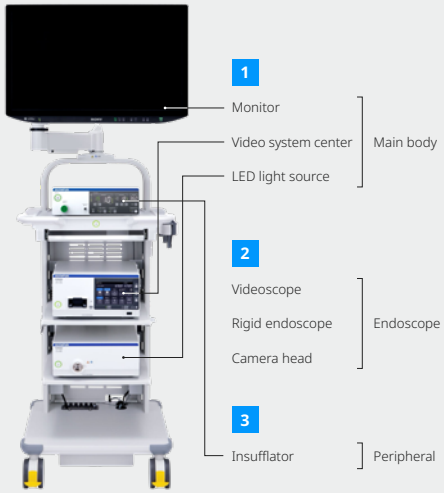
1 Main Body: Monitor, Video System Center, LED Light Source

The surgical endoscopy system includes models that support 3D scopes, which help surgeons perceive depth more easily; models that provide high-resolution 4K images for clearer visualization of fine details; models that enable IR imaging; and models that have multiple combinations of these functions in a single system.

The video system center acts as the core processor of the system. It converts electrical signals from the videoscope or camera head into video signals and displays them on a monitor. The light source delivers light through a light-guide cable to the tip of the scope, illuminating the inside of the body during procedures.



2 Endoscope

Surgical Videoscope

General laparoscopic and thoracoscopic videoscopes have a diameter of approximately 5–10mm and a length of 300–370mm. At the tip of the slim metal tube, a lens, image sensor, and light guide are integrated. Some scopes have a flexible (articulating) tip, while others are straight. Because they have a deep depth of field, manual focus adjustment is generally not required.

Surgical videoscope

Rigid Endoscope (Telescope) and Camera Head

By connecting a rigid endoscope, which consists of multiple lenses, with a camera head that contains an image sensor, the image can be displayed on a monitor via the video system. This combination of a rigid endoscope and camera head is used not only in laparoscopic and thoracoscopic surgery, but also across a wide range of medical specialties.

For example, in urology it is used for procedures such as transurethral prostate resection. In ENT, thin rigid endoscopes are used to observe, diagnose, and treat areas such as the eardrum, nasal sinuses, and vocal cords. In gynecology, they are used for procedures including fibroid removal and polyp resection, while in orthopedics they are used for treatments inside joints.

Rigid endoscope (telescope)

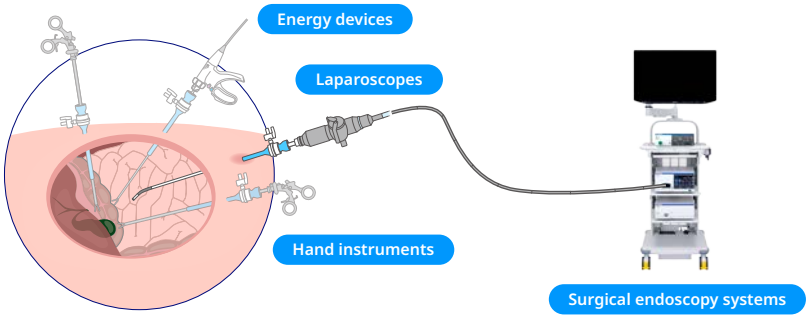
Camera head

3 Peripheral

Insufflator

The insufflator feeds carbon dioxide gas into the abdominal cavity in order to expand it and create a working space to perform surgery. A special insufflation needle (Veress needle) delivers the carbon dioxide gas to the peritoneal cavity. The insufflator monitors the pressure of the peritoneal cavity and automatically pumps in additional gas as needed to make up for gas that naturally leaks out during surgery.

Main Usage Scenes (Examples of Endoscopic Examination)



Hybrid Energy Devices

Surgical energy devices are used to cut tissue and control bleeding during laparoscopic and open procedures. Hybrid energy devices combine the advantages of ultrasonic and advanced bipolar energies to deliver fast tissue cutting and strong blood vessel sealing.

Hybrid energy devices

Advanced Bipolar Devices

Advanced bipolar energy devices are used to control bleeding and cut through soft tissue during laparopscopic and open procedures. Different jaw configurations support various surgical techniques.

Advanced bipolar devices

Ultrasonic Energy Devices

Ultrasonic devices convert electricity into ultrasonic vibrations, enabling fast, efficient tissue cutting during laparoscopic and open procedures.

Ultrasonic energy device

Laparoscopic Hand Instruments

Reusable monopolar and bipolar laparoscopic instruments such as scissors, electrodes, needle holders and suction/irrigation devices assist surgeons in managing a broad range of tissue conditions during laparoscopic procedures.

Laparoscopic hand instruments

Surgical Energy Platform

This versatile generator system enables hybrid, advanced bipolar and ultrasonic devices, together with standard electrosurgical instruments, to deliver standardization across operating rooms.

Surgical energy platform