OLYMPUS

EVIS EUS

EVIS EUS Endoscopic Ultrasound Center

EU-ME3

Advancing the Dimensions of Endosonography

Advancing the Dimensions of Endosonography

Focused on Your Expertise

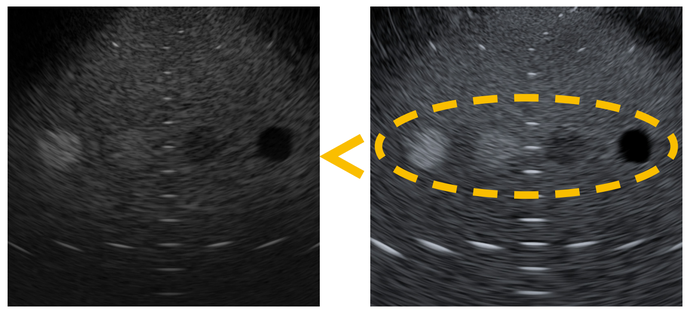
With more functions, better visualization,
and enhanced operability,
the EU-ME3 expands
the dimensions of endosonography.

Improved Ultrasound Imaging

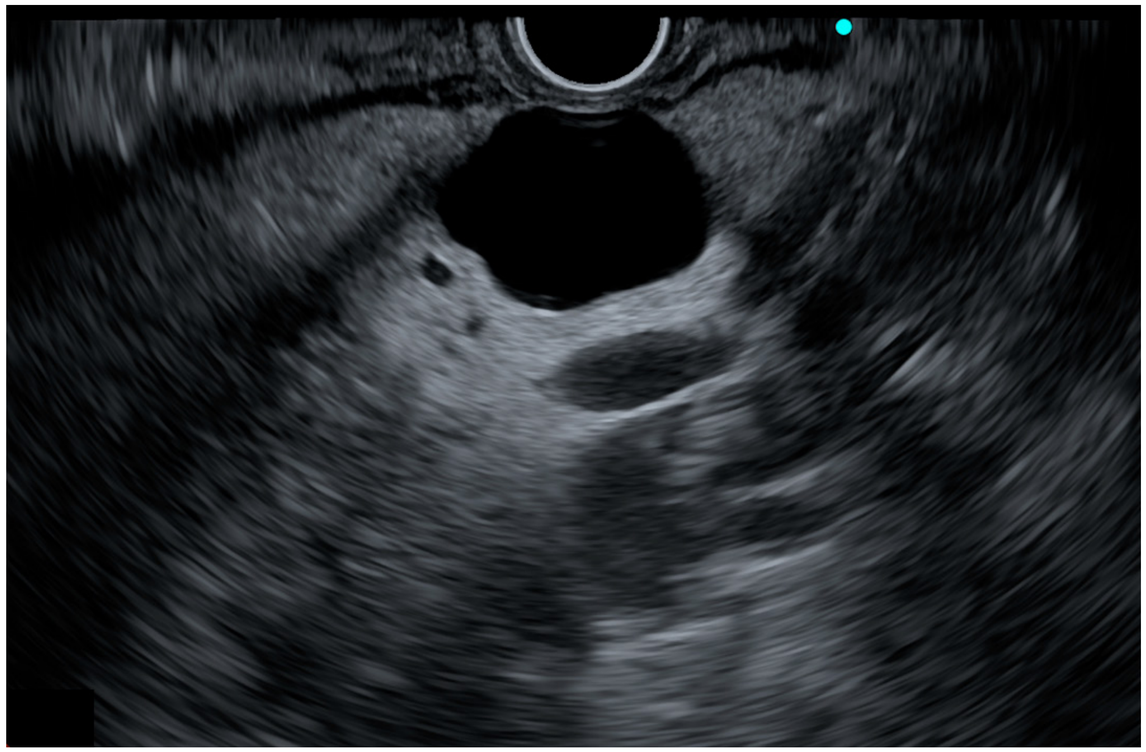
Enhanced B-mode

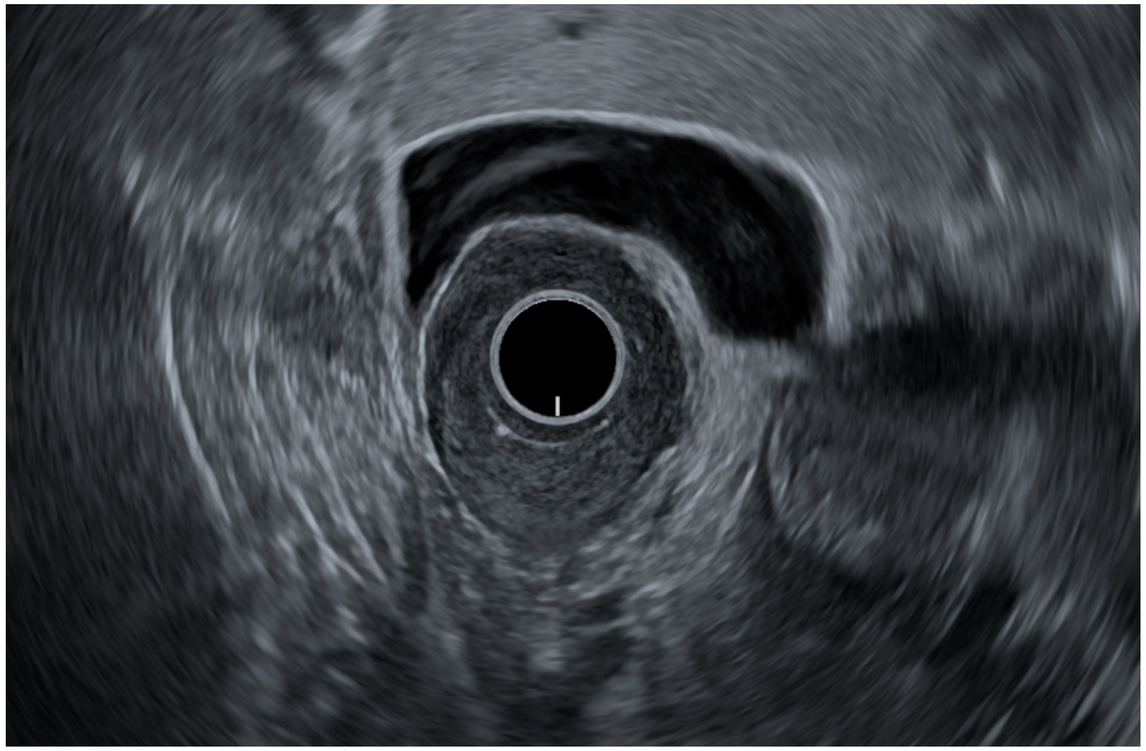
The EU-ME3 provides outstanding image quality and functionality – compatible to a high-end ultrasound center – in a compact body. B-mode image quality has been substantially enhanced compared to our conventional processor (EU-ME2).

B-mode



EU-ME2 **EU-ME3**



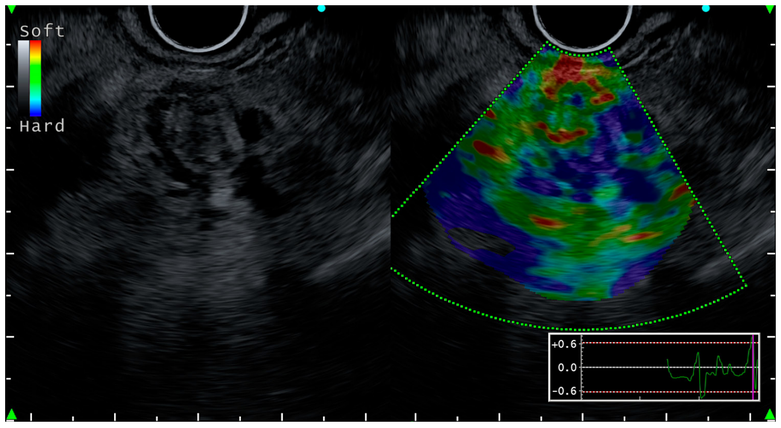


Improved Ultrasound Imaging

Improved Elastography

The EU-ME3 features an elastography function which visualizes the amount of strain in the tissue (tissue stiffness) during compression and retraction, making it possible to obtain more information about tissue properties.

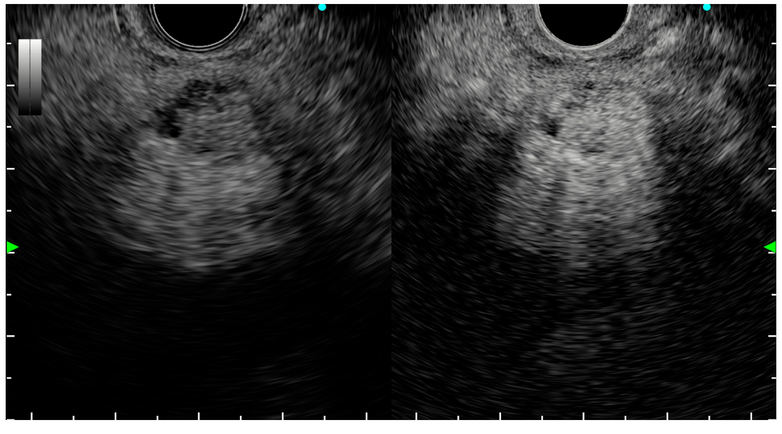
Elastography



Contrast Harmonic Echo (CHE)

Contrast Harmonic Echo (CHE) images harmonic components from ultrasound contrast agents. The newly added C-THE mode images signals from biological tissue and the contrast.

C-THE



Tissue Harmonic Echo (THE)

When ultrasound waves are propagated through tissue, distortion is produced and harmonic components are generated. The Tissue Harmonic Echo (THE) mode uses these components to build an image of the targeted area, providing a more detailed granular depiction. Advantages of harmonic imaging include improved resolution, improved signal-to-noise ratio, and fewer artifacts.

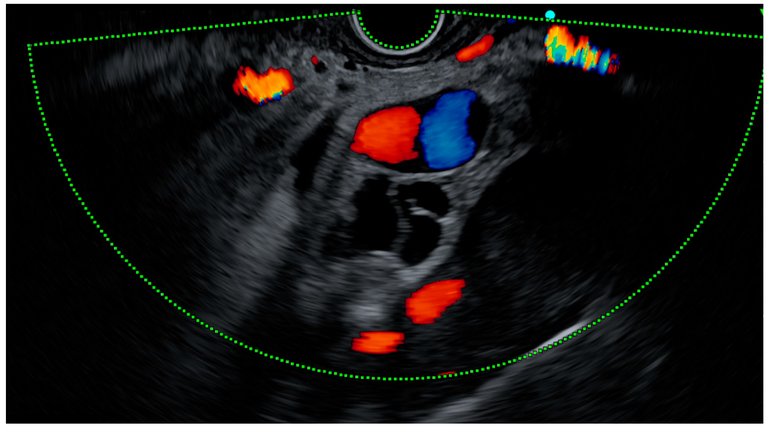
Improved Ultrasound Imaging

Doppler Modes

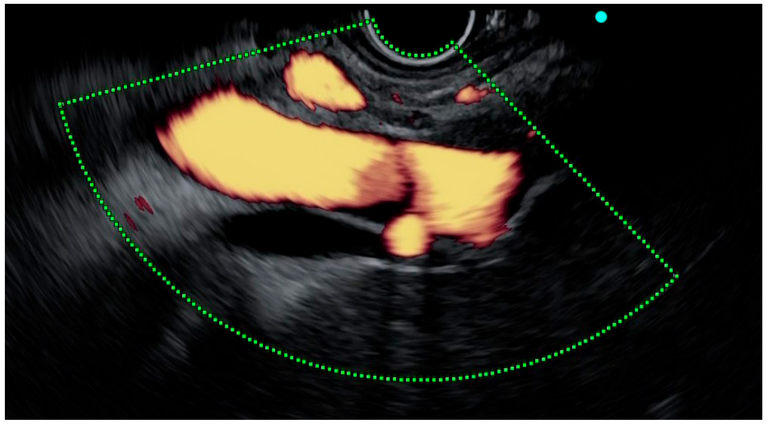
The EU-ME3 offers three basic Doppler modes to distinguish blood flow more clearly – Color Flow, Power Flow, and Pulsed Wave Doppler (PWD). Doppler modes can be used to support safer procedures, benefitting both the patient and the physician.

In addition to the three basic Doppler modes, the EU-ME3 also features H-Flow. H-Flow is a more sensitive Doppler mode that shows directional blood flow with less blooming. It is especially useful for imaging small vessels around the tip of the echoendoscope.

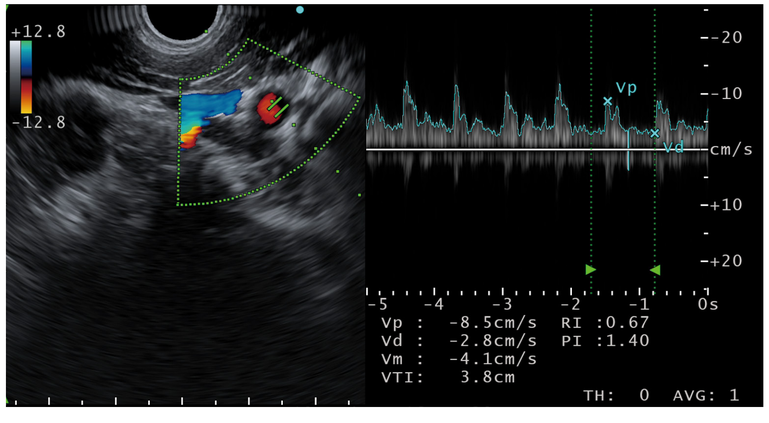
Color Flow



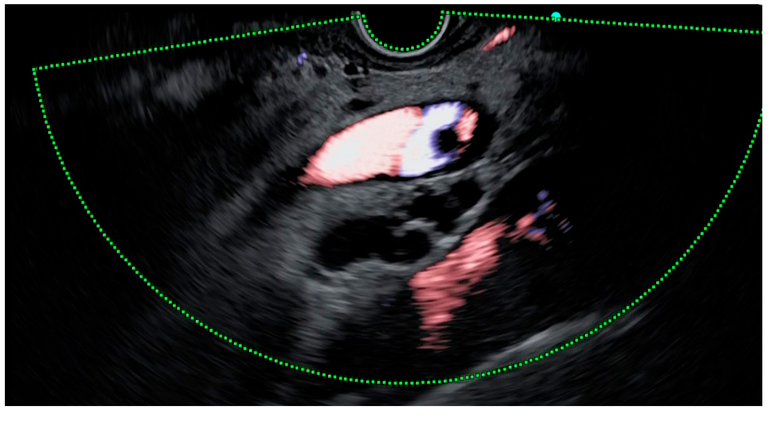
Power Flow



Pulsed Wave Doppler



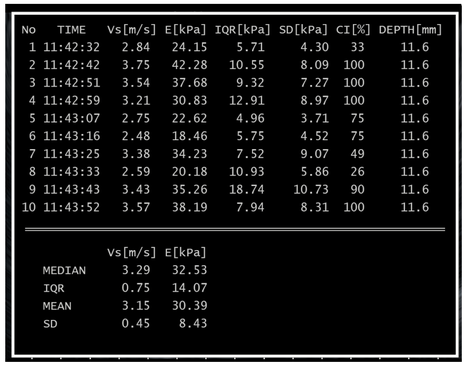
H-Flow



Designed for Enhanced Usability

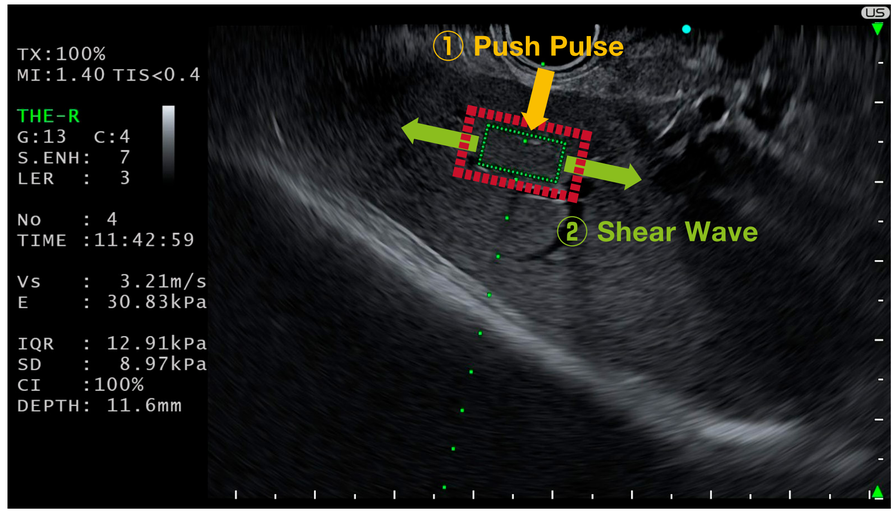
Shear Wave Quantification (SWQ)

SWQ provides an absolute value of tissue stiffness within a region of interest. It performs this quantitative tissue assessment by calculating the propagation velocity of shear waves, generated from a push-pulse.



No	TIME	Vs[m/s]	E[kPa]	IQR[kPa]	SD[kPa]	CI[%]	DEPTH[mm]
1	11:42:32	2.84	24.15	5.71	4.30	33	11.6
2	11:42:42	3.75	42.28	10.55	8.09	100	11.6
3	11:42:51	3.54	37.68	9.32	7.27	100	11.6
4	11:42:59	3.21	30.83	12.91	8.97	100	11.6
5	11:43:07	2.75	22.62	4.96	3.71	75	11.6
6	11:43:16	2.48	18.46	5.75	4.52	75	11.6
7	11:43:25	3.38	34.23	7.52	9.07	49	11.6
8	11:43:33	2.59	20.18	10.93	5.86	26	11.6
9	11:43:43	3.43	35.26	18.74	10.73	90	11.6
10	11:43:52	3.57	38.19	7.94	8.31	100	11.6

	Vs[m/s]	E[kPa]
MEDIAN	3.29	32.53
IQR	0.75	14.07
MEAN	3.15	30.39
SD	0.45	8.43

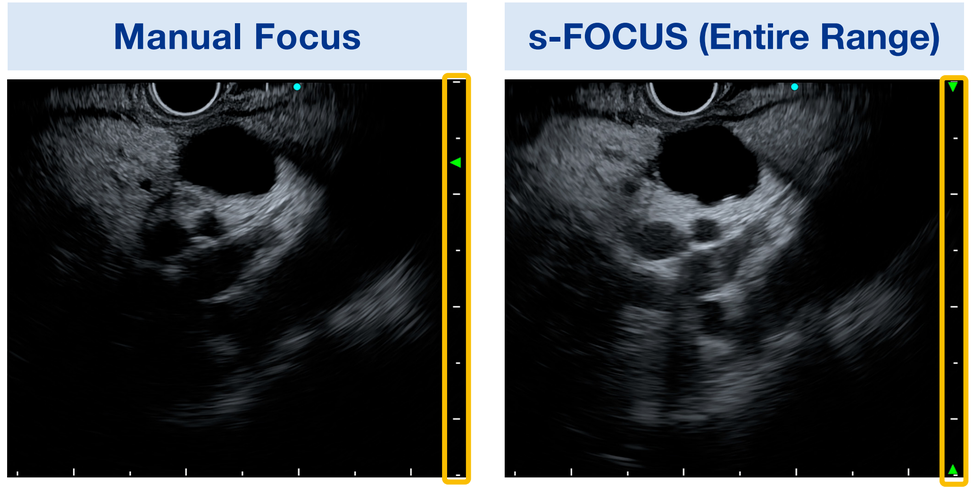


Elastography (i-ELST)

i-ELST is a new technology incorporated into the EU-ME3 that makes it easier to display elastic images, even when displacement due to pulsation is modest.

s-FOCUS

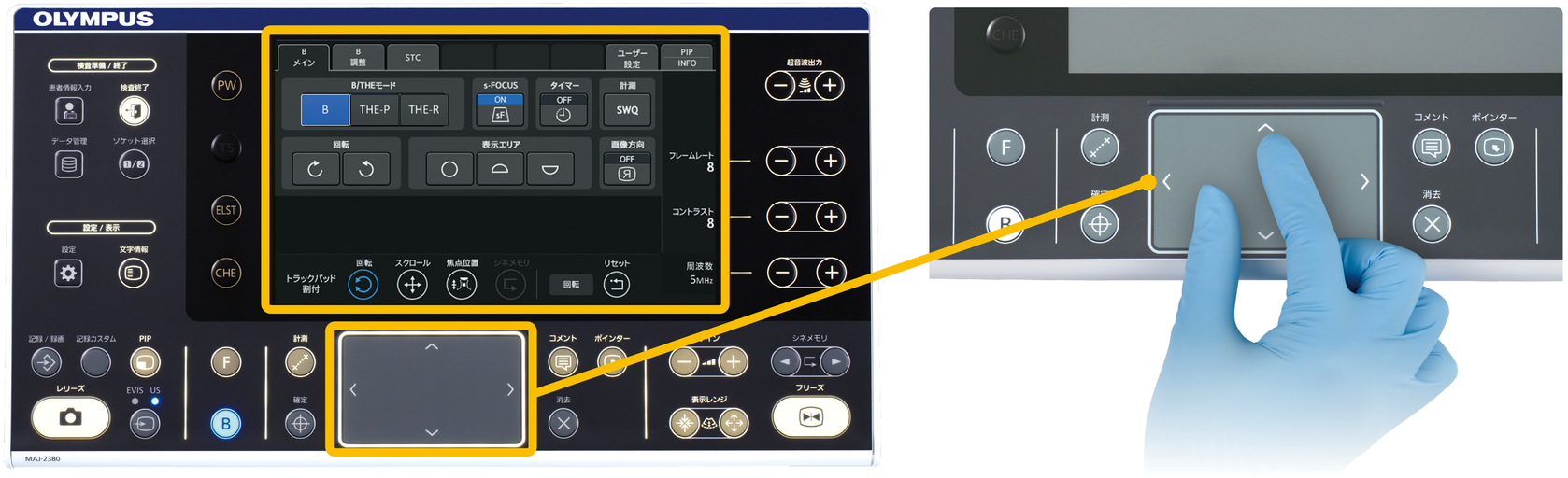
The EU-ME3 is equipped with an s-FOCUS mode that reduces the change in resolution with distance from the ultrasound transducer surface. s-FOCUS eliminates the need to manually adjust the focal zones during the procedure.



Designed for Enhanced Usability

Keyboard Usability

The keyboard was designed with a simple layout in mind and includes a user-friendly built-in touch panel, LED backlit keys and a trackpad for ease of use and cleaning. The larger LCD touch panel allows for a greater range of functions to be displayed at one time.



Ease of Targeting

The position and size of the Doppler region of interest (ROI) can be conveniently adjusted with a trackpad or buttons on the touch panel.

Designed for Enhanced Usability

Wide Range of Compatibility

Integrating both electronic and mechanical scanning technologies, the EU-ME3 is compatible with echoendoscopes and miniature probes, creating a total endosonography solution for a full range of applications.

Customizable Features

Software options are available to meet the needs of any facility. Because the functions are optional, you can select and add the necessary functions according to your needs and budget.

Designed for Enhanced Usability

Comparison of Ultrasound Functions

	EU-ME2	EU-ME2 PREMIER	EU-ME2 PREMIER PLUS	EU-ME3
B-mode	✓	✓	✓	✓
THE (Tissue Harmonic Echo)	-	✓	✓	✓
Flow	✓	✓	✓	✓
PWD (Pulsed Wave Doppler)	✓	✓	✓	✓
CHE (Contrast Harmonic Echo)	-	✓	✓	✓ (Software Option)
Elastography	-	-	✓	✓ (Software Option)
SWQ (Shear Wave Quantification)*	-	-	-	✓ (Software Option)

* For GI. Only compatible with GF-UCT180/260 and GF-UE190/290.

Specification

EVIS EUS ENDOSCOPIC ULTRASOUND CENTER OLYMPUS EU-ME3			
Power Supply	Voltage		220 – 240 V AC
	Voltage fluctuation		Within ±10%
	Frequency		50/60 Hz
	Frequency fluctuation		Within ±1 Hz
	Consumption electric power		340 VA
Size	Dimensions	Main unit	371 (W) × 175 (H) × 480 (D) mm 445 (W) × 184 (H) × 530 (D) mm (max.)
		Keyboard	392 (W) × 39 (H) × 210 (D) mm
	Weight	Main unit	21.5 kg (without software option case) 21.8 kg (with software option case)
		Keyboard	2.5 kg
Classification	Type of protection against electric shock		Class I
	Degree of protection against electric shock or applied part		TYPE BF applied part where no classification mark appears, the device is a TYPE BF applied part.
	Degree of protection against explosion		The Ultrasound Center should be kept away from flammable gases.
Ultrasound Scanning Format			Mechanical scanning, electronic scanning
Mechanical Scanning	Display mode		B-mode
	Scanning		Radial scanning, helical scanning
	Usable frequencies		12 MHz, 20 MHz
	Display range		2, 3, 4, 6, 9, 12 cm
	Display processing	Rotation	Rotatable
		Display area	Full circle, bottom sector, top sector, scroll
		Direction	Normal/Inverse
	Cine memory		Over 1,500 frames storable depending on the conditions. Cine review function
	3D		3D display, MPR display
	Measurement		Distance, area, circumstance
Electronic Scanning	Display mode		B-mode, FLOW mode, PW mode, CHE mode, ELST mode
	Scanning		Radial scanning, curved linear array scanning
	Usable frequencies		5 MHz, 6 MHz, 7.5 MHz, 10MHz, 12MHz
	Display range		2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 cm

Specification

Electronic Scanning	Display processing	Rotation	Rotatable during radial scanning
		Display area	Radial: Full circle, bottom sector, top sector, scroll, Curved linear array: Fixed
		Direction	Normal/Inverse
	Cine memory		Over 2,000 frames storable depending on the conditions. Cine review function
	Focus	Auto preset	s-FOCUS, AUTO, MANUAL
		Focus settings	Focus location and Focus number adjustable.
	FLOW mode		COLOR-FLOW mode, POWER-FLOW mode, H-FLOW mode
	PW mode		B+PW, COLOR+PW, POWER+PW, H-FLOW+PW
	Measurement		Distance, area, circumstance, PW measurement
	THE mode		THE-P mode, THE-R mode
	CHE mode (Software Options)	Display pattern	CHE, C-THE
		Preset (CH agent type)	2 types (Low acoustic pressure, Middle acoustic pressure), selectable
		Frequency selection	2 types (CHE-P, CHP-R)
	ELST mode (Software Options)	Pressurization guide	Pressurization bar, Strain graph
		Strain ratio	Measures strain or ratio of strain of 2 areas.
	SWQ (Software Options)		Calculates and displays transmission speed and elasticity of shear wave in ROI.
Recording Data	Data format	Movie data	AVI
Ancillary Equipment	Keyboard		Built-in track pad and touch panel.
	Recording device		DVR
	Video system center	Monitor display selection	Endoscopic/ultrasound image
		Sub screen	Endoscopic image can be displayed in sub screen.
		Patient data	Patient data can be shared with video system center.

OLYMPUS

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