LIVE - LED Integrated Video Endoscopes
Flexible Bronchoscopes from KARL STORZ
Rigid bronchoscopy can now look back at more than 100 years of history in which significant advancements were achieved. KARL STORZ has played a key role in these developments and today has extensive experience in this field.

Drawing on this tradition, we are expanding our portfolio for flexible bronchoscopy to include the LIVE models.

The CMOS video chip represents a future-oriented technology while the integrated LED eliminates the need for an additional light source. Only one cable is required for connection; with a length of 2.35 m, the cable allows work at a long distance from the tower and does not restrict user maneuverability.

With the new LIVEs, we are becoming a complete provider for a bronchoscopy system that allows visualization of both the upper and lower airways. This is made possible by a single camera platform – IMAGE1 S™.

In settings where space is a challenge, TELE PACK + allows space-saving, mobile and ergonomic work without compromising on quality. TELE PACK + is therefore a viable alternative to the conventional video tower unit.
LED integrated video endoscopes for bronchoscopy

Therapeutic 6.5
Diagnostic 5.5
Slim 4.2
Super Slim 3.2
LIVE – LED Integrated Video Endoscopes

Modern style of working without separate light source and with CMOS and HD

Easy to use, flat suction valve, safely secured with bayonet coupling

Camera buttons individually programmable

Compatible with IMAGE1 S™ and TELE PACK +

One-step deflection control
Easier maneuverability in the bronchial system due to a soft sheath

Ergonomic handle in elegant silver design

6.5 mm

5.5 mm
Take a look into the future with the right technology

The new LIVE video bronchoscopes feature excellent image quality, natural color rendering and homogeneous illumination. A special highlight is the LED light source integrated in the handle. State-of-the-art technology is thus combined with the cost-effectiveness of LEDs. A separate light source is therefore not necessary.

The handles of all models are ergonomically designed with a longer head section to provide enough space for convenient gripping.

Three head buttons are provided for ease of use. The grey button has been designated as a menu and confirm button. The functions of the other two buttons can be freely defined as desired, e.g., for image or video capture, toggling between visualization modes etc.

The deflection lever can be easily reached with the thumb and features a wide grip surface to prevent slippage.

Deflection can also be controlled in one step.
The handles of all four models feature an integrated LED light source with two light exit points at the distal end. Consequently, a separate light source is no longer needed to operate the video bronchoscopes. A plug for connecting the relevant video unit (IMAGE1 S™ or TELE PACK +) is sufficient.

The video bronchoscopes have a soft sheath which allows easier maneuverability in the bronchial system.

The single-use suction valve with a flat head allows more ease of use. Furthermore, a bayonet coupling secures the valve and prevents it from falling out.

With its length of over 2 meters, the connecting cable allows flexible use of the workstation. The mono plug design ensures a straightforward plug-and-play procedure.
IMAGE1 S™ in Bronchoscopy

KARL STORZ IMAGE1 S™ sets the standard with regard to imaging. True to the modular design principle, the system can be adapted to individual user needs. Furthermore, S-Technologies offer several visualization options for endoscopic imaging: CLARA, CHROMA and SPECTRA*.

“Clear imaging is particularly important for interventional procedures in pneumology. In this field, the IMAGE1 S™ camera platform provides [...] excellent, high-quality visualization. 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

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

Fig. 1: Standard image
Fig. 2: CLARA

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

Fig. 3: CHROMA
Fig. 4: CLARA + CHROMA

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

Fig. 5: SPECTRA* A
Fig. 6: SPECTRA* B

* not for sale in the U.S.
Images courtesy of Prof. R. EBERHARDT, Thoraxklinik Heidelberg, Germany
mORe than a camera – the IMAGE1 S™ platform

With the integration of video bronchoscopes into the IMAGE1 S™ modular camera platform, KARL STORZ once again establishes itself as a complete provider. In addition to a module for rigid bronchoscopy and other applications and, independent of clinical demands, individual configuration of the equipment cart is possible. A second tower is not required.

- Synergistic effects – all modules have the same control module. This eliminates the need to procure peripherals such as monitors, documentation units etc. several times.
- Gains in efficiency thanks to standardization – all OR rooms have the same technological basis, independent of the surgical discipline and specialty.
- Future-readiness – whereas stand-alone systems are confined to the technology relevant at a specific point in time, the modularity concept ensures that the platform can be upgraded with new technologies at any time. This leaves room for divergent trends so that the user is never confronted with an either/or option.
11910 TK  
**LIVE HD Video Bronchoscope 6.5/2.0, Set,**
distal tip outer diameter 6.5 mm, working channel diameter 2.8 x 3.2 mm, deflection 180°/130°, direction of view 0°, angle of view 100°, depth of view 3-50 mm, working channel 60 cm, for use with IMAGE1 S™ or TELE PACK +
including:
- **Case**
- **Pressure Compensation Cap**
- **Suction Valve,** sterile, for single use, package of 20
- **Leaflet Valve,** unsterile, for single use, package of 20
- **Leakage Tester**
  3x **Cleaning Brushes,** with double-sided brush, length 120 cm, brush diameter 3.2 mm, unsterile, for single use
- **Irrigation Adaptor**
- **LUER-Lock Tube Connector**
  3x **Valve Brushes,** unsterile, for single use
- **Protective Film**
- **Bite Protector**

11910 DK  
**LIVE HD Video Bronchoscope 5.5/2.8, Set,**
distal tip outer diameter 5.5 mm, working channel diameter 2.2 x 2 mm, deflection 210°/140°, direction of view 0°, angle of view 100°, depth of view 3-50 mm, working length 60 cm, for use with IMAGE1 S™ or TELE PACK +
including:
- **Case**
- **Pressure Compensation Cap**
- **Suction Valve,** sterile, for single use, package of 20
- **Leaflet Valve,** unsterile, for single use, package of 20
- **Leakage Tester**
  3x **Cleaning Brushes,** with double-sided brush, length 120 cm, brush diameter 3.2 mm, unsterile, for single use
- **Irrigation Adaptor**
- **LUER-Lock Tube Connector**
  3x **Valve Brushes,** unsterile, for single use
- **Protective Film**
- **Bite Protector**
## Accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Product Description</th>
<th>LIVE Compatible</th>
</tr>
</thead>
<tbody>
<tr>
<td>110352-10*</td>
<td><strong>Grasping Forceps Type Alligator</strong>, sterile, diameter 1.8 mm, working length 120 cm, for use with flexible endoscopes with working channels as of diameter 2 mm</td>
<td>11910 T, 11910 D</td>
</tr>
<tr>
<td>110353-10*</td>
<td><strong>Same</strong>, working length 160 cm</td>
<td>11910 T, 11910 D</td>
</tr>
<tr>
<td>110354-10*</td>
<td><strong>Grasping Forceps Type Alligator</strong>, sterile, diameter 2.4 mm, working length 160 cm, for use with flexible endoscopes with working channels as of diameter 2.8 mm</td>
<td>11910 T</td>
</tr>
<tr>
<td>110364-10*</td>
<td><strong>Grasping Forceps Type Rat Tooth</strong>, sterile, diameter 2.4 mm, working length 160 cm, for use with flexible endoscopes with working channels as of diameter 2.8 mm</td>
<td>11910 T</td>
</tr>
<tr>
<td>110372-10*</td>
<td><strong>Grasping Forceps Type Rat Tooth with Alligator Jaws</strong>, sterile, diameter 1.8 mm, working length 120 cm, for use with flexible endoscopes with working channels as of diameter 2 mm</td>
<td>11910 T, 11910 D</td>
</tr>
<tr>
<td>110374-10*</td>
<td><strong>Same</strong>, diameter 2.4 mm, working length 160 cm</td>
<td>11910 T</td>
</tr>
</tbody>
</table>
## Accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>LIVE Compatible</th>
</tr>
</thead>
<tbody>
<tr>
<td>110380-10*</td>
<td><strong>Biopsy Forceps Type Alligator,</strong> coated, diameter 1.8 mm, working length 120 cm, sterile, for single use, package of 10, for use with flexible endoscopes with working channels as of diameter 2 mm</td>
<td>11910 T, 11910 D</td>
</tr>
<tr>
<td>110381-10*</td>
<td><strong>Same,</strong> diameter 2.4 mm, working length 160 cm, for use with flexible endoscopes with working channels as of diameter 2.8 mm</td>
<td>11910 T</td>
</tr>
<tr>
<td>110410-10*</td>
<td><strong>Stone Basket,</strong> nitinol, without tip, diameter 1.8 mm, opening width 20 mm, working length 100 cm, sterile, for single use, package of 10, for use with flexible endoscopes with working channels as of diameter 2 mm</td>
<td>11910 T, 11910 D</td>
</tr>
<tr>
<td>110411-10*</td>
<td><strong>Same,</strong> diameter 2.4 mm, working length 170 cm, for use with flexible endoscopes with working channels as of diameter 2.8 mm</td>
<td>11910 T</td>
</tr>
<tr>
<td>110242-10*</td>
<td><strong>Cytology Brush,</strong> diameter 1.8 mm, working length 120 cm, sterile, for single use, package of 10, for use with flexible endoscopes with working channels as of diameter 2 mm</td>
<td>11910 T, 11910 D</td>
</tr>
</tbody>
</table>
091012-20* Suction Valve, sterile, package of 20 for use with Video Bronchoscopes 11910 D/P/S/T

11301 CA* Leaflet Valve, unsterile, package of 20

110251-100* Bite Protector, with elastic band, unsterile, package of 100

110252-100* Bite Protector, with elastic band, for children, unsterile, package of 100

11910 CD Irrigation Adaptor, reusable, for use with Video Bronchoscopes 11910 T, 11910 D, 11910 P, 11910 S
110921-100* **Valve Brush**, brush diameter 10 mm, brush length 35 mm, with thumb ring for brushing the valve seat, unsterile, for single use, package of 100, for use with flexible endoscopes

110922-100* **Valve Brush**, double-sided, brush diameters 10 mm and 5 mm, brush lengths 33 mm and 20 mm, with thumb ring for brushing the valve seat, unsterile, for single use, package of 100, for use with flexible endoscopes

110950-50* **Cleaning Brush**, with double-sided brush, length 120 cm, brush diameter 3.2 mm, unsterile, for single use, package of 50, for use with flexible endoscopes with working channel diameters 2.6-3 mm

© KARL STORZ 96082016 THOR 16 1.0 01/2020/EW-E

* mtp
IMAGE1 S™ Camera System

TC 200EN*  
**IMAGE1 S CONNECT®**, connect module, for use with up to 3 link modules, resolution 1920 x 1080 pixels, with integrated **KARL STORZ-SCB** and digital Image Processing Module, power supply 100-120 VAC/200-240 VAC, 50/60 Hz 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 English character set

TC 301  
**IMAGE1 S™ X-LINK**, link module, for use with flexible video endoscopes 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®** TC 200EN including:
- **Mains Cord**, length 300 cm
- **Link Cable**, length 20 cm

* Also available in the following languages: DE, ES, FR, IT, PT, RU
21.5" KARL STORZ Touch Screen, 
screen resolution 1920 x 1080, image format 16:9 FULL HD, 
video inputs: 1x DVI-I, 1x DVI-D, 
1x Display Port 1.2 compliant, 1x VGA, 
connectors: 1x USB-B touch connector (named “USB touch” on I/O label), 1x RS232 (D-Sub) touch connector (named “RS232 touch” on I/O label), 1x RJ45 serial communication connector, 
power supply 100-240 VAC, 50/60 Hz, IP protection class IPX2, touch control with latex gloves, wall-mounted with VESA 100 adaptor 
including:
External 24 VDC Power Supply
Mains Cord
Potential Equalization Bolts
Cable Cover
User Manual, printed in English, other languages stored on USB flash drive

Dimensions (w x h x d): 521 x 326 x 56.5 mm
Weight: 5 kg
It is recommended to check the suitability of the product for the intended procedure prior to use.