



## REGISTRUL DE STAT AL DISPOZITIVELOR MEDICALE

	Denumire
Declarația de conformitate CE	Declaratie de conformitate CE_Arietta 65
Declarația de conformitate CE	Declaratie de conformitate CE_Arietta 750VE
Declarația de conformitate CE	Declaratie de conformitate CE_Aloka Lisendo 880
Declarația de conformitate CE	Declaratie de conformitate CE_Arietta 750LE
Declarația de conformitate CE	Declaratie de conformitate CE_Arietta 50
Declarația de conformitate CE	Declaratie de conformitate CE_Arietta Precision
Declarația de conformitate CE	Declaratie de conformitate CE_Aloka Arietta 850
Declarația de conformitate CE	Declaratie de conformitate CE_Arietta 750SE
Certificatul CE	Certificat CE_Full Quality Assurance

Введите текст для поиска...

Nr	Denumire	Den.comerc.	Model	Nr. catalog	Tara	Producatorul	Reprezentant	Ordin	Data	Cod vamal
			Arietta 65			fujifilm	data			
DM000344366	SISTEM PENTRU DIAGNOSTIC ULTRASONOGRAFIC		Arietta 65		Japonia	FUJIFILM HEALTHCARE CORPORATION	F.C.P.C. DATACONTROL S.R.L.	Rg04-000071	21-03-2022	
DM000344369	SISTEM PENTRU DIAGNOSTIC ULTRASONOGRAFIC		Arietta 65 UP		Japonia	FUJIFILM HEALTHCARE CORPORATION	F.C.P.C. DATACONTROL S.R.L.	Rg04-000071	21-03-2022	
DM000344367	SISTEM PENTRU DIAGNOSTIC ULTRASONOGRAFIC		Arietta 65 PX		Japonia	FUJIFILM HEALTHCARE CORPORATION	F.C.P.C. DATACONTROL S.R.L.	Rg04-000071	21-03-2022	
DM000344368	SISTEM PENTRU DIAGNOSTIC ULTRASONOGRAFIC		Arietta 65 Master		Japonia	FUJIFILM HEALTHCARE CORPORATION	F.C.P.C. DATACONTROL S.R.L.	Rg04-000071	21-03-2022	

✓ [Содержит\(\[Producatorul\], 'fujifilm'\)](#) И [Содержит\(\[Reprezentant\], 'data'\)](#) И [Содержит\(\[Model\], ...\)](#)

March 30, 2021

Subject: Notification of changes due to company name change

1. Background

Based on “Hitachi Announces the Conclusion of Absorption-type Company Split Agreement Relating to Diagnostic Imaging-related Business”, issued on February 18, 2021 (hereinafter referred to as “Hitachi News Release Feb 18, 2021”), Hitachi, Ltd. will execute an absorption-type split and its Healthcare Business Unit’s diagnostic imaging business (CT, MRI, X-ray diagnostic equipment, ultrasound diagnostic imaging equipment, etc.) will be absorbed and split into a newly established company. Based on the absorption-type split, the new company name will change to FUJIFILM Healthcare Corporation.

After the transfer of shares of FUJIFILM Healthcare Corporation, a subsidiary of Hitachi, Ltd., to FUJIFILM Corporation on March 31, 2021, FUJIFILM Corporation will become a shareholder of FUJIFILM Healthcare Corporation, and FUJIFILM Healthcare Corporation will become a subsidiary of FUJIFILM Corporation. Since Hitachi, Ltd. and FUJIFILM Corporation are separate companies that have no capital relationship, Hitachi, Ltd. and FUJIFILM Healthcare Corporation will also be separate companies that have no capital relationship on March 31, 2021.

More information is available on the attached sheet, titled “Hitachi News Release Feb 18, 2021.”

2. Company name change overview

The table below shows the transition of changes in the shareholders of legal manufacturers, exporters, and sales companies in order to conduct manufacturing registrations and product registrations in each country.

Content	Before March 31, 2021	March 31, 2021~ June 30, 2021	After July 1, 2021
Legal manufacturer Name	Hitachi, Ltd.	Hitachi, Ltd.	FUJIFILM Healthcare Corporation (*1)
Brand name	HITACHI	HITACHI	FUJIFILM

©Hitachi, Ltd. Healthcare Business Unit

Ueno East Tower, 2-16-1, Higashi-Ueno, Taito-ku, Tokyo, 110-0015, Japan  
Tel.:+81-3-6284-3800 <http://www.hitachi.com/businesses/healthcare/>

Content	Before March 31, 2021	March 31, 2021~ June 30, 2021	After July 1, 2021
Exporter	Hitachi, Ltd.	FUJIFILM Healthcare Corporation	FUJIFILM Healthcare Corporation
Sales Company	Hitachi, Ltd.	FUJIFILM Healthcare Corporation	FUJIFILM Healthcare Corporation
Shareholder of Sales Company	Hitachi, Ltd.	FUJIFILM Corporation	FUJIFILM Corporation
ISO13485 holder	Hitachi, Ltd.	Hitachi, Ltd.	FUJIFILM Healthcare Corporation
Company name listed in FSC (Free Sales Certificate)	Hitachi, Ltd.	Hitachi, Ltd.	FUJIFILM Healthcare Corporation

(\*1) However, when shipping products under the new brand, administrative procedures in each country are required because the products can only be shipped after the product registration, which specifies the change in legal manufacturer and address, is completed.

Even after the change of legal manufacturer, the manufacturing process, quality management system (QMS) and product safety of the product will remain unchanged, with no impact on the factory and QMS.

Responsibility for sold HITACHI brand products and HITACHI brand inventory will be transferred to FUJIFILM Healthcare Corporation.

### 3. Changes regarding global subsidiaries

Following the absorption-type split of the diagnostic imaging business (CT, MRI, X-ray diagnostic equipment, ultrasound diagnostic imaging equipment, etc.) of Hitachi, Ltd. Healthcare Business Unit and the transfer of shares of the new company, the shareholders and company name of the global subsidiaries will also be changed and incorporate FUJIFILM Healthcare Corporation.

Hitachi, Ltd.

*Akio Yamamoto*

Name: Akio Yamamoto

Title: CEO

Healthcare Business Unit



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**SPECIFICATIONS**  
for  
**Diagnostic Ultrasound System**

**ARIETTA 65**



**MODEL: ARIETTA 65**

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## **ARIETTA 65**

A better "Reproducibility", "Versatility", "Accuracy" are required for the ultrasound diagnostic equipment. ARIETTA 65 is available to perform efficiency in use cases by answering your needs. Because it is implemented comfortable workflow, high definition image quality and useful application from premium platform.

### **1. Smooth workflow**

It is implemented design and features to improve efficiency for everyday practice. For example, it is ergonomics design to suppress stress of user and to support comfortable everyday practice. The other side is optimized operation panel switch location.

Also, it is implemented any automated process features (e.x.: "Protocol Assistant" and "Auto Optimizer"). It can be performed everyday practice more smoothly.

### **2. Superb Imaging**

It is implemented any kinds of image processing technology from premium platform. it can be performed "HI REZ", "Compound Imaging" (improved contrast resolution by suppressing speckle noise) and "HdTHI" (improved spatial resolution and penetration).

Also, it can be performed the additional unique image processing technology (ANR/NNR).

### **3. Simple to use Applications**

It is available to provide reliable practice by any kinds of applications.

Real-time Tissue Elastography is displayed stiffness color by calculating distortion of tissue. it is useful when it is examined for breast or it is confirmed hepatitis progress. And 2D Tissue Tracking is available to visualized and to quantified by measuring wall motion of heart.

## Scanning Method

- Electronic Convex
- Electronic Linear
- Electronic Phased Array Sector

## Operating Modes

- **B-mode**
- BiPlane-mode
- **M-mode**
- D: **Spectral Doppler mode** (PW, CW\*<sup>1</sup>, HPRF-PW)
- **Dual Gate Doppler mode**
- **Color Flow mode**
- **Power Doppler mode (Directional Power Doppler)**
- **eFLOW mode (Directional eFLOW)**
- **RT-3D(4D) mode**\*<sup>2</sup>

\*<sup>1</sup> Option: EU-9198

\*<sup>2</sup> Option: EU-9198 and SOP-ARIETTA65-4

## Image Display Modes

- **B: gray-scale imaging**
- **Dual B**
- Quad B
- M
- **B and M**
- D: Spectral Doppler (PW, HPRF PW, and CW)
- B and D
- B(Color Flow)
- B(Power Doppler)
- B(eFLOW)
- **Dual B**(Color Flow)
- Quad B(Color Flow)
- Dual B(Power Doppler)
- Quad B(Power Doppler)
- Dual B(eFLOW)
- Quad B(eFLOW)
- **M(Color Flow)**
- M(Power Doppler)
- M(eFLOW)
- B(Color Flow) and M (Color Flow)
- B(Power Doppler) and M(Power Doppler)
- B(eFLOW) and M (eFLOW)
- B(Color Flow) and D
- B(Color Flow) and Dual
- B(Power Doppler) and D
- B(Power Doppler) and Dual
- B(eFLOW) and D
- B(eFLOW) and Dual
- B(Color Flow) and D simultaneous real-time display (Triplex mode)

- B(Power Doppler) and D simultaneous real-time display (**Triplex mode**)
- B(eFLOW) and D simultaneous real-time display (Triplex mode)
- B and B(Color Flow) simultaneous real-time display (Dual Flow)
- B and B(Power Doppler) simultaneous real-time display (Dual CF)
- B and B(eFLOW) simultaneous real-time display (Dual Flow)
- Dynamic Slow-motion Display\*<sup>1</sup>  
(Real-time image/Slow-motion image, side by side display)
- **Panoramic View**\*<sup>2</sup>
- **TDI (Tissue Doppler Imaging)**
- Intermittent trigger mode\*<sup>3</sup>
- Monitor Mode\*<sup>3</sup>(Fundamental/CHI)
- Real-time Tissue Elastography \*<sup>4</sup>
- Real Time Biplane(Using biplane probe, display a real time 2 section image. Probe dependent.)
- Request function: In multi-mode display, it is possible to select one mode for full screen display.
- RT-3D(4D) mode\*<sup>5</sup>

\*<sup>1</sup> Option: SOP-ARIETTA65-57

\*<sup>2</sup> Option: SOP-ARIETTA65-1

\*<sup>3</sup> Option: SOP-ARIETTA65-44

\*<sup>4</sup> Option: SOP-ARIETTA65-43

\*<sup>5</sup> Option: EU-9198 and SOP-ARIETTA65-4

## Beam former

### Transmission

- CPWG (Compound Pulse Wave Generator)
- Programmable waveform transmission

### Reception

- Multi-processing high-speed digital beam former
- 12-bit A/D converter (4096 gray levels)
- A/D Sampling Frequency: 40[MHz]
- Parallel processing: Multiple directions

### Transmission/Reception method of Harmonics

- Reception frequency: 3.2-18.0\* MHz
- \* Maximum reception frequency can be achieved under below conditions.
- Probe: L64, Freq:High, Freq. Info. :Receive

### Tissue Adaptive Technology

- **Sound speed adjustment: 26 steps**

### Focusing

- **Transmission: Multi-stage transmission focus of up to 4 stages out of 16 stages (probe dependent)**
- **Reception: PixelFocus**

## System Dynamic Range

272dB

## System Processing Channels

574,976 Channels

## Frame rate

Max. More than 661 frames/sec\*

\* Depends on probes and various settings

## B-mode

- Display Gray Scale: 256 levels
- Scanning area: 1 degree step
- Line Density: 8 steps
- HI Frame Rate (Multi Parallel Processing)
- Zoom
  - HI zoom (real-time image):  
Max. Up to 0.5 cm display image (probe dependent)
  - PAN zoom (real time and frozen image):  
Max. Up to 0.5 cm display image (probe dependent)
- Depth range selections:  
0.75/1.0/1.5/2.0/2.5/3.0/3.5/4.0/4.5/5.0, 1 cm intervals from 5.0 to 24 cm, and 2cm intervals from 24cm to 40cm (probe dependent)
- Longitudinal and lateral inversion
- Rotation by 90 degrees (probe dependent)
- Gain\*: 80 dB range
- Echo enhancement: 8steps
- Texture: 2 steps(Smooth/Sharp), not available in M-mode
- Smooth/Enhance: 8 steps for each other
- Persistence: 8steps, including Off (Available to change type for adaptive frame rate)
- TGC (time gain compensation):  
Gain versus depth curve control: 8 slide controls TGC curve memory function
- LGC (lateral gain control):  
Gain versus angle curve control: 8 sectors (Sector probes only)
- Dynamic range: 40-90 dB
- Gray map: 10 types, changeable after frozen
- AGC: 8 steps
- View gamma: 4types
- Spatial Compound Imaging (by selected linear and convex sector probes)
- Trapezoidal scan (possible by selected linear probes)  
Available to combine with compound scan

- B steer function: This function enables you to use oblique function not only Color Flow/ Power Doppler mode but B mode.
- Adaptive Imaging: HI REZ function 8 steps, 2 types  
Adaptive imaging is the technique to generate optimum image with changing filter characteristic depending on input signal.  
This technique which installed this ultrasound diagnostic scanner reduces speckle noise on B-mode images and provides uniformly and high contrast images.  
\* Gain and Dynamic range can be changed after freezing
- Acoustic Noise Reduction: 8 steps  
This technique is reduced acoustic noise (Based on signal level)
- Near field Noise Reduction  
reduces artifacts and noises in the heart chamber or blood vessel
- Low Echo Reduction  
This technique is compressed low gradient echo level.
- Grayscale Enhancement  
This technique is enhanced image which is displayed as grayscale.
- Auto-optimizer (Optimization of gain)
- Needle Emphasis (probe dependent)

## M-mode:

- Sweep method: Moving bar  
Sweep speed:  
300.0, 200.0, 133.3, 100.0, 66.7, 50.0, 40.0 mm/sec
- Gain: B-gain  $\pm 30$  dB
- Dynamic Range: 40 dB-90 dB
- AGC: 8 steps
- Acoustic Noise Reduction
- Low Echo Reduction
- FAM (Free Angular M-mode) \*  
\* Option: SOP-ARIETTA65-5

## Spectral Doppler:

- Display: Power spectrum
- Real-time Doppler Auto Trace
- Doppler methods:
  - PW (Pulsed Wave) Doppler
  - HPRF (High Pulse Repetition Frequency) PW Doppler
  - Dual Gate Doppler
  - CW (Continuous Wave) Doppler \*
- Reference frequencies (probe dependent):

Maximum 3 frequencies

PW: 1.9, 2.0, 2.1, 2.5, 3.0, 3.2, 3.3, 3.5, 3.8,  
4.0, 4.3, 5.0, 6.0, 7.5, 8.6 MHz

CW: 1.8, 2.0, 2.1, 3.0, 3.3, 3.8, 5.0 MHz

- Analysis rate:
    - PW: 0.05 to 40 kHz
    - CW: 1.1 to 40 kHz
  - Max. velocity range:
    - PW/HPRF: -8.02 to 0 or 0 to +8.02 m/s
    - CW: -16.0 to 0 or 0 to +16.0 m/s
  - Base line shift: Adjustable in real-time and frozen
  - Steerable CW Doppler: probe dependent
  - Steered linear scanning: Max.  $\pm 30$  degrees changeable at 5 degrees interval
  - Auto angle Correction
  - Spectrum inversion
  - Angle correction: Available up to 80 degrees (Pre-settable, changeable after freezing)  
Auto angle correction, Warning function available
  - Sample volume size for PW Doppler:  
0.5 – 20 mm, changeable in 0.5mm, 1.0 mm step
  - Wall motion filter: 12steps, 1/16 of PRF is Max.
  - Doppler gain: 60dB variable, adjustable in real-time and frozen.
  - Echo Enhancement(CW): 3 steps
  - Low Echo Reduction(PW)
  - Grayscale Enhancement
  - Dynamic Range: 40-90dB, 1dB steps  
(Not changeable after freezing)
  - Auto-Optimizer  
(Optimization of gain, velocity range, baseline shift, sample gate position and angle Coreration)
  - Audio output: 2 channels\*
- \*Option: EU-9198

### Color Doppler Mode

- Color area size: Continuously variable
- Steered linear scanning:  
Max.  $\pm 30$  degrees \*, changeable at 5 degrees interval  
\* Probe dependent
- Line density: Up to 8 steps  
(Changeable setting independently with B mode)
- Auto-Optimizer (Optimization of gain)

### Color Flow Mode

- Display patterns:  
Velocity (derived from mean Doppler frequency shift), Velocity + variance, Variance, Velocity + intensity, Velocity + variance + intensity

- Max. velocity range:  $\pm 0.63$ cm/sec to  $\pm 458.33$ cm/sec
- Reference frequency: (Probe dependent)  
1.9, 2.0, 2.1, 2.5, 3.0, 3.2, 3.3, 3.5, 3.8, 4.0, 4.3, 5.0, 6.0, 7.5, 8.6 MHz
- Pulse repetition frequency:  
0.03 to 19.8 kHz
- Gradation:  
 $\pm 127$  levels for velocity (red and blue)  
64 levels for variance (green)
- Color Inversion: Normal, Invert
- Smoothing: 5 steps
- Wall filter: 6 steps
- Persistence (Color): 8 steps
- Wall Motion Reduction: Off + 3 steps, 2 types
- Packet Size: 3 levels
- Base line shift(Color):  
Up to double velocity ( $\pm 127$  steps)
- Color coding: 15 kinds
- TGC Enhancement: 2 kinds

### Power Doppler Mode

- Display patterns: Power Doppler, Directional Power Doppler
- Gradation: 256 levels
- Color coding 15 kinds
- Non-display of B/W image: Possible in ROI
- Smoothing: 5 levels

### High Resolution Power Doppler(eFLOW) Mode

- One of the Color Flow imaging functions that can display blood flow information in a high spatial and temporal resolution.
- Display patterns:  
eFLOW, Directional eFLOW
  - Pulse repetition frequency:  
0.03 to 19.8 kHz
  - Gradation: 256 levels ( $\pm 127$  levels for directional)
  - Color coding: 15 kinds
  - Non-display of B/W image: Possible in ROI
  - Advanced wall motion reduction
  - Smoothing: 5 levels

### TDI(Tissue Doppler Imaging)

- Function Available

### Manual

It is applicable to browse instruction manual on this system.

- On-board operation manual

### Cine Memory

- Cine search and loop display (in B mode):  
ECG time phase display is possible
- Capacity  
B mode: **Max. 63,500 frames.**  
**M and D modes: Max. Approx. 900 seconds.**

## Data Management

### 1. Image data

#### 1-1. Format

Multiple-frame (moving) image

DICOM (Raw, MJPEG)

PC Format (AVI, WMV, MP4)

Single-frame (still) image

DICOM (Non-compressed, RLE, RGB (Plane/Pixel), JPEG)

PC Format (TIFF, BMP, JPEG)

#### 1-2. Image acquisition mode

- Real-time multi-frame image acquisition (Raw, Image)

Aquiring both RAW and Image at the same time

Post ECG: Max. 10 cardiac cycles (R-R)

Pre ECG: Max. 10 cardiac cycles (R-R)

Post Time: Max. 90 seconds

Pre Time: Max. 16 seconds

Manual:

Raw data: Max. 150 seconds

Image data: Max. 180 seconds

- Cine loop high-speed data transfer (Raw, Image)

It is possible to selectively store data of arbitrary section in the Cine Memory.

- Simultaneous output to multiple media

It is possible to output still image data to multiple of storage media include network and printers at the touch of a button.

#### 1-3 Image data management tool

Image viewer

- Thumbnail display of stored images (1-36 images)
- Check mark is put on a transferred image
- Image zoom, rotation, inversion
- 1:1 replay (main unit HDD or DICOM storage data)
- DVD-RAM
- DVD-R
- CD-R
- USB memory
- USB HDD
- Re-storing to media, transfer
- Adjustment is possible on the reconstructed Raw-data image (gain, dynamic range, gamma curve type, and color coding in Color flow mapping mode)

### 2. Measurement data

**It is possible to store measurement data in the main unit hard disk**

### 3. Patient data

Displayed information\*

#### Patient information

ID (up to 64 characters), Name (up to 64 characters, including middle name), Birthday, Sex, Age, Height, Weight, Occupation

#### Study information

Procedure ID, Accession, Study ID, Study Description Referring physician, Reporting Phys, Sonographer

\* Conforms to DICOM 3.0 standard

### 4. Data storage

- Main unit hard disk

Capacity: **Approx. 500GB**

**(It is available to change to 1TB HDD)**

- USB memory
- USB HDD
- CD-R
- DVD-RAM
- DVD-R
- Network interface(DICOM format): 1000baseT, 100baseTX or 10baseT (automatically switched)
- Network folder(BMP, JPEG, TIFF, AVI, MWV, MP4)

### 5. DICOM network communication\*<sup>1</sup>

- Conformity to DICOM service class:
    - Ultrasound image storage SCU
    - Ultrasound multi-image storage SCU
    - Comprehensive SR SCU
    - Storage media FSC/FSU/FSR
    - Print management SCU
    - Modality worklist management SCU
    - Modality performed procedure step (MPPS) SCU
    - Storage Commitment Push Model SCU
    - Query/Retrieve SCU

(For details, please refer to the DICOM Conformance Statement issued by Hitachi, Ltd.)
  - Storage: Possible to store patient information directly to DICOM file server
  - Print: Possible to printout images with DICOM compatible printer directly
  - Work list management: Retrieval of patient and reservation information from hospital information system (HIS)
- NOTE: The HIS needs to be compatible with DICOM standard supplement 10. The HIS network and the DICOM network need to be linked.

- 
- Router setting: possible
  - Compatible with SR (Structured Report) for OB-GYN, cardiology, vascular and abdominal measurements\*<sup>2</sup>
  - Query/Retrieve\*<sup>3</sup>
  - Profile
  - IHE (Integrated Healthcare Enterprise)
    - SWF (Scheduled Workflow)
    - PDI (Portable Data for Imaging)
    - ED (Evidence Documents in Radiology/Cardiology domain)
    - Echocardiography Workflow
    - CT (Consistent Time)

\*<sup>1</sup> Option: SOP-ARIETTA65-10

\*<sup>2</sup> Option: SOP-ARIETTA65-21

\*<sup>3</sup> Option: SOP-ARIETTA65-59

## 6. Security measures

User authentication function is available.

3 Types of user authority can be set.

It is possible to set whether password is required or not at the start of operation.

Audit logs

Accesses related to user management and patient data are recorded as audit log data.

Handling of these logs is limited to users with Level 1 access.

## 7. Teaching file can be made.

## Measurements and Analysis:

### Basic measurements

#### B mode

Distance, Dist-trace, Area/Circum, Volume, Hip J Angle, Histogram, Angle, B.Index

#### M mode

M.Length, Time, Heart Rate, M.VEL, M.Index

#### D mode

D.VEL, ACCEL, RI, Time, P1/2T, Heart Rate, D.Caliper, D.Index (Caliper), D.Index (Trace), Mean.VEL., PI, D.Trace, Steno Flow, Regurg Flow, Real-time Doppler auto trace

#### B/D mode

Blood Flow

#### B(Flow) mode

Flow Profile\*

\* Option: SOP-ARIETTA65-7

### Application measurements

#### **Obstetrical measurements**

- Supports multiple gestations
- Growth analysis function (display of past measurement data)

#### B mode

Gestational age, Fetal weight

Auto GA\*<sup>1</sup> is possible.

Ratio

Amniotic Fluid Index(AFI), AF Pocket/AFV, MVP

CTAR/CTR

Cervical length

Auto NT\*<sup>2</sup>

#### M mode

Fetal Heart Rate

LV Function

#### D mode

Blood flow

\*<sup>1</sup> Option: SOP-ARIETTA65-76

\*<sup>2</sup> Option: SOP-ARIETTA65-42

### Gynecological measurements

#### B mode

Uterus measurements

Endometrial thickness measurements

Cervical measurements

Ovary measurements

Follicular measurements (Volume measurements by 3-axis measurements are possible.)

Urinary bladder measurements

#### D mode

Uterine artery

Ovarian artery

### Urological measurements

#### B mode

PSA Volume

PRS slice volume

Bladder

#### D mode

Renal artery

### Cardiology measurement

#### B mode

LV Volume measurements

M.Simpson\*, Area-length\*, Pombo\*\*, Teichholz\*\*, Gibson\*\*· Bullet, BP-ellipse, Simpson

\*Automatic heart cavity trace is possible. (3-point or full automated method\*<sup>1</sup>)

\*\* Auto measurement method\*<sup>1</sup> is possible.

Valve area measurements (AVA, MVA)

LA/AO

Ratio

Right ventricle measurements

LV myocardial mass

LA/RA Volume measurements

Automatic heart cavity trace\*<sup>1</sup> is possible. (3-point or full automated method)

FAC measurements

Automatic heart cavity trace\*<sup>1</sup> is possible. (3-point)

IVC (inferior vena cava) measurements

#### M mode

Pombo (wall), Teichholz (wall), Gibson (wall)

Caliper Mark Auto Shift is possible.

Mitral valve measurements

LA/AO measurements

Auto measurement method\*<sup>1</sup> is possible.

Tricuspid valve measurements

Pulmonary valve measurements

IVC (inferior vena cava) measurements

TAPSE measurements

#### D mode

LVOT (left ventricle outflow tract) flow

RVOT (right ventricle outflow tract) flow

Trans-mitral flow

(Full Automated or Automated setting period method)

Regurgitant flow (AR, PR, MR, TR)

Volumetric flow(MR)

Stenotic flow (AS, PS, MS, TS)

PISA

Pulmonary vein flow  
TDI PW  
(Full Automated or Automated setting period method)

Coronary flow

Asynchrony

TDI-CF/M mode

Shorteningt

Percent Systolic Wall Thickening

\*1 Option: SOP-ARIETTA65-74 and PEU-ARIETTA65

## **Vascular measurement**

Carotid artery

Blood flow measurement :

CCA (common carotid artery)

ICA (internal carotid artery)

ECA (external carotid artery)

BIFUR (Bifurcation of carotid artery)

VERT (Vertebral artery)

Stenotic rate:

% Stenosis area

% Stenosis diameter

IMT (Intima-media thickness) Measurements:

Automated IMT measurements\*1

IMT-C10 measurements\*1

Measurements of arteries in extremities

Lower extremity artery flow

Upper extremity artery flow

Transit time of Vessel Flow(TVF)\*2

Stenotic rate:

% Stenosis area

% Stenosis diameter

Measurements of veins in extremities

Lower extremity venous flow

Upper extremity venous flow

Trans-cranial Doppler

Trans-cranial blood flow measurements

\*1 Option: SOP-ARIETTA 65-38

\*2 Option: SOP-ARIETTA 65-47 and PEU-ARIETTA65

## **Abdominal measurement**

B mode

Gallbladder measurements

Common buile duct measurements

Liver measurements

Pancreas measurements

Pancreatic duct measurements

Renal measurement

Spleen measurements

Space-occupying lesion measurements

Blood vessel diameter measurements

Srenosis percentage measurements

D mode

Artery measurements

Renal artery measurements

Portal vein measurements

Shunt blood vessel measurement

B/D mode

Flow quantity(Artery)

Flow quantity(Vein)

## **Small parts measurement**

B mode

Lesion measurement

Aspect ration measurements

Nipple-tumor distance measurement

Thyroid gland volume measurement

Thyroid isthmus tickness measurement

D mode

Artery measurements

## **Report Functions**

Measurement reports

Obstetrical report

Gynecological report

Cardiac function report

Vascular report

IMT (Intima-Media Thickness) report

Urological report

Abdominal measurement report

Small parts report

It is possible to recall past measurement reports.

Examination data history can be plotted on the report.

Direct printout of each report is possible with an optional PC printer.

Output of measurement values in CSV file is possible.

## **Others**

Hot Key function:

It is possible to assign measuring functions to the alphabet keys on the keyboard. (It is needed keyboard)

Measurements on VCR playback image:

Possible (manual calibration)

User's calculation:

30 equations can be set for each application

User-assignable terms: 60 words possible

Font size of measurement result:

Possible to change in 3 kinds

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## Physiological Signal Display

- Displayed information: ECG, PCG\*<sup>1</sup>, Pulse wave\*<sup>2</sup>, breathing waveform
- ECG synchronized display: Available for one phase
- Detect regular pulse from arrhythmia(RRp/RRpp)
- Display position: Continuously variable (both in B and M modes)
- Bar graph display for breathing waveform
- 3 type electrocardiograms (I, II, III)
- Automated detection end diastole and end systole phase.
- Automated split as end diastole(left) and end systole(right)

\*<sup>1</sup> Option: MA-300 (Not available in EU)

\*<sup>2</sup> Option: TY-307A (Not available in EU)

## Dual Gate Doppler (Probe dependent)

This is a function which displays Doppler Spectrums of two different sample points simultaneously.

Supported combinations are PW/PW, TDI/TDI, and PW/TDI.

This function is beneficial for functional evaluations of heart failures and phase analysis. For example, E/e' measurements can be performed in a single scan.

Automated sample gate setting for each gate is possible.

# Optional Functions

## PC printer

It is possible to printout OB/GYN, cardiology, PV, small parts and urology report screens including ultrasound images directly with an external PC printer.

## Real-time Tissue Elastography\*<sup>1</sup>

This function is used to visualize the stiffness of a tissue in real-time. The strain generated in a tissue on applying pressure is represented by colors

(it is available to change Elastography Color Map)

- Elasto mode: Overlapping display of Elastography on B-mode image
- Dual Elasto mode: Dual image display of Elasto mode, possible to select different color map on each side.
- Real-time biplane: Elasto mode Overlapping display of Elastography on B-mode image of either cross-section, in the function to display B-mode image with the one of different cross-section simultaneously.
- **Strain Ratio measurement:**  
Calculation of ratio of strain between arbitrary 2 regions
- Assist Strain Ratio: Clicking center of the tumor automatically sets the measurement ROI to the tumor and the fatty layer (the mammary gland region and lesion are targeted).
- Strain Graph:  
The time variation of distorted average value is displayed on a graph in real time.
- Auto Select Frame:  
The frame under stable pressure is chosen automatically.
- **Strain Histogram**\*<sup>2</sup>
- Compatible to RAW data

\*<sup>1</sup> Option: **SOP-ARIETTA65-43** (Probe dependent)

\*<sup>2</sup> Option: **SOP-ARIETTA65-60**

## Shear Wave Measurement\*<sup>1</sup>

It is a function for measuring the propagation velocity of shear waves and elasticity. The propagation velocity of shear waves varies with tissue hardness.

- Shear Wave Measurement mode:  
Measures the propagation velocity of shear waves in the target region.
- ROI setting function:  
A trackball can be used to change the position of the ROI you select to measure.
- Automatic recording of still images:  
The instrument can be set up to automatically send results after measurements.

- Integration with measurement functions:  
Measurement data is saved for each selected measurement. You can modify a measurement during an examination.
- Data saved to CSV files:  
Measurement data is saved in a CSV file.
- Attenuation measurement\*<sup>2</sup> :  
Simultaneously with the measurement of Vs, the ultrasound attenuation (ATT) is measured near the center of the ROI.

\*<sup>1</sup> Option: **SOP-ARIETTA65-73** (Probe dependent)

\*<sup>2</sup> It is only available with C251 and C253.

## Automated NT Measurement\*

It is possible to automatically extract the nuchal translucency(NT) thickness by simply setting ROI(region of interest). In addition, thicknesses at max NT, Mean NT can be automatically calculated.

\* Option: SOP-ARIETTA65-42

## Auto GA\*

Automatic fetus measurement function that measurement caliper are appeared automatically after selecting measurement items

Measurement items compatible with Auto GA

- Head: BPD, BPD<sub>o</sub>, OFD, OFD<sub>o</sub>, HC, HC2, HC3
- Abdomen: APTD, APD, TTD, TAD, AC, AC2, FTA
- Femur: FL

\* Option: SOP-ARIETTA65-76

## 2D Tissue Tracking (2DTT) \*

2DTT enables the evaluations of regional wall motion abnormalities within your region of interest, such as the myocardium and valves automatically by speckle tracking method on a B-mode image. With only minimal angle dependency, analysis from various cross sections have become possible. Multiple analyses, including wall thickness, various strains and rotation angle can be performed.

### Analysis

- Free use  
Distance and angular change between 2 points of your choice can be analyzed.
- SAX: Parasternal short-axis view
  - Circumferential Strain and Strain Rate
  - Radial Strain and Strain Rate Global Circumferential Strain, Strain Rate
  - Angle and Angle Rate
  - Twist (With Overlay function)

- APEX: Apical long-axis view
- Apex-S (Strain)
  - Longitudinal Strain and Strain Rate
  - Transverse Strain and Strain Rate
  - Global Longitudinal Strain and Strain Rate
  - Volume
- Apex-V (Volume)
  - Volume for cavity
  - Single and Biplane EF(With Overlay Function)
  - dv/dt(volume variation velocity)
  - Center of gravity coordinate, display tracking

#### View

- SAX
  - Basal SAX
  - Mid SAX
  - Apical SAX
  - APEX-S, -V
    - 2ch, 3ch, 4ch (Inversion view included)

#### Graph Type

- Line Graph
- Color Graph
- Line & Color Graph
- Bull's eye (with Overlay function)

#### Measurements

- Point to Point
- Time to Peak
- 3 point: One-third point of diastole duration
- Distance

\*Option :SOP-ARIETTA65-49 and PEU-ARIETTA65

#### **Stress Echo analysis\***

Image display modes in which image acquisition is possible: B, Each Flow modes

- Image acquisition methods:
  - ECG synchronized acquisition
- Compatible frame rate: Up to 75 Hz
- Recalled screen
  - Playback speed: Selectable
  - Image allocation: Possible
  - Scoring: Possible
  - Automatic registration: On/Off
- Protocol: Skip view function is available.
  - Exercise stress protocols:
    - Exercise Stress Echo
    - Treadmill Exercise
    - Bicycle Exercise
  - Pharmacological stress protocols:
    - DSE
    - High-Dose DSE

- Low-Dose DSE
- Arbutamine
- Dipyridamole

User's protocol:

The user can make a protocol within 8 views X 12 stages in 1 exam.

Full disclosure (Multi acquisition): 270 seconds

- Scoring screen
  - Playback speed: Selectable
  - Comparison between different stages in the same view is possible
  - Image playback range is selectable
  - Systolic image acquisition
  - Bull's eye display (16 or 17 segmentation selectable)
- Report screen
  - Display format
    - Chart/Stage overview/View overview

\*Option: SOP-ARIETTA65-15 and PEU-ARIETTA65

#### **TDI analysis\***

Tissue Doppler Imaging (TDI) analysis is an echocardiographic technique employing the Doppler principle to measure the velocity of myocardial segments and other cardiac structures.

Strain information analysis is also available.

B-mode

Temporal Velocity Profile  
Velocity, time, acceleration, ratio

Regional Velocity Profile  
Velocity, distance

TDI-Myocardial Thickness (Wall thickness)  
Distance, time, velocity

Strain rate  
Time, strain rate

Strain  
Time, strain

M-mode

Velocity trace  
Velocity, time, acceleration, ratio, velocity difference

TDI-Myocardial Thickness (wall thickness)  
Distance, time, velocity

Velocity Profile  
Velocity, distance

CSV output of analyzed data is possible. CSV is a file format that can be converted into Excel file directly.

\*Option: SOP-ARIETTA65-13 and PEU-ARIETTA65

### **CHI (Contrast Harmonic Imaging)\***

Contrast agent generates abundant second harmonics when disrupted, which eases detection by Harmonic Echo. Setting for low-pressure type contrast agent is also incorporated.

- Wide-band Contrast Harmonic Imaging (WbC)  
The wideband pulse inversion method enables retrieval of echoes from the ultrasound contrast agent across a broad spectrum and display them in CHI mode at a high level of sensitivity.
  - Tissue Reduction Contrast Harmonic Imaging (TrC)  
The Amplitude Modulation method makes it possible to reduce signals from tissue to get clearer CHI mode images.
  - Monitor mode  
In the Monitor mode, images are available with a low sound pressure during the intermission of high sound pressure transmission.
  - Motion-compensated Accumulation Imaging  
It is possible to display running of fine blood vessels by accumulating contrast echo information.
  - Flash  
This mode sends high acoustic pressure transmissions at set intervals to destroy the ultrasound contrast agent.
  - Frame Rate Limit  
Function of limiting Frame Rate not to break bubbles.
- \* Option: **SOP-ARIETTA65-44** (Probe dependent)

### **Automated IMT Measurement\***

It is possible to automatically extract max IMT, min IMT and mean IMT by simply setting ROI (region of interest) on a long-axis view of the vessel. In addition, the thicknesses at 3 points, i.e., the point at max IMT, and the points at 1cm on the right and left of the max IMT, can be automatically detected and averaged.

\* Option: **SOP-ARIETTA65-38**

### **Panoramic View\***

It is possible to display an image of an extensive range of the body by moving the probe. An area wider than the scanning width of the probe can be displayed.

\* Option: **SOP-ARIETTA65-1**

### **Protocol Assistant\***

This function provides the capability to guide study by displaying protocol list (view name, mode, measure).

It is useful to improve everyday study.

- Available to registered protocol: 128 kinds
- Suspend protocol function
- Available to edit protocol on the system
- Available to register and edit reference image
- Available to import or export like preset

\* Option: SOP-ARIETTA65-79

### **RT-3D (4D)\***

- It is possible to display 3 arbitrary sections simultaneously
- MPR (Multi-planar Reconstruction)
- 360 degrees omni-directional rotation
- 4 kinds of rendering selectable
- Combination of 2 kinds of rendering type (Rendering Mode Mix)
- Detail scan of the ROI (Region of interest) is possible
- Inversion Mode (black-and-white)
- B-mode measurements on an arbitrary plane possible
- Auto Clipper : Automated placenta rejection function
- Multi Slice Imaging (MSI)
- **HI REZ**
- Lower Threshold
- 4Dshading
- Snapshot : 3D image (1 View) is magnified and printed in color

\* Option: **EU-9198 and SOP-ARIETTA65-4** (Probe dependent)

## General Specifications

### Acoustic Power

- 0 to 100%, 5% step

### Preset Function

- 100 kinds (Max. 25 kinds per each probe)
- Preset contents storable in USB memory
- Q.S.S.(Quick Scanning Selector):  
Image modifying parameters (e.g. Gain, frequency, depth) of your choice can be registered. (Up to 4 sets per preset)  
These parameters can immediately be registered and selected by touch panel during examinations.
- Preset is booted up in conjunction with ID information(BodyParts or etc,)

### Characters and graphic displays

Character input area:

- ID\*, name, age, sex, retained text  
\* Can be corrected after exam
- Input is possible with virtual keyboard on LCD panel
- Automatic Annotation Labeling:  
800 words (User registration is possible. 10 Class)
- Body mark:  
38 kinds are available per each region.  
6 regions+1 user are able to register.  
Body mark editor to create user's body mark: Available  
Probe mark: 4 kinds  
Display position: changeable  
Fetal body mark: rotatable
- Assist line display (Probe dependent)

### Menu control

- 10.1-inch color TFT LCD touch panel

### Active Probe Ports

- For electronic scanning probes: 4
- For independent probes\*: 1

\*Option: EU-9187B, EU-9198

### Input/Output Signals

- Data Input/Output
  - USB2.0 : 5 channel  
(Main unit 3+ Operation Panel 2)
- Digital Video Input/Output
  - DVI-D digital : 2 channel(Output 1, Input1)  
Resolution: WXGA++(1600x900)
- Analog Video Input/Output

#### Output

- Y/C: 1 channels

#### Input

- Y/C: 1 channel
- Network
  - LAN (Wired, Wireless)
- Others  
Audio (L/R): 2 channel (Output 1, Input 1)

### Viewing Monitor

- 21.5 inch LCD display  
Resolution: WXGA++(1600 x 900)
- Tilt and swivel are possible.
- Height adjustment and swivel together with operation panel

### Safety Regulation

- IEC 60601-1: 2012  
Class I, Type BF

### Environmental Requirements

#### In Operation

- Temperature: +10 to +40 degrees C
- Relative Humidity: 30 to 75%  
(non condensing)
- Atmospheric pressure: 700 to 1060 hPa
- Altitude: Up to 3000m

#### In Storage/transportation

- Temperature: -10 to +50 degrees C
- Relative Humidity: 10 to 90%  
(non condensing)
- Atmospheric pressure: 700 to 1060 hPa

### Power Requirement

- 100 to 120/ 200 to 240V ±10%, 50 or 60 Hz,  
Max. 750 VA (with options connected)
- Battery drive time \*  
70 minutes (first time use, 25 degrees C environment,  
B mode scanning)  
Battery driving time (battery capacity) may reduce  
depending on the charge-discharge repetition and  
environment.  
\*Option:EU-9199

### Dimensions

- 53.3 cm (W) × 74.2 cm (D) ×126.5 – 163.5 cm (H)

### Weight

- 85 kg (main unit only)

## System Configuration

Unite			Remarks
Category	Name	Model name	
System	Diagnostic ultrasound system	<b>ARIETTA 65</b>	includes a viewing monitor
Peripheral Interface / Connection Kit / Mounting Rack	Digital color printer (SONY)	UP-D25MD	EU-6060B, PM-AR65-H002, MP-FX-ALB-30 and MP-FX-ALB-31 are necessary.
	Digital color printer (MITSUBISHI)	CP30DW	EU-6060B, PM-AR65-H002, MP-FX-ALB-30 and MP-FX-ALB-32 are necessary.
	<b>Digital monochrome printer (SONY)</b>	<b>UP-X898MD</b>	<b>PM-AR65-H001 is necessary</b>
	Digital monochrome printer (MITSUBISHI)	P95DW	PM-AR65-H001 is necessary
	Medical video recorder	HVO-500MD/FHD	EU-6060B, PM-AR65-H003, MP-FX-ALB-33 and MP-FX-ALB-35 are necessary. PM-AR65-H003 is available for the model with SN:114857~.
	Medical video recorder	HVO-550MD/FHD	EU-6060B, PM-AR65-H003, MP-FX-ALB-33 and MP-FX-ALB-35 are necessary. PM-AR65-H003 is available for the model with SN:11071~.
	CD-R/DVD Disk Drive unit		
	Outlet expansion unit	EU-6060B	Unavailable during the operation on battery power.
	connection kit	<b>PM-AR65-H001</b>	
	connection kit	PM-AR65-H002	
	connection kit	PM-AR65-H003	
Hardware Option	Physiological signal display unit	PEU-ARIETTA65	
	Independent probe connection unit	EU-9187B	EU-9198 is necessary.
	CW & 3D unit	EU-9198	
	Battery unit	EU-9199	
	SWM unit	<b>EU-9206</b>	
	Jelly warmer	JW-3000U	EU-6063 and MP-FX-AVA-2B-R or MP-FX-AVA-2B-L are necessary. Unavailable during the operation on battery power.
	AC adopter for Jelly warmer	EU-6063	JW-3000U and MP-FX-AVA-2B-R or MP-FX-AVA-2B-L are necessary.
	Foot switch	MP-2819	3-point
	Foot switch	MP-2345B	1-point
	Small tray	MP-FX-ALB-21	
	Side tray	MP-FX-ALB-22	
	Mounting bracket	MP-FX-ALB-30	This is required when mounting color printer, medical video recorder, and when mounting monochrome printer in combination with aforementioned devices.
	Color printer mounting bracket (SONY)	MP-FX-ALB-31	
	Color printer mounting bracket (MITSUBISHI)	MP-FX-ALB-32	
	Medical video recorder mounting bracket	MP-FX-ALB-33	
	Peripheral expansion rack	MP-FX-ALB-34	This is required when mounting UP-D25MD and medical video recorder together on the system.
	Peripheral expansion rack	MP-FX-ALB-35	This is required when mounting CP30DW and medical video recorder together on the system.
	Flexible hook	MP-HA-ALB-2	It is impossible to simultaneously mount this and MP-HA-ALB-3.
	Flexible hanger	MP-HA-ALB-3	It is impossible to simultaneously mount this and MP-HA-ALB-2.
	Keyboard tray	MP-FX-ALB-6B	Optional keyboard is necessary.
	Jelly warmer right mount kit	MP-FX-AVA-2B-R	JW-3000U and EU-6063 are necessary.
	Jelly warmer left mount kit	MP-FX-AVA-2B-L	JW-3000U and EU-6063 are necessary.
Small probe holder (RS)	MP-PH-AR70-2U		
Small probe holder (LS)	MP-PH-AR70-4U		

	Large probe holder (LS,RF)	MP-PH-AR70-5U	
	Large probe holder (RS,LF)	MP-PH-AR70-6U	
	Adapter for large probe holder (for thin and long probes)	MP-PHAD-AR70-1U	
	Adapter for large probe holder	MP-PH-ADAPTER-5BU	
	Endo-cavity probe holder kit	MP-PH-AVA-11B	
	HDD expansion unit	AR65 Built-in 1T HDD	Factory built-in option
Software Option	<b>Panoramic View software</b>	<b>SOP-ARIETTA65-1</b>	
	Real-time 3D software	SOP-ARIETTA65-4	EU-9198 is necessary.
	FAM software	SOP-ARIETTA65-5	
	Flow Profile Measurement software	SOP-ARIETTA65-7	
	<b>DICOM network software</b>	<b>SOP-ARIETTA65-10</b>	
	<b>TDI Analysis software</b>	<b>SOP-ARIETTA65-13</b>	
	Stress Echo software	SOP-ARIETTA65-15	PEU-ARIETTA65 is necessary.
	<b>DICOM Structured Report software</b>	<b>SOP-ARIETTA65-21</b>	<b>SOP-ARIETTA65-10 is necessary.</b>
	<b>Automated IMT Measurement software</b>	<b>SOP-ARIETTA65-38</b>	
	Automated NT Measurement software	SOP-ARIETTA65-42	
	<b>Real-time Tissue Elastography software</b>	<b>SOP-ARIETTA65-43</b>	Most of attachment / adapter is optional. See "Optional Probes" description.
	Contrast Harmonic Imaging software	SOP-ARIETTA65-44	
	Transit Time of Vessel Flow measurement software	SOP-ARIETTA65-47	PEU-ARIETTA65 is necessary.
	2D Tissue Tracking Analysis software	SOP-ARIETTA65-49	
	Dynamic Slow-motion Display software	SOP-ARIETTA65-57	
	DICOM Query/Retrieve software	SOP-ARIETTA65-59	SOP-ARIETTA65-10 is necessary.
	<b>RTE Strain Histogram software</b>	<b>SOP-ARIETTA65-60</b>	<b>SOP-ARIETTA65-43 is necessary.</b>
	<b>Shear Wave Measurement Software</b>	<b>SOP-ARIETTA65-73</b>	<b>EU-9206 is necessary</b>
	Automated Cardiac Measurement software	SOP-ARIETTA65-74	PEU-ARIETTA65 is necessary.
	<b>Automated OB Measurement software</b>	<b>SOP-ARIETTA65-76</b>	
Protocol Assistant software	SOP-ARIETTA65-79		
McAfee Embedded control 3 software	SOP-ARIETTA65-128		

## Optional Probes

### Electronic convex sector probes

Application (description)	Model	Frequency range (MHz)	Scanning angle (degrees)	Optional accessories
Abdominal	C251	5.0~1.0	70	Needle Guide - Ultra-Pro II 644-082 (CIVCO)* <sup>1</sup>
Abdominal	C253	5.0~1.0	70	Needle Guide - Ultra-Pro II 644-082 (CIVCO)* <sup>1</sup>
Abdominal	C35	8.0~2.0	70	Needle Guide - Ultra-Pro II 644-082 (CIVCO)* <sup>1</sup>
Abdominal	C41	13.0~4.0	100	-
Abdominal	C42	8.0~4.0	80	Puncture Adapter EZU-PA532 Needle Guide - Ultra-Pro 644-077 (CIVCO)* <sup>1</sup>
Abdominal	C22K	6.0~1.0	82	Puncture Adapter MP-2781 MP-2781-5 MP-2781-25 Needle Guide - Ultra-Pro 614-109 (CIVCO)* <sup>1</sup>
Abdominal	C22P	6.0~1.0	74	Puncture Adapter EZU-PA7C2* <sup>1</sup> MP-2824
Abdominal	C25P* <sup>2</sup>	5.0~1.0	70	Puncture Adapter EZU-PA7B1-1 EZU-PA7B1-2 EZU-PA7B1-3 EZU-PA7B1-4 EZU-PA7B1-C
Intraoperative	C42K	10.0~4.0	65	Puncture Adapter MP-2783 MP-2458 Needle Guide - Ultra-Pro 614-100 (CIVCO)* <sup>1</sup>
Intraoperative	C42T	10.0~3.0	65	Waterproof case WP-001
Transvaginal Transrectal	C41B	10.0~2.0	200	Puncture Adaptor MP-2445 Probe Cover RB-945BP-NS Waterproof case WP-001
Transvaginal Transrectal	C41V	8.0~4.0	200	Puncture Adapter EZU-PA5V
Transvaginal Transrectal	C41V1	10.0~2.0	200	Puncture Adpter EZU-PA7V
Transrectal	C41RP	9.0~2.0	180	Puncture Adapter MP-2452 Probe Cover RB-665P-NS Waterproof case WP-001

### Electronic linear probes

Application (description)	Model	Frequency range (MHz)	Scanning width (mm)	Optional accessories
Peripheral Vessel	L441	12.0~2.0	38	Needle Guide - Ultra-Pro II 644-075 (CIVCO)* <sup>1</sup> Elastography Stabilizer MP-2804
Peripheral Vessel	L442	12.0~2.0	38	Puncture Adapter EZU-PA7L1

Small Organ	L34	7.0~3.0	38	Puncture Adapter EZU-PA3C1H Needle Guide - Ultra-Pro II™ 644-079 (CIVCO)* <sup>1</sup>
Small Organ	L55	13.0~5.0	50	Puncture Adapter EZU-PA7L2* <sup>1</sup> Elastography Stabilizer EL-001
Small Organ	L64	18.0~5.0	38	Puncture Adapter EZU-PA7L3* <sup>1</sup> Acoustic Coupler SF-001(Acoustic Coupler) EZU-TEATC2(Attachment) Acoustic Coupler for Elastography EZU-TECPL1(Acoustic Coupler) EZU-TEATC2(Attachment) Elastography Stabilizer EL-002
Intraoperative	L43K	12.0~2.0	26	Waterproof case WP-001
Intraoperative	L44K	14.0~2.0	42	Waterproof case WP-001
Intraoperative	L44LA	13.0~2.0	36	-
Intraoperative	L46K1	14.0~2.0	63	Waterproof case WP-001
Intraoperative	L51K	15.0~3.0	13	Waterproof case WP-001
Intraoperative	L53K	15.0~3.0	25	Waterproof case WP-001

### Electronic phased array sector probes

Application (description)	Model	Frequency range (MHz)	Scanning angle (degrees)	Optional accessories
Cardiac Adult	S11	5.0~1.0	90	-
Cardiac Adult	S211	5.0~1.0	90	-
Cardiac Pediatric	S31	9.0~2.0	90	-
Cardiac, TEE	S3ESEL* <sup>3</sup>	8.0~2.0	90	-
Intraoperative	S31KP* <sup>4</sup>	8.0~3.0	90	Puncture Adapter MP-2450 Waterproof case WP-001

### RT-3D(4D) probes\*

\* EU-9198 and SOP-ARIETTA65-4 are necessary

Application (description)	Model	Frequency range (MHz)	Scanning angle (degrees)	Optional accessories
Fetal	VC35	8.0~2.0	72	-
Transvaginal	VC41V	8.0~2.0	145	-

## Electronic radial probes

Application (description)	Model	Frequency range (MHz)	Scanning angle (degrees)	Optional accessories
Transrectal	R41R	10.0~5.0	360	Waterproof case WP-001

## Bi-plane probe

Application (description)	Model	Frequency range (MHz)	Scanning angle(degrees) / width(mm)	Optional accessories
Transrectal	CC41R	8.0~4.0	100/120	Puncture Adapter EZU-PA5V EZU-PA3U Waterproof case WP-001
Transrectal	CC41R1	10.0~2.0	180/180	Puncture Adapter EZU-PA5V Probe Cover RB-945BP-NS Waterproof case WP-001
Transrectal	CL4416R Convex Linear	10.0~2.0	180	Puncture Adapter BA-001 Probe Cover RB-945BP-NS Waterproof case WP-001
		14.0~2.0	63	
Transrectal	C41L47RP Convex Linear	8.0~4.0	200	Puncture Adapter EZU-PA3U
		10.0~5.0	64	

## Independent CW Doppler probes\*

\* Independent probe connection unit **EU-9198** and **EU-9187B** are necessary

Application (description)	Model	Frequency range (MHz)	Optional accessories
Cardiac Adult	UST-2265-2	2.0	-

\*<sup>1</sup> Needle Guide Replacement Kit 610-608(CIVCO) is necessary.

\*<sup>2</sup> One of puncture adapter is necessary to use needle.

\*<sup>3</sup> Probe cover (CIVCO transducer cover 610-933) is necessary to use S3ESEL

\*<sup>4</sup> One piece of MP-2450 is attached.

## Probes and available functions

### Convex sector

Function Probe	FmT	WbT	HdTHI	CHI (Low)	CHI (Mid)	CHI (High)	TDI	Panoramic View	Needle Emphasis	Elastography	eFLOW	CW	Compound
C251	✓	✓	✓	-	-	-	✓	✓	-	✓	✓	✓	✓
C253	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓
C35	✓	✓	✓	-	-	-	✓	✓	-	✓	✓	✓	✓
C41	-	-	✓	-	-	-	-	-	-	-	✓	-	✓
C42	✓	✓	✓	-	-	-	-	✓	-	✓	✓	✓	✓
C22K	-	-	✓	-	-	-	-	-	-	-	✓	-	✓
C22P	✓	✓	✓	-	-	-	-	-	-	-	✓	-	✓
C25P	✓	✓	✓	-	-	-	-	-	-	-	✓	-	✓
C42K	-	-	✓	-	-	-	-	-	-	✓	✓	-	✓
C42T	-	-	✓	✓	✓	-	-	-	-	✓	✓	-	✓
C41B	-	-	✓	-	-	-	-	-	-	✓	✓	-	✓
C41V	-	-	✓	-	-	-	-	-	-	✓	✓	-	✓
C41V1	-	-	✓	-	-	-	-	-	-	✓	✓	-	✓
C41RP	-	-	✓	-	-	-	-	-	-	-	✓	-	✓

### Linear

Function Probe	FmT	WbT	HdTHI	CHI (Low)	CHI (Mid)	CHI (High)	TDI	Panoramic View	Needle Emphasis	Elastography	eFLOW	CW	Compound	Trapezoid
L441	-	✓	✓	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
L442	-	✓	✓	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
L34	-	✓	✓	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
L55	-	✓	✓	-	-	-	✓	✓	✓	✓	✓	-	✓	✓
L64	-	✓	✓	-	-	-	-	✓	✓	✓	✓	✓	✓	✓
L43K	-	-	✓	✓	✓	-	-	-	-	✓	✓	-	✓	✓
L44K	-	-	✓	✓	✓	-	-	-	-	✓	✓	-	✓	✓
L44LA	-	-	✓	✓	✓	-	-	-	-	✓	✓	-	✓	✓
L46K1	-	-	✓	-	-	-	-	-	-	✓	✓	-	✓	✓
L51K	-	-	✓	-	-	-	-	-	-	✓	✓	-	✓	✓
L53K	-	-	✓	-	-	-	-	-	-	✓	✓	-	✓	✓

### Phased array sector

Function Probe	FmT	WbT	HdTHI	CHI (Low)	CHI (Mid)	CHI (High)	TDI	Panoramic View	Elastography	eFLOW	CW	Compound
S11	✓	-	-	-	-	-	✓	-	-	✓	✓	-
S211	✓	-	-	-	-	-	✓	-	-	✓	✓	-
S31	✓	-	-	-	-	-	✓	-	-	✓	✓	-
S3ESEL	-	-	-	-	-	-	✓	-	-	✓	✓	-
S31KP	-	-	-	-	-	-	-	-	-	✓	-	-

RT-3D (4D)

Function \ Probe	Real-time 3D	Compound	CW	eFLOW	Elastography	Panoramic View	TDI	CHI (High)	CHI (Mid)	CHI (Low)	HdTHI	WbT	FmT
VC35	✓	✓	-	✓	-	-	✓	-	-	-	✓	✓	✓
VC41V	✓	✓	-	✓	✓	-	-	-	-	-	-	✓	✓

Radial

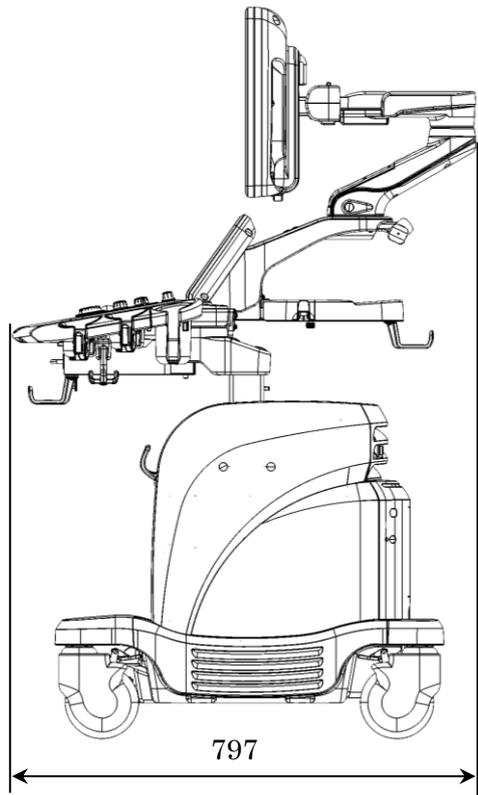
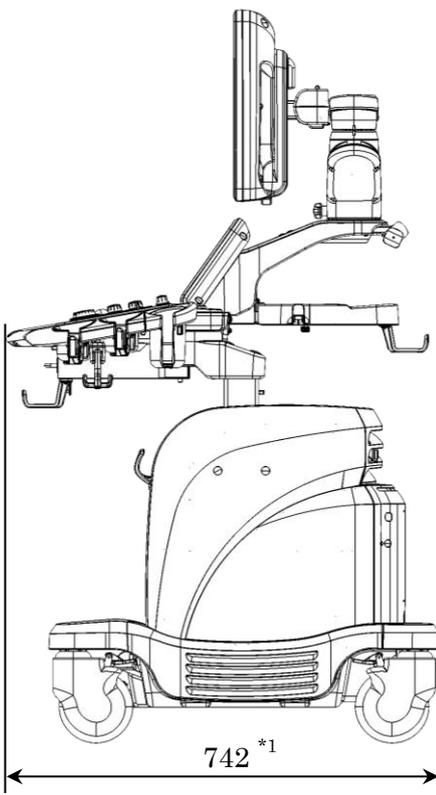
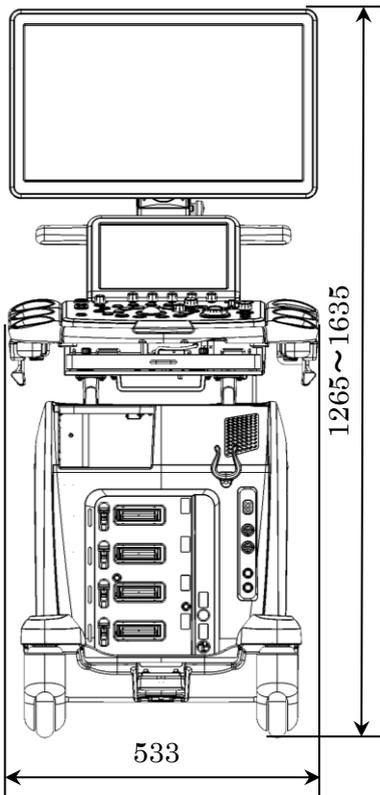
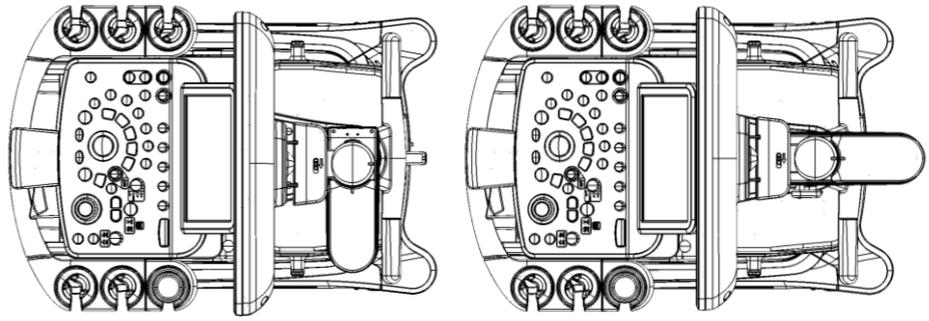
Function \ Probe	Realtime Biplane	Trapezoid	Compound	eFLOW	Elastography	Panoramic View	TDI	CHI (High)	CHI (Mid)	CHI (Low)	HdTHI	WbT	FmT
R41R	-	-	-	✓	✓	-	-	-	-	-	-	✓	-

Bi-plane

Function \ Probe	Realtime Biplane	Trapezoid	Compound	eFLOW	Elastography	Panoramic View	TDI	CHI (High)	CHI (Mid)	CHI (Low)	HdTHI	WbT	FmT
CC41R	✓	-	-	✓	✓	-	-	-	-	-	-	-	-
CC41R1	✓	-	-	✓	✓	-	-	-	-	-	-	-	-
CL4416R (Convex)	-	-	✓	✓	✓	-	-	-	-	-	-	-	-
CL4416R (Linear)	-	✓	✓	✓	✓	✓	-	-	-	-	-	-	-
C41L47RP (Convex)	-	-	-	✓	✓	-	-	-	-	-	-	-	-
C41L47RP (Linear)	-	✓	-	✓	✓	✓	-	-	-	-	-	-	-

Independent

Function \ Probe	Trapezoid	Compound	CW	eFLOW	Elastography	Panoramic View	TDI	CHI (High)	CHI (Mid)	CHI (Low)	HdTHI	WbT	FmT
UST-2265-2	-	-	✓	-	-	-	-	-	-	-	-	-	-



Unit: mm

\*1 when the monitor arm is folded

- 
- The specifications are subject to change without notice.
  - The standard components and optional items differ depending on the country.  
Not all products are marketed in all countries.  
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  - McAfee is a registered trademark or trademark of McAfee LCC in the United States and other countries.
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  - Excel is a registered trademark or trademark of Microsoft Corporation in the United States and other countries.



# Transducer Data Sheet

## 1. Convex

	C251	C252	C253	C35
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	convex	convex	convex	convex
Number of elements	160	160	160	192
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics (multi-layer)	single crystal	ceramics (multi-layer)	ceramics (multi-layer)
Shape of elements	50R	50R	50R	50R
Dimension of the skin contact area (mm x mm)	72.8 x 10.5	72.8 x 14	72.7 x 15.2	66.8 x 11
Field of view (linear: width, convex: sector angle)	C: 70deg.	C: 70deg.	C: 70deg.	C: 70deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic convex	Electronic convex	Electronic convex	Electronic convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	3.0MHz (5-1MHz)	3.0MHz (6-1MHz)	3.0MHz (5-1MHz)	5.0MHz (8-2MHz)
Weight (probe + connection cable)	300	300	300	310
Cable length (cm)	220	220	220	220
Fully immersible probe *2	N/A	N/A	N/A	N/A
Sterilization is possible	X	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference MN1-5998	See Instructon Manual MN1-5998	See Instructon Manual MN1-5998	See Instructon Manual MN1-5998
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference MN1-5998	See Instructon Manual MN1-5998	See Instructon Manual MN1-5998	See Instructon Manual MN1-5998
Biopsy attachment available	X	X	X	X

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

\*3 RVS sensor is built inside the probe.

## 1. Convex

	C41	C42	C22P	C25P
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	convex	convex	convex	convex
Number of elements	128	128	128	160
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics (multi-layer)	ceramics (multi-layer)	ceramics (multi-layer)
Shape of elements	12R	21R	22R	50R
Dimension of the skin contact area (mm x mm)	26.7 x 9	36.2 x 11	29.3 x 14.1	72.8 x 15
Field of view (linear: width, convex: sector angle)	C: 100deg.	C: 80deg.	C: 74deg.	C: 70deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic convex	Electronic convex	Electronic convex	Electronic convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	7.5MHz (13-4MHz)	6.5MHz (8-4MHz)	3.0MHz (6-1MHz)	3.0MHz (5-1MHz)
Weight (probe + connection cable)	240	240	490	250
Cable length (cm)	200	220	220	220
Fully immersible probe *2	N/A	N/A	N/A	N/A
Sterilization is possible	X	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference Q1E-EP1393	See Instructon Manual Q1E-EP1359	See Instructon Manual Q1E-EP1457	See Instructon Manual MN1-5998
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference Q1E-EP1393	See Instructon Manual Q1E-EP1359	See Instructon Manual Q1E-EP1457	See Instructon Manual MN1-5998
Biopsy attachment available	N/A	X	X	X

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

\*3 RVS sensor is built inside the probe.

## 1. Convex

	<b>C23</b>	<b>C23RV *3</b>
Manufacturer	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	<b>convex</b>	<b>convex</b>
Number of elements	<b>96</b>	<b>96</b>
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	<b>single crystal</b>	<b>single crystal</b>
Shape of elements	<b>25R</b>	<b>25R</b>
Dimension of the skin contact area (mm x mm)	<b>32.7 x 10.5</b>	<b>32.7 x 10.5</b>
Field of view (linear: width, convex: sector angle)	<b>C: 70deg.</b>	<b>C: 70deg.</b>
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	<b>Electronic convex</b>	<b>Electronic convex</b>
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	<b>N/A</b>	<b>N/A</b>
For 3D / 4D probes: sweep angle (in degrees)	<b>N/A</b>	<b>N/A</b>
Nominal Imaging Frequencies	<b>3.5MHz (6-1MHz)</b>	<b>3.0MHz (6-1MHz)</b>
Weight (probe + connection cable)	<b>430</b>	<b>430</b>
Cable length (cm)	<b>220</b>	<b>220</b>
Fully immersible probe *2	<b>X</b>	<b>X</b>
Sterilization is possible	<b>X</b>	<b>X</b>
Recommended method for decontamination and recommended products	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>
(Trade name versus active ingredient) Reference	<b>MN1-5998</b>	<b>MN1-5998</b>
Recommended method for disinfection and recommended products	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>
(Trade name versus active ingredient) Reference	<b>MN1-5998</b>	<b>MN1-5998</b>
Biopsy attachment available	<b>X</b>	<b>X</b>

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

\*3 RVS sensor is built inside the probe.

## 2. Linear

	L34	L441	L442	L55
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	linear	linear	linear	linear
Number of elements	128	192	192	192
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics (multi-layer)	ceramics	ceramics	composite
Shape of elements	-	-	-	-
Dimension of the skin contact area (mm x mm)	41.0 x 11	42.1 x 8.8	41.9 x 11.1	54.8 x 10.2
Field of view (linear: width, convex: sector angle)	L: 38mm	L: 38mm	L: 38mm	L: 50mm
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic linear	Electronic linear	Electronic linear	Electronic linear
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	5MHz (7-3MHz)	6.0MHz (12-2MHz)	7.0MHz (12-2MHz)	7.5MHz (13-5MHz)
Weight (probe + connection cable)	230	300	300	250
Cable length (cm)	220	200	220	220
Fully immersible probe *2	N/A	N/A	N/A	N/A
Sterilization is possible	X	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	Q1E-EP1361	MN1-5998	MN1-5998	Q1E-EP1368
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	Q1E-EP1361	MN1-5998	MN1-5998	Q1E-EP1368
Biopsy attachment available	X	X	X	X

\*1 Suppose "composite" means 2 dimensional cut structure, All coresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

## 2. Linear

	<b>L64</b>	<b>SML44</b>	<b>L35</b>
Manufacturer	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	<b>linear</b>	<b>linear</b>	<b>linear</b>
Number of elements	<b>192</b>	<b>1728</b>	<b>480</b>
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	<b>composite</b>	<b>CMUT matrix</b>	<b>single crystal matrix</b>
Shape of elements	<b>-</b>	<b>-</b>	<b>-</b>
Dimension of the skin contact area (mm x mm)	<b>42.1 x 8.7</b>	<b>45.7 x 11.4</b>	<b>48.0 x 9.2</b>
Field of view (linear: width, convex: sector angle)	<b>L: 38mm</b>	<b>L: 38mm</b>	<b>L: 45mm</b>
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	<b>Electronic linear</b>	<b>Electronic linear</b>	<b>Electronic linear</b>
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
For 3D / 4D probes: sweep angle (in degrees)	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Nominal Imaging Frequencies	<b>10MHz (18-5MHz)</b>	<b>7.5MHz (22-2MHz)</b>	<b>5MHz (9-2MHz)</b>
Weight (probe + connection cable)	<b>250</b>	<b>420</b>	<b>480</b>
Cable length (cm)	<b>220</b>	<b>220</b>	<b>220</b>
Fully immersible probe *2	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Sterilization is possible	<b>X</b>	<b>X</b>	<b>X</b>
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>
Reference	<b>Q1E-EP1366</b>	<b>MN1-5998</b>	<b>MN1-5998</b>
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>
Reference	<b>Q1E-EP1366</b>	<b>MN1-5998</b>	<b>MN1-5998</b>
Biopsy attachment available	<b>X</b>	<b>N/A</b>	<b>N/A</b>

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

### 3. Sector

	S11	S12	S121	S211
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	sector	sector	sector	sector
Number of elements	64	80	80	64
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	single crystal	single crystal	crystals
Shape of elements	-	-	-	-
Dimension of the skin contact area (mm x mm)	24.1 x 17.2	23.0 x 16	22.1 x 15.2	23.5 x 17
Field of view (linear: width, convex: sector angle)	S: 90deg. (wide scan: 120deg.)	S: 90deg.	S: 90deg. (wide scan: 120deg.)	S: 90deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Phased Array	Phased Array	Phased Array	Phased Array
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	2.5MHz (5-1MHz)	3.0MHz (5-1MHz)	2.75MHz (5-1MHz)	3.0MHz (5-1MHz)
Weight (probe + connection cable)	130	180	190	180
Cable length (cm)	220	220	225	220
Fully immersible probe *2	N/A	N/A	N/A	N/A
Sterilization is possible	X	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference MN1-5998	See Instructon Manual MN1-5998	See Instructon Manual MN1-5998	See Instructon Manual MN1-5998
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference MN1-5998	See Instructon Manual MN1-5998	See Instructon Manual MN1-5998	See Instructon Manual MN1-5998
Biopsy attachment available	N/A	N/A	N/A	N/A

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

### 3. Sector

	S31	S42	S3ESEL	S3ESL1
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	sector	sector	sector/ endocavitary	sector/ endocavitary
Number of elements	64	96	64	64
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	single crystal	ceramics (multi-layer)	ceramics	ceramics
Shape of elements	-	-	-	-
Dimension of the skin contact area (mm x mm)	13.9 x 12	13.0 x 10	diameter 12.2	diameter 11.8
Field of view (linear: width, convex: sector angle)	S: 90deg. (wide scan: 100deg.)	S: 90deg. (wide scan: 100deg.)	S: 90deg. (wide scan: 100deg.)	S: 90deg. (wide scan: 100deg.)
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Phased Array	Phased Array	Phased Array	Phased Array
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	5.0MHz (9-2MHz)	8.0MHz (14-3MHz)	5.0MHz (8-2MHz)	5.0MHz (9-2MHz)
Weight (probe + connection cable)	140	140	940	690
Cable length (cm)	220	220	156	210
Fully immersible probe *2	N/A	N/A	N/A	X
Sterilization is possible	X	X	N/A	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference Q1E-EP1376	See Instructon Manual MN1-5998	See Instructon Manual MN1-5998	See Instructon Manual MN1-6117
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference Q1E-EP1376	See Instructon Manual MN1-5998	See Instructon Manual MN1-5998	See Instructon Manual MN1-6117
Biopsy attachment available	N/A	N/A	N/A	N/A

\*1 Suppose "composite" means 2 dimensional cut structure, All coresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

### 3. Sector

	<b>S3ESCLS</b>
Manufacturer	<b>Hitachi Ltd.</b>
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	<b>sector/ endocavitary</b>
Number of elements	<b>48</b>
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	<b>ceramics</b>
Shape of elements	<b>-</b>
Dimension of the skin contact area (mm x mm)	<b>diameter 9.2</b>
Field of view (linear: width, convex: sector angle)	<b>S: 90deg. (wide scan: 100deg.)</b>
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	<b>Phased Array</b>
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	<b>N/A</b>
For 3D / 4D probes: sweep angle (in degrees)	<b>N/A</b>
Nominal Imaging Frequencies	<b>5.1MHz (8-2MHz)</b>
Weight (probe + connection cable)	<b>900</b>
Cable length (cm)	<b>185</b>
Fully immersible probe *2	<b>N/A</b>
Sterilization is possible	<b>N/A</b>
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	<b>See Instructon Manual</b>
	<b>Reference MN1-6015</b>
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	<b>See Instructon Manual</b>
	<b>Reference MN1-6015</b>
Biopsy attachment available	<b>N/A</b>

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

#### 4. Endocavity

	C41V	C41V1	C41B	C41RP
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	convex/ endocavitary	convex/ endocavitary	convex/ endocavitary	convex/ endocavitary
Number of elements	192	192	192	156
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics (multi-layer)	ceramics (multi-layer)	ceramics
Shape of elements	10R	10R	10R	9R
Dimension of the skin contact area (mm x mm)	42.9 x 9.6	42.9 x 10	42.9 x 10	31.419.5
Field of view (linear: width, convex: sector angle)	C: 200deg.	C: 200deg.	C: 200deg.	C: 180deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic convex	Electronic convex	Electronic convex	Electronic convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	6.5MHz (8-4MHz)	6.5MHz (10-2MHz)	6.5MHz (10-2MHz)	6.0MHz (9-2MHz)
Weight (probe + connection cable)	390	590	330	425
Cable length (cm)	220	250	250	250
Fully immersible probe *2	N/A	N/A	X	X
Sterilization is possible	X	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	Q1E-EP1363	Q1E-EP1432	MN1-6161	MN1-6161
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	Q1E-EP1363	Q1E-EP1432	MN1-6161	MN1-6161
Biopsy attachment available	X	X	X	X

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

#### 4. Endocavity

	R41R	R41RL	C41L47RP	CL4416R
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	convex/ endocavitary	convex/ endocavitary	linear/ convex/ endocavitary	linear/ convex/ endocavitary
Number of elements	256	256	sagittal: 192 axial: 192	sagittal: 192 axial: 152
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics	ceramics	ceramics (multi-layer)
Shape of elements	6R	6R	sagittal: - axial: 10R	sagittal: - axial: 9R
Dimension of the skin contact area (mm x mm)	38.6 x 9	38.6 x 9	L(s): 76 x 10 C(a): 42.6 x 9.6	L(s): 72.6 x 9.3 C(a): 34.7 x 10
Field of view (linear: width, convex: sector angle)	C: 360deg.	C: 360deg.	L(s): 64mm C(a): 200deg.	L(s): 63mm C(a): 180deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic convex	Electronic convex	Electronic (s) linear (a) convex	Electronic (s) linear (a) convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	7.5MHz (10-5MHz)	7.5MHz (10-5MHz)	sagittal: 7.5MHz (10-5MHz) axial: 6.5MHz (8-4MHz)	sagittal: 7.5MHz (14-2MHz) axial: 6.5MHz (10-2MHz)
Weight (probe + connection cable)	530	530	1090	490
Cable length (cm)	210	210	220	250
Fully immersible probe *2	X	X	N/A	X
Sterilization is possible	X	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	MN1-6161	MN1-6161	Q1E-EP1451	MN1-6161
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	MN1-6161	MN1-6161	Q1E-EP1451	MN1-6161
Biopsy attachment available	N/A	N/A	X	X

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

#### 4. Endocavity

	CC41R	CC41R1
Manufacturer	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	convex/ convex/ endocavitary	convex/ convex/ endocavitary
Number of elements	sagittal: 96 axial: 128	sagittal: 152 axial: 152
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics (multi-layer)
Shape of elements	sagittal: 10R axial: 10R	sagittal: 9R axial: 9R
Dimension of the skin contact area (mm x mm)	C(s): 23.6 x 12.7 C(a): 30.8 x 12	C(s): 34.7 x 10 C(a): 34.7 x 10
Field of view (linear: width, convex: sector angle)	C(s): 100deg. C(a): 120deg.	C(s): 180deg. C(a): 180deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic (s) convex (a) convex	Electronic (s) convex (a) convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A
Nominal Imaging Frequencies	sagittal: 6.5MHz (8-4MHz) axial: 6.5MHz (8-4MHz)	sagittal: 6.5MHz (10-2MHz) axial: 6.5MHz (10-2MHz)
Weight (probe + connection cable)	445	440
Cable length (cm)	210	250
Fully immersible probe *2	N/A	X
Sterilization is possible	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual
	Reference	
	MN1-6161	MN1-6161
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual
	Reference	
	MN1-6161	MN1-6161
Biopsy attachment available	X	X

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

## 5. Intraoperative

	C22K	C22T	C22I	C42K
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	convex	convex	convex	convex
Number of elements	90	90	90	144
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics	ceramics	ceramics
Shape of elements	21R	20R	20R	21R
Dimension of the skin contact area (mm x mm)	33.8 x 11.4	33.8 x 11.4	33.8 x 11.4	28.8 x 10.1
Field of view (linear: width, convex: sector angle)	C: 82deg.	C: 82deg.	C: 82deg.	C: 65deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic convex	Electronic convex	Electronic convex	Electronic convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	3.5MHz (6-1MHz)	3.5MHz (6-1MHz)	3.5MHz (6-1MHz)	7.5MHz (10-4MHz)
Weight (probe + connection cable)	160	180	180	350
Cable length (cm)	290	290	290	300
Fully immersible probe *2	N/A	X	X	N/A
Sterilization is possible	X	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference	See Instructon Manual Reference	See Instructon Manual Reference	See Instructon Manual Reference
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference	See Instructon Manual Reference	See Instructon Manual Reference	See Instructon Manual Reference
Biopsy attachment available	X	N/A	N/A	X

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

## 5. Intraoperative

	<b>C42T</b>	<b>L43K</b>	<b>L44K</b>	<b>L46K</b>
Manufacturer	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	<b>convex</b>	<b>linear</b>	<b>linear</b>	<b>linear</b>
Number of elements	<b>144</b>	<b>128</b>	<b>192</b>	<b>192</b>
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	<b>ceramics</b>	<b>ceramics</b>	<b>ceramics</b>	<b>ceramics</b>
Shape of elements	<b>20R</b>	<b>-</b>	<b>-</b>	<b>-</b>
Dimension of the skin contact area (mm x mm)	<b>28.8 x 10.1</b>	<b>31.5 x 7.2</b>	<b>48.3 x 10.3</b>	<b>77 x 10</b>
Field of view (linear: width, convex: sector angle)	<b>C: 65deg.</b>	<b>L: 26mm</b>	<b>L: 42mm</b>	<b>L: 60mm</b>
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	<b>Electronic convex</b>	<b>Electronic linear</b>	<b>Electronic linear</b>	<b>Electronic linear</b>
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
For 3D / 4D probes: sweep angle (in degrees)	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Nominal Imaging Frequencies	<b>7.5MHz (10-3MHz)</b>	<b>7.0MHz (12-2MHz)</b>	<b>7.5MHz (14-2MHz)</b>	<b>7.5MHz (13-3MHz)</b>
Weight (probe + connection cable)	<b>180</b>	<b>155</b>	<b>360</b>	<b>460</b>
Cable length (cm)	<b>290</b>	<b>300</b>	<b>300</b>	<b>300</b>
Fully immersible probe *2	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Sterilization is possible	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>
Reference	<b>MN1-6000</b>	<b>MN1-6369</b>	<b>MN1-6000</b>	<b>MN1-6000</b>
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>
Reference	<b>MN1-6000</b>	<b>MN1-6369</b>	<b>MN1-6000</b>	<b>MN1-6000</b>
Biopsy attachment available	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>X</b>

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case "WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

## 5. Intraoperative

	L46K1	L44LA	L44LA1	L51K
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	linear	linear/ endocavity	linear/ endocavity	linear
Number of elements	192	192	64	64
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics	ceramics	ceramics
Shape of elements	-	-	-	-
Dimension of the skin contact area (mm x mm)	70.3 x 10.3	44.2 x 6.4	43.3 x 7.2	16.4 x 5.3
Field of view (linear: width, convex: sector angle)	L: 63mm	L: 36mm	L: 38mm	L: 13mm
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic linear	Electronic linear	Electronic linear	Electronic linear
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	7.5MHz (14-2MHz)	7.0MHz (13-2MHz)	7.5MHz (13-2MHz)	8.5MHz (15-3MHz)
Weight (probe + connection cable)	360	665	250	100
Cable length (cm)	300	300	290	300
Fully immersible probe *2	X	N/A	X	X
Sterilization is possible	X	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference MN1-6000	See Instructon Manual MN1-6000	See Instructon Manual MN1-6000	See Instructon Manual MN1-6000
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference MN1-6000	See Instructon Manual MN1-6000	See Instructon Manual MN1-6000	See Instructon Manual MN1-6000
Biopsy attachment available	N/A	X	X	N/A

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

## 5. Intraoperative

	L53K	S31KP	L31KP
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	linear	sector	linear
Number of elements	128	34	48
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics	ceramics
Shape of elements	-	-	-
Dimension of the skin contact area (mm x mm)	8.0 x 29.8	8.0 x 8	6.9 x 6.5
Field of view (linear: width, convex: sector angle)	L: 25mm	S: 90deg.	L: 6mm
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic linear	Phased Array	Electronic linear
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A
Nominal Imaging Frequencies	8.5MHz (15-3MHz)	5.0MHz (8-3MHz)	5.0MHz (9-2MHz)
Weight (probe + connection cable)	260	180	180
Cable length (cm)	300	250	300
Fully immersible probe *2	X	X	X
Sterilization is possible	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference MN1-6000	See Instructon Manual MN1-6000	See Instructon Manual MN1-6000
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference MN1-6000	See Instructon Manual MN1-6000	See Instructon Manual MN1-6000
Biopsy attachment available	N/A	X	X

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

## 6. 4D

	<b>MXS1</b>	<b>MXS2ESLL1</b>	<b>VC34</b>	<b>VC35</b>
Manufacturer	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	<b>sector/ 4D</b>	<b>sector/ endocavity/ 4D</b>	<b>convex/ 4D</b>	<b>convex/ 4D</b>
Number of elements	<b>3072</b>	<b>1372</b>	<b>192</b>	<b>192</b>
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	<b>single crystal matrix</b>	<b>single crystal matrix</b>	<b>ceramics</b>	<b>ceramics</b>
Shape of elements	<b>-</b>	<b>-</b>	<b>40R</b>	<b>46R</b>
Dimension of the skin contact area (mm x mm)	<b>22.7 x 16.2</b>	<b>11.3 x 10.8</b>	<b>65 x 34.4</b>	<b>64 x 36</b>
Field of view (linear: width, convex: sector angle)	<b>S: 90deg.</b>	<b>S: 90deg.</b>	<b>C: 70deg.</b>	<b>C: 72deg.</b>
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	<b>Phased Array</b>	<b>Phased Array</b>	<b>Electronic convex/ Mechanical sector</b>	<b>Electronic convex/ Mechanical sector</b>
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	<b>electronic</b>	<b>electronic</b>	<b>mechanical</b>	<b>mechanical</b>
For 3D / 4D probes: sweep angle (in degrees)	<b>90deg.</b>	<b>90deg.</b>	<b>70deg.</b>	<b>80deg.</b>
Nominal Imaging Frequencies	<b>2.75MHz (5-1MHz)</b>	<b>4.0MHz (10-1MHz)</b>	<b>5.0MHz (7-2MHz)</b>	<b>4.0MHz (8-2MHz)</b>
Weight (probe + connection cable)	<b>390</b>	<b>890</b>	<b>560</b>	<b>540</b>
Cable length (cm)	<b>220</b>	<b>180</b>	<b>230</b>	<b>200</b>
Fully immersible probe *2	<b>N/A</b>	<b>X</b>	<b>N/A</b>	<b>N/A</b>
Sterilization is possible	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>
Reference	<b>MN1-5998</b>	<b>MN1-6117</b>	<b>MN1-6002</b>	<b>MN1-6002</b>
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>
Reference	<b>MN1-5998</b>	<b>MN1-6117</b>	<b>MN1-6002</b>	<b>MN1-6002</b>
Biopsy attachment available	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>

\*1 Suppose "composite" means 2 dimensional cut structure, All coorresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

## 6. 4D

	VC41V	VL54
Manufacturer	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	convex/ endocavity/ 4D	linear/ 4D
Number of elements	136	160
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	composite
Shape of elements	10R	-
Dimension of the skin contact area (mm x mm)	25 x 25	48 x 56
Field of view (linear: width, convex: sector angle)	C: 140deg.	L: 38mm
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic convex/ Mechanical sector	Electronicconvex/ Mechanical sector
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	mechanical	mechanical
For 3D / 4D probes: sweep angle (in degrees)	90deg.	29deg.
Nominal Imaging Frequencies	6.0MHz (8-2MHz)	7.5MHz (13-5MHz)
Weight (probe + connection cable)	620	610
Cable length (cm)	200	210
Fully immersible probe *2	N/A	N/A
Sterilization is possible	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual
Reference	MN1-6002	MN1-6002
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual
Reference	MN1-6002	MN1-6002
Biopsy attachment available	N/A	N/A

\*1 Suppose "composite" means 2 dimensional cut structure, All cooresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

## 7. EUPseries

	EUP-B514	EUP-L53L	EUP-O54J	EUP-B715
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary,sector, 3D, 4D...)	convex	linear	linear	convex
Number of elements	192	256	128	160
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics	ceramics	ceramics (multi-layer)
Shape of elements	40R	-	-	50R
Dimension of the skin contact area (mm x mm)	79.8 x 14.8	99.4 x 11	5.5 x 28.7	72.8 x 15
Field of view (linear: width, convex: sector angle)	C: 90deg.	L: 92mm	L: 25mm	C: 70deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic convex	Electronic linear	Electronic linear	Electronic convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	3.5MHz (5-2MHz)	7.5MHz (10-5MHz)	10.0MHz (13-7MHz)	3.5MHz (5-1MHz)
Weight (probe + connection cable)	390	1040	190	320
Cable length (cm)	220	220	220	220
Fully immersible probe *2	X	N/A	X	N/A
Sterilization is possible	X	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	Q1E-EP0616	Q1E-EP0348	Q1E-EP1064	Q1E-EP1245
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	Q1E-EP0616	Q1E-EP0348	Q1E-EP1064	Q1E-EP1245
Biopsy attachment available	X	N/A	N/A	X

\*1 Suppose "composite" means 2 dimensional cut structure. All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof box "EZU-WB1-H" is necessary. The resistance to water pressure resistance is up to 20 kPa.

## 7. EUPseries

	<b>EUP-C715</b>	<b>EUP-L74M</b>	<b>EUP-O732T</b>	<b>EUP-OL334</b>
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary,sector, 3D, 4D...)	convex	linear	convex	convex
Number of elements	160	192	144	96
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics (multi-layer)	composite	ceramics	ceramics
Shape of elements	50R	-	20R	40R
Dimension of the skin contact area (mm x mm)	72.8 x 15	54.8 x 10.2	28.8 x 10.1	35.0 x 7.3
Field of view (linear: width, convex: sector angle)	C: 70deg.	L: 50mm	C: 65deg.	C: 40deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic convex	Electronic linear	Electronic convex	Electronic convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	3.0MHz (5-1MHz)	7.5MHz (13-5MHz)	7.5MHz (10-3MHz)	7.5MHz (10-5MHz)
Weight (probe + connection cable)	320	250	190	540
Cable length (cm)	220	220	290	300
Fully immersible probe *2	N/A	N/A	N/A	N/A
Sterilization is possible	X	X	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	Q1E-EP1011	Q1E-EP1041	Q1E-EP1234	Q1E-EP0304
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	Q1E-EP1011	Q1E-EP1041	Q1E-EP1234	Q1E-EP0304
Biopsy attachment available	X	X	X	N/A

\*1 Suppose "composite" means 2 dimensional cut structure. All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof box "EZU-WB1-H" is necessary. The resistance to water pressure resistance is up to 20 kPa

## 7. EUPseries

	EUP-CC531S	EUP-R54AW-19
Manufacturer	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	convex/ convex/ endocavitary	convex
Number of elements	sagittal: 96 axial: 128	256
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics
Shape of elements	sagittal: 10R axial: 10R	6R
Dimension of the skin contact area (mm x mm)	C(s): 23.6 x 12.7 C(a): 30.8 x 12	38.6 x 9
Field of view (linear: width, convex: sector angle)	C(s): 100deg. C(a): 120deg.	C: 360deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic (s) convex (a) convex	Electronic convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A
Nominal Imaging Frequencies	sagittal: 6.5MHz (8-4MHz) axial: 6.5MHz (8-4MHz)	7.5MHz (10-5MHz)
Weight (probe + connection cable)	195	640
Cable length (cm)	210	220
Fully immersible probe *2	N/A	X
Sterilization is possible	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual
Reference	Q1E-EP1357	Q1E-EP0609
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual
Reference	Q1E-EP1357	Q1E-EP0609
Biopsy attachment available	X	N/A

\*1 Suppose "composite" means 2 dimensional cut structure. All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof box "EZU-WB1-H" is necessary. The resistance to water pressure resistance is up to 20 kPa

## 8. USTseries

		<b>UST-52105</b>	<b>UST-5418</b>	<b>UST-5550</b>	<b>UST-9130</b>
Manufacturer		<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>	<b>Hitachi Ltd.</b>
Type of probe (convex, linear, endocavitary,sector, 3D, 4D...)		<b>sector</b>	<b>linear</b>	<b>linear</b>	<b>convex</b>
Number of elements		<b>80</b>	<b>192</b>	<b>64</b>	<b>186</b>
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT		<b>ceramics</b>	<b>ceramics</b>	<b>ceramics</b>	<b>ceramics</b>
Shape of elements		<b>-</b>	<b>-</b>	<b>-</b>	<b>60R</b>
Dimension of the skin contact area (mm x mm)		<b>22.1 x 15.2</b>	<b>44.2 x 6.4</b>	<b>43.1 x 7.2</b>	<b>81.5 x 14</b>
Field of view (linear: width, convex: sector angle)		<b>S: 90deg.</b>	<b>L: 36mm</b>	<b>L: 38mm</b>	<b>C: 60deg.</b>
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?		<b>Phased Array</b>	<b>Electronic linear</b>	<b>Electronic linear</b>	<b>Electronic convex</b>
For 3D / 4D probes: rotation of the probe (electronic or mechanical)		<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
For 3D / 4D probes: sweep angle (in degrees)		<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Nominal Imaging Frequencies		<b>2.9MHz (5-1MHz)</b>	<b>7MHz (13-2MHz)</b>	<b>7.5MHz (13-4MHz)</b>	<b>3.6MHz (6-2MHz)</b>
Weight (probe + connection cable)		<b>170</b>	<b>670</b>	<b>470</b>	<b>290</b>
Cable length (cm)		<b>180</b>	<b>300</b>	<b>290</b>	<b>200</b>
Fully immersible probe *2		<b>N/A</b>	<b>N/A</b>	<b>X</b>	<b>N/A</b>
Sterilization is possible		<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
Recommended method for decontamination and recommended products (Trade name versus active ingredient)		<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>
	Reference	<b>MN1-5064</b>	<b>MN1-5783</b>	<b>MN1-5308</b>	<b>MN1-5160 MN1-5493</b>
Recommended method for disinfection and recommended products (Trade name versus active ingredient)		<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>	<b>See Instructon Manual</b>
	Reference	<b>MN1-5064</b>	<b>MN1-5783</b>	<b>MN1-5308</b>	<b>MN1-5160 MN1-5493</b>
Biopsy attachment available		<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>X</b>

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof cover " MP-2790" is necessary. The resistance to water pressure resistance is up to 9.8 kPa.

## 8. USTseries

		UST-9132I
Manufacturer		Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)		convex
Number of elements		144
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT		ceramics
Shape of elements		20R
Dimension of the skin contact area (mm x mm)		28.8 x 10.1
Field of view (linear: width, convex: sector angle)		C: 65deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?		Electronic convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)		N/A
For 3D / 4D probes: sweep angle (in degrees)		N/A
Nominal Imaging Frequencies		7.5MHz (10-3MHz)
Weight (probe + connection cable)		150
Cable length (cm)		290
Fully immersible probe *2		X
Sterilization is possible		X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)		See Instructon Manual
		Reference
		MN1-5221
Recommended method for disinfection and recommended products (Trade name versus active ingredient)		See Instructon Manual
		Reference
		MN1-5221
Biopsy attachment available		N/A

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

\*2 When immersing, optional waterproof cover " MP-2790" is necessary. The resistance to water pressure resistance is up to 9.8 kPa.

## 9. Independent

	UST-2265-2	UST-2266-5
Manufacturer	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	independent	independent
Number of elements	2	2
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics
Shape of elements	-	-
Dimension of the skin contact area (mm x mm)	diameter 16.2	diameter 9
Field of view (linear: width, convex: sector angle)	N/A	N/A
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	N/A	N/A
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A
Nominal Imaging Frequencies	2.0MHz	5.0MHz
Weight (probe + connection cable)	165	150
Cable length (cm)	200	200
Fully immersible probe *2	N/A	N/A
Sterilization is possible	X	X
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference MN1-0833	See Instructon Manual MN1-0831
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual Reference MN1-0833	See Instructon Manual MN1-0831
Biopsy attachment available	N/A	N/A

\*1 Suppose "composite" means 2 dimensional cut structure, All coresponding natures of each probe are stated.

\*2 When immersing, optional waterproof case " WP-001" is necessary. The resistance to water pressure resistance is up to 20 kPa.

## 10. Transducers for FUTUS

	CA2-8AD-H	CF4-9-H	EVN4-9-H	LA3-16AD-H
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	convex	convex	convex	linear
Number of elements	192	128	128	192
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics	ceramics	ceramics
Shape of elements	60R	14R	10R	-
Dimension of the skin contact area (mm x mm)	70 x 16	28 x 9	37 x 10	46 x 8
Field of view (linear: width, convex: sector angle)	C: 58 deg.	C: 92 deg.	C: 148 deg.	L: 38.4mm
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Electronic convex	Electronic convex	Electronic convex	Electronic linear
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	N/A	N/A	N/A
For 3D / 4D probes: sweep angle (in degrees)	N/A	N/A	N/A	N/A
Nominal Imaging Frequencies	4.3 MHz (1.6-7.6MHz)	6.4 MHz (2.6-9.9MHz)	6.6 MHz (2.8-10.7MHz)	8.7 MHz (2.4-15.3MHz)
Weight (probe + connection cable)	635	455	580	575
Cable length (cm)	220	220	250	220
Fully immersible probe	N/A	N/A	N/A	N/A
Sterilization is possible	N/A	N/A	N/A	N/A
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	MN1-6474	MN1-6474	MN1-6474	MN1-6474
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	MN1-6474	MN1-6474	MN1-6474	MN1-6474
Biopsy attachment available	N/A	N/A	X	N/A

\*1 Suppose "composite" means 2 dimensional cut structure, All corresponding natures of each probe are stated.

## 10. Transducers for FUTUS

	PN2-4-H	VN4-8-H	V5-9-H
Manufacturer	Hitachi Ltd.	Hitachi Ltd.	Hitachi Ltd.
Type of probe (convex, linear, endocavitary, sector, 3D, 4D...)	sector	convex/ 4D	convex/ 4D
Number of elements	64	128	192
Nature of elements *1 crystals, ceramics, polymers, composite, CMUT	ceramics	ceramics	ceramics
Shape of elements	-	38R	10R
Dimension of the skin contact area (mm x mm)	26 x 17	66 x 45	23 x 23
Field of view (linear: width, convex: sector angle)	S: 90 deg.	C: 77 deg.	C: 150 deg.
Type of scanning: mechanical? Electronic linear? Sector electronics (phased array or curved probe)?	Phased Array	Electronic convex	Electronic convex
For 3D / 4D probes: rotation of the probe (electronic or mechanical)	N/A	Mechanical	Mechanical
For 3D / 4D probes: sweep angle (in degrees)	N/A	85 deg.	90 deg.
Nominal Imaging Frequencies	2.6 MHz (1.1-4.3MHz)	4.5 MHz, (1.5-7.7MHz)	5.9 MHz (2.4-10.0MHz)
Weight (probe + connection cable)	455	675	825
Cable length (cm)	215	220	240
Fully immersible probe	N/A	N/A	N/A
Sterilization is possible	N/A	N/A	N/A
Recommended method for decontamination and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	MN1-6474	MN1-6474	MN1-6474
Recommended method for disinfection and recommended products (Trade name versus active ingredient)	See Instructon Manual	See Instructon Manual	See Instructon Manual
Reference	MN1-6474	MN1-6474	MN1-6474
Biopsy attachment available	N/A	N/A	N/A

\*1 Suppose "composite" means 2 dimensional cut structure, All coorresponding natures of each probe are stated.