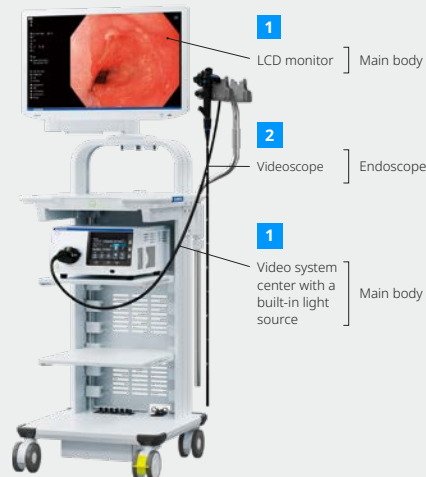


## 1 Main Body: LCD Monitor, Video System Center

The video system center converts the electrical signals from an image sensor at the tip of a videoscope into video signals and displays them on an LCD monitor. In addition to high-definition vision, the system supports various types of image processing including color enhancement and Narrow Band Imaging (NBI). The latest units are integrated with a light source and come equipped with an LED with a long life span. To improve color reproductivity, the system has adopted five-color LEDs supporting violet, blue, green, amber, and red. It also has an automatic dimming feature (automatically adjusts the brightness) and a pump that transmits water and air.



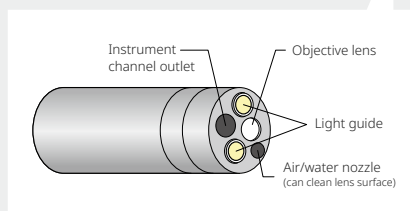
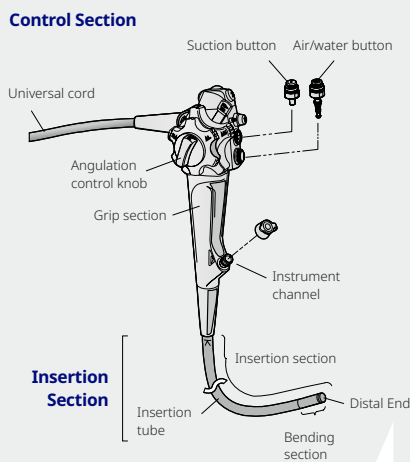
## 2 Endoscope

The endoscope consists of three parts: the control section, the insertion section, and the connector section.

### Control Section

The angulation knob on the control section is connected to the tip of the endoscope by a series of wires. By turning the angulation knob, the bending section at the distal end bends horizontally and vertically allowing for easier insertion into the body and the ability to view 360 degrees within body cavities.

The endoscope also contains buttons (valves) for feeding air or water and for applying suction. Covering the opening in the air/water valve will feed air into the organ being observed and will gently expand it for a better view. Depressing this valve will feed water through the endoscope to wash the viewing lens. Depressing the suction valve will allow the doctor to use the endoscope to suction any fluids which are obscuring a good view of the tissue. Endotherapy devices can be passed through the instrument channel for performing endoscopic biopsy and other treatments.



### Insertion Section

On the tip of the insertion section, there are four main parts: 1. Objective lens and image sensor, 2. Light guides that bring light from the light source through the endoscope, 3. Instrument channel outlet where endotherapy devices can be pushed in and out (also has a suction opening), 4. Nozzle for feeding water and air.

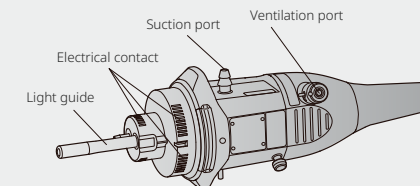
The objective lens is typically a super-wide-angle lens in order to visualize a large area of tissue at one time. In order to view tumor tissue in a more detailed manner, some endoscopes have an optical zoom feature. They also support high-definition video displays.

Light guide fiber bundles conduct light from the external light source through the endoscope to illuminate body cavities. Endotherapy devices are pushed in and out of the instrument channel for harvesting tissue (biopsy), removing tumors, cauterizing bleeding lesions, etc. The nozzle on the distal tip is used to clean the lens with water and expand body cavities by insufflating them with air.

### Connector Section

The connector section connects the endoscope with the video system center through the universal cord. Supply of air and water is also performed through this connection.

### Connector Section



## Main Usage Scenes (Examples of Endoscopic Examination)

