

Simply visionary.

BOa
COBRa
mamBa



Flexible Sensor Endoscopes
for ENDOCAM® Logic 4K

mamba

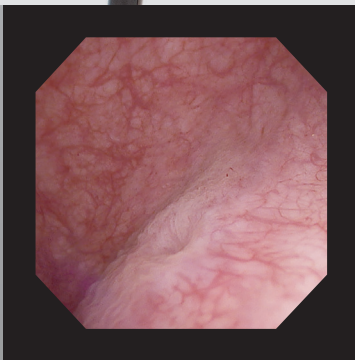
Flexible Sensor Cystoscope

Ultimate flexibility meets sensor technology.

Introducing Richard Wolf's newest flexible sensor endoscope for the ENDOCAM Logic 4K camera system. The **MAMBA** offers 210° bidirectional deflection, allowing the surgeon to easily visualize and navigate the bladder.

Featuring a slim outer sheath, 11.5 Fr. atraumatic distal tip, and a large 7.5 Fr. working channel, the **MAMBA** provides enhanced patient comfort without sacrificing irrigation. Its cutting-edge sensor technology generates a brilliant image and its lightweight, ergonomic handle helps ensure ease of use throughout a procedure.

Cystoscopy



Sensor Cystoscope Picture



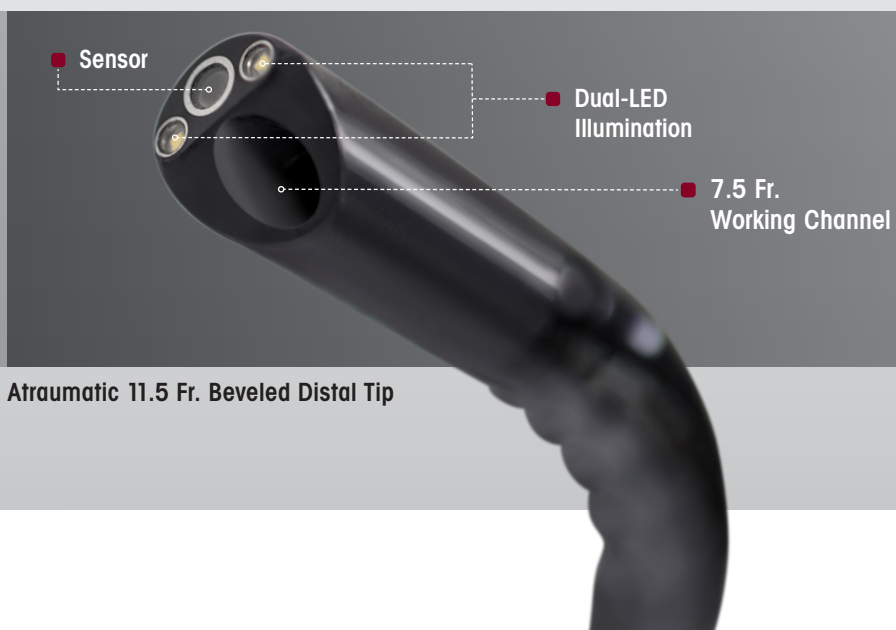
210° Bidirectional Deflection



mamba

Flexible Sensor Cystoscope

- 210° bidirectional deflection for precise control and navigation.
- Large 7.5 Fr. working channel for optimal irrigation.
- Atraumatic 11.5 Fr. beveled distal tip for easy insertion and enhanced patient comfort.
- 16.2 Fr. sheath.
- Two distally-integrated LEDs for superior illumination.
- Two programmable camera buttons.
- Special Imaging Modes (SIM).
- Ergonomic handle and axial cable.



Atraumatic 11.5 Fr. Beveled Distal Tip

BOA

Single-Channel Flexible Sensor Ureteroscope

The multifaceted instrument for all-around application.

Ureteroscopy

Engineered with Richard Wolf's latest sensor technology, the **BOA** produces a crisp, clear image of the upper and lower urinary tract. Its stiff shaft, slim 6.6 Fr. distal tip, and 270° bidirectional deflection make this flexible ureteroscope ideal for complex anatomy.

Featuring a 3.6 Fr. working channel, the **BOA** can be inserted through an access sheath as small as 9.5 Fr.



Sensor Ureteroscope Picture



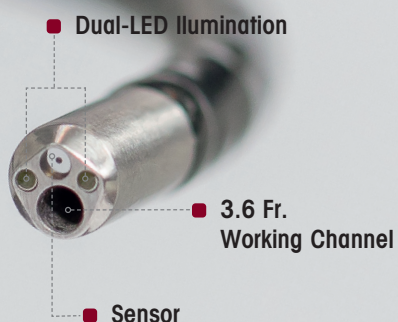
Compatible with a 9.5 Fr. Access Sheath

9.5 Fr.

BOa

Single-Channel Flexible Sensor Ureteroscope

- Compatible with a 9.5 Fr. access sheath.
- 270° bidirectional deflection.
- 3.6 Fr. working channel.
- Atraumatic 6.6 Fr. beveled distal tip for easy insertion.
- 8.7 Fr. sheath.
- Integrated LED illumination and distal image sensor.
- Two programmable camera buttons.
- Special Imaging Modes (SIM).
- Ergonomic handle and axial cable.



Atraumatic 6.6 Fr. Beveled Distal Tip



270° Bidirectional Deflection

COBRA

Dual-Channel Flexible Sensor Ureteroscope

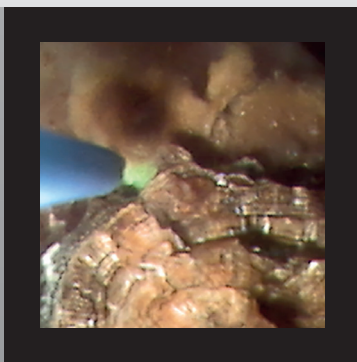
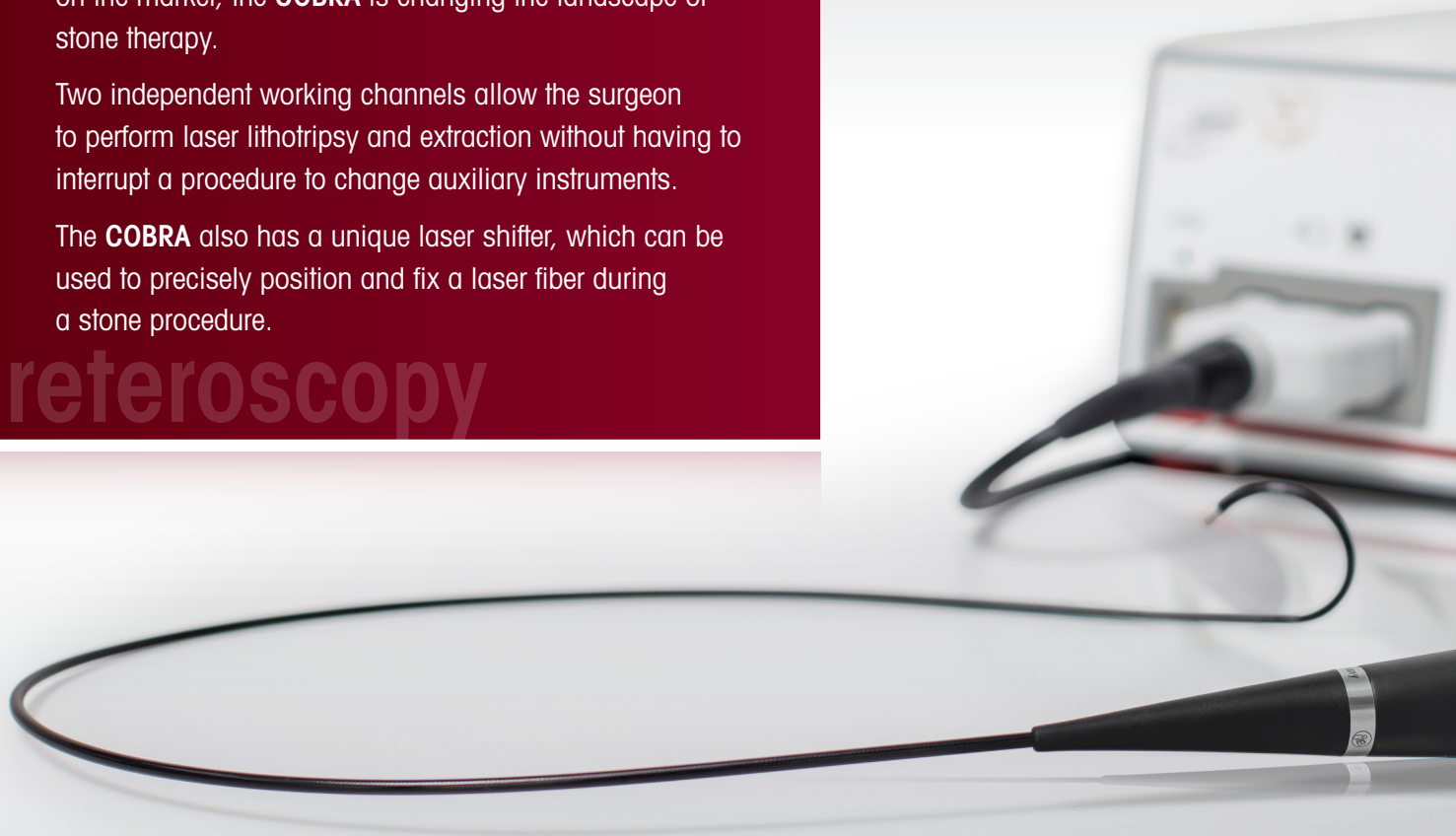
Optimizing stone therapy.

As the first and only dual-channel sensor ureteroscope on the market, the **COBRA** is changing the landscape of stone therapy.

Two independent working channels allow the surgeon to perform laser lithotripsy and extraction without having to interrupt a procedure to change auxiliary instruments.

The **COBRA** also has a unique laser shifter, which can be used to precisely position and fix a laser fiber during a stone procedure.

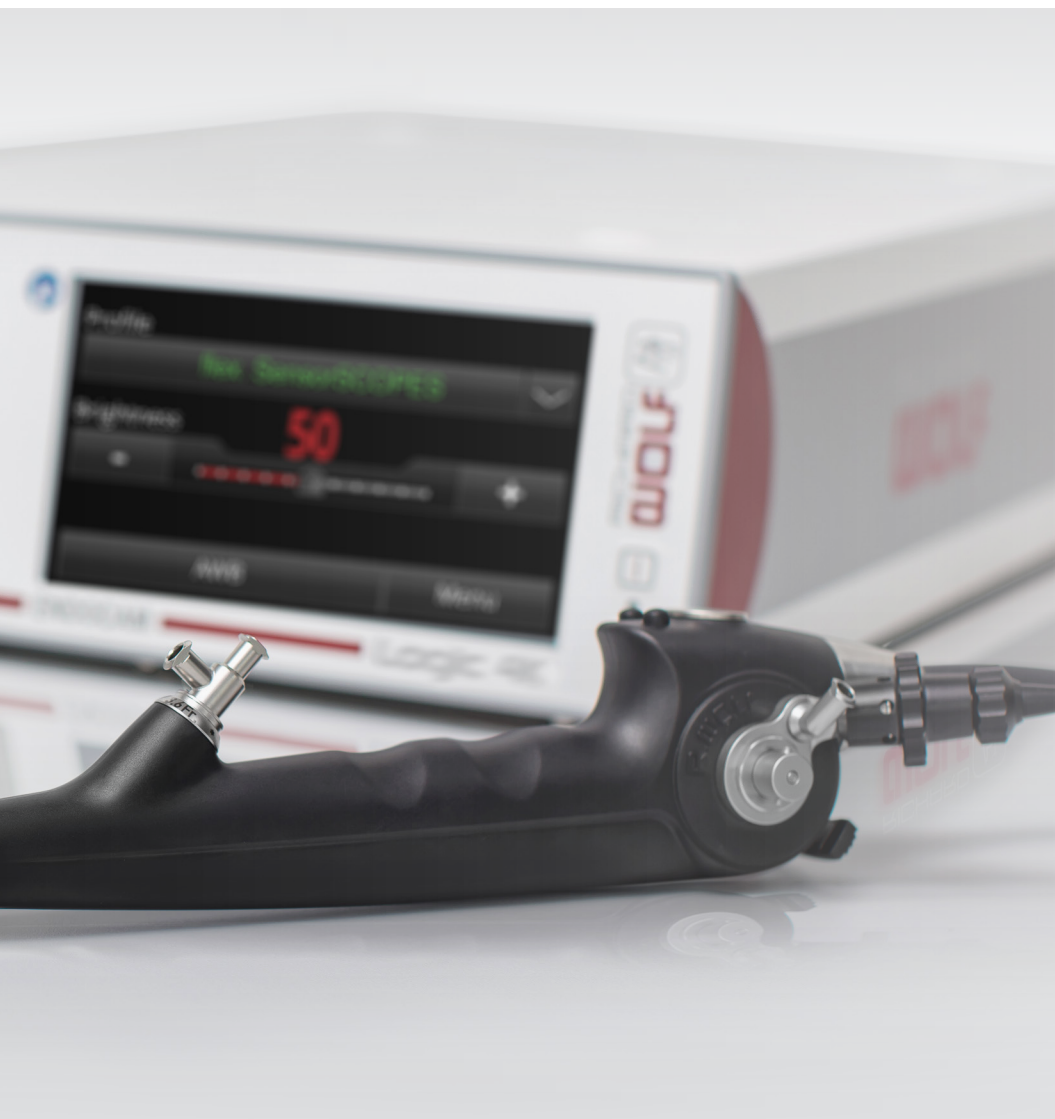
Ureteroscopy



Sensor Ureteroscope Picture



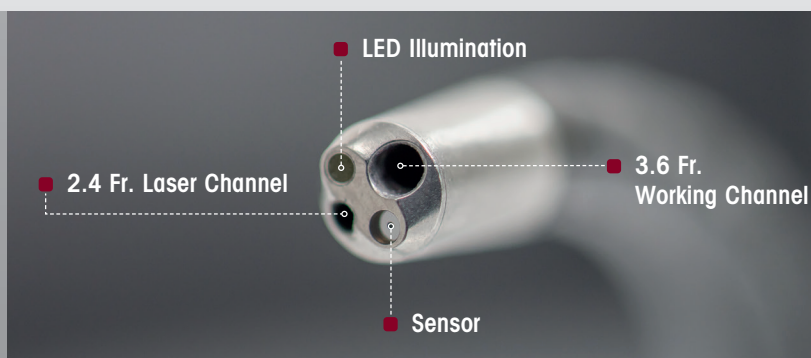
Two Independent Channels



COBRA

Dual-Channel Flexible Sensor Ureteroscope

- 270° bidirectional deflection.
- Two independent channels (3.6 Fr. and 2.4 Fr.) for the simultaneous use of tipless baskets and laser fibers.
- Atraumatic 5.2 Fr. beveled distal tip for easy insertion.
- 9.9 Fr. sheath.
- Integrated LED illumination and distal image sensor.
- Two programmable camera buttons.
- Special Imaging Modes (SIM).
- Ergonomic handle and axial cable.



Atraumatic 5.2 Fr. Beveled Distal Tip

ENDOCAM Logic 4K

The new definition of sharp.

The ENDOCAM Logic 4K camera system—the newest addition to the ENDOCAM Logic line—brings the clarity and brilliant detail of 4K to the operating room.

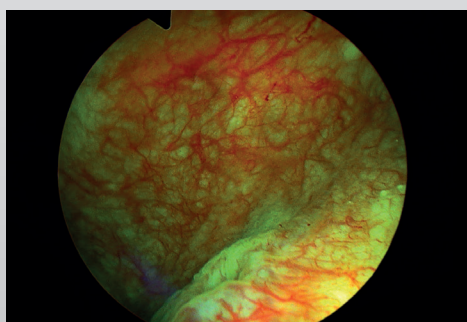
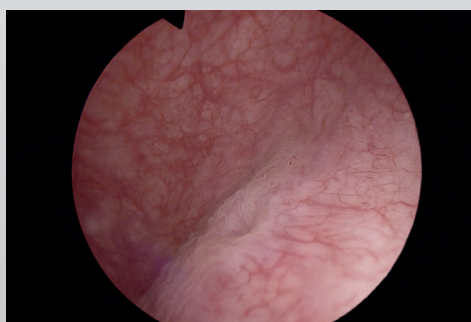
The ENDOCAM Logic 4K is a true plug-and-play system, allowing the user to plug any Richard Wolf flexible sensor endoscope directly into the camera control unit.

The built-in touch screen offers intuitive control, as well as the ability to make quick setting changes and create custom user profiles.



ENDOCAM Logic 4K
Camera Control Unit

COLOR CONTRAST I-III: Enhances contrast and reproduces select colors.



CONTRAST I - II: Enhances anatomical structures without altering their natural color.





ENDOCAM Logic 4K

■ Sustainable Technology

The camera control unit's USB port enables in-field software updates, ensuring the system is always in sync with our latest video technologies.

■ Equipment Versatility

The ENDOCAM Logic 4K is compatible with all Richard Wolf sensor endoscopes. This turnkey system also gives facilities the flexibility to upgrade their ENDOCAM Logic HD system incrementally.

■ User-Friendly Interface

The camera control unit's built-in touch screen provides ease-of-use and intelligent menu navigation.

■ Tailored Visualization

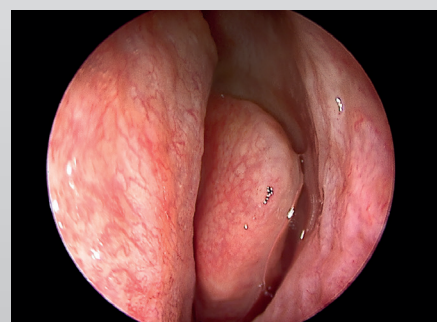
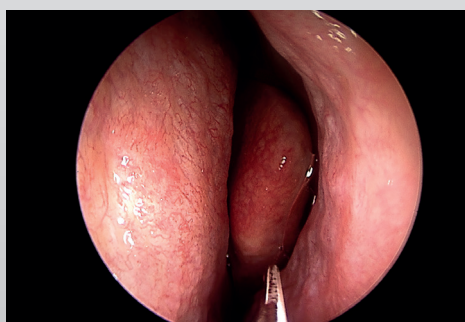
The ENDOCAM Logic 4K is equipped with several preset surgical profiles that have been field-tested to deliver vivid images for various endoscopic procedures, including cystoscopy, ureteroscopy, and resection.

Special Imaging Modes: The Difference is in the Detail

Richard Wolf's family of sensor endoscopes allow the user to select, at the touch of a button, one of several SIM modes, each designed to help facilitate easier tissue differentiation.

Modes

High Dynamic Range (HDR): Lightens dark areas and reduces overexposure.



Flexible Sensor Endoscopes

Technical Specifications

	MAMBA Flexible Sensor Cystoscope	BOA Single-Channel Flexible Sensor Ureteroscope	COBRA Dual-Channel Flexible Sensor Ureteroscope
Number of working channels	1	1	2
Sheath	16.2 Fr.	8.7 Fr.	9.9 Fr.
Distal tip	11.5 Fr. atraumatic, plastic	6.6 Fr. atraumatic, stainless steel	5.2 Fr. atraumatic, stainless steel
Working/irrigation channel	7.5 Fr.	3.6 Fr.	3.6 Fr.
Laser/irrigation channel	—	—	2.4 Fr.
Deflection	210° bidirectional	270° bidirectional	270° bidirectional
Working length	400 mm	680 mm	680 mm
Angle of view	110°	90°	90°
Lighting	Two distally-integrated LEDs	LED integrated into handle	LED integrated into handle
Handle	Ergonomic handle with axial camera cable	Ergonomic handle with axial camera cable	Ergonomic handle with brake (for locking the instrument tip) and axial camera cable
Position of working/irrigation channel in endoscopic image	3 o'clock	9 o'clock	6 o'clock
Position of laser/irrigation channel in endoscopic image	—	—	9 o'clock
Endoscopic image	Octagon, 3-step detail enhancement and 6-fold digital zoom, automatic white balance, light control, and focus	Square, 6-fold digital zoom, automatic white balance, light control, and focus	Square, 6-fold digital zoom, automatic white balance, light control, and focus
Compatible camera systems	ENDOCAM Logic HD ENDOCAM Logic HD <i>lite</i> ENDOCAM Logic 4K	ENDOCAM Logic HD ENDOCAM Logic HD <i>lite</i> ENDOCAM Logic 4K	ENDOCAM Logic HD ENDOCAM Logic HD <i>lite</i> ENDOCAM Logic 4K

Ordering Information

	MAMBA	BOA	COBRA
Logical Deflection (control lever down, distal tip down)	MAMBA Bundle 73150012US <i>Includes:</i> MAMBA flexible sensor cystoscope (7315001US)	BOA Bundle 73550712US <i>Includes:</i> BOA single-channel flexible sensor ureteroscope (7355071US)	COBRA Bundle 73560712US <i>Includes:</i> COBRA dual-channel flexible sensor ureteroscope (7356071US)
Ergonomic Deflection (control lever down, distal tip up)	MAMBA Bundle 73150062US <i>Includes:</i> MAMBA flexible sensor cystoscope (7315006US)	BOA Bundle 73550762US <i>Includes:</i> BOA single-channel flexible sensor ureteroscope (7355076US)	COBRA Bundle 73560762US <i>Includes:</i> COBRA dual-channel flexible sensor ureteroscope (7356076US)
	<i>Included with each bundle:</i> Leak tester (163.903) Pressure equalization valve (163.904) Luer sealing cap (15023205)	<i>Included with each bundle:</i> Leak tester (163.903) Pressure equalization valve (163.904) Disposable cleaning brush (pack of 10) for working channel (7990001)	<i>Included with each bundle:</i> Leak tester (163.903) Pressure equalization valve (163.904) Disposable cleaning brush (pack of 10) for working channel (7990001) Disposable cleaning brush (pack of 10) for laser channel (7990003) Clamping element (pack of 20), orange (15394144) Adapter (163914)

ENDOCAM Logic 4K Bundle 552530115

Includes:

ENDOCAM Logic 4K camera control unit (5525301), remote control (5525401), power cable (N710171),
8 GB USB stick (56540028), HDMI-HDMI cable lockable 3.0 m (103847)

GUARDIAN

SERVICE BY RICHARD WOLF



Protecting performance.

Guardian Service by Richard Wolf uses the same precision engineering and quality standards required of new Richard Wolf devices.