HD Video Mediastinoscopy

Future-oriented – Compact – Straightforward

The new, compact and fully autoclavable HD video mediastinoscope is based on CMOS chip-on-the-tip camera sensor technology and is equipped with an LED light source integrated in the handle. It is lightweight, well-balanced and very convenient to use.

The system can be operated with the CONNECT and X-LINK modules from the current KARL STORZ IMAGE1 S™ camera platform.

Special Features:

- Ergonomically shaped handle with integrated LED light source
- Keyboard with haptic feedback for camera menu control (programmable)
- HD CMOS chip-on-the-tip camera sensor technology
- Blade with continuous right lateral slit
- Plug & Play – cable exit with plug-in connection to X-LINK module
- No white balance necessary
System Components for HD Video Mediastinoscopy

TM220  **27” FULL HD Monitor**, screen resolution 1920 x 1080, image format 16:9, power supply 100-240 VAC, 50/60 Hz, 5 V DC output (1 A), VESA 100 adaptor
Video inputs: 2x DVI, 3G-SDI, VGA, S-Video, Composite, Video outputs: DVI, 3G-SDI, Composite
including:
- **External 24 VDC Power Supply**
- **Mains Cord**
- **Cable Cover**
- **4x Mounting Screws M4**

TC200EN*  **IMAGE1 S CONNECT®,** connect module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated KARL STORZ-SCB and digital Image Processing Module, power supply 100-120 VAC/200-240 VAC, 50/60 Hz, including:
- **Mains Cord**, length 300 cm
- **DVI-D Connecting Cable**, length 300 cm
- **SCB Connecting Cable**, length 100 cm
- **USB Flash Drive**, 32 GB

TC301  **IMAGE1 S™ X-LINK**, link module, for use with flexible videoendoscopes and one-chip camera heads (up to FULL HD), power supply 100-120 VAC/200-240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT®
including:
- **Mains Cord**, length 300 cm
- **Link Cable**, length 20 cm

10973HD  **Video Mediastinoscope**, with continuous proximal lateral slit, length 15 cm, for use with IMAGE1 S™

39502ZH  **Wire Tray**, for cleaning, sterilization and storage of instruments, stackable, including hole plate walls and foldaway handles, external dimensions (w x d x h): 240 x 250 x 66 mm

39100SH  **Silicone Grid Insert LARGE DIAMOND GRID**, blue, extra wide mesh, for the storage of instruments in standard wire trays, plastic and sterilization containers, external dimensions (w x d): 230 x 240 mm

Corresponding instruments, e.g., unipolar coagulation suction tubes or the 3-part dismantling MEDIAFIT forceps range, can be used with the new video mediastinoscopy system.

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

Further information on mediastinoscopy can be found in the THORAX catalog.
Sliding Sheath Instruments for Video-assisted Thoracic Surgery

CleverCurve™ – sophisticated design

The new CLEVERCURVE™ line has been added to our existing instrument portfolio for VATS interventions. These instruments are based on the principle of sliding sheath technology which features a passive, stationary element as well as an active, movable element.

The resulting direct force transmission from the handle to the jaw achieves good tactile feedback.

Special Features:

- Good tactile feedback when grasping or cutting tissue
- Stable yet delicate jaw guidance
- Straightforward and enhanced cleaning of sheath intermediate spaces thanks to wavy design
- Direct force transmission from the handle to the jaw
The instrument set includes 7 instruments with different jaw designs:

### Lung Grasping Forceps

- 40410LF: **Lung Grasping Forceps**, sliding sheath, atraumatic, single action jaws, curved jaws, arched and fenestrated, with hemostat-style ratchet, length 28 cm
- 40410LL: **Lung Grasping Forceps**, sliding sheath, atraumatic, single action jaws, spoon-shaped jaws, length 28 cm
- 40410LR: **Lung Grasping Forceps**, sliding sheath, atraumatic, single action jaws, curved jaws, arched and fenestrated, with hemostat-style ratchet, length 28 cm

### Dissecting Forceps

- 40410LH: **Dissecting Forceps**, sliding sheath, atraumatic, single action jaws, jaws distally angled 90°, length 28 cm
- 40410LS: **Dissecting Forceps**, sliding sheath, atraumatic, single action jaws, double curved jaws, length 28 cm
- 40410LG: **Dissecting Forceps**, sliding sheath, atraumatic, single action jaws, curved jaws, length 28 cm

### Scissors

- 40410LC: **Scissors**, sliding sheath, single action jaws, scissor blades distally angled 15°, length 24.5 cm

Further information on thoracic surgery can be found in the THORAX catalog.
EndoCA Meleon® Telescope with Variable Direction of View

The ENDOCAMELEON® HOPKINS® telescope with rod lens system and a rigid 10 mm sheath offers a variable direction of view. This allows optimal adjustment of the viewing direction to any OR situation.

Special Features:

- Variable direction of view 0° – 90°
- Enhanced illumination
- Easy-to-use adjustment knob for selecting the direction of view, now with fin
- Combines the convenient handling of the proven HOPKINS® telescope with the advantages and potential of a telescope offering various directions of view
- Particularly suitable for use in anatomically narrow working spaces
EndoCAMeleon® and Accessories

26003EC  **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

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

39501BEC  **Wire Tray for Cleaning, Sterilization and Storage** of one ENDOCAMELEON®, length 32 cm, and one light cable, including holder for light post adaptor, silicone telescope holder and lid, external dimensions (w x d x h): 480 x 125 x 54 mm

**Recommended for use in uniportal VATS interventions**

495NVC  **Fiber Optic Light Cable**, with 90° deflection to the instrument, very narrow radius of curvature, diameter 4.8 mm, length 300 cm
Instruments for Video-assisted Thoracic Surgery

KARL STORZ offers instruments for Video-assisted Thoracic Surgery (VATS) that meet the requirements of both hygiene and economic efficiency. All VATS instruments can be disassembled into two or three parts and can therefore be individually combined with various handles. The instruments and jaws have been specifically adapted to the anatomy of the thorax, offering the operating surgeons the best prerequisites for VATS procedures.

The portfolio has been expanded to include reusable trocars with flexible cannulas as well as the proven KARL STORZ HOPKINS® telescopes.

Product Overview:

- HOPKINS® telescopes with various lengths and diameters
- Flexible and rigid trocars in 6 and 11 mm
- CLICKLINE instruments with or without connector pins for unipolar coagulation
- ROBI® forceps and scissors for bipolar coagulation
Sample Instrumentation for Video-assisted Thoracic Surgery

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

40120NAL  **Trocar**, with blunt tip, flexible cannula, **autoclavable**, size 6 mm

40123NAL  **Trocar**, with blunt tip, flexible cannula, **autoclavable**, size 11 mm

43237LSR  **CLICKLINE Parenchymal Forceps**, atraumatic, dismantling, without connector pin for unipolar coagulation, single action jaws, double curved jaws, size 5 mm, length 28 cm

43237LLF  **CLICKLINE Lung Forceps**, atraumatic, dismantling, without connector pin for unipolar coagulation, single action jaws, curved jaws, fenestrated, size 5 mm, length 28 cm

43249LUP  **CLICKLINE Scissors**, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, distally angled outer sheath, double action jaws, curved scissors blades, scissors blades open horizontally to angulation, size 5 mm, length 28 cm

43249DUP  **CLICKLINE Biopsy Forceps**, dismantling, insulated, with connector pin for unipolar coagulation, with LUER-Lock irrigation connector for cleaning, distally angled outer sheath, single action jaws, jaws open vertically to angulation, size 5 mm, length 28 cm

48451LKP  **ROBI® KELLY Dissecting Forceps**, CLERMONT-FERRAND model, dismantling, with connector pin for bipolar coagulation, distally angled outer sheath, double action jaws, curved, jaws open horizontally to angulation, size 5 mm, length 20 cm

48551MT  **ROBI® Scissors**, CLERMONT-FERRAND model, rotating, dismantling, with connector pin for bipolar coagulation, distally angled outer sheath, straight scissors blades, scissors blades open vertically to angulation, size 5 mm, length 28 cm
Fluorescence Imaging in Thoracic Surgery

OPAL1® technology for NIR/ICG with the IMAGE1 S™ camera platform

For imaging with the fluorescent dye indocyanine green (ICG)*, KARL STORZ offers brilliant FULL HD imaging of the vascular and lymphatic systems for thoracic surgery. The NIR/ICG system offers additional visualization options, especially for anatomical segment resection.

- 5 and 10 mm telescopes with 0° and 30° directions of view available
- Xenon-based technology (no laser safety measures necessary)
- Switching between the white light and ICG modes possible at any time
- Optimal illumination and contrast enhancement
- Multidisciplinary applications, e.g., thoracic surgery, general and visceral surgery, gynecology, urology as well as reconstructive surgery

Additional information on the topic of segmentectomy with ICG is available in the doctor-to-doctor manual “NIR/ICG Fluorescence Imaging in Thoracoscopic Segmentectomy” (Order No.: 96085007).

*Please verify that the fluorescent dye indocyanine green is approved for the respective indication in your country.
OPAL1® Technology for NIR/ICG based on the IMAGE1 S™ camera system
The IMAGE1 S™ 4U camera system allows the operating surgeon to make optimal use of the benefits offered by 4K technology. A notable feature is the image quality: High image brightness, impressive colors, greater richness of detail and a significantly improved depth effect characterize this system. Thanks to the system’s modularity, 4U components can be easily integrated into the existing IMAGE1 S™ camera platform. Consequently, the system is still compatible with existing technologies (e.g., rigid, flexible, fluorescence and 3D endoscopy) and can be adapted to meet individual customer needs.

- **IMAGE1 S™ 4U** impresses with outstanding, razor-sharp images
  - Excellent image brightness
  - First-rate color rendition
  - Greater richness of detail

- Three innovative visualization technologies for tissue differentiation:
  - CLARA: Homogeneous illumination
  - CHROMA: Contrast enhancement
  - SPECTRA*: Spectral color shift and switch

- Easy integration into the IMAGE1 S™ camera platform

* not for sale in the U.S.
TC201EN* **IMAGE1 S CONNECT® II**, connect module, for use with up to 3 link modules, resolution 3840 x 2160 and 1920 x 1080 pixels, with integrated KARL STORZ-SCB or KS HIVE and digital Image Processing Module, power supply 100-240 VAC, 50/60 Hz

TC304 **IMAGE1 S™ 4U-LINK**, link module, for use with IMAGE1 S™ 4U camera heads, power supply 100-240 VAC, 50/60 Hz, for use with IMAGE1 S CONNECT® TC200 or IMAGE1 S CONNECT® II TC 201

TH121 **IMAGE1 S™ 4U RUBINA**, OPAL1® NIR/ICG, two-chip 4K UHD camera head, S-Technologies available, for NIR/ICG fluorescence imaging in combination with POWER LED RUBINA, OPAL1® NIR/ICG, progressive scan, low-temperature sterilization, focal length f = 19 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S CONNECT® II and IMAGE1 S™ 4U-LINK

TH120 **IMAGE1 S™ 4U One-Chip 4K UHD Camera Head**, S-Technologies available, progressive scan, soakable, EO sterilization, H₂O₂ (hydrogen peroxide), focal length f = 18 mm, 2 freely programmable camera head buttons, for use with IMAGE1 S™ 4U-LINK

TM440 58" 4K Monitor, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall mount with VESA 400 x 400 and VESA 400 x 200 adaptors

TM 342** 31" 4K Monitor, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall mount with VESA 100 and VESA 200 adaptors

TM450 55" 4K/3D Monitor, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, 100-240 VAC, 50/60 Hz, wall mount with VESA 200 and VESA 300 adaptors

TM009 Signal Converter Set, 12G-SDI – 4x 3G-SDI, for use with 55" 4K/3D Monitor TM450

Suitable equipment cart for TM440 and TM450:

WA10007 **OR1™ Cart for Monitor, Set**, height-adjustable, for 42-64" monitor, VESA pattern min. 100/100, max. 400/400, monitor weight max. 60 kg, monitor holder height-adjustable on 1.8 m high column, four castors, floor area (in mm): 980 x 830, total height: 1.95 m

TM350 32" 4K 3D Monitor, screen resolution 3840 x 2160, image format 16:9, power supply 100-240 VAC, 50/60 Hz, wall mount with VESA 100 adaptor

TL400 **Cold Light Fountain POWER LED RUBINA**, for NIR/ICG fluorescence imaging and standard endoscopic diagnosis, with two LEDs and one KARL STORZ light cable connection, with integrated unit communication via KS HIVE, power supply 100-125/220-240 VAC, 50/60 Hz

TL300 **Cold Light Fountain POWER LED 300 SCB**, with integrated KARL STORZ-SCB, high-performance LED module and one KARL STORZ light outlet, power supply 100-240 VAC, 50/60 Hz

495NAC **Fiber Optic Light Cable**, with straight connector, extremely heat-resistant, with safety lock, enhanced light transmission, can be used for ICG applications, diameter 3.5 mm, length 230 cm

495NCSC **Same**, diameter 4.8 mm, length 250 cm

495TIP **Same**, diameter 4.8 mm, length 300 cm

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

** TM342 not available in USA, Japan & China
It is recommended to check the suitability of the product for the intended procedure prior to use.
75 Years

Shaping the Future of Endoscopy with you