

FURUNO



CM-200 light

Ultrasound Bone Densitometer



Corporate Profile

Profile

Since the inception in 1948 when the world's first fish finder was successfully commercialized, FURUNO ELECTRIC., CO. LTD. has been responding to the needs of the society through developing various electronics product. Nowadays, FURUNO has established a firm position in the world as global comprehensive manufacturer of marine electronics device.

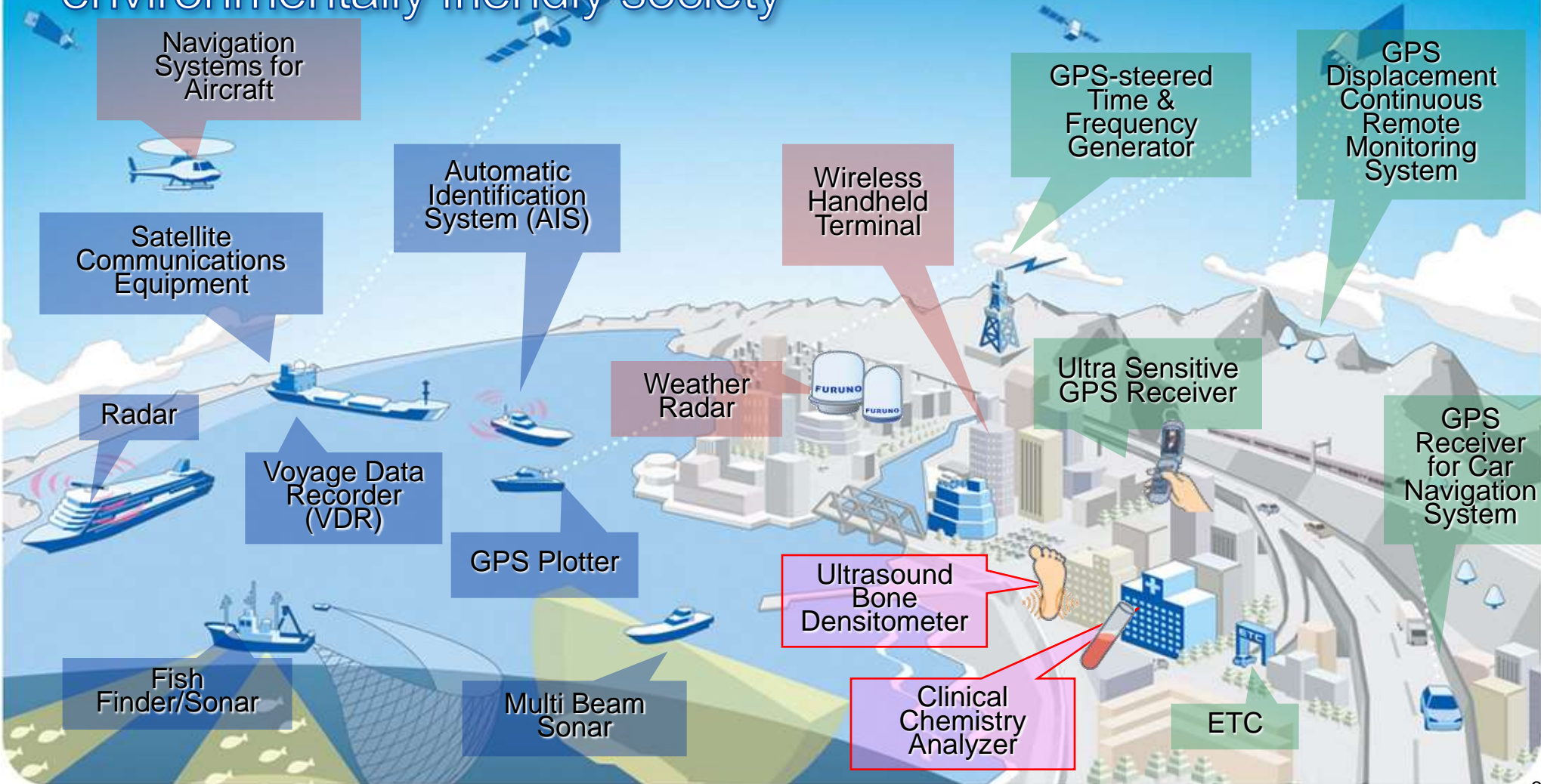


Company Name	FURUNO ELECTRIC CO., LTD.
Headquarters	Nishinomiya City, Hyogo, Japan
Incorporated	May 23, 1951
Business	Production and distribution of maritime and industrial electronic products.
Paid in Capital	JPY 7,534 million
Number of employees (Consolidated)	2,836
Net sales	JPY 75,666 million
President	Yukio Furuno

As of Feb 28, 2014

Business Fields

Achieving better safety and peace of mind to bring about an environmentally friendly society



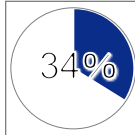
Business Description

Sales percentage of the total sales

Maritime Electronic Products



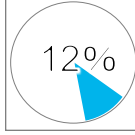
For Deepsea Vessels



We deliver a wide range of navigation and communications equipment for ocean-going fleets. We also provide a swift service provision scheme in our attempt to minimize downtime in case of equipment failures. These efforts adds up to better safety and efficiency at sea.



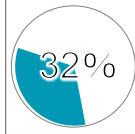
For Recreational Boats



We provide Fish Finders, GPS plotters, Radar and radio communication products for recreational craft. These products are based on the same commercial-grade quality that we use on our professional line of products.



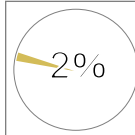
For Fishing Vessels



We are developing Fish Finders, Sonar, Radar, Current Indicators and water temperature sensors for various types of fishing vessels.



For Government Vessels

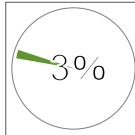


For government vessels we provide a wide range of navigation and communication equipment to assist them in safe and efficient operation.

Industrial Electronic Products



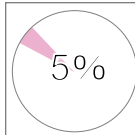
GPS Products



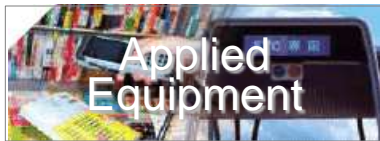
In addition to GPS core modules for car navigation systems and mobile phones, we supply GPS applied products for mobile phone base stations and other applications.



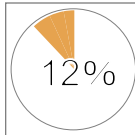
Medical Equipment



We are developing clinical chemistry analyzers, blood-testing equipment commonly used at hospitals and ultrasound bone densitometers based on our core competencies as well.



Applied Equipment



We are developing ETC (Electrical Toll Collection system) automotive devices and other ITS (Intelligent Transport Systems) devices incorporating DSRC technology. Also, we provide handheld terminals for logistics and wireless LAN access points.

Global Network



- Subsidiaries and representative offices
- Service centers
- National distributors

Domestic 9 offices
Overseas 25 subsidiaries
Distributors in 84 countries
As of Feb 28, 2014

AARNA SYSTEMS (DISTRIBUTOR IN INDIA)

Aarna Systems as a company is designed as **One Stop Shop for Bone Densitometry Solutions.**

Founded in Nov 2008 by Technocrats in the field of Osteoporosis Assessment, Aarna Systems specializes in cutting edge technology products that serve the needs of orthopedic hospitals, well women clinics, Pharmaceutical companies, diagnostic medical imaging community, Gyms, Wellness Centre, Obesity Centre & Nutrition Centre.

We are **Exclusive Distributors in India** for **Furuno Electric Company Limited, Japan,** World Renowned Company for its **Bone Densitometry Systems.**

Headquartered in Udaipur, our products are sold throughout India utilizing a direct sales force as well as a network of independent sales representatives and distributors.

For more details we invite you to visit us at www.aarnasystems.in

As of Feb 28, 2014

Osteoporosis & Bone Densitometer

Osteoporosis



Healthy Bone



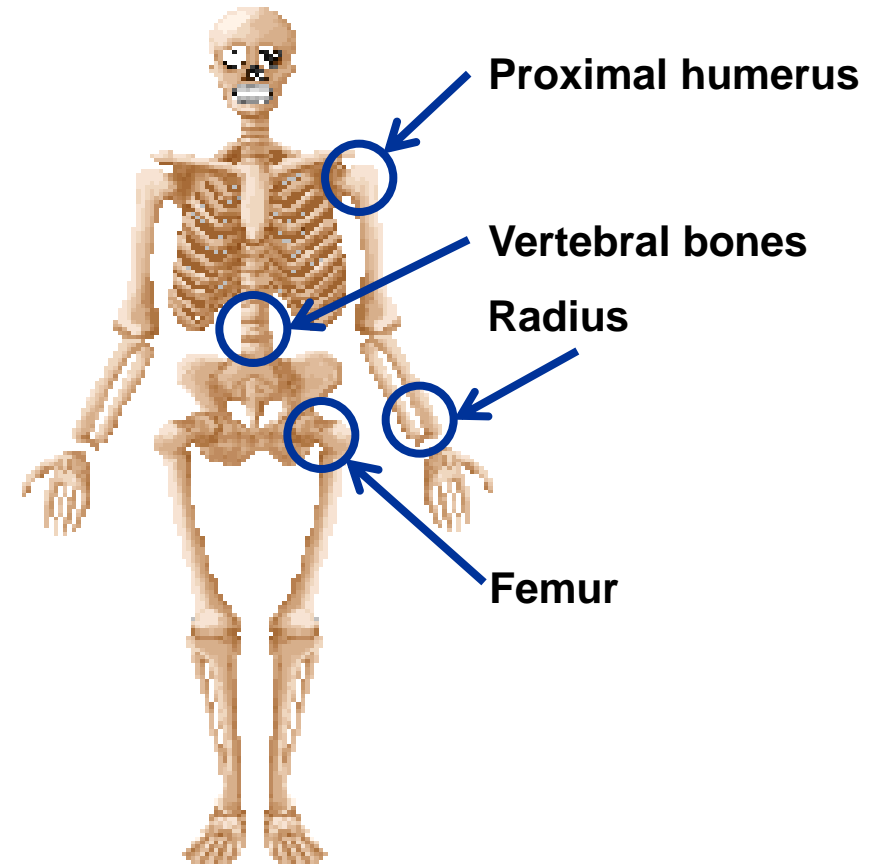
Osteoporotic Bone

Osteoporosis is a disease of the bones. It happens when you lose too much bone, make too little bone or both.

As a result, your bones become weak and may break from a minor fall or, in serious cases, even from simple actions, like sneezing or bumping into furniture.

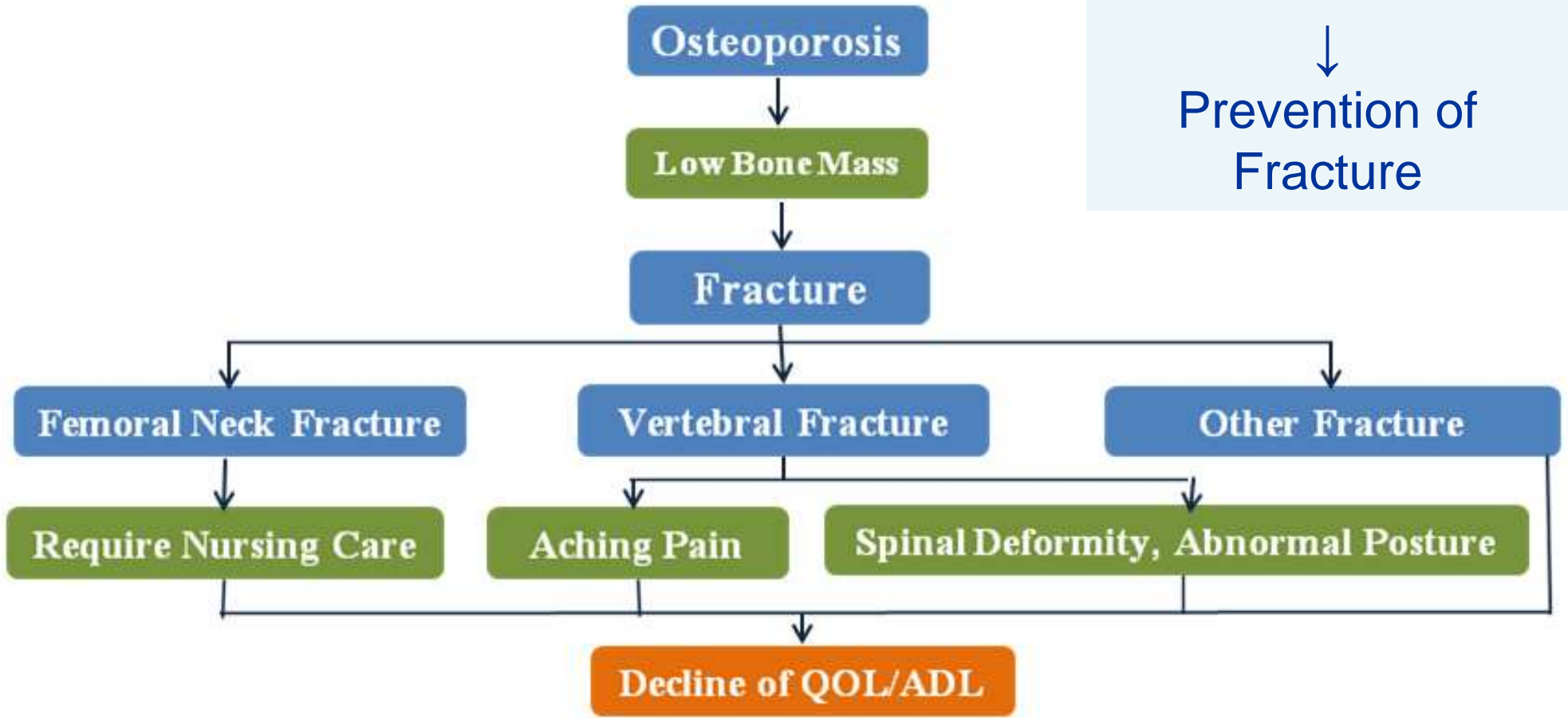
* National Osteoporosis Foundation

Fracture in Osteoporosis



Osteoporosis

Clinical End-Point
↓
Prevention of Fracture



- QOL: Quality Of Life
- ADL: Activity of Daily Living

Bone Densitometer

DXA

(Dual energy X-ray Absorptiometry)

Peripheral part



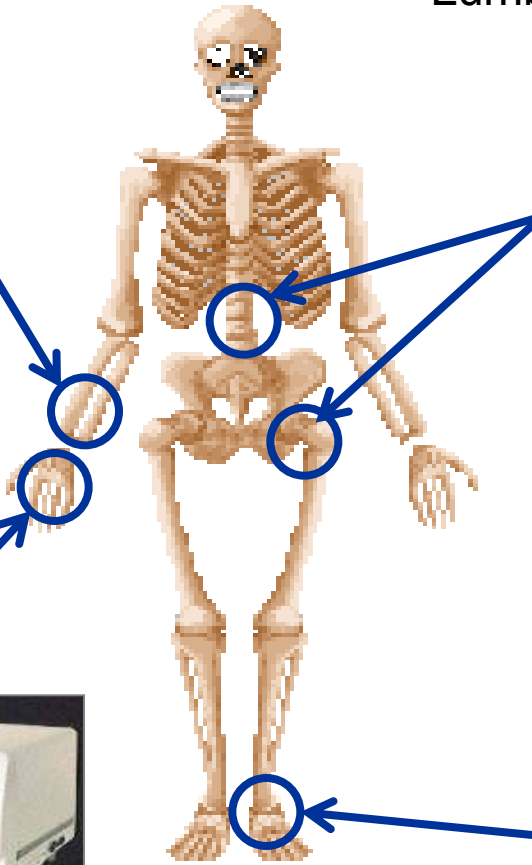
DXA

(Dual energy X-ray Absorptiometry)

Lumbar spine, femoral neck



MD(Micro Densitometry),
DIP(Digital Image Processing)
Mid finger



QUS

(Quantitative UltraSound)

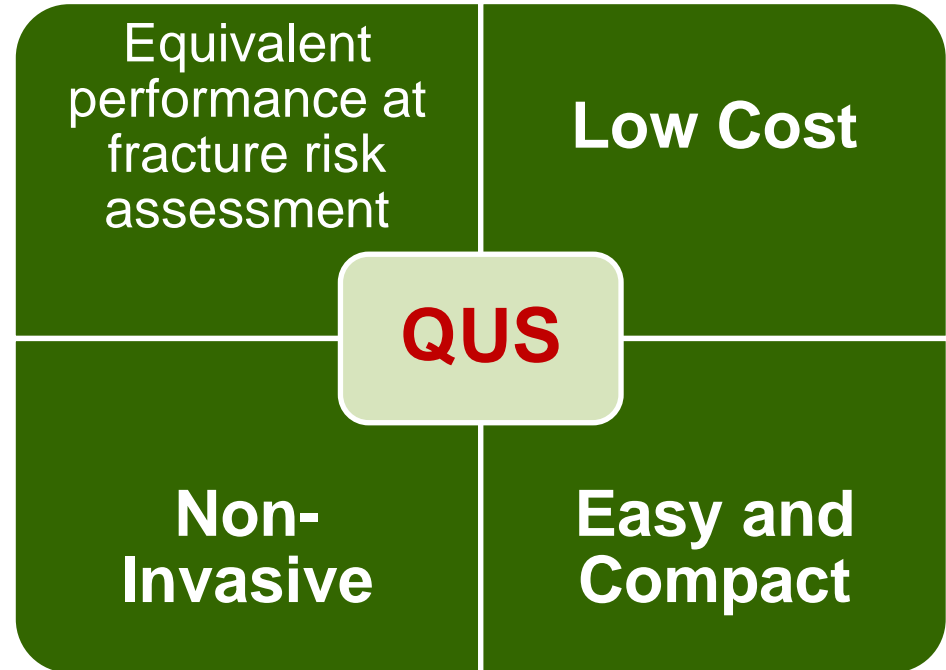
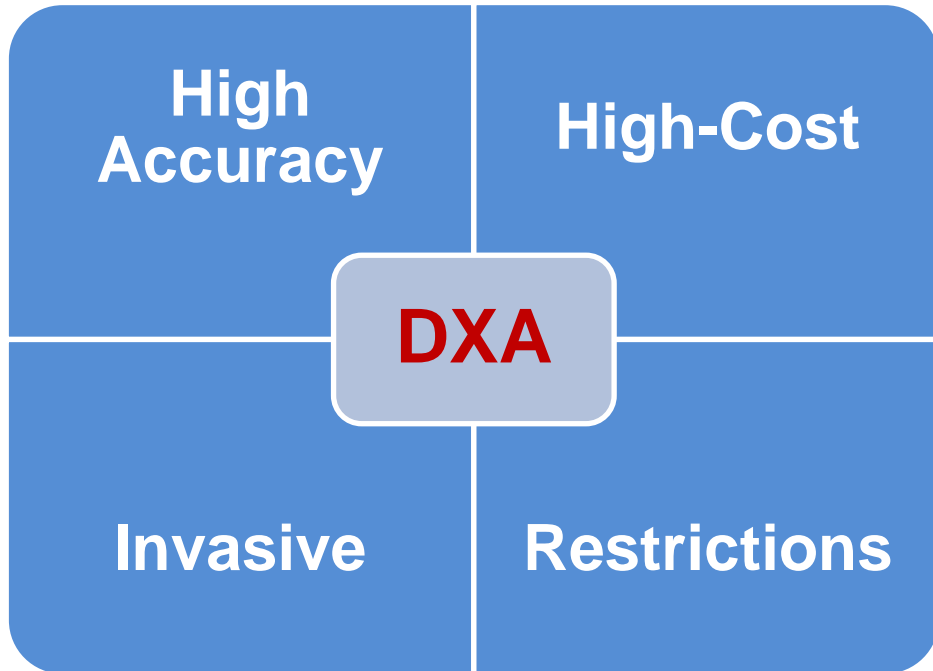
Calcaneus



Bone Densitometer



Dual-energy
X-ray
Absorptiometry



Quantitative
Ultra-
Sound



Ultrasound Bone Densitometer “CM series”

Furuno has started the production and distribution of **Ultrasound Bone Densitometer** since 2000.

CM series of FURUNO applied **QUS** to measure the density of human heel bone.

***QUS**

QUS (Quantitative Ultrasound) is an assessment method of the bone quantity utilizing the measurement result of **SOS** (Speed of Sound) in the heel bone.

AVAILABILITY

- ✓ Non-invasive nature of ultrasound technology
- ✓ Easy-to-use interface operation
- ✓ Compact and portable design
- ✓ Heel bone is reliable measurement site for highly-loaded calcaneus bone

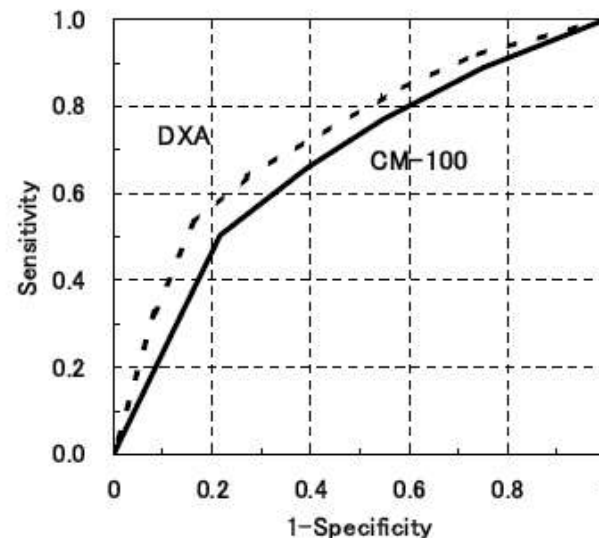
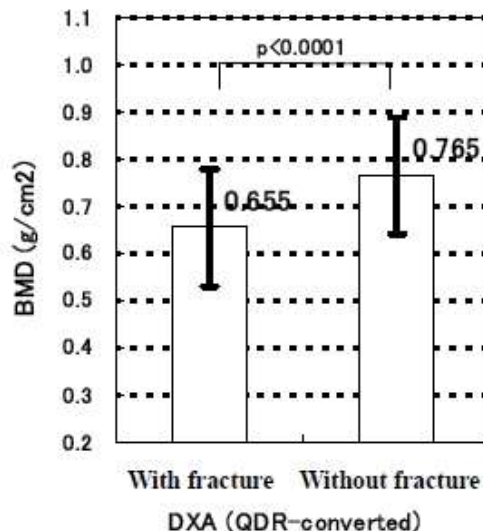
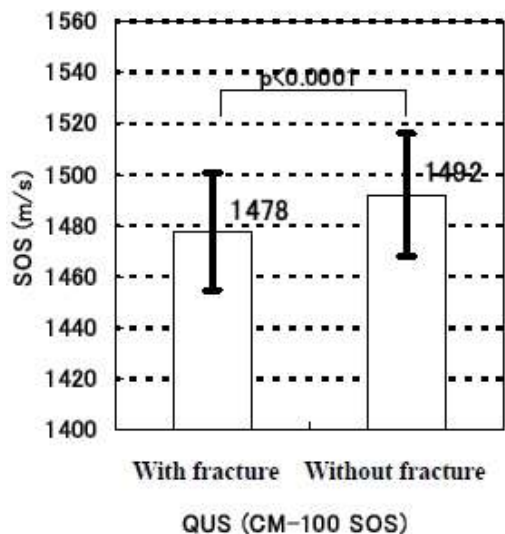
→ **Suitable for group screening for Osteoporosis**



Ultrasound Bone Densitometer “CM series”

Compression vertebral fracture, and calcaneal SOS and lumbar-Spine BMD

Judgment based on the presence or absence of a compression vertebral fracture



The SOS values obtained using the **CM series** were useful as lumbar-spine BMD values with regard to the diagnosis of a compression vertebral fracture.

	CM-100	DXA (QDR conversion)
Area under ROC	0.672	0.729
95% confidence interval	0.627 – 0.717	0.687 – 0.772

NS

CM-100 Multicenter Study Committee
 “Normative data and Cut-Off values Determined Using Quantitative Ultrasound CM-100 in Japanese Women”
Osteoporosis Japan vol.11, No.2, 2003

Product Features

Product Features



✓ Easy and Short Time Operation

Easy-to-operate, and only 3-10 seconds for the measurement

✓ Enables Highly Accurate Measurement

Sensing Technology of Human Heel Temperature Realizes Highly Reproducible Measurement.

✓ Low Running Cost

No need for periodic replacement of probe parts.
Consumable supply is only acoustic gel and printer paper.

✓ Bluetooth® Connectivity is Available (option)

Wireless connectivity is available at CM-200 light by Bluetooth®

✓ High trust and good performance

CM series are getting the high trust according to being used by many people and place.

Easy and Short Time Operation

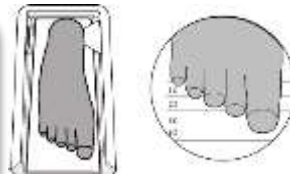
Easy-to-operate, and only 3-10 seconds for the measurement

Operation Procedure

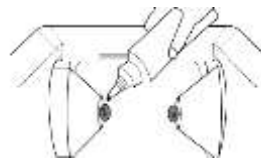
1. Input patient information.
(Age, Sex)



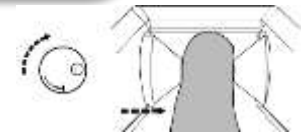
2. Adjust the **foot plate** to foot size of patient by using the **foot size dial**.



3. Apply the **acoustic gel** to both sides of the probe.



4. Wipe the measurement site (heel) with an alcohol swab. Then place the foot on the foot plate, **fixing it between the probes**.



5 Press the measurement start button. The measurement takes **3 - 10 seconds**.

High Accuracy <Adjustable Foot Plate>

The more accurate measurement is realized by the **Adjustable Footplate** to measure the center of heel bone.



**Measurement Site
(Center of the Heel bone)**

The footplate has **5 adjustable levels**

by turning the foot size dial.

(Patient foot size should be measured in advance.)

Measurable foot size are

19, 20, 21, 22-24 and 25 or over. (cm)

High Accuracy <Temperature Sensor>

A variation of **heel temperature** in human body affect to the measurement result.

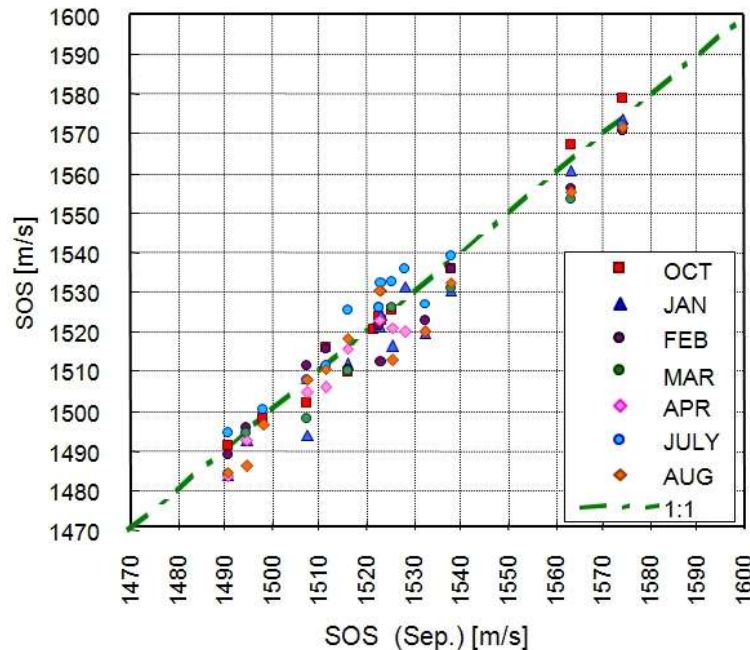
The **Heel Temperature Sensor** in CM series enables to correct the temperature variation of the measurement result.

Unique Technology of FURUNO.

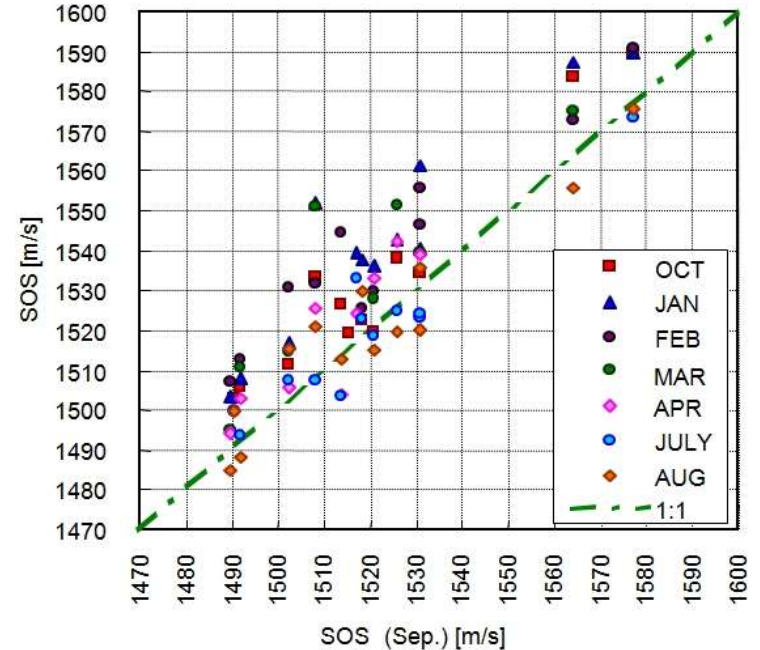


Heel Temperature Sensor

Sensor ON



Sensor OFF



Low Running Cost



Consumable goods are **acoustic gel and thermal printer paper only.**

CM-200 series do not apply water membrane system at the probes.

Accordingly, **no need for a periodical change of ultrasound probe.**

Running cost is low, and economic efficiency is high.

Bluetooth® Connectivity (option)

Wireless connectivity with the device and PC is available with **Bluetooth®**. You will be free from a complicated wiring, and broadens the **possibility of installation space or operational flexibility**.



Trademark Notices:

- Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc.

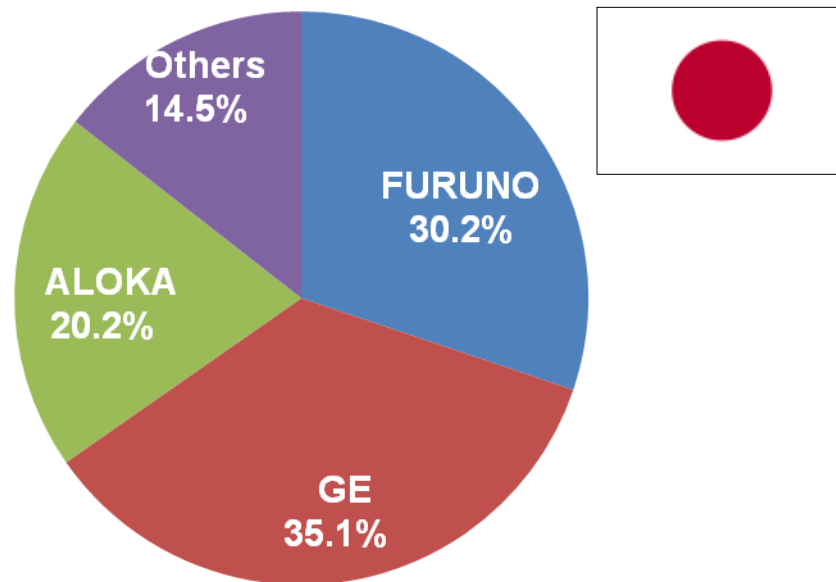


High trust and good performance

Our **CM series** (Ultrasound Bone Densitometer) is highly reputed by worldwide customers for its high performance and easy operation since the introduction to markets in 2000.

CM series have about **30% market share** in Japan. (cumulative)

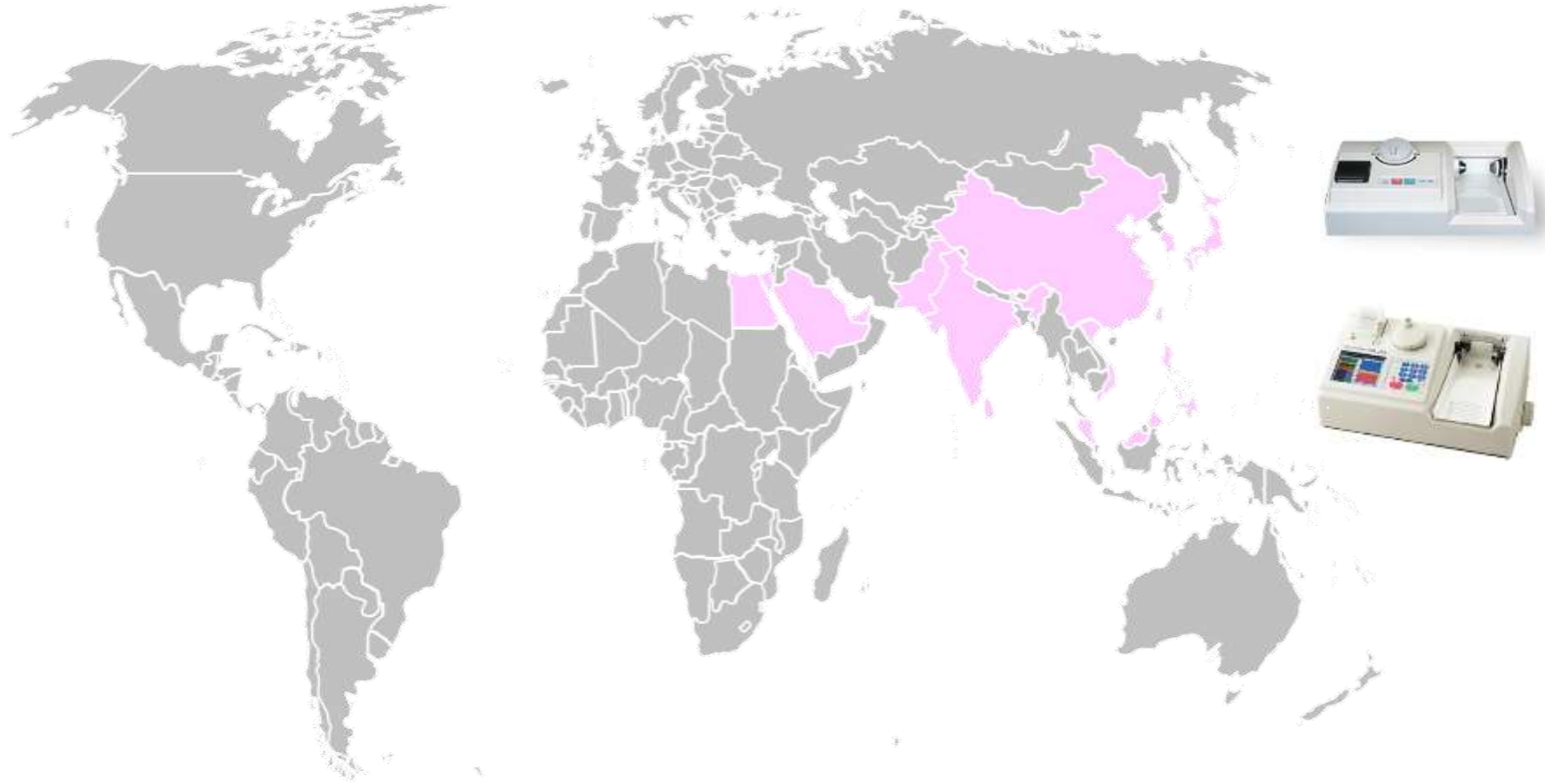
Cumulative unit sales in Japan as of 2013 *



Calculated from
 "installation list of measurement device in bone density",
 issued by Japan Osteoporosis Foundation

High trust and good performance

CM series have been installed **more than 4,000 units**.



* The pink is countries with the sales performance.

Product Specification

Screen Display (Utility software)

Measurement Result

Utility Software for CM-200 (light) (Ver.2550624100) [OFFLINE]

E0708.S08 7/17/2013 2:49:39

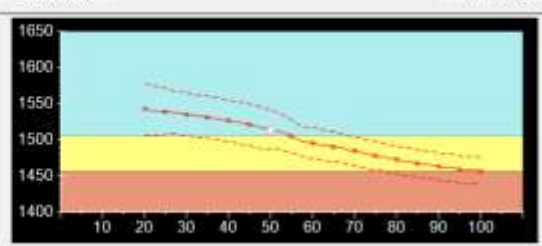
ID: F0001
 Name: May FURUKAWA
 Sex: Female
 Date of birth: 2/5/1963
 Age: 50
 Menopause: -
 Height: 165.0 cm
 Weight: 60.0 kg
 Foot size: 20 cm (at last measurement)
 Tag: ABC Clinic
 Comments:

SOS: 1513 m/s
 Equivalent to: 96 %of young adult mean (T-SCORE: -0.78)
 Equivalent to: 99 %of age-matched (Z-SCORE: -0.04)
 Equiv. Bone age: 51

Age: 50
 Foot size: 20 cm
 Measured foot: Right
 Flag: -

Unit temp: 28.2 °C
 Heel temp: -- °C

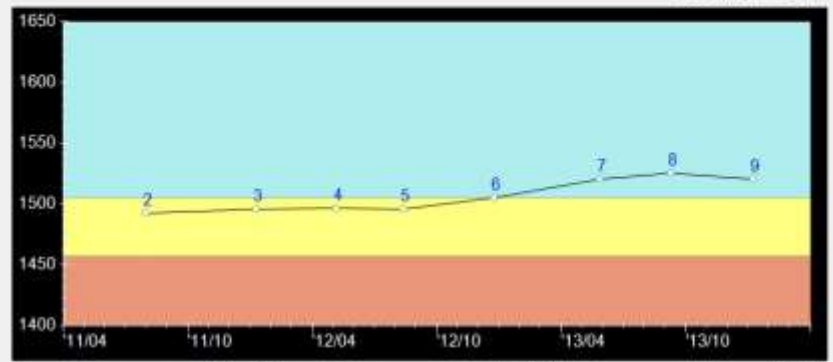
Buttons: List, New, Edit, Trend graph, Search, Settings, Exit



Trend Graph

Trend graph [Furuno]

Legend: CM-200 light Other



Date	SOS	Foot	Unit temp	Heel temp	Date	SOS	Foot	Unit temp	Heel temp		
1	2011/02/02	1490	R	22.1	22.5	9	2014/01/07	1520	R	23.6	21.3
2	2011/06/01	1482	R	29.2	29.5	10					
3	2012/01/09	1495	R	23.2	23.1	11					
4	2012/05/06	1486	R	26.3	24.8	12					
5	2012/08/12	1495	R	26.4	28.2	13					
6	2012/12/22	1505	R	23.5	22.8	14					
7	2013/05/27	1520	R	26.4	25.3	15					
8	2013/09/07	1525	R	28.5	27.3	16					

Heat temperature: Both | Foot: Both | Graph scale: Past 3 years | Print | Close

Printout (Utility software)

Measurement Result

OM-200 Light

Bone Density Measurement Result

Date measured 2014/01/07

Name	Furuno	Sex	Female	Age	62
ID	6628580	Height	160.0cm	Weight	50.0kg
Tag	Furuno hospital	Foot	Right	Menopause	--

<Measurement result> *Doxy adult measurement*

Speed of sound to your heel bone is **1520 m/s**.
 Your bone age equivalency is **46 years old**.

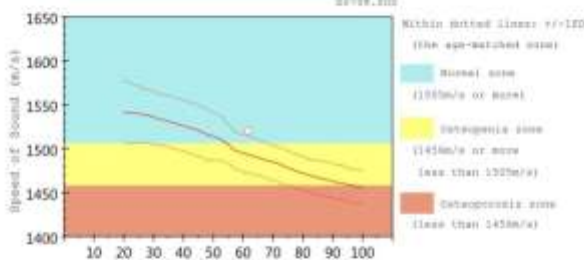
* Z-score value equivalent to BMD lumbar bone density.
 Equivalent to **90%** of young adult bone. * T-SCORE: **-0.55**

Equivalent to **124%** of age-matched. * T-Z SCORE: **1.29**

Foot size: 23 cm or more (heel temp.: 31.7°C) (heel temp.: 31.6°C)

20706.100

Within dotted lines +/-1SD Value (the age-matched zone)



The circle indicates your measurement value.

<Comments>

The Z-score value shows your bone density seems equivalent to the standard value of young normal adults. However, it is known that bone mass starts decreasing from age of 30 years, especially after menopause. It is advisable to have proper amount of exercise and calcium intake to maintain your bone mass. Further, periodical checkups are recommended.

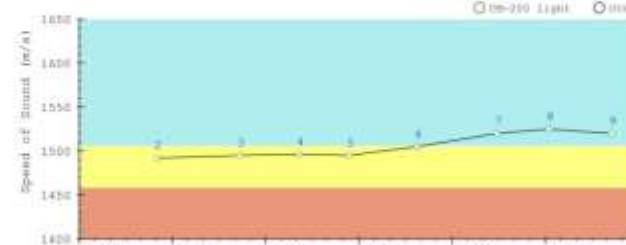
<Remarks>

Trend Graph

OM-200 Light

Trend graph

Name	Furuno	Sex	Female	Age	62
ID	6628580	Height	160.0cm	Weight	50.0kg
Tag	Furuno hospital	Foot	--	Menopause	--



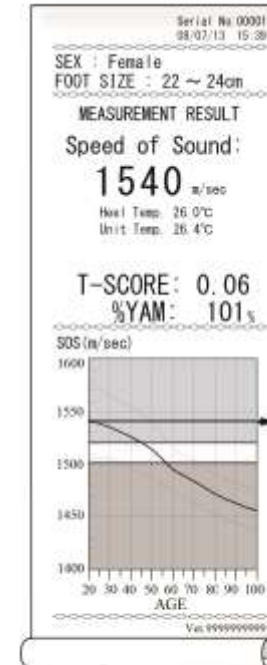
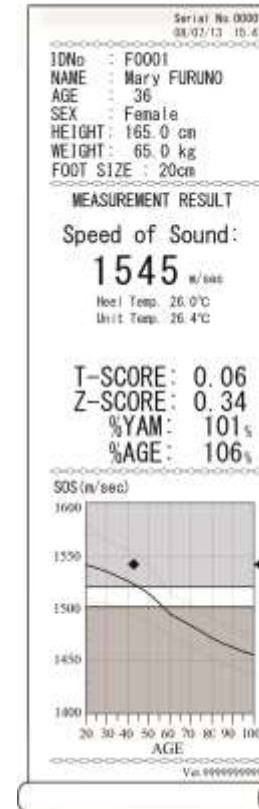
<Measurement data list>

Date	SOI (m/sec)	heel temp. (°C)	T-SCORE	Z-SCORE	SVAM	SAGE	Foot	Foot size (cm)
1 2011/02/02	1490	22.1	-1.40	-0.18	76%	98%	Right	25
2 2011/05/07	1491	25.2	-1.28	-0.14	76%	97%	Right	25
3 2012/01/09	1496	23.2	-1.20	0.00	77%	100%	Right	25
4 2012/05/08	1496	26.2	-1.21	0.00	78%	101%	Right	25
5 2012/08/12	1490	26.4	-1.20	0.00	77%	101%	Right	25
6 2012/12/22	1500	23.0	-1.00	0.00	82%	110%	Right	25
7 2013/05/27	1520	26.4	-0.56	1.28	96%	124%	Right	25
8 2013/09/07	1521	26.5	-0.56	1.32	96%	124%	Right	25
9 2014/01/07	1520	23.4	-0.50	1.28	96%	124%	Right	25

Printer (option)

The print out the measurement result is available by **optional printer** automatically.

SOS	: A speed at which the ultrasound penetrates in the patient heel bone.
%YAM	: % value relative to the standard SOS value of the young age.
%AGE	: % value relative to the standard SOS value of the same age.
T-SCORE	: Number of standard deviation relative to the standard SOS value of the young age group.
Z-SCORE	: Number of standard deviation relative to the standard SOS value of the same age group.


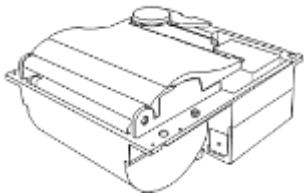



Specifications

Measurement Site	Calcaneus (Heel bone)
Measurement Method	Ultrasound Pulse Penetration
Measuring Parameter	SOS (Speed of Sound)
Measurement Time	3-10 seconds
Measurement Precision	%CV : 0.5% or better (In test cases measurement)
Result Display	SOS, T-score, Z-score, %YAM, %AGE, Bone age, Measurement result with graphic display
Measurement Type	Dry type (acoustic gel)
Environmental Condition	Operation Temperature : 10 to 35 degrees Celsius Humidity : 35 to 85%RH (non condensing)
	Storage Transportation Temperature : -10 to 50 degrees Celsius Humidity : 30 to 85%RH (non condensing)
Power Supply Voltage / Consumption Current	100-120V / max 0.6A 200-240V / max 0.3A
Power Frequency	50 Hz or 60 Hz
Dimensions	W495 mm x D310 mm x H200 mm
Weight	Approx. 9 kg
External Interface	USB *, Bluetooth® (option)

* USB cannot be used for any purpose other than connection of utility software.

Optional

<p>Operation Panel</p>	<p>The operation panel enables autonomous operation of CM-200 for data management of measurement handling. The panel is consist of monochrome LCD screen and operation button.</p>	
<p>Printer</p>	<p>The printer for measurement result print will be embedded to the device. The result will be printed out on thermal paper.</p>	
<p>Heel Temperature Sensor</p>	<p>The sensor for correction of human heel temperature. The measurement result will be more accurate by temperature correction by the sensor.</p>	
<p>Bluetooth®</p>	<p>The function able to connect PC or tablet terminal by Bluetooth®</p> <ul style="list-style-type: none"> Specification : Bluetooth® Ver. 2.1 + EDR Output power : Class 2 Communication distance : 10m Maximum(Depends on the situation.) On board profile : SPP 	

System Structure

Basic constitution

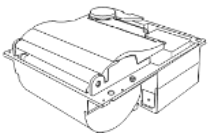


USB



The device and customer's PC will be connected by USB cable.

*Optional



The operation with single piece of device will be available when applied optional operation panel and printer.

*Optional



Bluetooth®



The wireless connectivity between PC and the device will be realized with optional operational panel and Bluetooth®

Thank you for your attention.

DISTRIBUTOR IN INDIA

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