- 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™ 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 due to integrated light technology
• 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-renoscopy 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-reno-scopes (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
LED technology, no light cable necessary

Lightweight, ergonomic handle for better user comfort

Shock absorber system

Torque stability 1:1 rotation

Shockproof sheath minimizes breakage

Easy insertion thanks to torsion-proof sheath

Longer service life due to optimized strain relief
**Video-Uretero-Renoscope**  
**KARL STORZ FLEX-X⁶**

**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 8.4 Fr.
- Atraumatic tip of 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* allows recognition of the finest tissue structures. The bright red portions of the visible spectrum are filtered out and the remaining color portions are expanded. This makes it easier to differentiate between tissue types.

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

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. Side-by-side view thus facilitates diagnosis.

* 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 intrarenal collecting system

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.

KARL STORZ answers this challenge by offering a choice of deflection mechanisms: either positive or contrapositive. With positive (or “logical”) 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 intrarenal collecting system

<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>11278 VK / 11278 VSK with positive deflection mechanism</td>
<td></td>
<td>0°</td>
<td>90°</td>
<td>70 cm</td>
<td>3.6 Fr.</td>
<td>8.4 Fr.</td>
</tr>
<tr>
<td>11278 VUK / 11278 VSUK with contrapositive deflection mechanism</td>
<td></td>
<td>0°</td>
<td>90°</td>
<td>70 cm</td>
<td>3.6 Fr.</td>
<td>8.4 Fr.</td>
</tr>
</tbody>
</table>

for use with IMAGE1 S™ Camera Control Unit

for use with all visualization modes

11278 VSK/VSUK

TC 200EN / TC 301
Flexible Video-Uretero-Renoscope
for access to the entire intrarenal collecting system

Set 11278 VK/VUK/VSK/VSK UK Video-Uretero-Renoscope FLEX-X C

The following accessories are included:

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

- **11014 YK**  
  **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

- **6927691**  
  **Adaptor for Two-Way Stopcock**, Luer-Lock with tube connection

- **11275 FE**  
  **Grasping Forceps**, double action jaws, flexible, 3 Fr., length 100 cm

- **11275 ZE**  
  **Biopsy Forceps**, double action jaws, flexible, 3 Fr., length 100 cm

- **27023 LB**  
  **Stone Basket**, nitinol, without tip, straight, 1.9 Fr., length 120 cm, 4 wires, basket diameter 12 mm, sterile, for single use

- **11770 T**  
  **Coagulation Electrode**, unipolar, 3 Fr., length 110 cm

- **27025 P**  
  **Guide Wire**, with ball end, 3 Fr., package of 10

- **39406 AS**  
  **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

- **27550 N**  
  **Seal**, for Instrument Ports 27001 G/GF/GH/GP, package of 10, single use recommended

- **27001 RA**  
  **Cleaning Adaptor**
**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

* Also available in the following languages: DE, ES, FR, IT, PT, RU
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
Notes
It is recommended to check the suitability of the product for the intended procedure prior to use.