FLEX\textsuperscript{C} – The New Dimension in Imaging
Flexible Video Uretero-Renoscope
with enhanced imaging options
When imaging meets the greatest challenges

KARL STORZ, as a pioneer of endoscopy, once again revolutionizes diagnostic and treatment options for the upper urinary tract. The new FLEX-X\textsuperscript{C} allows the optimal display and successful treatment of both kidney stones and urothelial carcinoma.

- Excellent image quality thanks to new camera chip technology
- 2.6x higher resolution
- LED technology ensures homogenous illumination
- Ergonomic handle
- Minimal sheath circumference of 8.5 Fr.
- Maximal deflection of 270° in either direction
- Direct transmission of hand movements through to the distal end thanks to high torque stability
- LASERITE ceramic insert prevents thermal damage

“The number of indications for uretero-renaloscopy have significantly increased in recent years. This trend will become more prevalent in the future due to the distinct tendency towards minimally invasive treatments.

The key points for a successful treatment are:

- Miniaturization of flexible video-uretero-renaloscopes (chip-on-the-tip technology)
- High maneuverability
- High image quality
- Efficient Holmium Laser (20 W) combined with a 230 μm laser fiber

Retrograde IntraRenal Surgery (RIRS) represents an achievement for endo-urologists and continues to evolve year after year into better management of patients with upper urinary tract diseases.”

M. GRASSO M.D. Prof. O. TRAXER,
Professor of Urology Hôpital Tenon,
New York Medical College Paris, France
New York, USA
Lightweight, ergonomic handle for better user comfort

Easy insertion thanks to torsion-proof sheath

LED technology, no light cable necessary

Shock absorber system

Torque stability 1:1 rotation
Video-Uretero-Rensoscope
KARL STORZ FLEX-X®

Easier access to the kidney
- High torque stability
- 1:1 implementation of hand movements through to the distal end
- Extremely smooth control
- Infinitely variable 270° deflection (up/down) for intuitive orientation and visualization of the entire renal collecting system
- Integrated shock absorber system offers additional passive deflection components and enables easier access to all areas of the kidney

Ergonomic use
- Integrated LED light source for ease of use without an additional light cable
- Lightweight
- Extremely thin and steerable sheath
- Use of instruments or laser fibers with little or no loss of angulation properties possible
- Automatic focus

Extremely slender and steerable
- Minimal sheath circumference of only 8.5 Fr.
- Large working channel of 3.6 Fr.
- LASERITE ceramic insert prevents thermal damage and extends service life
Video-Uretero-Renoscope FLEX-X° in combination with the IMAGE1 S™ camera system
Innovative Visualization Tools for Surgery and Diagnosis via Homogeneous Illumination and Contrast Enhancement

CLARA
A good endoscopic image features a clear display of details in both light and dark areas. CLARA supports proper illumination in each part of the endoscopic image.

CHROMA
Surgical interventions are more efficient if clear differentiation of tissue is possible. CHROMA intensifies the color contrast in the image. Clearly visible structure surfaces are given added emphasis while retaining the natural color perception in the image.
Innovative Visualization Tools for Surgery and Diagnosis by Shifting the Color Spectrum

SPECTRA*
SPECTRA* filters out the deep red parts of the visible spectrum and the remaining color components are expanded. This offers the user an alternative display for endoscopic images, especially the red areas.

SPECTRA* offers two different modes so that the user can select the display that suits best.

White light image  SPECTRA A**  SPECTRA B***

Side-by-side view
Simultaneous display of white light and IMAGE1 S™ images

The simultaneous display of a white light image and an image in the visualization mode enables a direct comparison of tissue structures on the monitor during surgery.

* SPECTRA: Not for Sale in the U.S.
** SPECTRA A: Not for Sale in the U.S.
*** SPECTRA B: Not for Sale in the U.S.

Endoscopic images courtesy of: Professor Knoll, Clinic for Urology, Sindelfingen Clinics, Klinikverbund-Südwest, Sindelfingen, Germany
Flexible Video-Uretero-Renoscope
for access to the entire upper urinary tract

Intuitive Deflection Mechanism

You wouldn’t force someone who is left-handed to write with their right hand. Yet many flexible endoscopes impose exactly this type of limitation by forcing their operators to use counter-intuitive deflection mechanisms (American deflection).

KARL STORZ answers this challenge by offering a choice of deflection mechanisms: either positive or contrapositive. With positive (“European”) deflection, a downward movement of the lever mechanism causes an upward movement of the endoscope tip, and vice versa. Reverse this orientation by choosing the contrapositive mechanism: a downward movement of the lever mechanism now causes a downward movement of the endoscope tip.

Either way, a simple flexion of the thumb on the deflection lever sweeps the endoscope tip into some of the most challenging areas of the anatomy, such as the lower pole calyces of the kidney. Additionally, the intuitive design means you will never have to struggle to distinguish up from down – or down from up.

Choose the active tip deflection mechanism you are most comfortable with

Positive deflection mechanism

Contrapositive deflection mechanism
Flexible Video Uretero-Renoscope
for access to the entire upper urinary tract

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Deflection of distal tip</th>
<th>Direction of view</th>
<th>Angle of view</th>
<th>Working length</th>
<th>Working channel inner diameter</th>
<th>Sheath size</th>
</tr>
</thead>
<tbody>
<tr>
<td>11278VK / 11278VSK with positive deflection mechanism</td>
<td><img src="image1" alt="Positive Deflection" /></td>
<td>0°</td>
<td>90°</td>
<td>70 cm</td>
<td>3.6 Fr.</td>
<td>8.5 Fr.</td>
</tr>
<tr>
<td>11278VUK / 11278VSUK with contrapositive deflection mechanism</td>
<td><img src="image2" alt="Contrapositive Deflection" /></td>
<td>0°</td>
<td>90°</td>
<td>70 cm</td>
<td>3.6 Fr.</td>
<td>8.5 Fr.</td>
</tr>
</tbody>
</table>

**IMAGE1 S™ Camera System**
for use with all visualization modes

**TC200EN / TC301**
for use with IMAGE1 S™ Camera Control Unit

11278VSK / VSUK
Flexible Video-Uretero-Renoscope
for access to the entire upper urinary tract

Set 11278VK/VUK/VSK/VSUK Video-Uretero-Renoscope FLEX-X®
The following accessories are included:

- **11278V/U/V/S/VSU** Video Uretero-Renoscope FLEX-X®, steerable
- **27677X** Case
- **13242XL** Leakage Tester, with bulb and manometer
- **27651AL** Cleaning Brush, round, flexible, outer diameter 2 mm, for working channel diameter 1.2-1.8 mm, length 150 cm
- **27014Y** LUPER-Adaptor, with seal
**Optional accessories:**

- **Fiber Fixation Set**, for the fixation of laser fibers in the working channels of flexible endoscopes up to diameter 1 mm including:
  - **Fiber Fixation Cleaning Adaptor Seal**, package of 10

- **Adaptor for Two-Way Stopcock**, Luer-Lock with tube connection

- **Grasping Forceps**, double action jaws, flexible, 3 Fr., length 100 cm

- **Biopsy Forceps**, double action jaws, flexible, 3 Fr., length 100 cm

- **Stone Basket**, nitinol, without tip, straight, 1.9 Fr., length 120 cm, 4 wires, basket diameter 12 mm, sterile, for single use

- **Coagulation Electrode**, unipolar, 3 Fr., length 110 cm

- **Guide Wire**, with ball end, 3 Fr., package of 10

- **Plastic Container for Flexible Endoscopes**, specially suited for gas and hydrogen peroxide (Sterrad®) sterilization and storage, for use with one flexible endoscope, external dimensions (w x d x h): 550 x 260 x 90 mm

- **Seal**, for Instrument Ports 27001G/GF/GH/GP, package of 10, single use recommended

- **Cleaning Adaptor**
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
   USB Silicone Keyboard, with touchpad,
   US English character set

* Also available in the following languages: DE, ES, FR, IT, PT, RU
TC301

**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® TC200EN including:

- **Mains Cord**, length 300 cm
- **Link Cable**, length 20 cm
Notes

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

Please note that the described products in this medium may not be available yet in all countries due to different regulatory requirements.
Shaping the Future of Endoscopy with you