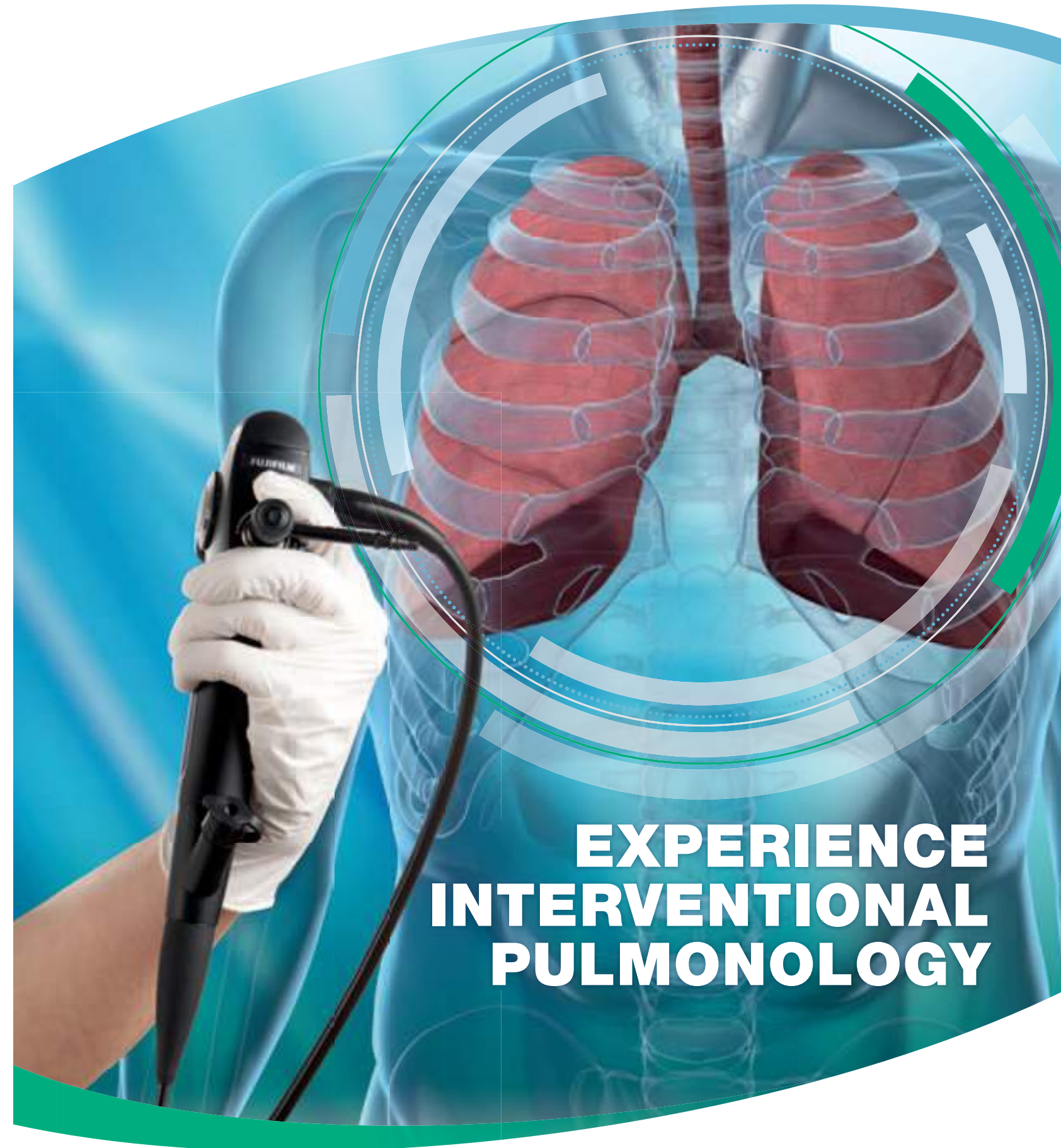


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**EXPERIENCE
INTERVENTIONAL
PULMONOLOGY**

FUJIFILM
Value from Innovation



VIDEO BRONCHOSCOPY, ENDOSCOPIC ULTRASONOGRAPHY, FIBEROPTIC BRONCHOSCOPY

ADVANCING IN **ENDOSCOPIC BRONCHIAL CARE**

FUJIFILM
Value from Innovation

Fujifilm's electronic bronchoscopes can meet all your requirements for enhanced endoscopic bronchial care.

Incorporation of leading endoscopic technologies means that these series can provide you with:

- High quality images to enhance efficiency in diagnosis
- Straight forward operability
- Improved insertability
- High levels of durability

Complemented by our video and image processors, our comprehensive range of endoscopes is suited to a wide variety of applications.



NEW EB-580 SERIES

Electronic Video Bronchoscopes

- High resolution 580 super CCD with close focus for advanced observation
- Larger working channel suitable for various treatments



EPX-4450HD / EPX-3500

Video Processors & Light Source

- Full HD output and Super CCD technology produce high definition images
- Anti-blur function extracts the best still image from multiple images
- Advanced workflow enables intuitive and straightforward work processes



EB-530US & SU-1

Ultrasonic Bronchoscopes EB-530US

- Equipped with the Super CCD for high resolution images
- 10° forward oblique view in combination with a 120° field of view improves maneuverability and safety during TBNA procedures

Endoscopic Ultrasonic Processor SU-1

- High resolution B-Mode images
- Various imaging modes
- User-friendly compact device with easy to clean flat keyboard with touch pad or trackball



NEW SP-900 & PB2020-M

Ultrasonic Mini Probe System

- High resolution ultrasonic images
- Shorter distal rigid section to insert the probe more smoothly
- Small, lightweight system as a stand-alone solution as well as part of a larger endoscopy system





MEET THE NEEDS FOR DIAGNOSIS AND TREATMENT: ELECTRONIC BRONCHOSCOPES

EB-580S / EB-580T VERSATILE AND RELIABLE

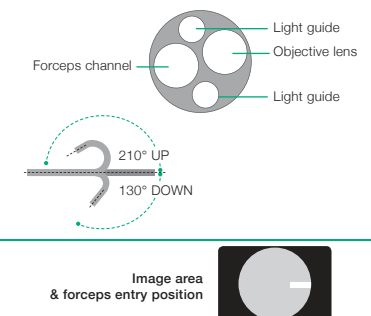
The EB-580S, equipped with an optical lens and a Fujifilm high resolution image sensor for vivid and high quality images, can obtain a wide range of data for accurate endoscopic examination and diagnosis. The EB-580T provides a larger working channel allowing for faster suction.



NEW VIDEO BRONCHOSCOPE **EB-580S** Standard Type



Viewing direction	0° (Forward)
Field of view	120°
Observation range	2–100 mm
Bending capability	Up 210°/Down 130°
Distal end diameter	5.3 mm
Flexible portion diameter	5.1 mm
Forceps channel diameter	2.2 mm
Working length	600 mm
Total length	870 mm



2.2 MM WORKING CHANNEL FOR FASTER SUCTION POWER

Faster suctioning offers quicker vision recovery, even during bleeding and taking biopsy. The strengthened tube of the working channel can improve durability.

210° UP ANGLE PROVIDES GREAT APPROACH ABILITY

Excellent bending capability (up angle: 210°) can improve reachability, especially to the upper lobe bronchus (B1-B3).

580 SUPER CCD & CLOSE FOCUS (2 MM)

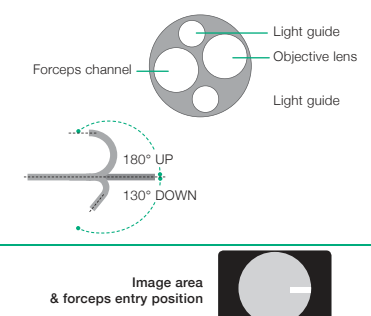


580 Super CCD and Close Focus can achieve increased secure screening and a more precise diagnosis of bronchial lesion and lung cancer.

NEW VIDEO BRONCHOSCOPE **EB-580T** Treatment Type



Viewing direction	0° (Forward)
Field of view	120°
Observation range	2–100 mm
Bending capability	Up 180°/Down 130°
Distal end diameter	5.8 mm
Flexible portion diameter	5.9 mm
Forceps channel diameter	2.8 mm
Working length	600 mm
Total length	870 mm



2.8 MM WORKING CHANNEL SUPPORTING THERAPEUTIC PROCEDURES

The larger working channel of 2.8 mm allows to use various therapeutic devices, and it provides accelerated suction of blood and bodily fluids for a clearer view during observation and treatment.

LASER COMPATIBILITY WITH ND-YAG AND DIODE



LINED-UP FOR VARIOUS APPLICATIONS

530 SERIES FULL SUPPORT FOR ALL



The 530 series of electronic bronchoscopes incorporate reliable endoscopic technologies to provide you with high quality images to enhance your diagnostic capability and improve operability in all areas of bronchial care.

SUPER CCD IMAGE SENSOR

OPIMIZED TIP LAYOUT

Dual light guides:

- Eliminate areas of shadow to see more
- Provide bright and clear images

Increased forceps channel size (3.2 mm)

- Enables the acceptance of various forceps
- Improves suction power



PROCEDURES

LIGHT-WEIGHT G5-GRIP ESPECIALLY FOR LONGLASTING THERAPEUTIC USAGE

The light weight grip reduces strain on the endoscopist during the procedure and is designed to fit naturally into the hands to increase maneuverability.



SINGLE-USE SUCTION BUTTON

The single-use suction button and improved internal structure facilitates a clean and less interrupted suction at any time.



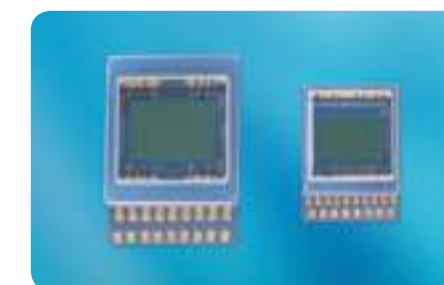
THE RIGHT ENDOSCOPE FOR THE JOB

The 530 series consists of five types of bronchoscope designed for both standard and treatment functions so that you can always choose the endoscope best suited to your purpose.

FUJIFILM
Value from Innovation

SUPER CCD IMAGE SENSOR

The 530 series endoscopes are equipped with a specially designed Super CCD image sensor for ultra-slim endoscopes. Using RGB filtering, the image sensor also provides vivid colors in the red spectrum which are important in endoscopic diagnoses.



Conventional

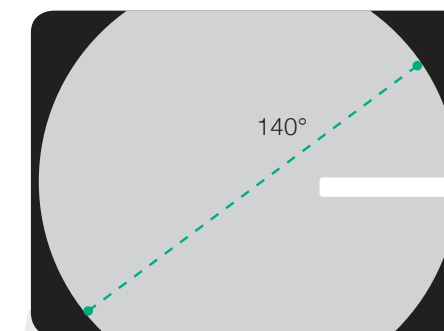
Super CCD

EB-530H: HIGH QUALITY IMAGES WITH A 140° FIELD OF VIEW

The EB-530H has an improved field of view of 140°, which is 20° wider than the conventional view. This enables a wider observation field to be displayed in high quality without using the digital zoom-out, supporting more effective and detailed diagnoses.



EB-530H

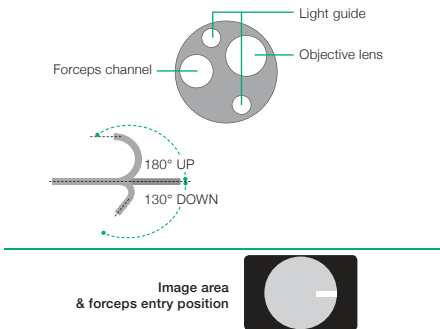




ELECTRONIC VIDEO BRONCHOSCOPE **EB-530P Slim Type**



Viewing direction	0° (Forward)
Field of view	120°
Observation range	3–100mm
Bending capability	Up 180°/Down 130°
Distal end diameter	3.8 mm
Flexible portion diameter	3.8 mm
Forceps channel diameter	1.2mm
Working length	600mm
Total length	890mm

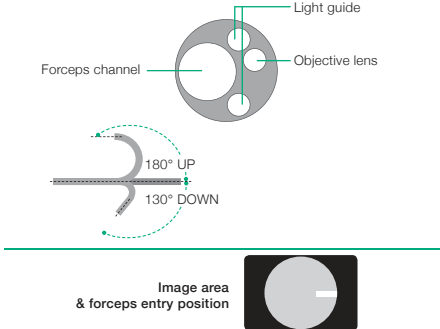


SLIM DIAMETER

ELECTRONIC VIDEO BRONCHOSCOPE **EB-530T Treatment Type**



Viewing direction	0° (Forward)
Field of view	120°
Observation range	3–100mm
Bending capability	Up 180°/Down 130°
Distal end diameter	5.8 mm
Flexible portion diameter	5.9 mm
Forceps channel diameter	2.8 mm
Working length	600 mm
Total length	870 mm

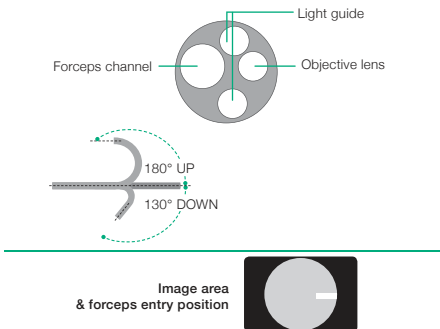


HIGH FREQUENCY COMPATIBILITY
BIG CHANNEL 2.8 MM

ELECTRONIC VIDEO BRONCHOSCOPE **EB-530S Standard Type**



Viewing direction	0° (Forward)
Field of view	120°
Observation range	3–100mm
Bending capability	Up 180°/Down 130°
Distal end diameter	4.9 mm
Flexible portion diameter	4.9 mm
Forceps channel diameter	2.0 mm
Working length	600 mm
Total length	870 mm

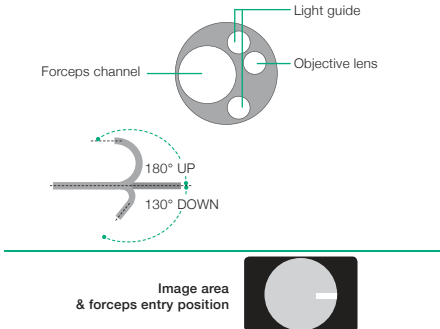


HIGH FREQUENCY COMPATIBILITY

ELECTRONIC VIDEO BRONCHOSCOPE **EB-530XT Treatment Type**



Viewing direction	0° (Forward)
Field of view	120°
Observation range	3–100mm
Bending capability	Up 180°/Down 130°
Distal end diameter	6.2 mm
Flexible portion diameter	6.3 mm
Forceps channel diameter	3.2 mm
Working length	600 mm
Total length	870 mm

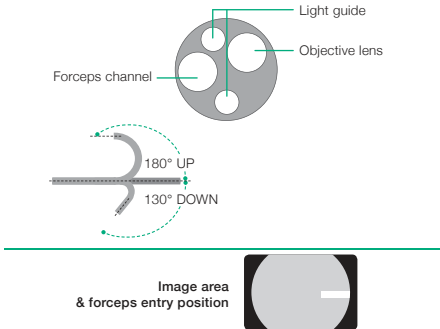


HIGH FREQUENCY COMPATIBILITY
LARGEST CHANNEL 3.2 MM

ELECTRONIC VIDEO BRONCHOSCOPE **EB-530H Standard Type**



Viewing direction	0° (Forward)
Field of view	140°
Observation range	3–100mm
Bending capability	Up 180°/Down 130°
Distal end diameter	5.4 mm
Flexible portion diameter	4.9 mm
Forceps channel diameter	2.0 mm
Working length	600 mm
Total length	870 mm



HIGH FREQUENCY COMPATIBILITY
WIDE VIEW 140°



IMPROVED MANEUVERABILITY AND HIGH RESOLUTION IMAGES

ULTRASONIC SYSTEM: **EB-530US** &

The EB-530US has excellent maneuverability and insertion capability to reduce patient discomfort and improve operator efficiency, while the high quality images and imaging modes provided by the Fujifilm ultrasonography processor SU-1 support accurate punctures.

**DISTAL
END
6.7 MM**

**UNIQUE
DESIGN OF
DISTAL END**

**HIGH
RESOLUTION
B-MODE**

EBUS-TBNA constantly monitors the position of the needle with 10° forward oblique view which, along with optimal positioning due to the multilateral approach improves maneuverability and safety during puncture. The opening of the forceps channel is constantly displayed in an endoscopic image to locate the puncture needle.



SU-1 PROCESSOR

ULTRASONIC BRONCHOSCOPE **EB-530US**

EQUIPPED WITH A SUPER CCD IMAGE SENSOR

The Super CCD image sensor in the tip of this ultrasonic bronchoscope provides high resolution endoscopic images.



APPROPRIATE BENDING ANGLE (UP 130°/DOWN 90°)

A large bending angle facilitates paracentesis at the target site.

DUAL LIGHT TO SUPPORT EBUS-TBNA

Two lights ideally positioned on opposite sides illuminate the front and eliminate shadows during paracentesis. An appropriate needle angle facilitates smooth paracentesis at the target site.

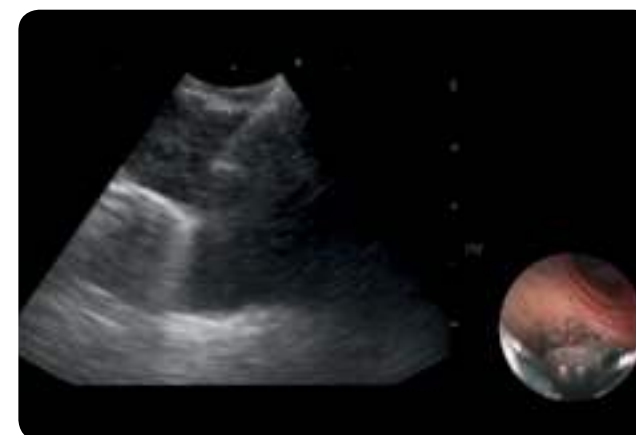
Viewing direction	10° Forward Oblique
Field of view	120°
Observation range	3–100mm
Bending capability	Up 130°/Down 90°
Distal end diameter	6.7mm
Flexible portion diameter	6.3mm
Forceps channel diameter	2.0mm
Working length	610mm
Total length	880mm



ENDOSCOPIC ULTRASONIC PROCESSOR **SU-1**

HIGH QUALITY IMAGING

The Fujifilm ultrasonography processor SU-1 is equipped with proprietary image processing technology and a variety of imaging modes, including the high resolution B-Mode, designed to support accurate diagnosis.



SU-1 -H- SU-1 -S-	
Power rating	AC 100–240 V
Frequency rating	50 Hz / 60 Hz
Power consumption	2.0–1.2 A
Dimensions	390 × 135 × 485 mm
Weight	13 kg
Scanning method	Electronic scanning
Probe types	Curved linear array / Radial
Scanning modes	B, M, CD, PD, PW, THI, and CH
Special modes*	Elastography / CHI
Received gain correction	0–100, 2-step
STC	6-step gain settings per depth
Sound speed correction	Full screen ROI settings
Dynamic Range	40–100 DB, 5-step
PinP	Endoscopic / Ultrasound Imaging
Observation screen	Hospital / Date / Time / Patient
Curved linear array	EB-530US
Frequency	5 MHz, 7.5 MHz, 10 MHz, and 12 MHz
DVI image input terminal	1

* CHI and Elastography modes are available only in SU1-H

PICTURE-IN-PICTURE IMAGE

Keyboard operation facilitates smooth examinations and allows switching between an ultrasound image, an endoscopic image, and a picture-in-picture screen.

EBUS



INDEPENDENT ULTRASOUND

SP-900 & PB2020-M NEW ULTRASONIC PROBE SYSTEM

Fujifilm developed this very compact, user-friendly ultrasonic mini probe system to make it possible to approach a peripheral pulmonary lesion effectively. Offering enhanced operability, SP-900 and PB2020-M are designed for a more precise and efficient examination.



CLEAR IMAGES

High resolution ultrasonic images can be obtained through the digital video signal output and digital corrections of the imaging artefacts.

IMPROVED INSERTABILITY

The shorter distal rigid section enables the probe to be inserted more smoothly into the upper lobe bronchus even when the endoscope is fully bent.

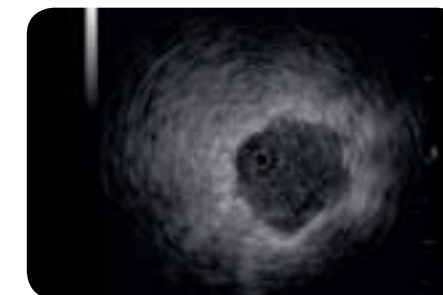
FAST AND SIMPLE

The small and lightweight system can be used as a stand-alone solution as well as part of a larger endoscopy system.

NEW ULTRASONIC PROCESSOR **SP-900**



Voltage	AC100-240V
Current consumption (rated)	0.7-0.5A
Scanning mode	B mode
Scanning method	Mechanical radial
Penetration depth	20mm or more
Frequency	50 / 60Hz
Dimensions (W x H x D)	377 x 80 x 480 mm
Weight	8.0kg



NEW MINI PROBE **PB2020-M**



Working length	2,150mm
Distal end diameter	1.4mm
Maximum diameter	2.0mm
Acoustic frequency	20MHz ± 15%



PROBE

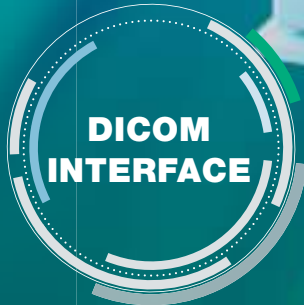


SUPPORTING DEFINITIVE DIAGNOSIS

RELIABLE **PROCESSOR** TECHNOLOGY

Processor technology from Fujifilm provides you with the best processor whatever the application. Video processors range from the EPX-4450HD for demanding examinations in HDTV quality to the EPX-2500, an affordable alternative for HD endoscopy, with full digital image processing and video interfaces.

With ergonomic and intuitive user controls, all our processors help to both save valuable time and provide most comfortable examinations.



VIDEO PROCESSOR **EPX-4450HD**

FUJIFILM'S STATE-OF-THE-ART TECHNOLOGY FOR ENDOSCOPY SYSTEM



Clear and sharp image quality, advanced image processing features and an intelligent interface facilitate user-friendly operations and efficient workflows. The EPX-4450HD – Fujifilm's state-of-the-art processor provides an optimal environment for clinical examinations:

PREMIUM ENDOSCOPY IN HDTV

The EPX-4450HD HDTV video processor offers top-level endoscopy in HDTV providing:

- Even better image quality
- Optimized integration into the hospital network opening the door to a new world of diagnostic opportunities
- Intuitive user interface, clear operating controls and an extensive range of settings
- An excellent video processor for both routine procedures and special clinical issues

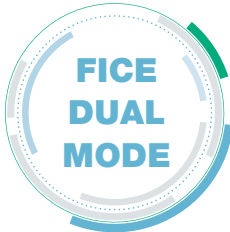
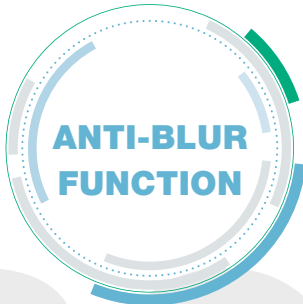


VP-4450HD processor

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	High, Low; 9 steps
Contrast (gamma)	3 steps
Hyper-Sharpness	High, Mid, Low, Off
Color emphasis	High, Mid, Low, Off
FICE	Flexible spectral imaging Color Enhancement 10 presets
Iris	Average/Peak/Auto
Image storage	CF Card
Power rating	120V 60Hz 0.8A / 230V 50Hz 0.5A
Dimensions (W x H x D)	390 x 105 x 460mm
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, Low, Off
Light save	On, Off
Transmitted illumination	On, Off
Power rating	120V 60Hz 3.3A / 230V 50Hz 1.7A
Dimensions (W x H x D)	390 x 155 x 450mm
Weight	15 kg



PROCESSORS



FIBEROPTIC BRONCHOSCOPES

VIDEO PROCESSOR EPX-3500HD

ADVANCED ENDOSCOPIC DIAGNOSTIC AND THERAPY



With its advanced image processing technology, the EPX-3500HD supports both endoscopic diagnostics and therapies. It offers clear images from superior functions such as structure enhancement (FICE), automatic light control and anti-blur. The EPX-3500HD is compatible with our full range of 580 and 530 bronchoscope series.

THREE PRE-DEFINED FICE PATTERNS AVAILABLE

Digital output	2 x DVI (1280 x 1024 p or 1920 x 1080 p)
Analog output	1 x RGB TV (PAL, RGB+SYNC), 1 x S-VIDEO (Y/C), 1 x VIDEO (Composite)
Control terminal	2 x Remote, 2 x Peripheral, 1 x Keyboard, 1 x Card reader, 1 x Aux, 1 x Digital printer, 1 x Foot switch, 1 x Ethernet (100/10 Base)
Color adjustment	Brightness, Red, Green, Blue, R-Hue, Chroma, 9 steps
Contrast	3 steps
Structure emphasis	High, Mid, Low, Off
Color emphasis	High, Mid, Low, Off
FICE	3 presets (FICE 0, 1, 8)
Iris	Average/Peak/Auto
Image storage	USB Flash Drive
Power rating	AC 100 - 240V ± 10 % 50/60Hz 1,0-0,3A*
Dimensions (W x H x D)	390 x 105 x 460 mm
Weight	8 kg

Compatible with XL-4450 light source. For further specifications please see page 14.



VIDEO PROCESSOR EPX-2500HD

EPX-2500 VIDEO PROCESSOR: HIGH DEFINITION IN EVERYDAY WORK



The EPX-2500 combines convenient operation with high resolution images. The digital video output of the EPX-2500 produces images in high definition without loss of quality. EPX-2500 is compatible with our 530 bronchoscope series.

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	High, Low; 9 settings
Contrast (gamma)	9 settings
BLD	High, Mid, Low, Off
Picture in picture	On, Off; Size: 1/4, 1/3
Auto gain control	Off, +3db, +6db
Iris	Average/Peak
Zoom	Electric zoom: x1.0-x2.0; 0.05 steps
Lamp rated value	Main lamp: 11.7V 150W Xenon lamp Emergency lamp: 12V 75W Halogen lamp
Brightness control	9 settings
Lamp cooling method	Forced air cooling
Air supply pump	High, Low, Off
Power	120V 60Hz 2.7 A / 230V 50Hz 1.4 A
Dimensions (W x H x D)	375 x 190 x 495 mm (including projections)
Weight	17.0kg

*less than 90VA



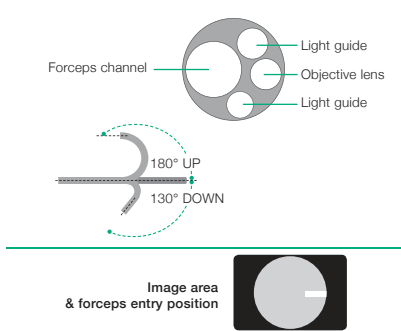
MOBILE FIBEROPTIC BRONCHOSCOPE FB-120MP

FOR EXAMINATIONS AT THE PATIENT'S SIDE

This mobile bronchoscope operates without a light cable, making it extremely versatile in clinical environments. The LED light source does not need to be changed for many years.



Viewing direction	0° (Forward)
Field of view	120°
Observation range	1-50mm
Bending capability	Up 180°/Down 130°
Distal end diameter	4.8mm
Flexible portion diameter	4.9mm
Forceps channel diameter	2.2mm
Working length	600mm
Total length	920mm
HF Compatibility	Yes



DURABLE BATTERY

The smaller battery box, LA-1A, has a CR2 lithium battery for up to 60 minutes continuous use. A rotational mechanism makes the battery switch highly stable.

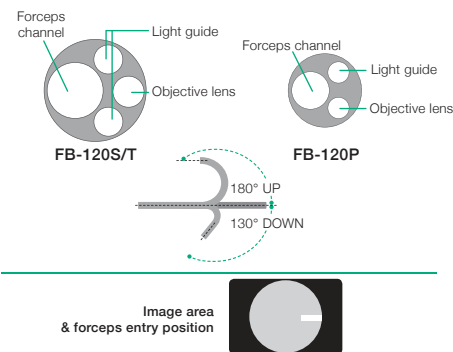


FIBEROPTIC BRONCHOSCOPE FB-120S/T/P

COMPATIBLE WITH HIGH FREQUENCY THERAPEUTIC TREATMENTS

Fujifilm's fiberoptic bronchoscopes provide safe and efficient methods of patient care, whether in intubation, examination or therapeutic situations.

	FB-120S	FB-120T	FB-120P
Viewing direction	0° (Forward)		
Field of view	120°	100°	
Observation range	1–50mm		
Bending capability	Up 180°/Down 130°		
Distal end diameter	4.8mm	5.9mm	2.7mm
Flexible portion diameter	4.9mm	5.9mm	2.8mm
Forceps channel diameter	2.2mm	2.8mm	1.2mm
Working length	600mm		
Total length	900mm	920mm	



EXCELLENT OPTICAL CHARACTERISTICS

ENHANCED MANEUVERABILITY

120



LINED-UP FOR VARIOUS APPLICATIONS

ACCURATE **VISUALIZATION**

SYNAPSE 3D

3D IMAGING AND VIRTUAL SIMULATION

SYNAPSE 3D uses unique image recognition technologies to automatically extract organs and vessels. The technology enables automatic extraction of lung, lung lobes, the bronchi, the pancreas, the colon etc. This feature makes possible a large variety of 3D analysis, such as visualization of chronic respiratory disease.

POWERFUL SIMULATION TOOL

The Bronchus Scope Simulation and Fine Bronchus Extracting functions make it possible to find an optimum bronchus path to reach a lung nodule by using the volume data collected with CT and then to simulate the insertion of the bronchoscope into this path.



Stay up to date on endoscopic best practices and learn from state-of-the-art demonstrations in our workshop series. For more information please contact endoscopy@fujifilm.eu

SYNAPSE