Fujifilm Endoscopy System

State-of-the-art Electronic Video Endoscopy and Endoscopic Ultrasonography

Specifications are subject to change without notice. 10/12

FUJIFILM

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FUJIFILM

Enhancing the quality of life of people worldwide

Fujifilm is known as the world's largest photographic and imaging company and is pioneering in diagnostic imaging and information systems for health-care facilities. The current endoscopic equipment provides high-definition video endoscopy and endoscopic ultrasound for gastroenterologists and pulmonologists. The actual range of endoscopes and the EPX-4450HD processor technology come with FICE Dual Mode and DICOM on-board.

We will use leading-edge, proprietary technologies to provide top-quality products and services that contribute to the advancement of culture, science, technology and industry, as well as improved health and environmental protection in society. Our overarching aim is to help enhance the quality of life of people worldwide.

Nowadays Fujifilm entities operate in over 50 group companies in Europe and employ more than 5,000 people engaged in R&D, manufacturing, sales, and service support.

Innovative solutions

As one of the leading companies in the development of endoscope technology, Fujifilm regularly sets new benchmarks in the industry, for example with devices for double balloon endoscopy and transnasal endoscopy. However, the focus at Fujifilm is very much on holistic patient care. Our service portfolio therefore also includes competent technical assistance, a comprehensive range of hygiene products and individual consulting.

New opportunities

Whether it is with the most advanced optical technology, state-of-the-art digital image processing or new examination methods, Fujifilm is always creating new opportunities in the world of endoscopy. In this way, we are making a significant contribution to the early detection of diseases and their successful treatment.

Dedicated research, the continuous enhancement of our technology, the highest quality demands and close working relationships with international specialists set the global standard in Fujifilm endoscopy and endosonography.

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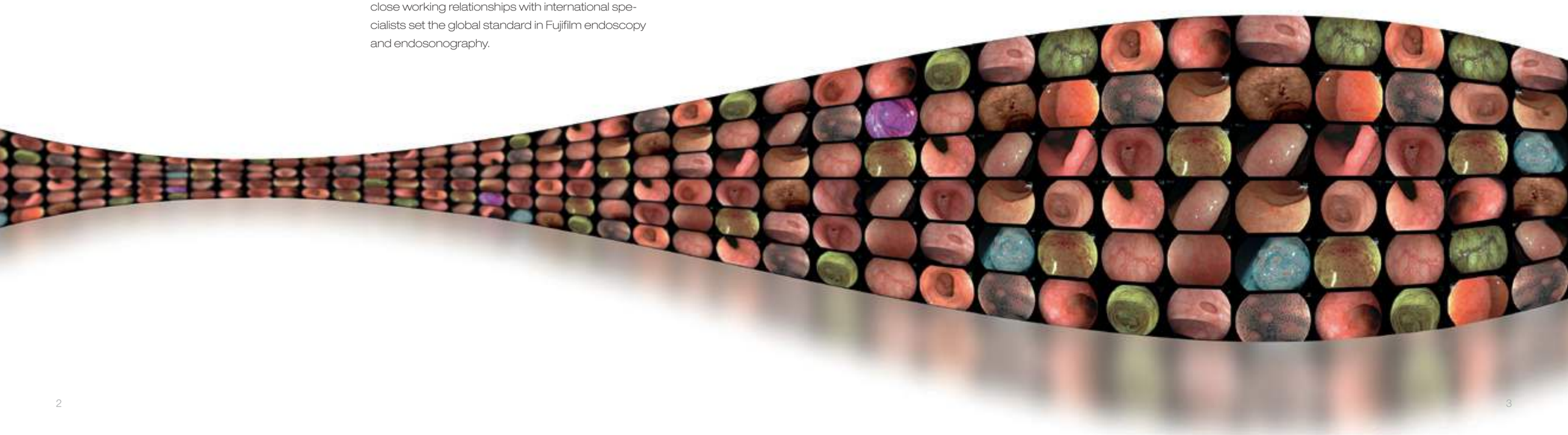


500 series endoscopes & 4450HD system: a solution for improved next generation endoscopy realized by fully digital technology

With advanced total solutions, Fujifilm is ready to fulfill a broad range of diagnostic and therapeutic endoscopic requirements.

500 series endoscopes features leading-edge optical technologies to provide clear, bright endoscopic images for easier and more accurate diagnosis. The ergonomically grip design ensures a smooth and comfortable handling. The fully digital processor EPX-4450HD employs state-of-the-art digital signal processing. This system, compatible with FICE, the image processing function to improve image visibility, takes the fullest advantage of being completely digital. Fujifilm's endoscopy system is a total solution to support image input, processing and sharing, surely contributing to more efficient endoscopy from now on with its excellent performance.

Fits right. Moves agilely.
Light-weight grip for high operability

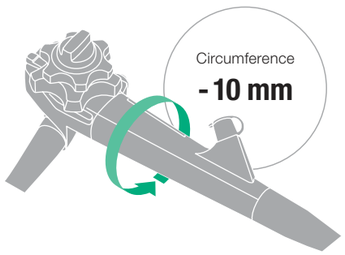
The newly developed grip fits gently into your hand, allowing full use of this high-performance endoscope. Materials, processing and choice of parts have all been reviewed to reduce the grip weight for greater maneuverability. The design is improved also to allow easier cleaning and disinfection. G-5 grip and 500 series endoscope in combination offer you added amenity in routine diagnosis.

500 SERIES SCOPE

G-5™ ENDOSCOPY

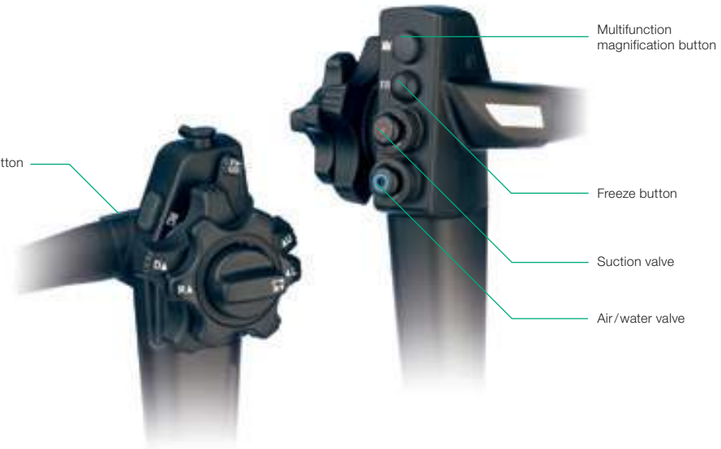
Designed lighter & slimmer

20 % less in weight and 10 mm slimmer than that of our conventional product. The angle operation knob is remodeled to accommodate the fingers more firmly with better fit.



Improved operability

New positioning of the functional switches, air/water and suction valve minimize finger travel and improve efficiency.



Water jet function

Main endoscopes for the lower gastrointestinal tract have a water jet nozzle in addition to the forceps channel. The water jet nozzle effectively removes mucus on the surface being examined.

Improved cleaning and disinfection

Cleanliness and safety focused on full defense against contamination. Easily soiled air/water valve is removable and autoclavable. A smoother, flatter surface assures all areas receive optimal contact with cleaning and high-performance disinfecting solutions.

Light-weight connector

The connectors incorporated in the 500 series endoscopes are slim, light-weight, and easy to handle. Procedures are easy when the endoscope has to be removed/attached for cleaning and disinfection on every occasion of endoscopy.

Flexible portion

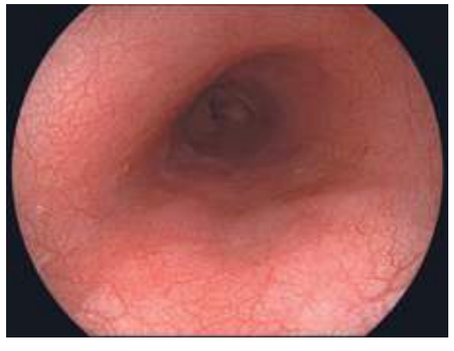
In upper and lower gastrointestinal endoscopy, the great flexibility of the endoscope allows easy insertability and the comfort of the examinee.

Fujifilm's state-of-the-art technology for endoscopy system: EPX-4450HD video processor

Clear and sharp image quality, advanced image processing features and interface allow for user-friendly operations and efficient workflows. The high-end EPX-4450HD processor, from Fujifilm's line-up of endoscopy systems, provides an optimal environment for clinical examinations.

High-quality image provided by the HDTV and DVI outputs

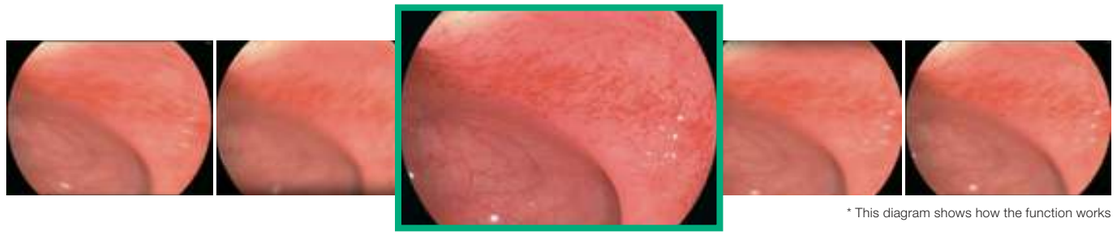
When the 500 series endoscopes, equipped with the high-resolution Super CCD, is used in combination with the full digital processor EPX-4450HD, having two HDTV and DVI output terminals each, details of a lesion are displayed more clearly in high quality.



Giving you clear images with advanced imaging technology

Anti-blur function: extracting the best still image from multiple images

The anti-blur function offers sharpest and clearest images for review and documentation in any occasion.



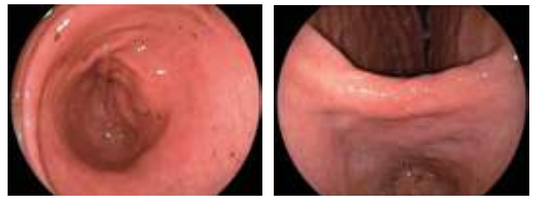
* This diagram shows how the function works

A sequence of images always kept in the background ▶ Freezing the image during the examination ▶ Automatic selection and display of the sharpest image

Achieving always optimal illuminated images with automatic control of the photometric mode

The automatic photometric mode optimally adjusts the lighting in accordance with the positioning of the endoscope, providing you with a well-balanced picture from close-up to distant focusing.

* Available with the 500 series endoscopes



Average photometric operation | Peak photometric operation

Interface with excellent usability and safety

The operation screen is easy to use and supports the hospital workflows

Before the examination, view the patient's information on screen for verification.

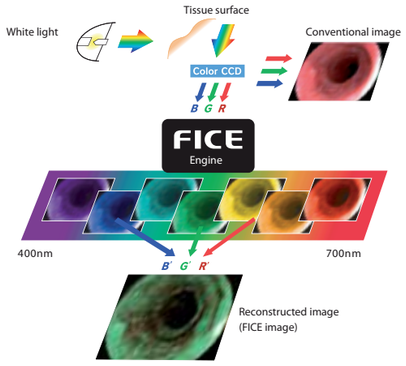
* You can also see the endoscope's serial number and the direction of the forceps on the screen.
* Cannot be displayed on some endoscopes.

The new screen layout on the monitor improves examination efficiency

Patient and imaging information are shown at the bottom of the monitor. This user-friendly layout supports an efficient endoscopy examination.

FICE spectral image processing technology widens the potential of endoscopic diagnosis

FICE – “Flexible spectral Imaging Color Enhancement“ – in the new EPX-4450HD yields diagnostic results without any need for tissue staining. The procedure digitally limits the wavelengths of the light and displays it in up to ten different color combinations. The endoscope switch allows physicians to switch between the conventional image and the FICE image in a split second, ensuring an uninterrupted examination with the eyes always concentrated on the monitor.



Dual Mode simultaneously display a FICE image and white light image on the same monitor

By having a dual view of a FICE image and white light image on the same monitor, you can collect more information for examination and diagnosis.

Dual Mode

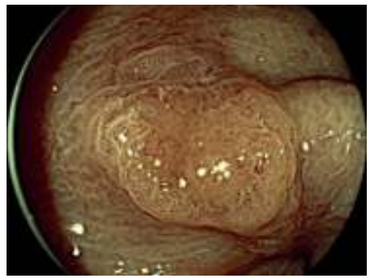
Change the FICE preset pattern with the endoscope switch in real-time*

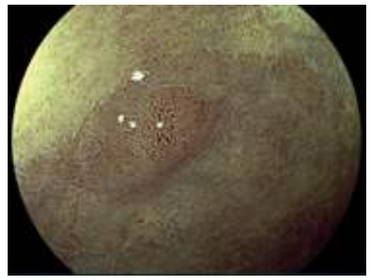
Use the endoscope button to select up to three wavelength patterns from presets. You can switch quickly, moving to the next FICE image with a single push of a button which allows selection of the best pattern for the respective diagnosis.

*Only when using the EPX-4450HD

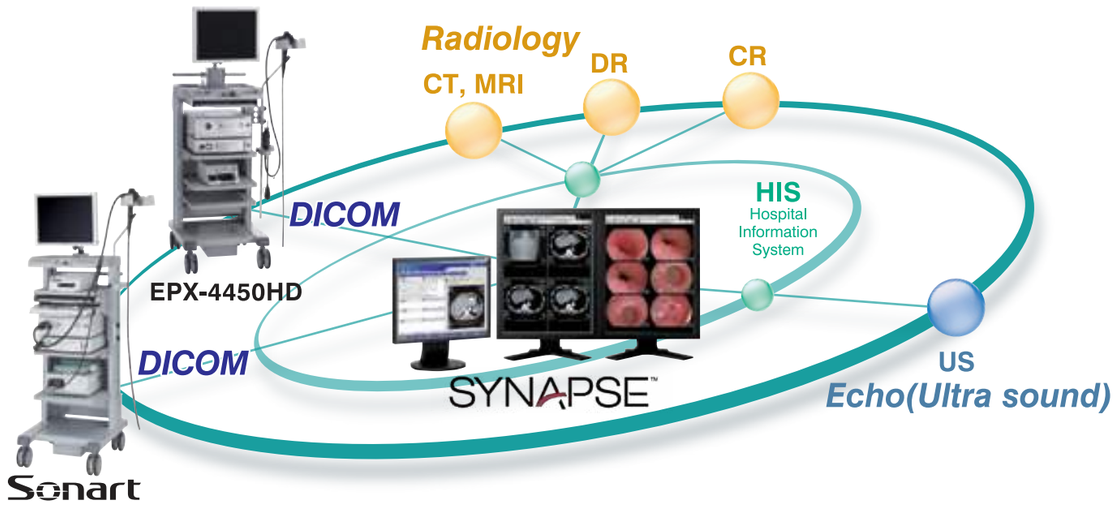
White light

FICE 1


FICE 1


FICE 8

EPX-4450HD integrates into the hospital network environment with DICOM interfaces



High-quality image endoscope with Super CCD

The Fujifilm Super CCD provides high-resolution image quality and supports the detection of smallest lesions.

Super CCD 590 series endoscope

For the Upper G.I. Tract – Optical Magnification

EG-590ZW

EG-590ZW is a high-quality optical magnifying electronic endoscope for the upper G.I. tract. The optical magnification enhances the images for easier and closer observation. This endoscope has maximum optical magnification levels of up to 135 times when viewed on a 19 inch monitor and also an excellent field of view.

Viewing direction	0° (Forward)
Field of view	WD: 140° / TL: 55°
Observation range	WD: 6 - 100 mm / TL: 2 - 3mm
Distal end diameter	10.8 mm
Flexible portion diameter	9.8 mm
Bending capability	UP 210° / DOWN 90° RIGHT 100° / LEFT 100°
Working length	1,100 mm
Total length	1,400 mm
Forceps channel diameter	2.8 mm

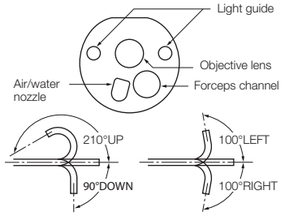


Image area &
Forceps entry position

OPTICAL MAGNIFYING | WIDE VIEW

Stomach FICE 0

For the Upper G.I. Tract – Standard Type

EG-590WR

This endoscope is reasonably slim with a distal end of 9.6 mm, yet is equipped with adequate functions necessary for routine examinations. This is a high-definition standard endoscope. The air/water nozzle is redesigned to constantly secure a clear field of view, and its water filtering function is significantly improved.

Viewing direction	0° (Forward)
Field of view	140°
Observation range	6 - 100 mm
Distal end diameter	9.6 mm
Flexible portion diameter	9.3 mm
Bending capability	UP 210° / DOWN 90° RIGHT 100° / LEFT 100°
Working length	1,100 mm
Total length	1,400 mm
Forceps channel diameter	2.8 mm

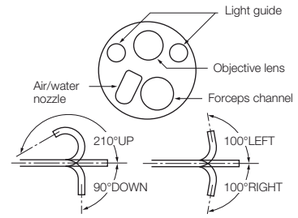


Image area &
Forceps entry position

WIDE VIEW

For the Lower G.I. Tract – Optical Magnification

EC-590ZW3/M, EC-590ZW3/L

These optical magnifying endoscopes for the lower G.I. tract have a water jet function which is effective for washing off mucus and securing a better field of view. These endoscopes have a wide variety of functions such as a large 3.8 mm forceps channel, optical magnifying function and water jet function.

	ZW3/M	ZW3/L
Viewing direction	0° (Forward)	
Field of view	WD: 140° / TL: 55°	
Observation range	WD: 6-100 mm / TL: 2-3 mm	
Distal end diameter	12.8 mm	
Flexible portion diameter	12.8 mm	
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°	
Working length	1,330 mm	1,690 mm
Total length	1,630 mm	1,990 mm
Forceps channel diameter	3.8 mm	

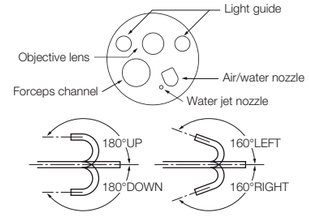


Image area &
Forceps entry position

OPTICAL MAGNIFYING | WIDE VIEW

For the Lower G.I. Tract – Standard Type

EC-590WM4, EC-590WI4, EC-590WL4

These endoscopes for the lower G.I. tract routine examinations have an ultra-wide 140° field of view, a large 3.8 mm channel and also a water jet function which is effective for washing off mucus.

	WM4	WI4	WL4
Viewing direction	0° (Forward)		
Field of view	140°		
Observation range	3-100 mm		
Distal end diameter	12.8 mm		
Flexible portion diameter	12.8 mm		
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°		
Working length	1,330 mm	1,520 mm	1,690 mm
Total length	1,630 mm	1,820 mm	1,990 mm
Forceps channel diameter	3.8 mm		

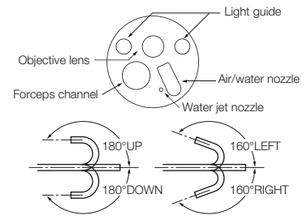


Image area &
Forceps entry position

ColoAssist

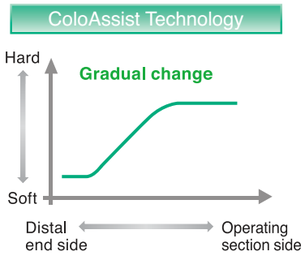
WATER JET | WIDE VIEW

ColoAssist
Enhanced insertion capability and improved maneuverability

Precision up to the tip
Fujifilm colonoscopes with ColoAssist convince by optimized force and torque transmission.

Endoscopes with ColoAssist
- EC-590ZW3/M, EC-590ZW3/L
- EC-590WM4/WI4/WL4
- EC-530WM3/WI3/WL3

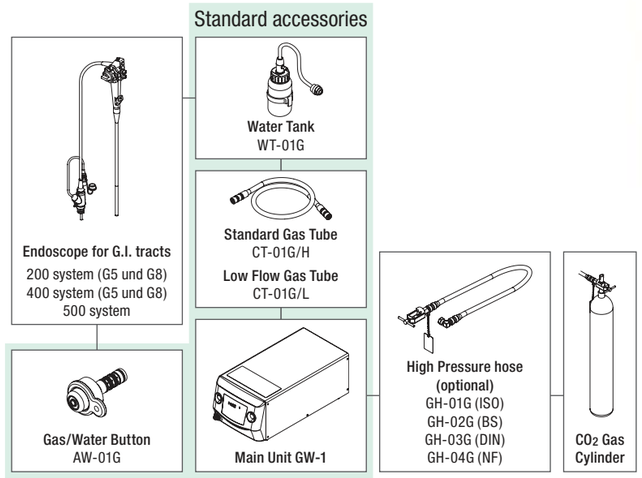
Insertion section with gradual stiffness
Newly designed insertion section with gradual flexibility enhances insertion capability.



Improved grip performance with newly-designed surface shape
Newly created ribbed surface prevents slipping and improves handling of the endoscope. Colonoscopy can be performed more easily and comfortably even in long examinations.

The CO_2 insufflator GW-1
Faster resorption of insufflated CO_2 for shorter examinations

Insufflated CO_2 reduces the bloated sensation for patients and the pain in drawn-out procedures.



Example of System Configuration

Water pump JW-2
Specially designed for advanced endoscopic examination

Proprietary piping technology enables water flow to be quickly stopped. One-liter water bottle enables prolonged water use and minimizes the need for constant refilling.

The new high-definition standard in endoscopy

The Fujifilm high-definition system represents the standard in digital endoscopy – in terms of both technology and cost-efficiency. It enables us to provide you with endoscopy equipment that is more affordable than ever before. At the heart of the system is the EPX-2500 video processor, which delivers images in high definition without loss in quality.

The EPX-2500 video processor
High definition in everyday work

The EPX-2500 combines convenient operation with high-resolution images that have optimal illumination. The digital video output (DVI) of the EPX-2500 produces images in high definition without loss of quality. Furthermore, the processor is equipped with a range of functions.

- Two ports for connecting Fujifilm 200 series and 530 series endoscopes
- Integrated xenon light source for bright, uniformly illuminated images
- Quick and simple operation
- Picture-in-picture function with freeze mode for live-display
- Better imaging of blood vessels
- 2x zoom for instant enlargement

High-quality 530 series endoscope
covers screening, diagnosis and treatment

530 series endoscope features high-quality endoscopes which serve various kinds of examination and diagnosis. The entire upper and lower G.I. including ultra-slim endoscopes.

For the Upper G.I. Tract – Transnasal Type

EG-530NW

The ultra-slim gastroscope with a distal end diameter of 5.9 mm is made possible by Fujifilm's proprietary microfabrication technology and offers a wide field of view with high-resolution imaging similar to that obtainable with transoral gastroscopes. The flexible gastroscope is ideal for transnasal insertion and provides the operator with highly visible endoscopic images while reducing patient discomfort.

Viewing direction	0° (Forward)
Field of view	140°
Observation range	4-100 mm
Distal end diameter	5.9 mm
Flexible portion diameter	5.9 mm
Bending capability	UP 210° / DOWN 90° RIGHT 100° / LEFT 100°
Working length	1,100 mm
Total length	1,400 mm
Forceps channel diameter	2.0 mm

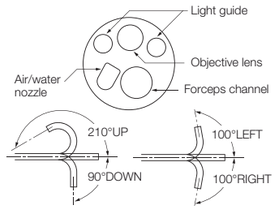
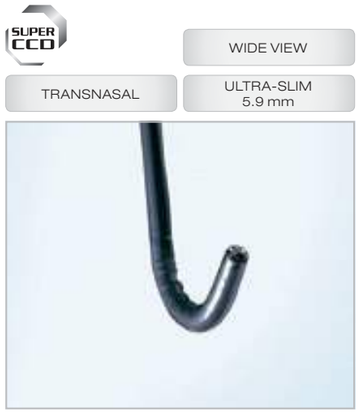


Image area &
Forceps entry position



SUPER CCD

WIDE VIEW

TRANSNASAL

ULTRA-SLIM
5.9 mm

For the Upper G.I. Tract – Transnasal Type

EG-530NP

EG-530NP slimmed down its endoscope to the utmost and realized a 4.9 mm distal end (5.1 mm in the flexible portion), immensely improving the transnasal insertion capability. This transnasal endoscope is also equipped with dual light guides and a 2.0 mm forceps channel.

Viewing direction	0° (Forward)
Field of view	120°
Observation range	3-100 mm
Distal end diameter	4.9 mm
Flexible portion diameter	5.1 mm
Bending capability	UP 210° / DOWN 120°
Working length	1,100 mm
Total length	1,460 mm
Forceps channel diameter	2.0 mm

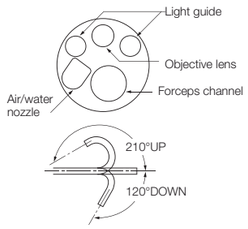


Image area &
Forceps entry position

SUPER CCD

TRANSNASAL

ULTRA-SLIM
4.9 mm

For the Upper G.I. Tract – Standard Type

EG-530WR

The EG-530WR with a wide field of view of 140° provides exceptional visualization. With the forceps channel of 2.8 mm, it is a standard endoscope producing high-quality images, which is highly suited for biopsies and treatment.

Viewing direction	0° (Forward)
Field of view	140°
Observation range	4-100 mm
Distal end diameter	9.4 mm
Flexible portion diameter	9.3 mm
Bending capability	UP 210° / DOWN 90° RIGHT 100° / LEFT 100°
Working length	1,100 mm
Total length	1,400 mm
Forceps channel diameter	2.8 mm

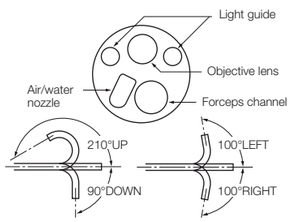


Image area &
Forceps entry position

WIDE VIEW

For the Upper G.I. Tract – Slim Type

EG-530FP

EG-530FP is a slim endoscope for the upper G.I. tract having a forceps channel of 2.8 mm diameter and a distal end of 8.5 mm. Observation capability has been increased with a wide field of view of 140° and Fujifilm's Super CCD technology.

Viewing direction	0° (Forward)
Field of view	140°
Observation range	3-100 mm
Distal end diameter	8.5 mm
Flexible portion diameter	8.5 mm
Bending capability	UP 210° / DOWN 90° RIGHT 100° / LEFT 100°
Working length	1,100 mm
Total length	1,400 mm
Forceps channel diameter	2.8 mm

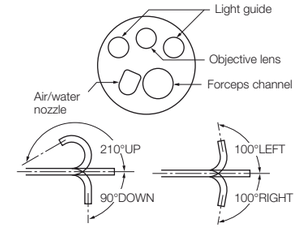


Image area &
Forceps entry position

SUPER CCD

WIDE VIEW

SLIM 8.5 mm

For the Upper G.I. Tract – Treatment Type

EG-530CT

With the forceps channel as wide as 3.8 mm, EG-530CT's distal end is as slim as 10.8 mm in diameter. To support therapeutic interventions, a water jet function is incorporated.

Viewing direction	0° (Forward)
Field of view	140°
Observation range	3-100 mm
Distal end diameter	10.8 mm
Flexible portion diameter	10.8 mm
Bending capability	UP 210° / DOWN 90° RIGHT 100° / LEFT 100°
Working length	1,100 mm
Total length	1,400 mm
Forceps channel diameter	3.8 mm

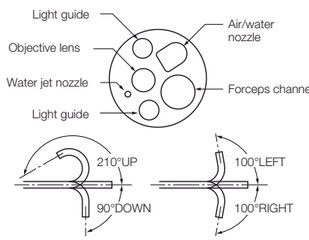


Image area &
Forceps entry position

WATER JET

BIG CHANNEL

WIDE VIEW

For the Upper G.I. Tract – Treatment Type

EG-530D

EG-530D is an endoscope for treatment of the upper G.I. tract, having two forceps channels, 3.8 mm and 2.8 mm, and a distal end as slim as 11.5 mm. Water jet function is also incorporated for various treatment methods during endoscopy.

Viewing direction	0° (Forward)
Field of view	140°
Observation range	3-100 mm
Distal end diameter	11.5 mm
Flexible portion diameter	11.5 mm
Bending capability	UP 210° / DOWN 90° RIGHT 100° / LEFT 100°
Working length	1,090 mm
Total length	1,405 mm
Forceps channel diameter	3.8 mm / 2.8 mm

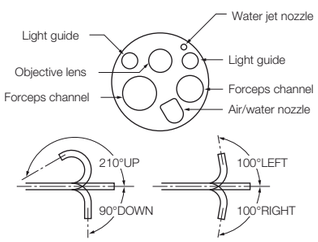


Image area &
Forceps entry position

WATER JET

DUAL CHANNEL

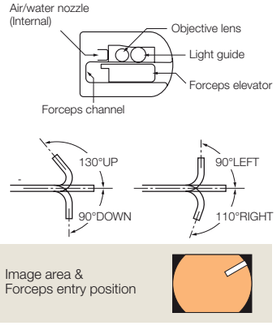
WIDE VIEW

For the Duodenum

▶ ED-530XT, ED-530XT8

The structure of the distal end, bending portion and flexible portion is changed for improved operability during examination and treatment.

Viewing direction	98° (8° rearward)
Field of view	100°
Observation range	4-60 mm
Distal end diameter	13.1 mm
Flexible portion diameter	11.5 mm
Bending capability	UP 130° / DOWN 90° RIGHT 110° / LEFT 90°
Working length	1,250 mm
Total length	1,550 mm
Forceps channel diameter	4.2 mm



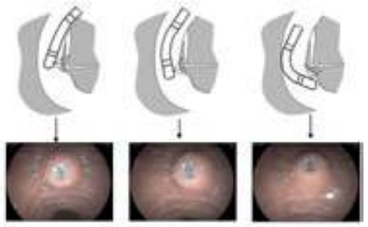
SUPER CCD

BIG CHANNEL

Improved operability

Easy to catch the papilla

The objective lens arrangement and bending performance have been properly arranged to catch the papilla easily from various endoscope positions.



Improved insertion capability of ERCP accessories into the papilla

Newly designed forceps elevator has been applied to enhance accessory control more precisely and securely, facilitating easier ERCP treatment.

Easy operability of the insertion portion

The stiffness of the insertion portion has been improved for easier stomach stretching and insertion capability.

Excellent image quality

Fujifilm's Super CCD, which has been exclusively developed for the endoscope, is built-in, providing clear images.

Improved cleaning and disinfection

Removable distal end cap*

The ED-530XT8 is equipped with a disposable distal end cap. It enables brushing all channels and helps to improve the hygienic environment.

*ED-530XT8 only

Covered tilt-up mechanism

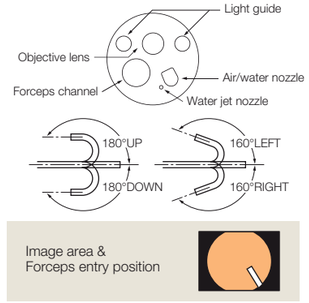
A covered tilt-up mechanism of the forceps elevator maintains the elevator wire clean without any additional cleaning procedure.

For the Lower G.I. Tract – Standard Type

▶ EC-530WM3, EC-530WI3, EC-530WL3

With a wide field of view of 140°, these lower G.I. tract endoscopes have a greater resolution. The newly ColoAssist design facilitates the insertion capability.

	WM3	WI3	WL3
Viewing direction	0° (Forward)		
Field of view	140°		
Observation range	3-100 mm		
Distal end diameter	12.8 mm		
Flexible portion diameter	12.8 mm		
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°		
Working length	1,330 mm	1,520 mm	1,690 mm
Total length	1,630 mm	1,820 mm	1,990 mm
Forceps channel diameter	3.8 mm		



WATER JET

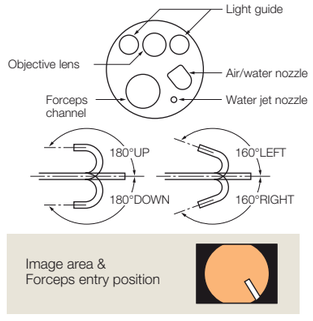
ColoAssist | WIDE VIEW

For the Lower G.I. Tract – Treatment Type

▶ EC-530MT, EC-530IT, EC-530LT

With a large channel of 4.2 mm accommodating various treatment accessories, these lower G.I. tract endoscopes are suited for examination and treatment, which also have a rapid suction function.

	MT	IT	LT
Viewing direction	0° (Forward)		
Field of view	140°		
Observation range	3-100 mm		
Distal end diameter	12.8 mm		
Flexible portion diameter	12.8 mm		
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°		
Working length	1,330 mm	1,520 mm	1,690 mm
Total length	1,630 mm	1,820 mm	1,990 mm
Forceps channel diameter	4.2 mm		



WATER JET

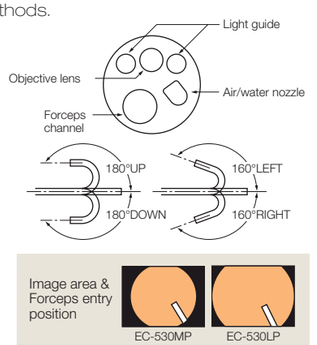
BIG CHANNEL | WIDE VIEW

For the Lower G.I. Tract – Slim Type

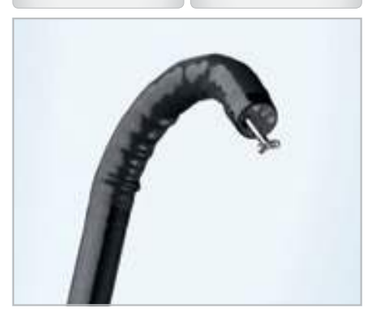
▶ EC-530MP, EC-530LP

These are slim-type colonoscopes with the distal end of 11.0 mm. While these two slimmed-down endoscopes have improved insertability, they retain a 3.2 mm forceps channel to accommodate various treatment methods.

	MP	LP
Viewing direction	0° (Forward)	
Field of view	140°	
Observation range	3-100 mm	
Distal end diameter	11.0 mm	
Flexible portion diameter	11.1 mm	
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°	
Working length	1,330 mm	1,690 mm
Total length	1,630 mm	1,990 mm
Forceps channel diameter	3.2 mm	



SLIM 11.0 mm | WIDE VIEW

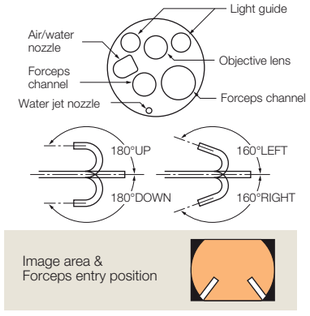


For the Lower G.I. Tract – Treatment Type

EC-530DM, EC-530DL

These lower G.I. tract endoscopes have two forceps channels (3.8 mm and 2.8 mm), especially useful for treatment such as EMR.

	DM	DL
Viewing direction	0° (Forward)	
Field of view	140°	
Observation range	3-100 mm	
Distal end diameter	12.8 mm	
Flexible portion diameter	12.8 mm	
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°	
Working length	1,330 mm	1,690 mm
Total length	1,645 mm	2,005 mm
Forceps channel diameter	3.8 mm / 2.8 mm	



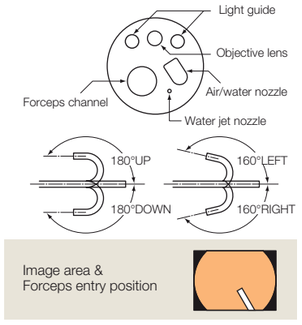
WATER JET | DUAL CHANNEL | WIDE VIEW

For the Lower G.I. Tract – Standard Type

EC-530FM, EC-530FI, EC-530FL

These super wide-angle standard colonoscopes offer a large 3.8 mm working channel inside a slim 12.8 mm outside diameter. An ultra-wide 140° field of view enhances the image quality. These colonoscopes also offer a wider observation range from 3-100 mm. In addition, an integrated forward water jet allows for lavage in clinical situations.

	FM	FI	FL
Viewing direction	0° (Forward)		
Field of view	140°		
Observation range	3-100 mm		
Distal end diameter	12.8 mm		
Flexible portion diameter	12.8 mm		
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°		
Working length	1,330 mm	1,520 mm	1,690 mm
Total length	1,630 mm	1,820 mm	1,990 mm
Forceps channel diameter	3.8 mm		



SUPER CCD

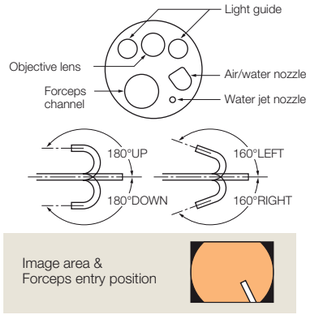
WIDE VIEW | WATER JET

For the Lower G.I. Tract – Sigmoidoscope

ES-530WE

ES-530WE is a sigmoidoscope of an effective length of 790 mm. The forceps channel diameter is 3.8 mm, and is equipped with water jet function.

Viewing direction	0° (Forward)
Field of view	140°
Observation range	3-100 mm
Distal end diameter	12.8mm
Flexible portion diameter	12.8mm
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°
Working length	790mm
Total length	1,090mm
Forceps channel diameter	3.8mm



WIDE VIEW | WATER JET

FlushKnife BT / FlushKnife

Aimed at achieving enhanced usability ideal for all physicians from ESD trainees to skilled practitioners.

Water jet system maintains the sharpness of the knife

The water jet system keeps the tip of the knife clean by washing off debris and lesion tissue adhering to the tip, thereby maintaining the sharpness of the knife throughout the treatment.

One knife covers from marking to arrest of bleeding, achieving high versatility

One knife carries out procedures including marking, incision, dissection and arrest of bleeding. The high versatility improves operation and cost efficiencies.

Marking

Mucosal incision

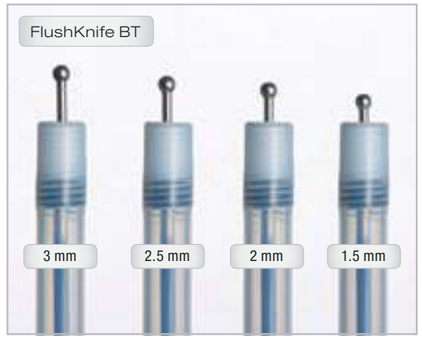
Submucosal dissection

Arrest of bleeding

The tip is designed to enhance safety and treatment capability

FlushKnife BT has a ball tip, which produces good traction, enabling the target tissue to be dissected smoothly. The ball tip touches a wider part of the tissue and arrests bleeding more efficiently.

Safer and more efficient treatment is achieved by using the protruding knife length best suited for each treatment area.



EUS Tower – all-in-one stack concept

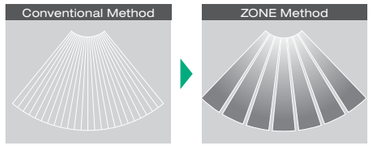
Years of research and development to reduce patient discomfort and improve operator efficiency during endoscope examinations led to the development of Sonart, the integration of ultrasonographic diagnosis and endoscopy systems.

For a more accurate diagnosis, advanced image processing technology integrates improved endoscope maneuverability and insertion capability. The compact, one-cart system supports various applications.

Sonart

ZONE Sonography™ technology ensures high-quality images

ZONE Sonography™ technology defines conventional wisdom in ultrasonography. The technology delivers wide ultrasound beams and quickly acquires large amounts of echo data in sizeable zones. Split-second data acquisition allows highly advanced image processing.



Sound Speed Correction technology improves image resolution

Advanced image processing technology estimates the optimal speed of ultrasound travelling through the body (sound speed) and constructs images.

What is Sound Speed Correction?

The resolution in the lateral dimension deteriorates due to a difference in sound speed. By correcting this and carrying out optimization, the resolution in the lateral dimension is improved.

1450 m/s ATS Phantom

Imaged at 1540 m/s
before Sound Speed Correction

Imaged at 1450 m/s
after Sound Speed Correction

Flexible image display and switching

Keyboard operation facilitates smooth examinations and allows switching among an ultrasound image, an endoscopic image, and a picture-in-picture image with patient's history images.

Picture-in-picture image Patient's history image

Ultrasound image

Endoscopic image

Display quality images in different modes

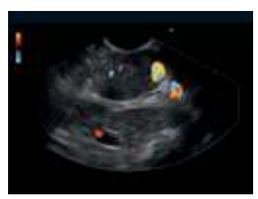
Technologies developed in the field of ultrasonographic diagnosis improve the quality of ultrasound images. Images created from advanced image processing enable the use of appropriate modes for your setting.

C mode

The Color Doppler function obtains hemodynamic information in disease areas and helps you locate the observation site and vascular structures.
SU-8000 Scanning modes; C mode, Power Doppler, Pulse wave, B mode, M mode

Frequency switching

A wide range of frequencies (5, 7.5, 10, and 12 MHz) helps to delineate clear C mode images of the regions.



CFM mode

B mode

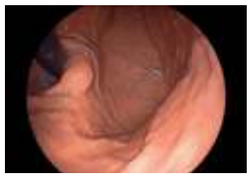
Ultrasonic endoscopes

EG-530UR2, EG-530UT2

EG-530UR2 and EG-530UT2 endoscopes combine Fujifilm's high-quality endoscope features with the most advanced ultrasound technology, to create an unsurpassed diagnostic and treatment system.

Excellent insertion capability

Newly designed structure of flexible portion improves insertion capabilty. The tip with a small bending radius allows better observation.



Consideration of the safety of fine needle aspiration

Dotted yellow guidelines are visualized on the monitor to ensure the safety of paracentesis.

High-quality endoscopic image

Equipped with the Super CCD, this ultrasound endoscope offers bright, vivid, high-resolution image.

EG-530UR2

EG-530UT2

In pursuit of balloon operability

An air/water and suction button inflates water to the balloon and deflates water from the balloon.

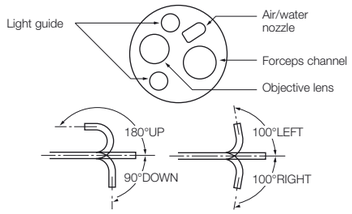
Radial Scan Ultrasound Video Endoscope

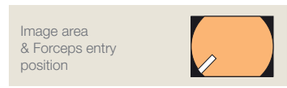
EG-530UR2

With a slim distal end of 11.4 mm and excellent bending capabilities, the EG-530UR2 allows physicians to perform endoscopic ultrasonography in a similar way to conventional endoscopy.

Viewing direction	0° (Forward)
Field of view	140°
Observation range	3-100 mm
Distal end diameter	11.4 mm
Flexible portion diameter	11.5 mm
Bending capability	UP 180° / DOWN 90° RIGHT 100° / LEFT 100°
Working length	1,250 mm
Total length	1,550 mm
Forceps channel diameter	2.2 mm

Scanning mode	Color Doppler, Power Doppler, PW Doppler, B mode, M mode
Scanning method	Electronic radial scan
Scanning angle	360°
Frequency	5 Mhz / 7.5 Mhz / 10 Mhz / 12 Mhz
Contact method	Balloon method, degassed water congestion method, contacting method





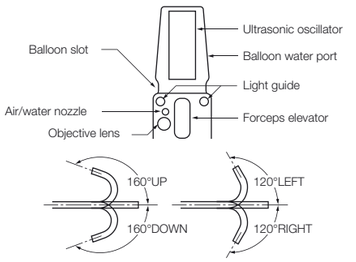
Convex Scan Ultrasonic Video Endoscope

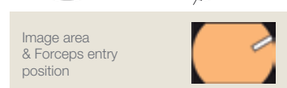
EG-530UT2

With its forceps channel elevator function, the distal end of EG-530UT2 improves the injection performance of the puncture needle. It also has a large channel which enables various treatment accessories to be inserted. With excellent bending capabilities, the EG-530UT2 provides greater flexibility in treatment.

Viewing direction	Forward oblique 40°
Field of view	140°
Observation range	3-100 mm
Distal end diameter	13.9 mm
Flexible portion diameter	12.1 mm
Bending capability	UP 160° / DOWN 160° RIGHT 120° / LEFT 120°
Working length	1,250 mm
Total length	1,550 mm
Forceps channel diameter	3.8 mm

Scanning mode	Color Doppler, Power Doppler, PW Doppler, B mode, M mode, THI
Scanning method	Electronic convex scan
Scanning angle	110° (Combination with SU-7000) 124° (Combination with SU-8000)
Frequency	5 Mhz / 7.5 Mhz / 10 Mhz / 12 Mhz
Contact method	Balloon method, degassed water congestion method, contacting method





Two balloons realize better insertability into the depth of digestive tract

The small intestine has long been the most difficult organ to access in gastrointestinal endoscopy, therefore it has been known as "The Black Box". With new engineering innovation, Fujifilm's double balloon endoscopic system, designed for the small intestine, is equipped with exclusively developed balloons, overtubes and balloon pump controller. Two balloons improve the insertability of the endoscope into the small intestine.

DOUBLE BALLOON ENDOSCOPY

Anterograde insertion

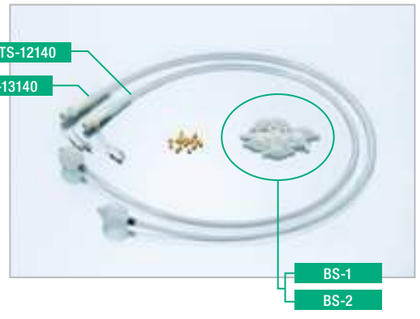
Transanal insertion

Balloon pump controller

PB-20

The PB-20 balloon pump controller is designed to simplify operation. Balloons can be easily controlled via a hand-operated remote control or foot switch – whichever is more convenient for the physician.

Power	AC 100 V 50/60 Hz 0.76 A
Power consumption (rated)	0.66 A
Set pressure accuracy	± 2 kPa
Set pressure of balloon	5.6 kPa
Maximum flow rate of pump	170 ml ± 50 ml / 10 sec
Dimensions (W x H x D)	350 × 130 × 420 mm
Weight	10 kg (Body), 0.4 kg (Remote switch)



Balloons and overtubes (consumable supplies)

The exclusively developed specialized balloons and overtubes ensure complete positioning of the endoscope in the small intestine. The distal end of the endoscope can be smoothly inserted to reach the area of diagnosis.

Overtube model	TS-12140	TS-13140	TS-13101
Outer diameter	12.2 mm	13.2 mm	13.2 mm
Total length	1,450 mm	1,450 mm	950 mm
Applicable endoscope	EN-450P5/20	EN-450T5	EC-450BI5

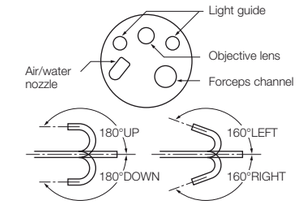
Balloon	BS-1	BS-2
Outer diameter	25 mm	35 mm

Enteroscope – Standard Type

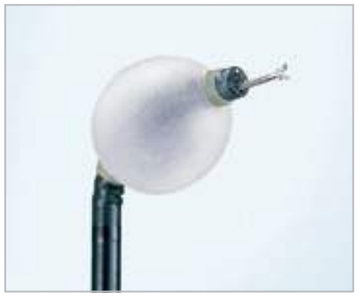
EN-450P5/20

EN-450P5/20 is an endoscope for the small intestine examination. The relatively slim overtubes (12.2 mm outer diameter) of the EN-450P5/20 allow for smooth insertion via both the anterograde and transanal routes, depending on the position of lesion.

Viewing direction	0° (Forward)
Field of view	120°
Observation range	5-100 mm
Distal end diameter	8.5 mm
Flexible portion diameter	8.5 mm
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°
Working length	2,000 mm
Total length	2,300 mm
Forceps channel diameter	2.2 mm



DOUBLE BALLOON

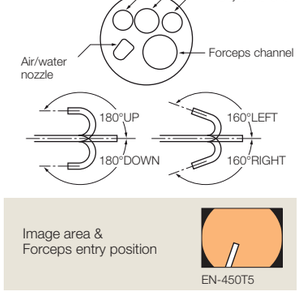


Enteroscope – Treatment Type

EN-450T5

Treatment capacity has been greatly expanded with the EN-450T5, which is equipped with a 2.8 mm forceps channel that allows the use of almost all general therapeutic accessories and a variety of accessories such as APC probe, clip, diathermic coagulator, and other therapeutic interventions.

Viewing direction	0° (Forward)
Field of view	140°
Observation range	4-100 mm
Distal end diameter	9.4mm
Flexible portion diameter	9.3 mm
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°
Working length	2,000 mm
Total length	2,300 mm
Forceps channel diameter	2.8 mm



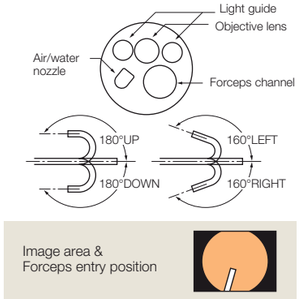
DOUBLE BALLOON FOR TREATMENT

Colonoscope – Standard Type

EC-450BI5

Using balloons, the endoscope is stabilized in the intestinal tract, which leads to better observation and treatment of lesions.

Viewing direction	0° (Forward)
Field of view	140°
Observation range	3-100 mm
Distal end diameter	9.4 mm
Flexible portion diameter	9.3 mm
Bending capability	UP 180° / DOWN 180° RIGHT 160° / LEFT 160°
Working length	1,520 mm
Total length	1,820 mm
Forceps channel diameter	2.8 mm



DOUBLE BALLOON

Video Processor

▶ EPX-4450HD

HD TV1080 endoscopy

VP-4450 HD Processor

Digital output	HD-SDI: HDTV 1080i (2ch) DVI (Digital Visual Interface): 1280 x 1024 p Ethernet: 100/10 Base	
Analog output	RGB: 1280 x 1024 p SDTV (120 V/NTSC, 230 V/PAL): RGB Y/C, Composite	
Color adjustment	Brightness, Red, Green, Blue, R-Hue, Chroma; 9 steps	
Detail	Hi, Lo; 9 steps	
Contrast (gamma)	3 steps	
Hyper-Sharpness	Hi, Mid, Lo, Off	
Color emphasis	Hi, Mid, Lo, Off	
FICE	Flexible spectral imaging Color Enhancement 10 presets	
Iris	Average / Peak / Auto	
Image storage	CF Card	
Power rating	120 V 60 Hz 0.8 A	230 V 50 Hz 0.5 A
Dimensions (W x H x D)	390 x 105 x 460 mm	
Weight	9.5 kg	
DICOM	MWL, Store	

XL-4450 Light source

Lamp rated value	Main Lamp: 300 W Xenon lamp LMP-002 Emergency Lamp: 75 W Halogen lamp	
Light control	Automatic light control	
Lamp cooling method	Forced air cooling	
Air supply pump	High, Mid, Lo, Off	
Light save	On, Off	
Transmitted illumination	On, Off	
Power rating	120 V 60 Hz 3.3 A	230 V 50 Hz 1.7 A
Dimensions (W x H x D)	390 x 155 x 450 mm	
Weight	15 kg	

Video Processor

▶ EPX-2500

HD endoscopy

Digital output	DVI (Digital Visual Interface): 1024 x 768 p
Analog output	RGB (2): SDTV (NTSC/PAL) Y/C (2): SDTV (NTSC/PAL) Composite: SDTV (NTSC/PAL)
Color adjustment	Black, Red, Green, Blue, R-Hue, Chroma; 9 settings
Detail	Hi, LO; 9 settings
Contrast (gamma)	9 settings
BLD	Hi, Mid, Lo, Off
Picture in picture	On, Off; Size: 1/4, 1/3
Auto gain control	Off, +3 db, +6 db
Iris	Average / Peak
Zoom	Electric zoom: x1.0 – x2.0; 0.05 steps
Lamp rated value	Main lamp: 11.7 V 150 W Xenon lamp Emergency lamp: 12 V 75 W Halogen lamp
Brightness control	9 settings
Lamp cooling method	Forced air cooling
Air supply pump	Hi, Low, Off
Power	120 V 60 Hz 2.7 A / 230 V 50 Hz 1.4 A
Dimensions (W x D x H)	375 x 495 x 190 mm (including projections)
Weight	17.0 kg

Ultrasonic Processor

▶ SU-8000

Sonart

Power supply		AC120 V	AC230 V
		60 Hz	50 Hz
		2.2 A	1.4 A
Current consumption (rated)		1.8 A	1.2 A
Applicable scopes		EG-530U series scope	
		EB-530U series scope	
Video output terminal		Video terminal (1 channel)	
		S video terminal (1 channel)	
		RGB PC terminal (1 channel)	
		RGB PC/TV terminal (1 channel)	
		DVI image input terminal (1 channel)	
		HD-SDI terminal (2 channels)	
Audio output terminal		RCA terminal (1 channel)	
Video input terminal		DVI image input terminal (1 channel)	
		S video terminal (PROCESSOR) (1 channel)	
		S video terminal (SP702) (1 channel)	
Control terminal		Remote terminal (2 channels)	
		Foot Switch terminal (1 channel)	
		Keyboard terminal (1 channel)	
		RS232C terminal (PROCESSOR) (1 channel)	
		RS232C terminal (SP702) (1 channel)	
Network terminal (1 channel)		Ethernet (100 BaseTX)	
Image storage	Storage	CF memory card, networked shared folder (FTP, DICOM)	
	File format	TIFF, JPEG	
External dimensions (W x H x D)		375 x 215 x 445 mm (including protruding parts)	
Weight		14 kg	