




THORAX

4th EDITION 1/2019

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STORZ



THE WORLD OF ENDOSCOPY



Information on events is available on the KARL STORZ website
www.karlstorz.com

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Important Notes:

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

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.

BASIC SETS



Units for Bronchoscopy and Esophagoscopy

Basic Set

STORZ
KARL STORZ — ENDOSKOPE

IMAGE1 S



Monitor:

9826 NB **26" FULL HD Monitor**
20 0906 21 **21.5" Touch Screen, 24 V**

Camera System:

TC 200EN* **IMAGE1 S CONNECT®**, basic module
TC 300 **IMAGE1 S™ H3-LINK**, module for rigid endoscopy, FULL HD
TC 301 **IMAGE1 S™ X-LINK**, module for flexible and rigid endoscopy
TH 100 **IMAGE1 S™ H3-Z Three-Chip FULL HD Camera Head**
TH 110 **IMAGE1 S™ HX One-Chip FULL HD Camera Head**
TC 001 **IMAGE1 S™ Video Endoscope Adaptor 0°**

Light Sources:

TL 300 **Cold Light Fountain POWER LED 300 SCB**
TL 100S1 **Cold Light Fountain CO₂MBI® LED SCB**
495 NAC **Fiber Optic Light Cable, with straight connector**

Pump System:

25 3200 01 **UNIMAT® 30**, suction pump set

Documentation:

WD 300 **AIDA®**
TC 009 **USB Adaptor, for ACC 1 and ACC 2**

HF Unit:

UH 300 **AUTOCON® III 300**
UF 901 **One-Pedal Footswitch**
27805 **Neutral Electrode**
27806 UR **Neutral Electrode Connecting Cable**

Equipment Cart:

UG 120 **Equipment Cart, narrow**
UG 624 **Pump Holder**
UG 500 **Monitor Holder**
UG 501 **Monitor Holder Adaptor**
UG 520 **Monitor Holding Arm**
29005 EFH **Footswitch Holder, for one-pedal footswitch**
UG 310 **Isolation Transformer**
UG 410 **Earth Leakage Monitor**

* Also available in the following languages: DE, ES, FR, IT, PT, RU, SE

The displayed video towers can only be used in conjunction with a telescope or a video endoscope.

Units see chapter 10, UNITS AND ACCESSORIES

Bronchoscopy for Adults with Proximal Illumination

Basic Set

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	Universal Bronchoscope , 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 jaws, for the controlled grasping of hard foreign bodies, with force-limited handle, incl. cleaning adaptor, for use with HOPKINS® Telescopes 10320 AA/BA
10350 KF	Optical Forceps , for the controlled grasping of peanuts and soft foreign bodies, with force-limited handle, incl. cleaning adaptor, for use with HOPKINS® Telescopes 10320 AA/BA
10350 L	Optical Forceps , spoon-shaped, round, for biopsy, incl. cleaning adaptor, for use with HOPKINS® Telescopes 10320 AA/BA
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, with cut-off hole, can be connected to suction tubes or suction catheters
10432 E	Spare Glass , for use with Aspirator 10432 N
10384 A	Cotton Applicator , working length 50 cm
10387 A	Sponge Holder , with spring handle, working length 50 cm

Recommended Accessories for Cleaning, Sterilization and Storage (suitable for soft packaging):

39501 BR	Wire Tray for Cleaning, Sterilization and Storage of telescopes and accessories for bronchoscopy
39501 ES	Wire Tray for Cleaning, Sterilization and Storage of instruments and accessories for oesophagoscopy

Further Accessories for Cleaning and Sterilization see HYGIENE catalog

Optical Needle Holder for Intraluminal Repair of Posterior Tracheal Rupture

Basic Set

WELTER Recommended Set

10105 FA	HOPKINS® Telescope 12° , diameter 4 mm, length 30 cm, autoclavable , fiber optic light transmission incorporated, color code: black
10130 N	Optical Needle Holder
10318 GK	Full Lumen Operating Tracheoscope , size 14, length 20 cm
10101 FA	Prismatic Light Deflector, autoclavable , with connection to fiber optic light cable
10318 K	Injection Cannula , for positive pressure assisted ventilation system, LUER-Lock, outer diameter 3.5 mm
12067 TR	Clip Forceps , applicator for absorbable ligating clips, jaw curved to right, with cleaning connector, sheath diameter 4.8 mm, working length 30 cm
10367 S	Scissors , straight, single action jaws, sheath diameter 2.5 mm, with cleaning connector, length 35 cm

Recommended Accessories for Cleaning, Sterilization and Storage:

39502 Z	Wire Tray for Cleaning, Sterilization and Storage of instruments
39100 S	Silicone Grid Insert LARGE DIAMOND GRID
39100 PS	Fixation Pin , package of 12
39360 AS	Silicone Tie-Downs , package of 12
39752 A2	Sterilization Container , with MicroStop® microbiological barrier
2x 39763 A2	Coding Label , inscribed
2x 39762 A2	Color Tab

Further Accessories for Cleaning and Sterilization see HYGIENE catalog

Rigid Bronchoscopy for Children with Proximal Illumination

Basic Set

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 , with connection to fiber optic light cable
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	Instrument Guide , for suction catheters, short, for bronchoscope for children and infants
10924 D	Adaptor , for respirator
10378 CF	Optical Forceps , 2 x 2 teeth, for controlled grasping of coins and flat foreign bodies, with force-limited handle, incl. cleaning adaptor, for use with HOPKINS® Telescope 10324 AA
10378 KF	Optical Forceps , with KILLIAN bean jaws, for controlled grasping of peanuts and soft foreign bodies, with force-limited handle, incl. cleaning adaptor, for use with HOPKINS® Telescope 10324 AA
10378 HF	Optical Forceps , alligator jaws, for controlled grasping of hard foreign bodies, with force-limited handle, incl. cleaning adaptor, for use with HOPKINS® Telescope 10324 AA
10386 B	Foreign Body Basket , with ring handle, working length 35 cm
10381 B	Suction Tube , with rubber tip, straight, outer diameter 2 mm, working length 35 cm
10382 B	Suction Tube , with rubber tip, curved, outer diameter 2 mm, working length 35 cm
10432 N	Aspirator , for collecting secretions, with cut-off hole, can be connected to suction tubes or suction catheters
10432 E	Spare Glass , for Aspirator 10432 N
10384 B	Cotton Applicator , working length 35 cm
10387 B	Sponge Holder , with spring handle, working length 35 cm

Recommended Accessories for Cleaning, Sterilization and Storage:

39753 A2	Sterilization Container , with MicroStop® microbiological barrier
39219 XU	Universal Instrument Rack with Silicone Holders and Tie-Downs
39100 S	Silicone Grid Insert LARGE DIAMOND GRID
2x 39763 A2	Coding Label , inscribed
2x 39762 A2	Color Tab

Further Accessories for Cleaning and Sterilization see HYGIENE catalog

Rigid Esophagoscopy for Adults

Basic Set

Esophagoscopes with lengths of 50, 30 and 20 cm

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 , length 50 cm, for use with esophagoscopes
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 , length 30 cm, for use with esophagoscopes
12060 S	ROBERTS-JESBERG Hypopharyngoscope , oval, size 10 x 14, length 20 cm
12061 C	Fiber Optic Light Carrier , length 20 cm, for use with hypopharyngoscopes
12070	Handle , for esophagoscopes

Telescope and instruments 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 jaws, for controlled grasping of hard foreign bodies, incl. cleaning adaptor, for use with HOPKINS® Telescope 12015 AA
12016 L	Optical Forceps , spoon-shaped, round, for biopsy, incl. cleaning adaptor, for use with HOPKINS® Telescope 12015 AA
10381 AL	Suction Tube , with rubber tip, straight, diameter 4 mm, working length 55 cm
10384 AL	Cotton Applicator , working length 55 cm
10387 AL	Sponge Holder , with spring handle, working length 55 cm

Telescope and instruments for esophagoscopes 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 controlled grasping of hard foreign bodies, with force-limited handle, incl. cleaning adaptor, for use with HOPKINS® Telescope 10324 AA
10378 L	Optical Forceps , spoon-shaped, round, for biopsy, incl. cleaning adaptor, for use with HOPKINS® Telescope 10324 AA
10381 B	Suction Tube , with rubber tip, straight, outer diameter 2 mm, working length 35 cm
10384 B	Cotton Applicator , working length 35 cm
10387 B	Sponge Holder , with spring handle, working length 35 cm

Recommended Accessories for Cleaning, Sterilization and Storage (suitable for soft packaging):

39501 BR	Wire Tray for Cleaning, Sterilization and Storage of telescopes and accessories for bronchoscopy
39501 ES	Wire Tray for Cleaning, Sterilization and Storage of instruments and accessories for oesophagoscopy

Further Accessories for Cleaning and Sterilization see HYGIENE catalog

Rigid Esophagoscopy for Children with Proximal Illumination

Basic Set

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 the controlled grasping of peanuts and soft foreign bodies, with force-limited handle, incl. cleaning adaptor, for use with HOPKINS® Telescope 10324 AA
10378 HF	Optical Forceps , alligator jaws, for the controlled grasping of hard foreign bodies, with force-limited handle, incl. cleaning adaptor, for use with HOPKINS® Telescope 10324 AA
10381 B	Suction Tube , with rubber tip, straight, outer diameter 2 mm, working length 35 cm
10384 B	Cotton Applicator , working length 35 cm
10387 B	Sponge Holder , with spring handle, working length 35 cm

Recommended Accessories for Cleaning, Sterilization and Storage:

39753 A2	Sterilization Container , with MicroStop® microbiological barrier
39219 XU	Universal Instrument Rack with Silicone Holders and Tie-Downs
39100 S	Silicone Grid Insert LARGE DIAMOND GRID
2x 39763 A2	Coding Label , inscribed
2x 39762 A2	Color Tab

Further Accessories for Cleaning and Sterilization see HYGIENE catalog

Units for Thoracic Surgery, Bronchoscopy and Esophagoscopy

Basic Set

STORZ
KARL STORZ — ENDOSKOPE

IMAGE1 S



Equipment Cart:

UG 120	Equipment Cart, narrow
UG 500	Monitor Holder
UG 501	Monitor Holder Adaptor
UG 520	Monitor Holding Arm
29005 DFH	Footswitch Holder, for two- and three-pedal footswitches
UG 310	Isolation Transformer
UG 410	Earth Leakage Monitor
Optional:	
UG 605	Keyboard Tray, narrow

Monitor:

9826 NB	26" FULL HD Monitor
20 0906 21	21.5" Touch Screen, 24 V

Camera System:

TC 200EN**	IMAGE1 S CONNECT® , basic module
TC 300	IMAGE1 S™ H3-LINK , module for rigid endoscopy, FULL HD
TC 301	IMAGE1 S™ X-LINK , module for flexible and rigid endoscopy
TH 100	IMAGE1 S™ H3-Z Three-Chip FULL HD Camera Head
TH 110	IMAGE1 S™ HX One-Chip FULL HD Camera Head
TC 001	IMAGE1 S™ Video Endoscope Adaptor 0°

Light Source:

TL 300	Cold Light Fountain POWER LED 300 SCB
495 NAC	Fiber Optic Light Cable , with straight connector
495 NVC	Fiber Optic Light Cable , with 90° deflection to the instrument

Pump System:

UP 210	ENDOMAT® SELECT , roller pump
UP 601	SURGERY Software , license
031524-10*	Tubing Set

optional:

20 0141 30	One-Pedal Footswitch
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Documentation:

WD 300	AIDA®
TC 009	USB Adaptor , for ACC 1 and ACC 2

HF Unit

UH 401	AUTOCON® III 400 High-End, BIVASCULARSAFE
27805	Neutral Electrode
27806 UR	Neutral Electrode Connecting Cable
UF 902	Two-Pedal Footswitch



** Also available in the following languages: DE, ES, FR, IT, PT, RU, SE

The displayed video towers can only be used in conjunction with a telescope or a video endoscope.

Units see chapter 10, UNITS AND ACCESSORIES

Medical Thoracoscopy

Basic Set

HEINE Recommended Set

26072 BA	HOPKINS® Forward-Oblique Telescope 30° , enlarged view, diameter 4 mm, length 30 cm, autoclavable , fiber optic light transmission incorporated, color code: red
40120 NAL	Trocar , with blunt tip, flexible cannula, without valve, autoclavable , size 6 mm, working length 8.5 cm, color code: black including: Cannula , flexible Trocar only
26072 A	Optical Biopsy Forceps , spoon-shaped, round, incl. cleaning adaptor
26072 SU	Optical Suction Tube
26072 TK	Optical Powder Blower

Recommended Accessories for Cleaning, Sterilization and Storage:

39502 Z	Wire Tray for Cleaning, Sterilization and Storage of instruments
39100 S	Silicone Grid Insert LARGE DIAMOND GRID
39100 PS	Fixation Pin , package of 12
39360 AS	Silicone Tie-Downs , package of 12
39752 A2	Sterilization Container , with MicroStop® microbiological barrier
2x 39763 A2	Coding Label , inscribed
2x 39762 A2	Color Tab

Further Accessories for Cleaning and Sterilization see HYGIENE catalog

Units for Thoracic Surgery

Basic Set

IMAGE1 S 3D



Monitor:

TM 330 **32" 3D Monitor**
20 0906 21 **21.5" Touch Screen, 24 V**

Camera System:

TC 200EN** **IMAGE1 S CONNECT®**, basic module
TC 300 **IMAGE1 S™ H3-LINK**, module for rigid endoscopy, FULL HD
TC 302 **IMAGE1 S D3-LINK™**, module for 3D endoscopy and VITOM® 3D
TH 100 **IMAGE1 S™ H3-Z Three-Chip FULL HD Camera Head**
26605 BA **TIPCAM®1 S 3D LAP**, 3D video laparoscope 30°, diameter 10 mm

Light Source:

TL 300 **Cold Light Fountain POWER LED 300 SCB**
495 TIP **Fiber Optic Light Cable**
495 NCSC **Fiber Optic Light Cable**, with safety lock

Insufflation:

UI 500S1 **ENDOFLATOR® 50 SCB**
031210-10* **Insufflation Tubing Set, ENDOFLATOR® 50**

Pump System:

UP 210 **ENDOMAT® SELECT**, roller pump
UP 601 **SURGERY Software**, license
031524-10* **Tubing Set**

optional:

20 0141 30 **One-Pedal Footswitch**

Documentation:

WD 300 **AIDA®**
TC 009 **USB Adaptor**, for ACC 1 and ACC 2
TC 010 **Two-Pedal Footswitch USB**

HF Unit:

UH 401 **AUTOCON® III 400 High-End, BIVASCULARSAFE**
27805 **Neutral Electrode**
27806 UR **Neutral Electrode Connecting Cable**
UF 902 **Two-Pedal Footswitch**

Equipment Cart:

UG 220 **Equipment Cart, wide**
UG 500 **Monitor Holder**
UG 501 **Monitor Holder Adaptor**
UG 520 **Monitor Holding Arm**
9832 A **Adaptor Plate**
UG 609 **Bottle Holder**, for CO₂ bottles
29005 DFH **Footswitch Holder**, for two- and three-pedal footswitches
UG 310 **Isolation Transformer**
UG 410 **Earth Leakage Monitor**



** Also available in the following languages: DE, ES, FR, IT, PT, RU, SE

The displayed video towers can only be used in conjunction with a telescope or a video endoscope.

The 2D/3D hybrid video tower can be used for both 3D and 2D endoscopy.

Units see chapter 10, UNITS AND ACCESSORIES

Video-Assisted Thoracoscopic Surgery (VATS)

Basic Set

Standard Telescope

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

or ENDOCAMELEON® Telescope

26003 EC **ENDOCAMELEON® HOPKINS® Telescope**, diameter 10 mm, length 31 cm, **autoclavable**, variable direction of view 0° – 90°, with adjusting knob for selecting the direction of view, fiber optic light transmission incorporated, color code: gold

or 3D Telescope

26605 BA **TIPCAM®1 S 3D LAP**, with two FULL HD image sensors, direction of view 30°, diameter 10 mm, length 32 cm, **autoclavable**, S-Technologies available, freely programmable camera head buttons, including video connecting cable, for use with IMAGE1 S™

LINDER and HÜRTGEN Recommended Set

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 **CLICKlinē Parenchymal Forceps, dismantling**, atraumatic, without connector pin for unipolar coagulation, single action jaws, straight jaws, size 5 mm, length 28 cm, metal Y-handle, with ABSORBER1® geometry, axial, with 4 locking positions

43237 LHF **CLICKlinē Lung Forceps, dismantling**, atraumatic, without connector pin for unipolar coagulation, grasping distal end, 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 **CLICKlinē Lung Forceps, dismantling**, atraumatic, without connector pin for unipolar coagulation, 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 **CLICKlinē Lung Nodule Forceps, dismantling**, atraumatic, without connector pin for unipolar coagulation, 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 **CLICKlinē Parenchymal Forceps, dismantling**, atraumatic, without connector pin for unipolar coagulation, single action jaws, single curved jaws, size 5 mm, length 28 cm, with metal handle, with hemostat style ratchet, with 4 locking positions, with lateral locking button

43249 LMP **CLICKlinē Scissors, dismantling**, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, curved scissor blades, size 5 mm, length 28 cm, with plastic handle, without ratchet, axial, with 4 locking positions

43249 MTP **CLICKlinē Scissors, dismantling**, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, distally angled outer sheath, single action jaws, straight scissor blades, serrated, scissor blades opens vertical to angulation, size 5 mm, length 28 cm, with plastic handle, without ratchet, axial, with 4 locking positions

40491 TKU **Powder Blower**, with rubber bulb, distally angled sheath, size 5 mm, length 30 cm

40170 LB **Coagulation Suction Tube**, distally angled sheath, with connector pin for unipolar coagulation

30804 **Handle with Trumpet Valve**, for irrigation or suction, for use with Coagulation 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

30805 **Handle with Two-Way Stopcock**, for irrigation or suction

40775 LF **Coagulation and Dissection 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 FAL **KOH Macro Needle Holder, dismantling**, with LUER-Lock irrigation connector for cleaning, single action jaws, straight jaws, with tungsten carbide inserts, with ergonomic handle, axial, disengageable ratchet, ratchet position left, size 5 mm, length 33 cm

26005 M **Unipolar High Frequency Cord**, with 5 mm plug, length 300 cm

26176 LE **Bipolar High Frequency Cord**, length 300 cm

Recommended Light Cable for Standard and ENDOCAMELEON® Telescopes:

495 NVC **Fiber Optic Light Cable**, with 90° deflection to the instrument, very narrow radius of curvature, diameter 4.8 mm, length 300 cm

Accessories for Cleaning and Sterilization see HYGIENE catalog

Video-Assisted Sympathectomy

Basic Set

Standard Telescope

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

or ENDOCAMELEON® Telescope

26003 EC **ENDOCAMELEON® HOPKINS® Telescope**, diameter 10 mm, length 31 cm, **autoclavable**, variable direction of view 0° – 90°, with adjusting knob for selecting the direction of view, fiber optic light transmission incorporated, color code: gold

or 3D Telescope

26605 BA **TIPCAM®1 S 3D LAP**, with two distal FULL HD image sensors, direction of view 30°, diameter 10 mm, length 32 cm, **autoclavable**, S-Technologies available, freely programmable camera head buttons, including video connecting cable, for use with IMAGE1 S™

Recommended Set

2x 40120 NAL **Trocar**, flexible, with blunt tip, size 6 mm, working length 8.5 cm
 40123 NAL **Trocar**, flexible, with blunt tip, size 11 mm, working length 8.5 cm
 48384 S **Bipolar Cutting Instrument**, for lifting and cutting the sympathetic nerve during sympathectomy, size 5 mm, length 30 cm
 48310 SX **Knife Insert**, package of 5
 43249 LKP **CLICK'line® KELLY Dissecting Forceps, dismantling**, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, curved jaws, size 5 mm, length 28 cm
 43237 LLR **CLICK'line® Lung Forceps, dismantling**, 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
 34251 MS **CLICK'line® METZENBAUM Scissors, rotating, dismantling**, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, double action jaws, curved scissor blades, length of jaws 15 mm, size 5 mm, length 30 cm
 43249 LUP **CLICK'line® Scissors, dismantling**, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, distally angled outer sheath, double action jaws, curved scissor blades, scissor blades open horizontally to angulation, size 5 mm, length 28 cm
 40775 LF **Coagulation and Dissection Electrode**, L-shaped, insulated, with connector pin for unipolar coagulation, distally angled sheath, size 5 mm, length 28 cm
 26772 UF **Coagulation and Dissection Electrode**, L-shaped, insulated, with connector pin for unipolar coagulation, size 5 mm, length 30 cm
 26005 M **Unipolar High Frequency Cord**, with 5 mm plug, length 300 cm, for use with AUTOCON® II 400 SCB system (111, 115, 122, 125), AUTOCON® III 300, AUTOCON® III 400, AUTOCON® II 200, AUTOCON® II 80, AUTOCON® system (50, 200, 350), Erbe Type ICC and Erbe VIO 300

Recommended Light Cable for Standard and ENDOCAMELEON® Telescopes:

495 NVC **Fiber Optic Light Cable**, with 90° deflection to the instrument, very narrow radius of curvature, diameter 4.8 mm, length 300 cm

Recommended Accessories for Cleaning, Sterilization and Storage:

39219 XX **Instrument Rack**, for cleaning, sterilization and storage
 39752 A2 **Sterilization Container**, with MicroStop® microbiological barrier
 2x 39763 A2 **Coding Label**, inscribed
 2x 39762 A2 **Color Tab**

Further Accessories for Cleaning and Sterilization see HYGIENE catalog

Video-Assisted Mini-Thoracotomy

Basic Set

Standard Telescope

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

or ENDOCAMELEON® Telescope

26003 EC **ENDOCAMELEON® HOPKINS® Telescope**, diameter 10 mm, length 31 cm, **autoclavable**, variable direction of view 0° – 90°, with adjusting knob for selecting the direction of view, fiber optic light transmission incorporated, color code: gold

or 3D Telescope

26605 BA **TIPCAM®1 S 3D LAP**, with two distal FULL HD image sensors, direction of view 30°, diameter 10 mm, length 32 cm, **autoclavable**, S-Technologies available, freely programmable camera head buttons, including video connecting cable, for use with IMAGE1 S™

GIUDICELLI, FUENTES and OTTOMANI Recommended Set

40103 CD **Trocar**, with blunt tip, size 11 mm, working length 6 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
 40400 A **Forceps**, atraumatic, bayonet-shaped, insulated, working length 22 cm, total length 36 cm
 40400 E **Dissecting Forceps**, with ratchet, self-opening, S-shaped, medial joint, length 33 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
 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 B **Electrode**, ball tip, malleable, with connector pin for unipolar coagulation, length 40 cm
 26596 T **Knot Tier**, for extracorporeal knotting, size 5 mm, length 36 cm
 26005 M **Unipolar High Frequency Cord**, with 5 mm plug, length 300 cm, for use with AUTOCON® II 400 SCB system (111, 115, 122, 125), AUTOCON® III 300, AUTOCON® III 400, AUTOCON® II 200, AUTOCON® II 80, AUTOCON® system (50, 200, 350), Erbe Type ICC and Erbe VIO 300

Recommended Accessories for Cleaning, Sterilization and Storage:

39502 Z **Wire Tray for Cleaning, Sterilization and Storage** of instruments
 39100 S **Silicone Grid Insert LARGE DIAMOND GRID**
 39100 PS **Fixation Pin**, package of 12
 39360 AS **Silicone Tie-Downs**, package of 12
 39752 A2 **Sterilization Container**, with MicroStop® microbiological barrier
 2x 39763 A2 **Coding Label**, inscribed
 2x 39762 A2 **Color Tab**

Further Accessories for Cleaning and Sterilization see HYGIENE catalog



BRONCHOSCOPY TRACHEOSCOPY

RIGID BRONCHOSCOPES
FOR ADULTS17-25

OPTICAL NEEDLE HOLDER *NEW*
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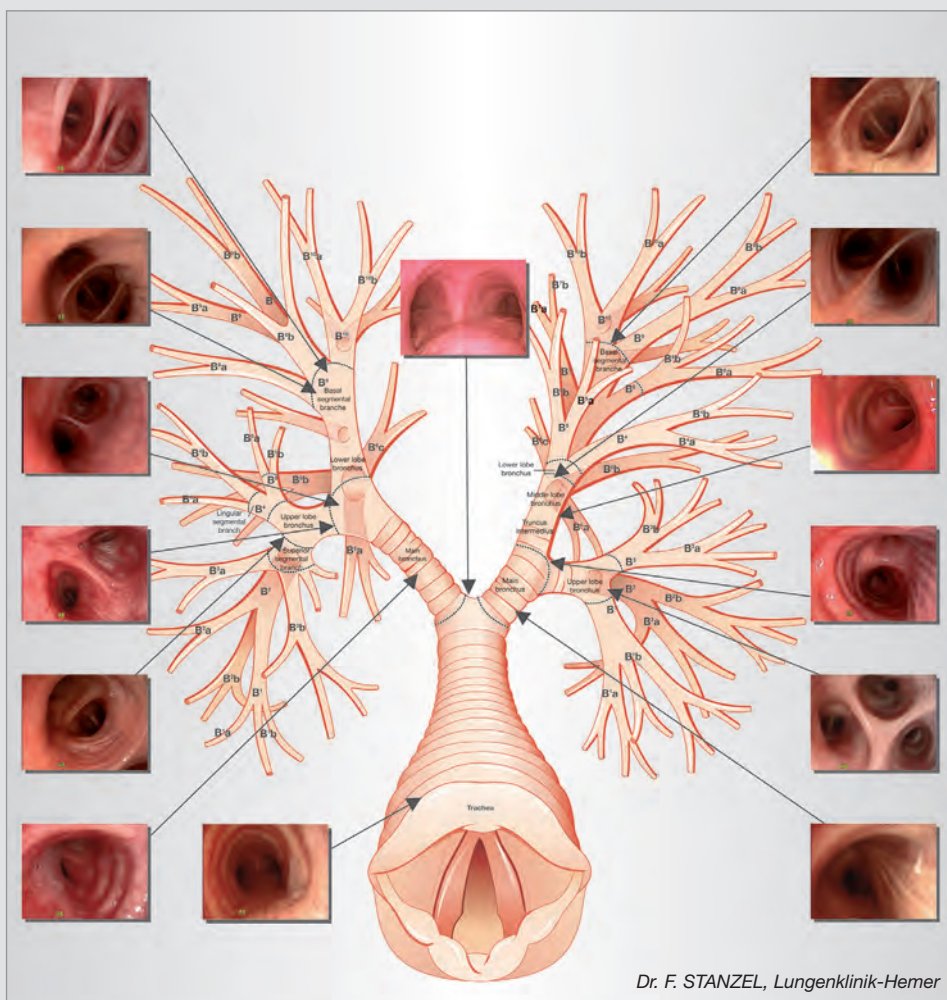
Bronchoscopy

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 white light diagnosis

Indications for rigid bronchoscopy:

- Hemoptysis
- Tracheal stenosis
- Foreign body removal
- All bronchological interventions such as bougienage, removal of sutures, hemostasis by means of electrocautery or laser
- Laser therapy
- 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 white light diagnosis



Dr. F. STANZEL, Lungenklinik-Hemer

The modular IMAGE1 S™ camera platform offers users various visualization options for diagnosis and therapy in bronchoscopy.

Three innovative technologies for visualization are integrated in the new camera system: CLARA, CHROMA and SPECTRA.

CLARA ensures homogeneous illumination of the endoscopic image. Dark areas such as, for example, deeply lying bronchial segments are visualized more clearly.

CHROMA is a technology that provides contrast enhancement. It displays structures more clearly, allowing better identification of different structures.

The third technology, SPECTRA, accentuates certain color ranges via hue adjustment. This additional information can thus support tissue differentiation.

IMAGE1 S™ also offers the advantage of being able to simultaneously display both the standard image and the respective mode on the same screen. Thanks to its modular design, this platform can be used for both rigid and flexible bronchoscopy.

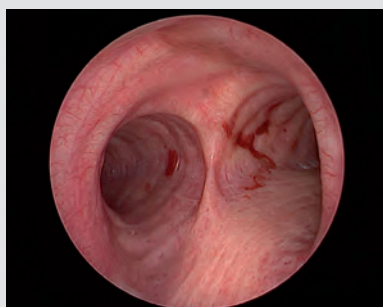


Fig. 1: Standard image



Fig. 2: CLARA



Fig. 3: CHROMA



Fig. 4: CLARA + CHROMA

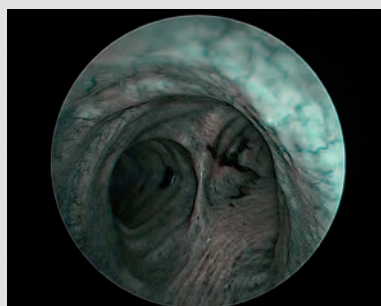


Fig. 5: SPECTRA A



Fig. 6: SPECTRA B

Clear imaging is particularly important for interventional procedures in pneumology. In this field, the IMAGE1 S™ camera platform delivers excellent, high-quality visualization for rigid bronchoscopy. Moreover, the use of

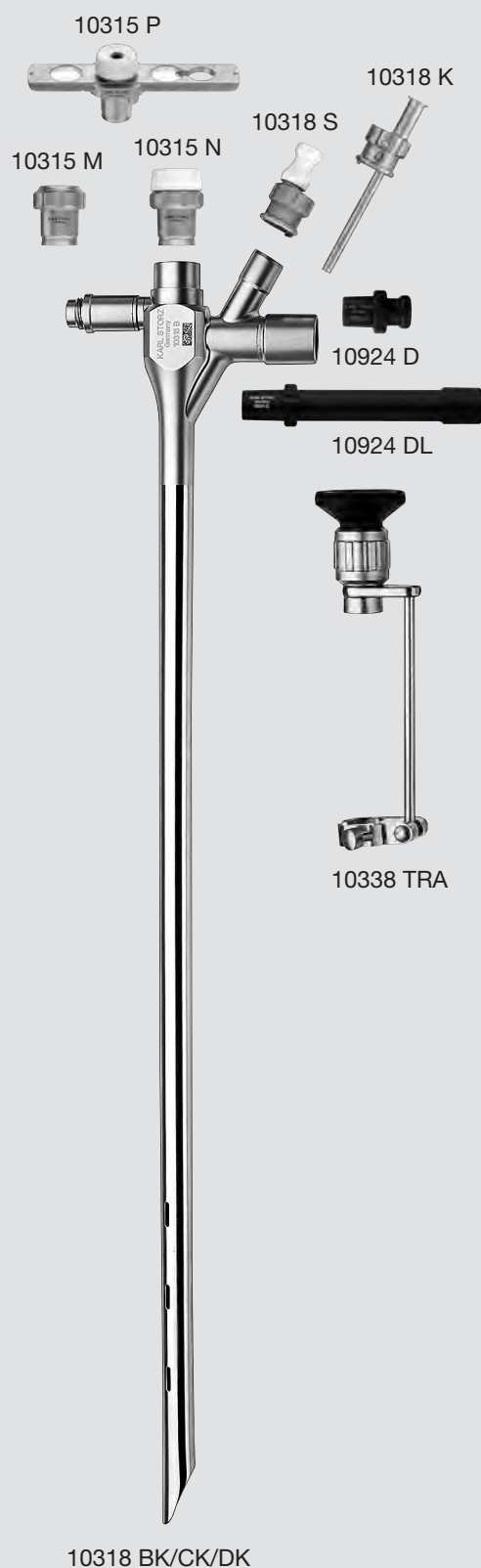
various visualization modes allows very good detection or differentiation of structures and changes in the bronchial system.

*Prof. R. EBERHARDT
Thoraxklinik Heidelberg, Germany*

Images courtesy of Prof. F. HERTH and Prof. R. EBERHARDT, Thoraxklinik Heidelberg, Germany

Universal Bronchoscopes for Adults

with fiber optic light carrier for distal illumination



- | | |
|-----------|--|
| 10318 BK | Universal Bronchoscope , size 8.5, length 43 cm
including:
Fiber Optic Light Carrier |
| 10318 CK | Universal Bronchoscope , size 7.5, length 43 cm
including:
Fiber Optic Light Carrier |
| 10318 DK | Universal Bronchoscope , size 6.5, length 43 cm
including:
Fiber Optic Light Carrier |
| 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 |
| 10924 DL | Adaptor , for respirator, long version |

Components/Spare Parts see chapter 11

with proximal illumination



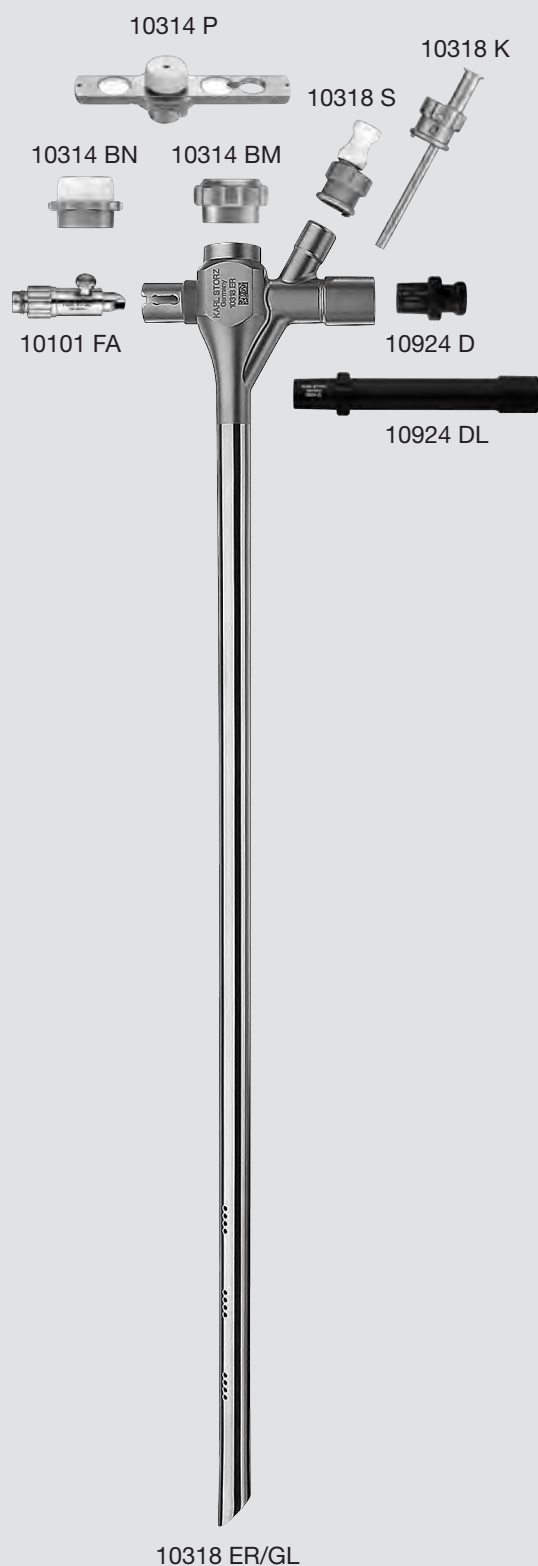
- Absence of distal light carrier does not restrict inner diameter
- Distal end of tracheoscopes without lateral holes for more effective oxygen supply in the axial direction, e.g., in the case of tumors in the upper part of the trachea

10318 BP	Universal Bronchoscope , size 8.5, length 43 cm
10318 CP	Same , size 7.5
10318 DP	Same , size 6.5
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
10318 H	Same , size 16 mm
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
10924 DL	Adaptor , for respirator, long version

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

Full Lumen Operating Bronchoscopes for Adults

with proximal illumination for stent applications

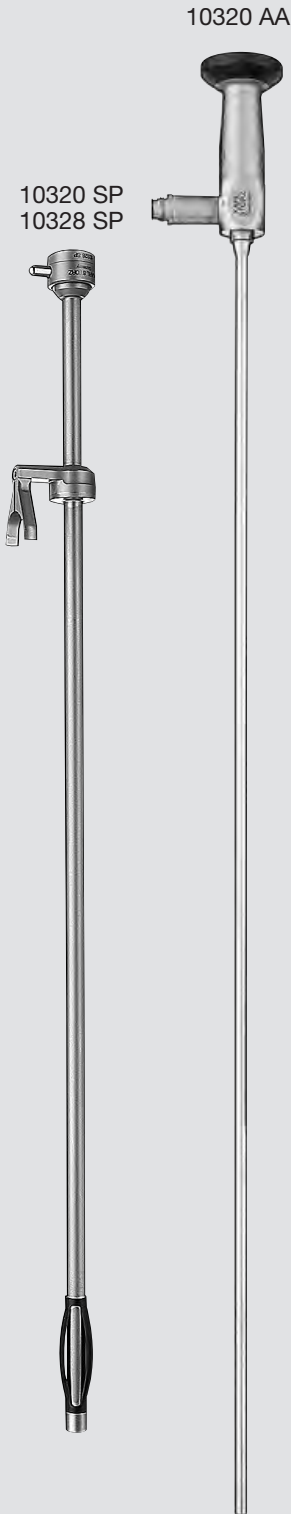


Special Features:

- Distal end beveled 45°, round airholes; especially suited for the application of stents
- Absence of distal light carrier does not restrict inner diameter

- | | |
|----------|--|
| 10318 ER | Full Lumen Operating Bronchoscope , size 11 mm, length 43 cm, modified for application of stents, color code: green |
| 10318 GL | Full Lumen Operating Bronchoscope , size 14 mm, length 43 cm, modified for application of stents, 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 |
| 10924 DL | Adaptor , for respirator, long version |

Compatible TONN stent applicators are available from:
Novatech SA, Z.I. Athélia III, 1058, Voie Antiope, 13705 La Ciotat Cédex, France



Special Features:

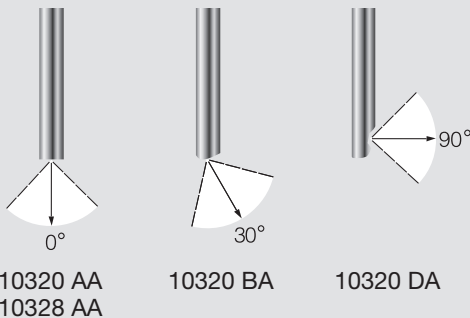
- Precise positioning of the telescope in the bronchoscope during insertion
- The telescope guide sheath prevents rod lenses from breaking if exposed to very large loads during intubation with a rigid bronchoscope

For use with Bronchoscopes 10318 and Optical Forceps 10350

- 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

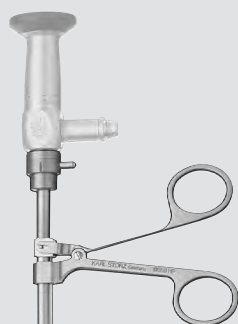
For use with Bronchoscopes 10318 and Optical Forceps 10352

- 10328 AA **HOPKINS® Straight Forward Telescope 0°**, diameter 4.5 mm, length 50 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green

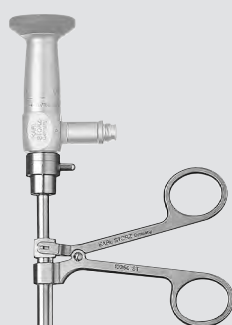


- NEW** 10320 SP **Telescope Guide Sheath**, for use with Bronchoscopes 10318 BP/CP/DP, 10318 ER/GL/FL and HOPKINS® Telescopes 10320 AA/BA
- NEW** 10328 SP **Telescope Guide Sheath**, for use with Bronchoscopes 10318 BP/CP/DP, 10318 ER/GL/FL and HOPKINS® Telescope 10328 AA

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog



10350 HF/KF



10350 L/ST/U

Special Features:

- The jaws of the forceps and the region of biopsy are well visualized prior to and during the procedure
- Better assessment of the depth of cut when taking biopsies
- New handle design of the optical forceps provides enhanced tactile feedback combined with force limitation

For use with HOPKINS® Telescopes 10320 AA/BA and Universal Bronchoscopes 10318 B/BP/C/CP/DP, size 8.5 to 6.5 and Full Lumen Operating Tracheo-Bronchoscopes 10318 ER/F/FL/G/GL/GR/H, size 11 to 16

- | | |
|----------|---|
| 10350 HF | Optical Forceps , with alligator jaws, for the controlled grasping of hard foreign bodies, with force-limited handle, incl. cleaning adaptor |
| 10350 KF | Optical Forceps , for the controlled grasping of peanuts and soft foreign bodies, with force-limited handle, incl. cleaning adaptor |
| 10350 L | Optical Forceps , spoon-shaped, round, for biopsy, incl. cleaning adaptor |
| 10350 ST | Optical Forceps , for the repositioning and removal of DUMON silicone stents or polymer, metal and hybrid stents, incl. cleaning adaptor |
| 10350 U | Optical Forceps , universal, for biopsy and foreign body removal, incl. cleaning adaptor |



10350 HF



10350 KF



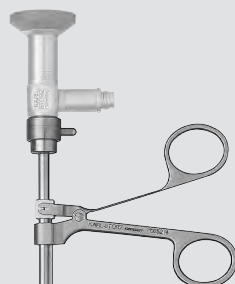
10350 L



10350 ST



10350 U



10352 H/KF



10352 L/U

Special Features:

- The jaws of the forceps and the region of biopsy are well visualized prior to and during the procedure
- Better assessment of the depth of cut when taking biopsies
- New handle design of the optical forceps provides enhanced tactile feedback combined with force limitation

For use with HOPKINS® Telescope 10328 AA/BA and Universal Bronchoscopes 10318 B/BP/C/CP/D/DP, size 8.5 to 6.5

- | | |
|----------|---|
| 10352 H | Optical Forceps , with alligator jaws, for the controlled grasping of hard foreign bodies, with force-limited handle, incl. cleaning adaptor |
| 10352 KF | Optical Forceps , for the controlled grasping of peanuts and soft foreign bodies, with force-limited handle, incl. cleaning adaptor |
| 10352 L | Optical Forceps , spoon-shaped, round, for biopsy, incl. cleaning adaptor |
| 10352 U | Optical Forceps , universal, for biopsy and foreign body removal, incl. cleaning adaptor |



10352 H



10352 KF



10352 L



10352 U

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.

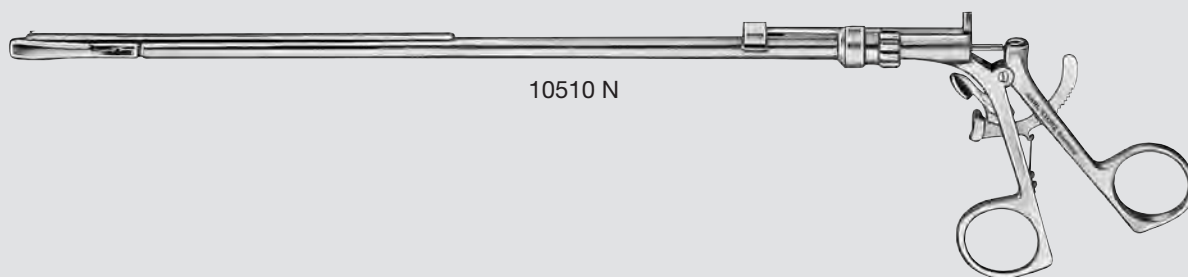
The bifurcated stent is grasped from inside with a stent forceps. By closing the jaws the bronchial limbs of the stent are narrowed to facilitate the passage through the vocal cords and the stenosis. The stent is intubated with the forceps similarly to the intubation of an endotracheal tube. After passing 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, the 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. Dr. med. L. FREITAG,
Universitätsspital Zürich, Switzerland
Dr. med. D. GRESCHUCHN*



10510 N

FREITAG Stent Forceps, for the placement of dynamic stents

including:

Handle, with ratchet

Outer Sheath

Forceps Insert

Pusher

Components/Spare Parts see chapter 11

Optical Needle Holder for Intraluminal Repair of Posterior Tracheal Ruptures

Tracheal rupture is a rare complication of endotracheal intubation. Early surgical treatment is recommended for a transmural rupture in cases of pneumomediastinum with difficulty in ventilation, tension pneumothorax, a broad communication of the posterior wall on the right thoracic cavity or if progressive subcutaneous or mediastinal emphysema is present.

A new needle holder was developed consisting of a HOPKINS® telescope in a fixed attachment with an endoscopic needle holder. This allows complete intraluminal repair of posterior tracheal wall ruptures.

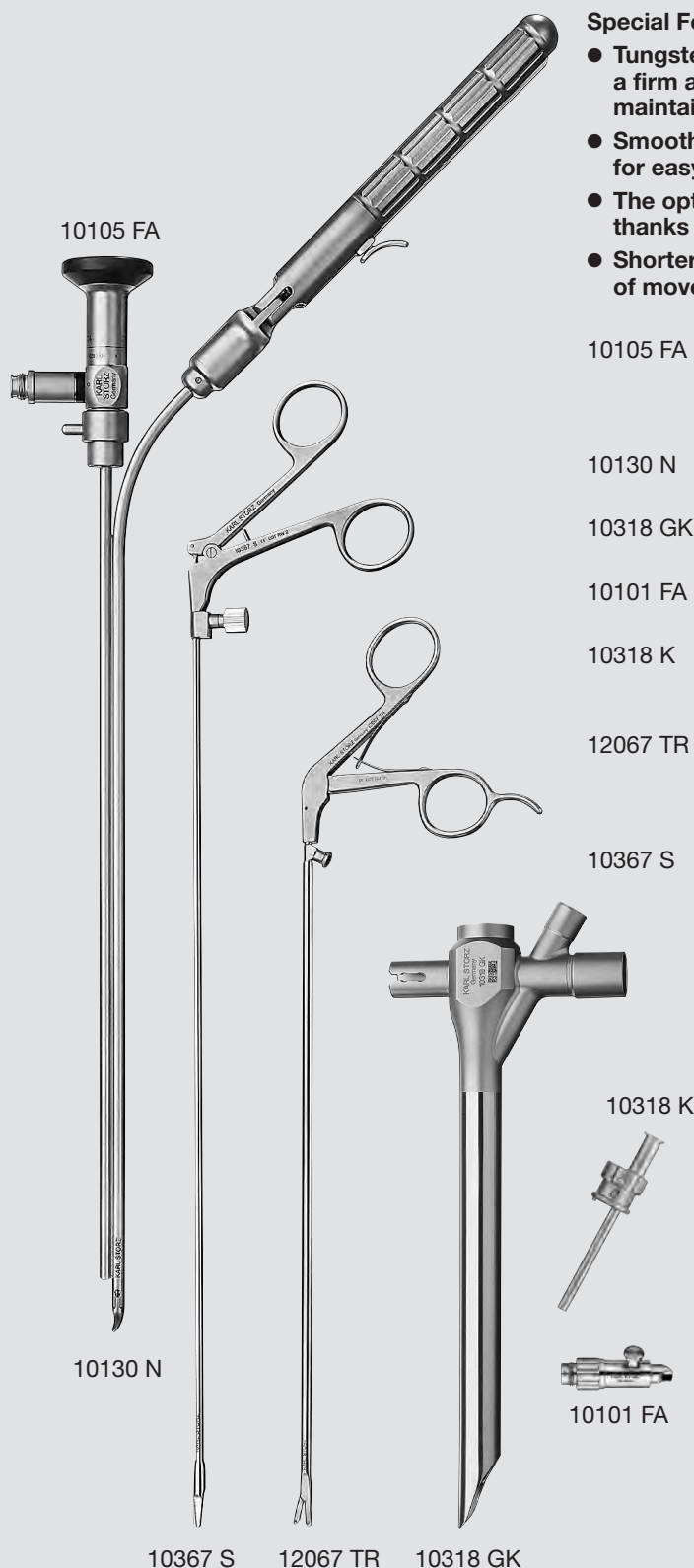
Patients are thus spared a thoracotomy or a collar incision and associated pain. There is no scarring and early extubation is possible if respiratory stability is adequate. Even after emergency intubation, patients may benefit from the reduced surgical trauma.

There are some technical limitations to this method: If the tracheal tear has no rim of membranous wall; if the rupture extends into the right main bronchus; and if the patient cannot tolerate jet ventilation due a functional limitation.

*PD Dr. S. WELTER,
Lungenklinik Hemer,
Germany*

Telescope and Instruments ^{NEW}

for the intraluminal repair of posterior tracheal ruptures



Special Features:

- Tungsten carbide inserts in both jaws ensure a firm and secure hold of the needle while maintaining high material resistance
- Smooth-running, precisely adjustable ratchet for easy and safe positioning of the needle
- The optical needle holder is lighter in weight thanks to titanium handles
- Shorter tracheoscope offers greater freedom of movement

- 10105 FA **HOPKINS® Telescope 12°**, diameter 4 mm, length 30 cm, **autoclavable**, fiber optic light transmission incorporated, color code: black
- 10130 N **Optical Needle Holder**, for use with HOPKINS® Telescope 10105 FA
- 10318 GK **Full Lumen Operating Tracheoscope**, size 14, length 20 cm
- 10101 FA **Prismatic Light Deflector**, autoclavable, with connection to fiber optic light cable
- 10318 K **Injection Cannula**, for positive pressure assisted ventilation system, LUER-Lock, outer diameter 3.5 mm
- 12067 TR **Clip Forceps**, applicator for absorbable ligating clips, jaw curved to right, with cleaning connector, sheath diameter 4.8 mm, working length 30 cm
- 10367 S **Scissors**, straight, single action jaws, sheath diameter 2.5 mm, with cleaning connector, length 35 cm

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

The aspiration of foreign bodies is potentially life-threatening and is associated with morbidity and mortality in both prehospital and clinical settings. Foreign body aspiration occurs most frequently among children aged six months to four years as well as in elderly or neurologically impaired patients. The most common aspirated object is food (primarily nuts, grapes, carrots) or, in the case of older toddlers, small toy parts and household objects.

The clinical presentation and spectrum of symptoms following foreign body aspiration can be classified as acute (< 24 h after the incident), subacute (> 24 h) or chronic (weeks, months). Airway obstruction can be either partial (most cases) or complete (rare) and may be secondary to compression of the larynx/trachea caused by a foreign body in the proximal esophagus or a respiratory tract infection induced by a foreign body.

Obtaining a patient history and performing a physical examination is critical for detecting foreign body aspiration in children presenting with a sudden onset of symptoms while eating or playing. Frequently, there is no recall of the aspiration event or it is not witnessed by parents or caregivers. Most cases present with a sudden fit of coughing that gradually subsides or disappears completely and may be associated with respiratory distress, stridor, expiratory wheezing and/or cyanosis. Symptoms can be subtle: What is important is that the possibility of foreign body aspiration is taken into consideration.

Depending on the location, size and consistency of the foreign body, careful auscultation of both lungs in alternation often reveals inspiratory/expiratory stridor or expiratory wheezing. This may be accompanied with unilateral decreased, localized reduced or even absent breath sounds. In some cases, undetected foreign body aspiration presents with secondary symptoms in the form of an acute or chronic respiratory tract infection, e.g., lobar and/or aspiration pneumonia or a chronic cough. The diagnostic value of chest X-rays, particularly with regard to foreign body aspiration, remains controversial. However, chest radiographs prove useful for ingested foreign bodies as, in contrast to aspirated foreign bodies, most ingested foreign bodies are radiopaque.

Foreign body ingestion can lead to the impaction of coins, magnets, batteries, sharp or large objects in the proximal esophagus, posing a danger of secondary tracheal compression or grave damage to the mucous membrane (batteries). This may be indicated by dysphagia or excessive drooling. The ingestion of acids or alkalis (e.g., bathroom cleaning products) can lead to coagulative and/or colliquative necrosis of the mucous membrane. If such symptoms occur or a similar case history is presented, it is important to consider foreign

body aspiration or ingestion and to perform a focused history and physical examination (re-evaluation). If a case history cannot clearly rule out foreign body aspiration or ingestion, endoscopy is recommended if any doubt exists.

The management strategy for the treatment of children after foreign body aspiration or ingestion varies from facility to facility. In general, this concerns the following specialist disciplines: Pediatrics/pediatric pneumology, ENT medicine, pediatric anesthesia and pediatric intensive care and, in the case of ingestion in the lower esophageal segments, pediatric gastroenterology and/or pediatric surgery. The disciplines, departments and endoscopy services involved should come to an agreement on the evaluation of the patient, indications, timing as well as the anesthetic and endoscopic techniques to be used (what? who? where? when? how?). Often the decision to proceed with foreign body endoscopy is a judgement call. The indications for endoscopy should be interpreted more liberally if there is any doubt.

An interdisciplinary consensus should be reached on patient eligibility for urgent endoscopy or whether to wait for adequate fasting. In general, the possibility of performing the intervention at a more convenient time with the availability of an optimal team should be taken into consideration.

In the case of an acute aspiration event (< 24 h) or if a foreign body is lodged in the upper respiratory tract (larynx, trachea) and/or if a child presents with acute dyspnea and/or in the case of an infant, an appropriate fasting interval is generally not observed as the foreign body could become dislodged and cause a complete airway obstruction.

An appropriate fasting interval should, however, be allowed for a subacute aspiration event (> 24 h) or chronic aspiration events (> 2 weeks) or if a foreign body is lodged in the lower respiratory tract without dyspnea.

The presence of esophageal foreign bodies, particularly impacted coins, magnets or batteries, is considered to be an urgent case and children are treated without adequate fasting.

The longer a tracheobronchial foreign body remains in the airway, the more difficult it becomes to remove the offending object as it may become encased in granulation tissue within days. Granulated tissue may cause bleeding during foreign body extraction and thus obscure the view of the situation. When evaluating eligibility for urgent endoscopy, it is important to wait until the optimal team for emergency endoscopy is assembled and the full functionality of instruments is ensured, including OR sets for potential emergency

coniotomy or tracheotomy before proceeding to anesthesia induction – unless the situation is life-threatening due to the (immediate risk) of complete airway obstruction. In this situation, emergency oxygenation, emergency laryngoscopy or emergency intubation and cardiopulmonary resuscitation naturally have top priority. In emergency laryngoscopy for an acute and total airway obstruction, an immediate attempt should be made to remove a supraglottic foreign body with a forceps or a similar tool.

If foreign body aspiration seems less likely or the probability of foreign body aspiration is ruled out in the case of protracted or chronic symptoms, a less invasive form of flexible tracheobronchoscopy is preferred at first. If, however, foreign body aspiration is probable, rigid tracheo-bronchoscopy is the procedure of choice as this is a more established approach to the extraction of foreign bodies. Some practitioners prefer a flexible technique for extraction, however, it must be possible to switch to rigid endoscopy at any time in any situation.

Video Laryngo- and Hypopharyngoscopy

For an initial assessment of the hypopharynx, larynx or the entry to the esophagus, a video laryngoscopy system with blades in sizes appropriate for all age groups proves useful. A sufficiently long and slender MILLER blade is suitable for visualizing the upper esophagus. For the purposes of endoscopy, appropriate grasping instruments as well as a conventional and/or MAGILL forceps modified by BOEDEKER (with horizontal opening) and a robust foreign body grasper (e.g., peanut grasping forceps) should be immediately available in case it becomes necessary to extract foreign bodies from the larynx or hypopharynx.

Rigid Tracheobronchoscopy

Rigid tracheobronchoscopy is generally used to extract foreign bodies from the airway, especially in children. A tracheoscope with a side vent allows ventilation of the patient during the procedure (e.g., manual ventilation, relatively high respiratory pressure, uncertain capnography). The grasped foreign body is either captured in the tracheobronchoscope or directly removed with a foreign body grasper or similar instrument. Rigid tracheoscope tubes in various lengths and sizes, bronchoscope tubes (e.g. DOESEL-HUZLY bronchoscopes, sizes 2.5 – 6), micro laryngoscope tubes ranging from very small to large sizes (e.g., KLEINSASSER, PARSONS, HOLINGER-TUCKER, or BENJAMIN, sizes 1 – 3) as well as straight forward and angled telescopes (0°, 30° and 70°) should be provided for rigid endoscopy.

In children, the cricoid is the narrowest portion of the upper respiratory tract. For rigid endoscopy, therefore, it is important to select a tube that can pass through the

cricoid to prevent the risk of mucosal swelling and postoperative stridor. To allow ventilation through the tracheoscope and bronchoscope tubes during endoscopy, suitable telescopes with airtight ports are required. So-called optical forceps are available for bronchoscopes from size 2.5. This allows simultaneous passage of the telescope with a grasping instrument through the tube.

Various suction tubes should also be at hand. Also useful are various grasping instruments such as peanut grasping forceps, alligator, bean jaw forceps as well as small serrated, double spoon and grasping forceps.

OR assistants, endoscopists and anesthetists should be thoroughly familiar with the instruments used and the planned procedure. Before induction of anesthesia, all appropriate instruments should be ready for use. As an established anesthetic technique, particularly for rigid tracheobronchoscopy, Total Intravenous Anesthesia (TIVA) with muscle relaxation can be recommended.

Flexible Tracheobronchoscopy

If foreign body aspiration is questionable or if potential foreign body aspiration can be ruled out, flexible tracheobronchoscopy may be considered as this technique is less invasive, potentially less atraumatic and allows a lighter form of anesthesia. For this purpose, flexible fiberscopes in various sizes should be provided. Endoscopes with diameters ranging from 2.5 to 5 mm cater for all pediatric age groups. Ventilation and oxygenation of the patient during flexible tracheobronchoscopy requires the use of an airway interface (Mainz adaptor with laryngeal mask or endotracheal tube and/or FREI endoscopy mask).

If a foreign body is to be removed with a flexible endoscope (possible from an outer diameter of 3.7 mm), additional flexible instruments such as grasping forceps, foreign body baskets or snares (with diameters 1 – 1.8 mm) should be available. To access peripheral foreign bodies, the possibility of inserting a flexible fiberoptic bronchoscope through a rigid bronchoscope tube can be taken into consideration. The selection of an appropriate instrument minimizes the risk of a foreign body being released prematurely and causing secondary trauma. Adequate suction should also be ensured. When using flexible endoscopy for foreign body extraction, the possibility to switch to rigid tracheobronchoscopy should always be anticipated during the preparation phase.

Esophagoscopy

Esophagoscopy can be performed with rigid or flexible endoscopes. Foreign bodies in the proximal esophagus, which cannot be accessed with a videolaryngoscopic MILLER blade (see above), can be easily removed with

a rigid tube as a rule. Here the foreign bodies are captured in the esophagoscope and removed or the tube is advanced to the level of the foreign body, which is then grasped by an alligator, bean jaw, peanut grasping or spoon forceps and withdrawn through the endoscope. To perform this procedure, pediatric esophagoscopes are required in various lengths and inner diameters. Particularly in the case of sharp-pointed foreign bodies or batteries, possible damage to the mucosa should always be assessed. It may also be necessary to fit a nasogastric tube. Flexible esophagoscopy can prove to be of invaluable assistance, especially for removing foreign bodies from portions of the lower esophageal segments, i.e. near the cardia. Endoscopes between 2.8 and 6 mm are available for this purpose. Foreign bodies can be removed with small forceps, foreign body baskets or snares.

In conclusion, the following three aspects are essential in order to ensure safe and effective treatment of patients after foreign body aspiration and ingestion:

1. Consider! (Patient history, re-evaluation)
2. If in doubt, perform endoscopy!
3. Interdisciplinary consultation!
(What? How? Who? Where? When?)

Based on a summary of the S2k guidelines (AWMF register number 001-031): "Interdisciplinary care of children after foreign body aspiration and foreign body ingestion".

(www.awmf.org/uploads/tx_szleitlinien/001031_S2k_Fremdkörpersversorgung_Kinder_2016-01.pdf). (Further references with author)

*Prof. Dr. med. Christoph Bernhard EICH,
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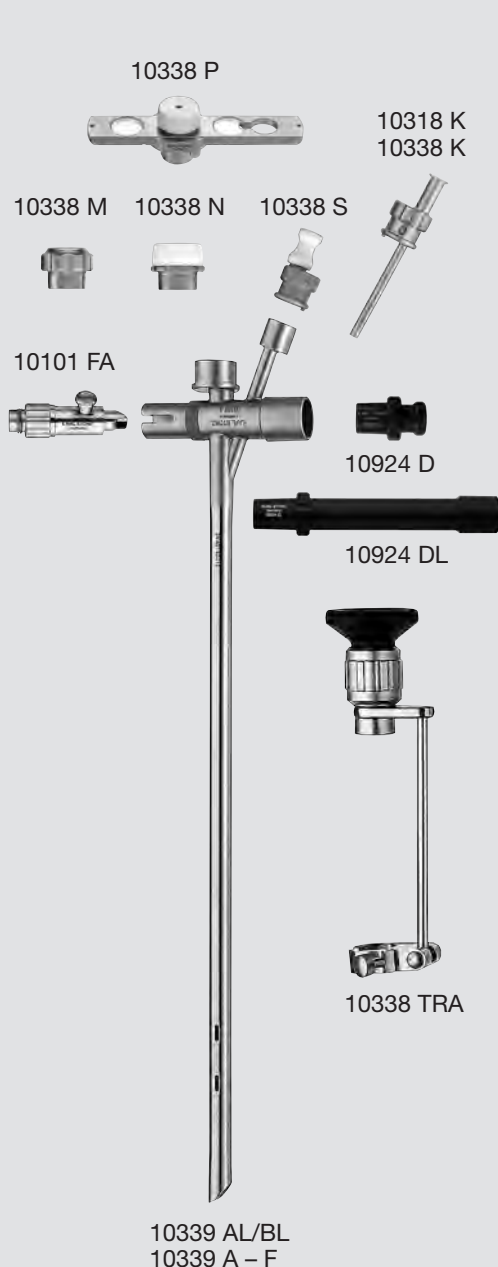
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(both Germany)*

Pediatric Bronchoscopes

with proximal illumination

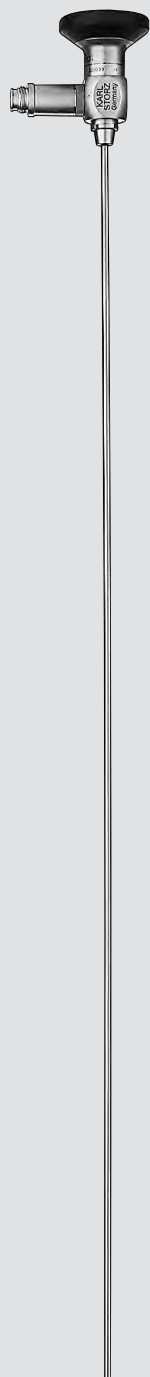
Special Features:

- 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
10338 P	FLUVOG Adaptor , with sliding glass window plug, sealing cap, notched lens and keyhole opening, movable
10338 S	Instrument Guide , for suction catheters
10338 TRA	Adjustable Magnifier , autoclavable, swing-away type, with ring adaption
10924 D	Adaptor , for respirator
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/EEE/F

10023 ABA



**For use with 40 cm DOESEL-HUZLY Bronchoscopes
10339 AL/BL**

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 30 cm DOESEL-HUZLY Bronchoscopes
10339 A/B/BB/C/CD/G**

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

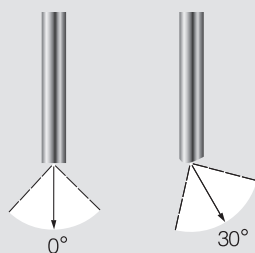
**For use with 26 cm DOESEL-HUZLY Bronchoscopes
10339 CC/DD/EE/GG**

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

**For use with 26 cm DOESEL-HUZLY Bronchoscopes
10339 CC/DD**

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

10005 BA **HOPKINS® Forward-Oblique Telescope 30°**,
enlarged view, diameter 4 mm, length 30 cm,
autoclavable, fiber optic light transmission
incorporated,
color code: red



10023 ABA
10324 AA
10020 ATA
10005 AA

10005 BA

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog



For use with 18.5 cm DOESEL-HUZLY Bronchoscopes 10339 D/E/F

- 10018 AA **HOPKINS® Straight Forward Telescope 0°**, diameter 2.7 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green
- 10017 AA **HOPKINS® Straight Forward Telescope 0°**, diameter 1.9 and 2.1 mm, length 18 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green

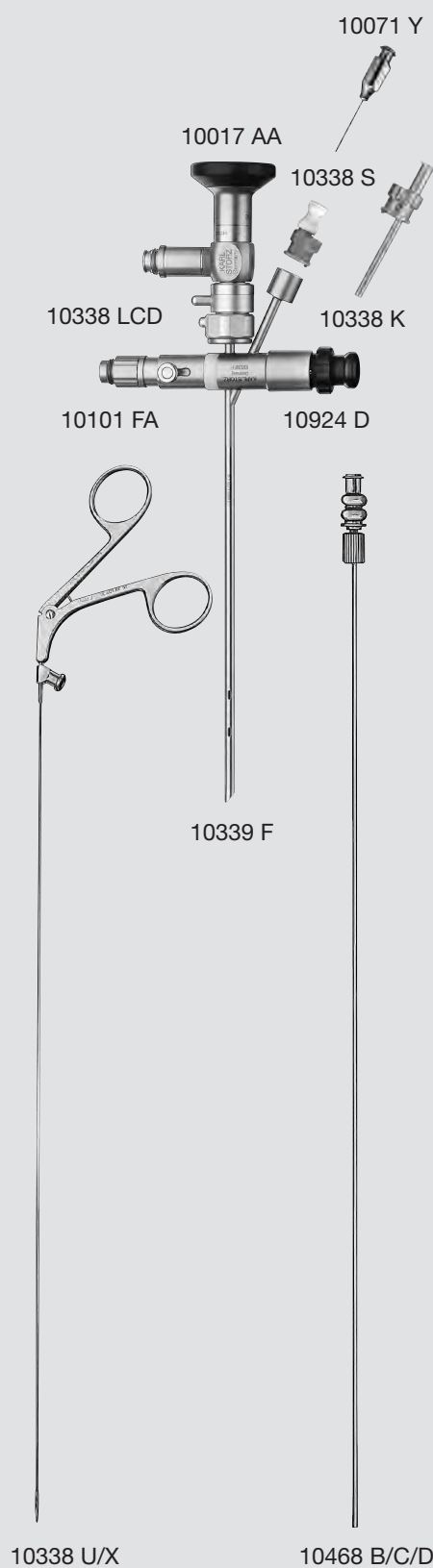
For fixed position between telescope and bronchoscope

- 10338 LCD **Telescope Bridge**, for fixed position between HOPKINS® Telescopes 10017 AA, 10018 AA, 10020 ATA and pediatric Bronchoscopes 10339 A/B/BB/C/G/CD/D/E/F as well as pediatric Esophagoscopes 12030 A/B/C/F/G
- 10338 R **Telescope Bridge**, for fixed position between HOPKINS® Telescopes 10023 ABA, 10020 ATA and pediatric Bronchoscopes 10339 AL/BL/CC/GG/DD/EE
- 10338 RK **Telescope Bridge**, for fixed position between HOPKINS® Telescope 10324 AA and pediatric Bronchoscopes 10339 A/B/BB/C/CD/EEE/G and pediatric Esophagoscopes 12030 A/B/C
- 10338 RL **Telescope Bridge**, for fixed position between HOPKINS® Telescope 10324 AA and pediatric Bronchoscopes 10339 CC/DD/EE/GG

Information on compatibility can be found in the system overview, see page 47
Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Instrument Set for Neonates

for the endoscopic treatment of esophago-tracheal fistulae

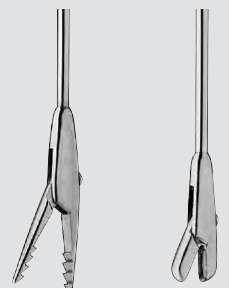


Instrument set for neonates for the endoscopic treatment of esophago-tracheal fistulae

- 10339 F DOESEL-HUZLY **Bronchoscope**, size 2.5, outer diameter 4.2 mm, inner diameter 3.5 mm, length 18.5 cm
- 10101 FA **Prismatic Light Deflector**, autoclavable, with connection to fiber optic light cable
- 10017 AA **HOPKINS® 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 HOPKINS® Telescopes 10017 AA, 10018 AA, 10020 ATA and pediatric Bronchoscopes 10339 A/B/BB/C/G/CD/D/E/F as well as pediatric Esophagoscopes 12030 A/B/C/F/G
- 10071 Y **Injection Cannula**
- 10338 S **Instrument Guide**, for suction catheters
- 10924 D **Adaptor**, for respirator
- 10338 K **Injection Cannula**, for positive pressure assisted ventilation system, LUER-Lock, outer diameter 2.7 mm, for use with Bronchoscopes 10339 E/EE/EEE/F

For use through a lateral working channel:

- 10338 U **Forceps**, alligator, spoon-shaped, single action jaws, semiflexible, sheath diameter 1 mm, with cleaning connector, working length 35 cm
- 10338 X **Forceps**, spoon-shaped, for biopsy, single action jaws, semiflexible, width of jaws 1.2 mm, sheath diameter 1 mm, with cleaning connector, working length 35 cm
- 10468 B **Suction Catheter**, 7.5 Fr., with Adaptor 10479 B
- 10468 C **Suction Catheter**, 6 Fr., with Adaptor 10479 C
- 10468 D **Suction Catheter**, 4.5 Fr., with Adaptor 10479 F



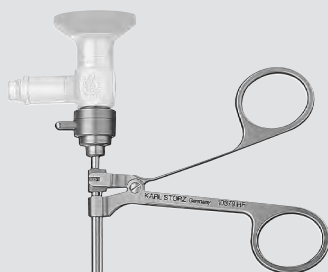
10338 U 10338 X

Optical Forceps

for Pediatric Bronchoscopes size 6 – 3.5, length 40 cm – 30 cm

Special Features:

- Forceps developed especially for hard and soft foreign bodies enable the controlled removal of foreign bodies under precise visual control
- Foreign bodies can be removed quickly and with utmost safety
- Better assessment of the depth of cut when taking biopsies
- New handle design of the optical forceps provides enhanced tactile feedback combined with force limitation



10379 CF/HF/KF



10379 L

For use with HOPKINS® Telescope 10023 ABA and Bronchoscopes 10339 AL/BL/A/B/BB/C/G/CD

- | | |
|----------|--|
| 10379 CF | Optical Forceps , 2 x 2 teeth, for the controlled grasping of coins and flat foreign bodies, with force-limited handle, incl. cleaning adaptor |
| 10379 HF | Optical Forceps , with alligator jaws, for the controlled grasping of hard foreign bodies, with force-limited handle, incl. cleaning adaptor |
| 10379 KF | Optical Forceps , with KILLIAN bean jaws, for the controlled grasping of peanuts and soft foreign bodies, with force-limited handle, incl. cleaning adaptor |
| 10379 L | Optical Forceps , spoon-shaped, round, for biopsy, incl. cleaning adaptor |



10379 CF

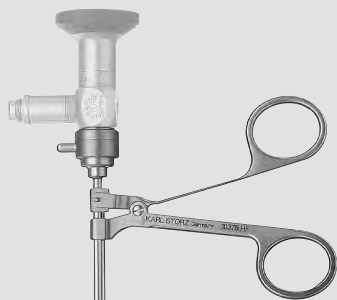
10379 HF

10379 KF

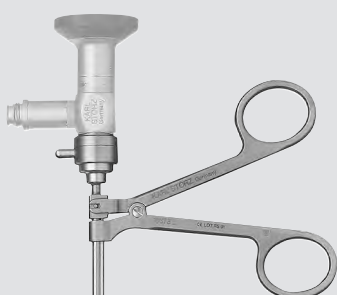
10379 L

Optical Forceps

for Pediatric Bronchoscopes size 6 – 3.5, length 30 cm – 18, 5 cm



10378 CF/HF/KF/KSF



10378 L/M/U

Special Features:

- Forceps developed especially for hard and soft foreign bodies enable the controlled removal of foreign bodies under precise visual control
- Foreign bodies can be removed quickly and with utmost safety
- Better assessment of the depth of cut when taking biopsies
- New handle design of the optical forceps provides enhanced tactile feedback combined with force limitation

For use with HOPKINS® Telescope 10324 AA and Bronchoscopes 10339 A/B/BB/C/G/CD/CC/DD/D

- 10378 CF **Optical Forceps**, 2 x 2 teeth, for the controlled grasping of coins and flat foreign bodies, with force-limited handle, incl. cleaning adaptor
- 10378 HF **Optical Forceps**, with alligator jaws, for the controlled grasping of hard foreign bodies, with force-limited handle, incl. cleaning adaptor
- 10378 KF **Optical Forceps**, with KILLIAN bean jaws, for the controlled grasping of peanuts and soft foreign bodies, with force-limited handle, incl. cleaning adaptor
- 10378 KSF **Optical Forceps**, VANCOUVER model, with extra delicate jaws, for the controlled grasping of peanuts and soft foreign bodies, with force-limited handle, incl. cleaning adaptor
- 10378 L **Optical Forceps**, spoon-shaped, round, for biopsy, incl. cleaning adaptor
- 10378 M **Optical Forceps**, spoon-shaped, oval, for biopsy, incl. cleaning adaptor
- 10378 U **Optical Forceps**, universal, for biopsy and foreign body removal, incl. cleaning adaptor



10378 CF

10378 HF

10378 KF

10378 KSF

10378 L

10378 M

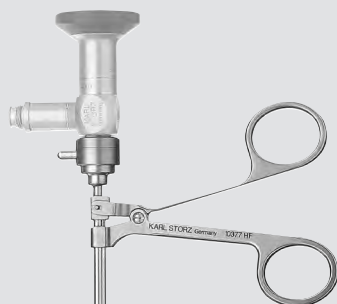
10378 U

Optical Forceps

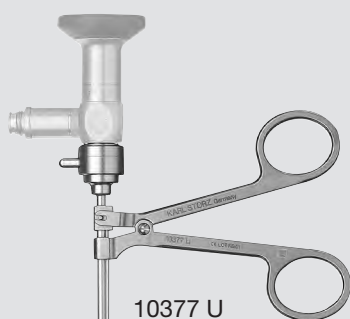
for Pediatric Bronchoscopes size 4 – 3.5, length 26 cm – 18, 5 cm

Special Features:

- Forceps developed especially for hard and soft foreign bodies enable the controlled removal of foreign bodies under precise visual control
- Foreign bodies can be removed quickly and with utmost safety
- New handle design of the optical forceps provides enhanced tactile feedback combined with force limitation



10377 CF/HF/KF



10377 U

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

- | | |
|----------|--|
| 10377 CF | Optical Forceps , 2 x 2 teeth, for the controlled grasping of coins and flat foreign bodies, with force-limited handle, incl. cleaning adaptor |
| 10377 HF | Optical Forceps , with alligator jaws, for the controlled grasping of hard foreign bodies, with force-limited handle, incl. cleaning adaptor |
| 10377 KF | Optical Forceps , with KILLIAN bean jaws, for the controlled grasping of peanuts and soft foreign bodies, with force-limited handle, incl. cleaning adaptor |
| 10377 U | Optical Forceps , universal, for biopsy and foreign body removal, incl. cleaning adaptor |



10377 CF



10377 HF



10377 KF



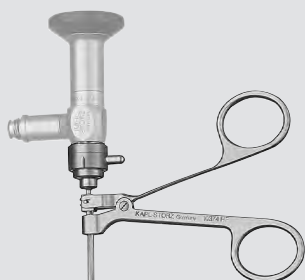
10377 U

Optical Forceps

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



10030 AA



10374 HF



10374 L

Special Features:

- Forceps developed especially for hard and soft foreign bodies enable the controlled removal of foreign bodies under precise visual control
- Foreign bodies can be removed quickly and with utmost safety
- Better assessment of the depth of cut when taking biopsies
- New handle design of the optical forceps provides enhanced tactile feedback combined with force limitation

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

10030 AA **Miniature Straight Forward Telescope 0°**, semirigid, diameter 1.3 mm, length 30.6 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green

10374 HF **Optical Forceps**, alligator, for the controlled grasping of hard foreign bodies, with force-limited handle, incl. cleaning adaptor

10374 L **Optical Forceps**, spoon-shaped, round, for biopsy, incl. cleaning adaptor



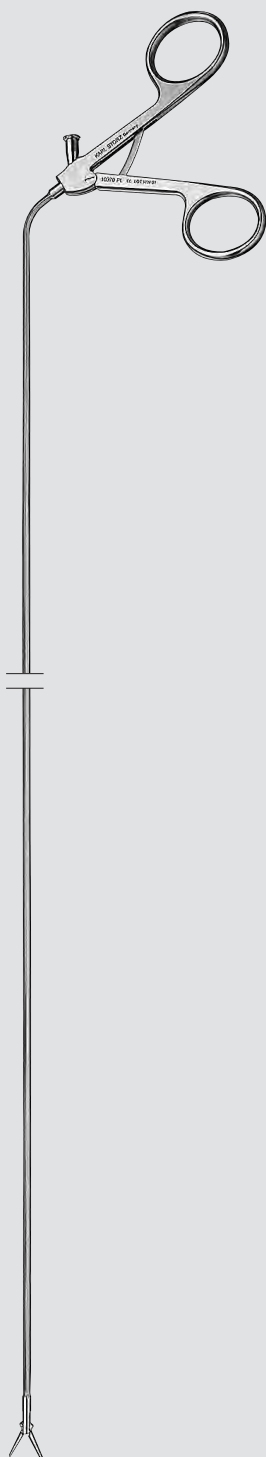
10374 HF



10374 L

Forceps for Bronchoscopy

Double action jaws



Sheath diameter 2.5 mm, working length 55 cm

- 10370 HL **Forceps**, alligator, for hard foreign bodies, with LUER-Lock irrigation connector for cleaning, double action jaws, sheath diameter 2.5 mm, working length 55 cm
- 10370 JL **Forceps**, pointed, serrated, for coins and flat foreign bodies, with LUER-Lock irrigation connector for cleaning, double action jaws, sheath diameter 2.5 mm, working length 55 cm
- 10370 KL **Forceps**, for peanuts and soft foreign bodies, with LUER-Lock irrigation connector for cleaning, double action jaws, sheath diameter 2.5 mm, working length 55 cm
- 10370 LL **Forceps**, spoon-shaped, round, for biopsy, with LUER-Lock irrigation connector for cleaning, double action jaws, diameter 5 mm, sheath diameter 2.5 mm, working length 55 cm
- 10370 UL **Forceps**, universal, for biopsy and foreign bodies removal, with LUER-Lock irrigation connector for cleaning, double action jaws, width 4 mm, sheath diameter 2.5 mm, working length 55 cm

Sheath diameter 2.5 mm, working length 50 cm

- 10370 H **Forceps**, alligator, for hard foreign bodies, with LUER-Lock irrigation connector for cleaning, double action jaws, sheath diameter 2.5 mm, working length 50 cm
- 10370 J **Forceps**, pointed, serrated, for coins and flat foreign bodies, with LUER-Lock irrigation connector for cleaning, double action jaws, sheath diameter 2.5 mm, working length 50 cm
- 10370 K **Forceps**, for peanuts and soft foreign bodies, with LUER-Lock irrigation connector for cleaning, double action jaws, sheath diameter 2.5 mm, working length 50 cm
- 10370 L **Forceps**, spoon-shaped, round, for biopsy, with LUER-Lock irrigation connector for cleaning, double action jaws, diameter 5 mm, sheath diameter 2.5 mm, working length 50 cm
- 10370 M **Forceps**, spoon-shaped, round, for biopsy, malleable, with LUER-Lock irrigation connector for cleaning, double action jaws, diameter 4 mm, sheath diameter 2.5 mm, working length 50 cm
- 10370 U **Forceps**, universal, for biopsy and foreign bodies removal, with LUER-Lock irrigation connector for cleaning, double action jaws, sheath diameter 2.5 mm, width 4 mm, working length 50 cm



10370 HL
10370 H



10370 JL
10370 J



10370 KL
10370 K



10370 LL
10370 L



10370 M



10370 UL
10370 U

Forceps for Bronchoscopy

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 **Forceps**, for peanuts and soft foreign bodies, double action jaws, sheath diameter 2 mm, working length 45 cm
- 10371 LL **Forceps**, spoon-shaped, round, for biopsy, double action jaws, diameter 4 mm, sheath diameter 2 mm, working length 45 cm
- 10371 UL **Forceps**, universal, for biopsy and foreign bodies removal, double action jaws, width 3 mm, sheath diameter 2 mm, working length 45 cm

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 **Forceps**, pointed, serrated, for coins and flat foreign bodies, double action jaws, sheath diameter 2 mm, working length 35 cm
- 10371 K **Forceps**, for peanuts and soft foreign bodies, double action jaws, sheath diameter 2 mm, working length 35 cm
- 10371 L **Forceps**, spoon-shaped, round, for biopsy, double action jaws, diameter 4 mm, sheath diameter 2 mm, working length 35 cm
- 10371 P **Forceps**, spoon-shaped, oval, fenestrated, for biopsy and foreign bodies removal, double action jaws, width 4 mm, sheath diameter 2 mm, working length 35 cm
- 10371 U **Forceps**, universal, for biopsy and foreign bodies removal, double action jaws, width 3 mm, sheath diameter 2 mm, working length 35 cm



10371 HL
10371 H



10371 J



10371 KL
10371 K



10371 LL
10371 L



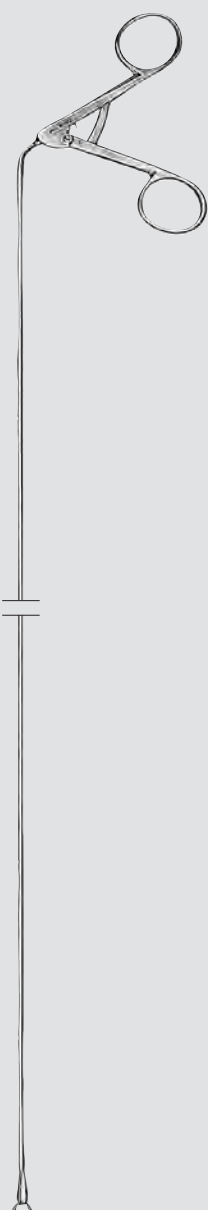
10371 P



10371 UL
10371 U

Forceps for Bronchoscopy

Double action jaws



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 | Forceps , pointed, serrated, for coins and flat foreign bodies, double action jaws, sheath diameter 1.5 mm, working length 35 cm |
| 10372 KL | Forceps , for peanuts and soft foreign bodies, double action jaws, sheath diameter 1.5 mm, working length 35 cm |
| 10372 LL | Forceps , spoon-shaped, round, for biopsy, double action jaws, diameter 3 mm, sheath diameter 1.5 mm, working length 35 cm |
| 10372 UL | Forceps , universal, for biopsy and foreign bodies removal, double action jaws, width 3 mm, sheath diameter 1.5 mm, working length 35 cm |



10372 HL



10372 JL



10372 KL



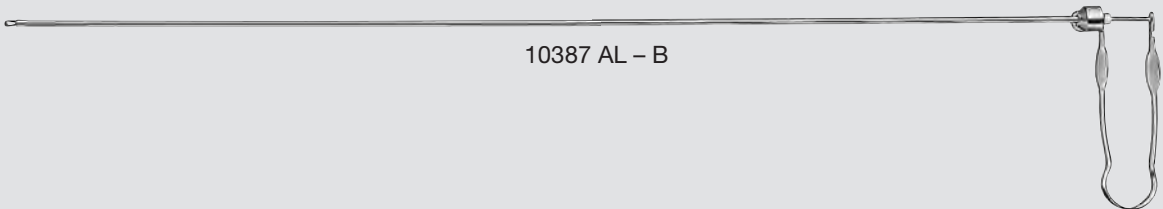
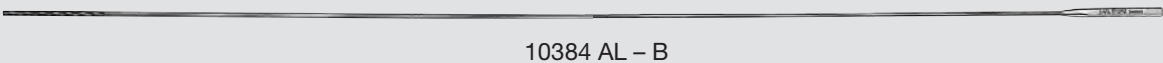
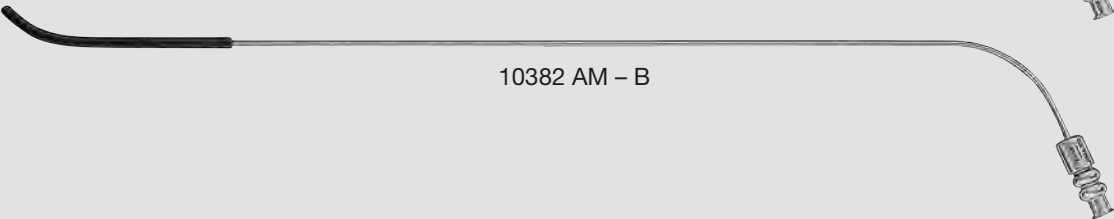
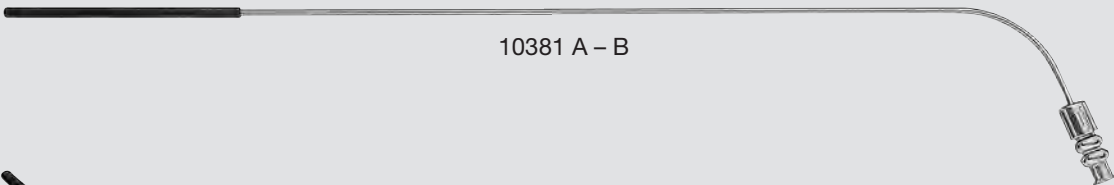
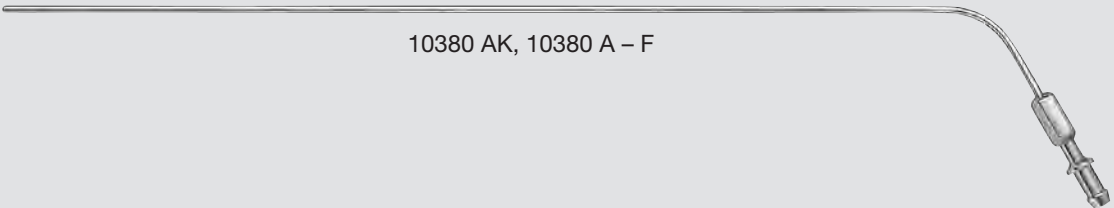
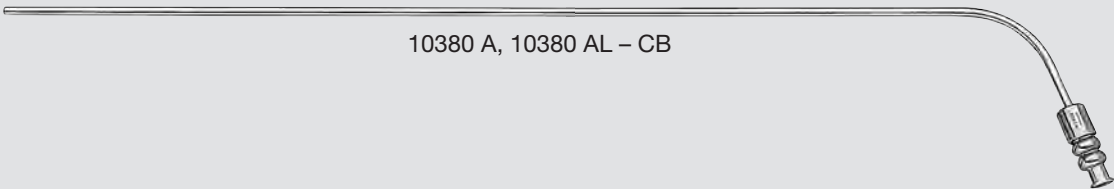
10372 LL



10372 UL

Accessories for Bronchoscopy

Suction Tubes, Cotton Carriers and Sponge Holders



Description of Instruments see page 43

Accessories for Bronchoscopy

Suction Tubes, Cotton Carriers, Sponge Holders and Catheters

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
10384 AL	Cotton Carrier
10387 AL	Sponge Holder , with spring handle

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
10387 A	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, diameter 4 mm
10383 AM	Suction Tube , with cut-off hole, diameter 3 mm

Working length 35 cm

10380 AK	Suction Tube , with cut-off hole, diameter 4 mm
10380 B	Suction Tube , 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, outer diameter 2 mm
10382 B	Suction Tube , with rubber tip, curved, outer diameter 2 mm
10390 BN	Coagulation Suction Tube , insulated, with connector pin for unipolar coagulation, diameter 3 mm
10384 B	Cotton Applicator
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 D	Same , diameter 3 mm
10383 E	Same , diameter 4 mm

For use through the lateral working channel of a rigid esophagoscope

10468 B	Suction Catheter , 7.5 Fr., with Adaptor 10479 B
10468 C	Same , 6 Fr., with Adaptor 10479 C
10468 D	Same , 4.5 Fr., with Adaptor 10479 F



10432 N/T

10434

- 10432 N

Aspirator, for collecting secretions, with cut-off hole, can be connected to suction tubes or suction catheters
- 10432 T

Same, without cut-off hole
- 10434

HUZLY Aspirator and Bronchus Irrigator, with Graduated Container 10455 A and Stopcock Cone, with blower ball 10434 H. 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

Puncture Cannula, for transbronchial biopsy, distal straight, diameter 1.6 mm, working length 47 cm
- 10438

Same, distally angled



Accessories for Bronchoscopy

Atomizers and Foreign Body Baskets



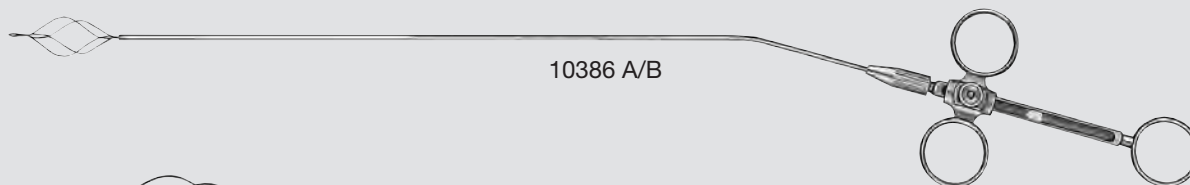
10454 K

10452 AK/BK

10452 AK **Bronchial Atomizer**, length 50 cm
including:
Graduated Container
Rubber Bulb

10452 BK **Bronchial Atomizer**, length 40 cm
including:
Graduated Container
Rubber Bulb

10454 K **Atomizer**, for the larynx
including:
Graduated Container
Rubber Bulb



10386 A/B



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

10386 B **Same**, working length 35 cm

Components/Spare Parts see chapter 11

Accessories for Bronchoscopy

Antifog Solution



15006 B

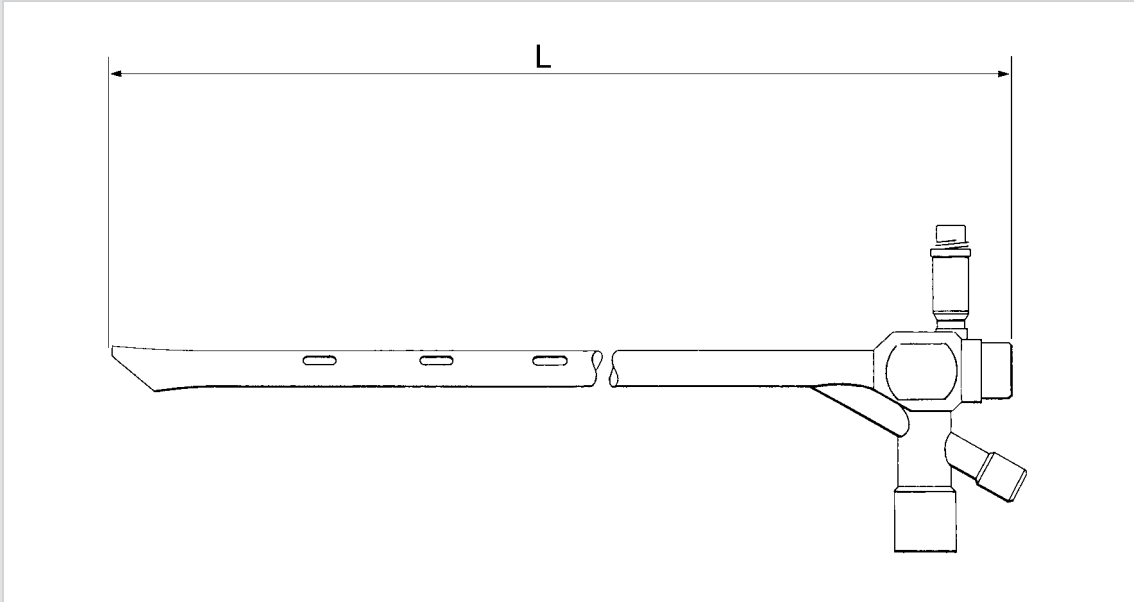


15006 C



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 |

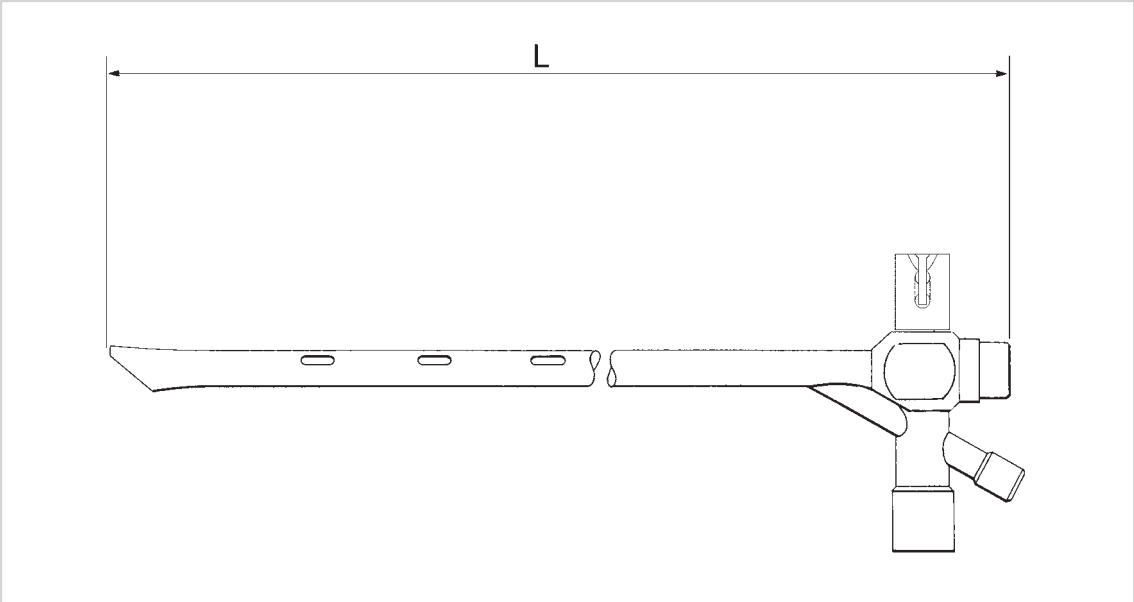


Art. No.	Size	Total Length – L –	Telescopes	Optical Forceps and Instruments
10318 BK	8.5	43 cm	10320	for use with HOPKINS® Telescopes 10320 AA/BA: 10350 HF, 10350 KF, 10350 L, 10350 ST, 10350 U
10318 CK	7.5	43 cm	10320	for use with HOPKINS® Telescopes 10320 AA/BA: 10350 HF, 10350 KF, 10350 L, 10350 ST, 10350 U
10318 DK	6.5	43 cm	10328	for use with HOPKINS® Telescopes 10328 AA: 10352 H, 10352 KF, 10352 L and 10352 U

System Overview

Universal Bronchoscopes and Tracheoscopes

with proximal illumination

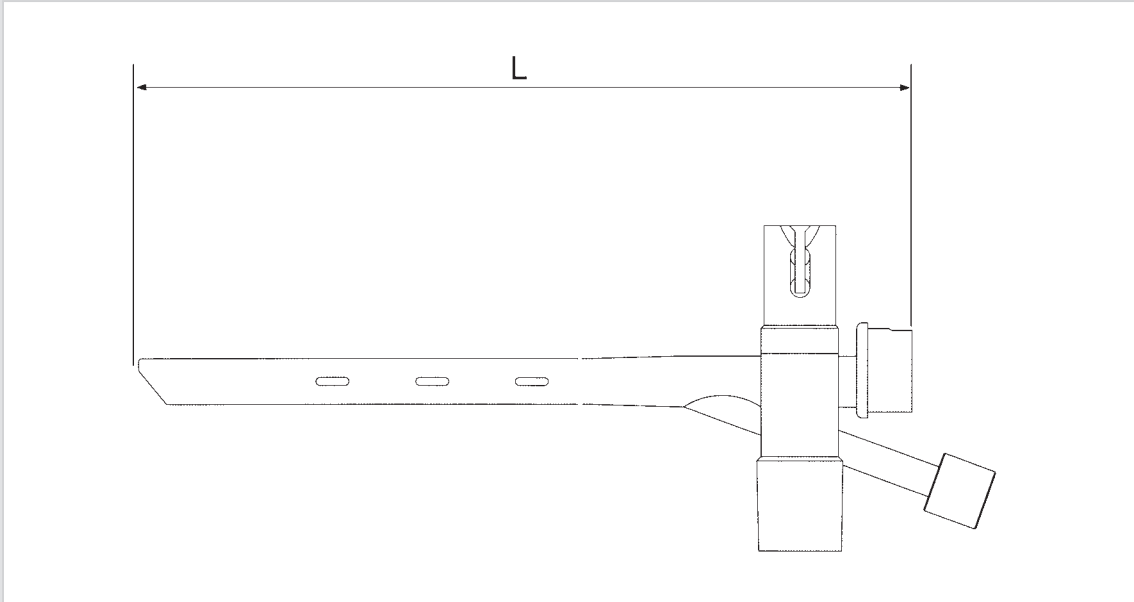


Art. No.	Size	Total Length – L –	Telescopes with Guide Sheaths	Optical Forceps and Instruments
10318 H	16	33 cm	10320	for use with HOPKINS® Telescopes 10320 AA/BA: 10350 HF, 10350 KF, 10350 L, 10350 ST, 10350 U
10318 G	14	33 cm	10320	
10318 F	12	33 cm	10320	
10318 GL	14	43 cm	10320 with 10320 SP	for use with HOPKINS® Telescopes 10320 AA/BA: 10350 HF, 10350 KF, 10350 L, 10350 ST, 10350 U
10318 FL	12	43 cm	10320 with 10320 SP	
10318 ER	11	43 cm	10320 with 10320 SP	
10318 BP	8.5	43 cm	10320 with 10320 SP	for use with HOPKINS® Telescopes 10320 AA/BA: 10350 HF, 10350 KF, 10350 L, 10350 ST, 10350 U
10318 CP	7.5	43 cm	10320 with 10320 SP	
10318 DP	6.5	43 cm	10328 with 10328 SP 10320 with 10320 SP	for use with HOPKINS® Telescopes 10328 AA/BA: 10352 H, 10352 KF, 10352 L, 10352 U for use with HOPKINS® Telescopes 10320 AA/BA: 10350 HF, 10350 KF, 10350 L, 10350 ST, 10350 U

System Overview

DOESEL-HUZLY Pediatric Bronchoscopes

with proximal illumination



Art. No.	Size	Total Length – L –	Telescopes with Guide Sheaths	Optical Forceps
10339 AL 10339 BL	6 5	40 cm	10023 with 10338 R	for use with HOPKINS® Telescope 10023 ABA: 10379 CF, 10379 HF, 10379 KF, 10379 L
10339 A 10339 B 10339 BB 10339 C 10339 G 10339 CD	6 5 4.5 4 3.7 3.5	30 cm	10324 with 10338 RK 10020 with 10338 LCD	for use with HOPKINS® Telescope 10324 AA: 10378 CF, 10378 HF, 10378 KF, 10378 KSF, 10378 L, 10378 M, 10378 U for use with HOPKINS® Telescope 10023 ABA: 10379 CF, 10379 HF, 10379 KF, 10379 L
10339 EEE	3		10324 with 10338 RK 10020 with 10338 LCD	–
10339 CC 10339 GG 10339 DD	4 3.7 3.5	26 cm	10324 with 10338 RL 10020 with 10338 R	for use with HOPKINS® Telescope 10020 ATA: 10377 CF, 10377 HF, 10377 KF, 10377 U for use with HOPKINS® Telescope 10324 AA: 10378 CF, 10378 HF, 10378 KF, 10378 KSF, 10378 L, 10378 M, 10378 U
10339 EE	3		10324 with 10338 RL 10020 with 10338 R	for use with Telescope 10030 AA: 10374 HF, 10374 L
10339 D	3.5	18.5 cm	10018 with 10338 LCD	for use with HOPKINS® Telescope 10020 ATA: 10377 CF, 10377 HF, 10377 KF, 10377 U for use with HOPKINS® Telescope 10324 AA: 10378 CF, 10378 HF, 10378 KF, 10378 KSF, 10378 L, 10378 M, 10378 U
10339 E	3		10018 with 10338 LCD	for use with Telescope 10030 AA: 10374 HF, 10374 L
10339 F	2.5		10017 with 10338 LCD 10018 with 10338 LCD	for use with Telescope 10030 AA: 10374 HF, 10374 L





ESOPHAGOSCOPY DIVERTICULOSCOPY

ESOPHAGOSCOPES AND
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FOR ADULTS52-54

ESOPHAGOSCOPES
FOR CHILDREN55

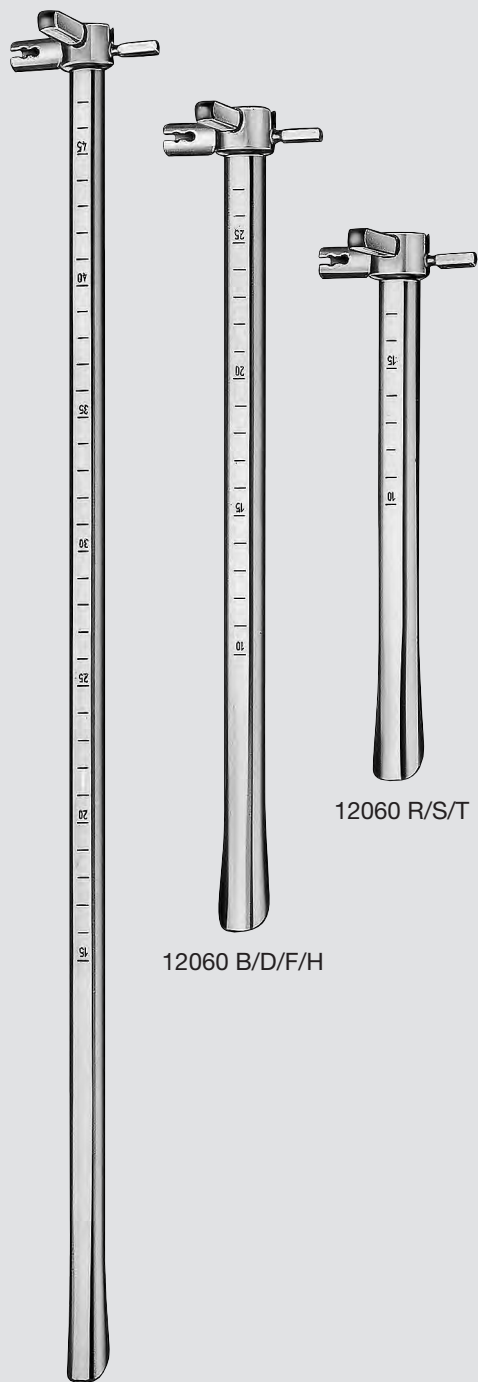
SYSTEM OVERVIEWS56-57

DIVERTICULOSCOPES58-60

ROBERTS-JESBERG Esophagoscopes and Hypopharyngoscopes

with distal and proximal illumination

STORZ
KARL STORZ — ENDOSKOPE



Size 12 x 16

- 12060 A ROBERTS-JESBERG **Esophagoscope**, oval, size 12 x 16, length 50 cm
- 12060 AV **Same**, length 40 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 10

- 12060 H ROBERTS-JESBERG **Esophagoscope**, oval, size 7 x 10, 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

12060 A/C/E

12060 R/S/T

12060 B/D/F/H



10101 FA

12061 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**, length 50 cm, for use with esophagoscopes
12061 AV **Same**, length 40 cm
12061 B **Same**, length 30 cm
12061 C **Fiber Optic Light Carrier**, length 20 cm, for use with hypopharyngoscopes

Additional Accessories

- 10338 TA **Adjustable Magnifier, autoclavable**, swing-away type, with plug connection
12070 **Handle**, for esophagoscopes



10338 TA



12070

HOPKINS® Telescope and Optical Forceps



For use with Esophagoscope 12060, lengths 50 cm and 40 cm

12015 AA **HOPKINS® Straight Forward Telescope 0°**, diameter 5.5 mm, length 53 cm, **autoclavable**, fiber optic light transmission incorporated, color code: green

Instruments for use with HOPKINS® Telescope 12015 AA

- 12016 K **Optical Forceps**, for the controlled grasping of peanuts and soft foreign bodies, incl. cleaning adaptor
- 12016 L **Optical Forceps**, spoon-shaped, round, for biopsy, incl. cleaning adaptor
- 12016 M **Optical Forceps**, with alligator jaws, for the controlled grasping of hard foreign bodies, incl. cleaning adaptor
- 12016 N **Optical Forceps**, universal, for biopsy and foreign body removal, incl. cleaning adaptor
- 12016 X **Telescope Guide**, for use with Esophagoscopes 12060 A/C/E and HOPKINS® Telescope 12015 AA



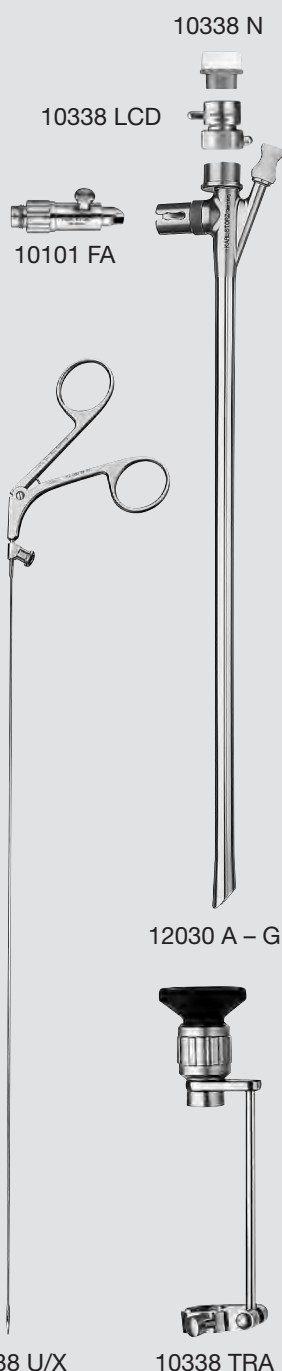
Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Pediatric Esophagoscopes

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 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**
- 10338 LCD **Telescope Bridge**, for fixed position between HOPKINS® Telescopes 10017 AA, 10018 AA, 10020 ATA and pediatric Bronchoscopes 10339 A/B/BB/C/G/CD/D/E/F as well as pediatric Esophagoscopes 12030 A/B/C/F/G

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, with cleaning connector, working length 35 cm
- 10338 X **Forceps**, spoon-shaped, for biopsy, single action jaws, semiflexible, width of jaws 1.2 mm, sheath diameter 1 mm, with cleaning connector, working length 35 cm

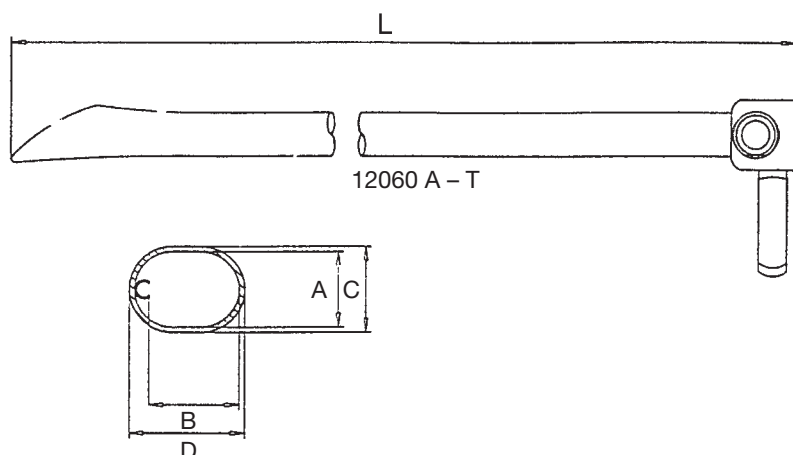
Telescopes, Optical Forceps, Forceps and Accessories for Rigid Esophagoscopy see chapter 2, pages 32-38

System Overview

ROBERTS-JESBERG Esophagoscopes and Hypopharyngoscopes 12060

with distal and proximal illumination

STORZ
KARL STORZ — ENDOSKOPE

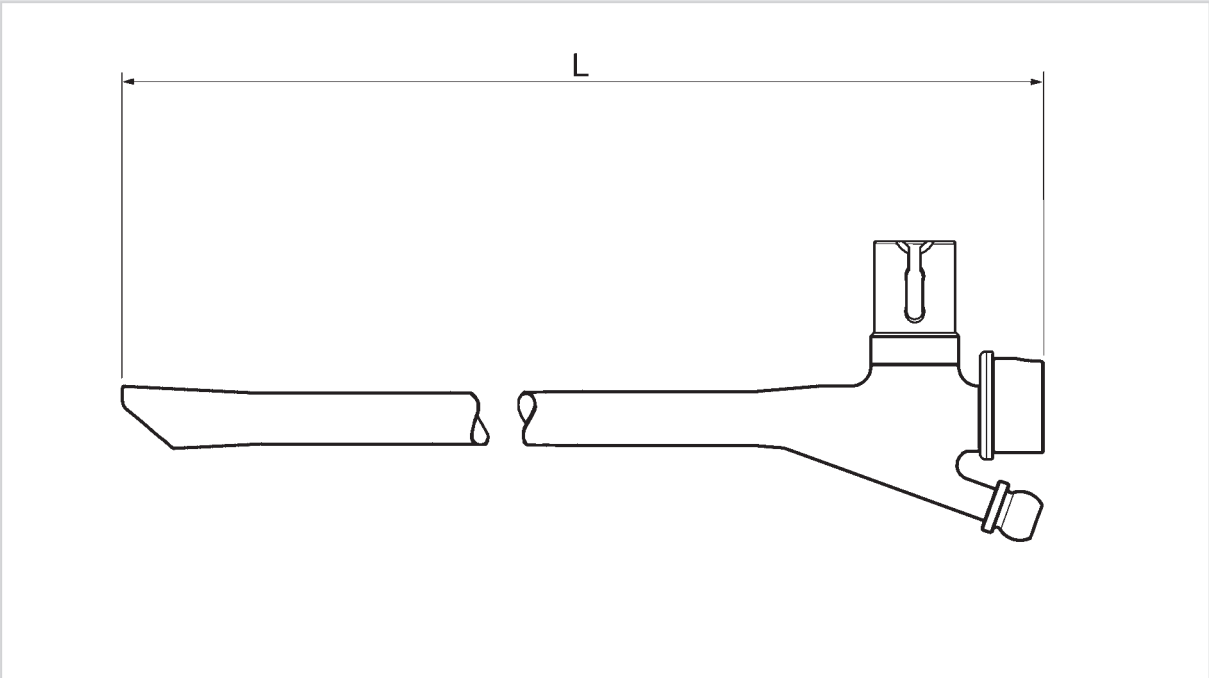


Art. No.	Total Length – L –	Inner Diameter Size – A x B –	Outer Diameter Size – C x D –	Telescopes with Guide Sheaths	Optical Forceps
12060 A	50 cm	11 x 12	12 x 16	12015 AA with 12016 X	for use with HOPKINS® Telescope 12015 AA: 12016 K, 12016 L, 12016 M, 12016 N
12060 AU	35 cm			12015 AA	
12060 AV	40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

System Overview

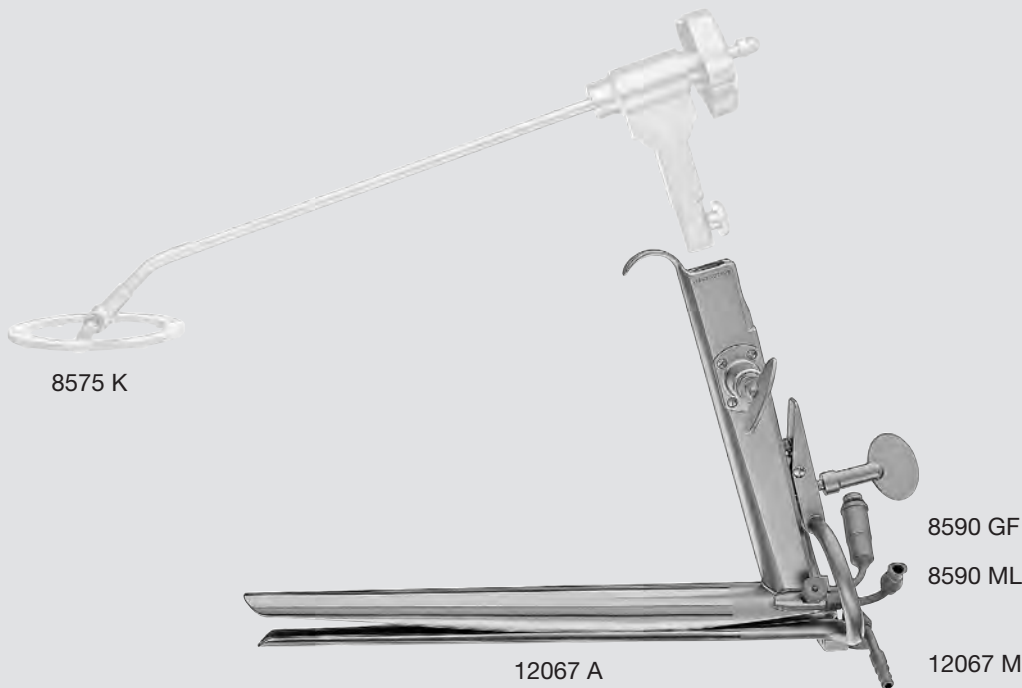
Esophagoscopes 12030

with proximal illumination

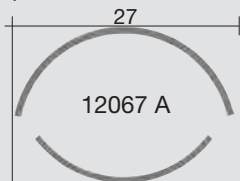


Art. No.	Size	Total Length – L –	Telescopes with Guide Sheaths	Optical Forceps
12030 A	6	30 cm	10324 AA with 10338 RK 10020 with 10338 LCD	for use with HOPKINS® Telescope 10324 AA: 10378 CF, 10378 HF, 10378 KSF, 10378 L, 10378 M, 10378 U0378 U
12030 B	5			
12030 C	4			
12030 F	3.5	18.5 cm	10018 AA 10017 AA with 10338 LCD	for use with HOPKINS® Telescope 10020 ATA: 10377 CF, 10377 HF, 10377 KF, 10377 U
12030 G	3			for use with Telescope 10030 AA: 10374 HF, 10374 L

WEERDA Distending Diverticuloscope for CO₂ LASER Technique

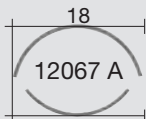


Outer dimensions
in mm:
proximal:



Spread: max. 40
min. 29

distal:



Spread: max. 65
min. 7

- 12067 A

WEERDA **Distending Diverticuloscope**, length 24 cm,
with 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
- 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

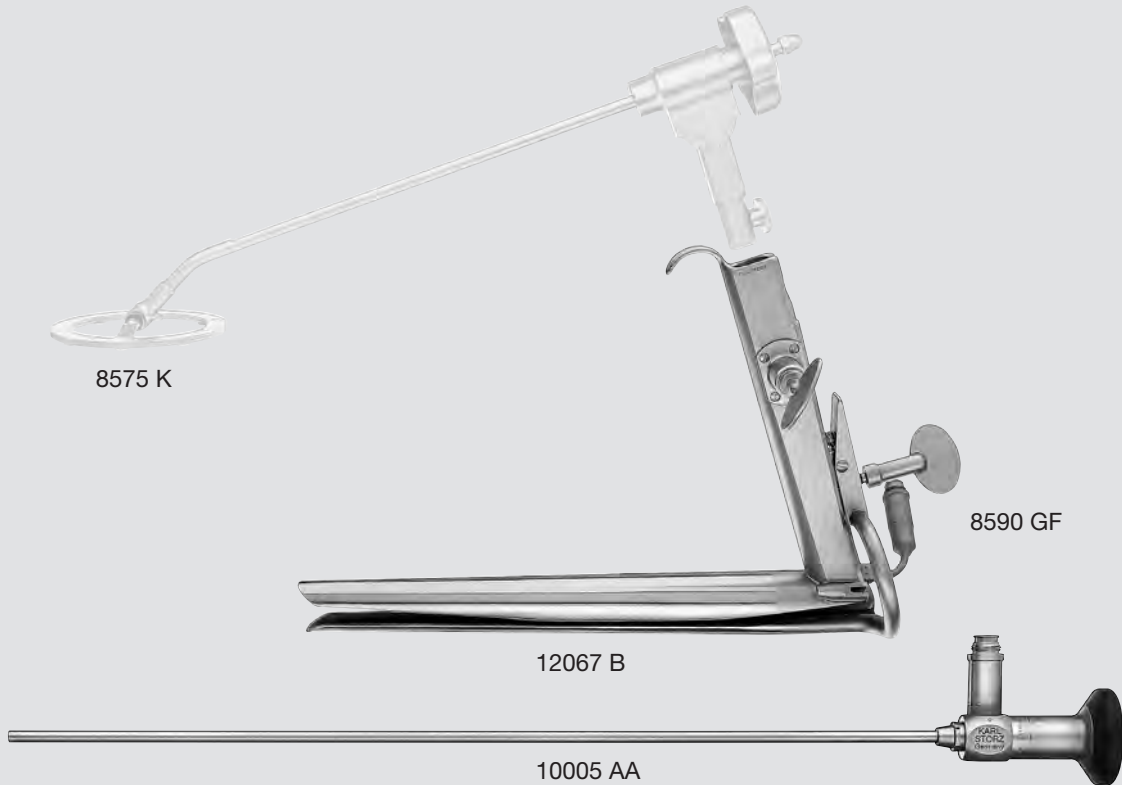
Laryngoscope Holder and Chest Support,
GÖTTINGEN model, with adjustment wheel
including:
Support Rod, movable, with metal ring, diameter 9 cm,
length 34 cm

or
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
- 8575 KC

Components/Spare Parts see chapter 11

WEERDA Distending Diverticuloscope for Stapling Technique

For use with HOPKINS® Telescope 10005 AA

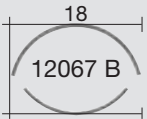


Outer dimensions
in mm:
proximal:



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® 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

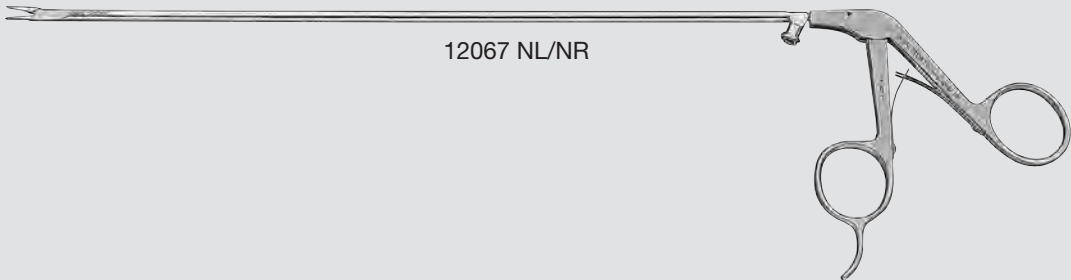
**BENJAMIN-PARSONS Laryngoscope Holder and Chest
Support**, GÖTTINGEN model, with adjustment wheel
including:

BENJAMIN-PARSONS Support Rod, movable, with metal ring,
diameter 12 cm and 2 lateral set screws, length 34 cm

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog
Components/Spare Parts see chapter 11

Instruments for Diverticulosopes

Clip Forceps



12067 NL/NR



12067 NL

Clip Forceps, jaws curved to left, with cleaning connector, 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



MEDIASTINOSCOPY

CARLENS MEDIASTINOSCOPES62

MEDIAFIT –
DISMANTLING INSTRUMENTS
FOR MEDIASTINOSCOPY63-64

CLICK^{line} AND FURTHER INSTRUMENTS
FOR MEDIASTINOSCOPY65-70



10970 B

- 10970 A CARLENS **Mediastinoscope**, with continuous 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

MEDIAFIT Forceps

Dismantling

With the new generation of **MEDIAFIT** instruments, the proven forceps in mediastinoscopy obtain improved ergonomics, reprocessing and user-friendliness.

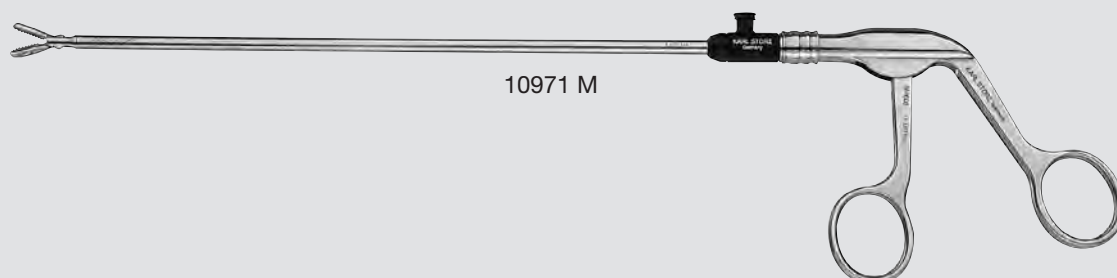
Completely detachable, the new **MEDIAFIT** forceps series meets the highest demands in instrument reprocessing. No more inaccessible channels or other dirt traps ensures cleaning, disinfection and sterilization without residue. This makes perfect hygiene the easiest thing in the world – without compromising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

MEDIAFIT 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.

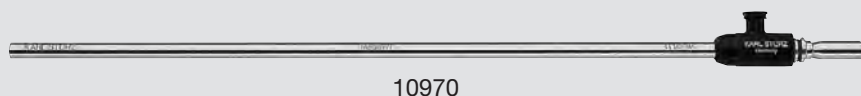
The dismantling system makes it possible to combine one handle with all jaw types. This enables a compact instrument setup as well as easy exchange/repair of individual components, providing significant economic benefits.

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



MEDIAFIT Outer Sheath



10970

MEDIAFIT Outer Sheath, with cleaning connector,
diameter 5 mm, length 21 cm



MEDIAFIT Forceps

Dismantling



Size 5 mm

Length	Handle
	550000
21 cm	

Single action jaws

Working Insert	Complete Instrument
10900 GO	10971 GO
	MEDIAFIT Biopsy Forceps , oval jaws, size 8 x 16 mm
10900 GP	10971 GP
	MEDIAFIT Biopsy Forceps , oval jaws, size 6 x 12 mm

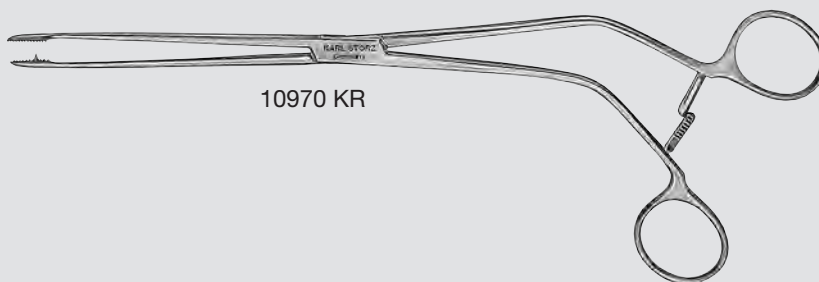
Double action jaws

10900 GR	10971 GR
	MEDIAFIT Biopsy Forceps , spoon-shaped jaws, jaw diameter 5 mm
10900 M	10971 M
	MEDIAFIT MAASSEN Sponge and Dissecting Forceps , fenestrated

Please note:
For **MEDIAFIT** 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

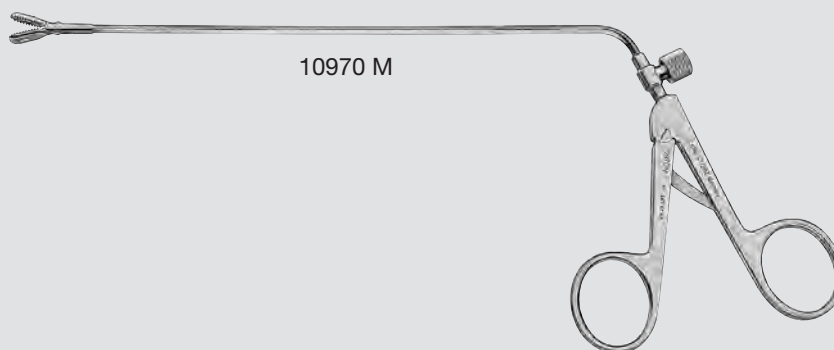


10970 K

Sponge and Dissecting Forceps,
length 20 cm

10970 KR

Sponge and Dissecting Forceps,
with ratchet, length 20 cm



10970 M



10970 M

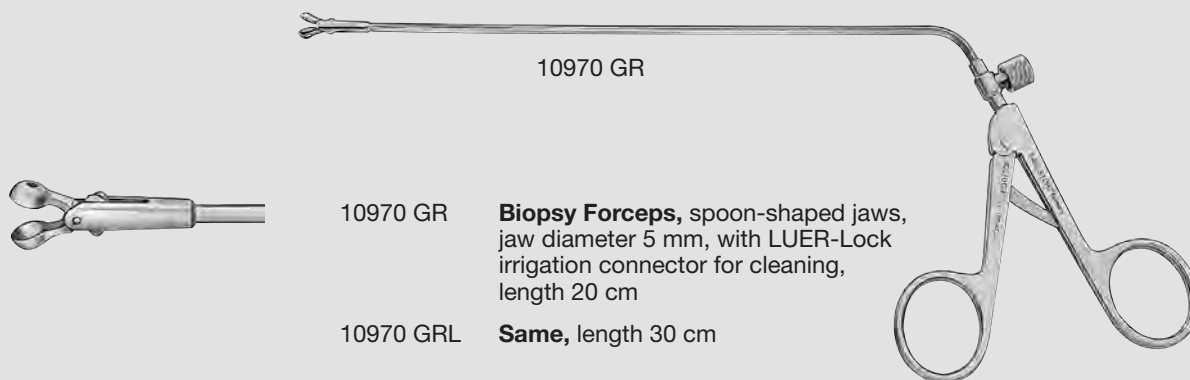
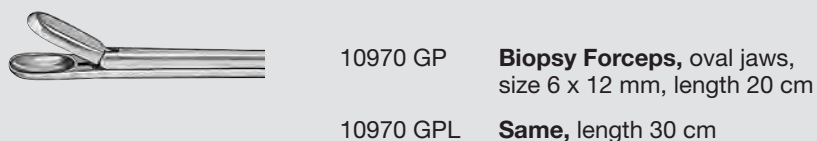
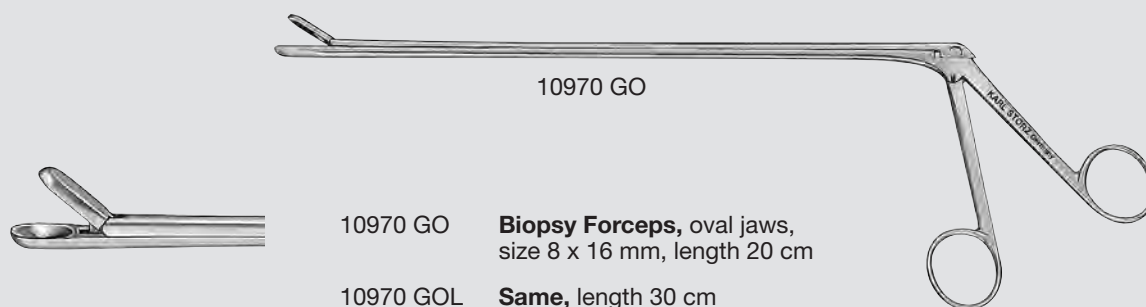
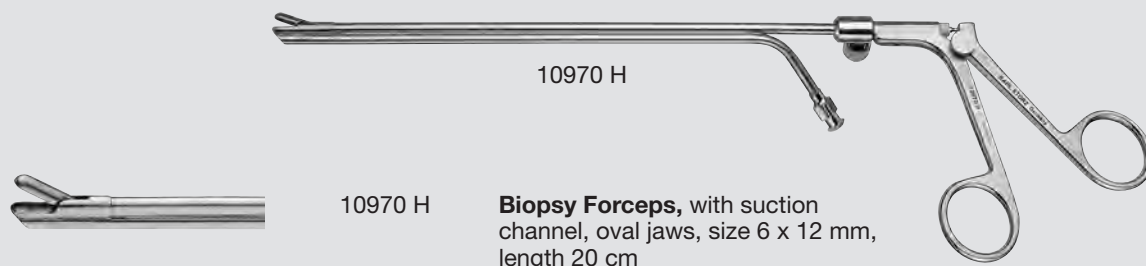
MAASSEN Sponge and Dissecting Forceps,
fenestrated, double action jaws, with cleaning
connector, length 20 cm

10970 ML

Same, length 30 cm

Biopsy Forceps

Lengths 20 and 30 cm



Plastic Handle, Metal Outer Sheaths

for biopsy forceps and scissors, insulated,
CLICK'line® – rotating, with connector pin for unipolar coagulation

Plastic Handle, without ratchet, with larger contact area at the finger ring, made of high-quality plastics – meeting the highest safety requirements for both patient and user



The anatomy of the hand varies in size from person to person. Wider contact areas at the finger and thumb ring and an ergonomic design ensures this **CLICK'line®** handle is comfortable to hold, preventing pressure marks even after hours of use. Due to its ergonomic shape, the new handle can be used in various holding positions and, therefore, meets a wide range of demands.

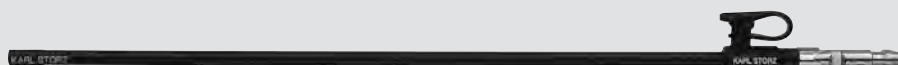
Special Features:

- **With larger contact area at the finger ring**
- **Comfortable handling**
- **Prevention of pressure marks**
- **Variable holding positions due to ergonomic shape**



33151 **CLICK'line® Plastic Handle, without ratchet, with larger contact area at the finger ring**

CLICK'line® Metal Outer Sheath, insulated



33250

- 33250 **CLICK'line® Metal Outer Sheath, insulated, with LUER-Lock irrigation connector for cleaning, size 5 mm, length 25 cm**
- 33200 **Same, length 30 cm**



- 29100 **Plug, for LUER-Lock irrigation connector for cleaning, black, autoclavable, package of 10**
- 29100 A **Color-Coded Plug, for LUER-Lock irrigation connector for cleaning, red, green, black, 10 each, package of 30**

Biopsy Forceps, Scissors

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

Size 5 mm



Length	Handle
	33151
25 cm	
30 cm	

Single action jaws

Working Insert	Complete Instrument
34250 MB	34151 MB
34210 MB	34251 MB

15

CLICK'line MANHES Biopsy Forceps

Double action jaws

33250 MK	33151 MK
----------	----------

12

CLICK'line METZENBAUM Scissors, curved

34210 MS	34251 MS
----------	----------

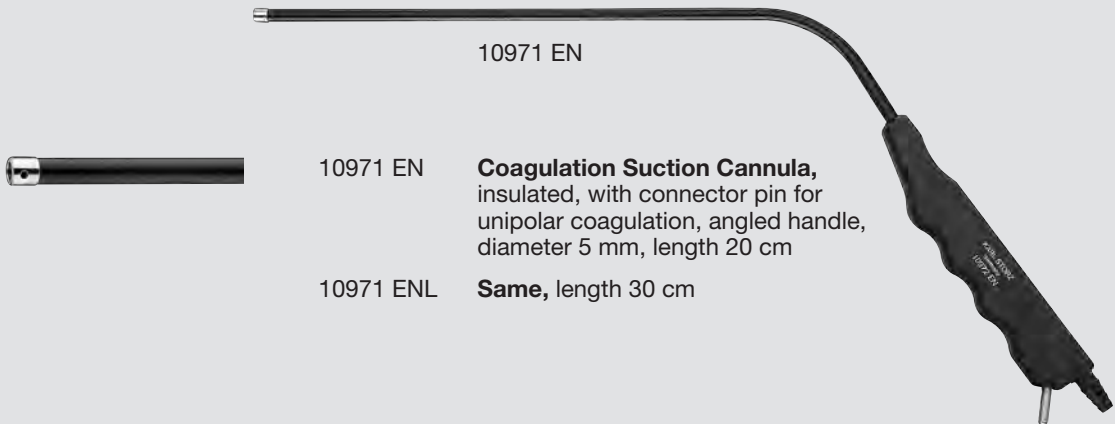
15

CLICK'line METZENBAUM Scissors, curved

Please note:
For CLICK'line instruments only the **individual component parts** are numbered. The catalog number for the complete **instrument**, as shown above against the **red** background, does not appear on the instrument.

Coagulation and Suction Cannulas, Aspiration Cannulas

Lengths 20 and 30 cm



10971 EN

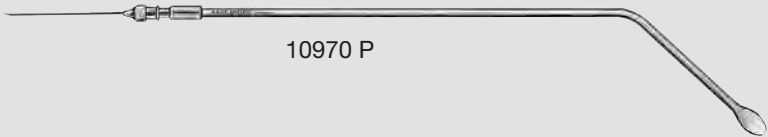


10971 EN

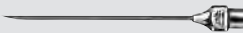
Coagulation Suction Cannula, insulated, with connector pin for unipolar coagulation, angled handle, diameter 5 mm, length 20 cm

10971 ENL

Same, length 30 cm



10970 P



10970 P

Aspiration Cannula, made of glass, length 20 cm including:
Injection Needle, package of 12

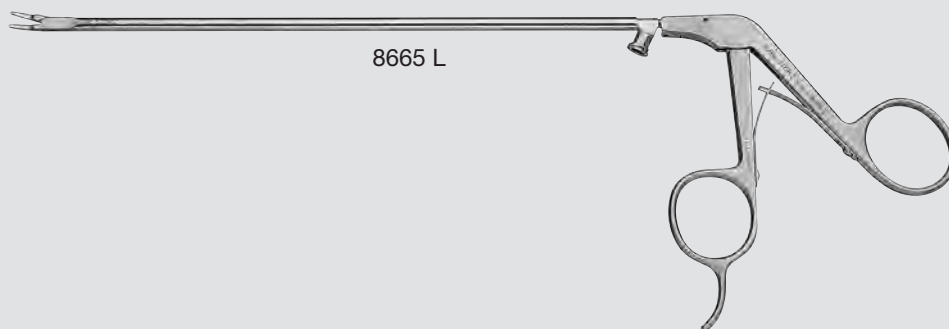
10970 PL

Aspiration Cannula, made of glass, length 30 cm including:
Injection Needle, package of 12

10970 PS

Silicone Tube, with LUER-Lock adaptor, for connecting Aspiration Cannulas 10970 P/PL to a LUER-Lock suction syringe

Components/Spare Parts see chapter 11



8665 L



8665 L

Clip Forceps, jaws angled to left, with LUER-Lock irrigation connector for cleaning, working length 22 cm, for use with Clip 8665 T



8665 R

Same, jaws angled to right



8665 T

Clip, titanium LT 200, medium, 5 mm, sterile, package of 36 cartridges with 6 clips each



MEDICAL THORACOSCOPY

TELESOPES AND
OPTICAL INSTRUMENTS72-74

TROCARS75

ACCESSORIES76

Medical thoracoscopy is an excellent method for exploration of the thoracic cavity in the case of pleural effusions of unknown origin, pleural processes that cannot be accessed by transthoracic biopsy or pneumothorax requiring drainage. Furthermore, this method is suitable for talc powder pleurodesis (poudrage) and for the removal of pleural empyema/complicated parapneumonic effusions. The method is safe and highly effective.

The procedure is usually carried out under local anesthesia with analgosedation. This eliminates the need for general anesthesia. The optical instruments

with the corresponding HOPKINS® telescope provide a compact system with only one access.

The small diameter of the optical instruments enables medical thoracoscopy to be performed using a 6 mm trocar.

The use of a soft and flexible plastic trocar allows an atraumatic penetration of the intercostal space.

*R. HEINE, M.D.,
Krankenhaus St. Elisabeth und St. Barbara,
Halle/Saale, Germany*

Special Features:

- 4 mm HOPKINS® telescope 30° with proven image quality
- Possible to connect telescope to various working elements
- The optical suction tube is not only suitable for the aspiration of fluids but also acts as a protective sheath for the telescope at the start of the procedure to achieve a good overview of the situation
- The optical biopsy forceps permits high-precision cutting
- The optical powder blower produces a fine spray thanks to optimal talc dosage and dispersion



Fig. 1: Pleural carcinosis/adhesions

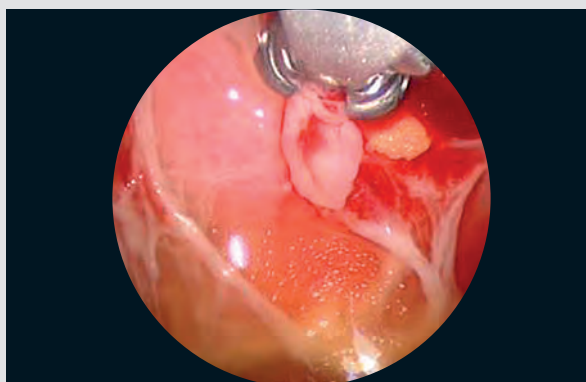


Fig. 2: Biopsy (optical forceps)



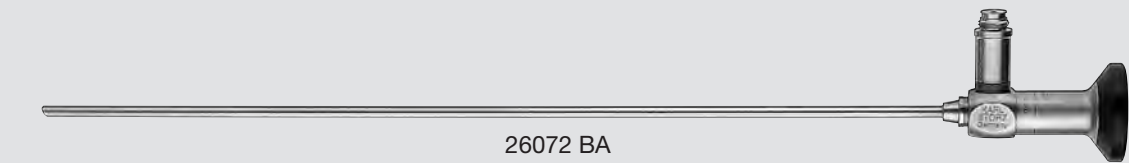
Fig. 3: Left pleural dome (aortic arch and left subclavian artery)

Images and text courtesy of R. HEINE, M.D., Krankenhaus St. Elisabeth und St. Barbara, Halle/Saale, Germany

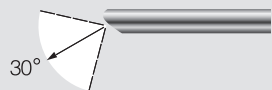
HOPKINS® Telescope and Optical Instruments

for medical thoracoscopy

Diameter 4 mm, length 30 cm
For use with optical instruments



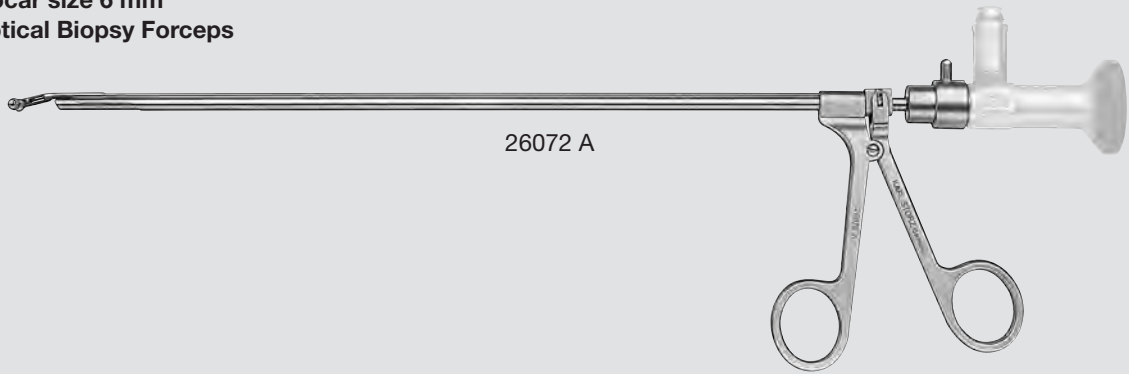
26072 BA



26072 BA

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

Trocar size 6 mm
Optical Biopsy Forceps



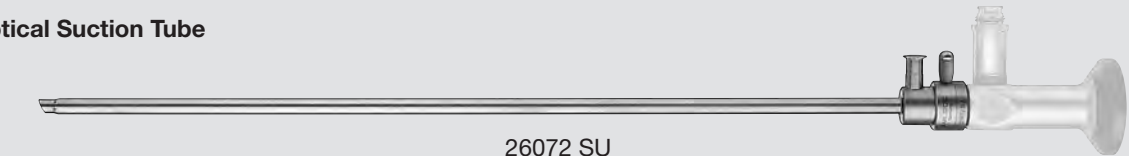
26072 A



26072 A

Optical Biopsy Forceps, spoon-shaped, round, incl. cleaning adaptor, for use with HOPKINS® Telescope 26072 BA

Optical Suction Tube



26072 SU



26072 SU

Optical Suction Tube, for use with HOPKINS® Telescope 26072 BA

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

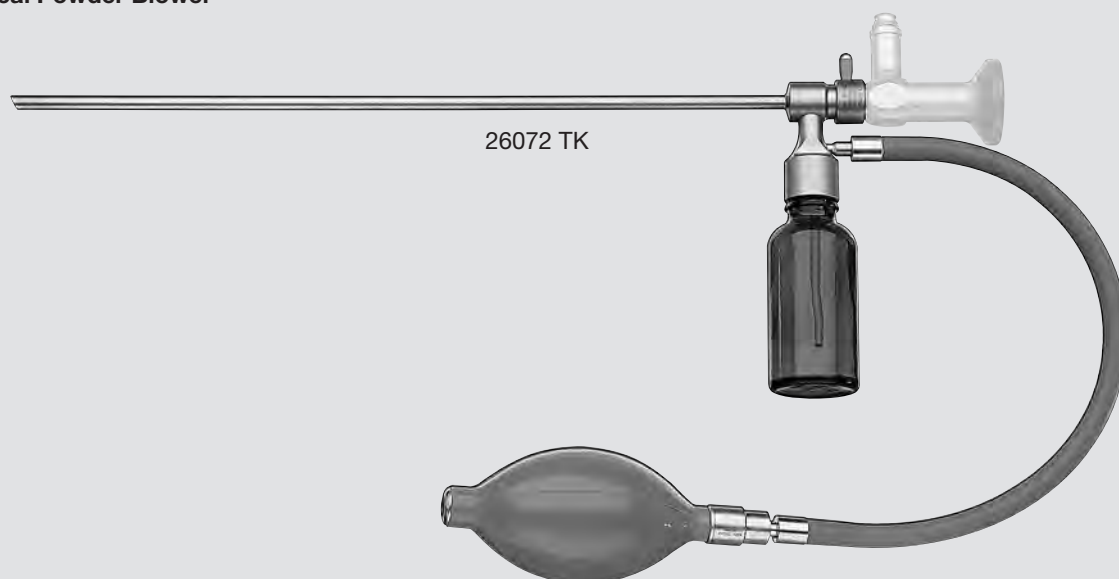
Optical Powder Blower

for medical thoracoscopy

Size 5 mm

Trocar size 6 mm

Optical Powder Blower



26072 TK



26072 TK

Optical Powder Blower, for use with
HOPKINS® Telescope 26072 BA

including:

Sheath for Optical Powder Blower

Rubber Tube

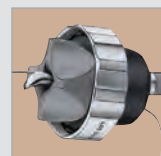
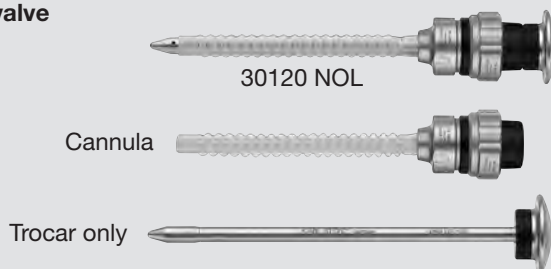
Rubber Bulb



Replacement Glass

Components/Spare Parts see chapter 11

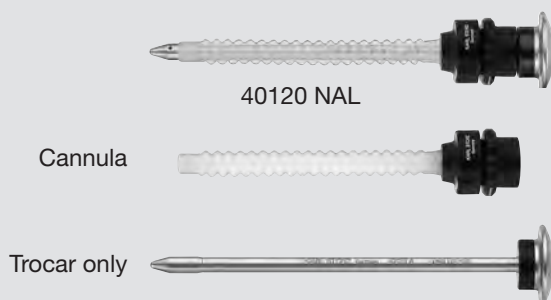
Trocars with Flexible Cannulas



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 thread and silicone leaflet valve Trocar only	30120 NOL
		30120 NL
		30120 NO
Accessory	Plastic Cannula, autoclavable, for flexible trocars, package of 5 	30120 X

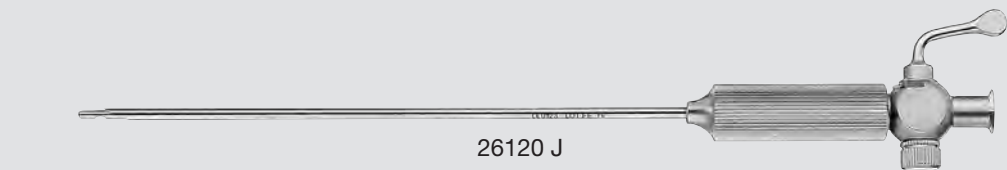
Size 6 mm
without valve



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

Pneumoperitoneum Needle and Pleura Biopsy Needle

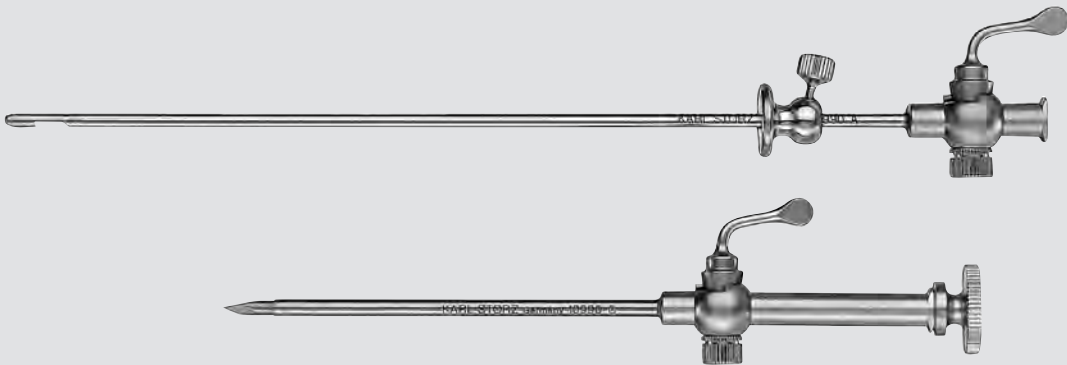
Pneumoperitoneum Needle



26120 J

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

RAMEL Pleurabiopsy Needle



10990

RAMEL **Pleurabiopsy Needle**
including:
Biopsy Needle
Rider
Cannula
Trocar only

Components/Spare Parts see chapter 11



VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS)

3D CAMERA PLATFORMS ^{NEW}78-83

ENDOCAMELEON® AND
HOPKINS® TELESCOPES84-87

TROCARS88-89

CLICKlinē CLAMPS, DISSECTING
AND GRASPING FORCEPS90-97

CLICKlinē FORCEPS AND SCISSORS
WITH CONNECTOR PIN FOR
UNIPOLAR COAGULATION98-99

ROBI® FORCEPS AND SCISSORS
WITH CONNECTOR PIN FOR
BIPOLAR COAGULATION100-105

CUTTING INSTRUMENT ^{NEW}
FOR SYMPATHECTOMY106

SUCTION AND IRRIGATION TUBES
WITH HANDLES AND
TUBING SETS107-109

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POWDER BLOWERS112

CURETTE FOR PLEURA-ABRASIO,
SURGICAL SPONGE HOLDERS113

NEEDLE HOLDERS,
PALPATION PROBES, KNOT TIERS114-119

IMAGE1 S™ 3D

A Dimension Ahead

The impressive IMAGE1 S™ camera platform from KARL STORZ provides brilliant image quality for a wide range of application fields such as thoracic surgery, laparoscopy, gynecology or microsurgical procedures. Thanks to the modular system design, existing 2D systems can be upgraded to 3D.

- 3D system featuring video endoscopes with a diameter of 10 mm and VITOM® 3D
- Easy toggle between 3D and 2D
- Seamless integration into the IMAGE1 S™ platform
- Three innovative visualization possibilities for easy tissue differentiation: CLARA, CHROMA and SPECTRA – in 2D and 3D

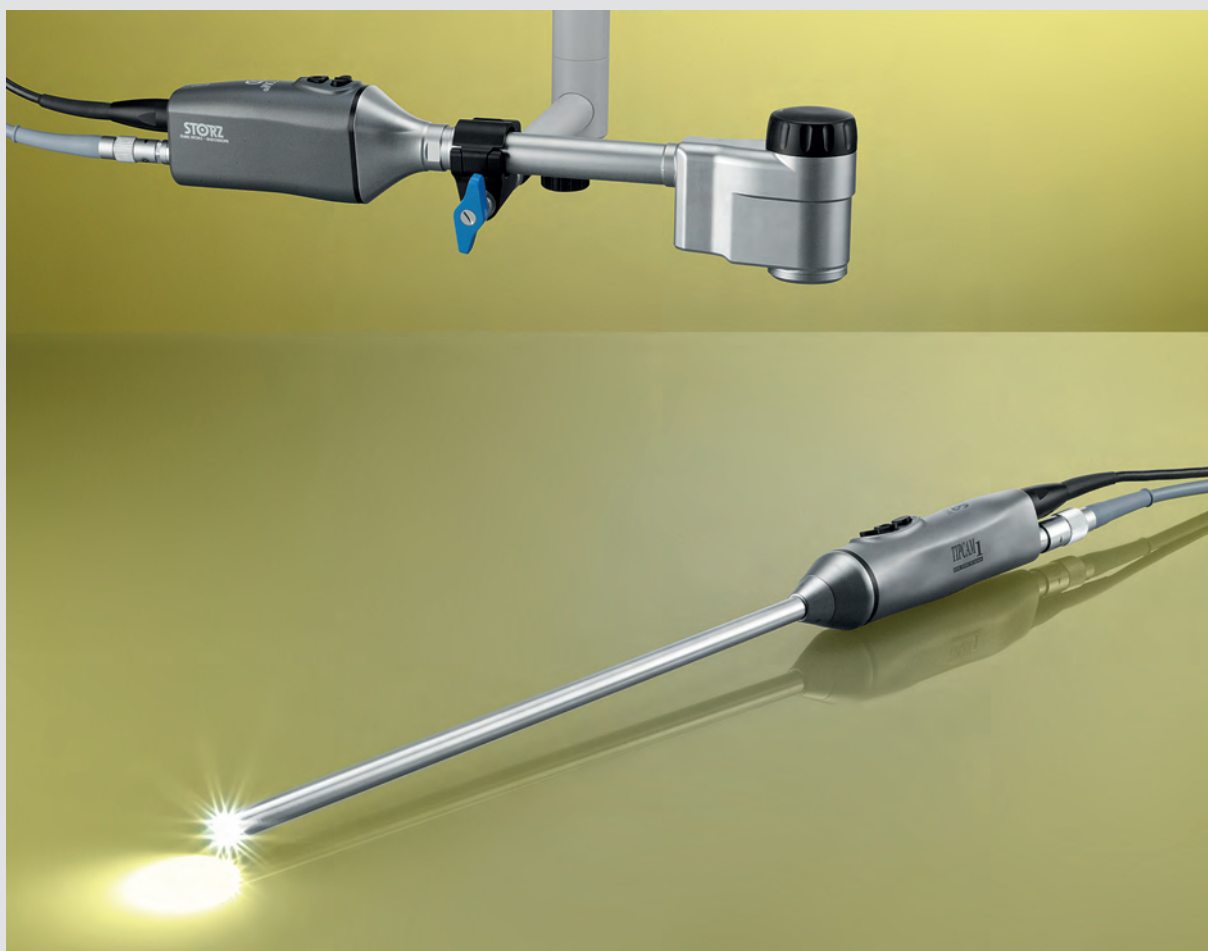
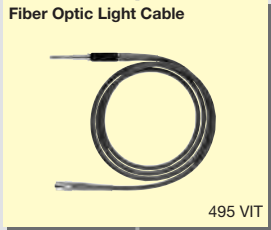
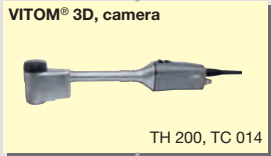
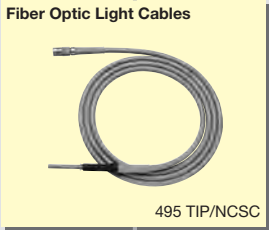
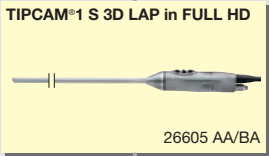


IMAGE1 S™ 3D

Overview



Compatible Camera Heads and Video Endoscopes see TELEPRESENCE catalog

Basic Module TC 200EN*

**3D Endoscopy
VITOM® 3D** TC 302



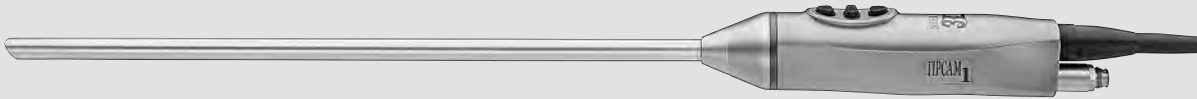
	TC 200EN* IMAGE1 S CONNECT®	TC 302 IMAGE1 S D3-LINK™
including:	Mains Cord , length 300 cm DVI-D Connecting Cable , length 300 cm SCB Connecting Cable , length 100 cm USB Flash Drive , 32 GB USB Silicone Keyboard , with touchpad, US	Mains Cord , length 300 cm Link Cable , length 20 cm
For use with:	<ul style="list-style-type: none"> ● TIPCAM®1 S 3D LAP, 10 mm video laparoscope ● VITOM® 3D, camera 	

Specifications:

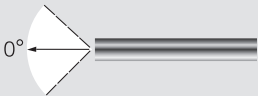
Interfaces		
Video outputs	2x DVI-D, 1x 3G-SDI	–
Signal output format	1920 x 1080 pixels, 50/60 Hz	–
Link outputs	–	1x
Link inputs	3x	–
Remote outputs	optional with TC 009	–
USB interfaces	4x USB, (2x front, 2x rear)	–
Unit communication	KARL STORZ Communication Bus (SCB) 2x 6-pin mini-DIN, RJ45	–

Additional Features		
Power consumption	62 VA	62 VA
Power frequency	50/60 Hz	50/60 Hz
Power supply	100 – 120 VAC, 200 – 240 VAC	100 – 120 VAC, 200 – 240 VAC
Dimensions w x h x d	305 x 54 x 320 mm	305 x 54 x 320 mm
Weight	2.1 kg	1.86 kg
Cleaning	wipe disinfection	wipe disinfection
Protection against moisture	IPX0	IPX0
Protection class	1	1
Degree of protection	CF-Defib	CF-Defib

* Also available in the following languages: DE, ES, FR, IT, PT, RU, SE



10 mm Video Endoscope



	26605 AA TIPCAM®1 S 3D LAP	26605 BA TIPCAM®1 S 3D LAP
For use with:	● IMAGE1 S D3-LINK™ , module for 3D endoscopy	

Specifications:

Frame rate	50/60 Hz	
Image sensor	2-chip	
Resolution	1920 x 1080 pixels	
Scanning method	progressive scan	
Direction of view	0°	30°
Outer diameter	10 mm	
Working length	32 cm	32 cm
Weight	420 g	
Cable length	300 cm	
Cable routing	straight	
Camera head buttons	freely programmable	
Reprocessing	autoclavable , hydrogen peroxide sterilization	
S-Technologies	CLARA, CHROMA, SPECTRA in 2D and 3D	
Degree of protection	in conjunction with the IMAGE1 S™ camera control unit: CF-Defib	

Documentation System see TELEPRESENCE catalog
Accessories for 3D Camera Platforms see page 83

3D Monitors 26" and 32"



	TM 263 ^{NEW} 26" 3D Monitor	TM 330 ^{NEW} 32" 3D Monitor
including:	Mains Cord External 24 VDC Power Supply 3x 3D Polarization Glasses , passive Cable Cover 4x Mounting Screws M4	Mains Cord External 24 VDC Power Supply 3x 3D Polarization Glasses , passive Cable Cover 4x Mounting Screws M4 4x Mounting Screws M6

Specifications:

Screen diagonal	26"	31.5"
Resolution	1920 x 1080 pixels	1920 x 1080 pixels
Aspect ration	16:9	16:9
Contrast ratio	1400:1	1400:1
Brightness	580 cd/m ² (type)	650 cd/m ² (type)
Video inputs	2x DVI-D, 2x 3G-SDI, Analog RGB (via VGA), S-Video, Composite, Component	2x DVI-D, 2x 3G-SDI, Analog RGB (via VGA), S-Video, Composite, Component
Video outputs	DVI-D, 2x 3G-SDI, S-Video, Composite, Component	DVI-D, 2x 3G-SDI, S-Video, Composite, Component
RS-232C connector	for external control (D-Sub 9-pin), RS-232C compatible	for external control (D-Sub 9-pin), RS-232C compatible
GPI output	D-Sub 9-pin	D-Sub 9-pin
Mount	VESA 100	VESA 100
Power supply unit	external, 24 V	external, 24 V
Unit properties	Picture-in-Picture	Picture-in-Picture
Rated power	86.4 W	88.8 W
Power supply	100 – 240 VAC	100 – 240 VAC
Power frequency	50/60 Hz	50/60 Hz
Dimensions w x h x d	643 x 396 x 80 mm	760 x 463 x 96 mm
Weight	8.5 kg	10.2 kg
Cleaning	wipe disinfection	wipe disinfection
Protection against moisture	IP45 front IP32 rear	IP45 front IP32 rear
Pedestal	9826 SF	9826 SF



USB Silicone Keyboard, with touchpad

Character sets:

20 0402 40DE German

20 0402 40FR French

20 0402 40IT Italian

20 0402 40PT Portuguese

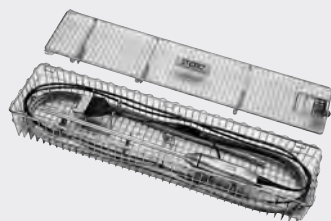
20 0402 40ES Spanish

20 0402 40RU Russian

20 0402 40SE Swedish

20 0402 40US English

20 0402 40CH German, French, Italian



39501 XTC

Wire Tray for Cleaning, Sterilization and Storage of TIPCAM®1 S 3D LAP Video Endoscopes 26605 AA/BA and one light cable, **autoclavable**, external dimensions (w x d x h): 640 x 150 x 87 mm



TM 003

3D Polarization Glasses, fogless, passive, for use with 3D monitors



9800 C

3D Clip-on Glasses, circularly polarized, for use with 3D monitors



20 0402 82

USB Flash Drive, 32 GB

20 0402 81

Same, 4 GB



495 TIP

Fiber Optic Light Cable, with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 300 cm

495 NCSC

Fiber Optic Light Cable, with straight connector, extremely heat-resistant, enhanced light transmission, with safety lock, diameter 4.8 mm, length 250 cm

Please note: The instruments displayed are not included in the sterilization and storage tray.



Recommended in combination with IMAGE1 S™ (CLARA and CHROMA modes)

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. Moreover, surgeons were restricted to the selected direction of view throughout the surgery or had to make an intraoperative telescope change.

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°.

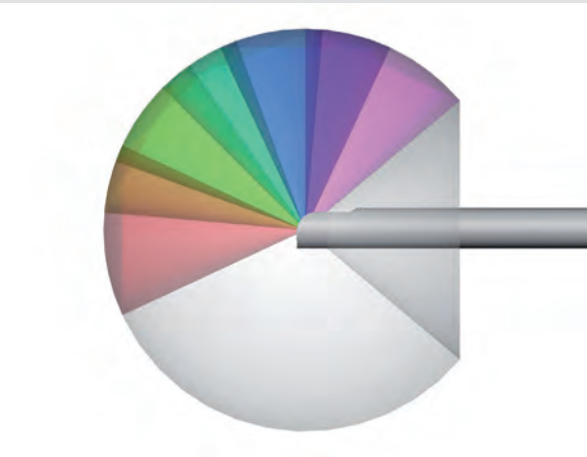
The ENDOCAMELEON® combines the user comfort of the proven HOPKINS® telescope with the advantages and potential of a telescope featuring a variable direction of view – offering you the quality you expect from KARL STORZ telescopes.

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. Instrument movement can be controlled throughout the entire procedure and hemorrhages in

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.

previously inaccessible areas can be detected and controlled. 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



There has been a steady increase in the percentage of video-assisted thoracoscopic procedures (VATS) in the surgical portfolio of modern thoracic surgery. Scientific studies on the clinical value of this method show that the length of the tissue incision plays a subordinate role in patient comfort. Instead, the number of intercostal spaces encountered as well as the extent of mechanical irritation within these intercostal spaces should be assessed for causality and intensity of pain.

Surgical instruments and telescopes in particular are manipulated in trocar incisions. This can easily exert distractive or compression forces on adjacent tissue, especially on the intercostal nerves.

With its variable direction of view, ENDOCAMELEON® allows an ideal display of the OR site inside the thorax without having to move the actual telescope. This reduces irritation in the intercostal spaces to a minimum. Furthermore, the various directions of view provided by the ENDOCAMELEON® makes it easier to position the telescope within the thorax so that it does not collide with surgical instruments and obstruct maneuverability.

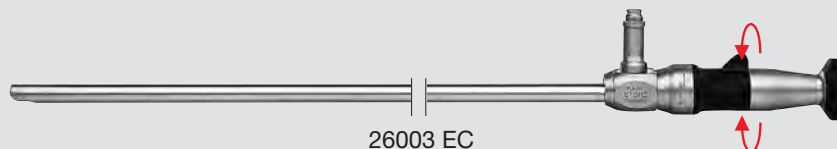
*Dr. med. Christian Kugler
Chefarzt der Klinik für Thoraxchirurgie
LungenClinic Grosshansdorf GmbH,
Germany*

Trocar size 11 mm

Recommended in combination with IMAGE1 S™ (CLARA and CHROMA modes)

Special Features:

- Variable direction of view 0° – 90° or 0° – 120°
- HOPKINS® telescope with unique rod lens system
- Easy-to-use adjustment knob for selecting the direction of view
- Rigid sheath with a diameter of 10 mm



26003 EC

ENDOCAMELEON® HOPKINS® Telescope, diameter 10 mm, length 31 cm, **autoclavable**, variable direction of view 0° – 90°, adjustment knob with fin for selecting the direction of view, fiber optic light transmission incorporated, color code: gold



26003 AS

ENDOCAMELEON® HOPKINS® Telescope, diameter 10 mm, length 32 cm, **autoclavable**, variable direction of view 0° – 120°, with adjustment knob for selecting the direction of view, fiber optic light transmission incorporated, light connection offset by 180° and angled 45°, color code: gold

Light Cable recommended for 26003 EC:

495 NVC

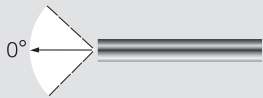
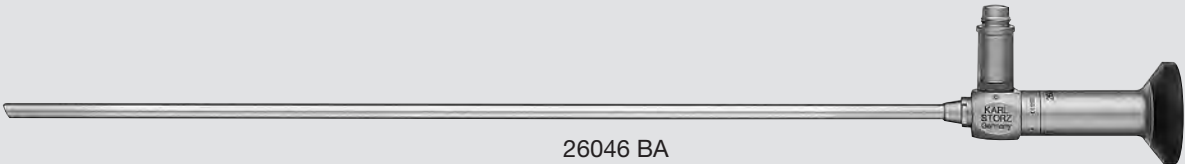
Fiber Optic Light Cable, with 90° deflection to the instrument, very narrow radius of curvature, diameter 4.8 mm, length 300 cm

Trocars for use with telescopes with a diameter of 10 mm see pages 88-89

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Diameter 5 mm, length 29 cm

Trocar size 6 mm



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



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



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

Trocars for use with telescopes with a diameter of 5 mm see pages 88-89
Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

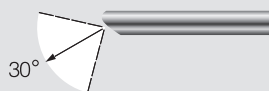
Diameter 10 mm, length 31 cm

Trocar size 11 mm



26003 AA

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



26003 BA

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



26003 FA



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



Trocars for use with telescopes with a diameter of 10 mm see pages 88-89

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Size 6 and 11 mm
without valve



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

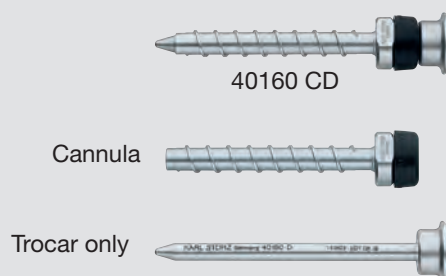
Size:		11 mm
Working length:		8.5 cm
Color code:		green
	Trocar , with blunt tip including: Cannula , flexible, with thread Trocar only	40123 NAL 40123 NL 40123 A
Accessory	Plastic Cannula, autoclavable , for flexible trocars, package of 5 	30123 X


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


For **trocars** only the individual components are numbered.
The catalog number for the **entire assembled trocar** does not appear on the instrument.
This is shown in the table in **bold** print.


Trocars

Sizes 6, 11 and 13 mm



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

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

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

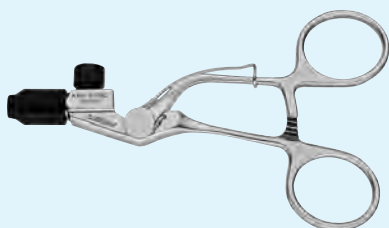
Note: Instruments with curved jaws or distal angled sheaths should be used with trocars having flexible cannulas!

For **trocars** only the individual components are numbered.
The catalog number for the **entire assembled trocar** does not appear on the instrument.
This is shown in the table in **bold** print.

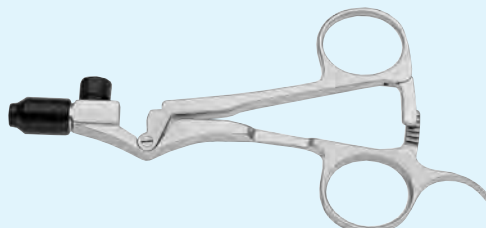
Metal Handles

for Thoracic Surgery,

CLICK'liné – without connector pin for unipolar coagulation



33144 P **CLICK'liné MOURET Metal Handle,**
with hemostat style ratchet, axial,
with 4 locking positions

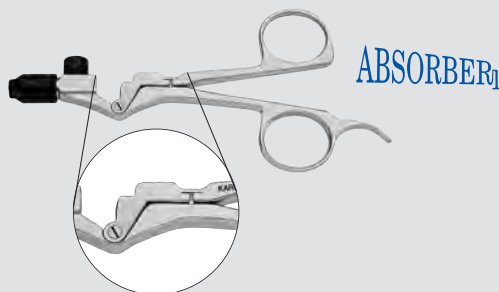


33137 PR **CLICK'liné Metal Y-Handle,**
with ratchet, axial,
with 4 locking positions

ABSORBER₁



33137 PF **CLICK'liné Metal Y-Handle,**
with ABSORBER1® geometry,
axial, with 4 locking positions



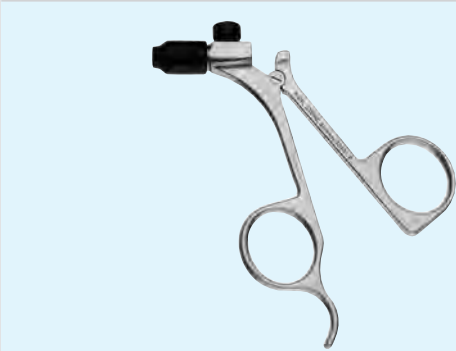
Special Feature:

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'liné** Handles see LAPAROSCOPY catalog

Metal Handles

for Thoracic Surgery,
CLICK'line – without connector pin for unipolar coagulation



33131 P **CLICK'line Metal Handle,**
without ratchet,
with 4 locking positions

NEW



33131 PSR **CLICK'line Metal Handle,**
with hemostat style ratchet,
with 4 locking positions

Further CLICK'line Handles see LAPAROSCOPY catalog

Metal Handles ^{NEW}

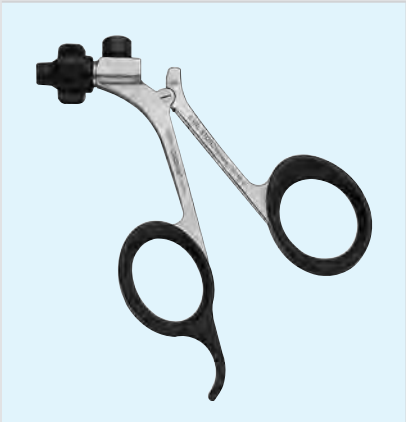
for Dissecting and Grasping Forceps,
CLICK'line® – rotating, without connector pin for unipolar coagulation



Metal Handles, with or without ratchets, with larger contact area at the finger ring, made of high-quality plastics – meeting the highest safety requirements for both patient and user

The anatomy of the hand varies in size from person to person. Wider contact areas at the finger and thumb ring and an ergonomic design ensures this **CLICK'line®** handle is comfortable to hold, preventing pressure marks even after hours of use. Due to its ergonomic shape, the new handle can be used in various holding positions and, therefore, meets a wide range of demands.

- Special Features:**
- **With larger contact area at the finger ring**
 - **Comfortable handling**
 - **Prevention of pressure marks**
 - **Variable holding positions due to ergonomic shape**



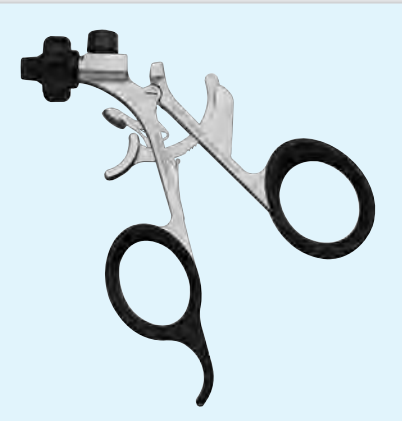
33161 **CLICK'line® Metal Handle, without ratchet, with larger contact area at the finger ring**



33162 **CLICK'line® Metal Handle, with MANHES style ratchet, with larger contact area at the finger ring**



33163 **CLICK'line® Metal Handle, with hemostatic style ratchet, with larger contact area at the finger ring**








33166 **CLICK'line® Metal Handle, with disengageable ratchet, with larger contact area at the finger ring**

Forceps

CLICK'linē – dismantling, without connector pin for unipolar coagulation

Size 5 mm

Trocar sizes 6 and 11 mm

Length	Handle				
	33144 P	33137 PF	33137 PR	33131 P	33131 PSR
28 cm		ABSORBER_R 			NEW 

Single action jaws

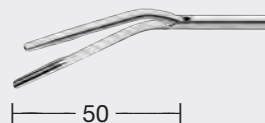
Trocar size 6 mm

Outer Sheath with Working Insert	Complete Instrument				
43210 LG	43244 LGP	43237 LGF	43237 LGR	43231 LGP	43233 LGP



CLICK'linē Parenchymal Forceps, atraumatic, straight jaws

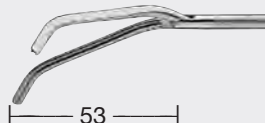
43210 LH	43244 LHP	43237 LHF	43237 LHR	43231 LHP	43233 LHP
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CLICK'linē Lung Forceps, atraumatic, grasping distal end, single curved jaws

Trocar size 11 mm

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



CLICK'linē Parenchymal Forceps, atraumatic, double curved jaws

43210 LE	43244 LEP	43237 LEF	43237 LER	43231 LEP	43233 LEP
----------	-----------	-----------	-----------	-----------	-----------



CLICK'linē Parenchymal Forceps, atraumatic, grasping distal end, jaws double curved to left, with distal serration

43210 LF	43244 LFP	43237 LFF	43237 LFR	43231 LFP	43233 LFP
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CLICK'linē Parenchymal Forceps, atraumatic, grasping distal end, jaws double curved to right, with distal serration

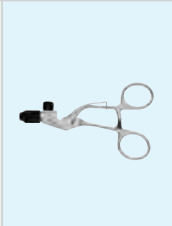
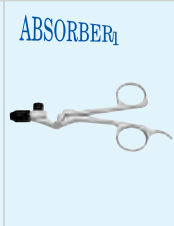



Please note:

For **CLICK'linē** instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument**, as shown above against the **blue** background, does not appear on the instrument.


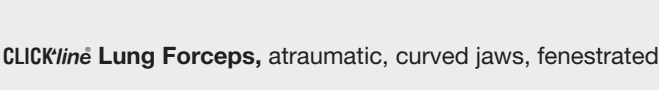
Forceps

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


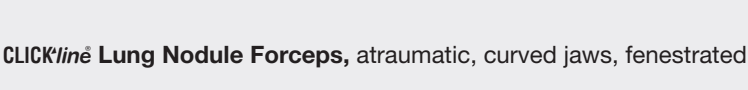
Size 5 mm
Trocars size 11 mm and percutaneous approach

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

Single action jaws

Outer Sheath with Working Insert	Complete Instrument				
43210 LL	43244 LLP	43237 LLF	43237 LLR	43231 LLP	43233 LLP
					
47	CLICK'line® Lung Forceps, atraumatic, curved jaws, fenestrated				

Percutaneous approach






43210 LR	43244 LRP	43237 LRF	43237 LRR	43231 LRP	43233 LRP
					
42	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**, as shown above against the **blue** background, does not appear on the instrument.


Dissecting and Grasping Forceps

CLICK^{line} – dismantling, without connector pin for unipolar coagulation

Size 5 mm
Trocar size 6 mm

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

Double action jaws

Outer Sheath with Working Insert	Complete Instrument				
43210 LP	43244 LPP	43237 LPF	43237 LPR	43231 LPP	43233 LPP
	CLICK ^{line} KELLY Dissecting and Grasping Forceps, curved jaws				

Please note:
For CLICK^{line} instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument**, as shown above against the **blue** background, does not appear on the instrument.

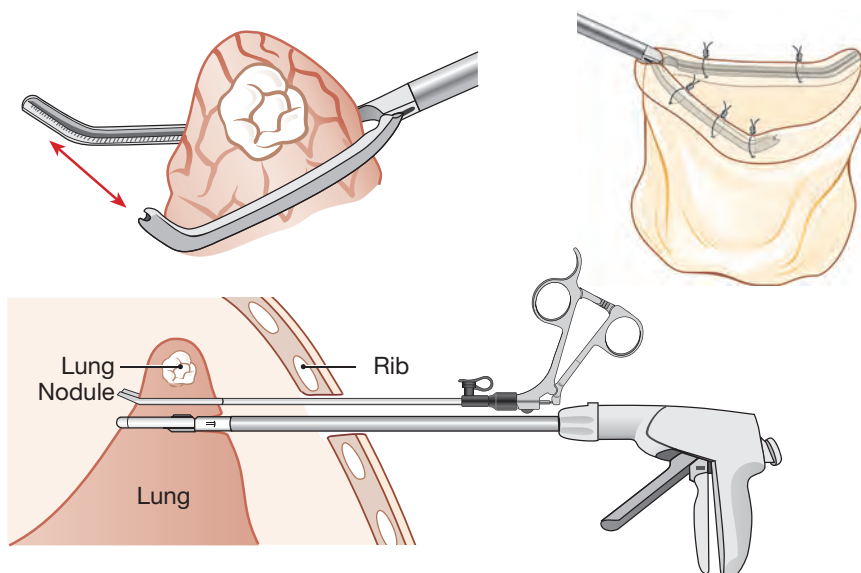
Forceps for Linear Stapler

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.

*Prof. A. LINDER,
Ärztelhaus Lützelmat, Lucerne, Switzerland,
PD. Dr. med. M. HÜRTGEN,
Katholisches Klinikum, Koblenz, Germany*




Forceps for Linear Staplers

CLICK*linē* – dismantling, without connector pin for unipolar coagulation

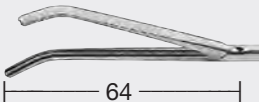
Size 5 mm
Trocars size 6 mm

Special Features:

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

Length	Handle
	33131 PSR
28 cm	<div>NEW</div> 

Single action jaws

Outer Sheath with Working Insert	Complete Instrument
43210 LV	43231 LVS
	<p>CLICK<i>linē</i> Parenchymal Forceps, atraumatic, single curved jaws, for use with linear staplers</p>

Please note:
For CLICK*linē* instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument**, as shown above against the **blue** background, does not appear on the instrument.

Plastic Handles ^{NEW}

for Thoracic Surgery,
CLICK[®]linē – insulated, with connector pin for unipolar coagulation



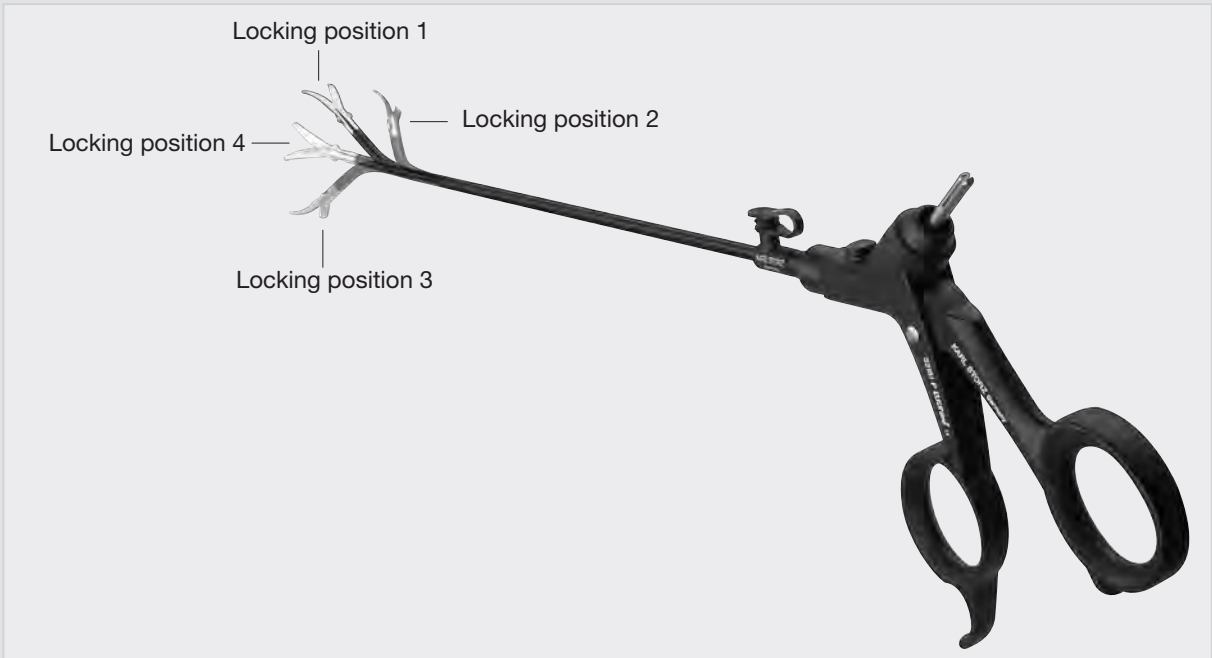
33151 P **CLICK[®]linē Plastic Handle**, non-rotating, **without** ratchet, with larger contact area at the finger ring, with 4 locking positions



33149 P **CLICK[®]linē Plastic Handle**, axial, non-rotating, **without** ratchet, double action shanks, with 4 locking positions

When the branches are open, the handle can be separated from the **CLICK[®]linē** outer sheath and the working insert at the press of a button. Reassembly in any of the 4 possible locking positions is equally reliable and quick.

This enables the user to secure jaws in the desired locking position.



Note: Constructive safety measure! For electrical safety reasons, insulated metal handles can only be assembled with insulated outer sheaths.

Further CLICK[®]linē Handles see LAPAROSCOPY

Dissecting Forceps, Scissors, Biopsy Forceps

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

Size 5 mm
Trocars size 6 mm



Length	Handle	
	33151 P	33149 P
28 cm	<div>NEW</div>	<div>NEW</div>

Double action jaws

Outer Sheath with Working Insert	Complete Instrument	
43210 LK	43251 LKP	43249 LKP
<div>21</div>	CLICK'line KELLY Dissecting Forceps, curved jaws	
43210 LM	43251 LMP	43249 LMP
<div>20</div>	CLICK'line Scissors, curved scissor blades	
43210 LU	43251 LUP	43249 LUP
<div>20</div>	CLICK'line Scissors, distally angled outer sheath, curved scissor blades, scissor blades open horizontally to angulation	

Single action jaws

43210 MT	43251 MTP	43249 MTP
<div>15</div>	CLICK'line Scissors, distally angled outer sheath, straight scissor blades, serrated, scissor blades open vertically to angulation	
43210 DU	43251 DUP	43249 DUP
<div>14</div>	CLICK'line Biopsy Forceps, distally angled outer sheath, jaws open vertically to angulation	

Please note:
For CLICK'line instruments only the **individual component parts** are numbered. The catalog number for the complete **instrument**, as shown above against the **red** background, does not appear on the instrument.

A prerequisite for successful, minimally invasive laparoscopic procedures is the selection of the correct HF instruments and units combined with the basic principles of surgery.

During a surgical procedure, the operating surgeon must be able to grasp various tissue structures, to dissect and work on the relevant organ (incision/dissection), and to control hemorrhage (suturing and/or hemostasis). Instruments that perform multiple functions means there is less need for instrument exchange. This saves the surgeon considerable time and effort.

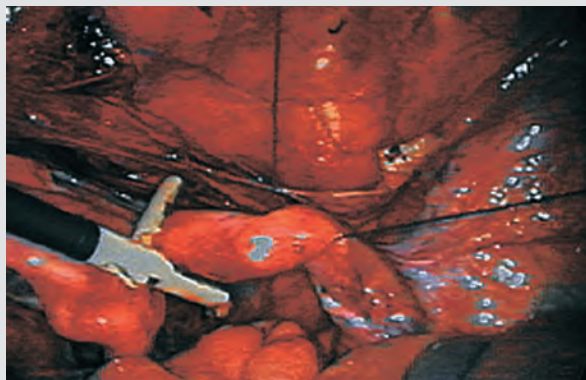
KARL STORZ set itself the task of designing instruments that meet the specific demands of minimally invasive surgery and developed the rotating, bipolar ("ROBI®") instruments – the CLERMONT-FERRAND model – in co-operation with Prof. Wattiez (Strasbourg, France) for this purpose. Like all other instruments in the ROBI® series, they are fully rotatable by 360° and can be disassembled into a handle, sheath and insert. The instruments are autoclavable and easy to handle and clean.



ROBI® Bipolar Grasping Forceps

Grasping Function

The use of retractors in minimally invasive surgery is not always possible or useful. The surgeon, therefore, requires an instrument that is capable of grasping tissue precisely and is able to maintain the tissue at a safe distance to the operating site.



To meet various needs and requirements, the jaws of the ROBI® bipolar grasping forceps vary in regard to size and width. Jaws with rougher toothings are suitable for grasping thicker and heavier tissue whereas jaws with finer toothings are better for grasping more fragile tissue structures. Fenestrated jaws offer the advantage that even structures which are difficult to grasp can be securely gripped.

To enable optimum grasping, even from less favorable angles and positions, all instruments can be rotated 360°. This function proves to be particularly advantageous when using monoarticulate forceps in order to place the jaws in the ideal position.

Dissection Function

The identification of tissue structures via dissection is a prerequisite for minimizing risks in precision surgery.

The delicate KELLY jaws represent a standard dissection instrument without which the CLERMONT-FERRAND series would not be complete. We have also included very slender and extra-flat jaws to meet the demands of all difficult anatomical conditions. By opening the handle, the jaws can be moved and the tissue surface can be spread apart. Conventional bipolar forceps, for example, have no joint between the jaws. Closure of the jaws is effected by sliding an external tube. As a result, opening is usually passive. Instruments with an imprecise grasping function do not allow precise dissection.

The joint mechanism of the ROBI® instruments provides the surgeon with a natural tactile feedback. The force exerted on the tissue can, therefore, be felt at the handle and thus permits a precise dose for dissection. "Tactile feedback enables optimal tissue dissection," according to Wattiez.

In addition to biarticulate jaws for easier handling of delicate tissue and vessels, the CLERMONT-FERRAND series also feature instruments with robust, monarticulate jaws which facilitate dissection in critical regions and reduce trauma to a minimum. These instruments are appropriate for oncological procedures such as, for example, lymph node dissection.

Micro instruments are being increasingly used in dissection due to their enhanced precision and advancements in high frequency technology. The delicate instruments from the CLERMONT-FERRAND series are ideal for use with bipolar energy.

The Coagulation Function

The use of bipolar energy offers significant advantages over unipolar energy. The carefully applied current flows between the branches of the utilized HF instrument and must not travel over long distances through the body of the patient via a neutral electrode. With the aim of providing maximum user safety, ROBI® instruments were designed and equipped with bipolar HF technology to ensure minimal patient discomfort.



An essential feature of ROBI® instruments is that the forceps inserts consist of two jaws that are insulated by a ceramic layer. This reduces flashover and, therefore, offers more safety during HF application.

Despite these safety precautions, it is important to observe basic rules and principles for optimum work with bipolar HF energy and to keep risks at a minimum. In general, it is important to ensure that no critical viscera is in contact with the instrument and that only the relevant tissue is grasped between the two jaws of the forceps when activating or contacting the bipolar instrument.

Coagulation occurs by means of heating the tissue. If the tissue is heated too severely or the HF application times are too long, there is a risk that burns will occur around the operating site. Heat dispersion can be restricted by selecting the appropriate HF power setting. A 30 – 50 W power setting is generally sufficient for laparoscopic interventions. In principle, the higher the selected HF power setting, the shorter the exposure time and vice versa. The longer the exposure time, the more extensive the heat dispersion. Care must be taken that HF energy has adequate penetration depth, which is not always easy for the surgeon to see or predict. After selecting the power setting, the surgeon applies the energy with as short an exposure time as possible.

The power setting used generally depends on the size of the selected jaws as the density of the energy transferred to the tissue is directly relative to the size of the jaws. With the same power setting, the narrower the jaws, the greater the energy density.

The thicker the jaws, the higher the power setting required. With thicker jaws, the operating surgeon has to choose a higher power setting (approx. 50 W) but with a shorter exposure time. With thinner jaws, a lower power setting of approximately 35 W is selected.

Tissue impedance is another important aspect that needs to be considered in order to avoid unintentional thermal damage. 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 more the tissue is compressed, the greater the impedance. Altering the electrical HF energy influences coagulation time, which then becomes shorter. In contrast to conventional bipolar forceps, grasping forceps from the ROBI® series – thanks to their tactile feedback – allow the pressure applied to the tissue to be altered and, as a result, the impedance to be changed.

During the procedure, blood and tissue may coagulate on the jaws. This may act as an insulation layer and change the distribution of energy. In extreme cases, there is no current flow and coagulation is no longer possible. To prevent soiling of the jaws, the appropriate power setting depending on the size of the jaws must be selected. Furthermore, long exposure times and coagulation in blood should be avoided. Precise, preventative coagulation is the best safety precaution.



ROBI® Bipolar Scissors

Cutting Function

To meet the different requirements of various tissue structures during the incision phase, we also added curved METZENBAUM scissors as well as serrated jaws for difficult-to-grasp tissue structures to the existing straight scissor versions in the CLERMONT-FERRAND series.

Coagulation Function

Bipolar ROBI® scissors have also been specially designed for use with HF energy and enable both coagulation and cutting in the coagulated area, the “tissue that has become white”. As soon as the tissue becomes pink again, the incision is interrupted and coagulation can be continued. Of course, the same safety precautions apply to ROBI® scissors regarding the use of bipolar HF energy as described above for grasping forceps.

Conclusion

Optimization of the minimally invasive intervention is dependent on the number and selection of functions that are possible for the surgeon. ROBI® grasping forceps offer the surgeon an instrument with grasping, dissection and coagulation functions. ROBI® scissors also offer the possibility of dissection and coagulation as well as, of course, incision. Thanks to the quick-change ROBI® system, working inserts can be rapidly exchanged during surgery and according to surgical requirements. This multifunctionality leads to an optimization of the surgical procedure which becomes easier, faster and safer as a result.

The ROBI® grasping forceps and scissors from the CLERMONT-FERRAND series feature a high degree of user-friendliness in the customary KARL STORZ tradition.

ROBI® Plastic Handles, ^{NEW}
Metal Outer Sheaths

for dissecting forceps and scissors, insulated, with connector pin
for bipolar coagulation, CLERMONT-FERRAND model



Special Features:

- Robust joint mechanism allows powerful, yet safe grasping
- New handle allows precise work and direct force transmission
- Ergonomic handle design provides enhanced user comfort
- Top mounted 45° high frequency connector pin leads the cable away from the operative field
- Straight ROBI® instruments can be dismantled into an insert, outer sheath and handle
- Curved ROBI® instruments can be dismantled into an outer sheath with working insert and a handle
- Color coding on the working insert and handle allows easier identification of compatible components

ROBI® Handles, insulated



38151 **ROBI® Plastic Handle, without ratchet**



38151 P **ROBI® Plastic Handle, without ratchet, with 4 locking positions**

ROBI® Metal Outer Sheaths, insulated



48400

- 48400 **ROBI® Metal Outer Sheath, insulated, with LUER-Lock connector for cleaning, size 5 mm, length 20 cm**
- 38500 **Same, length 30 cm**

Bipolar High Frequency Cords see chapter 10, UNITS AND ACCESSORIES

ROBI® Dissecting Forceps and Scissors ^{NEW}

distally angled outer sheath, dismantling, with connector pin
for bipolar coagulation, CLERMONT-FERRAND model

Size 5 mm
Trocars size 6 mm



Length	Handle	
	38151	38151 P
20 cm		
28 cm		

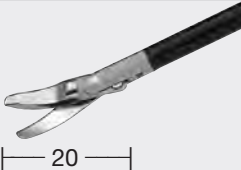
Double action jaws

Outer Sheath with Working Insert	Complete Instrument	
48410 LK	48451 LK	48451 LKP
48510 LK	48551 LK	48551 LKP



ROBI® KELLY Dissecting Forceps, CLERMONT-FERRAND model, curved jaws, jaws open horizontally to angulation

48410 LM	48451 LM	48451 LMP
48510 LM	48551 LM	48551 LMP



ROBI® Scissors, CLERMONT-FERRAND model, curved scissor blades, scissor blades open vertically to angulation

48510 LU	48551 LU	48551 LUP
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ROBI® Scissors, CLERMONT-FERRAND model, curved scissor blades, scissor blades open horizontally to angulation

Single action jaws

48510 MT	48551 MT	48551 MTP
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ROBI® Scissors, CLERMONT-FERRAND model, straight scissor blades, scissor blades open vertically 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.

ROBI® Dissecting Forceps and Scissors ^{NEW}

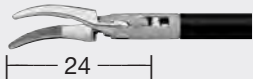


straight outer sheath, dismantling, with connector pin
for bipolar coagulation, CLERMONT-FERRAND model

Size 5 mm
Trocars size 6 mm



Length	Handle	
	38151	38151 P
20 cm		
30 cm		

Double action jaws

Working Insert	Complete Instrument	
48410 ML	48451 ML	48451 MLP
 24	ROBI® KELLY Dissecting and Grasping Forceps , CLERMONT-FERRAND model, long jaws	
48410 MW	48451 MW	48451 MWP
38510 MW	38551 MW	38551 MWP
 20	ROBI® METZENBAUM Scissors , CLERMONT-FERRAND model, curved jaws, slender scissor blades	
38510 MD	38551 MD	38551 MDP
 19	ROBI® Grasping Forceps , CLERMONT-FERRAND model, especially suitable for dissection	

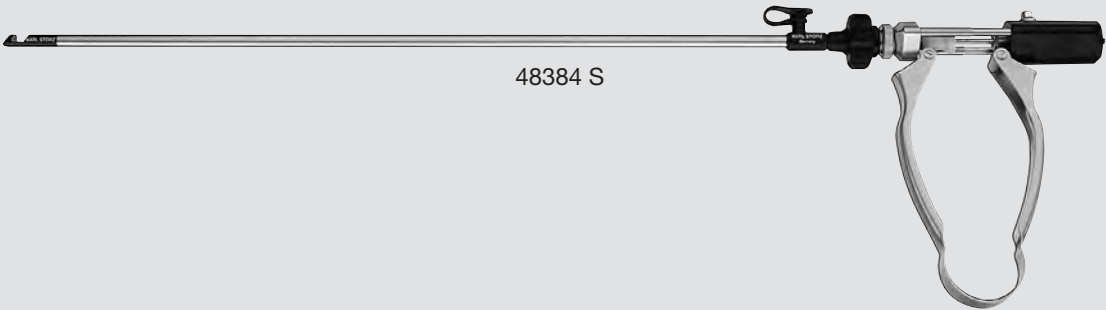
Please note:
For ROBI® instruments only the **individual component parts** are numbered. The catalog number for the **complete instrument** does not appear on the instrument. Please take this number from the numbers indicated in the **red** background of the table above.

Cutting Instrument for Sympathectomy ^{NEW}

bipolar, for lifting and cutting the sympathetic nerve

Special Features:

- For lifting and atraumatic bipolar cutting of the sympathetic nerve
- Requires only one port for the telescope and one port for the instrument
- Spring handle; the knife remains in a secure position in the sheath until required for use
- Bipolar TAKE-APART® system is compatible with all standard HF units



48384 S

Bipolar Cutting Instrument, for lifting and cutting the sympathetic nerve during sympathectomy, size 5 mm, length 30 cm including:

Bipolar Spring Handle
Outer Sheath
Knife Insert



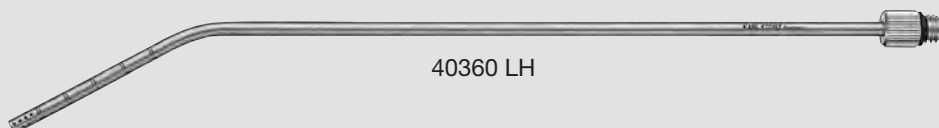
48310 SX

Knife Insert, package of 5

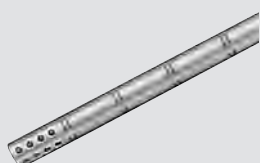
Bipolar High Frequency Cords see chapter 10, UNITS AND ACCESSORIES
Components/Spare Parts see chapter 11

Suction and Irrigation Tubes

Size 5 mm
Trocars 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

Handles for use with Suction and Irrigation Tubes see page 108

Handles for Suction and Irrigation Tubes

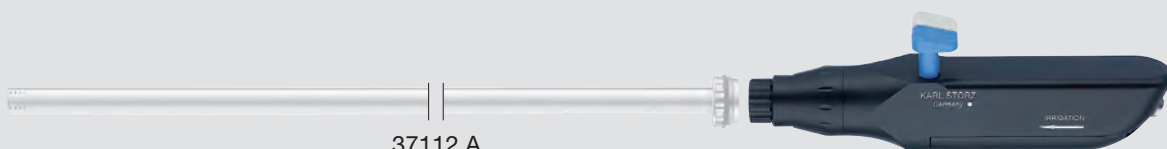
for use with suction and irrigation tubes size 5 mm



30805

30805

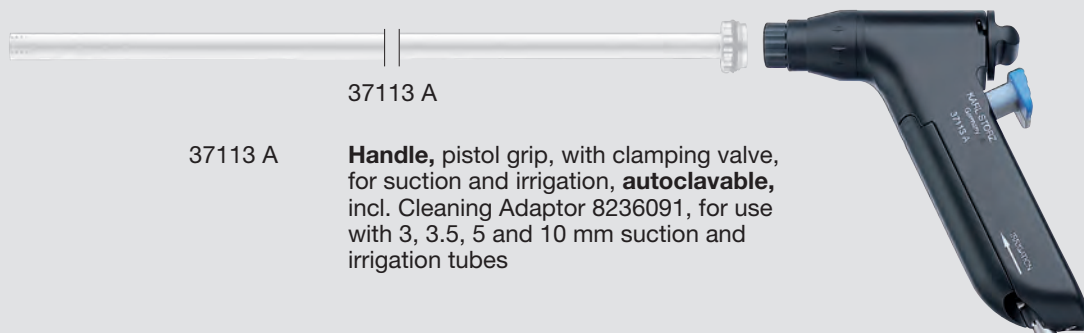
Handle with Two-Way Stopcock, for suction and irrigation, **autoclavable**, for use with suction and irrigation tubes size 5 mm



37112 A

37112 A

Handle, straight, with clamping valve, for suction and irrigation, **autoclavable**, incl. Cleaning Adaptor 8236091, for use with 3, 3.5, 5 and 10 mm suction and irrigation tubes



37113 A

37113 A

Handle, pistol grip, with clamping valve, for suction and irrigation, **autoclavable**, incl. Cleaning Adaptor 8236091, for use with 3, 3.5, 5 and 10 mm suction and irrigation tubes



37112 RV

NEW 37112 RV

Handle, straight, with roller valve, for suction and irrigation, **autoclavable**, incl. Cleaning Adaptor 8236091, for use with 3, 3.5, 5 and 10 mm suction and irrigation tubes

Please note:

Handles 37112 A, 37113 A and 37112 RV can be used with sterile tubing sets, see page 109

Tubing Sets

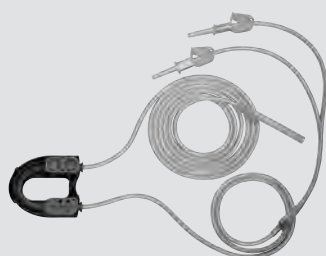
for use with Handles 37112 A, 37113 A and 37112 RV

STERILE



031133-10

031133-10* **Tubing Set**, sterile, for single use, package of 10, for use with Handles 37112 A, straight, 37113 A, pistol grip and 37112 RV



031524-10

031524-10* **Tubing Set for Irrigation**, FC, sterile, for single use, package of 10, for use with HAMOU® ENDOMAT® SCB 26 3311 20-1 and ENDOMAT® SELECT



031134-10

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



031219-10

031219-10* **Complete Tubing Set**, with two puncture cannulas, sterile, for single use, package of 10, for use with Handles 37112 A, straight, 37113 A, pistol grip and 37112 RV in combination with ENDOMAT® LC SCB

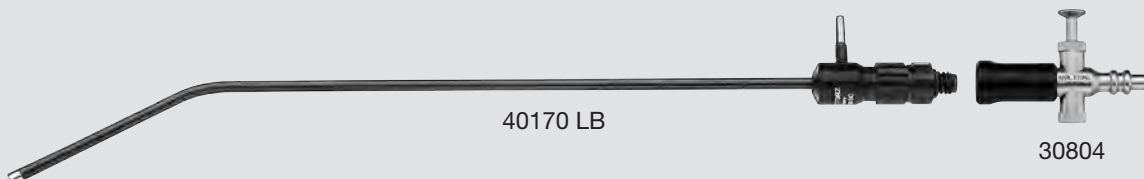


Coagulation Suction Tubes

Size 5 mm

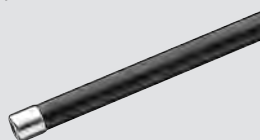
Trocar size 6 mm

With connector pin for unipolar coagulation



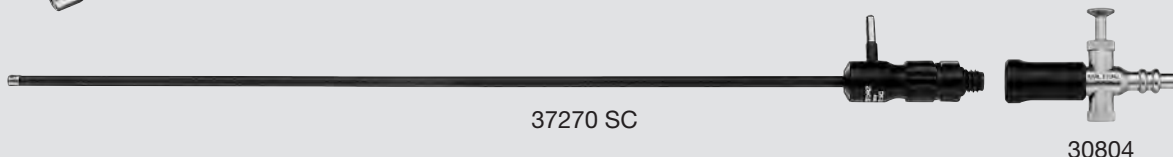
40170 LB

30804



40170 LB

Coagulation Suction Tube, with connector pin for unipolar coagulation, distally angled sheath, size 5 mm, length 28 cm, for use with Handle 30804



37270 SC

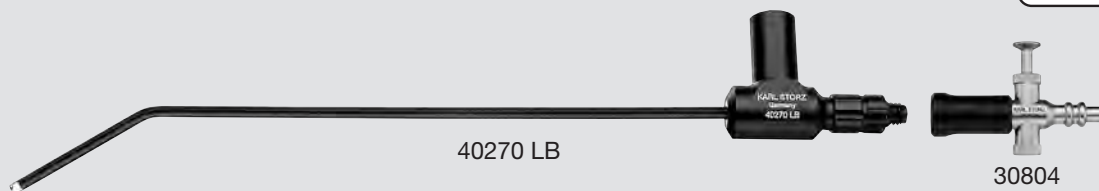
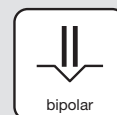
30804



37270 SC

Coagulation and Dissection Electrode, with suction channel, with connector pin for unipolar coagulation, size 5 mm, length 30 cm

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, for use with Handle 30804



30804

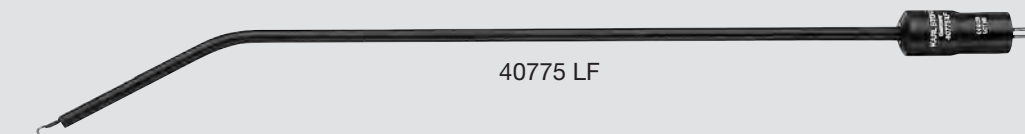
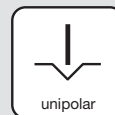
Handle with Trumpet Valve, for suction or irrigation, **autoclavable**, for use with 5 mm coagulation suction tubes, 3 and 5 mm suction and irrigation tubes

Coagulation and Dissection Electrodes

Size 5 mm

Trocar size 6 mm

with connector pin for unipolar coagulation

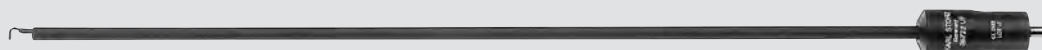


40775 LF



40775 LF

Coagulation and Dissection Electrode,
L-shaped, insulated, with connector pin
for unipolar coagulation, distally angled
sheath, size 5 mm, length 28 cm



26772 UF



26772 UF

Coagulation and Dissecting Electrode,
L-shaped, insulated, size 5 mm, length 30 cm

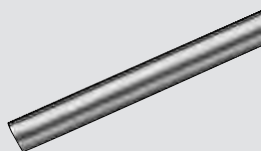
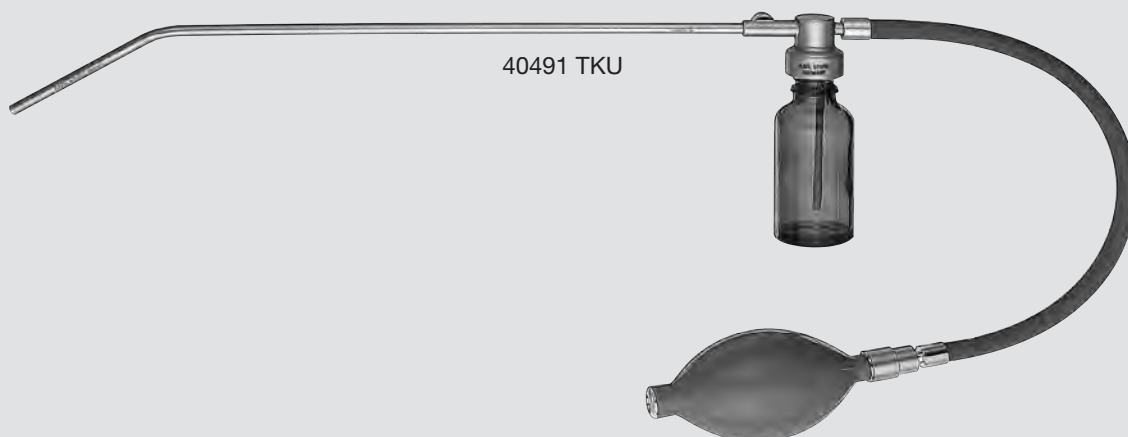


26778 UF

Coagulation and Dissection Electrode,
L-shaped, insulated, size 5 mm, length 43 cm

Powder Blowers

Size 5 mm
Trocars size 6 mm



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



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

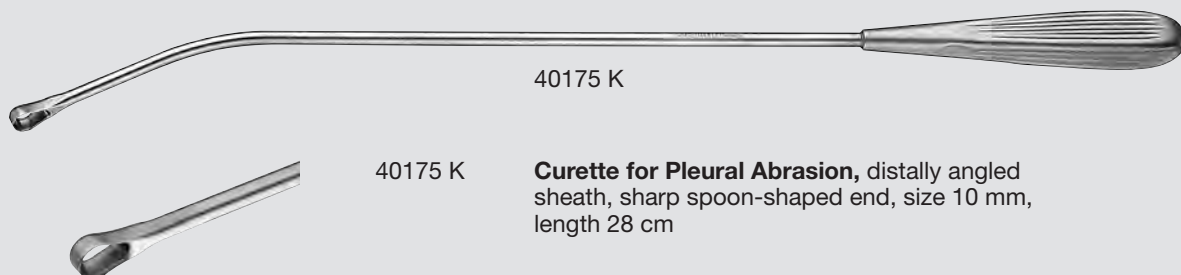


40492 TK **Powder Blower**, with rubber bulb, straight sheath, size 5 mm, length 42 cm
including:
Sheath
Rubber Bulb
Spare Bottle

Components/Spare Parts see chapter 11

Curette for Pleural Abrasion, Surgical Sponge Holders

Size 10 mm
Trocar size 11 mm

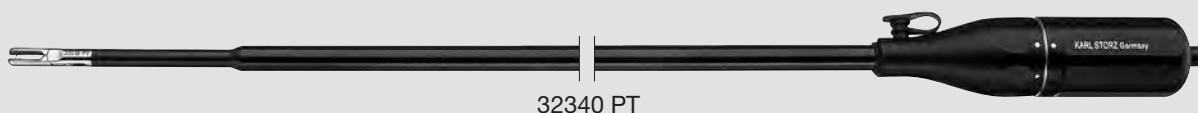


40175 K

40175 K

Curette for Pleural Abrasion, distally angled sheath, sharp spoon-shaped end, size 10 mm, length 28 cm

Sizes 5 and 10 mm
Trocar sizes 6 and 11 mm



32340 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 (4 x 4 cm) or spherical sponge for similar geometry and basis weight.

Spherical sponges recommended for size 10 mm:

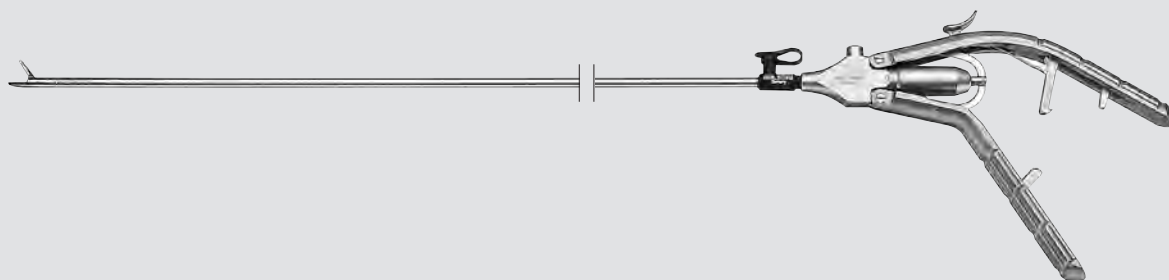
DIN 61630/VM 24 (8 x 8 cm) or spherical sponge for similar geometry and basis weight.

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

Components/Spare Parts see chapter 11

KOH Macro Needle Holders

dismantling



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.

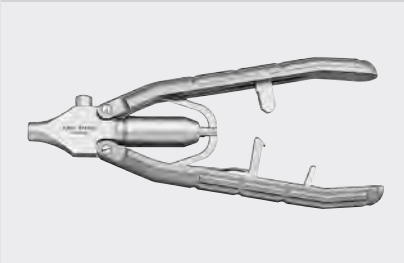
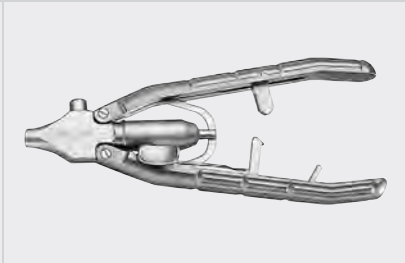
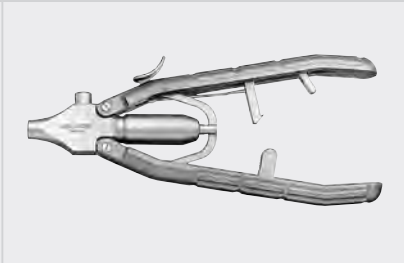
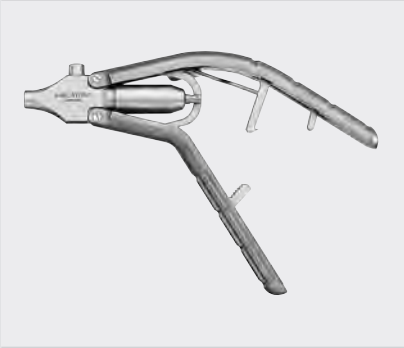
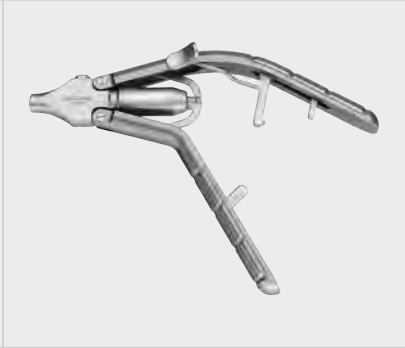
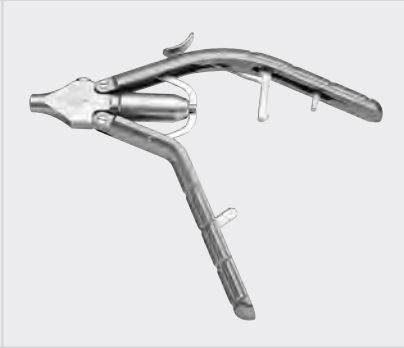
The reusable dismantling design offers the user the following benefits:

- **Can be disassembled into three separate components**
- **Fully autoclavable**
- **Cleaning connector**
- **Choice of six different handles and three different working inserts**
- **Jaws 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**

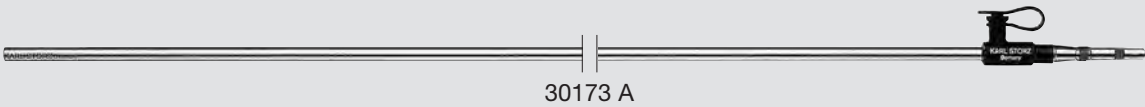
Handles and Outer Sheaths

for KOH Macro Needle Holders

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 left	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






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

KOH Macro Needle Holders





dismantling

Size 5 mm

Operating instruments, **length 33 cm**, with axial handle for use with **trocar size 6 mm**

Length	Handle		
	30173 AR	30173 AL	30173 AO
33 cm			

Single action jaws

Working Insert	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 USP 0 to 5-0		
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 USP 0 to 5-0		
30173 F	30173 FAR	30173 FAL	30173 FAO
	KOH Macro Needle Holder , straight jaws, with tungsten carbide inserts, for use with suture material size USP 0 to 5-0		
30173 G	30173 GAR	30173 GAL	30173 GAO
	KOH Macro Assistant Needle Holder , straight jaws		

Please note:

For the dismantling needle holders 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.

KOH Macro Needle Holders





dismantling

Size 5 mm

Operating instruments, **length 33 cm**, with pistol grip handle,
for use with **trocar size 6 mm**

Length	Handle		
	30173 PR	30173 PL	30173 PO
33 cm			

Single action jaws

Working Insert	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 USP 0 to 5-0		
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 USP 0 to 5-0		
30173 F	30173 FPR	30173 FPL	30173 FPO
	KOH Macro Needle Holder , straight jaws, with tungsten carbide inserts, for use with suture material size USP 0 to 5-0		
30173 G	30173 GPR	30173 GPL	30173 GPO
	KOH Macro Assistant Needle Holder , straight jaws		

Please note:

For the dismantling needle holders 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.

Size 5 mm


Operating instruments, **length 33 cm**,
for use with **trocars size 6 mm**




The ergonomic properties of the 5 mm KOH macro needle holder allow precise holding of the needles and the thread. The precision branches and the new locking mechanism make exact stitching with suture sizes 0/0 to 7/0 considerably easier. The KOH

ultramicro instrument set has been developed specifically to meet the high demands of microsurgery and is designed to suture structures as small as 0.5 mm.



Special Features:

- Tungsten carbide inserts for firm and reliable needle positioning, as well as long durability
- Ergonomically designed handle for relaxed working
- Ease of operation, precise adjustable ratchet for easy and safe positioning of the needle

Length	Instrument	
33 cm		

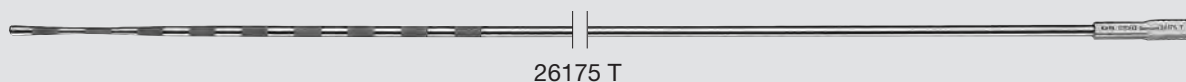
Distal tip	Instrument	
	26173 KAF	KOH Macro Needle Holder , jaws straight, with tungsten carbide inserts, ergonomic straight handle with disengageable ratchet, ratchet position right
	26173 KAL	KOH Macro Needle Holder , jaws curved to left, with tungsten carbide inserts, ergonomic straight handle with disengageable ratchet, ratchet position right
	26173 KAR	KOH Macro Needle Holder , jaws curved to right, with tungsten carbide insert, ergonomic straight handle with disengageable ratchet, ratchet position left

Length	Instrument	
33 cm		

Distal tip	Instrument	
	26173 KL	KOH Macro Needle Holder , jaws curved to left, with tungsten carbide inserts, ergonomic handle with ratchet, ratchet position on top
	26173 KC	KOH Macro Needle Holder , jaws curved to right, with tungsten carbide inserts, ergonomic handle with ratchet, ratchet position on top

Palpation Probes, Knot Tiers

Size 5 mm
Trocars size 6 mm



26175 T



26175 T

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



26596 SK



26596 SK

KÖCKERLING Knot Tier,
for extracorporeal knotting, size 5 mm,
length 36 cm

Size 5 mm
Trocars size 11 mm



40175 LT



40175 LT

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





THORACOTOMY AND VIDEO-ASSISTED MINI-THORACOTOMY

HEADLIGHTS122-124

NEW
BISLERI MIC RETRACTOR125

RIB SPREADERS126-127

TELESOPES AND TROCARS128-129

INSTRUMENTS FOR GRASPING,
DISSECTING AND CUTTING130-131

SUCTION AND IRRIGATION TUBES
WITH HANDLES AND
TUBING SETS132-134

ELECTRODES FOR UNIPOLAR
COAGULATION, KNOT TIER135

LED Headlight KS70 ^{NEW}

Special Features:

- Battery lifespan of up to 18 hours (at brightness level 1) allows use in extensive procedures
- Brightness adjustment in 3 levels
- Maintenance-free, high-performance LED in combination with liquid lens technology ensures high depth illumination and an optimal concentration of light energy without a loss of luminosity*
- Continuously adjustable light field diameter as well as the position and angle of the light unit for perfect orientation of the illumination path
- Well-balanced, lightweight and ergonomic headband design for optimal wearing comfort
- Lightweight and compact design of the lamp unit
- Optical charge status display and blinking lights as low battery warning indicator
- Quick and easy battery replacement
- Direct charging via a micro-USB plug connected to the headlight or external charging station



* The light field diameter is adjusted by adjusting the lens curvature – this allows variations in the illuminating angle and optimal light bundling at the same time.

LED Headlight KS70 ^{NEW}

White light

094220 **LED Headlight KS70**, white light, lightweight model, control unit and rechargeable battery box on headband, charging unit, illumination area adjustable from 30 – 150 mm in diameter with 40 cm working distance
including:
Control Unit
Battery Box
2x Battery Pack
Charger USB
Headband
Neoprene Cushion, for headband

Yellow light

094230 **LED Headlight KS70**, yellowish light, lightweight model, control unit and rechargeable battery box on headband, charging unit, illumination area adjustable from 30 – 150 mm in diameter with 40 cm working distance
including:
Control Unit
Battery Box
2x Battery Pack
Charger USB
Headband
Neoprene Cushion, for headband

Components/Spare Parts see chapter 11

Headlight KS60

with cold light illumination

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
- 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, movable 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
- 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 in diameter with 40 cm working distance, with removable and sterilizable focus handle

including:

Headband, fully adjustable, with forehead cushion

Y-Fiber Optic Light Cable

Clip with Band

Neoprene Cushion, for headband



310061

Same,

including:

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



Components/Spare Parts see chapter 11

BISLERI MIC Retractor ^{NEW}

Retractor for minimally invasive thoracotomy

Special Features:

- Swiveling retractor arms enable individual positioning of the retractor at the thorax
- Movable blades allow better positioning at the rib structure
- Slender design provides optimal visualization through the rib opening
- Fine toothing enables exact retractor guidance
- Blades in two sizes can be placed in the required position for flexible use
- System can be fully disassembled



49130

BISLERI MIC Retractor, for thoracotomy, with bendable retractor arms and movable blades

including:

Retractor Frame

Retractor Arm

Wing Screw

2x **Movable Blades**, short, size 4 x 5 cm

2x **Movable Blades**, long, size 4 x 6 cm

Components/Spare Parts see chapter 11

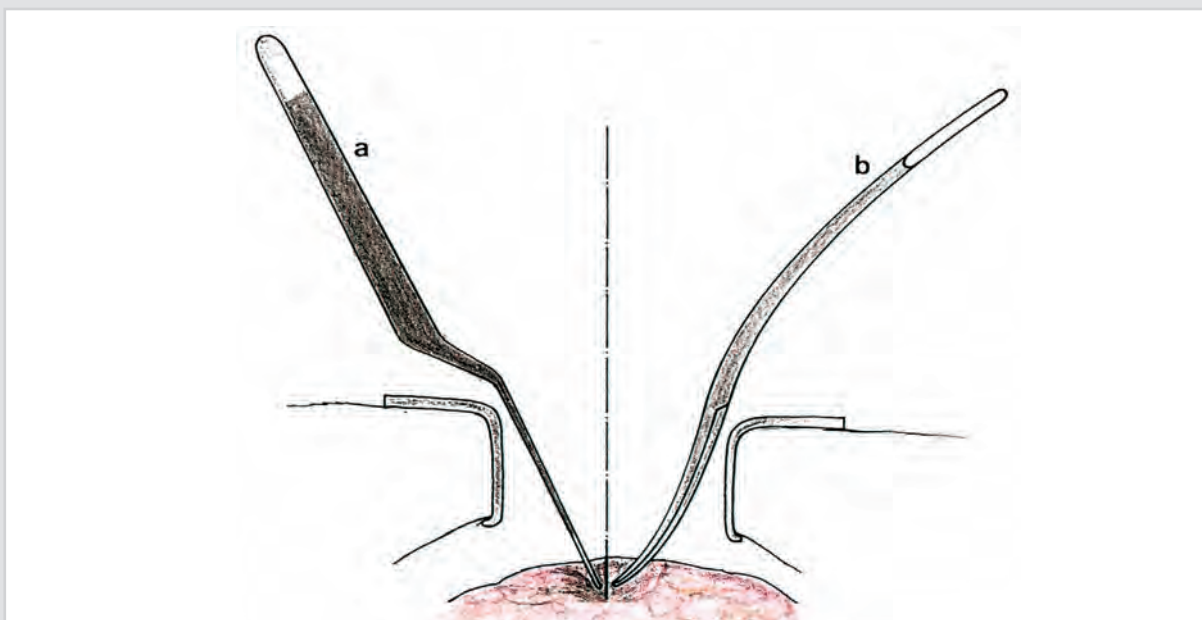
Operating Instruments

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

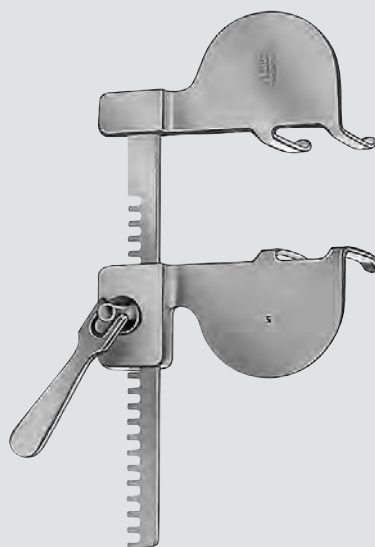
Special features of these instruments:

- 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.



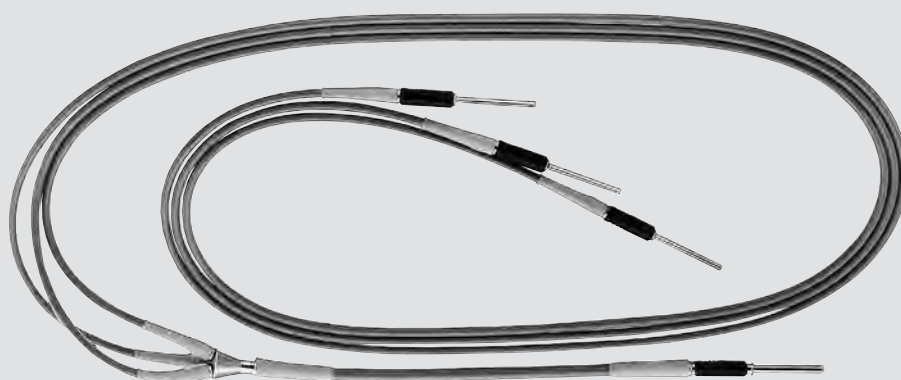
*S-shaped instruments which keep the operative field clear
(a) forceps, (b) scissors*

Rib Spreaders, 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

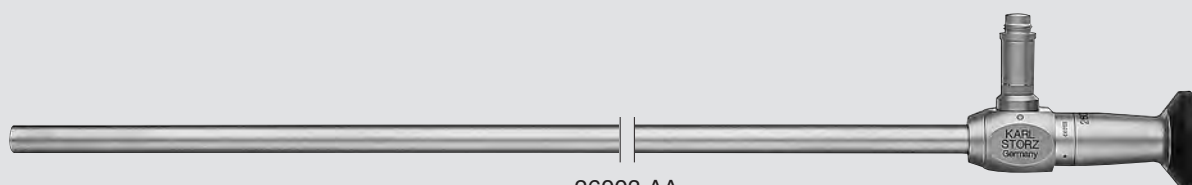


495 CD

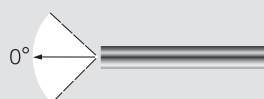
- 495 CD **Percutaneous Fiber Optic Light Cable**, length 300 cm,
with three percutaneous illumination ports, each 5 mm in
diameter, each 5 cm in length

Diameter 10 mm, length 31 cm

Trocar size 11 mm

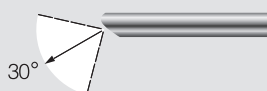


26003 AA



26003 AA

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



26003 BA

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

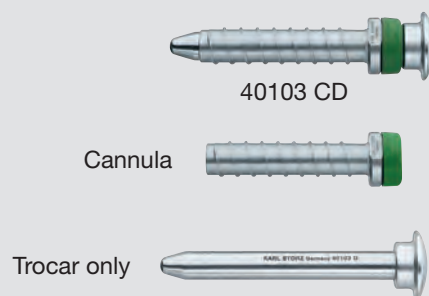
Further HOPKINS® Telescopes see chapter 6, VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS), pages 84-87


Fiber Optic Light Cables see TELEPRESENCE catalog

Container for the Sterilization and Storage of Telescopes see HYGIENE catalog

Trocars

Size 11 mm

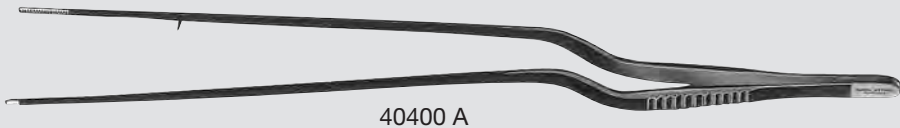


Size:		11 mm	
Working length:		4 cm	6 cm
	Trocar, with blunt tip	40103 AB	40103 CD
	including:		
	Cannula, with thread	40103 A	40103 C
	Trocar only	40103 B	40103 D

For **trocars** only the individual components are numbered.
 The catalog number for the **entire assembled trocar** does not appear on the instrument.
 This is shown in the table in **bold** print.

Further Trocars see chapter 6, VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS),
 pages 88-89

Forceps, Dissecting Forceps,
Lung Spatula

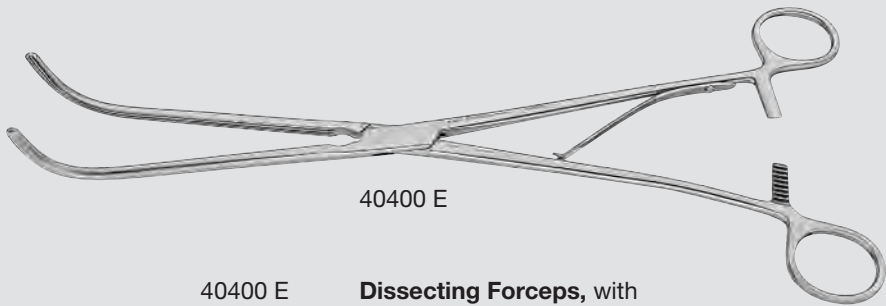


40400 A



40400 A

Forceps, atraumatic, bayonet-shaped, insulated, working length 22 cm, total length 36 cm



40400 E

40400 E

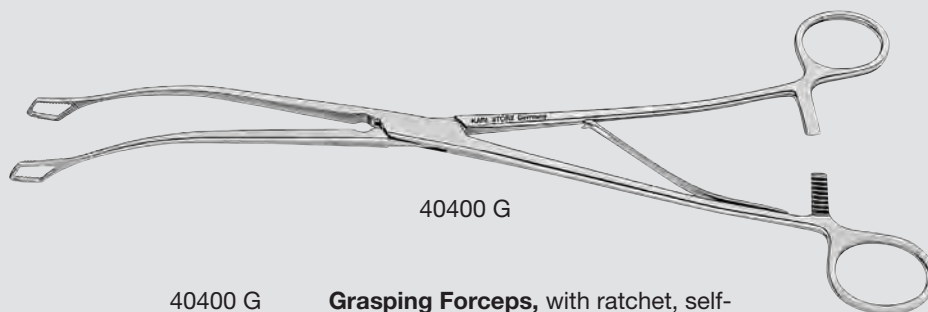
Dissecting Forceps, with ratchet, self-opening, S-shaped, medial joint, length 33 cm



40600 D

40600 D

Lung Spatula, S-shaped, length 27 cm



40400 G

40400 G

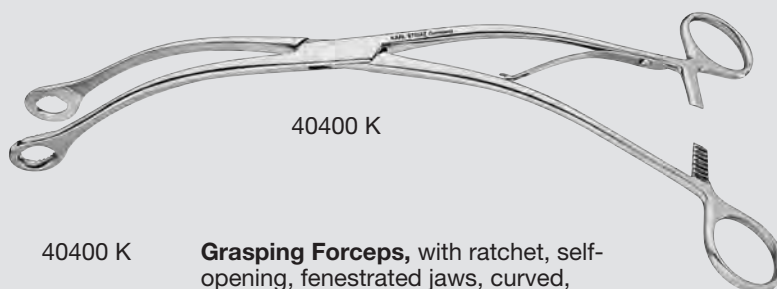
Grasping Forceps, with ratchet, self-opening, fenestrated jaws, S-shaped, medial joint, length 33 cm



40400 H

40400 H

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



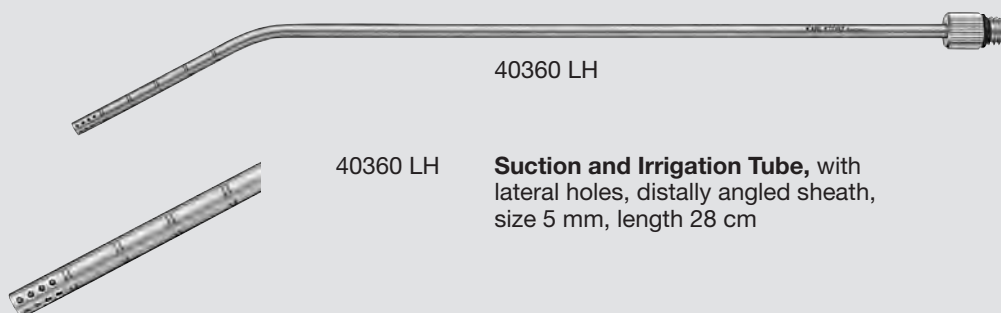
40400 K

40400 K

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

Suction and Irrigation Tubes

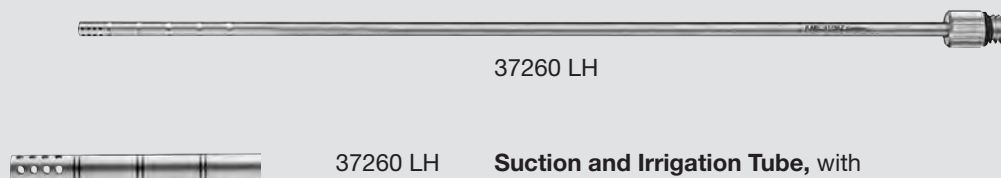
Size 5 mm
Trocár size 6 mm



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

Handles for use with Suction and Irrigation Tubes see page 133

Handles for Suction and Irrigation Tubes

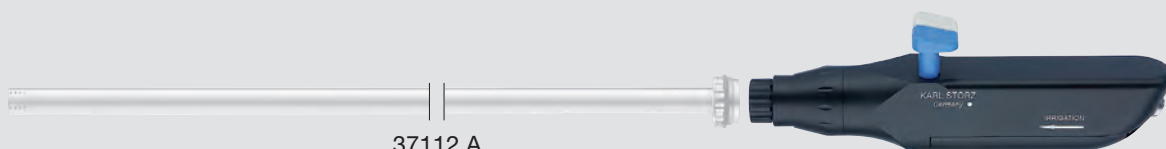
for use with suction and irrigation tubes size 5 mm



30805

30805

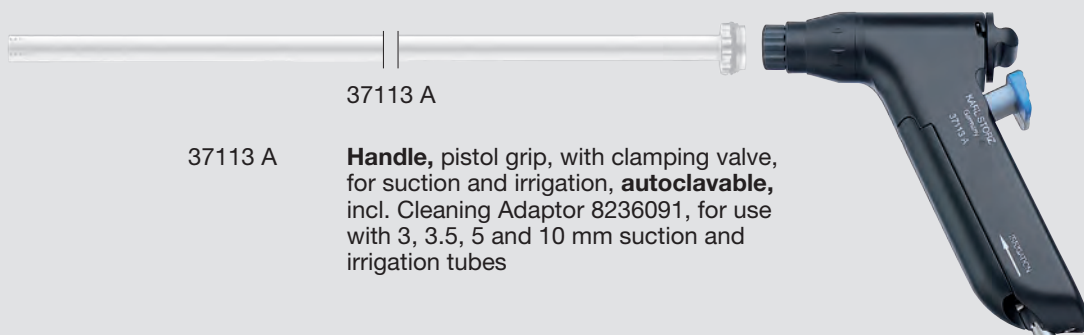
Handle with Two-Way Stopcock, for suction and irrigation, **autoclavable**, for use with suction and irrigation tubes size 5 mm



37112 A

37112 A

Handle, straight, with clamping valve, for suction and irrigation, **autoclavable**, incl. Cleaning Adaptor 8236091, for use with 3, 3.5, 5 and 10 mm suction and irrigation tubes



37113 A

37113 A

Handle, pistol grip, with clamping valve, for suction and irrigation, **autoclavable**, incl. Cleaning Adaptor 8236091, for use with 3, 3.5, 5 and 10 mm suction and irrigation tubes



37112 RV

NEW 37112 RV

Handle, straight, with roller valve, for suction and irrigation, **autoclavable**, incl. Cleaning Adaptor 8236091, for use with 3, 3.5, 5 and 10 mm suction and irrigation tubes

Please note:

Handles 37112 A, 37113 A and 37112 RV require the use of sterile tubing sets see page 134

Tubing Sets

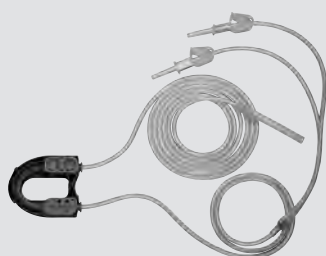
for use with Handles 37112 A, 37113 A and 37112 RV

STERILE



031133-10

031133-10* **Tubing Set**, sterile, for single use, package of 10, for use with Handles 37112 A, straight, 37113 A, pistol grip and 37112 RV



031524-10

031524-10* **Tubing Set for Irrigation, FC**, sterile, for single use, package of 10, for use with HAMOU® ENDOMAT® SCB 26 3311 20-1 and ENDOMAT® SELECT



031134-10

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

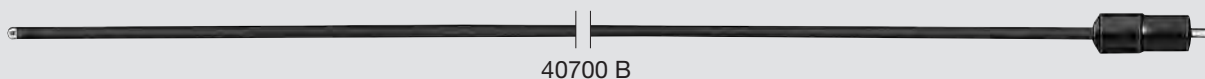


031219-10

031219-10* **Complete Tubing Set**, with two puncture cannulas, sterile, for single use, package of 10, for use with Handles 37112 A, straight, 37113 A, pistol grip and 37112 RV in combination with ENDOMAT® LC SCB



Electrode for Unipolar Coagulation, Knot Tier



40700 B



40700 B

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



26596 T



26596 T

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





VISUALIZATION SYSTEMS FOR OPEN AND MICRO SURGERY

VITOM® 2D:

2D VISUALIZATION FOR OPEN SURGERY WITH MINIMAL ACCESS	138-142
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OVERVIEW	143
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VITOM® II NIR/ICG	144-146
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VITOM® PDD	147-148
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SPECIFICATIONS	149
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VITOM® 3D:

3D VISUALIZATION FOR MICROSURGERY AND OPEN SURGERY	150
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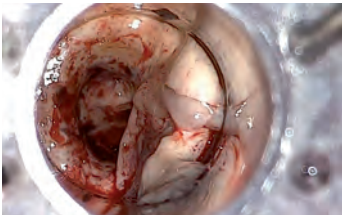
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VITOM® 3D	152
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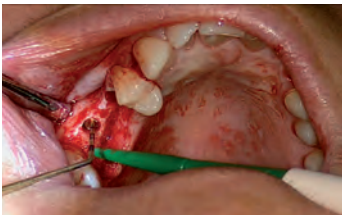
HOLDING SYSTEM AND ACCESSORIES	153-155
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VITOM® 2D
Potential Applications

The VITOM® can be used for many specialties in open surgery. In addition to visualization under white light, the VITOM® system also supports the option for fluorescence imaging (NIR/ICG and PDD).



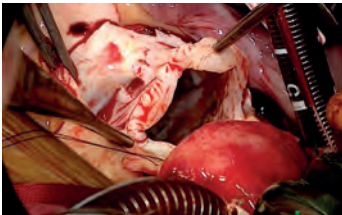
Port-based interventions
see NEUROSURGERY catalog



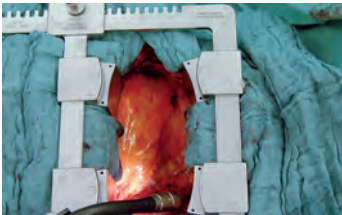
Dysgnathia surgery, flap preparation
see ORAL AND MAXILLOFACIAL SURGERY catalog



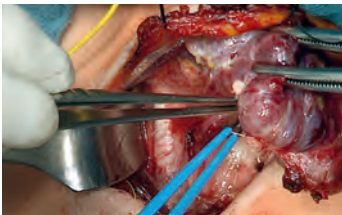
Open rhinoplasty, septoplasty, adenotomy
see ENDOSCOPES AND INSTRUMENTS
FOR ENT, ESOPHAGOSCOPY –
BRONCHOSCOPY catalog



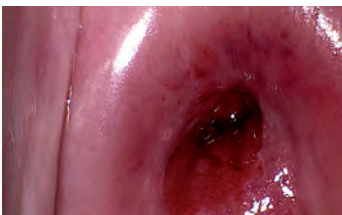
**Mitral valve surgery,
pediatric heart surgery**
see ENDOSCOPES AND INSTRUMENTS
FOR CARDIOVASCULAR SURGERY catalog



Mini-thoracotomy
see THORAX catalog



Open thyroidectomy
see LAPAROSCOPY IN SURGERY,
GYNECOLOGY, UROLOGY catalog



Loop conization, colposcopy
see GYNECOLOGY catalog

Urethral reconstruction, hypospadias/epispadias correction, artificial sphincter implantation, open prostatectomy
see UROLOGY catalog

Artificial sphincter implantation, rectal prolapse
see PROCTOLOGY catalog

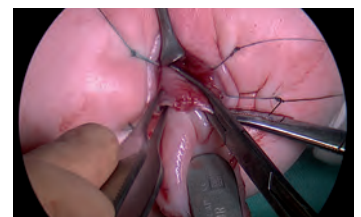
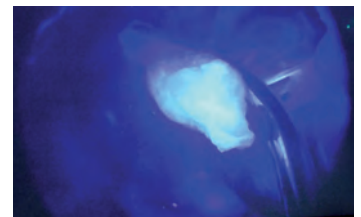
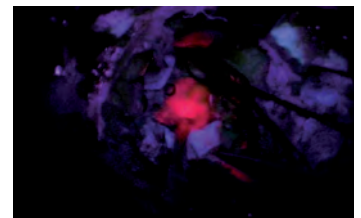
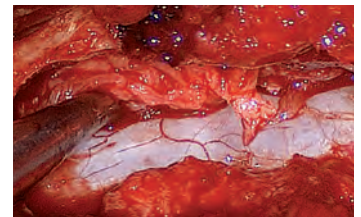
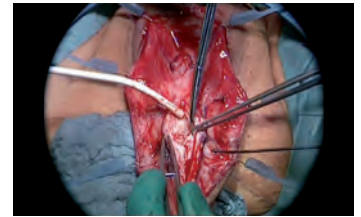
Dupuytren's contracture, ulnar shortening osteotomy, arthroplasty
see ARTHROSCOPY AND SPORTS MEDICINE catalog

Herniated discs, spinal stenosis, spondylodesis
see SPINE SURGERY catalog

Anorectal malformation, hypospadias correction, epispadias correction, ambiguous genitalia
see PEDIATRIC SURGERY catalog

Display of glioblastoma in neurosurgery
see FLUORESCENCE IMAGING WITH PDD

Perfusion assessment of anastomoses or free flaps, visualization of sentinel lymph nodes (in trial phase)
see FLUORESCENCE IMAGING WITH NIR/ICG



VITOM® 2D

2D visualization for open surgery with minimal access

Brilliant Visualization

The IMAGE1 S™ camera system provides optimal support for all interventions in minimally invasive and open surgery. VITOM® provides excellent depth of field, optimal magnification as well as good contrast and excellent color reproduction, which are the ideal prerequisites for the best possible visualization of interventions in open surgery.

Documentation

The VITOM® system is perfectly suited for the documentation of interventions in open surgery with minimal access.

Ergonomic Work

Enhanced images of the open surgical procedure can be observed via a monitor from a convenient distance by the surgeon, the assistant as well as the entire OR team. The system offers everyone present in the OR an optimal view of the surgical field.

Teaching and Training

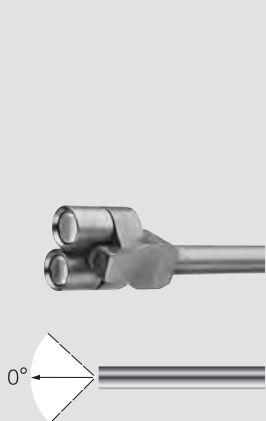
The VITOM® system is an excellent tool for teaching and training purposes as the system offers an unrestricted and magnified view of the surgical site both inside and outside the OR.



VITOM® Telescope 0°

The VITOM® telescope 0° is particularly suitable for brilliant documentation of open surgeries. Thanks to its

design and 0° direction of view, the telescope can be easily positioned by an assistant.



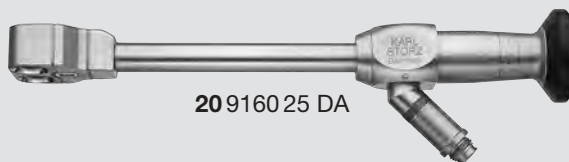
20 9160 25 AA

20 9160 25 AA VITOM® Telescope 0° with Integrated Illuminator, VITOM® HOPKINS® straight forward telescope 0°, working distance 25 – 75 cm, length 11 cm, **autoclavable**, with fiber optic light transmission incorporated and condensor lenses, color code: green

VITOM® Telescope 90°

The VITOM® telescope with a 90° direction of view is recommended for the visualization of an intervention as it allows flexible and ergonomic positioning above

the surgical site. This is a particular advantage for operating surgeons who wish to benefit from a clear and enlarged view on the monitor during a procedure.



20 9160 25 DA



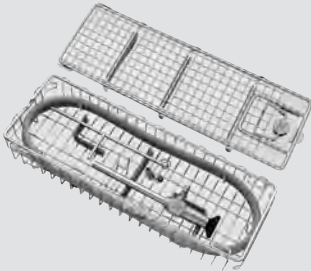
20 9160 25 DA VITOM® Telescope 90° with Integrated Illuminator, VITOM® HOPKINS® telescope 90°, working distance 25 – 75 cm, length 11 cm, **autoclavable**, with fiber optic light transmission incorporated and condensor lenses, color code: blue

Note: VITOM® is always used with a holding system.

Holding Systems see chapter 9

Specifications see page 149

Components/Spare Parts see chapter 11

		VITOM® Scope 0° with Integrated Illuminator	VITOM® Scope 90°
		20 9160 25 AA	20 9160 25 DA
495 TIP	 Fiber Optic Light Cable , with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 300 cm	●	●
495 NVC	 Fiber Optic Light Cable , with 90° deflection to the instrument, very narrow radius of curvature, diameter 4.8 mm, length 300 cm	●	—
39501 A2	 Wire Tray for Cleaning, Sterilization and Storage of two rigid endoscopes and one light cable, including holder for light post adaptors, silicone telescope holders and lid, external dimensions (w x d x h): 352 x 125 x 54 mm, for rigid endoscopes up to diameter 10 mm and working length 20 cm	●	●
Please note: The instruments displayed are not included in the wire tray.			

VITOM® 2D

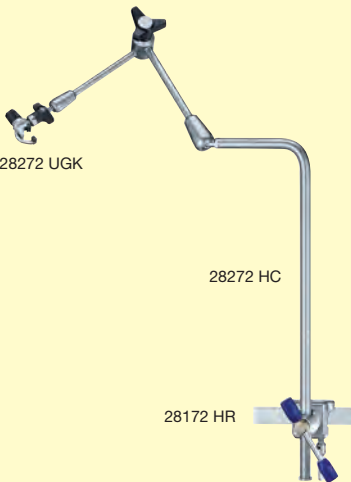
Overview

Clamping Cylinder

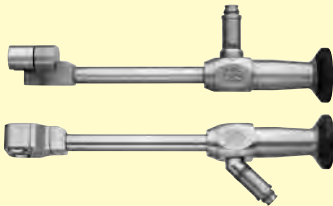


28272 CN

Mechanical Holding Arm



VITOM® Scope 0° with Integrated Illuminator
VITOM® Scope 90° with Integrated Illuminator



209160 25 AA/DA

Fiber Optic Light Cable



495 TIP

IMAGE1 S™ H3-Z Three-Chip FULL HD
Camera Head



TH 100

Cold Light Fountain POWER LED 300 SCB



TL 300

IMAGE1 S™ Camera System



TC 200EN
TC 300

26" FULL HD Monitor



9826 NB

VITOM® II NIR/ICG and PDD

Visualization system for fluorescence imaging in open surgery with minimal access with OPAL1® technology

OPAL1® – Fluorescence imaging based on the IMAGE1 S™ camera platform

Thanks to the OPAL1® technologies based on the IMAGE1 S™ camera platform, KARL STORZ is able to offer better visualization of anatomical structures or malignancies that are hidden to the naked eye under white light in minimally invasive and open surgery.

Near-infrared (NIR/ICG) fluorescence imaging allows the assessment of organ and tissue perfusion, e.g., following anastomoses or bypasses. It also makes it possible to display the bile duct anatomy during cholecystectomies or in the case of suspected lymphatic leakage. Furthermore, this technology can be used to visualize the lymphatic system, e.g., for the purposes of lymph node localization. The fluorescent dye indocyanine green (ICG) is used in this case.



Photodynamic diagnosis (PDD) is able to detect the high concentrations of fluorescent porphyrine products that indicate bladder tumors. It also supports urologists in the diagnosis and treatment of bladder cancer as demonstrated by the decrease in recurrence rates.

At the core of these fluorescence procedures is the IMAGE1 S™ camera platform which, in combination with various light sources and telescopes, forms the basis for OPAL1® technologies for fluorescent imaging. This combination offers physicians additional visual support in FULL HD image quality that is able to aid decision-making processes on a regular basis.

Fields of application for VITOM® II NIR/ICG:

- Perfusion assessment in open surgery*
- Lymph node detection*
- Bile duct visualization*



Fields of application for VITOM® PDD:

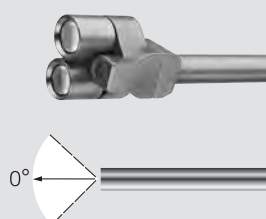
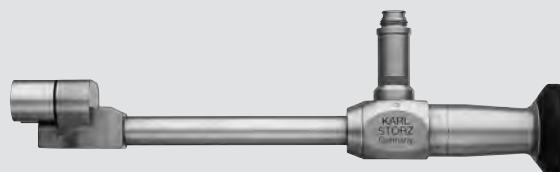
- Fluorescence-guided resection of high-grade gliomas*



*The approval of fluorescent markers and their use may vary due to country-specific regulations.
Fluorescence Diagnosis see TELEPRESENCE catalog

VITOM® II NIR/ICG

for near infrared (NIR/ICG) fluorescence imaging
in open surgery



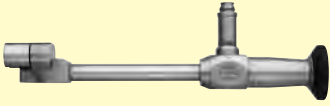
20 9160 25 AGA VITOM® II NIR/ICG Telescope 0°, with integrated illuminator and observation filter for fluorescence diagnostics with ICG, HOPKINS®, working distance 25 – 75 cm for white light, 20 – 30 cm for fluorescence applications, length 11 cm, **autoclavable**, with fiber optic light transmission incorporated and condensor lenses, color code: green



495 NCSC Fiber Optic Light Cable, with straight connector, extremely heat-resistant, enhanced light transmission, with safety lock, diameter 4.8 mm, length 250 cm


The IMAGE1 S™ platform is recommended for NIR/ICG applications.
For suitable light sources for NIR/ICG applications see TELEPRESENCE catalog

VITOM® II NIR/ICG Telescope
with Integrated Illuminator




20 9160 25 AGA

Clamping Cylinder



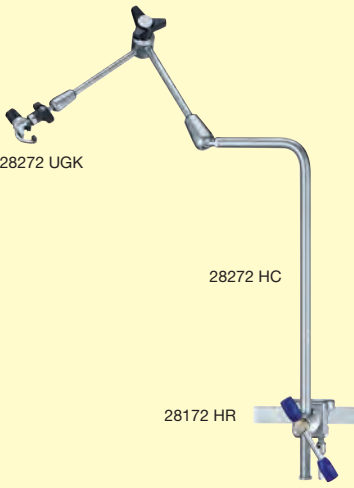
28272 CN

Fluid or Fiber Optic Light Cables



495 FR
495 NCSC

Mechanical Holding Arm



28272 UGK
28272 HC
28172 HR

IMAGE1 S™ H3-Z FI Three-Chip FULL HD
Camera Head



TH 102

Cold Light Fountain D-LIGHT P SCB



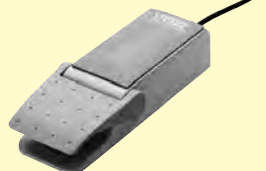
20 1337 01-1

IMAGE1 S™ Camera System




TC 200EN
TC 300

One-Pedal Footswitch



20 0141 30

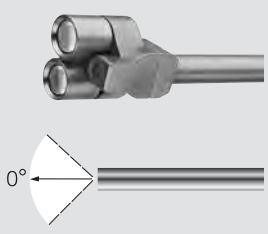
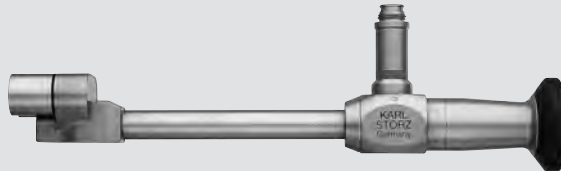
26" FULL HD Monitor



9826 NB

VITOM® PDD

Visualization system for open surgery with minimal access
with OPAL1® technology



20 9160 25 AIA

VITOM® II PDD Telescope 0°, with integrated illuminator and observation filter for fluorescence diagnostics with PDD, HOPKINS®, working distance 25 – 75 cm for white light, 20 – 30 cm for fluorescence applications, length 11 cm, **autoclavable**, with fiber optic light transmission incorporated and condensor lenses, color code: green



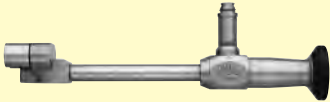
495 FR

Fluid Light Cable, diameter 5 mm, length 250 cm

5-16


The IMAGE1 S™ platform is recommended for PDD applications.
For suitable light sources for NIR/ICG applications see TELEPRESENCE catalog

VITOM® PDD Telescope 0°
with Integrated Illuminator




20 9160 25 AIA

Clamping Cylinder



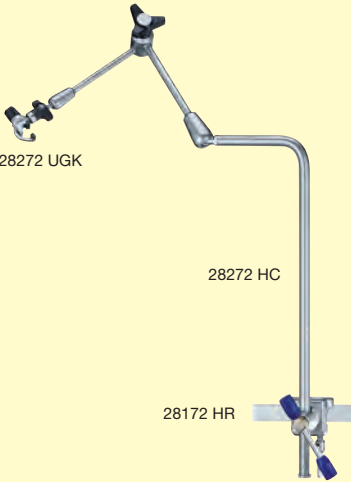
28272 CN

Fluid Light Cable



495 FR

Mechanical Holding Arm



28272 UGK
28272 HC
28172 HR

One-Chip FULL HD Camera Head



TH 112

Cold Light Fountain D-LIGHT C/AF SCB




20 1336 01-133

IMAGE1 S™ Camera System



TC 200EN
TC 301

One-Pedal Footswitch



20 0141 30

26" FULL HD Monitor



9826 NB

Working distance:	25 – 75 cm		
Depth of view at working distance of:	25 cm	50 cm	75 cm
Depth of view:	approx. 3.5 cm	approx. 7 cm	approx. 10 cm
Field of view at working distance of:	25 cm	50 cm	75 cm
IMAGE1 S™ H3-Z camera zoom 1x	5 cm	10 cm	15 cm
IMAGE1 S™ H3-Z camera zoom 2x	3.5 cm	7 cm	10.5 cm
Reproduction scale at working distance of:	25 cm	50 cm	75 cm
26" Monitor:			
H3-Z camera zoom 1x	approx. 8x	approx. 4x	approx. 3x
H3-Z camera zoom 2x	approx. 16x	approx. 8x	approx. 6x
42" Monitor:			
H3-Z camera zoom 1x	approx. 14x	approx. 7x	approx. 5x
H3-Z camera zoom 2x	approx. 28x	approx. 14x	approx. 10.5x
52" Monitor:			
H3-Z camera zoom 1x	approx. 17x	approx. 8x	approx. 6x
H3-Z camera zoom 2x	approx. 34x	approx. 16x	approx. 12x

Note:

A working distance of max. 30 cm is recommended in order to receive an optimal signal for fluorescence applications with VITOM® II NIR/ICG and VITOM® PDD.

Technical specifications are subject to change.

VITOM® 3D

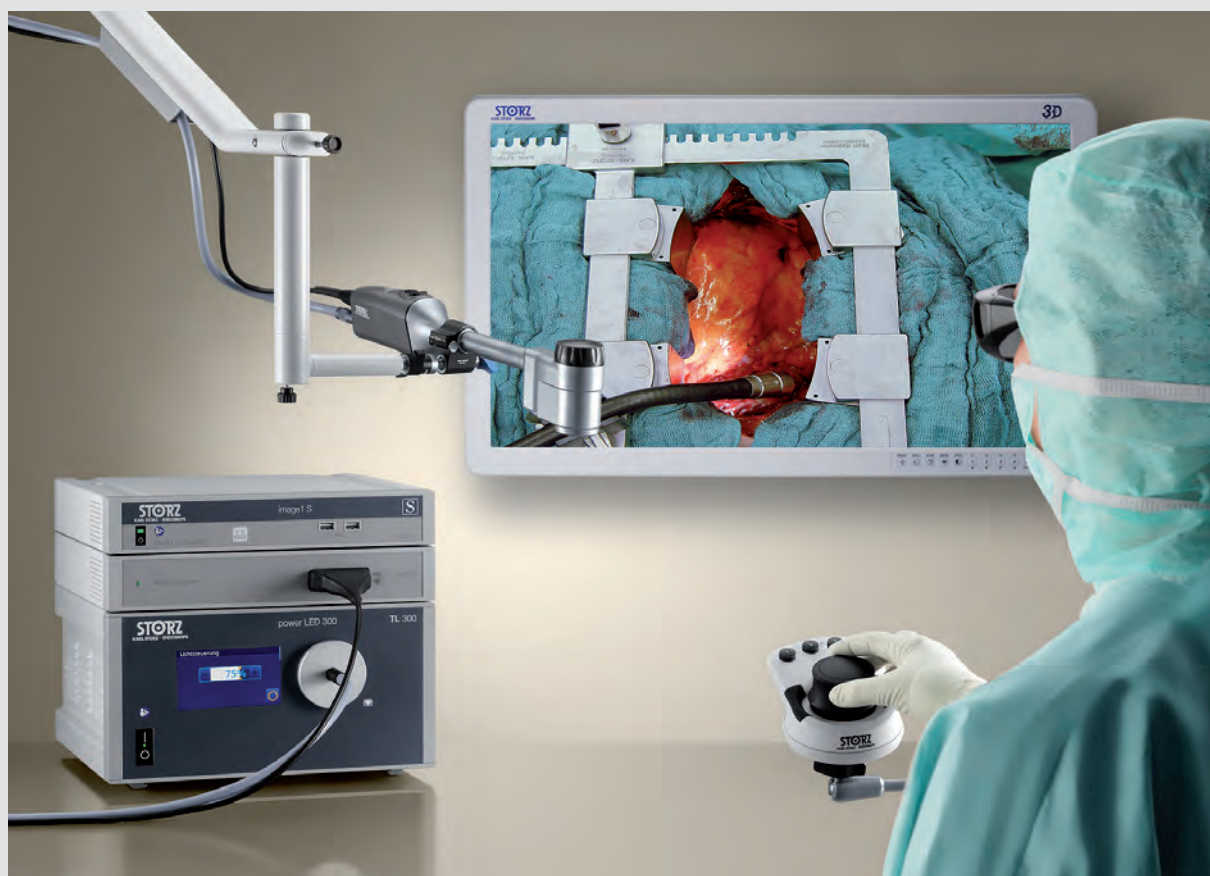
3D visualization for microsurgery and open surgery

The application possibilities of the VITOM® 3D are similar to that of the operating microscope. The surgeon can work comfortably with VITOM® 3D via a 3D monitor which allows for a relatively free choice of working positions. The most important functions are controlled via the IMAGE1 PILOT, which is mounted on the OR table in the direct vicinity of the surgeon. The VITOM® 3D system provides many surgical disciplines with a revolutionary solution for the visualization of micro-surgical and open surgical interventions.

The VITOM® 3D fits seamlessly into the IMAGE1 S™ platform and can be used with this system. The visualization and documentation of surgeries can thus be carried out with an existing endoscopy tower. This ideally supports combined work with endoscopes as in, for example, endoscopically assisted microsurgery (EAM).

Benefits at a glance:

- Ergonomic work – the user is not confined to the eyepiece
- Improved workflow – the entire OR team can view the procedure in the same image quality as the surgeon
- Flexible, diverse application possibilities – from visualization and documentation to education and training
- Beneficial for endoscopically assisted microsurgery as it is possible to combine VITOM® 3D with endoscopes
- Small, lightweight and portable system
- Economic synergetic effects from 3D visualization for microsurgery and open surgery as well as endoscopy based on the IMAGE1 S™ platform



VITOM® 3D, with integrated illumination
Cover, for VITOM® 3D, sterile



TH 200
TH 001*

Holding Arm for VITOM® 3D



28272 HSP

Fiber Optic Light Cables



495 TIP
495 VIT

IMAGE1 PILOT
IMAGE1 PILOT Sterile Cover



TC 014
041150-20*

IMAGE1 S™ Camera System



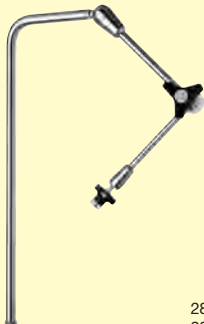
TC 200EN
TC 302

Cold Light Fountain POWER LED 300 SCB



TL 300

Holding Arm for IMAGE1 PILOT



28272 HB
28172 HR

3D Monitors



TM 330, TM 263

3D Polarization Glasses
3D Clip-on Glasses

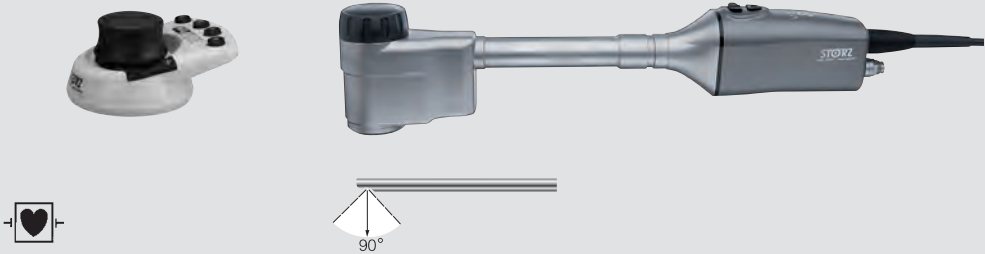


TM 003
9800 C



VITOM® 3D

3D visualization for microsurgery and open surgery



- TH 200

VITOM® 3D, with zoom and focus function, integrated illumination and horizontal alignment, working distance 20 – 50 cm, fiber optic light transmission incorporated, suitable for wipe disinfection, for use with IMAGE1 S CONNECT® Module TC 200, IMAGE1 S D3-LINK™ TC 302 and IMAGE1 PILOT TC 014
- TC 014

IMAGE1 PILOT, control unit with 3D wheel, 4 programmable function keys and USB port, for intuitive control of camera systems and connected units, for use with IMAGE1 S™ and VITOM® 3D TH 200

Specifications:

Frame rate	50/60 Hz
Image sensor	2 chip, 4K
Image display	3D, 2D
Scanning method	progressive scan
Zoom	infinitely variable
Working distance (WD)	20 – 50 cm
Magnification (WD 30 cm with 32" 3D monitor)	approx. 8 – 30 x
Cable length	500 cm
Cable routing	straight
Cleaning	wipe disinfection
Sterilization concept	single-use covers
Control concept	IMAGE1 PILOT for intuitive control of all relevant functions (zoom, focus, menu, navigation), 4 buttons for rapid access, 3D wheel
Camera head buttons	freely programmable
S-Technologies	CLARA, CHROMA, SPECTRA
Degree of protection	in conjunction with the IMAGE1 S™ camera control unit: CF-Defib

IMAGE1 PILOT is required for VITOM® 3D.
VITOM® 3D and IMAGE1 PILOT are always used with a holding system.
Please note: Special clamping jaws are available for mounting VITOM® 3D to the holding system.
Holding Systems see chapter 9

VERSACRANE™ Holding System – for the convenient positioning of VITOM®



28272 HSP

28272 HSP **VERSACRANE™ Holding Arm**, high, mobile, spring-supported, with quick release coupling KSLOCK, for use with KARL STORZ clamping jaws. The VERSACRANE™ holding arm is intended for use with VITOM® scopes.

including:

Mobile Stand, with height adjustment

WARNING: The VERSACRANE™ holding arm cannot be used with rigid endoscopes!

Clamping Jaws and Accessories for VITOM® 3D

28272 VTK **VITOM® 3D Clamping Jaw**, with ball joint and quick release coupling KSLOCK (male), for use with VITOM® 3D and KARL STORZ holding systems with quick release coupling KSLOCK




TH 001* **Cover**, for VITOM® 3D, sterile, for single use, package of 10

STERILE

11-16







Note: The 550 cm long Light Cable 495 VIT is necessary for the use of VERSACRANE™.
Components/Spare Parts see chapter 11

	28272 VTK	VITOM® 3D Clamping Jaw , with ball joint and quick release coupling KSLOCK (male), for use with VITOM® 3D and KARL STORZ holding systems with quick release coupling KSLOCK
	28272 VTP	VITOM® 3D Clamping Jaw , for POINT SETTER, with dovetail connector, for use with VITOM® 3D and POINT SETTER holding system
	495 TIP	Fiber Optic Light Cable , with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 300 cm
	495 VIT	Fiber Optic Light Cable , with straight connector, extremely heat-resistant, enhanced light transmission, diameter 4.8 mm, length 550 cm
	TH 001*	Cover , for VITOM® 3D, sterile, for single use, package of 10
	TH 002	VITOM® 3D Illuminator , additional lighting for VITOM® 3D, with 1 adjustable lens, autoclavable , for use with VITOM® 3D and light cable
	TH 003	Protective Cover , high-grade protective cover, padded imitation leather, for protecting the VITOM® 3D during storage and transport, for use with VITOM® 3D and holding arm
	39502 ZH	Wire Tray , stackable, with hole plates
	39502 LH	Lid
	39100 SH	Silicone Grid Insert LARGE DIAMOND GRID
	39100 PS	Fixation Pins , package of 12
	39360 AS	Silicone Tie-Downs , package of 12







Please note: The instruments displayed are not included in the wire tray.

IMAGE1 PILOT with holding system for fixation to the operating table

	TC 014	IMAGE1 PILOT , control unit with 3D wheel, 4 programmable function keys and USB port, for intuitive control of camera systems and connected units, for use with IMAGE1 S™ and VITOM® 3D TH 200
	28172 HR	Rotation Socket , to clamp to the operating table, with one mounted Butterfly Nut 28172 HRS, for European and US standard rails, with lateral clamp for height and angle adjustment of the articulated stand
	28272 HB	Articulated Stand , reinforced version, L-shaped, with one mechanical central clamp for all five joint functions, height 48 cm, operating range 52 cm, with quick release coupling KSLOCK (female)
	041150-20*	Cover , with elasticated tip, 42 x 164 cm, sterile, for single use, package of 20, for use with KARL STORZ holding systems and IMAGE1 PILOT

Monitor

	TM 330	32" 3D Monitor including: Mains Cord External 24 VDC Power Supply 3x 3D Polarization Glasses , fogless Cable Cover 4x Mounting Screws M4 4x Mounting Screws M6
	9832 SFH	Monitor Stand , for professional use, height-adjustable, tiltable, rotation +/-30°, disinfectable, color white, with VESA 200 adaptor, for use with 32" monitors
	TM 003	3D Polarization Glasses , fogless, passive, for use with 3D monitors
	9800 C	3D Clip-on Glasses , circularly polarized, for use with 3D monitors



Holding System for VITOM® 3D see chapter 9

HOLDING SYSTEMS



Mechanical Holding Systems

with KSLOCK



The mechanical holding systems from KARL STORZ offer a versatile, convenient and cost-effective possibility for the secure positioning of instruments and telescopes.

Special Features:

- Simple, fast and accurate positioning
- Many fields of application possible thanks to various articulated stands and a wide range of accessories
- Flexible positioning enables a large number of different positions
- All joints can be easily released or fixed by means of the central clamp
- Socket for use with European and United States standard rails of OR table
- Variable height adjustment by using the socket

A wide range of accessories enables the systems to be configured for any desired fields of application. The robust construction ensures reliable positioning without oscillation.

- Extension Rod 28172 HM for the adjustment of particularly large working distances, for example, the VITOM® system
- 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
- Maintenance-free solid construction
- Autoclavable
- KSLOCK rapid coupling for mounting clamping jaws, instruments and accessories with KSLOCK pins





Socket

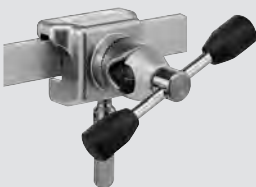
Standard Socket

28172 HK



Rotation Socket

28172 HR



Articulated Stand

straight

28272 HA

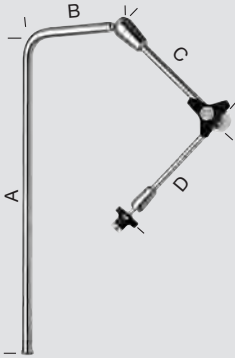


A 30 cm
C 20 cm

B –
D 17 cm

L-shaped

28272 HB

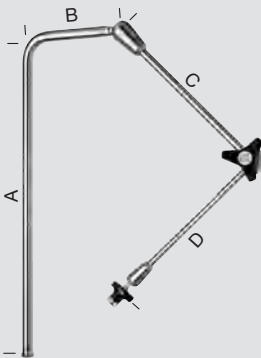


A 48 cm
C 20 cm

B 15 cm
D 17 cm

L-shaped, long

28272 HC

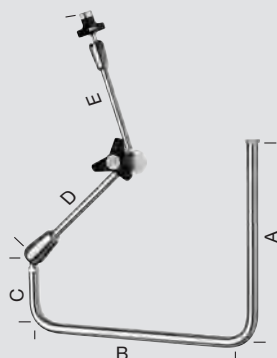


A 48 cm
C 27 cm

B 15 cm
D 24 cm

U-shaped

28272 HD



A 25 cm
C 10 cm
E 17 cm

B 31 cm
D 20 cm

To complete the mechanical holding system, a clamping jaw is required.
Clamping Jaws for the Mechanical Holding System see page 160



Holding Systems

Recommended Clamping Jaws and Accessories

Clamping Jaws

	28272 UGN	Clamping Jaw , metal, clamping range 16.5 – 23 mm, with quick release coupling KSLOCK (male), for use with all square-headed HOPKINS® telescopes
	28272 UKN	Clamping Jaw , metal, clamping range 4.8 – 12.5 mm, with quick release coupling KSLOCK (male), for use with instrument and telescope sheaths
	28272 UGK	Clamping Jaw , with ball joint, large, clamping range 16.5 – 23 mm, with quick release coupling KSLOCK (male), for use with all square-headed HOPKINS® telescopes
	28272 UKK	Clamping Jaw , with ball joint, small, metal, clamping range 4.8 – 12.5 mm, with quick release coupling KSLOCK (male), for use with instrument and telescope sheaths
	28272 UL	Clamping Jaw , universal, clamping range 0 – 18 mm, with quick release coupling KSLOCK (male)
	28272 UF	Clamping Jaw , for use with all polymer housing fiberscopes, with quick release coupling KSLOCK (male)

Accessories

	28272 CN	Clamping Cylinder , folding, for flexible mounting of 10 mm telescopes on the telescope sheath, autoclavable . The clamping cylinder allows vertical movement and rotation of the telescope.
	28172 HM	Extension Rod , 50 cm, with lateral clamp for height adjustment of the articulated stand, for use with Articulated Stands 28272 HA/HB/HC and Sockets 28172 HK/HR
	041150-20*	Cover , with elasticated tip, package of 20





UNITS AND ACCESSORIES

INSUFFLATORS AND SMOKE
SUCTION CONTROL

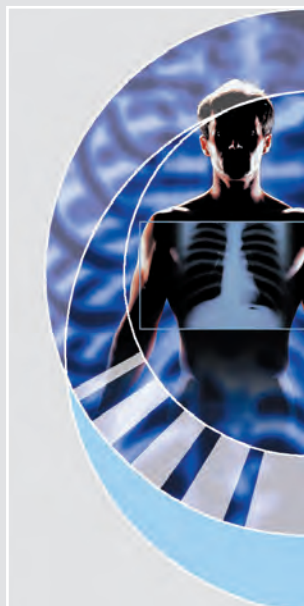


SUCTION AND IRRIGATION SYSTEMS



HIGH FREQUENCY SURGERY UNITS





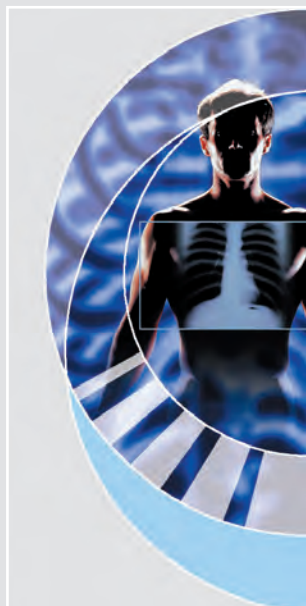
- **INSUFFLATORS AND SMOKE SUCTION CONTROL**
- **SUCTION AND IRRIGATION SYSTEMS**
- **HIGH FREQUENCY SURGERY UNITS**

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 entire KARL STORZ product line includes the following categories of units with accessories:

- **Insufflators and Smoke Evacuation Systems**
- **Suction and Irrigation Systems**
- **Motor Systems**
- **Lithotripsy**
- **HF Surgery Units**



■ INSUFFLATORS

NEW ENDOFLATOR® 40 SCB

NEW ENDOFLATOR® 50 SCB

■ SMOKE SUCTION CONTROL

NEW S-PILOT®

Special Features:

- Ease of use thanks to touch screen control
- Clear, adjacent displays for set value and actual value facilitate monitoring of the insufflation process
- Fast and reliable insufflation via an adjustable flow rate up to 40 l/min
- Innovative PEDIATRIC mode with special safety limits for sensitive applications
- Automatic adjustment of insufflation rate to diverse instrument resistance values ensures the fastest possible insufflation
- 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
- With connection possibilities to the KARL STORZ Communication Bus (KARL STORZ-SCB) for unit integration



ENDOFLATOR® 40 SCB ^{NEW}
Recommended Standard Set Configuration



- UI 400S1 **ENDOFLATOR® 40 SCB**, set with integrated SCB module, power supply 100 – 240 VAC, 50/60 Hz including:
- ENDOFLATOR® 40 SCB**
 - SCB Connecting Cable**, length 100 cm
 - Universal Wrench**
 - Insufflation Tubing Set***, with gas filter, sterile, for single use, package of 5
 - HICAP® Trocar**, size 11 mm



Specifications:

Operating mode	- HIGH FLOW mode - PEDIATRIC mode
Gas flow	- PEDIATRIC mode: 0.1 – 15 l/min - HIGH FLOW mode: 1 – 40 l/min
Pressure	- PEDIATRIC mode: 1 – 15 mmHg - HIGH FLOW mode: 1 – 30 mmHg
Gas	CO ₂
Measuring/control system	Electronic
Parameter display	- Set pressure - Actual pressure (intraabdominal) - Gas flow - Gas consumption: 0 – 999 l - Status display gas consumption

SECUVENT® safety system	•
Power supply	100 – 240 VAC, 50/60 Hz
Dimensions w x h x d	305 x 164 x 315 mm
Weight	7.4 kg
Certified to	IEC 601-1, CE acc. to MDD

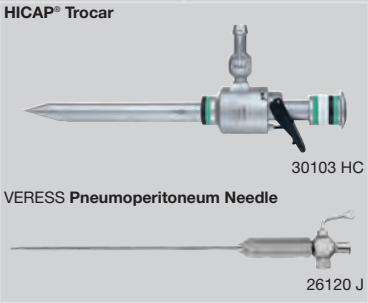
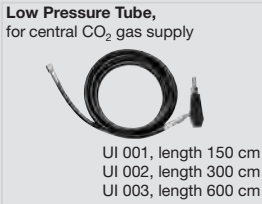
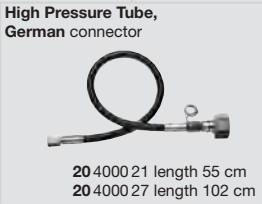
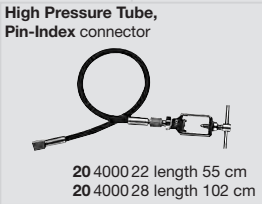


Optional Accessories for ENDOFLATOR® 40 SCB see pages U 12-13
Components/Spare Parts see chapter 11

ENDOFLATOR® 40 SCB ^{NEW}

System Components

INSUFFLATORS AND
SMOKE SUCTION CONTROL



ENDOFLATOR® 50 SCB ^{NEW}

with Speed Flow Insufflation (50 l/min)

STORZ
KARL STORZ — ENDOSKOPE

INSUFFLATORS AND
SMOKE SUCTION CONTROL

Special Features:

- Ease of use due to large, color 7" touch screen
- Simultaneous display of set values and actual values facilitate monitoring of the insufflation process
- Automatic adjustment of insufflation rate to diverse instrument resistance values ensures the fastest possible insufflation
- Fully automatic, electronically controlled gas refill (e.g. in case of gas loss when changing instruments)
- **SECUVENT®** safety system: Constant monitoring of intraabdominal pressure
- Especially suitable for providing a high gas flow when using smoke generating systems
- Powerful **HIGH FLOW** mode for fast insufflation of large gas volumes up to 50 l/min
- A high-capability trocar (**HICAP®** trocar) that allows ideal flow conditions is included in the set
- Tubing set with integrated heating element for preheating gas to body temperature to prevent telescope from fogging and peritoneum from cooling down
- With connection possibilities to the **KARL STORZ Communication Bus (KARL STORZ-SCB)** for unit integration



ENDOFLATOR® 50 SCB ^{NEW}
with Speed Flow Insufflation (50 l/min),
Recommended Standard Set Configuration



INSUFFLATORS AND
SMOKE SUCTION CONTROL



UI 500S1 **ENDOFLATOR® 50 SCB**, with integrated SCB module,
power supply 100 – 240 VAC, 50/60 Hz
including:
SCB Connecting Cable, length 100 cm
Universal Wrench
Heated Insufflation Tubing Set*, with gas filter,
sterile, for single use, package of 3
HICAP® Trocar, size 11 mm



Specifications:

Operating mode	- HIGH FLOW mode - PEDIATRIC mode
Gas flow	- PEDIATRIC mode: 0.1 – 15 l/min - HIGH FLOW mode: 1 – 50 l/min
Pressure	- PEDIATRIC mode: 1 – 15 mmHg - HIGH FLOW mode: 1 – 30 mmHg
Gas	CO ₂
Measuring/control system	Electronic
Parameter display	- Set pressure - Actual pressure (intraabdominal) - Gas flow - Gas consumption: 0-999 l - Status display gas consumption

SECUVENT® safety system	•
Heating element	•
Power supply	100 – 240 VAC, 50/60 Hz
Dimensions w x h x d	305 x 164 x 315 mm
Weight	7.8 kg
Certified to	IEC 601-1, CE acc. to MDD



Optional Accessories for ENDOFLATOR® 50 SCB see pages U 12-13
Components/Spare Parts see chapter 11

ENDOFLATOR® 50 SCB ^{NEW}

System Components

CO₂ Bottle, empty,
Pin-Index connector



26 4000 91

CO₂ Bottle, empty,
German connector



26 4000 90

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 CO₂ gas supply



UI 001, length 150 cm
UI 002, length 300 cm
UI 003, length 600 cm

UNIT SIDE
PATIENT SIDE

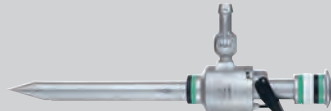


Heatable Insufflation Tubing Set



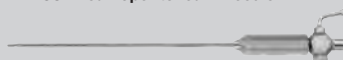
031210-01*

HICAP® Trocar



30103 HC

VERESS Pneumoperitoneum Needle














26120 J



Optional Accessories

for Insufflators










INSUFFLATORS AND
SMOKE SUCTION CONTROL

				for use with	
				ENDOFLATOR® 40 SCB UI 400S1	ENDOFLATOR® 50 SCB UI 500S1
	031200-10*	Insufflation Tubing Set with Gas Filter , length 300 cm, hydrophobic on both sides, sterile, for single use, package of 10, for use with insufflation units with a maximum gas flow of 50 l/min (Electronic ENDOFLATOR®, THERMOFLATOR®, ENDOFLATOR® 40 and ENDOFLATOR® 50)	STERILE 	•	•
	031210-10*	Same , heatable	STERILE 	-	•
	031122-25*	Gas Filter , with ISO connectors, hydrophobic on both sides, sterile, for single use, package of 25, for use with insufflation units with a maximum gas flow of 50 l/min (Electronic ENDOFLATOR®, THERMOFLATOR®, ENDOFLATOR® 40 and ENDOFLATOR® 50)	STERILE 	•	•
	UI 004	Insufflation Tube , sterilizable, inner diameter 9 mm, length 250 cm		•	•
	031622-10*	Insufflation Tubing Set with Gas Filter , length 400 cm, two patient-side tube connections, hydrophobic on both sides, sterile, for single use, package of 10, for use with insufflation units with a maximum gas flow of 30 l/min (Electronic ENDOFLATOR®, THERMOFLATOR®, ENDOFLATOR® 40 and ENDOFLATOR® 50)	STERILE 	•	•
	26120 J	VERESS Pneumoperitoneum Needle , with spring-loaded blunt inner cannula, LUER-Lock, autoclavable, diameter 2.1 mm, length 10 cm		•	•
	30103 HC	HICAP® Trocar , size 11 mm		•	•



Optional Accessories

for Insufflators

			for use with	
			ENDOFLATOR® 40 SCB UI 400S1	ENDOFLATOR® 50 SCB UI 500S1
	20 4000 21	CO₂ High Pressure Tube , American connection/German connection, length 55 cm	•	•
	20 4000 27	Same , length 102 cm		
	20 4000 22	CO₂ High Pressure Tube , American connection/Pin-Index connection, length 55 cm	•	•
	20 4000 28	Same , length 102 cm		
	20 4002 22	CO₂ High Pressure Tube , American connection/ISO connection, length 102 cm	•	•
	UI 001	Low Pressure Tube , for the central CO ₂ gas supply, length 150 cm	•	•
	UI 002	Same , length 300 cm		
	UI 003	Same , length 600 cm		
	26 4000 90	CO₂ Bottle , empty, with German connection	•	•
	26 4000 91	CO₂ Bottle , empty, with Pin-Index connection	•	•
	UI 005	Bottle Holder , fold-away, holder for CO ₂ gas bottles 1000 ml, including attachments	•	•
	20 4000 32	High Pressure Inline Gas Filter	•	•
	20 0903 70	SCB Connecting Cable , length 60 cm	•	•
	20 0900 70	Same , length 30 cm		

Special Features:

- Intelligent, fully automatic control of the vacuum generated for smoke evacuation in combination with HF units integrated in SCB
- Footswitch can be activated if using equipment from other manufacturers
- Touch key enables smooth insertion of the tube
- With connection option for KARL STORZ Communication Bus (KARL STORZ-SCB)
- Compatible with all standard insufflation units with pressure control



**Compatible with all standard
insufflation units with pressure control**



- UP 501S1

S-PILOT®, incl. footswitch, power supply 100 – 240 VAC, 50/60 Hz
including:
One-Pedal Footswitch
Tubing Set Suction*, sterile, for single use, package of 5
SCB Connecting Cable, length 100 cm

STERILE

- UP 501S3

S-PILOT®, without footswitch, power supply 100 – 240 VAC, 50/60 Hz
including:
Tubing Set Suction*, sterile, for single use, package of 5
SCB Connecting Cable, length 100 cm

STERILE

Specifications:

Power supply	100 – 240 VAC, 50/60 Hz
Rated power	30 W

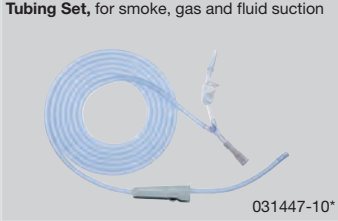
Dimensions w x h x d	305 x 50 x 320 mm
Weight	1.92 kg



Optional Accessories for S-PILOT® see pages U 17-18
Components/Spare Parts see chapter 11



Tubing Set, for smoke, gas and fluid suction



for use with



UI 500S1 ENDOFLATOR® 50 SCB



UI 400S1 ENDOFLATOR® 40 SCB



26 4320 08-1 THERMOFLATOR® SCB



26 4305 08-1 Electronic CO₂-
ENDOFLATOR® SCB





031447-10* **Tubing Set for Smoke, Gas and Fluid Suction**,
with connector for second suction tube, sterile,
for single use, package of 10, for use with S-PILOT®,
for laparoscopy



STERILE



031111-10* **Smoke Evacuation Filter**, unsterile,
for single use, package of 10



20 0141 30 **One-Pedal Footswitch**, digital,
one-stage, for irrigation

	UP 004	S-PILOT® Connecting Cable , diameter 3.5 mm, length 300 cm, for use with AUTOCON® III 400, ConMed System 2450 or 5000
	UP 005	S-PILOT® Connecting Cable , diameter 2.5 mm, length 300 cm, for use with Valleylab Force Triad or Valleylab Force FX
	20 0900 13	Set for SCB/ERBE VIO Interface Box , power supply 100 – 240 VAC, 50/60 Hz including: SCB/ERBE VIO Interface Box SCB Connecting Cable SCB/ECB Connecting Cable Mains Cord
	20 0912 90	Set for SCB/KLS MARTIN maxium , SCB/RS 232 interface module for KLS MARTIN maxium, for installation in KARL STORZ SCB Interface control 20 0901 20, SCB MEDIA CONTROL® 20 0910 32 and SCB ACC CONTROL® 20 0906 32 including: SCB/KLS MARTIN maxium Module RS 232 Connecting Cable , length 200 cm
	20 0905 01	KARL STORZ-SCB Interface control Set , for integrating up to 6 SCB interface modules, e.g., module for SCB/SONY video recorder, module for SCB MEDIA CONTROL® or module for OR1™ Telestration etc. into the KARL STORZ-SCB interface control, power supply 100 – 240 VAC, 50/60 Hz including: KARL STORZ-SCB Interface control SCB Connecting Cable , length 100 cm Mains Cord

Components/Spare Parts see chapter 11



■ SUCTION AND IRRIGATION SYSTEMS

NEW **ENDOMAT® SELECT**
DUOMAT®
UNIMAT® 30

ENDOMAT® SELECT ^{NEW}

Roller pump for the irrigation of fluids

STORZ
KARL STORZ — ENDOSKOPE

Special Features:

- Roller pump system for flow-controlled irrigation
- Max. flow setting: 3500 ml/min
- Fields of application can be expanded at any time
- Unit and accessories extremely easy to use
- Multidisciplinary use
- With connection option for KARL STORZ Communication Bus (KARL STORZ-SCB)





Basic Unit:

UP 210 **ENDOMAT® SELECT**, suction or irrigation pump, incl. mains cord, power supply 100 – 240 VAC, 50/60 Hz

Software Module for Surgery:

UP 601 **SURGERY Software, License**, allows selection of the procedures “LAP”, “THOR” and “PROCTO”, for use with ENDOMAT® SELECT UP 210

Specifications:

Software package	Surgery	Operating mode	Irrigation, flow-controlled
Flow max.	3500 ml/min	Dimensions w x h x d	305 x 110 x 260 mm
Power supply	100 – 240 VAC, 50/60 Hz	Certified to	IEC 601-1, CE acc. to MDD
Weight	4.7 kg		
Parameter display	- Set flow - Actual flow		

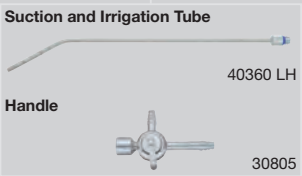
Note:

ENOMAT® SELECT only functions after uploading a software module (e.g., UP 601). When placing an order for this system, please consult Configuration Flyer 96311002.

Optional Accessories for ENDOMAT® SELECT see page U 23






Components/Spare Parts see chapter 11

UNIT SIDE
PATIENT SIDE



ENDOMAT® SELECT

Optional Accessories

	031524-10*	Tubing Set for Irrigation , FC, sterile, for single use, package of 10, for use with HAMOU® ENDOMAT® SCB 26 3311 20-1 and ENDOMAT® SELECT	STERILE 
	20 0900 70	SCB Connecting Cable , length 30 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, autoclavable , for use with suction and irrigation tubes size 5 mm	
	UP 610	ADVANCED Package, software, license , extends functions of installed software packages, for use with ENDOMAT® SELECT UP 210	



Note:
Further information on additional Software Modules and Accessories for ENDOMAT® SELECT is available in Product Highlight 96311003.

Special Features:

- Simple, powerful suction and irrigation system for universal use
- Suction bottle with overflow protection
- Low noise level



20 3210 08 DUOMAT®, Suction and Irrigation Pump,
power supply 100 – 120/230 – 240 VAC, 50/60 Hz

Specifications:

Pressure non-regulated	max. 400 mmHg (53.2 kPa)
Suction pressure	non-regulated: max. (-)0.75 bar (-75 kPa)
Power supply	100 – 120, 230 – 240 VAC, 50/60 Hz

Dimensions w x h x d	305 x 110 x 271 mm
Weight	5 kg
Certified to	IEC 601-1, CE acc. to MDD

Optional Accessories for DUOMAT® see pages U 26-27
Components/Spare Parts see chapter 11

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
connection)
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 –
bacterial filter
connection)
part 1 of 2



20 3000 44

Pressure
Infusion Cuff



26 3100 38
26 3101 38

Bottle Cap,
for
Irrigation
Bottle



26 3100 35
26 3100 50

Filter



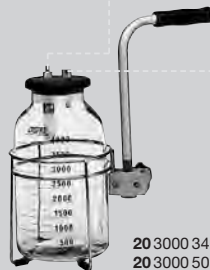
031124-10*

Filter



031124-10*

Bottle Caps,
Suction Bottle,
5 l,
Bottle Holder,
Holder for
Bottle Stand



20 3000 34
20 3000 50
20 3000 32
20 3000 33

Suction
Bottle,
1.5 l,
Bottle
Cap,
Bottle
Holder



20 3000 52
20 3000 34
20 3001 30

Silicone
Tubing Set,
for irrigation
(Pressure
infusion cuff –
instrument
connection)
part 2 of 2



20 3000 46

Silicone
Tubing Set,
for irrigation
(bottle –
instrument
connection)
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








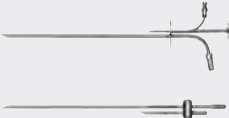



40360 LH

Handle



30805

	26 3100 38	Pressure Infusion Cuff, 1.5 l
	26 3101 38	Pressure Infusion Cuff, 3 l
	26 3100 35	Bottle Cap , sterilizable, for use with irrigation bottles 1 l and 1.5 l, sterile (cylindrical and square) type Abbott and Baxter Laboratories
	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
	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, autoclavable , for use with suction and irrigation tubes size 5 mm
	26173 VG	Puncture Needle , for sterile infusion solution 1 l, sterilizable, working length 22 cm
	860015 B	Puncture Needle , for sterile infusion solution 500 ml, sterilizable, working length 18 cm
	26 3100 50	Irrigation Liquid Bottle , 1 l, sterilizable

	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 , digital, two-stage, for activating a higher flow for improved visibility
	20 0141 30	One-Pedal Footswitch , digital, one-stage, for irrigation
	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 and 26 3101 38
	20 3000 45	Silicone Tubing Set , for irrigation, sterilizable, for use with Bottle Caps 26 3100 35, 26 3103 35 and Puncture Needle 860015 B
	20 3001 45	Silicone Tubing Set , sterilizable, for irrigation/insufflation, for use with Puncture Needle 860015 B
	031124-10*	Filter , for suction, connection on bottle side with special connection, connection on unit side with cone, unsterile, for single use, package of 10, for use with all standard suction pumps with tube connections



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:
Filter
Secretion Bottle
Bottle Cap
Connecting Tube, short
Patient Tube
Overflow Case
Mains Cord, length 300 cm

25 3200 01C

Same, power supply 115 VAC, 50/60 Hz

Specifications:

Suction performance	30 l/m
Vacuum	up to 85 kPa, up to 640 mmHg
Power supply	115/230 VAC, 50/60 Hz
Dimensions w x h x d	245 x 345 x 282 mm
Weight	7.4 kg
Certified to	IEC 601-1, CE acc. to MDD

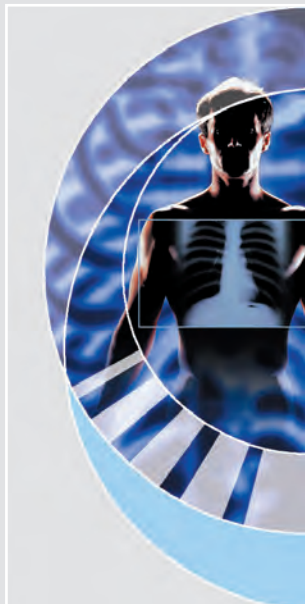
Rated power/ power consumption	1 A, 100 Watt (115 VAC) 0.45 A, 100 Watt (230 VAC)
Protection class	protection class I, BF, IPX 1
Inspections or certifications	MDD 93/42 EWG, EN 60601-1, EN 60601-1-2, EN 10079-1, ISO 9001, UL 2601-1

Optional Accessories for UNIMAT® 30 see page U 30
Components/Spare Parts see chapter 11



SUCTION AND IRRIGATION SYSTEMS

	for Bronchoscopy:		
	10432 N	Aspirator , for collecting secretions, with cut-off hole, can be connected to suction tubes or suction catheters	
	10432 T	Same , without cut-off hole	
	25 3200 80*	Filter , for suction, unsterile, for use with UNIMAT® 30	
	25 3200 81	Suction Bottle	
	25 3200 82	Bottle Cap	
	25 3200 85	Overflow Case	
	25 3200 83	Connecting Tube , short	
	25 3200 84	Patient Tube	
	UG 624	Pump Holder , for mounting suction pump UNIMAT® 30 25 3200 01 to equipment cart UG xxx	
	031111-10*	Smoke Evacuation Filter , unsterile, for single use, package of 10	



■ HIGH FREQUENCY SURGERY UNITS

NEW AUTOCON® III 400

NEW AUTOCON® II 300

AUTOCON® III 400 High-End ^{NEW}

High Frequency Surgery Unit

STORZ
KARL STORZ — ENDOSKOPE

The high-end HF unit from KARL STORZ provides the highest level of user comfort and ease of use. The 9" color touch screen displays procedures for all areas of application according to the needs of the user.

A footswitch allows settings to be changed during surgery directly from the sterile area. Alternatively, two sockets with separate instruments can be controlled via a footswitch.

The maximum power of 400 Watt (unipolar and bipolar) is precisely regulated by a generator. Only the amount of energy required for the desired tissue effect is emitted. Consequently, this unit delivers the best possible performance combined with the highest patient safety.

Benefits at a glance:

- Extremely easy to handle thanks to 9" color touch display
- Predefined procedures for each speciality
- Interdisciplinary use
- 400 W unipolar and bipolar performance
- Neutral electrode monitoring for highest patient safety
- Automatic smoke evacuation with the S-PILOT® from KARL STORZ
- Best hygiene conditions thanks to smooth surface
- Can be integrated into KARL STORZ OR1™



AUTOCON® III 400 High-End *NEW*
High Frequency Surgery Unit



- UH 400

AUTOCON® III 400 High-End, power supply 220 – 240 VAC, 50/60 Hz including:

Mains Cord

HF connecting sockets unipolar:
2x 3-pin US type
5 mm connector KARL STORZ/Erbe VIO
2x 4 mm connector (via footswitch)
BOVIE (via footswitch)

bipolar:
2x 2-pin US type (28.58)
3x KARL STORZ/Erbe VIO
neutral electrode 2-pol.

System requirements:
SCB R-UI Software
Release 20090001-46 or higher
Can be integrated into OR1™ with KARL STORZ OR1™ SCB control WU 300.
- UH 400U

Same, power supply 100 – 127 VAC, 50/60 Hz
- UH 401

AUTOCON® III 400 High-End, BIVASCULARSAFE, power supply 220 – 240 VAC, 50/60 Hz including:

Mains Cord
- UH 401U

Same, power supply 100 – 127 VAC, 50/60 Hz

Specifications:			
Max. power	unipolar: 400 Watt (at 200 Ohm) bipolar: 400 Watt (at 75 Ohm)	Output frequency	350 kHz/1 MHz
Power supply	220 – 240 VAC, 50/60 Hz (UH 400, UH 401) 100 – 127 VAC, 50/60 Hz (UH 400U, UH 401U)	Dimensions w x h x d	447 x 177 x 457 mm
Weight	12.5 kg	Certified to	IEC 60601-1
Sockets	Unipolar sockets: 2 Bipolar sockets: 2 (can be expanded to 3)		

Optional Accessories for AUTOCON® III 400 High-End see pages U 38-40
Components/Spare Parts see chapter 11

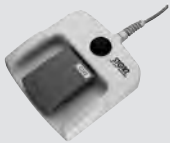
AUTOCON® III 400 High-End *NEW*

High Frequency Surgery Unit,
System Components



UNIT SIDE
PATIENT SIDE

One-Pedal Footswitch



UF 901

Two-Pedal Footswitch



UF 902



Connecting Cable



27806 UR

Neutral Electrode



27805

Unipolar High Frequency Cord



26005 M

Unipolar High Frequency Cord



26 5200 45

Handle



26 5200 43

Handle with Cable, unipolar



26 5200 46

Bipolar High Frequency Cord



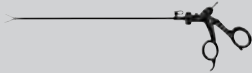
26176 LE

ROBI® Dissecting Forceps



48451 LKP

CLICK/line KELLY
Dissecting Forceps



43251 LKP

Knife Electrode



26 5200 36

Knife Electrode



26 5200 36

HIGH FREQUENCY SURGERY UNITS

AUTOCON® III 300 ^{NEW}

High Frequency Surgery Unit

With a maximum output of 400 Watt unipolar and bipolar 200 Watt, the AUTOCON® III 300 HF generator is a new member of the III generator product family.

The exterior of the HF generator is equipped with a bipolar and a unipolar jack as well as a socket for connecting the neutral electrode.

Synergies such as an intuitive user interface thanks to the 9" color touch display and a housing design

optimized from a hygienic and safety point of view are also outstanding features of the AUTOCON® III 300. Proven features such as the possibility to adjust modes and settings via a footswitch from the sterile field or the interdisciplinary procedure list have also been retained in this generator.

Benefits at a glance:

- Straightforward handling thanks to color 9" touch display
- Predefined procedures for each specialty
- Interdisciplinary use
- 400 Watt unipolar and 200 Watt bipolar performance
- Neutral electrode monitoring for best possible patient safety
- Automatic smoke evacuation with S-PILOT® from KARL STORZ
- Best hygiene conditions thanks to smooth surface
- Can be integrated into KARL STORZ OR1™





- UH 300

AUTOCON® III 300,
power supply 220 – 240 VAC, 50/60 Hz
including:

Mains Cord

HF connecting sockets unipolar:
3-pin US type
5 mm connector KARL STORZ/Erbe VIO

bipolar:
2-pin US type (28.58 mm)
2x KARL STORZ/Erbe VIO
Neutral electrode 2-pin

System requirements:
SCB R-UI Software
Release 20090001-46 or higher
Can be integrated into OR1™ with KARL STORZ OR1™ SCB control WU 300.
- UH 300U

Same, power supply 100 – 127 VAC, 50/60 Hz

Specifications:

Max. power	unipolar: 400 Watt (at 100 Ohm) bipolar: 200 Watt (at 75 Ohm)	Output frequency	350 kHz/1 MHz
Power supply	220 – 240 VAC, 50/60 Hz (UH 300) 100 – 127 VAC, 50/60 Hz (UH 300U)	Dimensions w x h x d	447 x 177 x 457 mm
Weight	11.8 kg	Certified to	IEC 60601-1
Sockets	Unipolar sockets: 1 Bipolar sockets: 1 (can be expanded to 2)		

Optional Accessories for AUTOCON® III 300 see pages U 38-40
Components/Spare Parts see chapter 11

AUTOCON® III 300 *NEW*






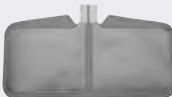



High Frequency Surgery Unit,
System Components



HIGH FREQUENCY SURGERY UNITS

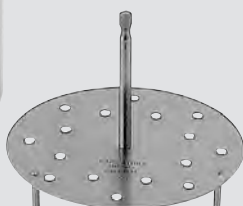
Optional Accessories

for AUTOCON® III 400 High-End and AUTOCON® III 300

			for use with	
			AUTOCON® III 400	AUTOCON® III 300
	UF 901	One-Pedal Footswitch , with button for switchover function, for use with HF generators	•	•
	UF 902	Two-Pedal Footswitch , with button for switchover function, for use with HF generators	•	•
	27805	Neutral Electrode , of conductive silicone, with 2 rubber ties for fastening, contact surface A = 500 cm², for use with AUTOCON® series (200, 350), AUTOCON® II 400 series (111, 115) with Connecting Cable 27806 as well as AUTOCON® III 400 and AUTOCON® III 300 with Connecting Cable 27806 UR	•	•
	27806 UR	Neutral Electrode Connecting Cable , for use with Neutral Electrode 27805	•	•
	27806 US	Neutral Electrode Connecting Cable , for use with Neutral Electrode 27802	•	•
	27802	Neutral Electrode , contact surface divided into two, A = 169 cm², for single use, package of 50, for use with AUTOCON® 50/200/350 and AUTOCON® II 400 all versions, AUTOCON® III 400 and AUTOCON® III 300, Connecting Cable 27806 US required	⊗	•
	26 5200 43	Electrode Handle , with 2 buttons for activating the unipolar generator, yellow button: unipolar cutting, blue button: unipolar coagulation, Connecting Cable 26 5200 45	•	•
	26 5200 45	High Frequency Cable , for Electrode Handle 26 5200 43, length 400 cm, for use with AUTOCON® II 400 SCB 20 5352 20-111 and 20 5352 20-115	•	•
	26 5200 46	Electrode Handle , without buttons, with integrated connecting cable, length 300 cm	•	•

Surgery Electrodes Set

Accessories



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 downwards



Knife Electrode, 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 Handles 26 5200 43 and 26 5200 46
Components/Spare Parts see chapter 11


Accessories

Unipolar and Bipolar High Frequency Cords

Unipolar High Frequency Cords

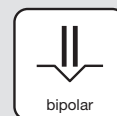
KARL STORZ High Frequency
Instrument Surgery Unit







	26002 M	Unipolar High Frequency Cord , with 4 mm plug, length 300 cm, for models KARL STORZ, Erbe type T, older models and Ellman
	26004 M	Unipolar High Frequency Cord , with 4 mm plug, length 300 cm, for use with Martin HF units
	26005 M	Unipolar High Frequency Cord , with 5 mm plug, length 300 cm, for AUTOCON® II 400 SCB system (111, 115, 122, 125), AUTOCON® III 300, AUTOCON® III 400, AUTOCON® II 200, AUTOCON® II 80, AUTOCON® system (50, 200, 350) and Erbe type ICC and Erbe VIO 300
	26006 M	Unipolar High Frequency Cord , with 8 mm plug, length 300 cm, for use with AUTOCON® II 400 SCB system (112, 116), AUTOCON® III 300, AUTOCON® III 400 and Valleylab models

Bipolar High Frequency Cords

KARL STORZ High Frequency
Instrument Surgery Unit



	26176 LE	Bipolar High Frequency Cord , length 300 cm, for AUTOCON® III 400, AUTOCON® II 400 SCB system (111, 113, 115, 122, 125), AUTOCON® II 200, AUTOCON® II 80, Coagulator 26021 B/C/D, 860021 B/C/D, 27810 B/C/D, 28810 B/C/D, AUTOCON® series (50, 200, 350), Erbe-Coagulator, T and ICC series
	26176 LM	Bipolar High Frequency Cord , length 300 cm, for use with Martin HF units
	26176 LV	Bipolar High Frequency Cord , length 300 cm, for AUTOCON® III 300, AUTOCON® III 400, AUTOCON® II 400 SCB system (112, 114, 116, 122, 125), AUTOCON® II 200, AUTOCON® II 80 and Valleylab coagulators, for use with high frequency surgical units with bipolar sockets with 28.58 mm pin distance
	26176 LW	Bipolar High Frequency Cord , length 300 cm, for AUTOCON® II 400 system (122, 125) and for AUTOCON® II 80, pin distance on unit side 22 mm, for use with high frequency surgical units with bipolar sockets with 22 mm pin distance

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

Compatibility

High Frequency Cords to AUTOCON® HF Electrosurgical Units



AUTOCON® III 300	UH 300 UH 300U	—
AUTOCON® III 400	—	UH 400 UH 400U UH 401 UH 401U

Unipolar High Frequency Cords

27806 UR	●	●
27806 US	●	●
26 5200 45	●	●
26 5200 46	●	●
26002 M	●	●
26005 M	●	●
26006 M	●	●

Bipolar High Frequency Cords

26176 LE	●	●
26176 LV	●	●

COMPONENTS / SPARE PARTS



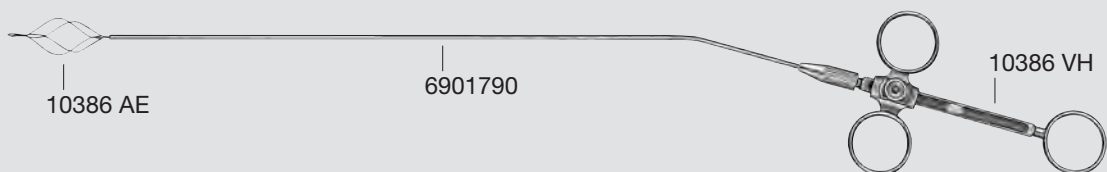



The chapter “Components / Spare Parts” contains detailed information on KARL STORZ instruments.

For easy location and reference, an index is available which lists the order number of the spare parts as well as those of the entire instrument, set or unit.

Hotline

Queries concerning products, exchange, maintenance and cleaning can be addressed to Technical Support: +49 (0)7461/708-980, from Monday to Thursday from 7 – 18 h and Friday from 7 – 17 h.

Example:

Components / Spare Parts		Catalog Page
10386 A	Foreign Body Basket	45
		
Spare Parts		
	10386 AE Foreign Body Basket, without handle, length 55 cm	
	10386 VH Three-ring Handle	6901790 Guide Tube

Components/spare parts with corresponding order number of the instrument and reference to catalog page

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Surgery Electrodes Set	SP 42

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Telescopes

HOPKINS® Telescopes, Miniature Straight Forward Telescope, ENDOCAMELEON® HOPKINS® Telescopes

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	<div>495 F</div> <div>Receptacle,</div> <div>diameter 9 mm, for</div> <div>Wolf fiber optic light cable</div>	
		<div>495 G</div> <div>Screw Base, for</div> <div>KARL STORZ fiber optic</div> <div>light cables and Olympus</div> <div>Corporation</div>

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10318 L	Fiber Optic Light Carrier	
10318 CK	Universal Bronchoscope	
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10318 D	Universal Bronchoscope	
10318 L	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 cables and Olympus Corporation	

Bronchoscopy, Tracheoscopy

FLUVOG Adaptors, Rubber Telescope Guides,
Instrument Guides, Prismatic Light Deflector

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Spare Part



6127490
Sealing Cap, (50/3.6)

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10315 N



10314 BN

Spare Part



6127590
Sealing Cap, (50/4)

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Spare Part



27550 C-10
Sealing Cap, drill hole diameter 1.2 mm, package of 10

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Spare Part



3430890
Knurled Cap



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10338 P



10338 N

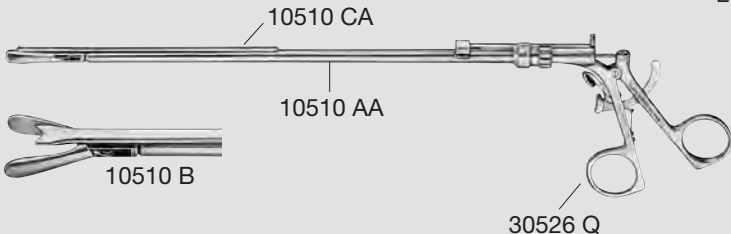


Spare Part

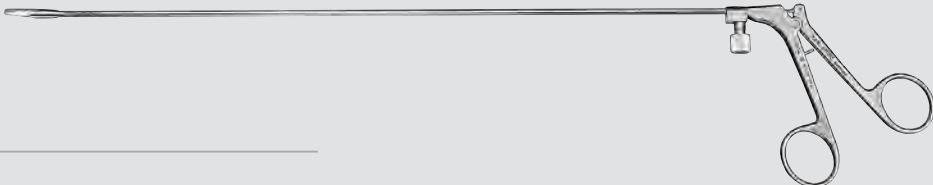



6127390
Sealing Cap, (50/2.6)

Bronchoscopy, Tracheoscopy

FREITAG Stent Forceps

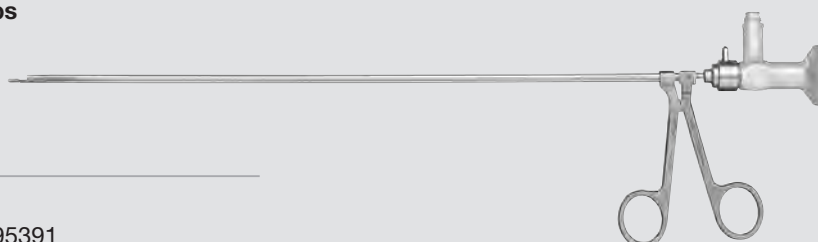
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	7909890 Halfround Plate	
		7944790 Silicone Ring

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Bronchoscopy, Tracheoscopy

Optical Forceps, Aspirators

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10378 U	Optical Forceps	36
10377 CF	Optical Forceps	37
10377 HF	Optical Forceps	37
10377 KF	Optical Forceps	37
10377 U	Optical Forceps	37
10374 HF	Optical Forceps	38
10374 L	Optical Forceps	38



Spare Part



8295391
Cleaning Adaptor

Components / Spare Parts		Catalog Page
10432 N	Aspirator	44
10432 T	Aspirator	44



Spare Parts



6860290
Washer



10432 E
Spare Glass

Bronchoscopy, Tracheoscopy

Suction Tubes

Components / Spare Parts		Catalog Page
10381 A	Suction Tube	43
10381 AL	Suction Tube	43
10381 B	Suction Tube	43
10434 A	Suction Tube	44
10381 AM	Suction Tube	43
10381 BL	Suction Tube	43



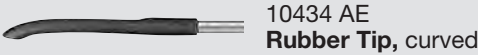
Spare Parts

Spare Part for 10381 A/AL/AM



10381 AE
Rubber Tip, straight

Spare Part for 10434 A



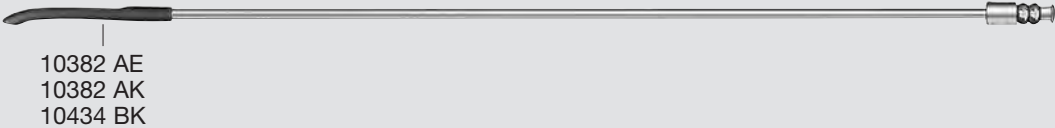
10434 AE
Rubber Tip, curved

Spare Part for 10381 B/BL



10381 AK
Rubber Tip, straight

Components / Spare Parts		Catalog Page
10382 A	Suction Tube	43
10382 B	Suction Tube	43
10434 B	Suction Tube	44
10382 AM	Suction Tube	43



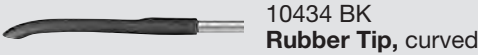
Spare Parts

Spare Part for 10382 A/AM



10382 AE
Rubber Tip, curved

Spare Part for 10434 B



10434 BK
Rubber Tip, curved

Spare Part for 10382 B

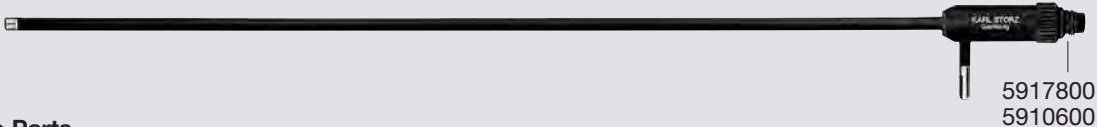


10382 AK
Rubber Tip, curved

Bronchoscopy, Tracheoscopy

Coagulation Suction Tubes, Sponge Holders

Components / Spare Parts		Catalog Page
10390 AN	Coagulation Suction Tube	43
10390 BN	Coagulation Suction Tube	43



Spare Parts

Spare Part for 10390 AN



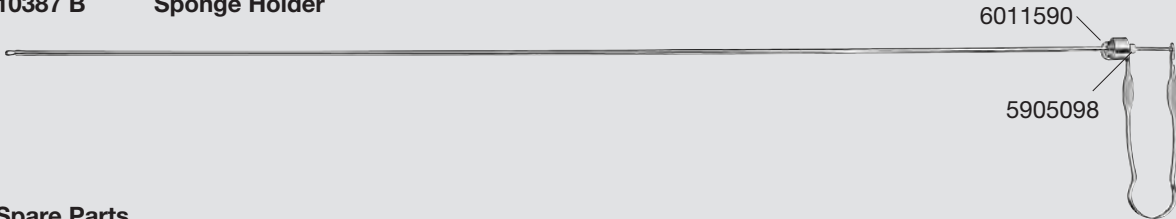
5917800
O-Ring

Spare Part for 10390 BN



5910600
O-Ring, 3 x 1.5 mm

Components / Spare Parts		Catalog Page
10387 A	Sponge Holder	43
10387 AL	Sponge Holder	43
10387 B	Sponge Holder	43



Spare Parts



5905098
Sealing Cap, small

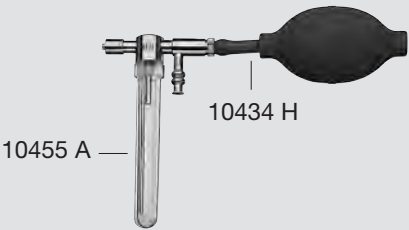


6011590
Plug, for LUER-Lock
connector

Bronchoscopy, Tracheoscopy

HUZLY Aspirator and Bronchus Irrigator, Bronchial Atomizers, Atomizer

Components / Spare Parts		Catalog Page
10434	HUZLY Aspirator and Bronchus Irrigator	44



Spare Parts



10455 A
Graduated Container,
autoclavable

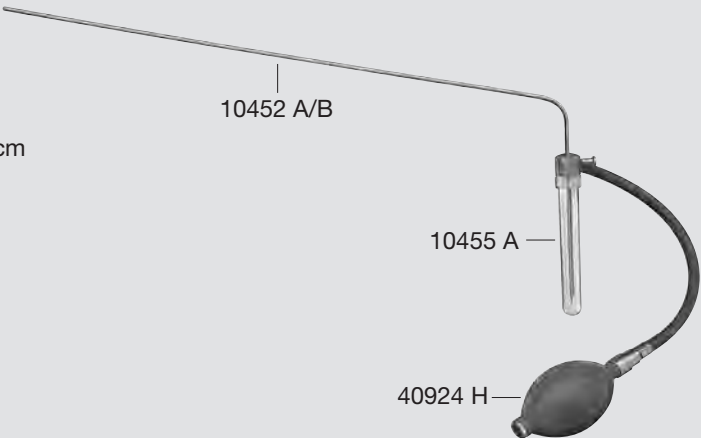


10434 H
Stopcock Cone,
with blower ball

Components / Spare Parts		Catalog Page
10452 AK	Bronchial Atomizer, length 50 cm	45

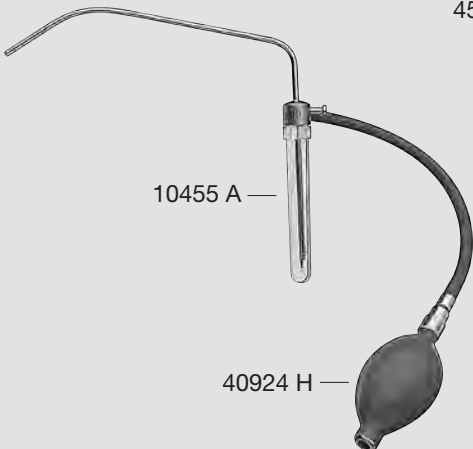
- 10452 A Bronchial Atomizer
- 10455 A Graduated Container
- 40924 H Rubber Bulb

- 10452 BK Bronchial Atomizer, length 40 cm
- 10452 B Bronchial Atomizer
- 10455 A Graduated Container
- 40924 H Rubber Bulb



Components / Spare Parts		Catalog Page
10454 K	Atomizer, for the larynx	45

- 10455 A Graduated Container
- 40924 H Rubber Bulb



Bronchoscopy, Tracheoscopy

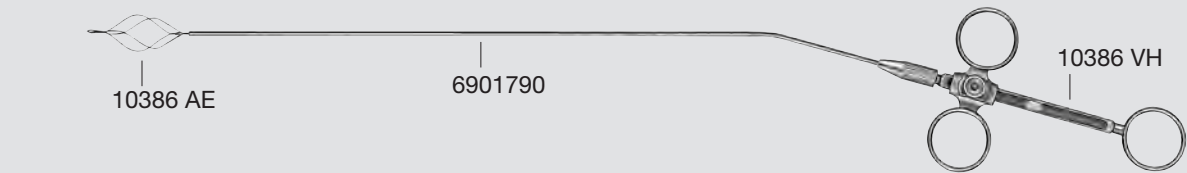
Foreign Body Baskets

Components / Spare Parts

Catalog Page

10386 A Foreign Body Basket

45



Spare Parts



10386 AE
Foreign Body Basket,
without handle,
length 55 cm



6901790
Guide Tube



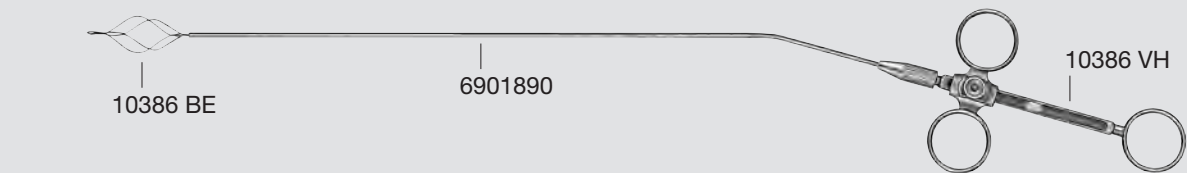
10386 VH
Three-ring Handle

Components / Spare Parts

Catalog Page

10386 B Foreign Body Basket

45



Spare Parts



10386 BE
Foreign Body Basket,
without handle,
length 35 cm



6901890
Guide Tube



10386 VH
Three-ring Handle

Esophagoscopy, Diverticuloscapy

Esophagoscope Tubes, Handle, Fiber Optic Light Carriers, Optical Forceps

Components / Spare Parts		Catalog Page
12030 A	Esophagoscope Tube	55
12030 B	Esophagoscope Tube	55
12030 C	Esophagoscope Tube	55
12030 F	Esophagoscope Tube	55
12030 G	Esophagoscope Tube	55



Spare Part



27550 C-10
Sealing Cap, drill hole
diameter 1.2 mm,
package of 10

Components / Spare Parts		Catalog Page
12070	Handle, for esophagoscopes	53

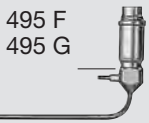


Spare Part



6988190
Knurled Screw

Components / Spare Parts		Catalog Page
12061 A	Fiber Optic Light Carrier	53
12061 AV	Fiber Optic Light Carrier	53
12061 B	Fiber Optic Light Carrier	53
12061 C	Fiber Optic Light Carrier	53



Spare Parts

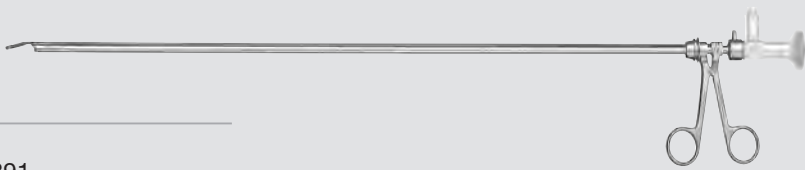


495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base, for
KARL STORZ fiber optic
light cables and Olympus
Corporation

Components / Spare Parts		Catalog Page
12016 K	Optical Forceps	54
12016 L	Optical Forceps	54
12016 M	Optical Forceps	54
12016 N	Optical Forceps	54



Spare Part



8295391
Cleaning Adaptor

Esophagoscopy, Diverticuloscopy

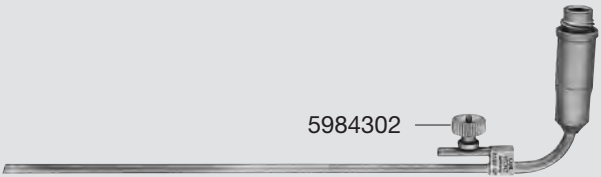
Fiber Optic Light Carrier, Laryngoscope Holders and Chest Supports

Components / Spare Parts

Catalog Page

8590 GF **Fiber Optic Light Carrier**

58-59



Spare Part

8633690
Knurled Nut

Components / Spare Parts

Catalog Page

8575 K **Laryngoscope Holder and Chest Support, GÖTTINGEN model**

58-59

8575 KA **Laryngoscope Holder, GÖTTINGEN model,**
with adjustment wheel

8575 KB **Support Rod, movable, with metal ring**



Spare Part



5984302
Cap Nut

Components / Spare Parts

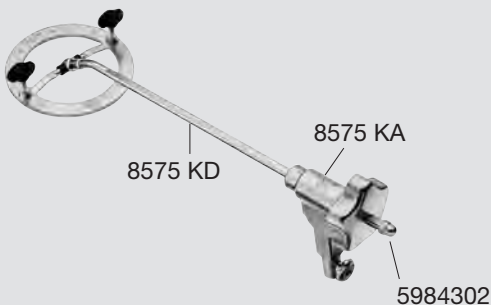
Catalog Page

8575 KC **BENJAMIN-PARSONS Laryngoscope Holder and Chest Support**

58-59

8575 KA **Laryngoscope Holder, GÖTTINGEN model,**
with adjustment wheel

8575 KD **BENJAMIN-PARSONS Support Rod,**
movable, with metal ring



Spare Part




5984302
Cap Nut

Mediastinoscopy


CARLENS Mediastinoscopes, Outer Sheaths, Aspiration Cannulas

Components / Spare Parts		Catalog Page
10970 A	CARLENS Mediastinoscope	62
10970 B	CARLENS Mediastinoscope	62




10970 AE
10970 BE

5959502


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

Components / Spare Parts		Catalog Page
33200	CLICK'line Metal Outer Sheath, insulated	67
33250	CLICK'line Metal Outer Sheath, insulated	67



29100 —

Spare Parts	
	29100 Plug, for LUER-Lock irrigation connector for cleaning, black, autoclavable, package of 10
	7909890 Halfround Plate
	7944790 Silicone Ring

Components / Spare Parts		Catalog Page
10970 P	Aspiration Cannula	69
10970 PE	Cannula	
812410	Injection Needle, package of 12	
10970 PL	Aspiration Cannula	
10970 PEL	Cannula	
812410	Injection Needle, package of 12	



Medical Thoracoscopy

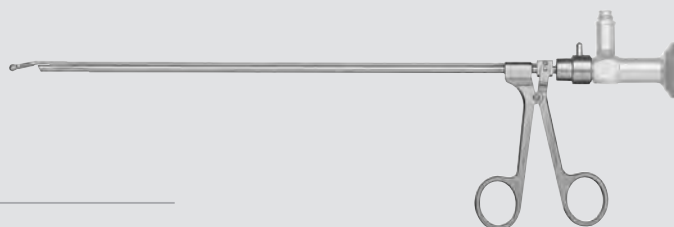
Optical Forceps, Optical Powder Blowers, Rubber Tube, Rubber Bulb

Components / Spare Parts

Catalog Page

26072 A Optical Forceps

73



Spare Part



8295391
Cleaning Adaptor

Components / Spare Parts

Catalog Page

26072 TK Optical Powder Blower

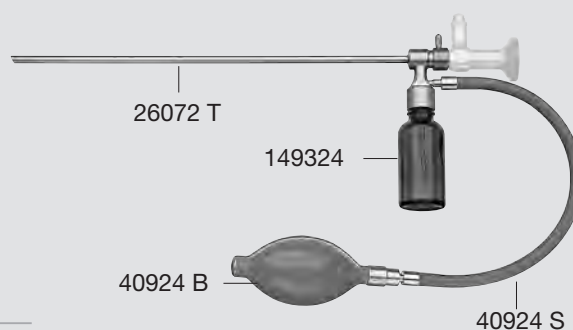
74

26072 T Sheath for Optical Powder Blower

40924 S Rubber Tube

40924 B Rubber Bulb

149324 Replacement Glass



Spare Part



5925000
O-Ring

Components / Spare Parts

Catalog Page

40924 S Rubber Tube

74



Spare Part



600007
LUER-Lock Tube
Connector, male,
tube diameter 6 mm

Components / Spare Parts

Catalog Page

40924 B Rubber Bulb






74










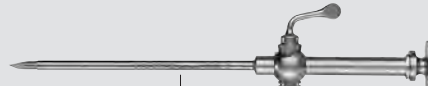


Spare Part



600007
LUER-Lock Tube
Connector, male,
tube diameter 6 mm


Components / Spare Parts		Catalog Page
30120 NL	Cannula	75
<div><div><div>30120 X</div><div></div><div>6127590</div></div><div><div>7720590</div><div></div></div></div>		
Spare Parts		
<div><div></div><div><div>6127590</div><div>Sealing Cap, (50/4)</div></div></div>	<div><div></div><div><div>7720590</div><div>Silicone Leaflet Washer</div></div></div>	
<div><div></div><div><div>30120 X</div><div>Plastic Cannula, autoclavable, package of 5</div></div></div>		

Components / Spare Parts		Catalog Page
26120 J	VERESS Pneumoperitoneum Needle	76
<div><div><div></div><div>6376990</div></div><div><div></div><div>6985691</div></div><div></div></div>		
Spare Parts		
<div><div></div><div><div>6376990</div><div>Stopcock, for irrigation connector</div></div></div>	<div><div></div><div><div>6985691</div><div>Spring Cap</div></div></div>	


Components / Spare Parts		Catalog Page
10990	RAMEL Pleurabiopsy Needle	76
10990 A	Biopsy Needle, with LUER-Lock connector, with stopcock	<div><div><div><div>10990 A</div><div></div><div>10990 B</div><div></div></div><div><div></div><div>10990 C/D</div></div></div></div>
10990 B	Rider, with stop screw	
10990 C	Cannula, with LUER-Lock connector, with stopcock	
10990 D	Trocar only, with pyramidal tip	
Spare Parts		
<div><div></div><div><div>8515090</div><div>Stopcock</div></div></div>	<div><div></div><div><div>6985691</div><div>Spring Cap</div></div></div>	


Video-Assisted Thoracoscopic Surgery (VATS)

Cannulas


Components / Spare Parts			Catalog Page
40120 NL	Cannula	30120 X — 	75, 88


Spare Part

	30120 X Plastic Cannula, autoclavable, package of 5
---	--


Components / Spare Parts			Catalog Page
40123 NL	Cannula	30123 X — 	88

Spare Part

	30123 X Plastic Cannula, autoclavable, package of 5
---	--

Components / Spare Parts			Catalog Page
40160 A	Cannula	 — 6127590	89
40160 C	Cannula		89

Spare Part

	6127590 Sealing Cap, (50/4)
---	---------------------------------------

Video-Assisted
Thoracoscopic Surgery (VATS)

Cannulas, Outer Sheaths

Components / Spare Parts		Catalog Page
40103 A	Cannula	89, 129
40103 C	Cannula	89, 129

Spare Part



7616690
Sealing Cap, (60/10)



Components / Spare Parts		Catalog Page
40107 A	Cannula	89
40107 C	Cannula	89

Spare Part



7416090
Sealing Cap, (60/13)



Components / Spare Parts		Catalog Page
43210 LG	CLICK'line® Outer Sheath with Parenchymal Forceps	93
43210 LH	CLICK'line® Outer Sheath with Lung Forceps	93
43210 LS	CLICK'line® Outer Sheath with Parenchymal Forceps	93
43210 LE	CLICK'line® Outer Sheath with Parenchymal Forceps	93
43210 LF	CLICK'line® Outer Sheath with Parenchymal Forceps	93
43210 LL	CLICK'line® Outer Sheath with Lung Forceps	94
43210 LR	CLICK'line® Outer Sheath with Lung Nodule Forceps	94
43210 LP	CLICK'line® Outer Sheath with KELLY Dissecting and Grasping Forceps	95
43210 LV	CLICK'line® Outer Sheath with Parenchymal Forceps	97
43210 LK	CLICK'line® Outer Sheath with KELLY Dissecting Forceps	99
43210 LM	CLICK'line® Outer Sheath with Scissors	99
43210 LU	CLICK'line® Outer Sheath with Scissors	99
43210 MT	CLICK'line® Outer Sheath with Scissors	99
43210 DU	CLICK'line® Outer Sheath with Biopsy Forceps	99



Spare Part



29100
Plug, for LUER-Lock
irrigation connector
for cleaning, black,
autoclavable,
package of 10

Video-Assisted Thoracoscopic Surgery (VATS)

Outer Sheaths

Components / Spare Parts		Catalog Page
48400	ROBI® Metal Outer Sheath, insulated	103
38500	ROBI® Metal Outer Sheath, insulated	103



Spare Part



29100
Plug, for LUER-Lock
irrigation connector
for cleaning, black,
autoclavable,
package of 10

Components / Spare Parts		Catalog Page
48410 LK	ROBI® Outer Sheath with Forceps Insert	104
48510 LK	ROBI® Outer Sheath with Forceps Insert	104
48410 LM	ROBI® Outer Sheath with Forceps Insert	104
48510 LM	ROBI® Outer Sheath with Forceps Insert	104
48510 LU	ROBI® Outer Sheath with Scissors Insert	104
48510 MT	ROBI® Outer Sheath with Scissors Insert	104



Spare Part



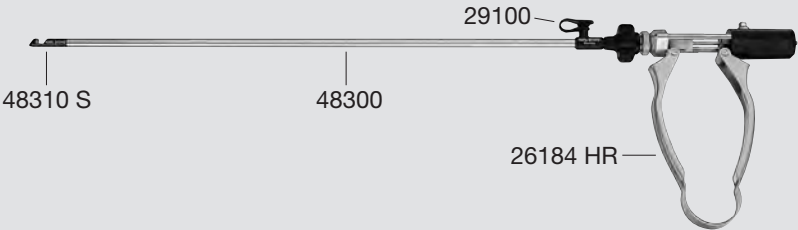
29100
Plug, for LUER-Lock
irrigation connector
for cleaning, black,
autoclavable,
package of 10

Video-Assisted
Thoracoscopic Surgery (VATS)

Bipolar Cutting Instrument, Bipolar Spring Handle

Components / Spare Parts		Catalog Page
48384 S	Bipolar Cutting Instrument	106

26184 HR	Bipolar Spring Handle
48300	Outer Sheath
48310 S	Knife Insert

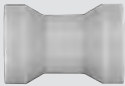


Spare Part

	29100 Plug , for LUER-Lock irrigation connector for cleaning, black, autoclavable, package of 10
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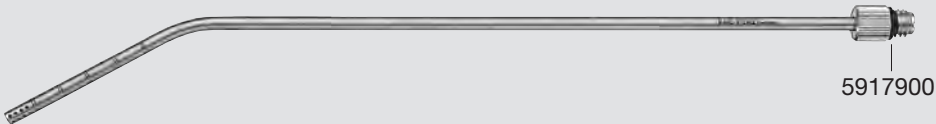
Components / Spare Parts		Catalog Page
26184 HR	Bipolar Spring Handle	106

Spare Part

	7072390 Sealing Cap , diameter 1.8 mm
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Components / Spare Parts		Catalog Page
40360 LH	Suction and Irrigation Tube	107, 132

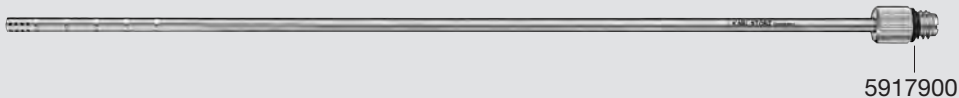


Spare Part



5917900
O-Ring, small

Components / Spare Parts		Catalog Page
37260 LH	Suction and Irrigation Tube	107, 132



Spare Part



5917900
O-Ring, small

Components / Spare Parts		Catalog Page
37112 A	Handle, straight	108, 133



Spare Parts



37112 D
Seal Set



8401290
Adaptor



8236791
Adaptor, complete



8401390
Cap Nut



8236091
Cleaning Adaptor

Video-Assisted
Thoracoscopic Surgery (VATS)
Handles for Suction and Irrigation

STORZ

KARL STORZ — ENDOSKOPE

Components / Spare Parts	Catalog Page
37113 A Handle, pistol grip	108, 133



Spare Parts

	37113 D Seal Set
	8236791 Adaptor, complete
	8401290 Adaptor



	8401390 Cap Nut
	7648291 Blind Plug
	8236091 Cleaning Adaptor

Components / Spare Parts	Catalog Page
37112 RV Handle, straight	108, 133



Spare Parts

	37112 D Seal Set
	8236791 Adaptor, complete
	8236091 Cleaning Adaptor

	8401290 Adaptor
	8401390 Cap Nut

Video-Assisted Thoracoscopic Surgery (VATS)

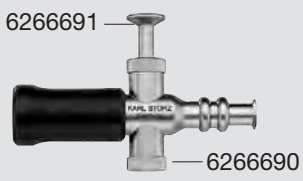
Handles for Suction and Irrigation, Coagulation Suction Tubes,
Coagulation and Dissection Electrodes

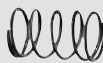




Components / Spare Parts		Catalog Page
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30804 **Handle with Trumpet Valve**

110



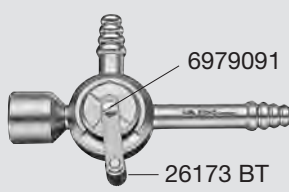
Spare Parts	
	5905610 Spring
	6266690 Knurled Cap


	6266691 Piston
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Components / Spare Parts		Catalog Page
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30805 **Handle with Two-Way Stopcock**

108, 133



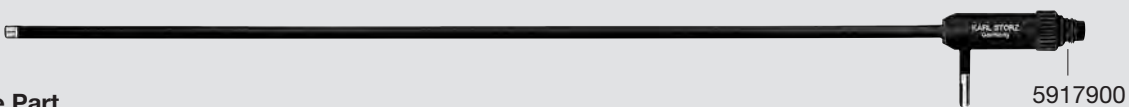
Spare Parts	
	26173 BT Stopcock


	6979091 Spring Cap
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Components / Spare Parts		Catalog Page
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40170 LB **Coagulation Suction Tube**
37270 SC **Coagulation and Dissection Electrode**
40270 LB **Coagulation Suction Tube**

110
110
110



Spare Part	
	5917900 O-Ring, small

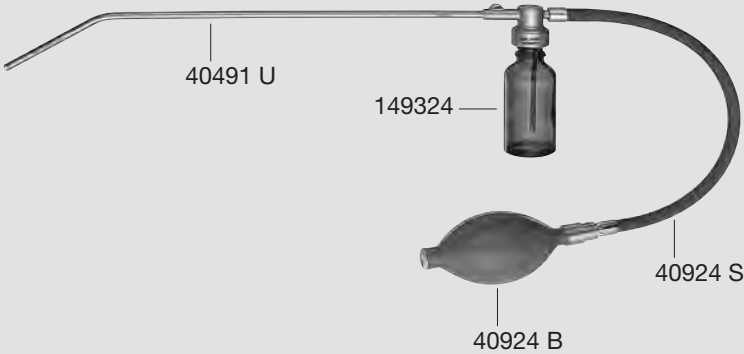
11-16

Video-Assisted Thoracoscopic Surgery (VATS)

Powder Blowers, Rubber Tube, Rubber Bulb

Components / Spare Parts	Catalog Page
40491 TKU Powder Blower	112

- 40491 U Sheath, distally angled
- 40924 B Rubber Bulb
- 40924 S Tube
- 149324 Spare Bottle



- 40491 TK Powder Blower**
- 40491 T Sheath, straight
- 40924 B Rubber Bulb
- 40924 S Tube
- 149324 Spare Bottle

- 40492 TK Powder Blower**
- 40492 T Sheath, straight
- 40924 B Rubber Bulb
- 40924 S Tube
- 149324 Spare Bottle

Spare Part



5925000
O-Ring

Components / Spare Parts	Catalog Page
40924 S Rubber Tube	112



Spare Part



600007
LUER-Lock Tube
Connector, male,
tube diameter 6 mm

Components / Spare Parts	Catalog Page
40924 B Rubber Bulb	112



Spare Part



600007
LUER-Lock Tube
Connector, male,
tube diameter 6 mm

Video-Assisted Thoracoscopic Surgery (VATS)

Surgical Sponge Holders, Handle, Outer Sheaths

Components / Spare Parts Catalog Page


32340 PT	Surgical Sponge Holder	113
32121	Handle	
32340	Outer Sheath, insulated	
33310 PT	Sponge Holder Insert	



32540 PT	Surgical Sponge Holder
32121	Handle
32540	Outer Sheath, insulated
33510 PT	Sponge Holder Insert

Components / Spare Parts Catalog Page

32121	Handle	113
--------------	---------------	-----



Spare Parts



32121 K
Handle Core



32121 H
Handle Shell

Components / Spare Parts Catalog Page

32340	Outer Sheath, insulated	113
32540	Outer Sheath, insulated	113



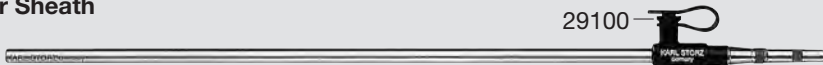
Spare Part



29100
Plug, for LUER-Lock
irrigation connector
for cleaning, black,
autoclavable,
package of 10

Components / Spare Parts Catalog Page

30173 A	Metal Outer Sheath	115
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Spare Parts



29100
Plug, for LUER-Lock
irrigation connector
for cleaning, black,
autoclavable,
package of 10



9562890
Halfround Plate

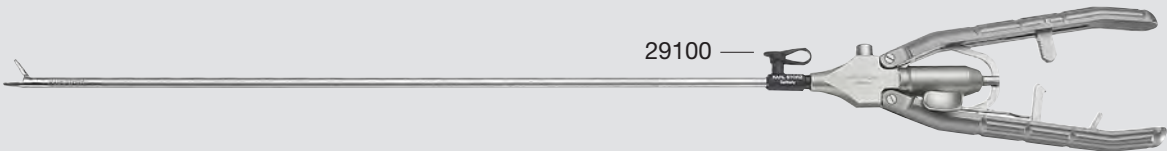


9562990
Clamping Ring

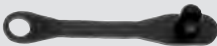
Video-Assisted
Thoracoscopic Surgery (VATS)

KOH Macro Needle Holders

Components / Spare Parts		Catalog Page
30173 FAL	KOH Macro Needle Holder	116

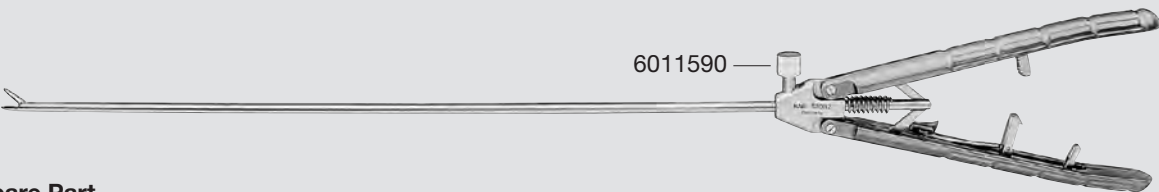


Spare Part



29100
Plug, for LUER-Lock
irrigation connector
for cleaning, black,
autoclavable,
package of 10

Components / Spare Parts		Catalog Page
26173 KAF	KOH Macro Needle Holder	118
26173 KAL	KOH Macro Needle Holder	118
26173 KAR	KOH Macro Needle Holder	118

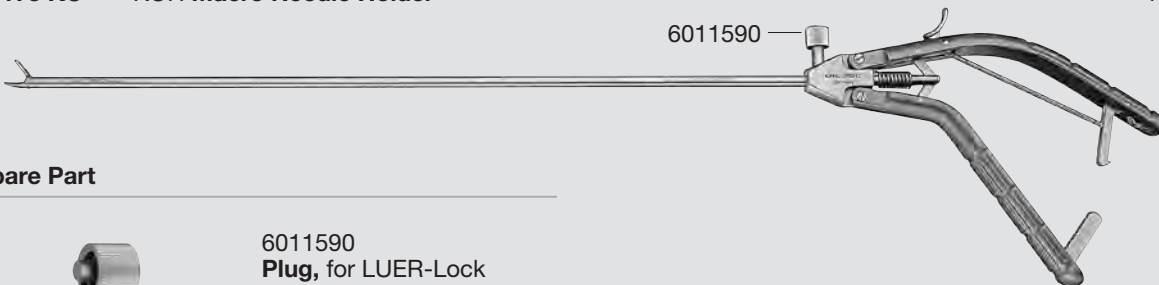


Spare Part



6011590
Plug, for LUER-Lock
connector

Components / Spare Parts		Catalog Page
26173 KL	KOH Macro Needle Holder	118
26173 KC	KOH Macro Needle Holder	118



Spare Part



6011590
Plug, for LUER-Lock
connector

Thoracotomy and Video-Assisted Mini-Thoracotomy

LED Headlights KS70

Components / Spare Parts

Catalog Page

123

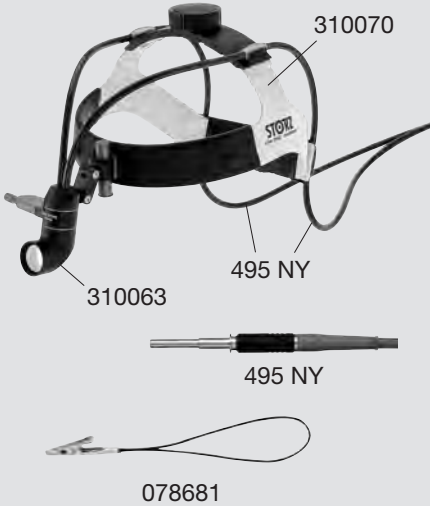
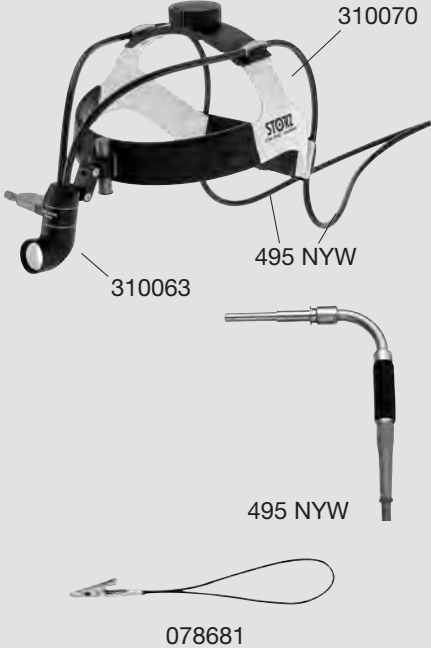
- 094220** **LED Headlight KS70**
- 094203 **LED Headlight KS70**
- 094207 **Control Unit**
- 094208 **Battery Box**
- 094224 **Battery Pack**
- 094229 **Charger USB**
- 078770 **Headband**
- 078513 **Neoprene Cushion, for headband**

- 094230** **LED Headlight KS70**
- 094204 **LED Headlight KS70**
- 094207 **Control Unit**
- 094208 **Battery Box**
- 094224 **Battery Pack**
- 094229 **Charger USB**
- 078770 **Headband**
- 078513 **Neoprene Cushion, for headband**



Thoracotomy and Video-Assisted Mini-Thoracotomy

Headlights KS60

Components / Spare Parts		Catalog Page
310060	Headlight KS60	124
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 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	
078513	Neoprene Cushion, for headband	
310061	Headlight KS60	
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 cold light source, length 290 cm	
078681	Clip with Band, for attaching the fiber optic light cable to OR clothing	
078513	Neoprene Cushion, for headband	

Thoracotomy and Video-Assisted Mini-Thoracotomy

Headlight KS60, BISLERI MIC Retractor

Components / Spare Parts		Catalog Page
310070	Headband, for 310060 and 310061	124



Spare Parts



078511
Forehead Cushion,
with push-button lock



310073
Protection Clip, for cold
light cable, for fixing the
light cable to the headband,
package of 2

Components / Spare Parts		Catalog Page
310063	Headlight KS60, for 310060 and 310061	124



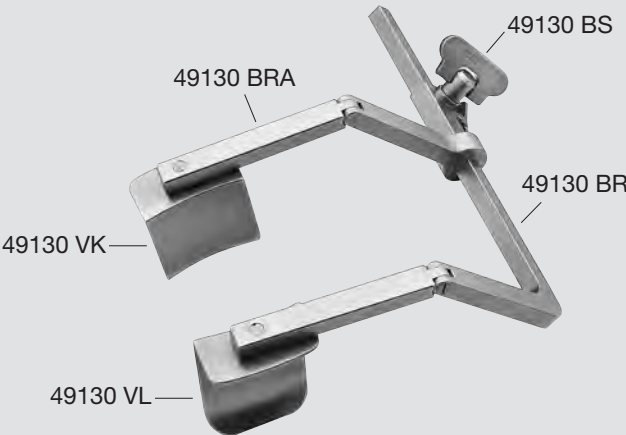
Spare Part



310065
Handle, with focusing
screw, sterilizable

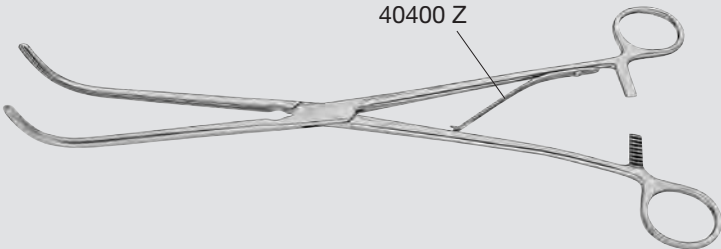

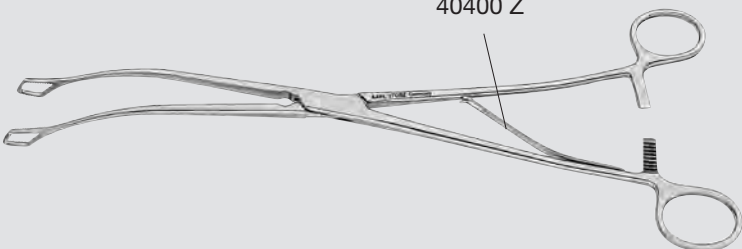

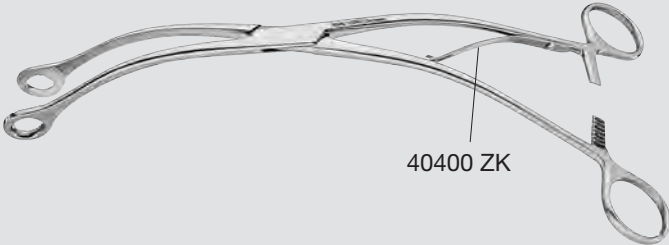

Components / Spare Parts		Catalog Page
49130	BISLERI MIC Retractor	125

- 49130 BR **Retractor Frame**
- 49130 BRA **Retractor Arm**
- 49130 BS **Wing Screw**
- 49130 VK **Movable Blades, short**
- 49130 VL **Movable Blades, long**

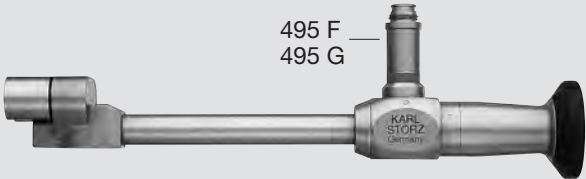


Thoracotomy and Video-Assisted Mini-Thoracotomy

Dissecting Forceps, Grasping Forceps

Components / Spare Parts		Catalog Page
40400 E	Dissecting Forceps	130
 40400 Z		
Spare Parts		
	40400 Z Spring Plate and Screw	
Components / Spare Parts		Catalog Page
40400 G	Grasping Forceps	131
40400 H	Grasping Forceps	131
 40400 Z		
Spare Parts		
	40400 Z Spring Plate and Screw	
Components / Spare Parts		Catalog Page
40400 K	Grasping Forceps	131
 40400 ZK		
Spare Parts		
	40400 ZK Spring Plate and Screw	

Components / Spare Parts		Catalog Page
20916025 AA	VITOM® Telescope 0° with Integrated Illuminator	141
20916025 AGA	VITOM® II NIR/ICG Telescope 0° with Integrated Illuminator	145
20916025 AIA	VITOM® II PDD Telescope 0° with Integrated Illuminator	147



Spare Parts

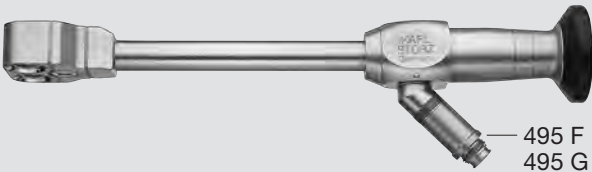


495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base, for
KARL STORZ fiber optic
light cables and Olympus
Corporation

Components / Spare Parts		Catalog Page
20916025 DA	VITOM® Telescope 90° with Integrated Illuminator	141



Spare Parts




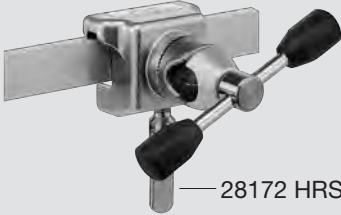


495 F
Receptacle,
diameter 9 mm, for
Wolf fiber optic light cable



495 G
Screw Base, for
KARL STORZ fiber optic
light cables and Olympus
Corporation

Holding Systems

Mechanical Holding Systems

Components / Spare Parts		Catalog Page
28172 HK	Socket, to clamp to the OR table	159
<div><div>Spare Part</div><div>ET35-91-090 Butterfly Nut, for fixing the retaining rod</div></div>		
		ET35-91-090
Components / Spare Parts		Catalog Page
28172 HR	Rotation Socket, to clamp to the operating table	155, 159
<div><div>Spare Part</div><div>28172 HRS Butterfly Nut, to clamp Socket 28172 HR to the operating table, one already mounted on Socket 28172 HR</div></div>		
		28172 HRS
Components / Spare Parts		Catalog Page
28272 HA	Articulated Stand	159
28272 HB	Articulated Stand	155, 159
28272 HC	Articulated Stand	159
28272 HD	Articulated Stand	159
<div><div>Spare Part</div><div>28172 HZ Set Screw, for articulated stands</div></div>		
		28172 HZ

Insufflators

ENDOFLATOR® 40 SCB, ENDOFLATOR® 50 SCB

Components / Spare Parts

Catalog Page

- UI 400S1 ENDOFLATOR® 40 SCB**
- UI 400 **ENDOFLATOR® 40 SCB**, power supply
100 – 240 VAC, 50/60 Hz
- 20090170 **SCB Connecting Cable**, length 100 cm
- 20400030 **Universal Wrench**
- 031200-03* **Insufflation Tubing Set**, with gas filter, sterile,
for single use, package of 5
- 30103 HP **HICAP® Trocar**, size 11 mm



UI 400

SCB®

U 7

- UI 500S1 ENDOFLATOR® 50 SCB**
- UI 500 **ENDOFLATOR® 50 SCB**, power supply
100 – 240 VAC, 50/60 Hz
- 20090170 **SCB Connecting Cable**, length 100 cm
- 20400030 **Universal Wrench**
- 031210-03* **Heated Insufflation Tubing Set**, with gas filter,
sterile, for single use, package of 3
- 30103 HP **HICAP® Trocar**, size 11 mm



UI 500

SCB®

U 10

Spare Parts



1858390
Mains Fuse,
T 2.0 AH, 250 V,
package of 10



20300184
**LUER-Lock Tube
Connector**, male, tube
diameter 10 mm

Components / Spare Parts

Catalog Page

- UI 400 ENDOFLATOR® 40 SCB**

U 7

Spare Part

1815490
ISO Connector,
female



Insufflators

ENDOFLATOR® 40 SCB, ENDOFLATOR® 50 SCB

Components / Spare Parts		Catalog Page
20400022	CO ₂ High Pressure Tube	U 13
20400028	CO ₂ High Pressure Tube	U 13

Spare Part



2903390
Seal, for use with
CO₂ bottle, Pin-Index
connector



Components / Spare Parts		Catalog Page
20400021	CO ₂ High Pressure Tube	U 13
20400027	CO ₂ High Pressure Tube	U 13

Spare Part



2903490
Seal, for use with
CO₂ bottle, German
connection



Components / Spare Parts		Catalog Page
20400222	High Pressure Tube	U 13

Spare Part



2903490
Seal, for use with
CO₂ bottle, German
connection



Insufflators

**S-PILOT®, Set for SCB/ERBE VIO Interface Box and
SCB/KLS MARTIN maxium, KARL STORZ-SCB Interface control Set**

Components / Spare Parts	Catalog Page
--------------------------	--------------

- | | | |
|---------------------|---|------|
| UP 501S1 | S-PILOT®, including footswitch | U 15 |
| UP 501 | S-PILOT® | |
| 20014130 | One-Pedal Footswitch | |
| 031447-03* | Tubing Set Suction , sterile, for single use, package of 5 | |
| 20090170 | SCB Connecting Cable , length 100 cm | |
|
UP 501S3 |
S-PILOT®, without footswitch | |
| UP 501 | S-PILOT® | |
| 031447-03* | Tubing Set Suction , sterile, for single use, package of 5 | |
| 20090170 | SCB Connecting Cable , length 100 cm | |



UP 501

Components / Spare Parts	Catalog Page
--------------------------	--------------

- | | | |
|-----------------|---|------|
| 20090013 | Set for SCB Interface Box ERBE VIO | U 18 |
| 20091332 | SCB Interface Box (ERBE VIO) | |
| 20090170 | SCB Connecting Cable | |
| 20091370 | SCB/ECB Connecting Cable | |
| 400 C | Mains Cord | |











Components / Spare Parts	Catalog Page
--------------------------	--------------

- | | | |
|-----------------|--|------|
| 20091290 | Set for SCB/KLS MARTIN maxium | U 18 |
| 20091222 | SCB/KLS MARTIN maxium Module | |
| 20091870 | RS 232 Connecting Cable , length 200 cm | |

Components / Spare Parts	Catalog Page
--------------------------	--------------

- | | | |
|-----------------|---|------|
| 20090501 | KARL STORZ-SCB Interface control Set | U 18 |
| 20090120 | KARL STORZ-SCB Interface control | |
| 20090170 | SCB Connecting Cable , length 100 cm | |
| 400 A | Mains Cord | |



Components / Spare Parts		Catalog Page
UP 210	ENDOMAT® SELECT	U 21
400 A	Mains Cord, length 300 cm	
		
		UP 210
Spare Parts		
For single use		
	031523-10* Tubing Set for Irrigation, PC, sterile, for single use, package of 10	
	031524-10* Tubing Set for Irrigation, FC, sterile, for single use, package of 10	
	031529-10* Tubing Set for Irrigation, CV, sterile, for single use, package of 10	
	031647-10* Tubing Set for Suction, BS, sterile, for single use, package of 10	
	030647-10* Tubing Set for Suction, DS, sterile, for single use, package of 10	
Reusable		
	UP 007 Tubing Set, irrigation, FC, sterilizable	
	UP 008 Tubing Set, irrigation, PC, sterilizable	
	UP 009 Tubing Set, irrigation, DS, sterilizable	
	UP 010 Tubing Set, irrigation, BS, sterilizable	



Suction and Irrigation Systems

DUOMAT®

Components / Spare Parts

Catalog Page

20321008 DUOMAT®

U 24

20321020 DUOMAT®, power supply
100 – 120/230 – 240 VAC, 50/60 Hz



20321020

Spare Parts



1067800
Mains Fuse,
T 0.2 A (SB), package of 10



2084290
Mains Fuse,
T 0.5 A (SB), package of 10

Components / Spare Parts

Catalog Page

26310035 Bottle Cap

U 26



Spare Parts



26310087
Seal Set, for bottle caps

Components / Spare Parts

Catalog Page

20300034 Bottle Cap

U 27



Spare Parts



20300580
Overflow Case, gray,
for Bottle Cap 20300034



2911590
Plunger Ball, green,
to overflow case,
2 pcs required



031124-10*
Filter, unsterile, for single
use, for fluid suction,
specially adapted,
package of 10



Components / Spare Parts	Catalog Page
20300045 Silicone Tubing Set , for irrigation	U 27



Spare Part

	600007 LUER-Lock Tube Connector , male, tube diameter 6 mm
--	---

Components / Spare Parts	Catalog Page
20300046 Silicone Tubing Set	U 27



Spare Parts

	20330088 Puncture Needle , for irrigation bottle
	600007 LUER-Lock Tube Connector , male, tube diameter 6 mm

	600008 LUER-Lock Tube Connector , female, tube diameter 6 mm
--	---

Components / Spare Parts	Catalog Page
20300042 Silicone Tubing Set , for suction	U 27
20300044 Silicone Tubing Set , for suction	U 27



Spare Parts

	27500 LUER-Lock Tube Connector , male, tube diameter 9 mm
	20300181 LUER-Lock Tube Connector , female, tube diameter 8 mm

	20300180 Tubing Connector Set
--	---

Suction and Irrigation Systems

UNIMAT® 30

Components / Spare Parts

Catalog Page

- 25320001 UNIMAT® 30, Suction Pump Set, 230 VAC**
- 25320020 UNIMAT® 30, suction pump, power supply 230 VAC, 50/60 Hz
- 25320080 Filter
- 25320081 Secretion Bottle
- 25320082 Bottle Cap
- 25320083 Connecting Tube, short
- 25320084 Patient Tube
- 25320085 Overflow Case
- 400 A Mains Cord, length 300 cm

U 28



25320001

Spare Parts



1069400
Mains Fuse,
T 0.63 A, L 250 V



25320083
Connecting Tube, short



25320080
Filter



25320084
Patient Tube

Components / Spare Parts

Catalog Page

- 25320001C UNIMAT® 30, Suction Pump Set, 115 VAC**
- 25320020C UNIMAT® 30, suction pump, power supply 115 VAC, 50/60 Hz
- 25320080 Filter
- 25320081 Secretion Bottle
- 25320082 Bottle Cap
- 25320083 Connecting Tube, short
- 25320084 Patient Tube
- 25320085 Overflow Case
- 400 A Mains Cord, length 300 cm

U 28



25320001 C

Spare Parts



1069500
Fuse, T 1.6 A, L 250 V



25320083
Connecting Tube, short



25320080
Filter







25320084
Patient Tube

11-16

Suction and Irrigation Systems

UNIMAT® 30

Components / Spare Parts		Catalog Page
10432 N	Aspirator	U 30
10432 T	Aspirator	U 30
		
Spare Parts		
	6860290 Washer	
	10432 E Spare Glass	
Components / Spare Parts		Catalog Page
25320081	Suction Bottle	U 30
		
Spare Parts		
	25320082 Bottle Cap	
	25320085 Overflow Case	

High Frequency Surgery Units

AUTOCON® III 400 High-End, AUTOCON® III 300

Components / Spare Parts

Catalog Page

UH 400 **AUTOCON® III 400 High-End,**
power supply 220 – 240 VAC, 50/60 Hz

U 33

400 A **Mains Cord,** length 300 cm

UH 400U **AUTOCON® III 400 High-End,**
power supply 100-127 VAC, 50/60 Hz

400 B **Mains Cable,** US version, length 200 cm



UH 400

UH 401 **AUTOCON® III 400 High-End, BIVASCULARSAFE,**
power supply 220 – 240 VAC, 50/60 Hz

400 A **Mains Cord,** length 300 cm

UH 401U **AUTOCON® III 400 High-End, BIVASCULARSAFE,**
power supply 100-127 VAC, 50/60 Hz

400 B **Mains Cord,** US version, length 200 cm

Spare Part for use at 220-240 V:



1222890
Fuse,
2x 5 AH, package of 10

Spare Part for use at 100-127 V:



1432095
Line Fuse,
2x 10 AH, package of 10

Components / Spare Parts

Catalog Page

UH 300 **AUTOCON® III 300,**
power supply 220 – 240 VAC, 50/60 Hz

U 36

400 A **Mains Cord,** length 300 cm

UH 300U **AUTOCON® III 300,**
power supply 100 – 127 VAC, 50/60 Hz

400 B **Mains Cord,** US version, length 200 cm



UH 300

Spare Part for use at 230 V:



2027690
Mains Fuse,
220 – 240 VAC, T 4.0 AH,
package of 10

Spare Part for use at 110 V:

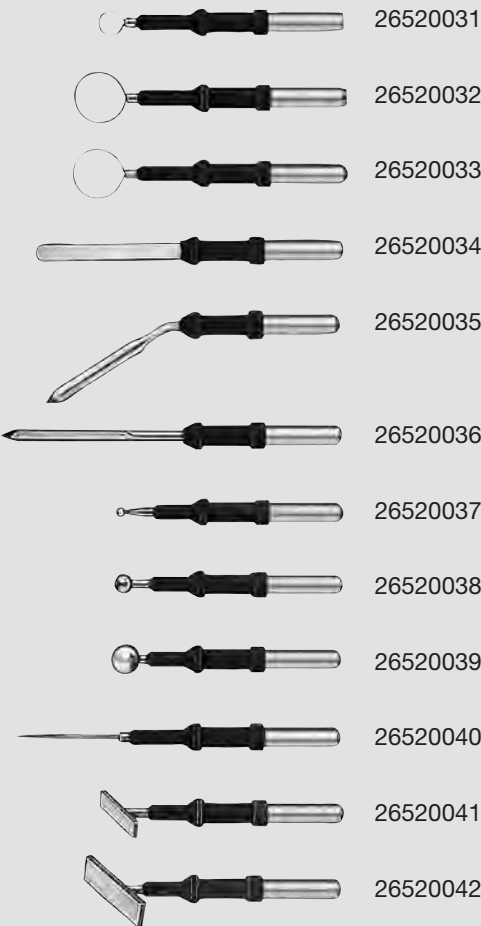


2028090
Mains Fuse,
T 8.0 AL (SB),
package of 10

High Frequency Surgery Units

Surgery Electrodes Set

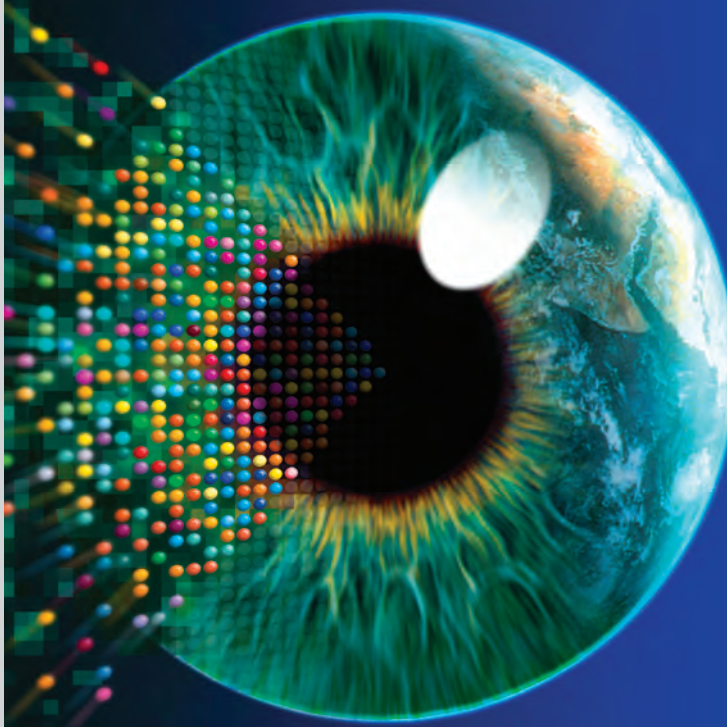
Components / Spare Parts		Catalog Page
20530008	Surgery Electrodes Set	U 39
20530031	Container with Lid and Sterilizing Insert, for 16 electrodes with diameter 4 mm	
26520031	Wire Snare, 5 mm	
26520032	Wire Snare, 10 mm	
26520033	Ribbon Snare, 10 mm	
26520034	KIRSCHNER Spatula Electrode, straight	
26520035	MAGENAU Knife Electrode, angled	
26520036	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	



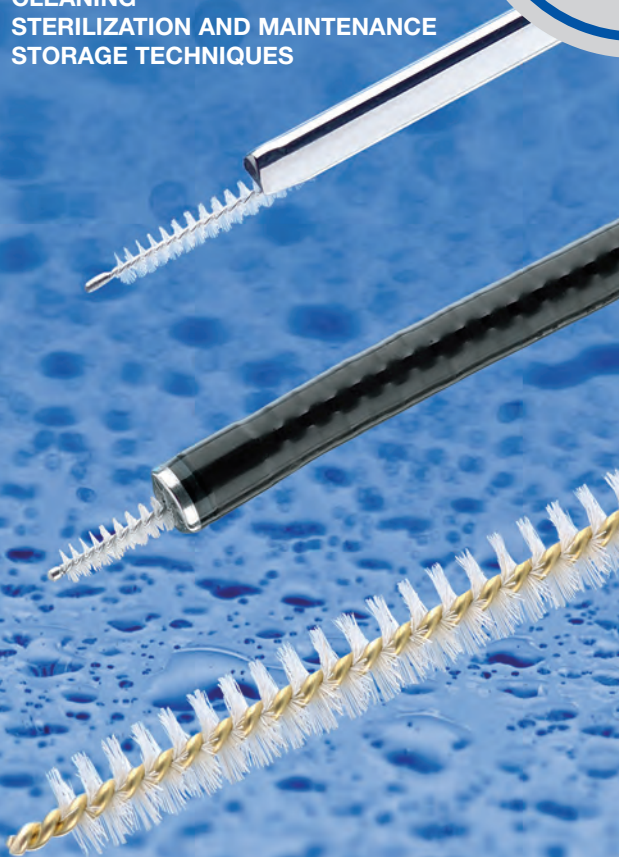
KARL STORZ OR1 NEO®
ERGONOMICS, SAFETY AND EFFICIENCY IN THE OR



TELEPRESENCE
IMAGING SYSTEMS - DOCUMENTATION
ILLUMINATION - VIDEOCARTS



HYGIENE
CLEANING
STERILIZATION AND MAINTENANCE
STORAGE TECHNIQUES



ENDOPROTECT1
KARL STORZ SERVICE PROGRAM



KARL STORZ OR1 NEO® ERGONOMICS, SAFETY AND EFFICIENCY IN THE OR



The KARL STORZ OR1 NEO® objective is to provide an optimal operating room design for performing minimally invasive and conventional surgeries. Customized to meet disciplinary and interdisciplinary needs, the OR1 NEO® operating room concept offers the optimal solution to each requirement for an integrated OR workstation design. The system's modular design allows all components and functionalities to be integrated in the OR1 NEO® operating room solution and, therefore, become part of the workstation system. Once again, KARL STORZ sets new standards in ergonomics, safety and efficiency in the OR.

- **System integration**
- **Data management and documentation**
- **Telemedicine**

The OR1 NEO® components provide a customized system and compatible applications. Each component offers a reliable solution on its own; the sum of all components forms a complete multifunctional system.

TELEPRESENCE

- **Imaging systems**
- **Documentation**
- **Illumination**
- **Equipment carts**



FULL HD – New Vision in Medicine

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IMAGE 1 HUB™ HD enables the connection of the latest HD camera heads and all standard IMAGE1 camera heads.

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KARL STORZ WIDEVIEW monitors deliver **optimal image display**. Using the 16:10 aspect provides a larger display window and improves the viewing ergonomics.

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- Accessories for maintenance and cleaning
- Cases for cleaning and disinfection
- Quivers for disinfection and storage of flexible endoscopes
- Wire trays for cleaning, sterilization and storage of endoscopes, instruments and motor accessories
- Instrument racks for cleaning, sterilization and storage
- Plastic containers for cleaning, sterilization and storage of endoscopes
- Plastic containers for cleaning, sterilization and storage of endoscopes, camera heads and instruments
- Stainless steel trays for sterilization and storage of instruments
- Aluminium trays for sterilization and storage of instruments
- Sterilization containers with MicroStop® system
- Racks for cleaning, sterilization and storage of ENT instruments
- Aluminium cases for HOPKINS® telescopes
- Carrying cases for instruments and accessories

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- **Set audits**
- **Training**
- **OR1™ service**
- **Hygiene**
- **ORCHESTRION IMM**



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

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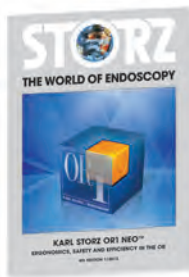


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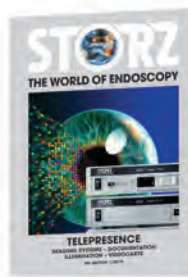


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ERGONOMICS, SAFETY
AND EFFICIENCY IN THE OR

We are particularly interested in:

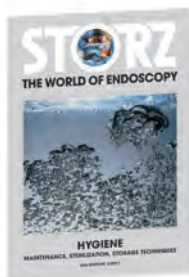
- ☐ System integration
- ☐ Data management and documentation
- ☐ Telemedicine



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We are particularly interested in:

- ☐ FULL HD – New vision in medicine
- ☐ Camera systems
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- ☐ Monitors and video printers
- ☐ Light sources
- ☐ Equipment carts



☐ HYGIENE

CLEANING,
STERILIZATION AND
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STORAGE TECHNIQUES



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- ☐ Hygiene
- ☐ ORCHESTRION IMM

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Town/City

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E-Mail

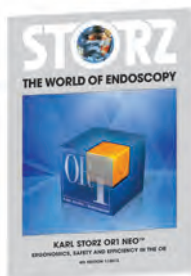
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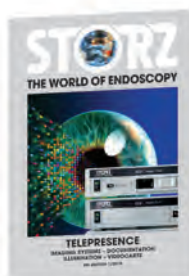


☐ KARL STORZ OR1 NEO®

ERGONOMICS, SAFETY
AND EFFICIENCY IN THE OR

We are particularly interested in:

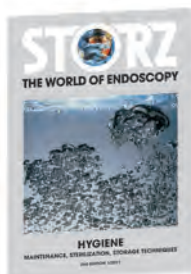
- ☐ System integration
- ☐ Data management and documentation
- ☐ Telemedicine



☐ TELEPRESENCE

We are particularly interested in:

- ☐ FULL HD – New vision in medicine
- ☐ Camera systems
- ☐ Data management and documentation
- ☐ Monitors and video printers
- ☐ Light sources
- ☐ Equipment carts



☐ HYGIENE

CLEANING,
STERILIZATION AND
MAINTENANCE,
STORAGE TECHNIQUES



☐ ENDOPROTECT1

KARL STORZ SERVICE PROGRAM

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- ☐ Repair service
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Oral and Maxillofacial Surgery	<input type="checkbox"/>	Systems for Gastroenterology	<input type="checkbox"/>
Endoscopes and Instruments for ENT, Esophagoscopy – Bronchoscopy	<input type="checkbox"/>	Laparoscopy in Surgery, Gynecology, Urology	<input type="checkbox"/>
- Standard Instruments	<input type="checkbox"/>	- Pediatric Laparoscopy	<input type="checkbox"/>
- Laryngology	<input type="checkbox"/>	- Minilaparoscopy	<input type="checkbox"/>
- Otology	<input type="checkbox"/>	Gynecology	<input type="checkbox"/>
- Rhinology and Rhinoplasty	<input type="checkbox"/>	Urology	<input type="checkbox"/>
- Sinoscopy, Rhinoscopy, Postrhinoscopy	<input type="checkbox"/>	Proctology	<input type="checkbox"/>
- UNIDRIVE® S III ECO	<input type="checkbox"/>	Arthroscopy and Sports Medicine	<input type="checkbox"/>
- UNIDRIVE® S III ENT	<input type="checkbox"/>	Pediatric Surgery	<input type="checkbox"/>
Plastic Surgery	<input type="checkbox"/>	MTP Single-Use Products	<input type="checkbox"/>
Endoscopes for Anesthesiology and Emergency Medicine	<input type="checkbox"/>	KARL STORZ OR1 NEO®	<input type="checkbox"/>
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