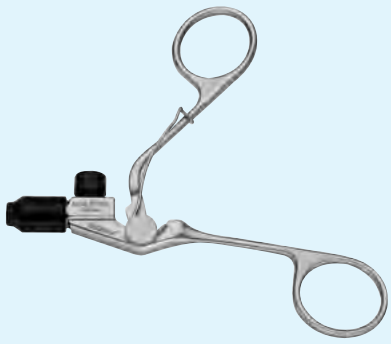
For **KARL STORZ trocars** only the individual components are numbered. The catalog number for the **entire assembled trocar**, as shown above in **bold** print, does not appear on the instrument.

3-11

Metal Handles for Thoracic Surgery

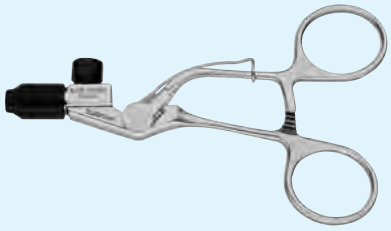
CLICK'*line*® – dismantling, without connector pin for unipolar coagulation

NEW



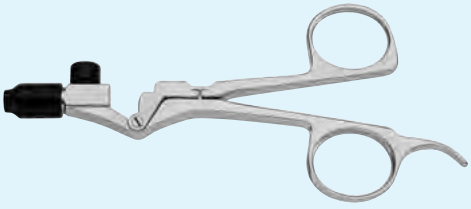
33144 PF **CLICK'*line*®** MOURET **Metal Handle,** without ratchet, axial, with 4 locking positions for **CLICK'*line*®** outer sheaths with working inserts

NEW

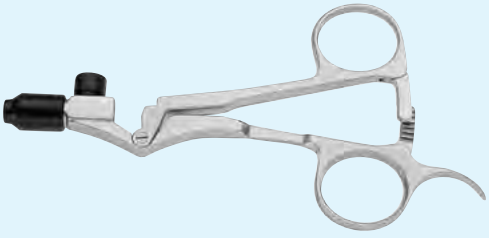


33144 P **CLICK'*line*®** MOURET **Metal Handle,** with hemostat style ratchet, axial, with 4 locking positions for **CLICK'*line*®** outer sheaths with working inserts

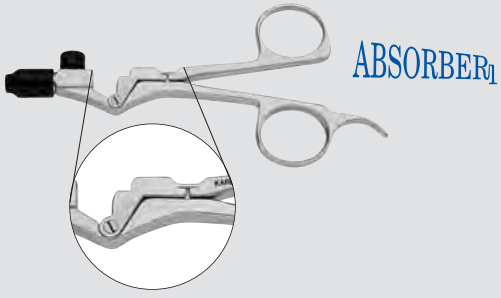
ABSORBER1



33137 PF **CLICK'*line*® Metal Y-Handle,** with ABSORBER1® geometry, axial, with 4 locking positions for **CLICK'*line*®** outer sheaths with working insert



33137 PR **CLICK'*line*® Metal Y-Handle,** with ratchet, axial, with 4 locking positions for **CLICK'*line*®** outer sheaths with working insert



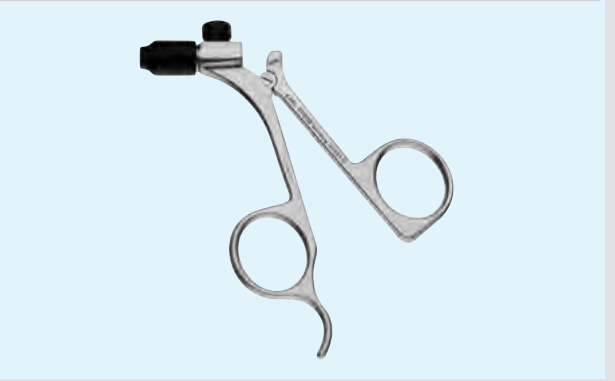
Special Feature:
When the grasping branches are closed, the special ABSORBER1® geometry absorbs the developing force before the full clamping power is transferred to the jaws. The user can, therefore, grasp sensitive structures by exerting less, yet firm, pressure on the jaws.

Further CLICK'*line*® handles see catalog LAPAROSCOPY

3-11

Metal Handles for Thoracic Surgery

CLICK'*line*® – dismantling, without connector pin for unipolar coagulation



33131 P **CLICK'*line*® Metal Handle,** with 4 locking positions for **CLICK'*line*®** outer sheaths with working inserts

33131 PS **CLICK'*line*® Metal Handle,** with lateral locking button, with 4 locking positions for **CLICK'*line*®** outer sheaths with working inserts

33133 P **CLICK'*line*® Metal Handle,** with hemostat style ratchet, with 4 locking positions for **CLICK'*line*®** outer sheaths with working inserts

Further CLICK'*line*® handles see catalog LAPAROSCOPY

3-11

Metal Handles for Thoracic Surgery

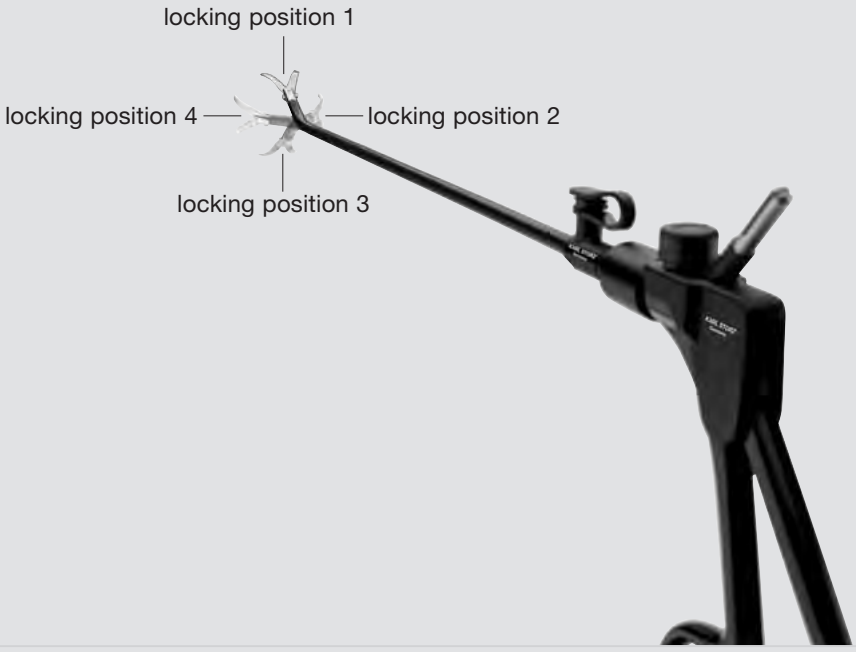
CLICK*line*® – dismantling, with connector pin for unipolar coagulation

unipolar

33125 P **CLICK*line*® Metal Handle,** insulated, with 4 locking positions for **CLICK*line*®** outer sheaths with working inserts

33127 P **CLICK*line*® Metal Y-Handle,** insulated, with 4 locking positions for **CLICK*line*®** outer sheaths with working inserts

When the grasping branches are open, the **CLICK*line*®** outer sheath with working insert can be separated from the handle at a simple push of a button. Conversely, reassembly to one of the 4 locking positions on the handle is fast and safe. This enables the user to secure the jaws in a specific locking position as required.



Please Note: Constructive Safety Measures!
For electrical safety reasons, insulated metal handles can only be assembled with insulated outer sheaths.
Further CLICK*line*® handles see catalog LAPAROSCOPY

3-11

Forceps

CLICK*line*® – dismantling, without connector pin for unipolar coagulation

Size 5 mm
Trocar sizes 6 and 11 mm

Length	Handle					
	33144 PF	33144 P	33137 PF	33137 PR	33131 P	33133 P
28 cm						

Single action jaws

Trocar size 6 mm

Outer Sheath with Working Insert	Catalog number of the complete instrument					
43210 LG	43244 LGF	43244 LGP	43237 LGF	43237 LGR	43231 LGP	43233 LGP

CLICK*line*® **Parenchymal Forceps,** atraumatic, straight jaws

43210 LH	43244 LHF	43244 LHP	43237 LHF	43237 LHR	43231 LHP	43233 LHP

CLICK*line*® **Lung Forceps,** atraumatic, single curved jaws

Trocar size 11 mm

43210 LS	43244 LSF	43244 LSP	43237 LSF	43237 LSR	43231 LSP	43233 LSP

CLICK*line*® **Parenchymal Forceps,** atraumatic, double curved jaws

Please note:
For CLICK*line*® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **blue** background of the table above.

3-11

Forceps

CLICK*line*® – dismantling, without connector pin for unipolar coagulation

Size 5 mm
Trocar size 6 mm

Length	Handle					
	33144 PF	33144 P	33137 PF	33137 PR	33131 P	33133 P
28 cm						

Single action jaws

Outer Sheath with Working Insert	Catalog number of the complete instrument					
43210 LL	43244 LLF	43244 LLP	43237 LLF	43237 LLR	43231 LLP	43233 LLP
	CLICK*line*® Lung Forceps, atraumatic, curved jaws, fenestrated					

Percutaneous approach

43210 LR	43244 LRF	43244 LRP	43237 LRF	43237 LRR	43231 LRP	43233 LRP
	CLICK*line*® Lung Nodule Forceps, atraumatic, curved jaws, fenestrated					

Please note:
For CLICK*line*® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **blue** background of the table above.

3-11

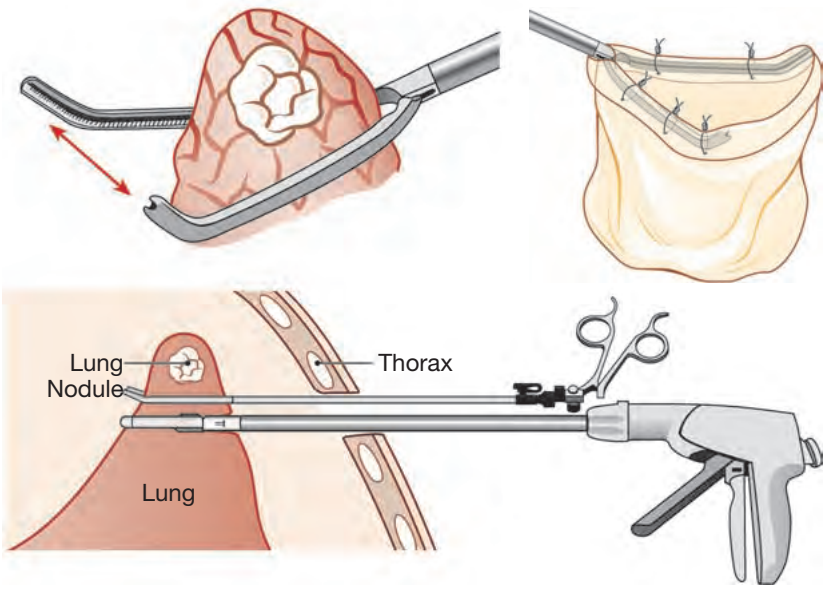
Forceps for Linear Stapler

CLICK*line*® – dismantling, without connector pin for unipolar coagulation

In addition to the double curved Parenchymal Forceps 43231 LSP employed for lung wedge resection in the widely used 3-port technique, a single curved Parenchymal Forceps 43231 LVS allows insertion parallel to the stapler when using the 2-port technique (see illustration).

To extract the specimen without coming into contact with the chest wall and to save time and costs, an extraction bag can be attached to the same parenchymal forceps.

Dr. A. LINDER,
Lungenklinik Hemer,
Dr. M. HÜRTGEN,
Katholisches Klinikum, Koblenz,
Germany



Please note:
The extraction bag for single use is available from mtp.
For further information, please contact:

mtp medical technical promotion gmbh
Take-Off GewerbePark 46
D-78579 Neuhausen ob Eck
Germany
Telephone: +49/74 67/9 45 04-0
Fax: +49/74 67/9 45 04-99

5-06

Forceps for Linear Stapler

CLICK*line*® – dismantling, without connector pin for unipolar coagulation

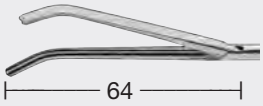
Size 5 mm
Trocar size 6 mm

Special Features:

- **Lateral locking button on the handle does not interfere with the linear stapler**
- **Secure atraumatic grasping**

Length	Handle
	33131 PS
28 cm	

Single action jaws

Outer Sheath with Working Insert	Catalog number of the complete instrument
43210 LV	43231 LVS
	**CLICK*line*® Parenchymal Forceps,** atraumatic, curved jaws, for use with linear stapler

Please note:
The extraction bag for single use is available from mtp.
For further information, please contact:

mtp medical technical promotion gmbh
Take-Off GewerbePark 46
D-78579 Neuhausen ob Eck
Germany
Telephone: +49/74 67/9 45 04-0
Fax: +49/74 67/9 45 04-99

Please note:
For CLICK*line*® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **blue** background of the table above.

3-11

Dissecting and Grasping Forceps

CLICK'*line*® – dismantling, without connector pin for unipolar coagulation

Size 5 mm
Trocar size 6 mm

Length	Handle					
	33144 PF	33144 P	33137 PF	33137 PR	33131 P	33133 P
28 cm	NEW	NEW	ABSORBER			

Double action jaws

Outer Sheath with Working Insert	Catalog number of the complete instrument					
43210 LP	43244 LPF	43244 LPP	43237 LPF	43237 LPR	43231 LPP	43233 LPP

21

CLICK'*line*® KELLY **Dissecting and Grasping Forceps**

Single action jaws

43210 MF	43244 MFF	43244 MFP	43237 MFF	43237 MFR	43231 MFP	43233 MFP

24

CLICK'*line*® MANHES **Dissecting and Grasping Forceps,** atraumatic, straight jaws

43210 MA	43244 MAF	43244 MAP	43237 MAF	43237 MAR	43231 MAP	43233 MAP

17

CLICK'*line*® MANHES **Grasping Forceps,** "Cobra-Jaws", 1x 2 teeth, straight jaws

Please note:
For CLICK'*line*® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **blue** background of the table above.

3-11

Dissecting Forceps, Scissors and Biopsy Forceps

CLICK*line*® – dismantling, with connector pin for unipolar coagulation

Size 5 mm
Trocar size 6 mm

unipolar

Length	Handle	
	33125 P	33127 P
28 cm		

Double action jaws

Outer Sheath with Working Insert	Catalog number of the complete instrument	
43210 LK	43225 LKP	43227 LKP
21	**CLICK*line*®** KELLY **Dissecting Forceps**, curved jaws	
43210 LM	43225 LMP	43227 LMP
20	**CLICK*line*® Scissors,** curved scissor blades	
43210 LU	43225 LUP	43227 LUP
20	**CLICK*line*® Scissors,** distally angled sheath, curved scissor blades, scissor blades open horizontal to angulation	

Single action jaws

43210 MT	43225 MTP	43227 MTP
15	**CLICK*line*® Scissors,** distally angled sheath, scissor blades open parallel to angulation	
43210 DU	43225 DUP	43227 DUP
14	**CLICK*line*®** CUSCHIERI **Biopsy Forceps,** distally angled sheath	

3-11

Please note:
For **CLICK*line*®** instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **red** background of the table above.

Grasping Forceps

CLICK'*line*® – dismantling, with connector pin for unipolar coagulation

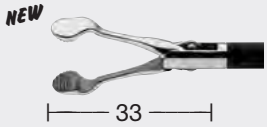
Size 10 mm
Trocar size 11 mm

unipolar

Length	Handle	
	33125 P	33127 P
30 cm		

Double action jaws

Working Insert	Catalog number of the complete instrument	
43710 BLS	43725 BLS	43727 BLS



CLICK'*line*® BABCOCK **Grasping Forceps,** round jaws, long

CLICK'*line*® Metal Outer Sheath, insulated

33500 K

33500 K **CLICK'*line*® Metal Outer Sheath, insulated,** with LUER-Lock connector for cleaning, size 10 mm, length 30 cm

Please note:
For CLICK'*line*® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **red** background of the table above.

3-11

RoBi® Instruments

Rotating Bipolar Grasping Forceps and Scissors,
CLERMONT-FERRAND **Model**

KARL STORZ — ENDOSKOPE

General Information

Ergonomics of the Chosen Instrument

A prerequisite for endoscopic surgery is the selection of ergonomic instruments. The number, location and size of trocars are the primary elements that the surgeon has to coordinate. In addition, there are essential questions associated with optimal performance of the actual endoscopic intervention, i.e., which instruments will be used and where. Although there are several solutions, they are dependent on specific rules. These rules combine the basic principles of surgery with the rules of endoscopic surgical ergonomics.

The Basic Principles of Surgery

Surgery comprises three fundamental phases: dissection – incision – hemostasis. For every individual surgical intervention, the surgeon has to recognize the organ (dissection), control the organ (hemostasis) and work on the organ (section). This surgical rule of three can only be realized if the tissue is properly exposed, which further implies that it is possible to grasp the tissue. For this reason, the surgical activities can also be subdivided as follows: dissection – incision – hemostasis – grasping. An instrument is ideal if it can be used to implement all four functions.

Endoscopic Ergonomics

Small diameters are often used in laparoscopy. Due to mechanical problems that frequently occur with these micro instruments, multifunctional instruments are very difficult to implement. The use of electrical current, which enables multifunctionality, creates an addtional difficulty.

Furthermore, the operating surgeon is forced to make decisions due to the limited number of trocars, their operating site determined at the start of the intervention, and the optimization of instrument functions. After deciding on the location and number of trocars, the essential question is: Which instrument will be used where? This decision depends extensively on the functions of the instruments.

Choice of Functions

The instrument functions have to correspond to the surgical requirements. Because it is difficult to produce an instrument that provides all of the necessary functions, certain decisions have to be made. We focused on grasping, dissection and coagulation of the dissected tissue. The following tasks can be carried out using the bipolar forceps presented here:

- Grasping: The instrument is capable of grasping tissue. It is designed to grasp fine tissue, such as the peritoneum, although it can also grasp stronger sections of tissue, such that the tissue can be exposed regardless of circumstances.
- Dissection: The jaws can be opened by the surgeon. The force exerted on the handle is transferred to the tissue and permits dissection.
- Coagulation: This occurs between the jaws and is limited to the tissue situated between the jaws. This safety factor and the gripping capacity were the reasons for our decision in favor of this bipolar technique.

Choice of Energy

It is a well-known fact that bipolar energy is safer than monopolar energy due to the fact that the surgeon controls the power being used at all times. There is no danger from an electrical current. Nevertheless, the dispersion of heat around the coagulated area can result in a tissue burn. Active gripping restricts this effect and the dispersion is controlled. Through more or less heavy compression of the tissue, the surgeon can alter the tissue impedance and, thus, modify the dispersion of electrical energy. The power used generally depends on the size of the jaws selected. The lower the selected energy, the longer the exposure time and, as a result, the more extensive the heat dispersion.

The Grasping Function

General Information

One characteristic of laparoscopy is that no retraction device is used. To compensate for this, the surgeon requires a gripping instrument. Simple distention is insufficient. As a result, he requires an instrument with which the tissue can be grasped precisely so that another instrument can be used. The surgical assistant normally has a gripping instrument. However, a single instrument is not enough and it is important that the surgeon also has a gripping instrument.

The Shape of the Jaws

Various jaws are available. These vary in regard to size and gauge. Generally, the jaws have a rough toothing. With these, thicker and heavier sections of tissue can be grasped. Smaller jaws have finer toothing. With these, more fragile sections of tissue can be grasped. The precision of coagulation is dependent on the gauge of the jaws. The finer the gauge of the jaws, the more precise the coagulation.

- Microbipolar jaws are suitable for vascular, urological, infertility procedures and tubal reanastomosis where fine precision is required. The smaller biarticulate jaws are excellent for handling delicate tissues like the vessels, ureters and fallopian tubes. These are also suitable for tying intracorporeal knots.

7-04

- KELLY jaws are very popular in general laparoscopic procedures as the shape of the biarticulate jaws allows the surgeon to achieve precise dissection and coagulation.
- Fenestrated jaws featured here have fine atraumatic serration. Jaws are biarticulate and the broad jaws enable a strong grasping function.
- Monoarticulate jaws are appropriate on oncological procedures especially during lymph node dissection as one jaw remains stable to reduce trauma while the other jaw takes on the main dissecting role.

The Coagulation Function

The Bipolar Energy

Bipolar energy is precise and safe at the same time. The path of electrons is always known. They move from the generator to the forceps, flowing through the tissue located between the jaws and return directly via the forceps cable to the generator. A neutral electrode is unnecessary. This prevents any risk of electrical burns. Coagulation, however, occurs by means of heating the tissue. If the tissue is heated too severely or the exposure times are too long, there is a risk that burns will occur around the operating site. To restrict this effect, the exposure times have to be limited and modified according to the tissue impedance. In contrast to conventional bipolar forceps, these allow the pressure applied to the tissue to be altered and, as a result, the impedance to be changed. The more the tissue is compressed, the greater the impedance. The surgeon can alter the impedance of the tissue held by the forceps via the handle, and, thereby, alter the coagulation time. In this manner, the heat dispersion can be controlled.

The Energy Density

The indicated power varies according to the size of the jaws. The thicker the jaws, the higher the power has to be. In principle, work proceeds with powers in the order of 30 to 50 watts. The density of energy transferred to the tissue is directly relative to the size of the jaws. The narrower the jaws, the greater the energy. Therefore, in order to coagulate a tissue zone with precision, the surgeon has to select a high power setting. With thicker jaws, he has to choose a higher power setting (50 watts), but with a shorter exposure time. With thinner jaws, he has to select a lower power setting of approximately 35 watts.

Application Mode

The rules for the application of bipolar energy are very precise. After selecting the power, the surgeon applies the energy with as short an exposure time as possible. After performing the coagulation, the incision is restricted to the coagulated area, i.e., the tissue that has become white. As soon as the tissue becomes pink in color again, the incision is interrupted and coagulation is continued at the spot where the incision is being made. Soiling of the jaws changes the distribution of energy. In extreme cases, coagulation is no longer possible. To avoid hemorrhaging resulting from insufficient coagulation, the electrodes (the jaws of the forceps) have to remain clean. Soiling of the jaws can be prevented by the following measures:

- Selection of the appropriate power, dependent on the size of the jaws
- Application with short exposure times
- Avoiding coagulation in blood. Even if the coagulation proceeds correctly, blood coagulates on the jaws causing them to become soiled. Correct, preventive coagulation is, therefore, the best preventive measure.

The Dissection Function

Interest

The dissection of tissue found its way into the endoscopic technique relatively late. The working principle of bipolar energy initially consisted of coagulating “as much tissue as possible.” This surgical technique resulted from both the lack of experience among surgeons, as well as the features of bipolar instruments. Conventional forceps, for example, have no joint between the jaws. Closure of the jaws generally proceeds by sliding an external tube. Opening is usually passive. The grasping function of these instruments was very imprecise and dissection was impossible. Nevertheless, dissection is the prerequisite for precision surgery. By using dissection, tissue can be identified or secured in such a way that no other organs are involved.

7-04

RoBi® Instruments

Rotating Bipolar Grasping Forceps and Scissors,
CLERMONT-FERRAND **Model**

KARL STORZ — ENDOSKOPE

Application Mode

Dissection proceeds through introduction of the instrument tip between the tissue surfaces. By opening the handle, the jaws can be moved and the tissue surfaces spread apart. The force which is transferred to the tissue can be felt in the handle and, thus, enables precise dosing for dissection.

Instrument Features

Characteristics

This instrument is a bipolar instrument with two insulated jaws. By means of the specific joint, this insulation can be maintained. Insulation of the jaws is made possible by an intermediate ceramic layer. In this manner, current leakage is impossible. This insulation is optimum at 2,500 volts. The forceps are rotatable, detachable and autoclavable.

Rotation

Rotation is an essential feature of bipolar forceps. It permits the following:

- Through rotation, the tissue can be grasped at a correct 90° angle, coagulated and cut. This is an essential prerequisite for correct gripping, the dissection of tissue and coagulation restricted to the affected tissue.
- As for all instruments equipped with a single movable jaw, it is important to perform a rotation to position this jaw at the ideal location to which the force of dissection should be applied.

Disassembly

It has to be possible to disassemble the forceps so that inserts can be exchanged and the forceps can be cleaned easily. Thanks to the quick-change system RoBi®, the inserts can be exchanged during surgery and according to surgical requirements.

Cleaning

In its disassembled condition, the forceps can be cleaned more easily. The collection of tissue remnants at the rear end of the jaws is limited by the recess provided at this location. In spite of the toothing, the jaws can be cleaned simply. Cleaning after surgery is facilitated if the jaws are soaked for a few minutes. By brushing the jaws with a soft brush, tissue remnants can be removed before the forceps are sterilized.

Sterilization

The instrument can be reused. Sterilization is performed in an autoclave at 134°C.

Precautions

When activating the bipolar instrument, it is important to ensure that there is no critical viscera in contact with the length of the instrument. Before stepping on the pedal, the surgeon must ensure that only the tissue concerned are grasped between the two jaws of the forceps. This is to prevent unintentional thermal injury.

Conclusions

The selection of functions for an instrument is made according to the surgical requirements and the technical prerequisites. If laparoscopies are being performed, the surgeon must make these decisions himself. Modern endoscopic surgery is performed using two hands. Optimization of the endoscopic intervention is dependent on the number and selection of functions that are possible for the surgeon with his two hands. We have decided on grasping, dissection and coagulation with one hand. These functions are performed by means of the bipolar forceps. If simple distention of the tissue using the instrument is also taken into account, the surgeon has four functions at his disposal, all possible with one hand. This multifunctionality optimizes endoscopic intervention, which in this way becomes simpler, faster and safer.

Nomenclature

RoBi® stands for “rotating bipolar instruments” and describes an innovative and compatible range of instruments that are distinguished by the following features:

- bipolar
- rotatable
- detachable handle, sheath and interior
- specific joint mechanism

7-04

RoBi® Bipolar Dissecting Forceps and Scissors NEW

Sheath curved, rotating, dismantling, with connector pin for bipolar coagulation

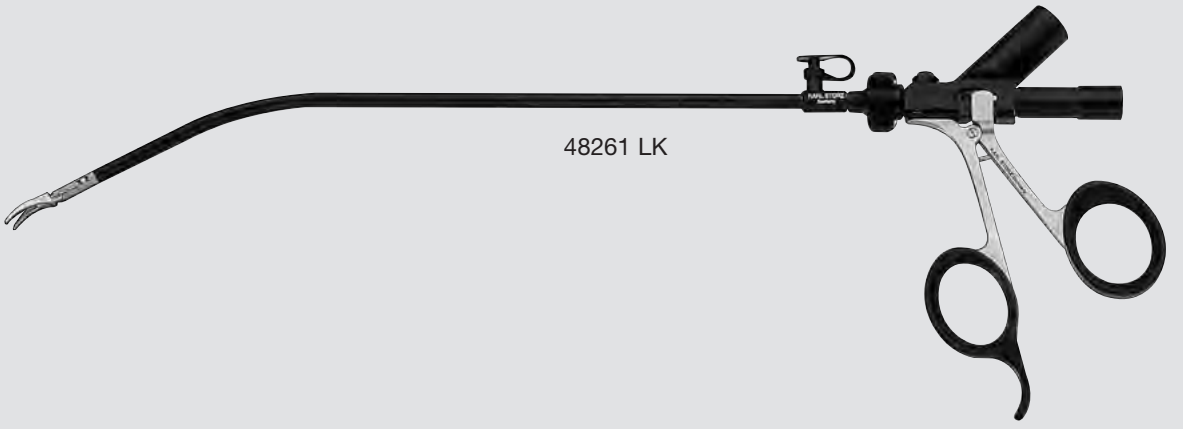
KARL STORZ — ENDOSKOPE

Size 5 mm
Trocar size 6 mm

bipolar

Special Features:

- **Curved sheath specially designed for thoracoscopy**
- **Jaws with robust hinge for optimized bipolar grasping and dissecting**
- **Slim construction**
- **Can be disassembled into the following parts:**
  – Handle
  – Working insert with outer sheath
- **Top mounted 45° high frequency connector pin takes the cable away from the operative field**
- **Instrument cleaning is straightforward and safe**
- **Autoclavable**



48261 LK

3-11

RoBi® Bipolar Dissecting Forceps and Scissors NEW

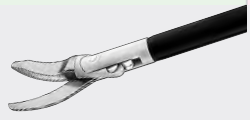
Sheath curved, rotating, dismantling, with connector pin for bipolar coagulation

Size 5 mm
Trocar size 6 mm

bipolar

Length	Handle
	38161
28 cm	

Double action jaws

Outer Sheath with Working Insert	Catalog number of the complete instrument
48210 LK	48261 LK
24	**RoBi®** KELLY **Dissecting Forceps**, sheath distally angled
48210 LM	48261 LM
20	**RoBi® Scissors,** sheath distally angled, scissor blades open vertically to angulation
48210 LU	48261 LU
 20	**RoBi® Scissors,** sheath distally angled, scissor blades open horizontally to angulation

Single action jaws

48210 MT	48261 MT
18	**RoBi® Scissors,** sheath distally angled, scissor blades open horizontally to angulation

Please note:
For RoBi® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **red** background of the table above.

3-11

RoBi® Bipolar Grasping Forceps and Scissors

Straight sheath, rotating, dismantling, with connector pin for bipolar coagulation, CLERMONT-FERRAND **model**

KARL STORZ — ENDOSKOPE

Size 5 mm
Trocar size 6 mm

bipolar

Length	Handle
	38161
30 cm	

Double action jaws

Working Insert	Catalog number for the complete instrument
38210 MD	38261 MD
19	KELLY **RoBi® Grasping Forceps,** CLERMONT-FERRAND model, especially suitable for dissection
38210 MW	38261 MW
20	METZENBAUM **RoBi® Scissors,** CLERMONT-FERRAND model, curved, for cutting and bipolar coagulation

RoBi® Metal Outer Sheath, insulated

38200

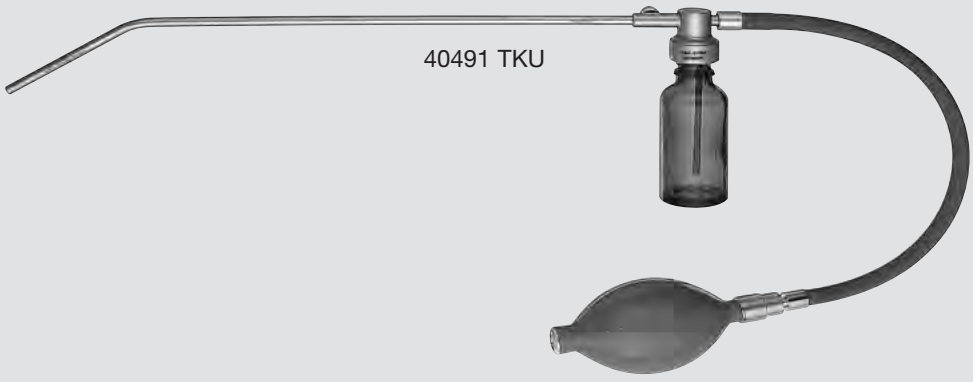
38200 **RoBi® Metal Outer Sheath, insulated, with** LUER-Lock irrigation connector for cleaning, size 5 mm, length 30 cm

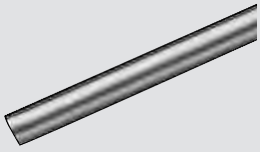
3-11

Please note:
For RoBi® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **red** background of the table above.

Powder Blowers

Size 5 mm
Trocar size 6 mm





40491 TKU **Powder Blower,** with rubber bulb, distally angled sheath, size 5 mm, length 30 cm
including:
Sheath
Rubber Bulb
Tube
Bottle

40491 TK **Powder Blower,** with rubber bulb, straight sheath, size 5 mm, length 30 cm
including:
Sheath
Rubber Bulb
Tube
Bottle

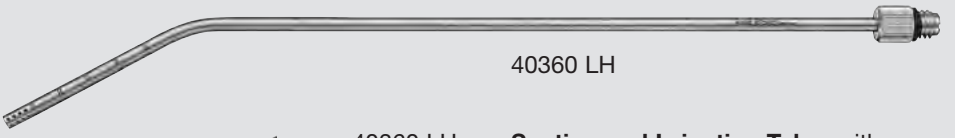
40492 TK **Powder Blower,** with rubber bulb, straight sheath, size 5 mm, length 42 cm
including:
Sheath
Rubber Bulb
Tube
Bottle

3-11

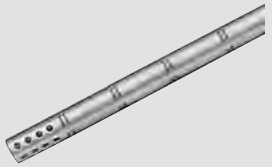
Components see chapter 13, SPARE PARTS AND ACCESSORIES

Suction and Irrigation Tubes

Size 5 mm
Trocar size 6 mm

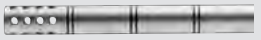


40360 LH



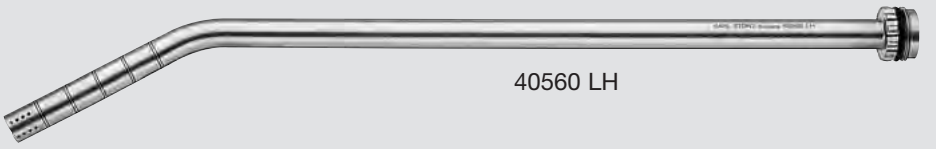
40360 LH **Suction and Irrigation Tube,** with lateral holes, distally angled sheath, size 5 mm, length 28 cm

37260 LH

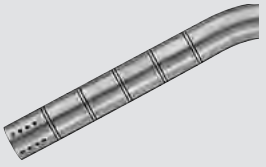


37260 LH **Suction and Irrigation Tube,** with lateral holes, size 5 mm, length 30 cm

Size 10 mm
Trocar size 11 mm



40560 LH



NEW 40560 LH **Suction and Irrigation Tube,** with lateral holes, distally angled sheath, size 10 mm, length 28 cm

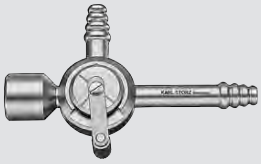
3-11

Handles for use with suction and irrigation tubes see page 167

Handles for Suction and Irrigation Tubes

KARL STORZ — ENDOSKOPE

For use with suction and irrigation tubes size 5 and 10 mm



30805 **Handle with Two-Way Stopcock,** for suction and irrigation, **autoclavable,** for use with Suction and Irrigation Tubes 37260 LH, 40360 LH and 40560 LH

37112 A **Suction and Irrigation Handle,** straight, with clamping valve, for suction and irrigation, **autoclavable,** for use with Suction and Irrigation Tubes 37260 LH, 40360 LH and 40560 LH

37113 A **Suction and Irrigation Handle,** pistol grip, with clamping valve, for suction and irrigation, **autoclavable,** for use with Suction and Irrigation Tubes 37260 LH, 40360 LH and 40560 LH

Tubing Sets for use with Suction and Irrigation Handles

031133-10* **Tubing Set,** for single use, sterile, package of 10, for use with Suction and Irrigation Handles 37112 A and 37113 A

031134-10* **Tubing Set,** for single use, sterile, package of 10, for use with Suction and Irrigation Handles 37112 A and 37113 A in combination with silicone tube inner diameter 5 mm at the patient end

Please note:
For KARL STORZ suction and irrigation handles we recommend the use of tubing sets specially designed for these handles from:

* mtp medical technical promotion gmbh
Take-Off GewerbePark 46
D-78579 Neuhausen ob Eck
Germany
Telephone: +49/74 67/9 45 04-0
Fax: +49/74 67/9 45 04-99

3-11

Coagulation Suction Tubes, Dissecting Electrodes

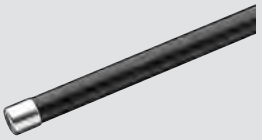
Size 5 mm
Trocar size 6 mm

unipolar

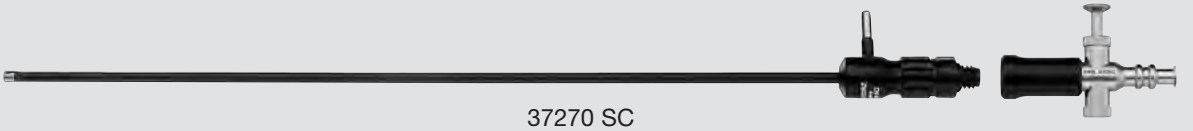
With connector pin for unipolar coagulation

40170 LB

30804



40170 LB **Coagulation Suction Tube,** with connector pin for unipolar coagulation, distally angled sheath, size 5 mm, length 28 cm



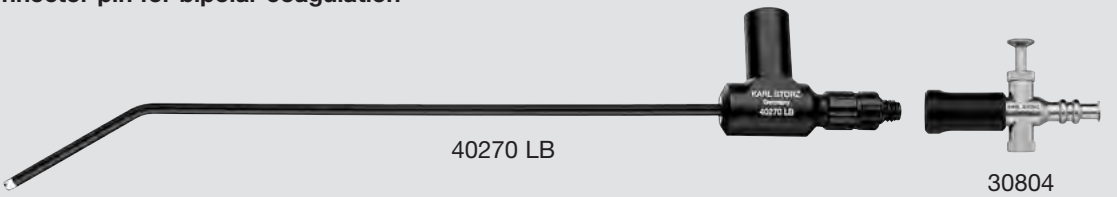
37270 SC

30804

37270 SC **Coagulating and Dissecting Electrode,** with suction channel, with connector pin for unipolar coagulation, size 5 mm, length 30 cm

bipolar

With connector pin for bipolar coagulation



40270 LB

30804

40270 LB **Coagulation Suction Tube,** with connector pin for bipolar coagulation, distally angled sheath, size 5 mm, length 28 cm

37270 GC

30804

37270 GC GORDTS and CAMPO **Coagulating Suction Tube,** with connector pin for bipolar coagulation, size 5 mm, length 30 cm

30804 **Handle with Trumpet Valve,** for suction or irrigation, **autoclavable,** for use with 5 mm coagulating suction tubes and 5 mm suction and irrigation tubes

5-06

Dissecting Electrodes

Size 5 mm
Trocar size 6 mm

With connector pin for unipolar coagulation

40775 LF

40775 LF — **Dissecting Electrode,** L-shaped, insulated, with connector pin for unipolar coagulation, distally angled sheath, size 5 mm, length 28 cm

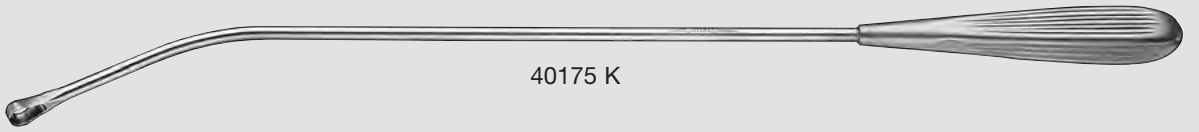
26772 UF

26772 UF — **Coagulating and Dissecting Electrode,** L-shaped, insulated, with connector pin for unipolar coagulation, size 5 mm, length 30 cm

3-11

Curette for Pleura Abrasion, Surgical Sponge Holder

Curette for Pleura Abrasion
Size 10 mm
Trocar size 11 mm



40175 K

NEW 40175 K **Curette for Pleural Abrasion,** distally angled sheath, spoon-shaped, length 28 cm

Surgical Sponge Holder
Size 5 and 10 mm
Trocar size 6 and 11 mm

32540 PT

32340 PT **Surgical Sponge Holder,** self-retaining, size 5 mm, length 30 cm
including:
Handle
Outer Sheath, insulated
Sponge Holder Insert

32540 PT **Surgical Sponge Holder,** self-retaining, size 10 mm, length 30 cm
including:
Handle
Outer Sheath, insulated
Sponge Holder Insert

Spherical sponges recommended for size 5 mm:
DIN 61630/VM 20 (6 x 6 cm) or spherical sponge for similar geometry and basis weight.

Spherical sponges recommended for size 10 mm:
DIN 61630/VM 24 (8 x 8 cm) or spherical sponge for similar geometry and basis weight.

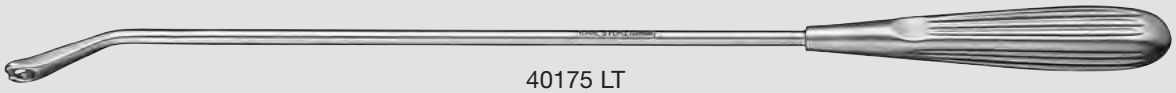
Handle 32121 can be used with both 5 mm and 10 mm surgical sponge holders.

Components see chapter 13, SPARE PARTS AND ACCESSORIES

3-11

Palpation Probe, Knot Tier

Size 5
Trocar size 11 mm



40175 LT

40175 LT **Palpation Probe and Knot Tier,** distally angled sheath, size 5 mm, length 28 cm

Size 5
Trocar size 6 mm

26175 T

26175 T **Palpation Probe,** with cm-markings, size 5 mm, length 36 cm

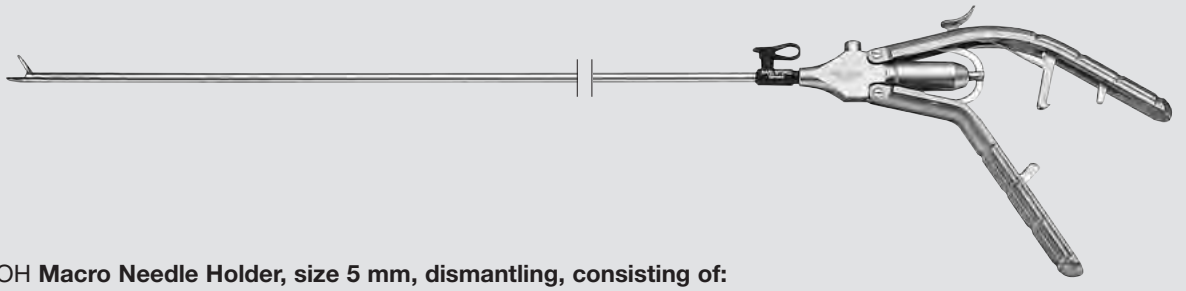
26596 SK

26596 SK KOECKERLING **Knot Tier,** for extracorporeal knotting, size 5 mm, length 36 cm

KOH **Macro Needle Holder** NEW

dismantling

KARL STORZ — ENDOSKOPE



KOH **Macro Needle Holder, size 5 mm, dismantling, consisting of:**

- **Handle**
- **Outer sheath**
- **Working insert**

Cleaning and sterilization are gaining increasing importance for KARL STORZ as a manufacturer of surgical instruments.
Similar to all our surgical instruments, the cleaning and hygiene of our needle holders also play an important role. Our KOH macro needle holders feature consistent effectiveness and precision, with significantly improved cleaning results achieved by dismantling the instrument. The handle, outer sheath and inner part can be cleaned and sterilized separately for perfect results.

The reusable dismantling design offers the user the following benefits:

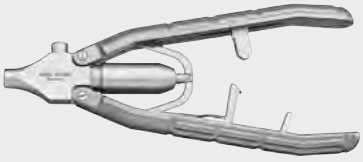
- **Can be disassembled into three separate components**
- **Fully autoclavable**
- **Cleaning adaptor**
- **Choice of six different handles and three different working inserts**
- **With tungsten carbide inserts**
- **Environmentally correct: In the event of damage, only the component with the defect needs to be replaced**
- **User-friendly and ergonomic handling**

3-11

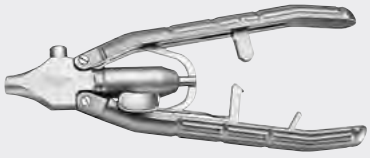
Handles and Outer Sheaths NEW

KOH **Macro Needle Holders, dismantling**

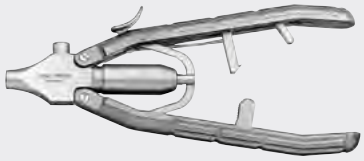
Handles, axial and pistol grip, with disengageable ratchet



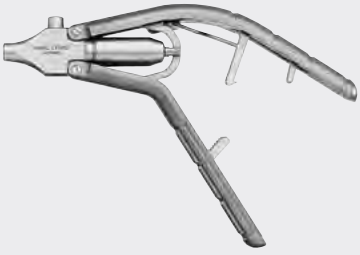
30173 AR **Handle,** axial, with **disengageable** ratchet, ratchet position right



30173 AL **Handle,** axial, with **disengageable** ratchet, ratchet position links



30173 AO **Handle,** axial, with **disengageable** ratchet, ratchet position on top



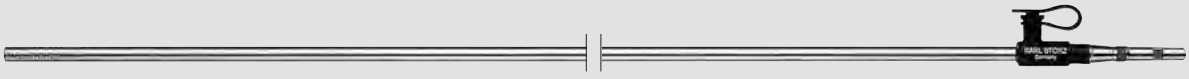
30173 PR **Handle,** pistol grip, with **disengageable** ratchet, ratchet position right

30173 PL **Handle,** pistol grip, with **disengageable** ratchet, ratchet position left

30173 PO **Handle,** pistol grip, with **disengageable** ratchet, ratchet position on top

Metal Outer Sheath

Size 5 mm
Trocar size 6 mm



30173 A

30173 A **Metal Outer Sheath,** with LUER-Lock connector for cleaning, size 5 mm, length 33 cm

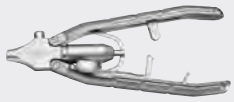
3-11

KOH **Macro Needle Holders** NEW

dismantling, axial handles

KARL STORZ — ENDOSKOPE

Size 5 mm
Trocar size 6 mm

Length	Handle		
	30173 AR	30173 AL	30173 AO
33 cm			

Single action jaws

Working Insert	Catalog number for the complete instrument		
30173 R	30173 RAR	30173 RAL	30173 RAO
	KOH **Macro Needle Holder,** jaws curved to right, with tungsten carbide inserts, for use with suture material size 0/0 to 7/0		
30173 L	30173 LAR	30173 LAL	30173 LAO
	KOH **Macro Needle Holder,** jaws curved to left, with tungsten carbide inserts, for use with suture material size 0/0 to 7/0		
30173 F	30173 FAR	30173 FAL	30173 FAO
	KOH **Macro Needle Holder,** straight jaws, with tungsten carbide inserts, for use with suture material size 0/0 to 7/0		

Please note:
For dismantling needle holders only the **individual component parts** are numbered. The catalog number for the **complete instrument,** as shown above against the **white** background, is not on the instrument.

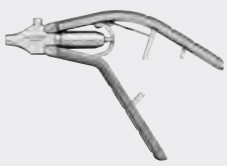
3-11

KOH **Macro Needle Holders** NEW

dismantling, pistol-grip handles

KARL STORZ — ENDOSKOPE

Size 5 mm
Trocar size 6 mm

Length	Handle		
	30173 PR	30173 PL	30173 PO
33 cm			

Single action jaws

Working Insert	Catalog number for the complete instrument		
30173 R	30173 RPR	30173 RPL	30173 RPO
	KOH **Macro Needle Holder,** jaws curved to right, with tungsten carbide inserts, for use with suture material size 0/0 to 7/0		
30173 L	30173 LPR	30173 LPL	30173 LPO
	KOH **Macro Needle Holder,** jaws curved to left, with tungsten carbide inserts, for use with suture material size 0/0 to 7/0		
30173 F	30173 FPR	30173 FPL	30173 FPO
	KOH **Macro Needle Holder,** straight jaws, with tungsten carbide inserts, for use with suture material size 0/0 to 7/0		

Please note:
For dismantling needle holders only the **individual component parts** are numbered. The catalog number for the **complete instrument,** as shown above against the **white** background, is not on the instrument.

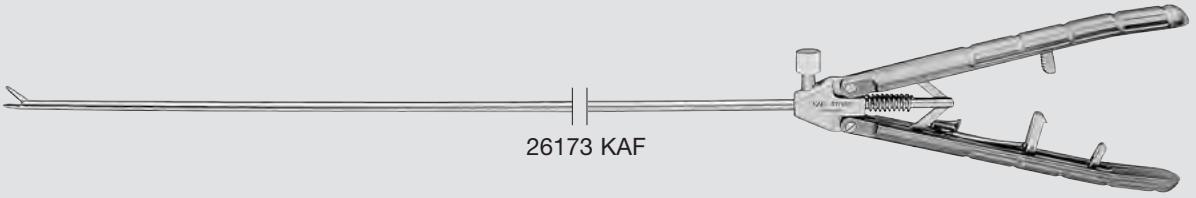
3-11

KOH **Macro Needle Holder**

Size 5 mm
Trocar size 6 mm

Special Features:

- **Tungsten carbide inserts for secure and reliable needle positioning as well as long durability**
- **Smooth, precise adjustable ratchet for easy and safe needle positioning**
- **Ergonomically designed handle for relaxed work**
- **Needle sizes BV, SH or CT1**

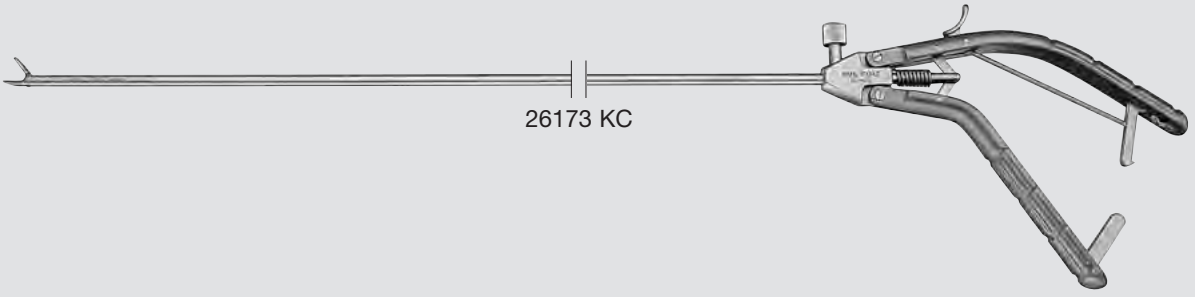


26173 KAF

26173 KAF — KOH **Macro Needle Holder,** with tungsten carbide insert, ergonomic straight handle, with disengageable ratchet, ratchet position right, jaws straight, size 5 mm, length 33 cm, for use with suture material size 0/0 to 7/0 and needle sizes BV, SH or CT-1

26173 KAL — **Same,** jaws curved to left

26173 KAR — **Same,** ratchet position left, jaws curved to right



26173 KC

26173 KL — KOH **Macro Needle Holder,** with tungsten carbide insert, ergonomic handle with ratchet, jaws curved to left, size 5 mm, length 33 cm, for use with suture material size 0/0 to 7/0 and needle sizes BV, SH or CT-1

26173 KC — **Same,** jaws curved to right

3-11

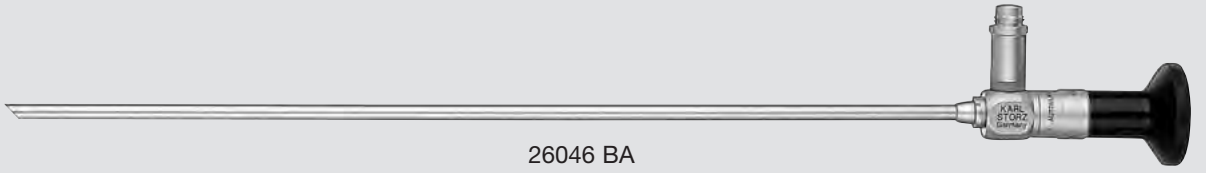
Please note: Using the needle holder with a needle larger than recommended may result in a mechanical damage to the instrument.

ENDOSCOPIC TRANSTHORACIC SYMPATHECTOMY

TELESCOPES AND TROCARS	178-179
SCISSORS, DISSECTING AND GRASPING FORCEPS	180-181
LUNG AND GRASPING FORCEPS	182
DISSECTING ELECTRODES	183

HOPKINS® II Telescopes

Diameter 5 mm, length 29 cm
Trocar size 6 mm
Recommended Fiber Optic Light Cables: 495 NL, 495 NA or 495 ND



26046 BA

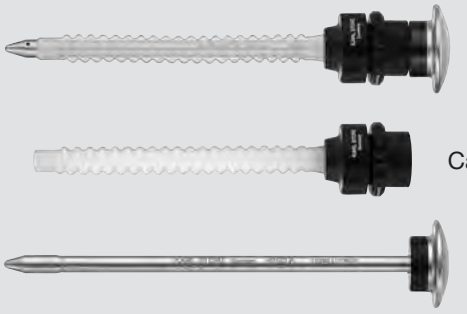
26046 BA **HOPKINS® II Forward-Oblique Telescope 30°,** enlarged view, diameter 5 mm, length 29 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red

3-11

Fiber Optic Light Cables see catalog TELEPRESENCE

Trocars with Flexible Cannulas

Size 6 mm



Size:		**6 mm**
Working length:		8.5 cm
Color code:		black
	Trocar, with blunt tip including: **Cannula,** flexible **Trocar only**	**40120 NAL** 40120 NL 40120 A
Accessories	**Plastic Cannula, autoclavable,** for flexible trocars, package of 5 	30120 X

Note: Instruments with curved jaws or distal angled sheaths should be used with trocars having flexible cannulas!

For **KARL STORZ trocars** only the individual components are numbered. The catalog number for the **entire assembled trocar,** as shown above in **bold** print, does not appear on the instrument.

Further trocars see chapter 7, VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS), pages 145-146

3-11

Scissors, Dissecting and Grasping Forceps

CLICK*line*® – dismantling, insulated, with connector pin for unipolar coagulation

KARL STORZ — ENDOSKOPE

Size 5 mm
Trocar size 6 mm

unipolar

Length	Handle		
	33125 P	33127 P	33151
30 cm			

Double action jaws

Working Insert	Catalog number of the complete instrument		
34210 MS	34225 MSP	34227 MSP	34251 MS
18	CLICK*line*® METZENBAUM **Scissors,** with LUER-Lock adaptor for cleaning, curved		
33210 MD	33225 MDP	33227 MDP	33251 MD
16	CLICK*line*® KELLY **Dissecting and Grasping Forceps,** with LUER-Lock adaptor for cleaning		

CLICK*line*® Metal Outer Sheath, insulated

33200

33200 CLICK*line*® **Metal Outer Sheath, insulated, with** LUER-Lock connector for cleaning, size 5 mm, length 30 cm

Further handles for CLICK*line*® instruments with connector pin for unipolar coagulation
see catalog LAPAROSCOPY.

Please note:
For CLICK*line*® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **red** background of the table above.

3-11

Scissors,
Dissecting and Grasping Forceps

CLICK'*line*® – dismantling, insulated,
with connector pin for unipolar coagulation

KARL STORZ — ENDOSKOPE

Size 5 mm
Trocar size 6 mm

unipolar

Length	Handle		
	33125 P	33127 P	33151
28 cm			

Double action jaws

Outer Sheath with Working Insert	Catalog number of the complete instrument		
43210 LU	43225 LUP	43227 LUP	43251 LU
20	CLICK'*line*® **Scissors,** sheath distally angled, curved scissor blades, scissor blades open horizontally to angulation		
43210 LK	43225 LKP	43227 LKP	43251 LK
21	CLICK'*line*® KELLY **Dissecting Forceps,** curved jaws		

Further handles for CLICK'*line*® instruments with connector pin for unipolar coagulation
see catalog LAPAROSCOPY

For curved instruments with connector pin for unipolar coagulation we recommend CLICK'*line*® Handles 33125 P and 33127 P with locking positions.

Please note:
For CLICK'*line*® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **red** background of the table above.

3-11

Lung Forceps, Grasping Forceps

without connector pin for unipolar coagulation

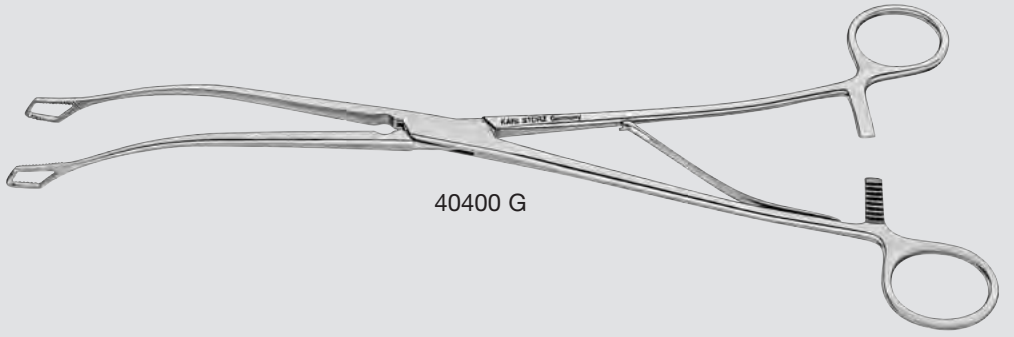
Size 5 mm
Trocar size 6 mm

Length	Handle					
	33144 PF	33144 P	33137 PF	33137 PR	33131 P	33133 P
28 cm						

Single action jaws

Outer Sheath with Working Insert	Catalog number of the complete instrument					
43210 LL	43244 LLF	43244 LLP	43237 LLF	43237 LLR	43231 LLP	43233 LLP

CLICK*line*® **Lung Forceps,** atraumatic, curved jaws, fenestrated



40400 G

40400 G **Grasping Forceps,** with ratchet, self-opening, fenestrated jaws, S-shaped, medial joint, length 33 cm

Please note:
For CLICK*line*® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **blue** background of the table above.

3-11

Dissecting Electrodes

with connector pin for unipolar coagulation

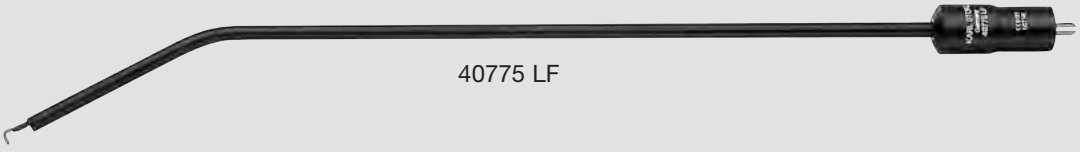
Size 5 mm
Trocar size 6 mm

unipolar

26772 UF

26778 UF **Coagulating and Dissecting Electrode,** L-shaped, insulated, with connector pin for unipolar coagulation, size 5 mm, length 43 cm

26772 UF **Coagulating and Dissecting Electrode,** L-shaped, insulated, with connector pin for unipolar coagulation, size 5 mm, length 30 cm



40775 LF

40775 LF **Dissecting Electrode,** L-shaped, insulated, with connector pin for unipolar coagulation, distally angled sheath, size 5 mm, length 28 cm

3-11

THORACOTOMY AND VIDEO-ASSISTED MINI-THORACOTOMY

HEADLIGHTS	**187**
SCHÖLLHORN **MULTI-RETRACTOR**	**188-189**
RIB SPREADER	**190-191**
TELESCOPES AND TROCARS	**192-193**
INSTRUMENTS FOR GRASPING, DISSECTING AND CUTTING	**194-198**
RETRACTORS	**199**
SUCTION AND IRRIGATION TUBES AND DISSECTING ELECTRODES	**200-202**
INSTRUMENTS FOR SUTURE AND LIGATURE	**203**

HEADLIGHT KS60 NEW

with cold light illumination

KARL STORZ — ENDOSKOPE

Special Features:

- **Luminous field can be focused – adjustable from 20 to 80 mm at a working distance of 40 cm – resulting in brightness of over 175,000 lux**
- **Double lens system provides outstanding illumination in the depths of the operating field**
- **Precise delineation and no luminous field color margins**
- **Homogeneous illumination of the luminous field without shadows**
- **Newly designed, lightweight headband provides improved comfort, also suitable for a small head size, can be adjusted both horizontally and vertically**
- **Sterilizable handle allows adjustment under sterile conditions, moveable and height adjustable**
- **Light cable is divided in the head area, ensuring even distribution of weight**
- **Extremely robust and flexible light cable due to special protective casing**
- **Convenient light cable length of 290 cm provides greater freedom of movement**

310060/310061

310060 **Headlight KS60,** with double lens system and Y-fiber optic light cable, >175,000 lux, illuminated area adjustable from 20 – 80 mm with 40 cm working distance, with removeable and sterilizable Focus Handle 310065

including:

Headband, fully adjustable, with Forehead Cushion 078511, with cross band, including holder for Headlight 310063

Y-Fiber Optic Light Cable, with special protective casing for Headlight 310063, length 290 cm

Clip with Band, for attaching the fiber optic light cable to OR clothing

310061 **Same,** including:

Y-Fiber Optic Light Cable, with 90° deflection to the light source

Components see chapter 13, SPARE PARTS AND ACCESSORIES

3-11

SCHÖLLHORN **Multi-Retractor**

for thoracic surgery

KARL STORZ — ENDOSKOPE

Since the first successful thorax operation as a method of therapy for tuberculosis towards the end of the 19th century, techniques for thoracotomy have become increasingly atraumatic.

Thoracotomies/sternotomies are standardized, even if there are different schools of thought regarding the types of thoracic incisions used.

In addition to conventional posterolateral thoracotomy, the muscle-sparing anterolateral thoracotomy approach is now gaining widespread acceptance.

Similar to minimally invasive video-assisted thoracoscopic surgery, which uses increasingly smaller trocars and telescopes, the development of the KARL STORZ standard retractor has led to a more atraumatic intercostal approach in standard thoractomies.

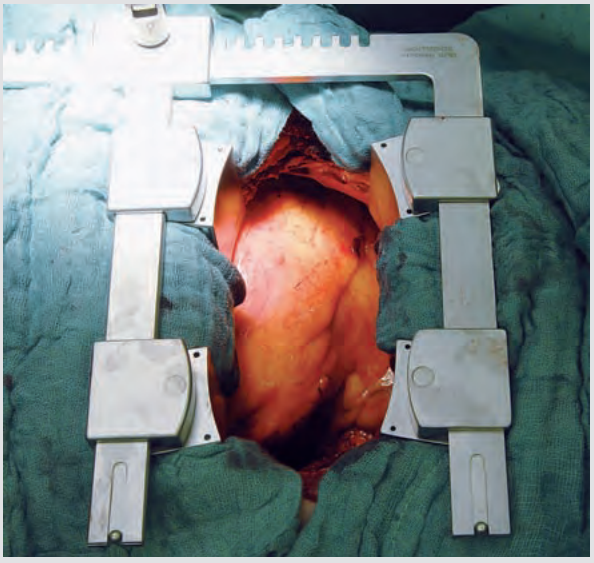
Freely movable, convex blades, which are specially adapted to the rib curvature and the anatomy, can be placed in the required position on the retractor frame and are fully adjustable. This individual adjustment of axial tensile force enables more atraumatic thoracotomy to be performed and reduces the likelihood of the so-called post-thoracotomy pain syndrome.

The thorax retractor is completed by a special fiber optic light carrier connected to the cold light source. The light carrier is malleable and has a rotating head. It can be mounted in any position on the retractor frame, providing optimal illumination of the OR site.

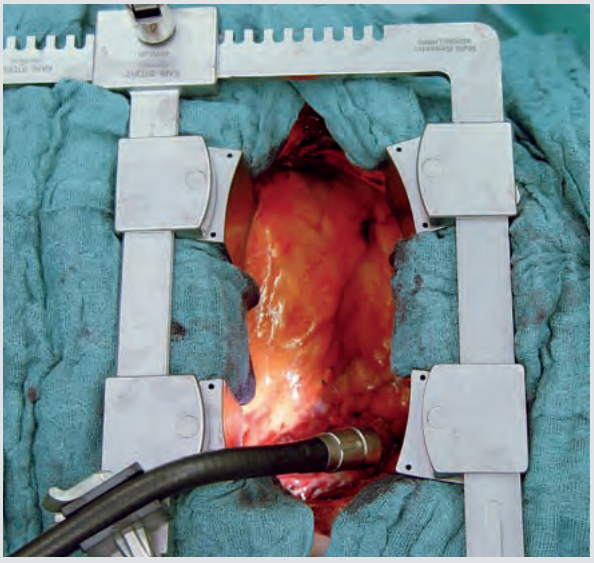
The flexibility of the light carrier combined with the possibility of placing the retractor in any position delivers improved illumination of the surgical field without problems. Moreover, the universal fixation device for mounting the light carrier can be attached to any conventional retractor system.

All retractor components, including the light carrier and universal fixation device, are sterilizable by autoclave at 134 °C so that use is unrestricted.

O. Schega. M.D.
Chief Physician, Thoracic Surgery
Johanniter-Krankenhaus Treuenbrietzen, Germany



Thoracotomy site with retractor

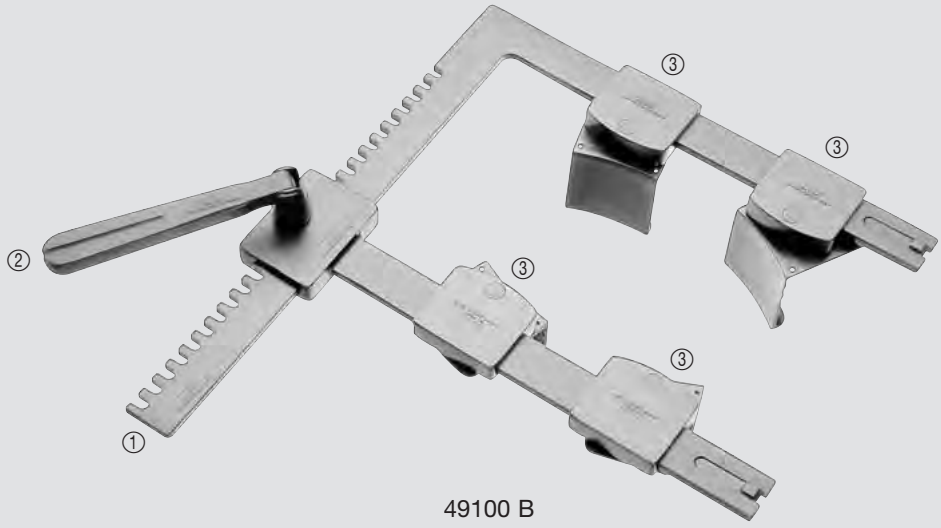


Thoracotomy site with retractor and light guide

3-11

SCHÖLLHORN **Multi-Retractor**

for thoracic surgery



49100 B

49100 B SCHÖLLHORN **Standard Retractor**
including:
① **Retractor Frame,** 25 x 22 cm, including Lever 49100 BS
② **Lever,** spare part
4x **Moveable Blade,** freely adjustable, height 30 mm
③ 4x **Moveable Blade,** freely adjustable, height 40 mm
4x **Moveable Blade,** freely adjustable, height 50 mm

49100 LS

49100 LS **Fiber Optic Light Carrier Extension**
including:
① **Fiber Optic Light Carrier,** malleable, for illumination of the operating field
② **Universal Holding Device,** for Fiber Optic Light Carrier 49100 L,
for use with rectangular retractor frames with profile min. 5 x 15 mm
to max. 8 x 34 mm and round components with profile min. 10 to max. 16 mm

Components see chapter 13, SPARE PARTS AND ACCESSORIES

3-11

Instruments for Video-Assisted Mini-Thoracotomy

Prof. GIUDICELLI, Prof. FUENTES **and** Dr. OTTOMANI

KARL STORZ — ENDOSKOPE

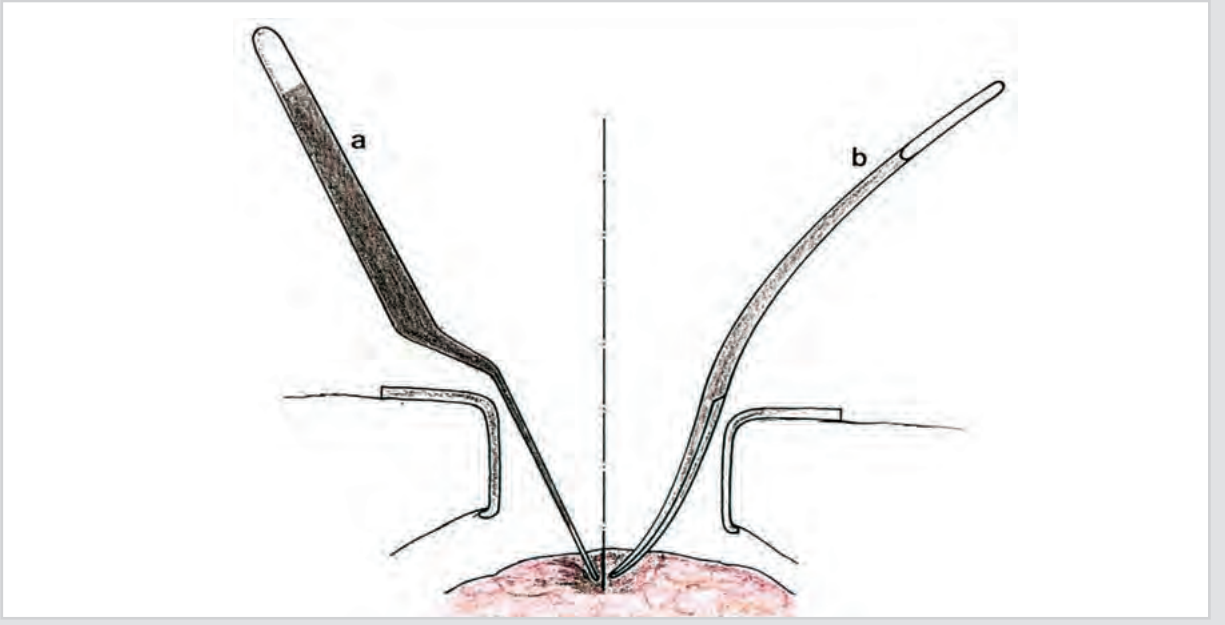
Operating Instruments

Following initial attempts to use tubular instruments employed in the field of pelviscopy, we soon opted for more specific instruments similar to conventional instruments, but with a number of features suitable for video-assisted thorax surgery.

Prof. R. GIUDICELLI, M. D.,
Marseille, France

Special features of these instruments:

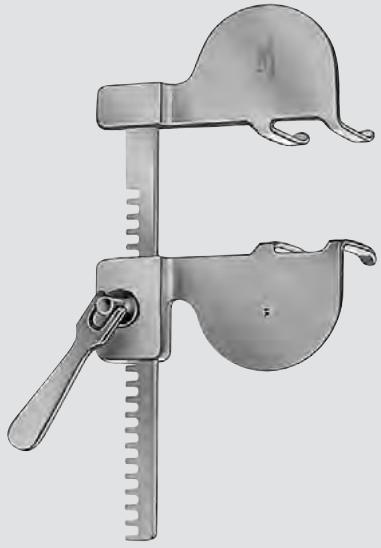
- Curved instruments, which follow the curvature of the thorax, as well as S-shaped instruments which impede the field of vision as little as possible and retain the minithoracotomy port (as shown below)
- Long instruments which facilitate access to the outermost regions of the thorax (apex of the lung, costo-diaphragmal sinus)
- Instruments with medial and non-distal joints which open widely even in narrow areas.



S-shaped instruments which keep the operative field clear
(a) forceps, (b) scissors

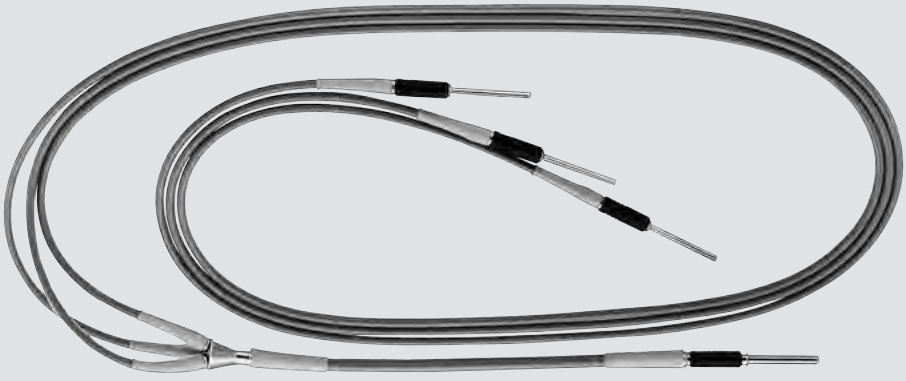
11-98ı

Rip Spreader, Percutaneous Fiber Optic Light Cable



40110 A

40110 A	GIUDICELLI/FUENTES/OTTOMANI **Rib Spreader,** self-retaining, blade depth 40 mm, blade width 30 mm
40110 B	**Same,** blade depth 60 mm



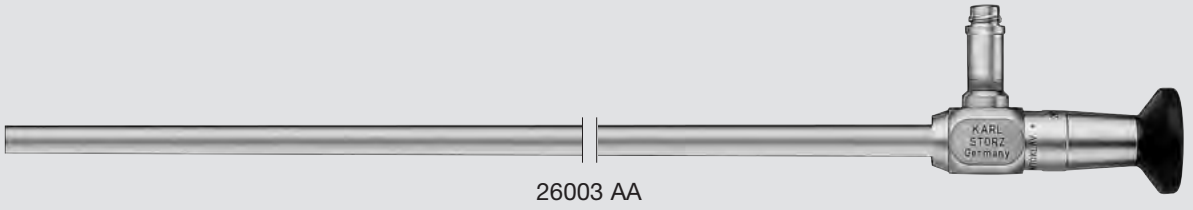
495 CD

495 CD	**Percutaneous Fiber Optic Light Cable,** length 300 cm, with three percutaneous illumination ports, each 5 mm in diameter, each 5 cm in length

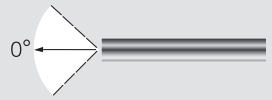
5-04

HOPKINS® II Telescopes

Diameter 10 mm, length 31 cm
Trocar size 11 mm
Recommended Fiber Optic Light Cables: 495 NL, 495 NA or 495 NE



26003 AA



26003 AA **HOPKINS® II Straight Forward Telescope 0°,** enlarged view, diameter 10 mm, length 31 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green

26003 BA **HOPKINS® II Forward-Oblique Telescope 30°,** enlarged view, diameter 10 mm, length 31 cm, **autoclavable,** fiber optic light transmission incorporated, color code: red

3-11

Further HOPKINS® Telescopes see chapter 7, VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS), pages 140-144

Fiber Optic Light Cables see catalog TELEPRESENCE

Size 11 mm

Cannula

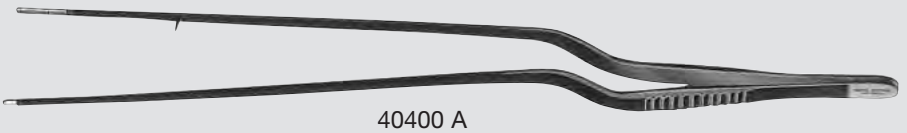
Trocar only

Size:		**11 mm**	
Working length:		4 cm	6 cm
	Trocar, with blunt tip including:	**40103 AB**	**40103 CD**
	Cannula	40103 A	40103 C
	Trocar only	40103 B	40103 D

3-11

For **KARL STORZ trocars** only the individual components are numbered. The catalog number for the **entire assembled trocar**, as shown above in **bold** print, does not appear on the instrument.

Further Trocars see chapter 7, VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS), pages 140-144



40400 A

40400 A **Forceps,** atraumatic, bayonet-shaped, insulated, length 22 cm

40400 C

40400 C **Forceps,** atraumatic, bayonet-shaped, insulated, length 20 cm

40400 B

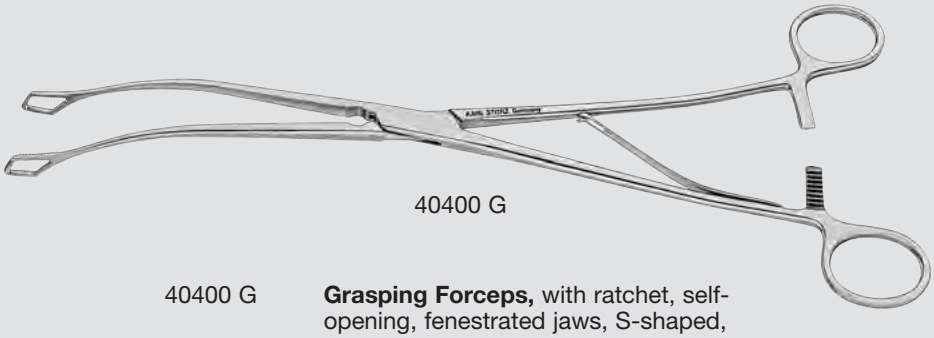
40400 B **Forceps,** with multiple teeth, bayonet-shaped, insulated, length 22 cm

40400 D

40400 D **Forceps,** with multiple teeth, bayonet-shaped, insulated, length 20 cm

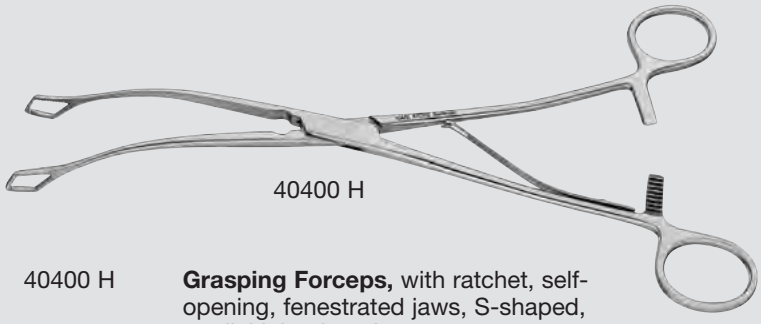
11-98

Grasping Forceps



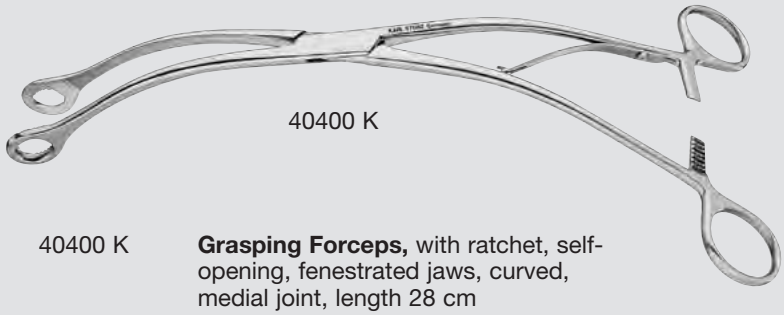
40400 G

40400 G **Grasping Forceps,** with ratchet, self-opening, fenestrated jaws, S-shaped, medial joint, length 33 cm



40400 H

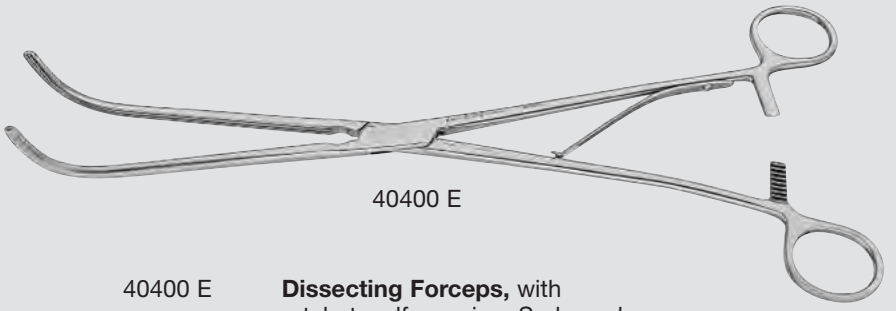
40400 H **Grasping Forceps,** with ratchet, self-opening, fenestrated jaws, S-shaped, medial joint, length 28 cm



40400 K

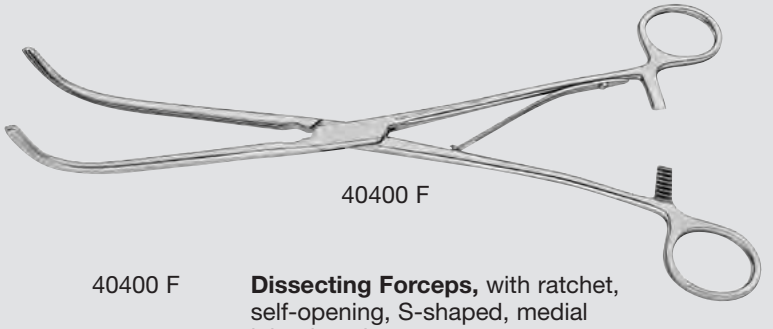
40400 K **Grasping Forceps,** with ratchet, self-opening, fenestrated jaws, curved, medial joint, length 28 cm

11-98



40400 E

40400 E **Dissecting Forceps,** with ratchet, self-opening, S-shaped, medial joint, length 33 cm



40400 F

40400 F **Dissecting Forceps,** with ratchet, self-opening, S-shaped, medial joint, length 28 cm

11-98

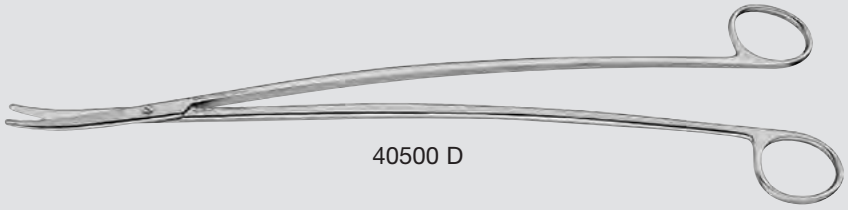
Dissecting Scissors

40500 B

40500 B **Dissecting Scissors,** S-shaped, medial joint, length 33 cm

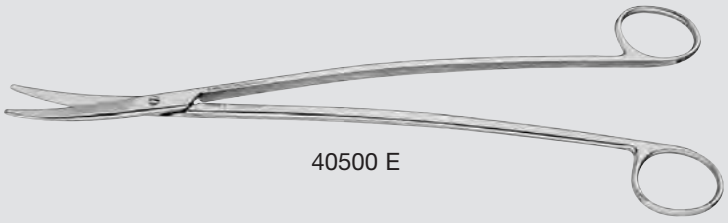
40500 C

40500 C **Dissecting Scissors,** S-shaped, medial joint, length 28 cm



40500 D

40500 D **Dissecting Scissors,** S-shaped, distal joint, length 33 cm



40500 E

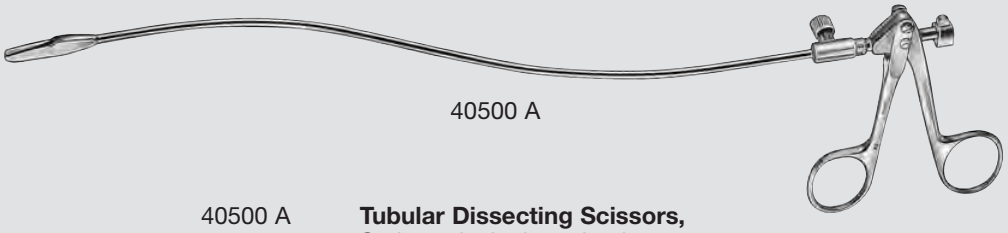
40500 E **Dissecting Scissors,** S-shaped, distal joint, length 28 cm

11-98

Dissecting Scissors

40501 A

40501 A **Dissecting Scissors,** S-shaped, distal end angled, medial joint, length 26 cm



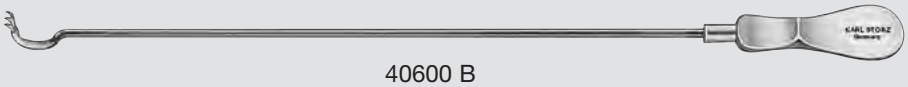
40500 A

40500 A **Tubular Dissecting Scissors,** S-shaped, single action jaws, length 35 cm

11-98

40600 A

40600 A **Retractor,** S-shaped, with 3 teeth, length 27 cm

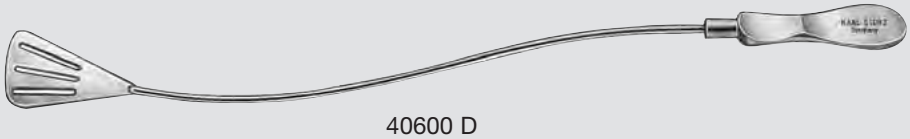


40600 B

40600 B **Retractor,** distal end curved, with 3 teeth, length 27 cm

40111 A

40111 A **Retractor,** S-shaped, blade depth 50 mm, length 80 mm



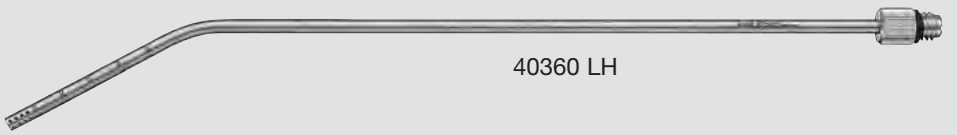
40600 D

40600 D **Lung Spatula,** S-shaped, length 27 cm

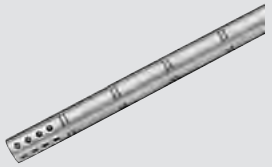
11-98

Suction and Irrigation Tubes

Size 5 mm
Trocar size 6 mm

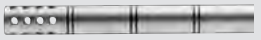


40360 LH



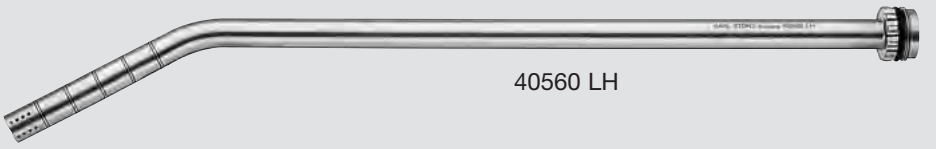
40360 LH **Suction and Irrigation Tube,** with lateral holes, distally angled sheath, size 5 mm, length 28 cm

37260 LH

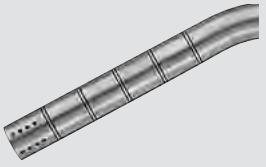


37260 LH **Suction and Irrigation Tube,** with lateral holes, size 5 mm, length 30 cm

Size 10 mm
Trocar size 11 mm



40560 LH



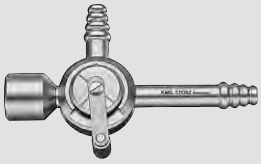
NEW 40560 LH **Suction and Irrigation Tube,** with lateral holes, distally angled sheath, size 10 mm, length 28 cm

3-11

Handles for Suction and Irrigation Tubes

KARL STORZ — ENDOSKOPE

For use with suction and irrigation tubes size 5 and 10 mm



30805 **Handle with Two-Way Stopcock,** for suction and irrigation, **autoclavable,** for use with Suction and Irrigation Tubes 37260 LH, 40360 LH and 40560 LH

37112 A **Suction and Irrigation Handle,** straight, with clamping valve, for suction and irrigation, **autoclavable,** for use with Suction and Irrigation Tubes 37260 LH, 40360 LH and 40560 LH

37113 A **Suction and Irrigation Handle,** pistol grip, with clamping valve, for suction and irrigation, **autoclavable,** for use with Suction and Irrigation Tubes 37260 LH, 40360 LH and 40560 LH

Tubing Sets for use with suction and irrigation handles

031133-10* **Tubing Set,** for single use, sterile, package of 10, for use with Suction and Irrigation Handles 37112 A and 37113 A

031134-10* **Tubing Set,** for single use, sterile, package of 10, for use with Suction and Irrigation Handles 37112 A and 37113 A in combination with silicone tube inner diameter 5 mm at the patient end

Please note:
For KARL STORZ suction and irrigation handles we recommend the use of tubing sets specially designed for these handles from:

* mtp medical technical promotion gmbh
Take-Off GewerbePark 46
D-78579 Neuhausen ob Eck
Germany
Telephone: +49/74 67/9 45 04-0
Fax: +49/74 67/9 45 04-99

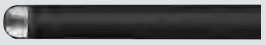
3-11

Unipolar Coagulating Electrodes

40700 A

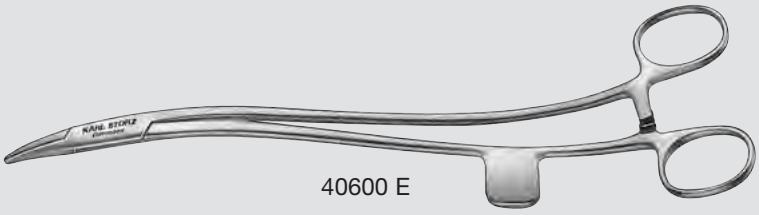
40700 A **Electrode,** knife tip, malleable, with connector pin for unipolar coagulation, length 40 cm

40700 B



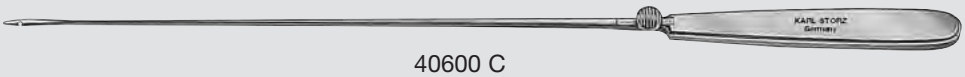
40700 B **Electrode,** ball tip, malleable, with connector pin for unipolar coagulation, length 40 cm

11-98₂



40600 E

40600 E **Needle Holder,** S-shaped, with ratchet, length 27 cm



40600 C

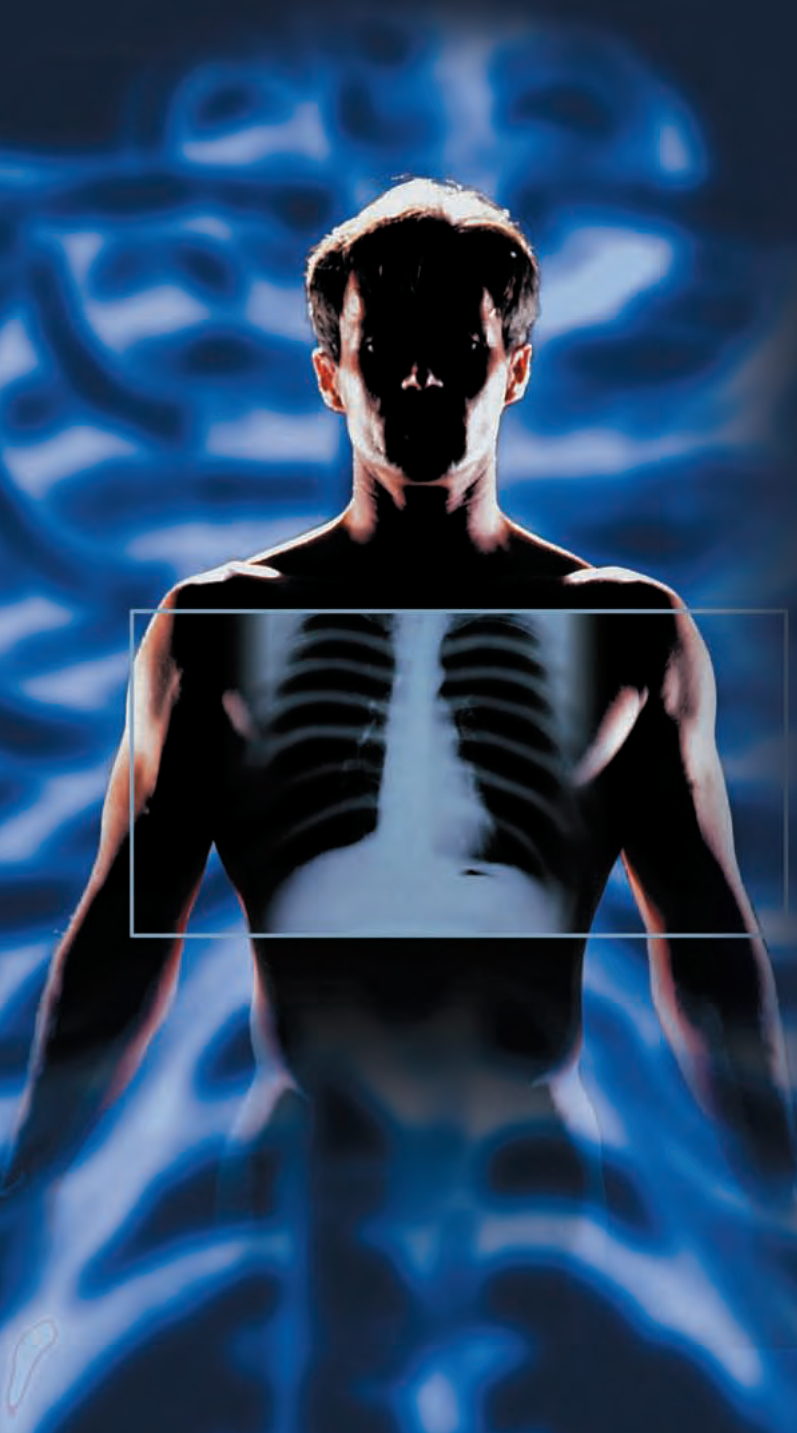
40600 C **Sling Passer,** length 25 cm

26596 T

26596 T **Knot Tier,** for extracorporeal knotting, size 5 mm, length 36 cm

11-98

VISUALIZATION SYSTEM FOR MICROSURGERY



VITOM® 25 NEW

Visualization System for Microsurgery

KARL STORZ — ENDOSKOPE

3-11

VITOM® 25 NEW

Visualization System for Microsurgery

KARL STORZ — ENDOSKOPE

The VITOM® 25 from KARL STORZ represents a revolutionary new way of displaying surgical procedures in a high quality and ergonomic manner.

The VITOM® 25 is based on the renowned HOPKINS® II rod lens system from KARL STORZ. With the help of a holding system, the VITOM® 25 is placed at a working distance of 25 – 60 cm above the surgical site, giving the surgeon more room to work.

The small size of the VITOM® 25 reduces space requirements in the OR to a minimum. Thanks to the slim and compact design, the surgical field is not obstructed and even long instruments can be used with ease. The VITOM® 25 provides excellent depth of field, magnification, contrast and color reproduction, which are the prerequisites for FULL HD display and recording.

The first-class enlarged image can be observed via a FULL HD monitor from a convenient distance by the surgeon and the assistant as well as the entire OR team.

The VITOM® 25 system has proven to be an excellent alternative to OR illumination cameras, loupes or operating microscopes in various surgical disciplines.

The VITOM® 25 has integrated illumination**,** which can be enhanced by an optional illuminator.

The system allows further use of existing units. A FULL HD endoscope imaging solution from KARL STORZ can also be used with the VITOM® 25 exoscope.

The VITOM® 25 system offers:

- **Excellent FULL HD image quality**
- **Great depth of view**
- **Large working distance**
- **Ergonomic monitor work**
- **Compact design requiring minimal space in the OR**
- **Use of existing KARL STORZ FULL HD endoscopy system possible**

3-11

Exoscope and Illumination

VITOM® 25 Exoscope
and Light Cable

+

VITOM® 25 Illuminator
and Y-Light Cable (optional)

+

XENON 300 SCB
Light Source

Camera and Display

IMAGE 1 HUB™ HD
Camera Control Unit

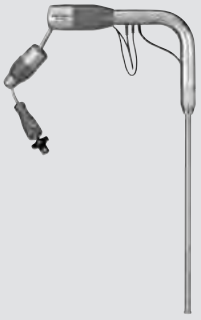
+

IMAGE1 H3-Z Three-Chip
HD Camera Head

+

IMAGE 1 HUB™ HD
Monitor

Holding System



ENDOCRANE™
Piezoelectric Holding Arm

or

POINT SETTER
Pneumatic Holding Arm

or

Mechanical Holding Arm

Documentation System

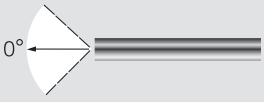
KARL STORZ AIDA® compact NEO

3-11

Holding Arm systems see chapter 11, HOLDING SYSTEMS
KARL STORZ AIDA® compact NEO see catalog KARL STORZ OR1™

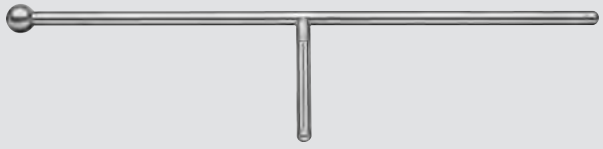
Diameter 10 mm, length 11 cm

20 9160 20



20 9160 20 **VITOM® 25 HOPKINS® II Straight Forward Telescope 0°,** working distance 25 – 60 cm, diameter 10 mm, length 11 cm, **autoclavable,** fiber optic light transmission incorporated, color code: green

Fiber Optic Light Cables 495 NE and NVB recommended



20 9180 20

20 9180 20 **VITOM® 25 Distance Rod,** length 25 cm

optional:

20 9170 00

20 9170 00 **VITOM® 25 Illuminator,** for straight forward telescopes 0°, 2 adjustable lenses with holding device for VITOM® 25, **autoclavable**

Y-Fiber Optic Light Cable 495 UV recommended

Fiber Optic Light Cables see catalog TELEPRESENCE

3-11

Cold Light Fountain XENON 300 SCB

Special Features:

- **Extremely high light intensity due to 300 Watt Xenon lamp**
- **Built-in antifog pump**
- **With integrated KARL STORZ Communication Bus (KARL STORZ-SCB)**

20 1331 01-1 **Cold Light Fountain XENON 300 SCB**

power supply 100 – 125/220 – 240 VAC, 50/60 Hz
including:
Mains Cord
Silicone Tubing Set, length 250 cm
SCB Connecting Cable, length 100 cm

Specifications:

Lamp type	XENON 15 V, 300 Watt
Color temperature	6000 K
Light outlets	1
Light intensity adjustment	continuously adjustable via a membrane keyboard or KARL STORZ Communication Bus Signal

Dimensions w x h x d	305 x 165 x 335 mm
Weight	7.96 kg
Certified to:	IEC 601-1 and UL 544, protection class 1/CF

3-11

Spare Lamps and Spare Lamp Modules for Cold Light Fountains XENON see catalog TELEPRESENCE

IMAGE 1 HUB™ HD

HD Camera Control Unit

KARL STORZ — ENDOSKOPE

Special Features:

- **Maximum resolution and the consistent use of the 16:9 aspect ratio guarantee FULL HD.**
- **Endoscopic and microscopic camera systems are equipped with three CCD chips that support the 16:9 input format as well as capturing images with a resolution of 1920 x 1080 pixels.**

The benefits of FULL HD (High Definition) for medical applications are:

- **Up to 6 times higher input resolution of the camera delivers more detail and depth of focus.**
- **Using 16:9 format during image acquisition enlarges the field of vision and supports ergonomic viewing.**
- **The brilliance of color enables optimal diagnosis.**
- **Lateral view is enhanced by 32% when the endoscope is withdrawn slightly, providing the same image enhancement as a standard system. Any vertical information loss is restored and the lens remains clean.**

222010 11U102 **IMAGE 1 HUB™ HD Camera Control Unit SCB, with SDI Module**

for use with IMAGE1 FULL HD and IMAGE1 standard one- and three-chip camera heads, max. resolution 1920 x 1080 pixels, **with integrated SDI (Serial Digital Interface) module, KARL STORZ-SCB** and integrated Image Processing Module, color systems PAL/NTSC, power supply 100 – 240 VAC, 50/60 Hz

including:

Mains Cord

BNC/BNC Video Cable

S-Video (Y/C) Connecting Cable

2x **Connecting Cables,** for controlling peripheral units

DVI-D Connecting Cable

SCB Connecting Cable

Keyboard, with US English character set

Specifications:

Signal-to-Noise Ratio	IMAGE 1 HUB™ HD, three-chip camera systems ≥ 60 dB
AGC	Microprocessor-controlled
Video Output	- Composite signal to BNC socket - S-Video signal to 4-pin Mini-DIN socket (2x) - RGBS signal to D-Sub socket - SDI signal to BNC socket (only IMAGE 1 HUB™ HD with SDI module) (2x) - HD signal to DVI-D socket (2x)
Input	Keyboard for title generator, 5-pin DIN socket

Control Output /Input	- KARL STORZ-SCB at 6-pin Mini-DIN socket (2x) - 3.5 mm stereo jack plug (ACC 1, ACC 2), - Serial port at RJ-11 - USB port (only IMAGE 1 HUB™ HD with ICM) (2x)
Dimensions w x h x d	305 x 89 x 335 mm
Weight	2.95 kg
Power supply	100-240 VAC, 50/60 Hz
Certified to:	IEC 601-1, 601-2-18, CSA 22.2 No. 601, UL 2601-1 and CE acc. to MDD, protection class 1/CF

Optional accessories for IMAGE 1 HUB™ HD see catalog TELEPRESENCE

3-11

IMAGE1 HD

Camera Heads for Endoscopy and Microscopy

KARL STORZ — ENDOSKOPE

For use with IMAGE 1 HUB™ HD Camera Control Unit SCB 22 2010 11U102

22 2200 55-3

NEW	**22** 2200 55-3	**50 Hz** **60 Hz**	**IMAGE1 H3-Z** **Three-Chip FULL HD Camera Head**

max. resolution 1920 x 1080 pixels, progressive scan, soakable, gas- and plasma-sterilizable, with integrated Parfocal Zoom Lens, focal length f = 15 – 31 mm (2x), 2 freely programmable camera head buttons, for use with color systems **PAL/NTSC**

Accessories

533 TVA

040112-40*	**Camera Cover,** folded inside out, 13 x 242 cm, sterile, package of 25, for use with all standard endoscopic video camera systems
040112-160*	**Same,** package of 160
533 TVA	**Adaptor, autoclavable,** permits telescope changing under sterile conditions

Specifications:

IMAGE1 HD Camera Head	**H3-Z**
50 Hz	**22** 2200 55-3 (PAL/NTSC) (50/60 Hz)
Image Sensor	3x ⅓" CCD chip
Pixel Output Signal H x V	1920 x 1080
Dimensions	Diameter 32-44 mm, length 114 mm
Weight	246 g
Min. Sensitivity	F 1.4/1.17 Lux
Optical Interface	Integrated Parfocal Zoom Lens,, f = 15-31 mm
Grip Mechanism	Standard eyepiece adaptor
Cable	non-detachable
Cable Length	300 cm

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Optional accessories for IMAGE 1 HUB™ HD see catalog TELEPRESENCE

3-11

IMAGE 1 HUB™ HD

HD Monitor

9524 N/NO
9526 N/NO

9524 NB/NBO
9526 NB/NBO

KARL STORZ HD Flat Screens	24"		26"	
Desktop with pedestal	9524 N	9524 NO	9526 N	9526 NO
Wall-mounted with VESA 100-adaption	9524 NB	9524 NBO	9526 NB	9526 NBO
Inputs:				
SDI	●	●	●	●
HD-SDI	●	●	●	●
RGBS	●	●	●	●
S-Video	●	●	●	●
Composite	●	●	●	●
SOG	●	●	●	●
DVI-D	●	●	●	●
Fiber Optic	–	●	–	●
VGA	●	●	●	●
Outputs:				
SDI	●	●	●	●
HD-SDI	●	●	●	●
RGBS	●	●	●	●
S-Video	●	●	●	●
Composite	●	●	●	●
DVI-D	●	●	●	●
Displayable Signal Formats:				
4:3	●	●	●	●
5:4	●	●	●	●
16:9	●	●	●	●
16:10	●	●	●	●
Picture-in-Picture (PiP, HD – SD)	●	●	●	●
Picture-in-Picture (PiP, HD – HD)	●	●	●	●
PAL/NTSC compatible	●	●	●	●
Picture-Perfect Technology	●	●	●	●

The following accessories are included:
Mains Cord, length 300 cm
External 24VDC Power Supply
Pedestal (only 9524 N/NO and 9526 N/NO)

3-11

The systems can be operated with KARL STORZ-SCB units.
Video Connecting Cables see catalog TELEPRESENCE

HOLDING SYSTEMS

MECHANICAL HOLDING SYSTEMS	216-217
ELECTRICAL HOLDING ARM	218-221
PNEUMATIC HOLDING SYSTEM	222-226

Mechanical Holding Systems

with KSLOCK

KARL STORZ — ENDOSKOPE

KS*lock*

Special Features:

- **Simple, fast and accurate positioning**
- **New, reinforced versions of various articulated stands**
- **Five joint functions enable a large number of different positions**
- **All five joint functions and instruments can be fixed by means of the mechanical central clamp KSLOCK.**
- **Variable height adjustment by using the socket**
- **Socket for use with European and United States standard rails**
- **Ergonomical positioning at the operating table**
- **Eases the work routine of the assistant**
- **Instruments and telescopes are clamped securely**
- **Steady imaging of the operation field**
- **Modular composition using individual elements**
- **Maintenance-free solid construction**
- **Autoclavable**

28272 RLC

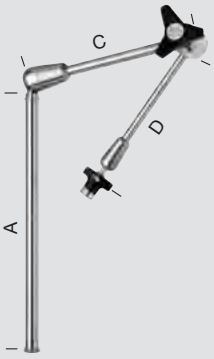
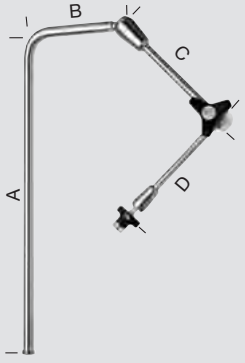
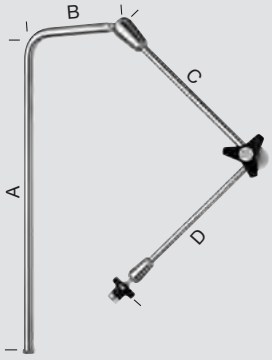
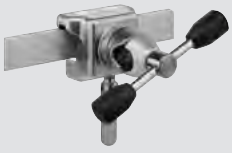
3-11

Mechanical Holding Systems

with KSLOCK

KARL STORZ — ENDOSKOPE

KS*lock*

Socket	Articulated Stand					
28172 HK	28272 HA		28272 HB		28272 HC	
						
28172 HR	A 30 cm	B –	A 48 cm	B 15 cm	A 48 cm	B 15 cm
	C 20 cm	D 17 cm	C 20 cm	D 17 cm	C 27 cm	D 24 cm

Clamping Jaw	Catalog number for the complete holding system		
28272 UG	28272 KGA	28272 KGB	28272 KGC
	28272 RGA	28272 RGB	28272 RGC
	Clamping Jaw, metal, with axial intake, for use with all square-headed KARL STORZ telescopes, clamping range 16.5 – 23 mm		
28272 UK	28272 KKA	28272 KKB	28272 KKC
	28272 RKA	28272 RKB	28272 RKC
	Clamping Jaw, metal, with axial intake, for use with instrument, irrigation and telescope sheaths, clamping range 4.8 – 12.5 mm		
28272 UL	28272 KLA	28272 KLB	28272 KLC
	28272 RLA	28272 RLB	28272 RLC
	Clamping Jaw, universal, clamping range 0 – 18 mm		
28272 UF	28272 KFA	28272 KFB	28272 KFC
	28272 RFA	28272 RFB	28272 RFC
	Clamping Jaw, for use with all KARL STORZ polymer housing fiberscopes		
28272 UU	28272 KUA	28272 KUB	28272 KUC
	28272 RUA	28272 RUB	28272 RUC
	Clamping Jaw, for use with all KARL STORZ polymer housing fiberscopes		

Clamping Cylinder		
	28272 C	**Clamping Cylinder,** for flexible mounting of 10 mm telescopes to telescope sheath, **autoclavable.** The clamping cylinder allows vertical movement and rotation of the telescope.

3-11

ENDOCRANE™ Holding System NEW

The ENDOCRANE™ holding arm is the system of choice if a particularly fast, accurate and safe positioning of instruments or endoscopes is required, i.e. in neurosurgery, laparoscopy or orthopedics.

The ENDOCRANE™ holding arm helps surgeons and assistant surgeons save time as the positioning of instruments and telescopes is faster and easier than with a manual holding system.

The system also relieves the assistant surgeon of camera guidance and delivers steady images.

The ENDOCRANE™ holding system features a special piezoelectric locking joint mechanism. This achieves positioning without misalignment as well as rapid locking (30 ms), meeting the demands of a clinical setting.

The system can be used with one hand and the large working radius of 50 cm allows variable use. A holding capacity of 20 N (2 kg) is possible in any position.

The holding arm features a fail-safe function which prevents a loss of retention force in the case of malfunction, i. e. power failure.

The system is very compact and can be mounted directly on standard OR table rails.

28272 EC

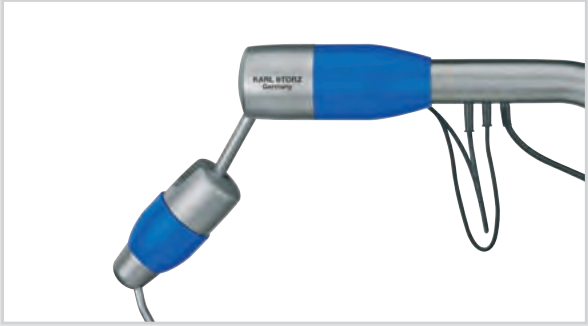
3-11

ENDOCRANE™ Holding System NEW

KARL STORZ — ENDOSKOPE

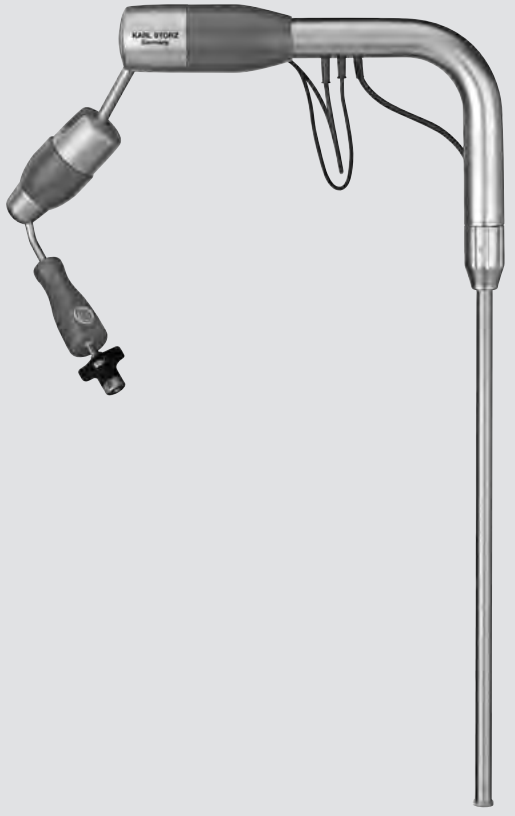
Product Features

- **Safety**
  The fail-safe function of the ENDOCRANE™ prevents loss of retention force and ensures that the arm does not collapse in case of malfunction.
- **Accuracy**
  ENDOCRANE™ offers accurate positioning without misalignment. This is indispensable for critical applications such as neurosurgery.
- **Speed**
  The piezoelectric principle enables the joints of the ENDOCRANE™ to close in 30 ms and ensures a holding force of 20 N in all positions.
- **Convenience**
  The ENDOCRANE™ system allows single-handed use via the handle.
- **Flexibility**
  ENDOCRANE™ is equipped with the proven KARL STORZ rapid coupling, which ensures fast and secure mounting of various clamping jaws. The ENDOCRANE™ handle also has a manual ball joint to allow convenient fine adjustment.
- **Hygiene**
  Der ENDOCRANE™ holding arm is equipped with a sterile cover during use. This guarantees 100% hygiene as well as safety and ensures that the system is in continuous use.



3-11

ENDOCRANE™ Holding System NEW



28272 EC

28272 EC	**ENDOCRANE™,** piezoregulated holding arm, including stand including: **Socket,** to clamp to the OR table **Control Unit** **Cover*,** sterile, package of 25 **Spring Balance** **Mains Cord**

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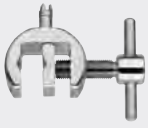
Components see chapter 13, SPARE PARTS AND ACCESSORIES

3-11

ENDOCRANE™ Holding System NEW

Clamping Jaws

KARL STORZ — ENDOSKOPE

	28272 UG	**Clamping Jaw,** metal, for use with all square-headed KARL STORZ HOPKINS® telescopes, clamping range 16.5 to 23 mm, with quick release coupling KSLOCK (male)
	28272 UK	**Clamping Range,** metal, with axial intake, for use with instrument, irrigation and telescope sheaths, clamping range 4.8 to 12.5 mm, with quick release coupling KSLOCK (male)
	28272 UL	**Clamping Jaw,** universal, clamping range 0 to 18 mm, with quick release coupling KSLOCK (male)
	28272 UF	**Clamping Jaw,** for use with all KARL STORZ polymer housing fiberscopes, with quick release coupling KSLOCK (male)
	28272 UU	**Clamping Jaw,** for use with instrument, irrigation and telescope sheaths
	28272 C	**Clamping Cylinder,** for flexible mounting of 10 mm telescopes to telescope sheath, **autoclavable.** The clamping cylinder allows vertical movement and rotation of the telescope. For use with Clamping Jaw 28272 UG and 28272 UG as well as POINT SETTER Universal Adaptor 10 – 15 mm
*	040146-01*	**Cover,** sterile
	040146-25*	**Cover,** sterile, package of 25

Specifications:

Arm:		**Control Unit**	
Maximum holding capacity	2 kg/20 N	Power supply	100 – 240 VAC
Working radius	500 mm/19.7"	Mains frequency	50/60 Hz
Swivel range	360°	Weight	5 kg/11.0 lbs
Maximum locking time	30 ms (fail-safe)	Dimensions (w x h x d)	305 x 80 x 305 mm
Weight of holding arm and stand	7 kg/15.4 lbs		
Protection against electric shock	Type CF		
Type of protection	IP 50		

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Specifications subject to change without notice.

3-11

POINT SETTER Holding System NEW

KARL STORZ — ENDOSKOPE

The POINT SETTER holding system is the perfect solution for positioning endoscopes as well as cameras, retractors or other instruments.

The POINT SETTER holding arm is mounted directly to the operating table and features safe, simple and reliable use.

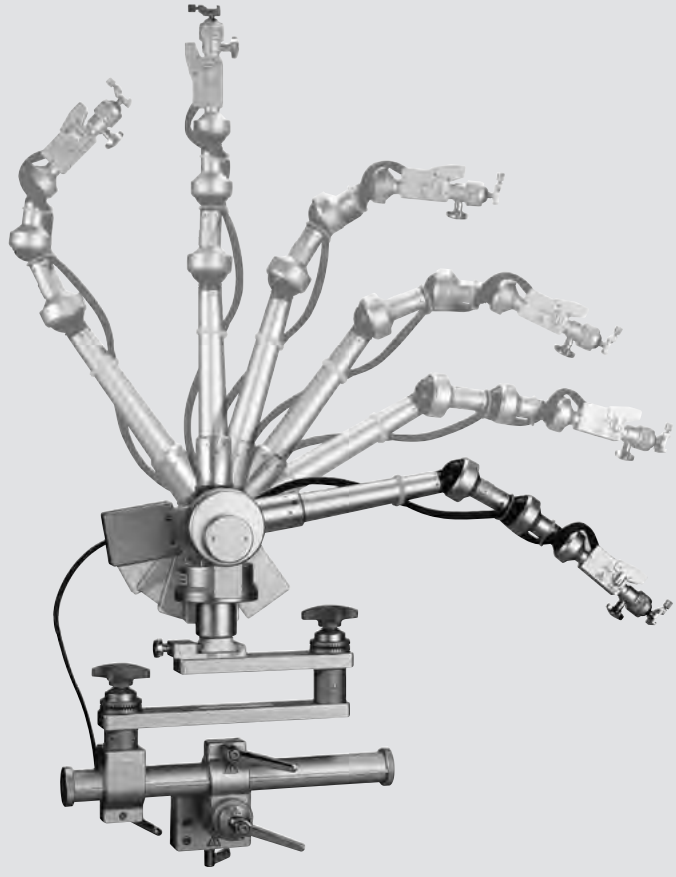
The patented self-locking pneumatic system ensures perfect safety, eliminating the need for additional error-prone electronics.

Furthermore, the POINT SETTER holding arm allows convenient single-handed use. Pressing and holding the control button on the handle releases the arm for quick and accurate positioning. The POINT SETTER arm locks as soon as the button is released.

The flexible OR table adaptor and the arm length of 650 mm provides more work space. Combined with a holding capacity of 2 kg this makes the POINT SETTER an ideal tool for surgical interventions.

Special Features:

- **The self-locking pneumatic system ensures that low, fluctuating or deficient gas pressure does not affect the stability of the arm.**
- **A press of a control button releases the arm immediately for quick positioning.**
- **Side guards prevent accidental activation of the POINT SETTER arm.**
- **A locking mechanism offers additional safety.**
- **A manual ball joint at the tip of the handle enables convenient fine-tuning.**
- **Special surface structure for uniform and smooth movement as well as accurate positioning**
- **Precise positioning without forward or backward motion**
- **The POINT SETTER arm is very robust and has high torsional stiffness to ensure low oscillation and high reliability.**



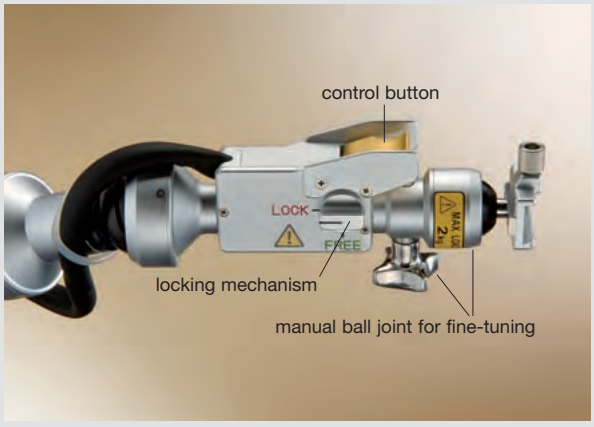
3-11

POINT SETTER Holding System NEW

KARL STORZ — ENDOSKOPE

Product Features

- **Perfect Safety**
  The POINT SETTER arm operates according to an innovative, self-locking principle similar to a spring-loaded brake. This makes it totally safe and reliable. Low, fluctuating or deficient gas pressure does not effect arm stability. The arm cannot collapse even if all pressure tubes are cut off.
- **Recoil-free Positioning**
  The POINT SETTER arm enables very precise positioning without recoil or backlash. This is particularly important, especially if the system is used for nerve or brain retraction.
- **Convenient Use**
  The POINT SETTER arm was designed for single-handed use. Pressing the control button releases the arm immediately and enables quick positioning. The control button has an elevated side guard that prevents unintentional activation of the POINT SETTER arm. A locking mechanism offers additional safety.
- **Manual Fine-tuning**
  A manual ball joint at the tip of the handle enables convenient fine-tuning.
- **Uniform Movement**
  The connector joints of the POINT SETTER arm have a special surface structure for uniform and smooth movement.
- **Balanced System**
  The POINT SETTER Arm is counterbalanced to ensure optimal movement. This is particularly important to ensure that the surgeon's fine-motor control remains unhindered during complex interventions.
- **Robust Design**
  The POINT SETTER arm is very robust and has high torsional stiffness for low oscillation and high reliability.



3-11

POINT SETTER Holding System NEW

28172 WS

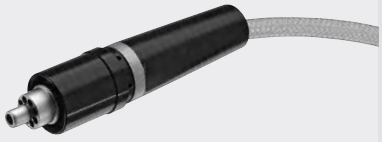
28172 WS **POINT SETTER,** pneumatic holding system with OR table adaptor including:
Universal Adaptor, for use with telescopes diameter 10 – 15 mm
Universal Adaptor, for use with telescopes diameter 5 – 10 mm
Universal Adaptor, 10 – 15 mm, pediatric
Adaptor, for KARL STORZ fiberscopes
Pressure Hose Schrader, length 600 cm, for USA and Asia
Case, for POINT SETTER arm
Drape, for single use, sterile, package of 10

3-11

POINT SETTER Holding System NEW

KARL STORZ — ENDOSKOPE

Alternative and Spare Connecting Tubes

	28172 WA	**Connecting Tube,** for POINT SETTER, Dräger, length 600 cm
	28172 WB	**Connecting Tube,** for POINT SETTER, Dräger air motor, length 600 cm
	28172 WC	**Connecting Tube,** for POINT SETTER, compressor, length 600 cm
	28172 WN	**Connecting Tube,** for POINT SETTER, Schrader, length 600 cm

Accessories and Miscellaneous Material

	20 0310 02	**Air Compressor,** for POINT SETTER, 0 – 8 bar, power supply 230 VAC, 50/60 Hz including: **Connecting Tube,** for Calcusplit® **Connecting Tube,** for POINT SETTER, length 600 cm
	20 0310 02 C	**Air Compressor,** for POINT SETTER, 0 – 8 bar, power supply 115 VAC, 50/60 Hz including: **Connecting Tube,** for Calcusplit® **Connecting Tube,** for POINT SETTER, length 600 cm
	28272 C	**Clamping Cylinder,** for flexible mounting of 10 mm telescopes to telescope sheath, **autoclavable.** The clamping cylinder allows vertical movement and rotation of the telescope. For use with Clamping Jaw 28172 UG and 28272 UG as well as Universal Adaptor 10 – 15 mm
	28172 WD	**Drape,** for single use, sterile, package of 10

Components see chapter 13, SPARE PARTS AND ACCESSORIES

3-11

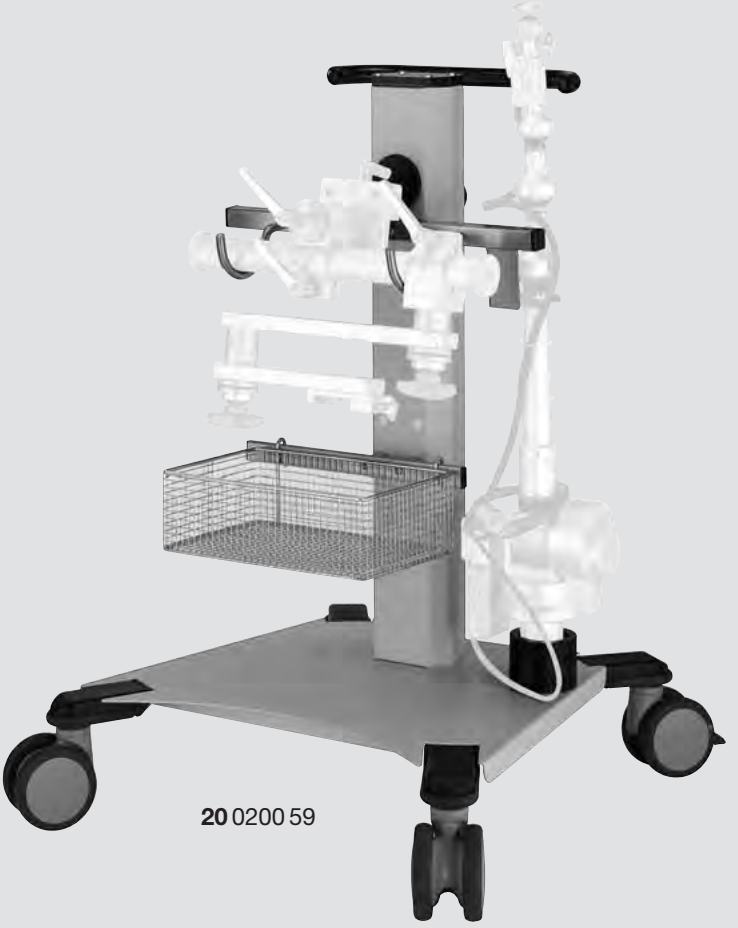
STOR-E Transport Cart NEW

for POINT SETTER Holding Arm

With the aid of the transport cart, the POINT SETTER holding system can be easily transported into the OR. The components of the POINT SETTER holding system are safely suspended from the cart at a convenient height. This enables easy and quick mounting to standard OR table rails.

Special Features:

- **Mobile and safe storage of the POINT SETTER holding arm**
- **Faster installation and readiness of the POINT SETTER for immediate use in the OR**
- **Offers space for the POINT SETTER with standard OR table adaptor, connecting tube, sterile covers and small parts**



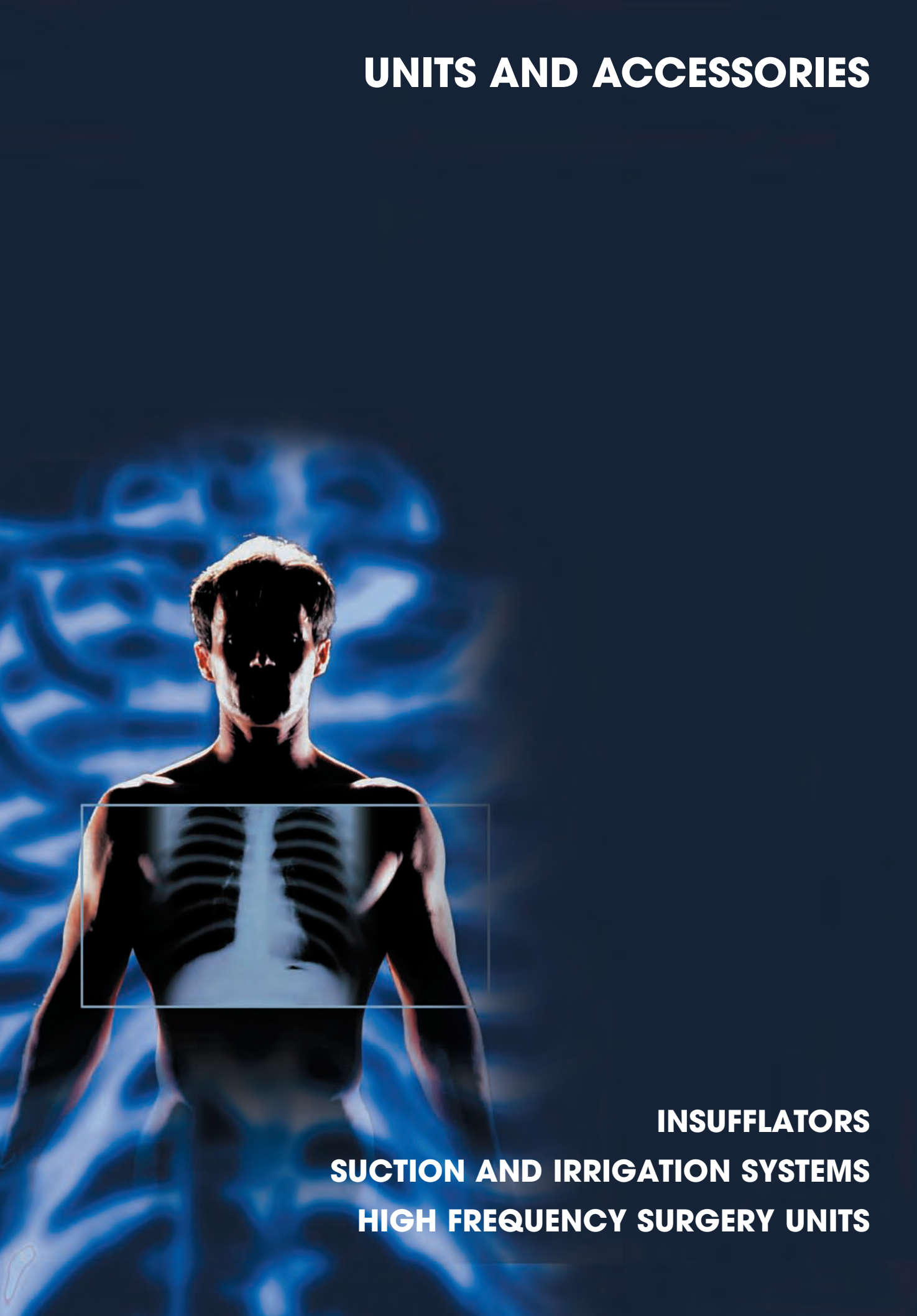
20 0200 59

20 0200 59 **STOR-E Transport Cart,** for the POINT SETTER holding arm
including:
Attachment, POINT SETTER set
Tray

3-11

Components see chapter 13, SPARE PARTS AND ACCESSORIES

UNITS AND ACCESSORIES



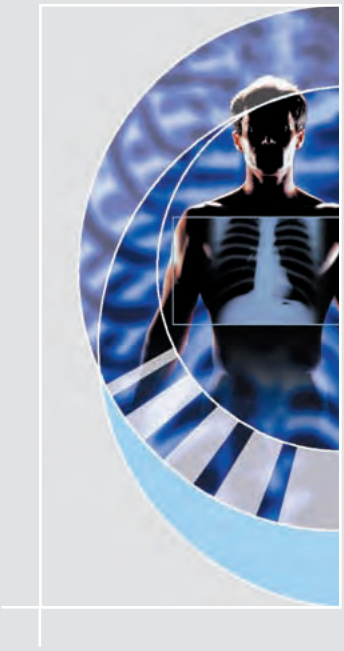
INSUFFLATORS

SUCTION AND IRRIGATION SYSTEMS

HIGH FREQUENCY SURGERY UNITS

Units and Accessories for Thoracoscopy

KARL STORZ — ENDOSKOPE



INSUFFLATORS

SUCTION AND IRRIGATION SYSTEMS

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**
- **Units for High Frequency Surgery**

11-98

Electronic CO_2 ENDOFLATOR® SCB

Recommended System Configuration

KARL STORZ — ENDOSKOPE

Special Features:

- **High degree of patient safety**
- **Easy to use**
- **Clear, adjacent displays for set value and actual value facilitate monitoring of the insufflation process**
- **Touch keys for precise preselection of set values**
- **Optical and acoustic alarm signals in the event of patient overpressure**
- **Fully automatic, electronically controlled gas refill (e. g. in case of gas loss when changing instruments)**
- **Secuvent® Safety System: Constant monitoring of intraabdominal pressure; any overpressure is reduced immediately**
- **SCB model with connections to the KARL STORZ Communication Bus (KARL STORZ-SCB)**

26 4305 08-1 **Electronic CO_2 ENDOFLATOR® SCB,** power supply 100 – 240 VAC, 50/60 Hz

including:

Mains Cord

Silicone Tubing Set, sterilizable

Universal Wrench

SCB Connecting Cable, length 100 cm

CO_2/N_2O Gas Filter*, sterile, for single use, package of 10

Specifications:

Operating Mode	Operating mode
Gas Flow	0-20 l/min
Pressure	0-30 mmHg (3990 Pa)
Gas	CO_2
Measuring/Control System	electronic
Parameter Display	- Insufflation pressure - Intraabdominal pressure: 0-50 mmHg (6650 Pa) - Gas flow: 0-20 l/min - Gas consumption: 0-999 l

Secuvent® Safety System	•
Power Supply	100-240 VAC, 50/60 Hz
Dimensions w x h x d	305 x 164 x 233 mm
Weight	6 kg
Certified to	IEC 601-1, CE acc. to MDD

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Optional Accessories for Electronic CO_2 ENDOFLATOR® SCB see pages U 6-7

Components see chapter 13, SPARE PARTS AND ACCESSORIES

11-98$_2$

Electronic CO_2 ENDOFLATOR® SCB

System Components

KARL STORZ — ENDOSKOPE

CO_2 Bottle, Pin-Index connector

26 4000 91 **empty**
26 4000 93 **filled**

CO_2 Bottle, German connector

26 4000 90 **empty**
26 4000 92 **filled**

High Pressure Tube, Pin-Index connector

20 4000 22 length 55 cm
20 4000 28 length 102 cm

High Pressure Tube, German connector

20 4000 21 length 55 cm
20 4000 27 length 102 cm

High Pressure Tube, ISO connector

20 4002 22 length 102 cm

Low Pressure Tube, for central CO_2 gas supply

20 4000 26 length 300 cm

UNIT SIDE

PATIENT SIDE

SCB®

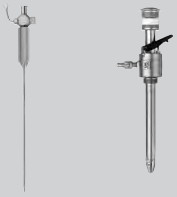
CO_2/N_2O Gas Filter, sterile, for single use

031122-10*

Silicone Tube, for insufflation

20 4001 43

VERESS **Pneumoperitoneum Cannula**



26120 J 30103 WX

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11-98₂

Optional Accessories

for Electronic CO_2 ENDOFLATOR® SCB

KARL STORZ — ENDOSKOPE

	26120 J	VERESS **Pneumoperitoneum Needle,** with spring-loaded blunt inner cannula, LUER-Lock, **autoclavable,** diameter 2.1 mm, length 10 cm
	26120 JK	**Same,** length 7 cm
	26120 JL	**Same,** length 13 cm
	26120 L	**Localization Cannula,** LUER-Lock, diameter 0.8 mm, length 12 cm, for use with Syringe 26003, 10 ml
	20 4000 32	**High Pressure Inline Gas Filter**
	20 4001 43	**Silicone Tubing Set,** sterilizable
	26 4000 90	**CO_2 Bottle,** empty, with German connection
	26 4000 92	**Same,** filled
	26 4000 91	**CO_2 Bottle,** empty, with Pin-Index connection
	26 4000 93	**Same,** filled

11-98₃

Optional Accessories

for Electronic CO_2 ENDOFLATOR® SCB

	20 4000 21	**CO_2 High Pressure Tube,** American connection/German connection, length 55 cm
	20 4000 27	**Same,** length 102 cm
	20 4000 22	**CO_2 High Pressure Tube,** American connection/ Pin-Index connection, length 55 cm
	20 4000 28	**Same,** length 102 cm
	20 4002 22	**CO_2 High Pressure Tube,** American connection/ISO connection, length 102 cm
	20 4004 21	**Low Pressure Tube,** for the central CO_2 gas supply, length 150 cm
	20 4004 23	**Same,** length 100 cm
	20 4000 26	**Same,** length 300 cm
	20 4004 25	**Same,** length 600 cm
	20 0903 70	**SCB Connecting Cable,** length 60 cm
*	031122-25*	**Gas Filter,** sterile, for single use, package of 25

HAMOU® **ENDOMAT®** SCB

Suction and Irrigation System,
Recommended System Configuration

KARL STORZ — ENDOSKOPE

Special Features:

- **Irrigation function is performed by a roller pump**
- **Maximum parameters for LAP and HYST mode are automatically fixed by the choice of the tubing set**
- **Precise presetting of suction and irrigation parameters via touch keys**
- **Adjacent display scales for set values and actual value ensure safe monitoring of suction and irrigation levels**
- **With connections to KARL STORZ Communication Bus (KARL STORZ-SCB)**

26 3310 09-1 HAMOU® **ENDOMAT® SCB**
power supply 100 – 240 VAC, 50/60 Hz
including:
Mains Cord
3x **HYST Tubing Set*,** for single use
3x **LAP Tubing Set*,** for single use
SCB Connecting Cable, length 100 cm
VACUsafe Promotion Pack Suction*, 2 l

Specifications:

Pressure regulated	- HYST 0-200 mmHg (26.6 kPa) - LAP 0-400 mmHg (53.2 kPa)
Flow regulated	- HYST 0-500 ml/min - LAP 0-1000 ml/min
Suction Pressure regulated	- HYST 0-(-)0.5 bar (-50 kPa) - LAP 0-(-) 0.8 bar (-80 kPa)

Power Supply	100-240 VAC, 50/60 Hz
Dimensions w x h x d	305 x 164 x 233 mm
Weight	6 kg
Certified to	IEC 601-1, CE acc. to MDD

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Optional Accessories for HAMOU® **ENDOMAT® SCB** see pages U 14-16
Components see chapter 13, SPARE PARTS AND ACCESSORIES

5-04₂

HAMOU® **ENDOMAT® SCB**

System Components

KARL STORZ — ENDOSKOPE

One-Pedal Footswitch

20 0141 30

LAP Tubing Set **26** 3300 41

LAP Tubing Set 031118-10*

UNIT SIDE

PATIENT SIDE

SCB®

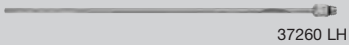
Silicone Tubing Set,
for **suction,**
part 1 of 2

20 3000 42

Filter

031124-10*

Suction and Irrigation Tube



37260 LH

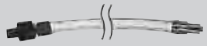
Handle

30805

Bottle Caps
Suction Bottles, 5 l
Bottle Stands
Bottle Stand Holder

20 3000 34
20 3000 50
20 3000 32
20 3000 33

Silicone Tubing Set,
part 2 of 2



20 3000 42

SUCTION AND IRRIGATION SYSTEMS

5-04$_1$

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ENDOMAT® LC SCB

Roller Pump – Suction or Irrigation System, Recommended System Configuration

KARL STORZ — ENDOSKOPE

Special features:

- **Simple roller pump system, flow-regulated, for irrigation or suction. To improve visibility during irrigation, the second level of Footswitch 20 0142 30 can be used to activate a flow between 500 and 1000 ml/min.**
- **SCB model with connections to the KARL STORZ Communication Bus (KARL STORZ-SCB)**

20 3303 01-1 **ENDOMAT® LC SCB,**
power supply 100 – 240 VAC, 50/60 Hz
including:
Mains Cord
Silicone Tubing Set, for irrigation, sterilizable
Silicone Tubing Set, for suction, sterilizable
SCB Connecting Cable, length 100 cm

Recommended optional accessories:

20 0142 30 **One-Pedal Footswitch,** two-stage, for activating a higher flow for improved visibility

031119-10* **Tubing Set,** for irrigation, sterile, for single use, with two puncture cannulas, package of 10

031247-10* **Tubing Set,** for suction, sterile, single use, package of 10

Specifications:

Flow	regulated: 0-1000 ml/min
Pressure	non-regulated: max. 1125 mmHg (150 kPa)
Suction Pressure	non-regulated: -0.46 bar (-46 kPa)
Power Supply	100-240 VAC, 50/60 Hz

Dimensions w x h x d	305 x 110 x 260 mm
Weight	4.5 kg
Certified to	IEC 601-1, CE acc. to MDD

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Optional Accessories for ENDOMAT® LC see pages U 14-16
Components see chapter 13, SPARE PARTS AND ACCESSORIES

5-04

ENDOMAT® LC SCB

System Components

One-Pedal Footswitch (optional)

20 0142 30

Silicone Tubing Set

20 3303 40

UNIT SIDE

PATIENT SIDE

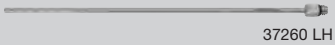
Silicone Tubing Set, for **suction**
part 1 of 2

20 3303 41

Filter

031124-10*

Suction and Irrigation Tube



37260 LH

Handle

30805

Bottle Caps, Suction Bottle, 5 l, Bottle Stand, Bottle Stand Holder

20 3000 34
20 3000 50
20 3000 32
20 3000 33

Silicone Tubing Set, for **suction,** part 2 of 2

20 3303 41

SUCTION AND IRRIGATION SYSTEMS

5-04$_1$

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DUOMAT®

Suction and Irrigation System,
Recommended System Configuration

KARL STORZ — ENDOSKOPE

Special Features:

- **Simple, powerful suction and irrigation system for universal use**
- **Suction bottle with overflow protection**
- **Low noise level**

20 3210 08 **DUOMAT®**
power supply 100 – 120, 230 – 240 VAC, 50/60 Hz
including:
Mains Cord
VACUsafe Promotion Pack Suction*, 2 l

Specifications:

Pressure	non-regulated: max. 400 mmHg (53.2 kPa)	Dimensions w x h x d	305 x 110 x 260 mm
Suction Pressure	non-regulated: max. (-)0.75 bar (-75 kPa)	Weight	5 kg
Power Supply	100-120, 230-240 VAC, 50/60 Hz	Certified to:	IEC 601-1, CE acc. to MDD

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Optional Accessories for DUOMAT® see pages U 14-16

Components see chapter 13, SPARE PARTS AND ACCESSORIES

3-98₂

UNIT SIDE

PATIENT SIDE

Silicone Tubing Set, for irrigation (Unit – pressure infusion cuff connection) part 1 of 2

20 3000 46

Silicone Tubing Set, for irrigation (Unit – bottle) part 1 of 2

20 3000 45

Silicone Tubing Set, for suction part 1 of 2

20 3000 42

Silicone Tubing Set, for suction (Unit – filter connection) part 1 of 2

20 3000 44

Filter

mtp*

Filter

mtp*

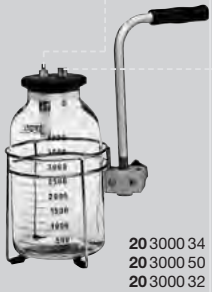
Pressure Infusion Cuff

26 3100 38
26 3101 38

Bottle Cap, for irrigation bottle

26 3100 35
26 3100 50

Bottle Caps, Suction Bottle, 5 l, Bottle Stand, Bottle Stand Holder



20 3000 34
20 3000 50
20 3000 32
20 3000 33

Suction Bottle, 1.5 l, Bottle Cap, Bottle Stand

20 3000 52
20 3000 34
20 3001 30

Silicone Tubing Set, for irrigation (Instrument – pressure infusion cuff connection) part 2 of 2

20 3000 46

Silicone Tubing Set, for irrigation (Bottle – Instrument) part 2 of 2

20 3000 45

Silicone Tubing Set (Bottle – Instrument connection) part 2 of 2

20 3000 42

Silicone Tubing Set (Bottle – Instrument connection) part 2 of 2

20 3000 44

Suction and Irrigation Tube

37260 LH

Handle

30805

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Optional Accessories

for Suction and Irrigation Systems

KARL STORZ — ENDOSKOPE

			for use with		
			HAMOU® ENDOMAT® SCB 26 3310 20-1	ENDOMAT® LC SCB 20 3303 20-1	DUOMAT® 20 3210 20
	26 3100 38	**Pressure Infusion Cuff,** 1.5 l, max. 400 mmHg, sterilizable	–	–	●
	26 3101 38	**Pressure Infusion Cuff,** 3 l, max. 400 mmHg, sterilizable	–	–	●
	26 3100 35	**Bottle Cap,** sterilizable, for use with irrigation bottles 1 l and 1.5 l, sterile (cylindrical and quadratic) type Abbott and Baxter Laboratories	–	–	●
	26 3102 35	**Bottle Cap,** sterilizable, for use with irrigation bottle 1 l, sterile (round), type Fresenius and B. Braun (old type), Delta Pharma (round)	–	–	●
	26 3103 35	**Bottle Cap,** sterilizable, for use with irrigation bottle 1 l, sterile (round or square), type B. Braun (old type) and Delta Pharma	–	–	●
	20 3000 52	**Suction Bottle,** 1.5 l, sterilizable	●	–	●
	20 3000 34	**Bottle Cap,** for suction bottles 1.5 l and 5 l, sterilizable	●	–	●
	20 3001 30	**Bottle Stand,** for suction bottle 1.5 l or irrigation bottle 1 l	●	–	●
	26 3100 50	**Irrigation Liquid Bottle,** 1 l, sterilizable	–	–	●

5-06

Optional Accessories

for Suction and Irrigation Systems

KARL STORZ — ENDOSKOPE

			for use with		
			HAMOU® ENDOMAT® SCB 26 3310 20-1	ENDOMAT® LC SCB 20 3303 20-1	DUOMAT® 20 3210 20
	20 3000 50	**Suction Bottle,** 5 l, sterilizable	●	●	●
	20 3000 34	**Bottle Cap,** for suction bottles 1.5 l and 5 l, sterilizable	●	●	●
	20 3000 32	**Bottle Stand,** for suction bottle 5 l	●	●	●
	20 3000 33	**Bottle Stand Holder,** for Bottle Stand **20** 3000 32	●	●	●
	20 0142 30	**One-Pedal Footswitch,** two-stage, for activating a higher flow for improved visibility	–	●	–
	20 0141 30	**One-Pedal Footswitch,** one-stage, for irrigation function	●	●	–
	20 0143 30	**Two-Pedal Footswitch,** one-stage	●	–	–
	20 3004 82	**Connector Set,** sterilizable, package of 2, for use with Silicone Tubing Sets **20** 3303 40, **20** 3303 41 and **20** 7116 40	–	●	–
	20 3303 82	**Pump Tube,** sterilizable, package of 25	–	●	–
	26 3300 41	**LAP Tubing Set,** reuseable, sterilizable	●	–	–
	031118-10*	**LAP Tubing Set,** for irrigation, for single use, sterile, package of 10	●	–	–

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Optional Accessories

for Suction and Irrigation Systems

KARL STORZ — ENDOSKOPE

SUCTION AND IRRIGATION SYSTEMS

			for use with		
			HAMOU® ENDOMAT® SCB 26 331020-1	ENDOMAT® LC SCB 20 330320-1	DUOMAT® 20 321020
	20 3000 42	**Silicone Tubing Set,** for suction, sterilizable	●	–	●
	20 3000 44	**Silicone Tubing Set,** for suction, sterilizable, short	–	–	●
	20 3000 46	**Silicone Tubing Set,** sterilizable, for use with Pressure Infusion Cuff **26** 3100 38, **26** 3101 38	–	–	●
	20 3000 45	**Silicone Tubing Set,** for irrigation, sterilizable, for use with Bottle Caps **26** 3100 35, **26** 3102 35, **26** 3103 35 and Puncture Needle 26173 VG	–	–	●
	20 0900 70	**SCB Connecting Cable,** length 30 cm	●	●	–
	031124-10*	**Filter,** to block fluid during suction, for single use, unsterile, package of 10	●	●	●
	031133-10*	**Tubing Set,** for single use, sterile, package of 10, for use with Suction and Irrigation Handles 37112 A and 37113 A	●	●	●
*	031134-10*	**Tubing Set,** for single use, sterile, package of 10, for use with Suction and Irrigation Handles 37112 A and 37113 A in combination with silicone tube inner diameter 5 mm at the patient end	●	●	●
	mtp*	**Receptacle,** reusable, 2 l suction bag, with filter, for single use	●	●	●
	mtp*	**Tubing Set,** for suction, sterile, for single use	●	●	●

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5-061

The New AUTOCON® II 400 SCB HF Unit

Special Features:

- **For interdisciplinary use**
- **Cutting-edge next-generation unit with a convenient, 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**

HIGH FREQUENCY SURGERY UNITS

3-11

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 microprocessor 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.

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.

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 includes 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

KARL STORZ — ENDOSKOPE

Special Features:	AUTOCON® II 400 SCB	AUTOCON® 200
Degree of coagulation can be preselected in several steps: The degree of coagulation measures extent of coagulation depth	●	●
Soft coagulation vs. 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 carbonisation	●	●
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 has to be accepted.	●	●
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 possible 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 user programs 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 area	●	–
Standard version compatible with KARL STORZ Communication Bus (KARL STORZ-SCB)	●	
Interdisciplinary use	●	–
Spray coagulation: Coagulation with modulated HF voltage (Up > 500 V); Very long arcs enable coagulation of large and bleeding areas of tissue without contact to tissue	●	–
Arc-controlled cutting, unipolar	●	–

HIGH FREQUENCY SURGERY UNITS

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AUTOCON® II 400 SCB

Specifications

KARL STORZ — ENDOSKOPE

HF-Modes	Effects	P max. at 500 Ohm	V_P max. at 500 Ohm	Crest Factor	Arc Control	Voltage Control
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	- Automatic Self-Test - Maldosage - Neutral Electrode Safety System (dynamic, two-part, one- and two-part NE) - LF/HF Leakage Current Monitor - Activation Time - Deactivable HF

Power Supply	**20** 5352 20-11x: 230 VAC, 50/60 Hz **20** 5352 20U11x: 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

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HIGH FREQUENCY SURGERY UNITS

AUTOCON® II 400 SCB

High Frequency Surgery Unit,
Recommended System Configurations

KARL STORZ — ENDOSKOPE

AUTOCON® II 400 SCB,
power supply 230 VAC, 50/60 Hz
including:
Mains cord
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 pages U 26-28
Components see chapter 13, SPARE PARTS AND ACCESSORIES

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HIGH FREQUENCY SURGERY UNITS

AUTOCON® II 400 SCB

System Components

KARL STORZ — ENDOSKOPE

Three-Pedal Footswitch

20 017831

Two-Pedal Footswitch

20 017830

One-Pedal Footswitch

20 017832

UNIT SIDE

PATIENT SIDE

SCB®

Bipolar High Frequency Cord

26176 LE

Unipolar High Frequency Cord

26 520045

Handle

26 520043

Unipolar High Frequency Cord

26005 M

Connecting Cable

27806

Bipolar Instrument

40270 LB/30804

Knife Electrode

26 520036

Unipolar Instrument

40775 LF

Neutral Electrode

27805

HIGH FREQUENCY SURGERY UNITS

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AUTOCON® 200

High Frequency Surgery Unit,
Recommended System Configurations

KARL STORZ — ENDOSKOPE

20 5225 01 **AUTOCON® 200,** power supply 200 – 240 VAC, 50/60 Hz
including:
Mains Cord
Adaptor, for unipolar HF output, diameter 4/5 mm

20 5225 01-010 **AUTOCON® 200,**
with ENDOCUT function,
power supply 200 – 240 VAC, 50/60 Hz
including:
Mains Cord
Adaptor, for unipolar HF output, diameter 4/5 mm

20 5225 01 C **AUTOCON® 200,** power supply 100 – 120 VAC, 50/60 Hz
including:
Mains Cord
Adaptor, for unipolar HF output, diameter 4/5 mm

20 5225 01C010 **AUTOCON® 200,**
with ENDOCUT function,
power supply 100 – 120 VAC, 50/60 Hz
including:
Mains Cord
Adaptor, for unipolar HF output, diameter 4/5 mm

Specifications:

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

Coagulation Degrees	**Cutting** 4 steps
Autostart	**Coagulation** bipolar
Autostop	**Coagulation** unipolar soft
Safety Systems	- permanent power control - maldosage - neutral electrode, safety system - automatic self-test
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

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Optional Accessories for AUTOCON® 200 see pages U 26-28
Components see chapter 13, SPARE PARTS AND ACCESSORIES

AUTOCON® 200

System Components

KARL STORZ — ENDOSKOPE

Two-Pedal Footswitch

20 013330

UNIT SIDE

PATIENT SIDE

Connecting Cable

27806

Neutral Electrode

860021 E

Bipolar High Frequency Cord

26176 LE

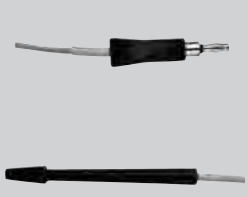
Unipolar High Frequency Cord

26 5200 45

Handle

26 5200 43

Handle with Cable, unipolar



26 5200 46

Unipolar High Frequency Cord

26005 M

Bipolar Instrument

40270 LB/30804

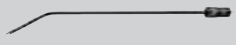
Knife Electrode

26 5200 36

Knife Electrode

26 5200 36

Unipolar Instrument



40775 LF

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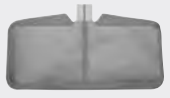
HIGH FREQUENCY SURGERY UNITS

Optional Accessories

for AUTOCON® II 400 SCB and AUTOCON® 200

KARL STORZ — ENDOSKOPE

			for use with: AUTOCON® II 400 SCB	for use with: AUTOCON® 200
	20 0178 31	**Three-Pedal Footswitch,** with switch function for switching between mode levels A and B, for use with **20** 5352 20-11x	●	–
	20 0178 30	**Two-Pedal Footswitch,** for use with **20** 5352 20-11x	●	–
	20 0178 32	**One-Pedal Footswitch,** for activating coagulation, for use with **20** 5352 20-11x	●	–
	20 0133 30	**Two-Pedal Footswitch,** for controlling the coagulation and cutting function	–	●
	20 0131 30	**One-Pedal Footswitch,** for controlling the coagulation function	–	●
	27805	**Neutral Electrode,** of conductive silicone with 2 rubber ties for attachment, contact surface A = 500 cm², for use with Connecting Cable 27806	●	●
	860021 E	**Neutral Electrode,** made of conductive silicone, with 1 rubber strap for fastening contact face A = 187 cm² surface area, for use with Connecting Cable 27806	–	●
	27806	**Neutral Electrode Connecting Cable,** for Neutral Electrodes 27805 and 860021 E, length 400 cm	-111 -115	●
	27806 UR	**Neutral Electrode Connecting Cable,** for Neutral Electrode 27805	-112 -116	–
	27806 US	**Neutral Electrode Connecting Cable,** for Neutral Electrode 27802	-112 -116	–
	27802	**Neutral Electrode,** for single use, contact face divided into two, A = 169 cm², package of 50, Connecting Cable 27801 is required	●	●
	27801	**Connecting Cable,** for connecting Neutral Electrode 27802, length 500 cm	-111 -115	●
	26 5200 43	**Electrode Handle,** with 2 buttons for activating the unipolar generator, yellow button: unipolar cutting, blue button: unipolar coagulation (Cable **26** 5200 45 required)	●	●
	26 5200 45	**High Frequency Cable,** for Electrode Handle **26** 5200 43, length 400 cm	-111 -115	●
	26 5200 46	**Electrode Handle,** without buttons, with integrated connecting cable, length 300 cm	-111 -115	●

HIGH FREQUENCY SURGERY UNITS

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Optional Accessories

Surgery Electrodes Set
for AUTOCON® II 400 SCB and AUTOCON® 200

unipolar

20 5300 08 **Surgery Electrodes Set**
including:

Container with Lid and Sterilizing Insert, for
16 electrodes with diameter 4 mm

Wire Snare, 5 mm

Same, 10 mm

Ribbon Snare, 10 mm

KIRSCHNER **Spatula Electrode,**
straight

MAGENAU **Knife Electrode,**
angled

Same, lancet-shaped

Ball Electrode, 2 mm

Same, 4 mm

Same, 6 mm

Needle Electrode

Flat Electrode, 8 x 10 mm

Same, 10 x 15 mm

For use with Electrode Handle 26 5200 43 and 26 5200 46
Components see chapter 13, SPARE PARTS AND ACCESSORIES

Optional Accessories

Unipolar and Bipolar High Frequency Cords for AUTOCON® II 400 SCB and AUTOCON® 200

KARL STORZ — ENDOSKOPE

Unipolar High Frequency Cords

unipolar

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

Bipolar High Frequency Cords

bipolar

KARL STORZ Instrument	High Frequency Surgery Units		
		26176 LE	**Bipolar High Frequency Cord,** to KARL STORZ 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	**Bipolar High Frequency Cord,** for Martin and Berchtold coagulators, length 300 cm
		26176 L	**Bipolar High Frequency Cord,** with 2x 4 mm banana plug for KARL STORZ Coagulator 26020 XA/XB and Ellman, length 300 cm
		26176 LA	**Bipolar High Frequency Cord,** with 2x 4 mm banana plug for KARL STORZ Coagulator 26020 XA/XB and Valleylab, length 300 cm
		26176 LV	**Bipolar High Frequency Cord,** for KARL STORZ 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 M**L,** 26176 LV**L.**

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HIGH FREQUENCY SURGERY UNITS

SPARE PARTS AND ACCESSORIES

Introduction

The chapter “spare parts and accessories” lists all KARL STORZ spare parts available for a specific instrument.

Spare parts are available for instruments which are subject to a considerable amount of wear and tear resulting from repeated use in everyday practice.

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

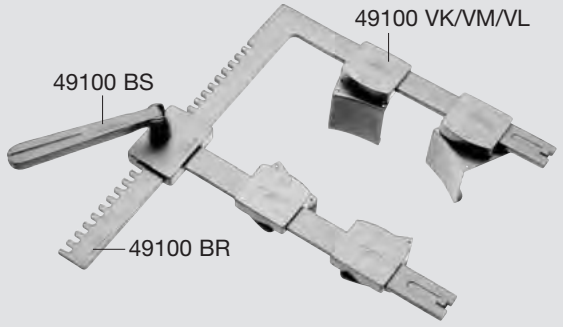
Exchange

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

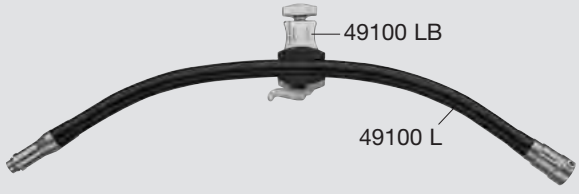
Hotline

Queries concerning products, exchange, maintenance and cleaning can be addressed to the KARL STORZ EP1 Hotline: +49 (0)7461/708-490, daily between 8 and 18 h.

Spare parts and accessories for:		Catalog page
49100 B	SCHÖLLHORN **Standard Retractor**	189
49100 BR	**Retractor Frame,** 25 x 22 cm, including Lever 49100 BS	
49100 BS	**Lever,** spare part	
49100 VK	**Moveable Blade,** freely adjustable, height 30 mm	
49100 VM	**Moveable Blade,** freely adjustable, height 40 mm	
49100 VL	**Moveable Blade,** freely adjustable, height 50 mm	



Spare parts and accessories for:		Catalog page
49100 LS	**Fiber Optic Light Carrier Extension**	189
49100 L	**Fiber Optic Light Carrier,** malleable, for illumination of the OR field	
49100 LB	**Universal Fixation Device,** for securing Fiber Optic Light Carrier 49100 L, for use with rectangular retractor frames with profile min. 5 x 15 mm to max. 8 x 34 mm and round components with profile min.10 to max.16 mm	



Spare parts

495 F
Receptacle, diameter 9 mm, for Wolf fiber optic light cable

495 G
Screw Base,
for KARL STORZ fiber optic light cable and Olympus/Winter & Ibe

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

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Flexible Endoscopes – Video Bronchoscopes SP 6

Flexible Endoscopes – Suction Unit, KARL STORZ TELE PACK SP 7

Flexible Bronchoscopes – Broncho-Fiberscopes SP 8

UNIMAT® 30 SP 9-SP 10

Bronchoscopes for Adults – Universal Bronchoscopes for Adults, Standard Model with Fiber Optic Light Carrier for Distal Illumination SP 11

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Cannulas, RAMEL Pleurabiopsy Needle SP 21

VERESS Pneumoperitoneum Needle, Powder Blowers SP 22

Suction and Irrigation Tubes SP 23

Coagulating Suction Tubes, Coagulating and Dissecting Electrodes SP 24

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High Frequency Surgery Units

- AUTOCON® II 400 SCB, AUTOCON® 200 SP 45
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KARL STORZ — ENDOSKOPE

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Telescopes

HOPKINS® and HOPKINS® II Telescopes

KARL STORZ — ENDOSKOPE

Spare parts and accessories for:		Catalog page
10018 AA	**HOPKINS® Straight Forward Telescope 0°**	73
10018 BA	**HOPKINS® Forward-Oblique Telescope 30°**	–
10020 ATA	**HOPKINS® Straight Forward Telescope 0°**	24, 73
10020 BA	**HOPKINS® Forward-Oblique Telescope 30°**	–
10020 CA	**HOPKINS® Lateral Telescope 70°**	–
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10023 CBA	**HOPKINS® Lateral Telescope 70°**	–
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10320 AA	**HOPKINS® Straight Forward Telescope 0°**	63
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10320 BA	**HOPKINS® Forward-Oblique Telescope 30°**	63
10320 BP	**HOPKINS® Forward-Oblique Telescope 30°**	103
10320 DA	**HOPKINS® Lateral Telescope 90°**	63
10320 DP	**HOPKINS® Lateral Telescope 90°**	103
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10324 AA	**HOPKINS® Straight Forward Telescope 0°**	23, 73
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10324 CA	**HOPKINS® Lateral Telescope 70°**	–
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10328 BA	**HOPKINS® Forward-Oblique Telescope 30°**	–
10328 CA	**HOPKINS® Lateral Telescope 70°**	–
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12067 VA	**HOPKINS® Straight Forward Telescope 0°**	–
10005 AA	**HOPKINS® II Straight Forward Telescope 0°, enlarged view**	37, 62, 73
10017 AA	**HOPKINS® II Straight Forward Telescope 0°**	72
26003 AA	**HOPKINS® II Straight Forward Telescope 0°, enlarged view**	141, 192
26003 BA	**HOPKINS® II Forward-Oblique Telescope 30°, enlarged view**	141, 192
26003 FA	**HOPKINS® II Telescope 45°, enlarged view**	141
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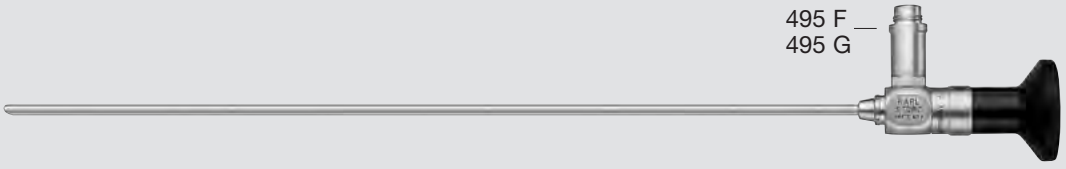
26046 BA	**HOPKINS® II Forward-Oblique Telescope 30°, enlarged view**	140, 178
26046 BUA	**HOPKINS® II Forward-Oblique Telescope 30°, enlarged view**	–
26046 FA	**HOPKINS® II Telescope 45°, enlarged view**	140
26072 BA	**HOPKINS® II Forward-Oblique Telescope 30°, enlarged view**	135
8575 AA	**HOPKINS® II Straight Forward Telescope 10°**	–



Spare parts

495 F
Receptacle, diameter 9 mm, for Wolf fiber optic light cable

495 G
Screw Base, for KARL STORZ fiber optic light cable and Olympus/Winter & Ibe

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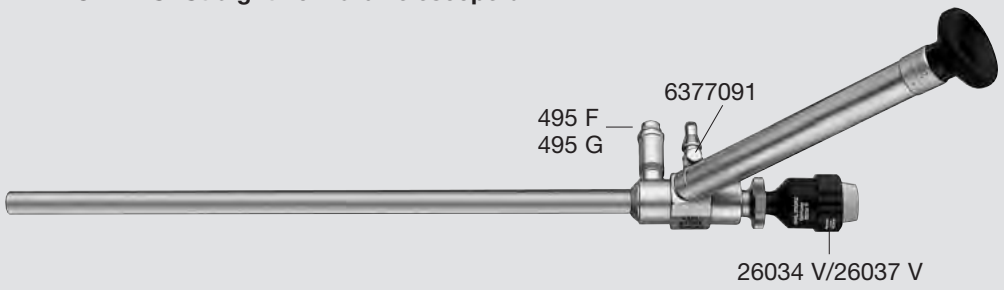
Telescopes

HOPKINS® Thoracoscopes, with integrated working channel

KARL STORZ — ENDOSKOPE

Spare parts and accessories for: Catalog page

26034 AA	**HOPKINS® Straight Forward Telescope 0°**	–
26034 AUA	**HOPKINS® Straight Forward Telescope 0°**	–
26038 AA	**HOPKINS® Straight Forward Telescope 0°**	–
26038 AUA	**HOPKINS® Straight Forward Telescope 0°**	–
26037 ADA	**HOPKINS® Straight Forward Telescope 0°**	–



Spare parts

495 F
Receptacle, diameter 9 mm, for Wolf fiber optic light cable

6376990
Stopcock, for irrigation connection

495 G
Screw Base,
for KARL STORZ fiber optic light cable and Olympus/Winter & Ibe

6377091
Spring Cap

Accessories

26034 V
Adaptor, for working channel, for use with thoracoscopes diameter 10 mm

26037 V
Adaptor for Working Channel, for use with thoracoscopes diameter 8 mm

Spare parts for 26034 V

7720590
Silicone Leaflet Washer

6127590
Sealing Cap, (50/4)

Spare parts for 26037 V

7720590
Silicone Leaflet Washer

6127490
Sealing Cap, (50/3.6)

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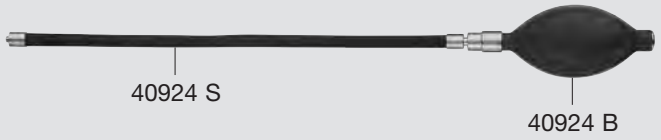
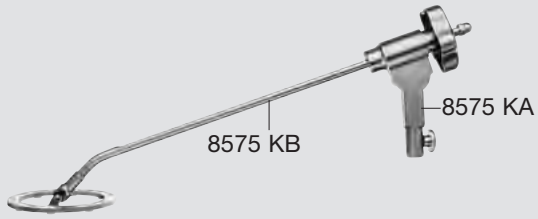
Rubber Insufflation Bulb, Laryngoscope Holders and Chest Supports

KARL STORZ — ENDOSKOPE

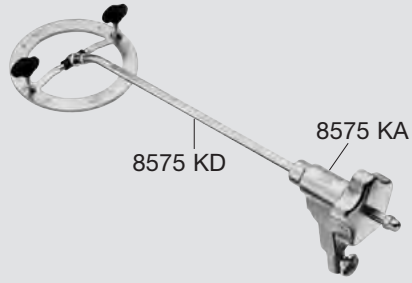
Spare parts and accessories for:		Catalog page
40924	**Rubber Insufflation Bulb**	20
40924 B	**Rubber Bulb**	
40924 S	**Rubber Tube**	



Spare parts and accessories for:		Catalog page
8575 K	**Laryngoscope Holder and Chest Support,** GÖTTINGEN model	36, 37
8575 KA	**Laryngoscope Holder,** GÖTTINGEN model, with adjustment wheel	
8575 KB	**Support Rod,** movable, with metal ring, diameter 9 cm, length 34 cm	



Spare parts and accessories for:		Catalog page
8575 KC	BENJAMIN-PARSONS **Laryngoscope Holder and Chest Support**	36, 37
8575 KA	**Laryngoscope Holder,** GÖTTINGEN model, with adjustment wheel	
8575 KD	BENJAMIN-PARSONS **Support Rod,** movable, with metal ring, diameter 12 cm and 2 lateral set screws, length 34 cm	



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Flexible Endoscopes

Video Bronchoscopes

KARL STORZ — ENDOSKOPE

Spare parts and accessories for:		Catalog page
11900 AP	**Video Bronchoscope for Autofluorescence and White Light Diagnosis, PAL**	42, 94
11900 AN	**Video Bronchoscope for Autofluorescence and White Light Diagnosis, NTSC**	42, 94
11900 BP	**Video Bronchoscope, PAL**	43
11900 BN	**Video Bronchoscope, NTSC**	43

Accessories

11025 XE
Pressure Compensation Cap, for ventilation during gas sterilization

13272
Mouth Piece

13242 LX
Leakage Tester, with bulb and manometer

13990 SFN
Protective Film

20213070
Video Connecting Cable, length 60 cm

13991 SS
Irrigation Tube, reusable, for the working channel of flexible video endoscopes

13242 XA
Adaptor, for manual leakage test with 13242 XL or automatic leakage test in washer/disinfector

600007
LUER-Lock Tube Connector, male, tube diameter 6 mm

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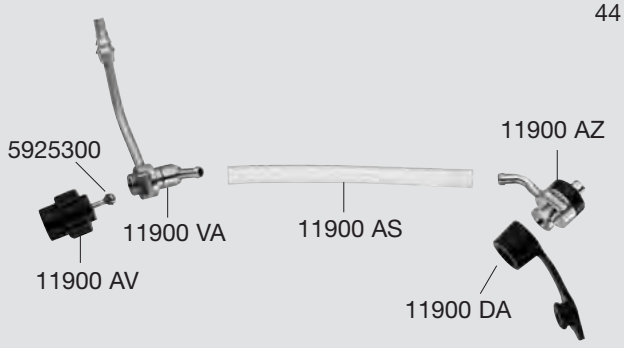
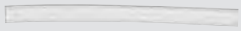
Spare parts and accessories for:		Catalog page
11900 AE	**Suction Unit**	44
11900 AV	**Suction Valve**	
11900 VA	**Valve Adaptor**	
11900 AS	**Connecting Tube,** package of 10	
11900 AZ	**Suction Cylinder**	
13991 DA	**Rubber Leaflet Valve,** package of 10	



Spare parts



11900 AS
Connecting Tube, package of 10

11900 VA
Valve Adaptor, autoclavable

11900 AZ
Suction Cylinder, autoclavable

13991 DA
Rubber Leaflet Valve, for working channel, package of 10

11900 AV
Suction Valve, autoclavable

5925300
O-Ring, for suction valve, small, red, 2 x 1.5 mm

Spare parts and accessories for:		Catalog page
20043012-020	**KARL STORZ TELE PACK**	46
20043020-020	**TELE PACK Control Unit, PAL**	
20041036	**CF Memory Card,** 128 MB, incl. PCMCIA adaptor	
400 A	**Mains Cord,** length 300 cm	
536 MK	**BNC/BNC Video Cable,** length 180 cm	
547 S	**S-Video (Y/C) Connecting Cable,** length 180 cm	
487 VE	**Adaptor,** vor connecting video bronchoscopes to TELE PACK	
20043112-020	**Same** including:	
	20043120-020 **TELE PACK Control Unit, NTSC**	

20043020-020

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Flexible Bronchoscopes

Broncho-Fiberscopes

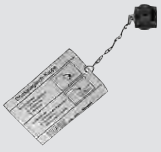
Spare parts and accessories for:		Catalog page
11001 BI	**Broncho-Fiberscope**	98
11001 BN	**Broncho-Fiberscope**	48
11002 BD	**Broncho-Fiberscope**	48
11003 BC	**Broncho-Fiberscope**	48
11004 BC	**Broncho-Fiberscope**	48
11004 BI	**Broncho-Fiberscope**	98
11005 BC	**Broncho-Fiberscope**	48
11009 BC	**Broncho-Fiberscope**	48
11009 BI	**Broncho-Fiberscope**	98

Spare parts

495 F
Receptacle, diameter 9 mm, for Wolf fiber optic light cable

495 G
Screw Base, for KARL STORZ fiber optic light cable and Olympus/Winter & Ibe

Accessories



11025 E
Pressure Compensation Cap, for ventilation during gas sterilization

11301 CE
Suction Valve, for single use, package of 20

11301 CA
Leaflet Valve, for single use, package of 20

13242 LX
Leakage Tester, with bulb and manometer

11301 CB
Suction Valve, reusable

13272
Mouth Piece

11301 CD
Irrigation Adaptor, for machine cleaning, for fiberscopes

29100
Plug, for LUER-Lock connection for cleaning, black, autoclavable, package of 10

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Spare parts and accessories for:		Catalog page
25320001	**UNIMAT® 30, Suction Pump Set,** 230 VAC	56

25320020	**UNIMAT® 30,** suction pump, power supply 230 VAC, 50/60 Hz
25320080	**Bacterial Filter**
25320081	**Secretion Bottle,** 2 l
25320082	**Bottle Cap,** with grip
25320083	**Connecting Tube,** short
25320084	**Patient Tube**
25320085	**Overflow Case**
400 A	**Mains Cord,** length 300 cm
mtp*	**VACUsafe Promotion Pack Suction**

Spare parts

1069400
Mains Fuse,
T 0.63 A, L 250 V

10432 N
Aspirator, for collecting secretions, with cut-off hole, with Spare Glass 10432 E, can be connected to suction tubes or suction catheter

10432 T
Aspirator, for collecting secretions, without cut-off hole, with Spare Glass 10432 E, can be connected to suction tubes or suction catheter

6860290
Washer

10432 E
Spare Glass

Accessories

29005 PH
Pump Holder, for attaching suction pump UNIMAT® 30 25320001 to equipment cart, for mounting to 2 Standard Equipment Rails 29003 GS

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

UNIMAT® 30

KARL STORZ — ENDOSKOPE

Spare parts and accessories for:		Catalog page
25320001C	**UNIMAT® 30, Suction Pump Set,** 115 VAC	56

25320020C	**UNIMAT® 30,** suction pump, power supply 115 VAC, 50/60 Hz
25320080	**Bacterial Filter**
25320081	**Secretion Bottle,** 2 l
25320082	**Bottle Cap,** with grip
25320083	**Connecting Tube,** short
25320084	**Patient Tube**
25320085	**Overflow Case**
400 A	**Mains Cord,** length 300 cm
mtp*	**VACUsafe Promotion Pack Suction**

Spare parts

1069500
Mains Fuse,
T 1.6 A, L 250 V

10432 N
Aspirator, for collecting secretions, with cut-off hole, with Spare Glass 10432 E, can be connected to suction tubes or suction catheter

10432 T
Aspirator, for collecting secretions, without cut-off hole, with Spare Glass 10432 E, can be connected to suction tubes or suction catheter

6860290
Washer

10432 E
Spare Glass

Accessories

29005 PH
Pump Holder, for attaching suction pump UNIMAT® 30 25320001 to equipment cart, for mounting to 2 Standard Equipment Rails 29003 GS

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

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Bronchoscopes for Adults

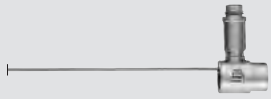
Universal Bronchoscopes for Adults,
Standard Model with Fiber Optic Light Carrier for Distal Illumination

KARL STORZ — ENDOSKOPE

Spare parts and accessories for:		Catalog page
10318 B	**Universal Bronchoscope**	58
10318 C	**Universal Bronchoscope**	58
10318 D	**Universal Bronchoscope**	58

Spare parts

495 F
Receptacle, diameter 9 mm, for Wolf fiber optic light cable



10318 L
Fiber Optic Light Carrier, for bronchoscopes

495 G
Screw Base,
for KARL STORZ fiber optic light cable and Olympus/Winter & Ibe

Accessories

10315 P
FLUVOG **Adaptor**

Spare part for 10315 P

6127490
Sealing Cap, (50/3.6)

10315 N
Rubber Telescope Guide

Spare part for 10315 N

6127590
Sealing Cap, (50/4)

10318 S
Instrument Guide

Spare part for 10318 S

27550 C
Sealing Cap, drill hole diameter 1.2 mm

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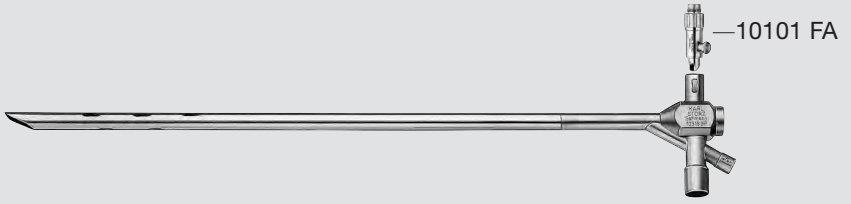
Bronchoscopes for Adults

Universal Tracheo-Bronchoscopes with Proximal Illumination

KARL STORZ — ENDOSKOPE

Spare parts and accessories for:		Catalog page
10318 BP	**Universal Bronchoscope**	59
10318 CP	**Universal Bronchoscope**	59
10318 DP	**Universal Bronchoscope**	59



Accessories

10101 FA
Prismatic Light Deflector, with connection to fiber optic light cable

Spare part for 10101 FA

3430890
Knurled Cap

10314 P
FLUVOG **Adaptor**

Spare part for 10314 P

6127490
Sealing Cap, (50/3.6)

10314 BN
Rubber Telescope Guide

Spare part for 10314 BN

6127590
Sealing Cap, (50/4)

10318 S
Instrument Guide

Spare part for 10318 S

27550 C
Sealing Cap, drill hole diameter 1.2 mm

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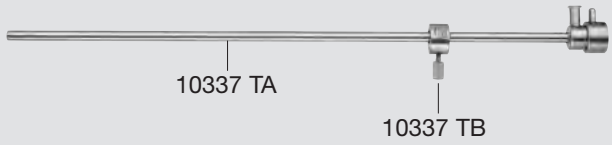
Optical Intubation Tracheoscope, TONN **Stent Applicators**

KARL STORZ — ENDOSKOPE

Spare parts and accessories for:		Catalog page
10337 T	**Optical Intubation Tracheoscope,** GRONINGEN model	62

10337 TA **Sheath,** for insertion of endotracheal tubes under optical control, proximal with LUER-Lock and distal with lateral holes for anesthetic gases, outer diameter 5.5 mm, length 30 cm, for use with HOPKINS® II Telescopes 10005 AA and BA

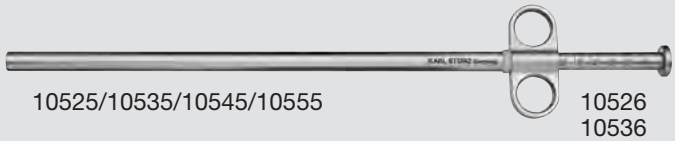
10337 TB **Distance Ring,** with fixation screw for length adjustment of the endotracheal tubes



Spare parts and accessories for:	Catalog page
TONN **Stent Applicators**	69

10521/10522/10523
10531/10532/10533

10524/10534/10544/10554



10525/10535/10545/10555

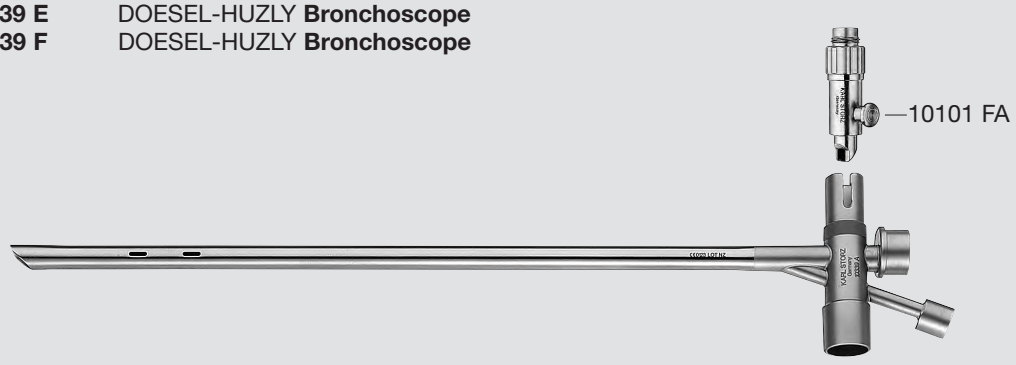
10526
10536
10546
10556

TONN **Stent Applicators,** color code:	**10520** blue	**10530** red	**10540** green	**10550** white
Basic Block	10521	10531	10521	10521
Folding System	10522	10532	10542	10552
Clamping Rod	10523	10533	10523	10523
Loading Rod	10524	10534	10544	10554
Introducer Tube, with 2-ring handle	10525	10535	10545	10555
Pusher	10526	10536	10546	10556

3-11

Pediatric Bronchoscopes

Spare parts and accessories for:		Catalog page
10339 AL	DOESEL-HUZLY **Bronchoscope**	71
10339 BL	DOESEL-HUZLY **Bronchoscope**	71
10339 A	DOESEL-HUZLY **Bronchoscope**	71
10339 B	DOESEL-HUZLY **Bronchoscope**	71
10339 BB	DOESEL-HUZLY **Bronchoscope**	71
10339 C	DOESEL-HUZLY **Bronchoscope**	71
10339 G	DOESEL-HUZLY **Bronchoscope**	71
10339 CD	DOESEL-HUZLY **Bronchoscope**	71
10339 EEE	DOESEL-HUZLY **Bronchoscope**	71
10339 CC	DOESEL-HUZLY **Bronchoscope**	71
10339 GG	DOESEL-HUZLY **Bronchoscope**	71
10339 DD	DOESEL-HUZLY **Bronchoscope**	71
10339 EE	DOESEL-HUZLY **Bronchoscope**	71
10339 D	DOESEL-HUZLY **Bronchoscope**	71
10339 E	DOESEL-HUZLY **Bronchoscope**	71
10339 F	DOESEL-HUZLY **Bronchoscope**	71, 72



Accessories

10101 FA
Prismatic Light Deflector, with connection to fiber optic light cable

Spare part for 10101 FA

3430890
Knurled Cap

10338 P
FLUVOG **Adaptor**

Spare part for 10338 P

6127390
Sealing Cap, (50/2.6)

10338 N
Rubber Telescope Guide

Spare part for 10338 N

6127390
Sealing Cap, (50/2.6)

10338 S
Guide Piece

Spare part for 10338 S

27550 C
Sealing Cap, drill hole diameter 1.2 mm

3-11

Esophagoscopes

Esophagoscope Tubes

Spare parts and accessories for:		Catalog page
12016 E	**Esophagoscope Tube**	20
12016 F	**Esophagoscope Tube**	–

Spare parts

495 F
Receptacle, diameter 9 mm, for Wolf fiber optic light cable

495 G
Screw Base, for KARL STORZ fiber optic light cable and Olympus/Winter & Ibe

Spare part for 12016 E

12016 EM
Fiber Optic Light Carrier

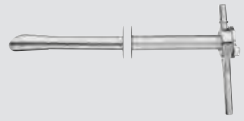
Spare part for 12016 F

12016 FM
Fiber Optic Light Carrier

Spare part for 12016 E

12016 EF
Esophagoscope Tube, size 11

Spare part for 12016 F



12016 FF
Esophagoscope Tube, size 12

Accessories

12016 EH
Stopcock, with tube

12016 EW
Sealing Cap

Spare parts for 12016 EH

6871191
Stopcock

6377091
Spring Cap

7322990
Tube

3-11

Esophagoscopes

Esophagoscope Tubes, Handle for Esophagoscopes

Spare parts and accessories for:		Catalog page
12030 A	**Esophagoscope Tube**	22
12030 AL	**Esophagoscope Tube**	–
12030 B	**Esophagoscope Tube**	22
12030 C	**Esophagoscope Tube**	22
12030 F	**Esophagoscope Tube**	22
12030 G	**Esophagoscope Tube**	22

Spare part

6573890
Sealing Cap

Accessories

10101 FA
Prismatic Light Deflector,
with connection to fiber optic light cable

Spare part for 10101 FA

3430890
Knurled Cap

Spare parts and accessories for:		Catalog page
12070	**Handle for Esophagoscopes**	19

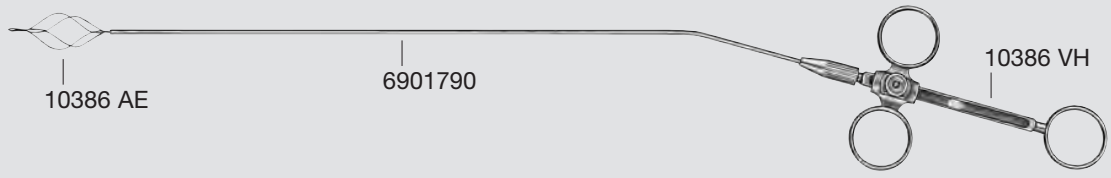
Spare part

6988190
Knurled Screw

3-11

Foreign Body Basket

Spare parts and accessories for:		Catalog page
10386 A	**Foreign Body Basket**	85



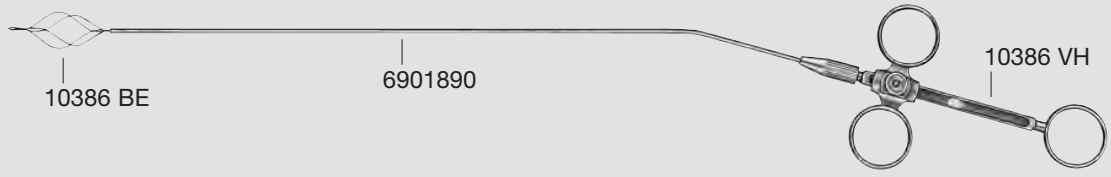
Spare parts

10386 AE
Foreign Body Basket,
without handle,
length 50 cm

6901790
Guide Tube

10386 VH
Three-ring Handle

Spare parts and accessories for:		Catalog page
10386 B	**Foreign Body Basket**	32, 85



Spare parts

10386 BE
Foreign Body Basket,
without handle,
length 35 cm

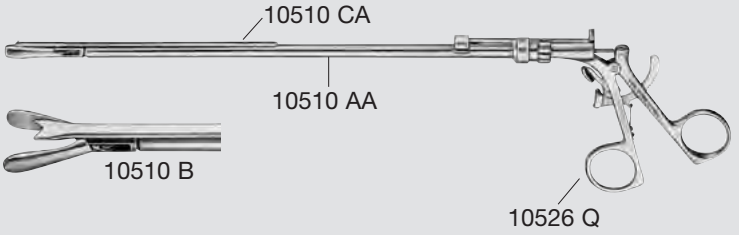
6901890
Tube

10386 VH
Three-ring Handle

3-11

FREITAG **Stent Forceps**, **Fiber Optic Light Carriers**

Spare parts and accessories for:		Catalog page
10510 N	FREITAG **Stent Forceps**	70
30526 Q	**Handle,** with ratchet	
10510 AA	**Outer Sheath**	
10510 B	**Forceps Insert**	
10510 CA	**Pusher**	



Spare parts

7909890
Halfround Plate

7944790
Silicone Ring

Spare parts and accessories for:		Catalog page
12061 A	**Fiber Optic Light Carrier**	19
12061 AX	**Fiber Optic Light Carrier**	19
12061 B	**Fiber Optic Light Carrier**	19
12061 C	**Fiber Optic Light Carrier**	19
12061 F	**Fiber Optic Light Carrier**	–
12061 G	**Fiber Optic Light Carrier**	–
12061 H	**Fiber Optic Light Carrier**	–
12061 K	**Fiber Optic Light Carrier**	–

Spare parts

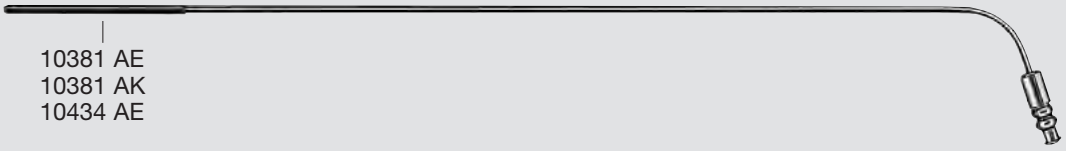
495 F
Receptacle, diameter 9 mm, for Wolf fiber optic light cable

495 G
Screw Base,
for KARL STORZ fiber optic light cable and Olympus/Winter & Ibe

3-11

Suction Tubes

Spare parts and accessories for:		Catalog page
10381 A	**Suction Tube**	83
10381 AL	**Suction Tube**	31
10381 B	**Suction Tube**	31, 83
10434 A	**Suction Tube**	84



10381 AE
10381 AK
10434 AE

Spare parts

Spare part for 10381 A and 10381 AL

10381 AE
Rubber Tip, straight

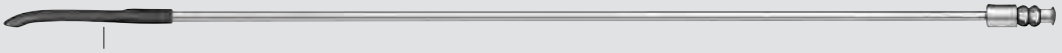
Spare part for 10381 B

10381 AK
Rubber Tip, straight

Spare part for 10434 A

10434 AE
Rubber Tip, straight

Spare parts and accessories for:		Catalog page
10382 A	**Suction Tube**	83
10382 AL	**Suction Tube**	–
10382 B	**Suction Tube**	31, 83
10434 B	**Suction Tube**	84



10382 AE
10382 AK
10434 BK

Spare parts

Spare part for 10382 A and 10382 AL

10382 AE
Rubber Tip, curved

Spare part for 10382 B

10382 AK
Rubber Tip, curved

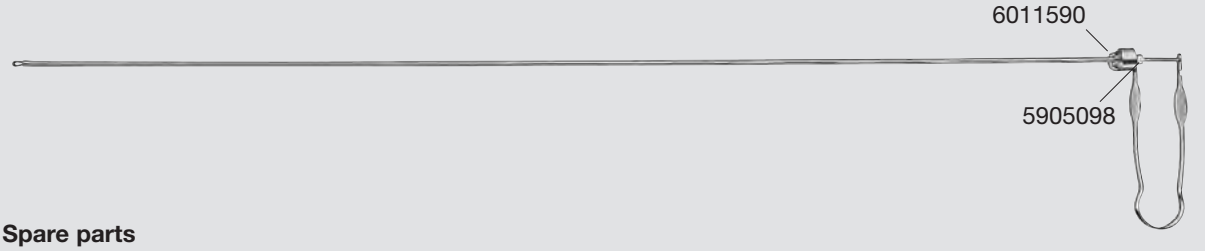
Spare part for 10434 B

10434 BK
Rubber Tip, curved

3-11

Sponge Holders,
CARLENS **Mediastinoscopes**

Spare parts and accessories for:		Catalog page
10387 A	**Sponge Holder**	83
10387 AL	**Sponge Holder**	31
10387 AX	**Sponge Holder**	–
10387 B	**Sponge Holder**	31, 83
10388 A	**Sponge Holder**	83



Spare parts

5905098
Sealing Cap, small

6011590
Plug, for LUER-Lock adaptor

Spare parts and accessories for:		Catalog page
10970 A	CARLENS **Mediastinoscope**	124
10970 B	CARLENS **Mediastinoscope**	124

Spare parts

5959502
Knurled Screw

Spare part for 10970 A

10970 AE
Fiber Optic Light Carrier

Spare part for 10970 B

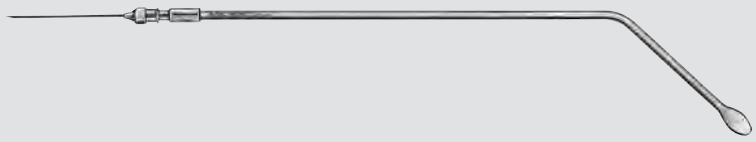
10970 BE
Fiber Optic Light Carrier

3-11

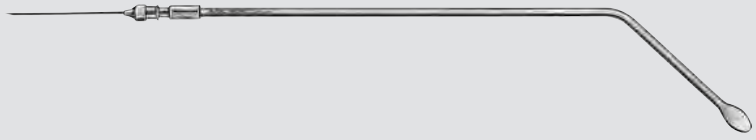
Cannulas,
RAMEL **Pleurabiopsy Needle**

KARL STORZ — ENDOSKOPE

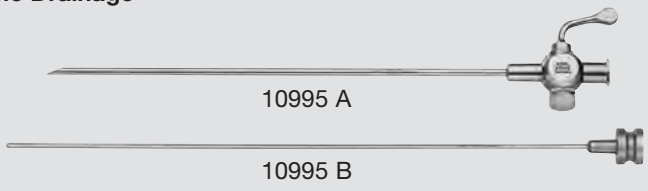
Spare parts and accessories for:		Catalog page
10970 P	**Aspiration Cannula**	130
10970 PE	**Cannula**	
812410	**Injection Needle,** package of 12	



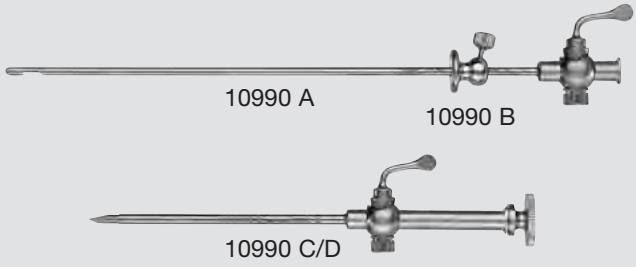
Spare parts and accessories for:		Catalog page
10970 PL	**Aspiration Cannula**	130
10970 PEL	**Cannula**	
812410	**Injection Needle,** package of 12	



Spare parts and accessories for:		Catalog page
10995	**Application Cannula for Thoracic Drainage**	137
10995 A	**Outer Cannula,** with insufflation stopcock, diameter 2.1 mm, length 15 cm	
10995 B	**Inner Cannula,** blunt tip, diameter 1.5 mm, length 16.5 cm	



Spare parts and accessories for:		Catalog page
10990	RAMEL **Pleurabiopsy Needle**	137
10990 A	**Biopsy Needle,** with LUER-Lock, with stopcock	
10990 B	**Rider,** as stop screw	
10990 C	**Cannula,** with LUER-Lock, with stopcock, size 3 mm, working length 6.5 mm	
10990 D	**Trocar only,** with pyramidal tip	



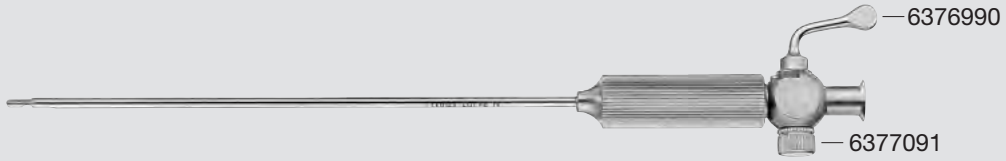
3-11

VERESS **Pneumoperitoneum Needle**, **Powder Blowers**

KARL STORZ — ENDOSKOPE

Spare parts and accessories for: Catalog page

26120 J VERESS **Pneumoperitoneum Needle** 138, U 6



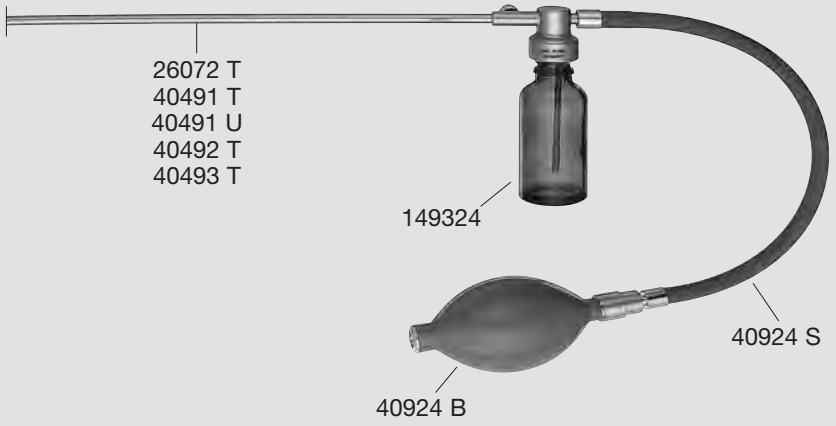
Spare parts

6376990
Stopcock, for
irrigation connection

6377091
Spring Cap

Spare parts and accessories for: Catalog page

Powder Blower 135, 165



Powder Blower	**26072 TK**	**40491 TK**	**40491 TKU**	**40492 TK**	**40493 TK**
Sheath	26072 T	40491 T	40491 U	40492 T	40493 T
Rubber Bulb, with LUER-Lock	40924 B	40924 B	40924 B	40924 B	40924 B
Rubber Tube, with LUER-Lock on both ends	40924 S	40924 S	40924 S	40924 S	40924 S
Glass, brown, autoclavable	149324	149324	149324	149324	149324

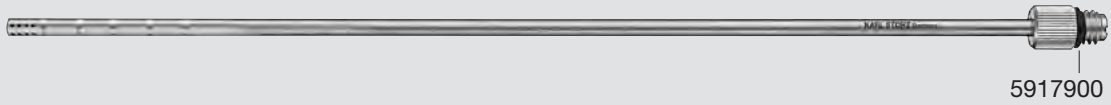
Spare part

5925000
Silicone Ring

3-11

Suction and Irrigation Tubes

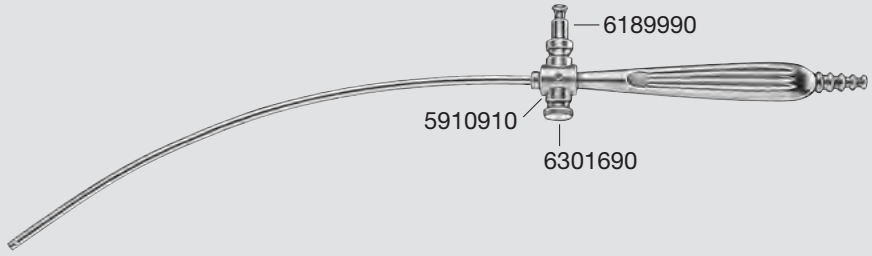
Spare parts and accessories for:		Catalog page
37260 LH	**Suction and Irrigation Tube**	166, 200
40360 LH	**Suction and Irrigation Tube**	166, 200
40560 LH	**Suction and Irrigation Tube**	166, 200



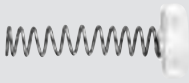
Spare part

5917900
O-Ring, small

Spare parts and accessories for:		Catalog page
40800 A	**Suction Tube**	–



Spare parts

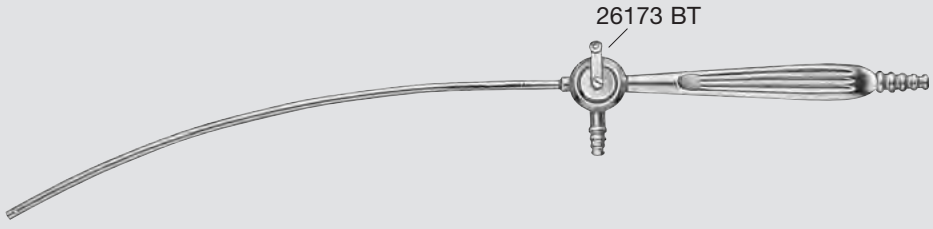


5910910
Spring

6301690
Screw Cap

6189990
Piston

Spare parts and accessories for:		Catalog page
40800 AA	**Suction and Irrigation Tube**	–



Spare parts

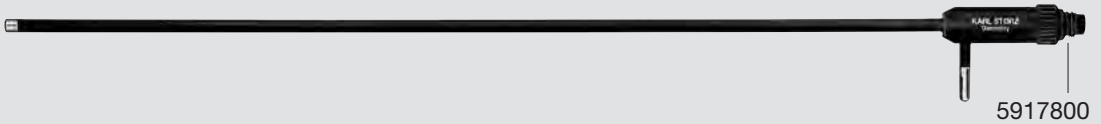
26173 BT
Stopcock

6353591
Spring Cap

3-11

Coagulating Suction Tubes, Coagulating and Dissecting Electrodes

Spare parts and accessories for:		Catalog page
10390 AN	**Coagulating Suction Tube**	83
10390 LN	**Coagulating Suction Tube**	31
10390 BN	**Coagulating Suction Tube**	31, 83



5917800
5910600

Spare parts

Spare part for 10390 AN and 10390 LN

5917800
O-Ring

Spare part for 10390 BN

5910600
O-Ring, 3 x 1.5 mm

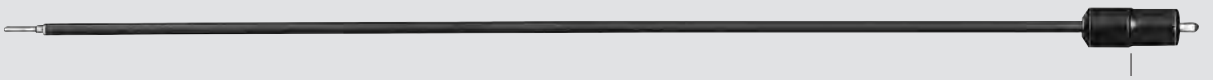
Spare parts and accessories for:		Catalog page
10970 EN	**Coagulating Suction Tube**	–
10970 ENL	**Coagulating Suction Tube**	–
26770 U	**Coagulating Suction Tube**	–
37270 GC	GORDTS and CAMPO **Coagulating Suction Tube**	168
37270 DB	**Coagulating and Dissecting Electrode**	–
37270 DL	**Coagulating and Dissecting Electrode**	–
37270 DW	**Coagulating and Dissecting Electrode**	–
37270 SC	**Coagulating and Dissecting Electrode**	168
40170 LB	**Coagulating Suction Tube**	168
40270 LB	**Coagulating Suction Tube**	168

5917900

Spare part

5917900
O-Ring, small

Spare parts and accessories for:		Catalog page
26770 S	**Coagulating Electrode**	–
26772 UF	**Coagulating and Dissecting Electrode**	169, 183
26778 UF	**Coagulating and Dissecting Electrode**	183
40700 A	**Electrode**	202
40700 B	**Electrode**	202
40775 LF	**Dissecting Electrode**	169, 183



5910600
5917800

Spare parts

Spare part for 26770 S

5910600
O-Ring, 3 x 1.5 mm

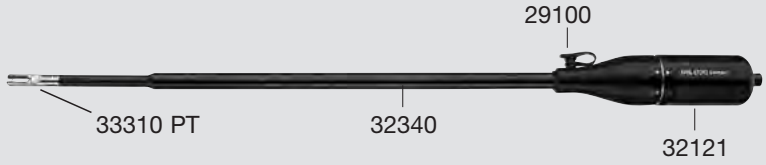
Spare part for 26772 UF, 26778 UF, 40700 A/B, 40775 LF

5917800
O-Ring

3-11

Surgical Sponge Holders

Spare parts and accessories for:		Catalog page
32340 PT	**Surgical Sponge Holder**	170
32121	**Handle**	
32340	**Outer Sheath,** insulated	
33310 PT	**Sponge Holder Insert**	



Spare part

29100
Plug, for LUER-Lock connection for cleaning, black, autoclavable, package of 10

Spare parts and accessories for:		Catalog page
32540 PT	**Surgical Sponge Holder**	170
32121	**Handle**	
32540	**Outer Sheath,** insulated	
33510 PT	**Sponge Holder Insert**	

Spare part

29100
Plug, for LUER-Lock connection for cleaning, black, autoclavable, package of 10

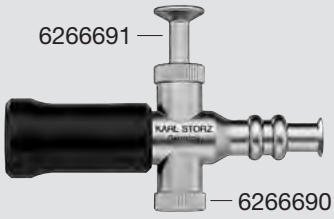
3-11

Handles for Suction and/or Irrigation, Macro Needle Holders

KARL STORZ — ENDOSKOPE

Spare parts and accessories for: Catalog page

30804 **Handle with Trumpet Valve** 168



Spare parts

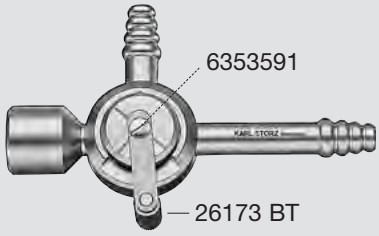
5905610
Spring

6266690
Knurled Cap

6266691
Piston

Spare parts and accessories for: Catalog page

30805 **Handle with Two-Way Stopcock** 167, 201



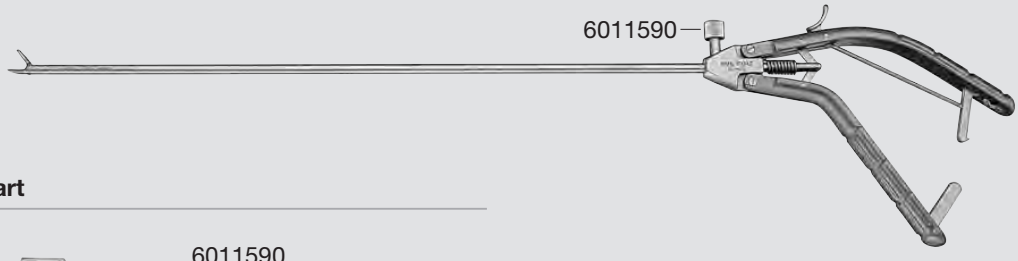
Spare parts

26173 BT
Stopcock

6353591
Spring Cap

Spare parts and accessories for: Catalog page

26173 KC KOH **Macro Needle Holder** 176
26173 KL KOH **Macro Needle Holder** 176



Spare part

6011590
Plug, for LUER-Lock adaptor

3-11

Outer Sheaths

Spare parts and accessories for:		Catalog page
30310 DBL	CLICK*line*® **Outer Sheath with** BLAKESLEY **Biopsy Forceps**	–
43210 LG	CLICK*line*® **Outer Sheath with Parenchymal Forceps**	152
43210 LH	CLICK*line*® **Outer Sheath with Lung Forceps**	152
43210 LS	CLICK*line*® **Outer Sheath with Parenchymal Forceps**	152
43210 LL	CLICK*line*® **Outer Sheath with Lung Forceps**	152
43210 LR	CLICK*line*® **Outer Sheath with Lung Nodule Forceps**	152
43210 LP	CLICK*line*® **Outer Sheath with** KELLY **Dissecting and Grasping Forceps**	156
43210 MF	CLICK*line*® **Outer Sheath with** MANHES **Dissecting and Grasping Forceps**	156
43210 MA	CLICK*line*® **Outer Sheath with** MANHES **Grasping Forceps**	156
43210 LV	CLICK*line*® **Outer Sheath with Parenchymal Forceps**	155
43210 LK	CLICK*line*® **Outer Sheath with** KELLY **Dissecting Forceps**	157
43210 LM	CLICK*line*® **Outer Sheath with Scissors**	157
43210 LU	CLICK*line*® **Outer Sheath with Scissors**	157
43210 MT	CLICK*line*® **Outer Sheath with Scissors**	157
43210 DU	CLICK*line*® **Outer Sheath with** CUSCHIERI **Biopsy Forceps**	157
48210 LK	**RoBi® Outer Sheath with** KELLY **Dissecting Forceps**	163
48210 LM	**RoBi® Outer Sheath with Scissors**	163
48210 LU	**RoBi® Outer Sheath with Scissors**	163
48210 MT	**RoBi® Outer Sheath with Scissors**	163

Spare part

29100
Plug, for LUER-Lock connection for cleaning, black, autoclavable, package of 10

3-11

Spare parts and accessories for:		Catalog page
38200	**RoBi® Metal Outer Sheath,** insulated	164

Spare part

29100
Plug, for LUER-Lock connection for cleaning, black, autoclavable, package of 10

Spare parts and accessories for:		Catalog page
33200	CLICK*line*® **Metal Outer Sheath,** insulated	180
33250	CLICK*line*® **Metal Outer Sheath,** insulated	129
33300	CLICK*line*® **Metal Outer Sheath,** insulated	–
33400	CLICK*line*® **Metal Outer Sheath,** insulated	–
33500 K	CLICK*line*® **Metal Outer Sheath,** insulated	158

Spare parts

29100
Plug, for LUER-Lock connection for cleaning, black, autoclavable, package of 10

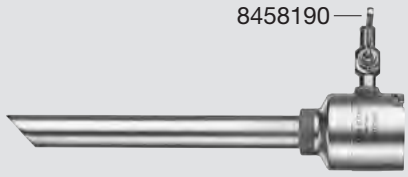
7909890
Halfround Plate

7944790
Silicone Ring

3-11

Cannulas

Spare parts and accessories for:		Catalog page
30103 H1	**Cannula**	–
30103 H2	**Cannula**	–

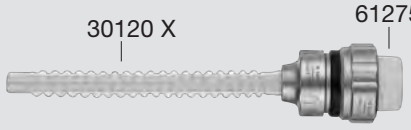


Spare parts

6985691
Spring Cap

8458190
Stopcock

Spare parts and accessories for:		Catalog page
30120 NL	**Cannula**	136



Spare parts

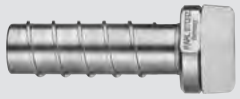
6127590
Sealing Cap, (50/4)

7720590
Silicone Leaflet Washer

3-11

Cannulas

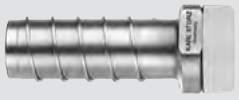
Spare parts and accessories for:		Catalog page
40103 A	**Cannula**	146, 193
40103 C	**Cannula**	146, 193
40103 F	**Cannula**	–
40103 EL	**Cannula**	148
40103 CL	**Cannula**	–



Spare part

7228790
Sealing Cap, (60/11)

Spare parts and accessories for:		Catalog page
40107 A	**Cannula**	146
40107 C	**Cannula**	146
40108 A	**Cannula**	–
40108 C	**Cannula**	–



Spare part

7416090
Sealing Cap, (60/13)

Spare parts and accessories for:		Catalog page
40160 A	**Cannula**	146
40160 C	**Cannula**	146
40160 E	**Cannula**	–

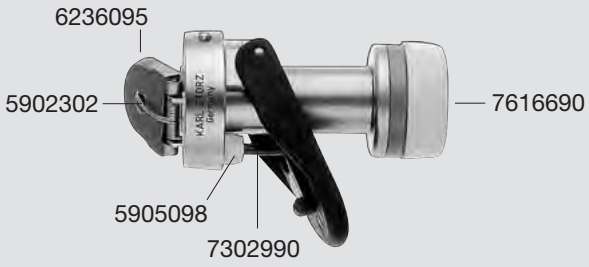
Spare part

6127590
Sealing Cap, (50/4)

3-11

Spare parts and accessories for: Catalog page

30103 M1 Multifunctional Valve –



Spare parts

5902302
Sealing Screw

5905098
Sealing Cap, small

6236095
Seal

7302990
Tappet

7616690
Sealing Cap, (60/10)

Spare parts and accessories for: Catalog page

30102 A1 Automatic Valve –

Spare parts

5902302
Sealing Screw

6127890
Sealing Cap, (50/7.5)

6236095
Seal

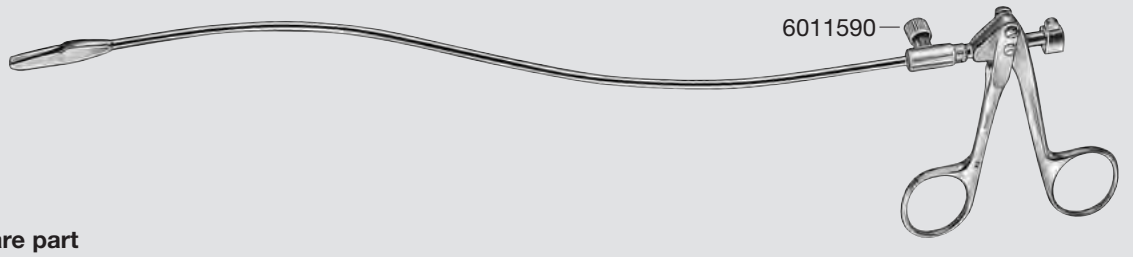
3-11

Tubular Dissecting Forceps, SCHÖLLHORN **Multi-Retractor**

KARL STORZ — ENDOSKOPE

Spare parts and accessories for: Catalog page

40500 A **Tubular Dissecting Scissors** 198



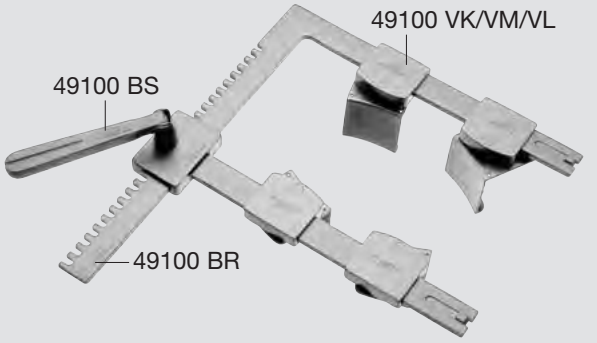
Spare part

6011590
Plug, for LUER-Lock adaptor

Spare parts and accessories for: Catalog page

49100 B SCHÖLLHORN **Standard Retractor** 189

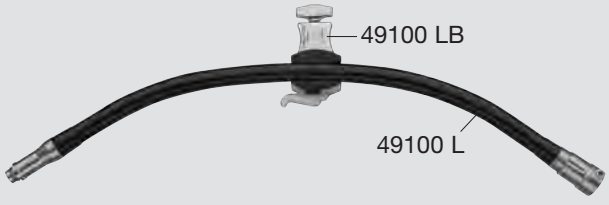
49100 BR **Retractor Frame,** 25 x 22 cm, including Lever 49100 BS
49100 BS **Lever,** spare part
49100 VK **Moveable Blade,** freely adjustable, height 30 mm
49100 VM **Moveable Blade,** freely adjustable, height 40 mm
49100 VL **Moveable Blade,** freely adjustable, height 50 mm



Spare parts and accessories for: Catalog page

49100 LS **Fiber Optic Light Carrier Extension** 189

49100 L **Fiber Optic Light Carrier,** malleable, for illumination of the OR field
49100 LB **Universal Fixation Device,** for securing Fiber Optic Light Carrier 49100 L, for use with rectangular retractor frames with profile min. 5 x 15 mm to max. 8 x 34 mm and round components with profile min.10 to max.16 mm



Spare parts

495 F
Receptacle, diameter 9 mm, for Wolf fiber optic light cable

495 G
Screw Base, for KARL STORZ fiber optic light cable and Olympus/Winter & Ibe

3-11

Headlights

Spare parts and accessories for:		Catalog page
310060	**Headlight KS60**	187
310063	**Headlight KS60,** with removeable and sterilizable Focus Handle 310065	
310070	**Headband**, fully adjustable, with Forehead Cushion 078511, with cross band, including holder for Headlight 310063	
495 NY	**Y-Fiber Optic Light Cable,** with special protective casing for Headlight 310063, length 290 cm	
078681	**Clip with Band,** for attaching the fiber optic light cable to OR clothing	

Spare parts

078511
Forehead Cushion,
with push-button lock

310063
Headlight KS60, with double lens system and Y-fiber optic light cable, >175,000 lux, illuminated area adjustable from 20 – 80 mm with 40 cm working distance, with removeable and sterilizable Focus Handle 310065

310065
Handle, with focusing screw, sterilizable

310070
Headband,
fully adjustable, with Forehead Cushion 078511, with cross band, including holder for Headlights 310060, 310061 and 310063

495 NY
Y-Fiber Optic Light Cable, with special protective casing for Headlight 310063, diameter 2 x 2.5 mm, length 290 cm

Accessories

078681
Clip with Band,
for attaching fiber optic light cable to OR clothing

3-11

Headlights

Spare parts and accessories for:		Catalog page
310061	**Headlight KS60**	187
310063	**Headlight KS60,** with removable and sterilizable Focus Handle 310065	
310070	**Headband,** fully adjustable, with Forehead Cushion 078511, with cross band, including holder for Headlight 310063	
495 NYW	**Y-Fiber Optic Light Cable,** with special protective casing for Headlight 310063, with 90° deflection to the light source, length 290 cm	
078681	**Clip with Band,** for attaching the fiber optic light cable to OR clothing	

Spare parts

078511
Forehead Cushion,
with push-button lock

310063
Headlight KS60, with double lens system and Y-fiber optic light cable, >175,000 lux, illuminated area adjustable from 20 – 80 mm with 40 cm working distance, with removeable and sterilizable Focus Handle 310065

310065
Handle, with focusing screw, sterilizable

310070
Headband,
fully adjustable, with Forehead Cushion 078511, with cross band, including holder for Headlights 310060, 310061 and 310063

495 NYW
Y-Fiber Optic Light Cable, with special protective casing for Headlight 310063, with 90° deflection to the cold light fountain, diameter 2 x 2.5 mm, length 290 cm

Accessories

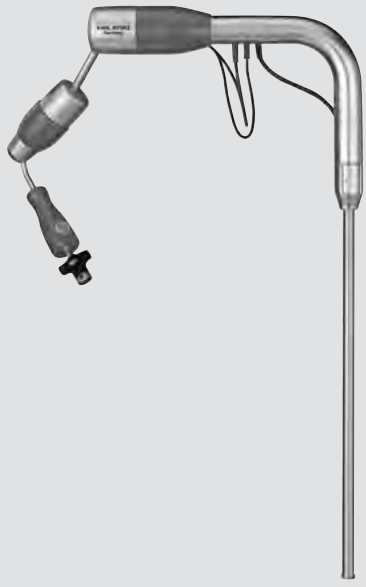
078681
Clip with Band,
for attaching fiber optic light cable to OR clothing

3-11

ENDOCRANE™, Air Compressors

KARL STORZ — ENDOSKOPE

Spare parts and accessories for:		Catalog page
28272 EC	**ENDOCRANE™,** piezoregulated holding arm	220
28272 ECS	**ENDOCRANE™ Arm,** including stand	
28172 HG	**Socket,** to clamp to the OR table	
20780020	**Control Unit**	
040146-25*	**Cover,** sterile, package of 25	
28272 ECW	**Spring Balance**	
400 A	**Mains Cord,** length 300 cm	



28272 ECS

Spare parts and accessories for:		Catalog page
20031002	**Air Compressor,** for POINT SETTER	225
20031020	**Compressor,** 0 – 8 bar, power supply 230 VAC, 50/60 Hz	
27630022	**Fabric Reinforced Tube,** for Calcusplit®	
28172 WC	**Connecting Tube,** for POINT SETTER, length 600 cm	

20031002

Spare parts and accessories for:		Catalog page
20031002 C	**Air Compressor,** for POINT SETTER	225
20031020 C	**Compressor,** 0 – 8 bar, power supply 115 VAC, 50/60 Hz	
27630022	**Fabric Reinforced Tube,** for Calcusplit®	
28172 WC	**Connecting Tube,** for POINT SETTER, length 600 cm	

20031002 C

3-11

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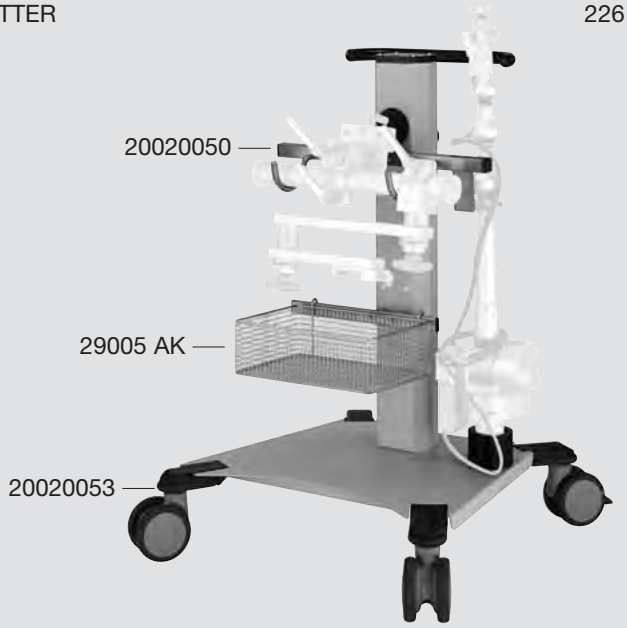
Take-Off GewerbePark 46, D-78579 Neuhausen ob Eck, Germany

STOR-E Transport Cart

Spare parts and accessories for:		Catalog page
20020059	**STOR-E Transport Cart,** for POINT SETTER	226
20020053	**Mobile Stand,** for POINT SETTER	
20020050	**Attachment,** POINT SETTER set	
29005 AK	**Tray**	



3-11

Spare parts and accessories for: Catalog page

26430508-1 **Electronic CO_2 ENDOFLATOR® SCB** U 4

26430520-1 **Electronic CO_2 ENDOFLATOR® with KARL STORZ-SCB,** power supply 100 – 240 VAC, 50/60 Hz
400 A **Mains Cord,** length 300 cm
20400143 **Silicone Tubing Set,** sterilizable
20400030 **Universal Wrench**
20090170 **SCB Connecting Cable,** length 100 cm
031122-10* **CO_2/N_2O Gas Filter,** sterile, for single use, package of 10

26430520-1

Spare part

2027590
Mains Fuse,
100 – 240 VAC, T 2.0 AL (SB), package of 10

Accessories

20400143
Silicone Tubing Set,
for insufflation, sterilizable

Spare parts for 20400143

20400081
Plastic Connector, male

20300184
LUER-Lock Tube Connector, male, tube diameter 10 mm

20400022
CO_2 High Pressure Tube,
American connection/Pin-Index connection,
length 55 cm

20400028
CO_2 High Pressure Tube,
American connection/Pin-Index connection,
length 102 cm

Spare part for 20400022 and 20400028

2903390
Seal, for use with CO_2 bottle, Pin-Index connector

20400021
CO_2 High Pressure Tube,
American/German connection, length 55 cm

20400027
CO_2 High Pressure Tube,
American/German connection, length 102 cm

Spare part for 20400021 and 20400027

2903490
Seal, for use with CO_2 bottle, German connection

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3-11

Spare parts and accessories for: Catalog page

26331009-1 HAMOU® **ENDOMAT® SCB** U 8

26331020-1 HAMOU® **ENDOMAT® SCB with KARL STORZ-SCB,** power supply 100 – 240 VAC, 50/60 Hz
400 A **Mains Cord,** length 300 cm
mtp* **HYST Tubing Set,** for single use
mtp* **LAP Tubing Set,** for single use
20090170 **SCB Connecting Cable,** length 100 cm
mtp* **VACUsafe Promotion Pack Suction,** 2 l

26331020-1

Spare part

2027590
Mains Fuse,
100 – 240 VAC, T 2.0 AL (SB), package of 10

Accessories

20300042
Silicone Tubing Set,
for suction, sterilizable

Spare parts for 20300042

27500
LUER-Lock Tube Connector, male,
tube diameter 9 mm

20300181
LUER-Lock Tube Connector, female,
tube diameter 8 mm

20300180
Tubing Connector Set,
for Bottle Cap 20300034

20300034
Bottle Cap, for suction bottles 1.5 and 5 l, sterilizable

Spare parts for 20300034

20300580
Overflow Case, gray,
for Bottle Cap 20300034

2911590
Plunger Ball, green,
to overflow case,
2 pcs required

031124-10*
Filter, to block fluid during suction, for single use, unsterile, package of 10

3-11

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

Accessories

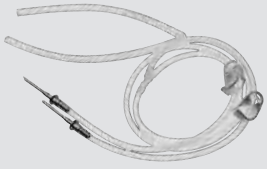
26330041
LAP Tubing Set, reusable, sterilizable

Included in delivery of 2330041

2719591
LAP Pressure Dome,
without silicone tubing set

2719891
LAP Silicone Tubing Set,
without pressure dome

20330386
Pump Tubing LAP,
without connectors,
package of 25



Inflow Tube,
with Y-adaptor

2719591
LAP Pressure Dome,
without silicone tubing set

Spare parts for 2719591

2730891
Lock Ring LAP

2731191
Dome

2731291
Dome Ring

2731391
Sealing Disk, for pressure relief valve

2731491
Compression Spring LAP

2731691
Plastic Disk

20330185
Diaphragm for Pressure Dome, package of 10

20330188
O-Ring, package of 10

Accessories

20330386
Pump Tubing LAP,
without connectors,
package of 25

Spare part for 20330386

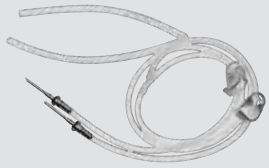
2731791
Connector Set LAP

Silicone Tubing LAP

Spare parts for Silicone Tubing LAP

20300185
Tube Connector

27500
LUER-Lock Tube Connector, male,
tube diameter 9 mm



Inflow Tube,
with Y-adaptor

Spare parts for inflow tube

20330088
Puncture Needle,
for irrigation bottle

2732191
Y-Adaptor, package of 10

2732091
Tube Clip, white,
package of 10

3-11

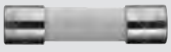
Spare parts and accessories for: Catalog page

20330301-1 ENDOMAT® LC SCB U 10

20330320-1 **ENDOMAT® LC with KARL STORZ-SCB,** power supply 100 – 240 VAC, 50/60 Hz
400 A **Mains Cord,** length 300 cm
20330340 **Silicone Tubing Set,** for irrigation, sterilizable
20330341 **Silicone Tubing Set,** for suction, sterilizable
20090170 **SCB Connecting Cable,** length 100 cm

20330320-1

Spare part



2027390
Mains Fuse,
100 – 240 VAC, T 1.0 A
(SB), package of 10

Accessories

20330340
Silicone Tubing Set,
for irrigation, sterilizable

20330341
Silicone Tubing Set,
for suction, sterilizable

Spare parts for 20330340

27500
LUER-Lock Tube Connector, male,
tube diameter 9 mm

20330088
Puncture Needle,
for irrigation bottle

20330393
Pump Tube, sterilizable,
package of 25

20300482
Connector Set,
sterilizable, package of 2

Spare parts for 20330341

27500
LUER-Lock Tube Connector, male,
tube diameter 9 mm

20300180
Tubing Connector Set,
for Bottle Cap 20300034

20330393
Pump Tube, sterilizable,
package of 25

20300482
Connector Set,
sterilizable, package of 2

3-11

Accessories

20300034
Bottle Cap, for suction bottles 1.5 and 5 l, sterilizable

Spare parts for 20300034

20300580
Overflow Case, gray, for Bottle Cap 20300034

2911590
Plunger Ball, green, to overflow case, 2 pcs required

031124-10*
Filter, to block fluid during suction, for single use, unsterile, package of 10

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Suction and Irrigation Systems

DUOMAT®

KARL STORZ — ENDOSKOPE

Spare parts and accessories for: Catalog page

20321008 **DUOMAT®** U 12

20321020 **DUOMAT®,** power supply 100 – 120, 230 – 240 VAC, 50/60 Hz

400 A **Mains Cord,** length 300 cm

mtp* **VACUsafe Promotion Pack Suction,** 2 l

20321020

Spare parts

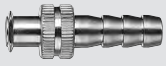
1067800
Mains Fuse,
230 – 240 VAC, T 0.2 A (SB), package of 10

2084290
Mains Fuse,
100 – 120 VAC, T 0.5 A (SB), package of 10

Accessories

20300045
Silicone Tubing Set,
for irrigation, sterilizable

Spare part for 20300045



600008
LUER-Lock Tube Connector, female, tube diameter 6 mm

20300042
Silicone Tubing Set,
for suction, sterilizable

20300044
Silicone Tubing Set,
for suction, sterilizable, short

Spare parts for 20300042 and 20300044

20300046
Silicone Tubing Set,
sterilizable

Spare parts for 20300046

27500
LUER-Lock Tube Connector, male, tube diameter 9 mm

20330088
Puncture Needle,
for irrigation bottle

20300181
LUER-Lock Tube Connector, female, tube diameter 8 mm

600007
LUER-Lock Tube Connector, male, tube diameter 6 mm

20300180
Tubing Connector Set,
for Bottle Cap 20300034

3-11

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

Accessories

20300034
Bottle Cap, for suction bottles 1.5 and 5 l, sterilizable

Spare parts for 20300034

20300580
Overflow Case, gray, for Bottle Cap 20300034

2911590
Plunger Ball, green, to overflow case, 2 pcs required

031124-10*
Filter, to block fluid during suction, for single use, unsterile, package of 10

26310035-335
Irrigation Bottle
including:
Bottle Cap
Irrigation Liquid Bottle

Spare part for 263100 35-335

26310087
Seal Set, for bottle caps

3-11

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

Spare parts and accessories for: Catalog page U 22

20535220-111/20535220-112
20535220-115/20535220-116

AUTOCON® II 400 SCB, Set	**20535201-111**	**20535201-112**	**20535201-115**	**20535201-116**
AUTOCON® II 400 SCB, power supply 230 VAC, 50/60 Hz	20535220-111	20535220-112	20535220-115	20535220-116
Mains Cord, length 300 cm	400 A	400 A	400 A	400 A
SCB Connecting Cable, length 100 cm	20090170	20090170	20090170	20090170

Spare part

2027690
Mains Fuse,
100 – 240 VAC, T 4.0 AL (SB), package of 10

Spare parts and accessories for: Catalog page U 24

20522501	**AUTOCON® 200**
20522520	**AUTOCON® 200,** power supply 200 – 240 VAC, 50/60 Hz
400 A	**Mains Cord,** length 300 cm
27809	**Adaptor,** for unipolar HF output, diameter 4/5 mm

20522520

Spare part

2027690
Mains Fuse,
100 – 240 VAC, T 4.0 AL (SB), package of 10

3-11

Spare parts and accessories for: Catalog page

20522501 C **AUTOCON® 200** U 24

20522520 C **AUTOCON® 200,** power supply 100 – 120 VAC, 50/60 Hz
400 A **Mains Cord,** length 300 cm
27809 **Adaptor,** for unipolar HF output, diameter 4/5 mm

20522520 C

Spare part

2028090
Mains Fuse,
100 – 120 VAC, T 8.0 AL
(SB), package of 10

Spare parts and accessories for: Catalog page

20522501-010 **AUTOCON® 200** U 24

20522520-010 **AUTOCON® 200,** with ENDOCUT function, power supply 200 – 240 VAC, 50/60 Hz
400 A **Mains Cord,** length 300 cm
27809 **Adaptor,** for unipolar HF output, diameter 4/5 mm

20522520-010

Spare part

2027690
Mains Fuse,
100 – 240 VAC, T 4.0 AL
(SB), package of 10

Spare parts and accessories for: Catalog page

20522501C010 **AUTOCON® 200** U 24

20522520C010 **AUTOCON® 200,** with ENDOCUT function, power supply 100 – 120 VAC, 50/60 Hz
400 A **Mains Cord,** length 300 cm
27809 **Adaptor,** for unipolar HF output, diameter 4/5 mm

20522520C010

Spare part

2028090
Mains Fuse,
100 – 120 VAC, T 8.0 AL
(SB), package of 10

3-11

Spare parts and accessories for:		Catalog page
20520501	**AUTOCON® 50**	–
20520520	**AUTOCON® 50,** power supply 100/120/230/240 VAC, 50/60 Hz	
400 A	**Mains Cord,** length 300 cm	
27809	**Adaptor,** for unipolar HF output, diameter 4/5 mm	

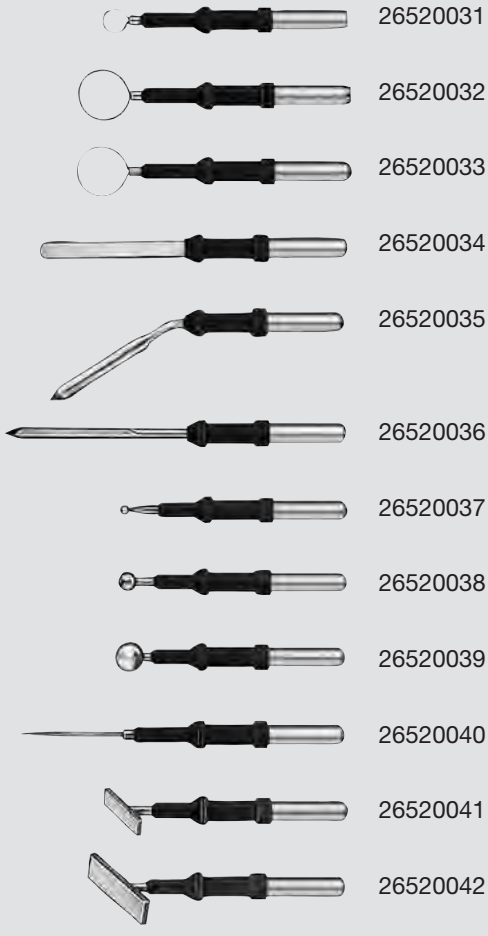
20520520

Spare part

2027590
Mains Fuse,
100 – 240 VAC, T 2.0 AL
(SB), package of 10

Surgery Electrodes Set

Spare parts and accessories for:		Catalog page
20530008	**Surgery Electrodes Set**	U 27
20530031	**Container with Lid and Sterilizing Insert,** for 16 electrodes with diameter 4 mm	
26520031	**Wire Snare,** 5 mm	
26520032	**Wire Snare,** 10 mm	
26520033	**Ribbon Snare,** 10 mm	
26520034	KIRSCHNER **Spatula Electrode,** straight	
26520035	MAGENAU **Knife Electrode,** angled	
26520036	MAGENAU **Knife Electrode,** lancet-shaped	
26520037	**Ball Electrode,** 2 mm	
26520038	**Ball Electrode,** 4 mm	
26520039	**Ball Electrode,** 6 mm	
26520040	**Needle Electrode**	
26520041	**Flat Electrode,** 8 x 10 mm	
26520042	**Flat Electrode,** 10 x 15 mm	



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