Matsusada Precision

X-ray Inspection System

μB3500

NEW

CT-Mountable Desk-top size X-ray inspection system

X-ray micro view microscope

μB®3500

Lateral irradiation allows for simple fixation of work

Also, X axis (left and right), Y axis (front and back), Z axis (up and down) and rotary axis (turning) are included to support easy observation.

A round work can be easily observed by placing it on the stage and turning it 360 degrees. The stage can be moved to the left/right, front/back, and up/down, allowing for easy operation.

A work that cannot be placed on its side can be easily observed just by placing it on the stage. Changing the stage platform allows for inspection of several works in a row.

As the top panel door opens, a long or heavy work (10 kg)* can easily be loaded on the stage.

* Equipment that supports 10-kg work is optional.

The top panel door opens allowing for easy loading.

It is difficult to work with only a front door.

Operability is further enhanced by operating the stage with the joystick while looking inside through the big window.

Simple operation allows for use of necessary functions by “anyone” “in no time”.

μRay®Vision

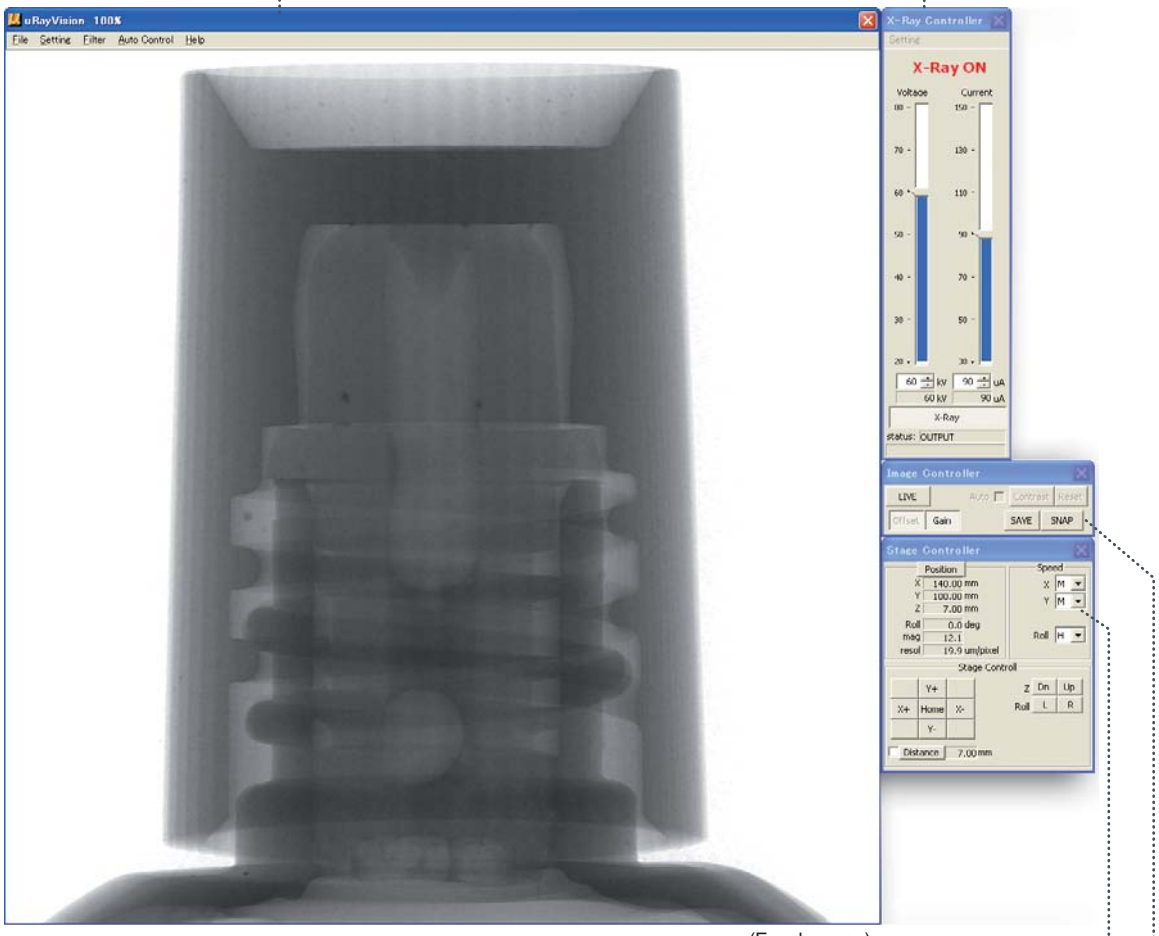
The accompanying dedicated software, “**μRay®Vision**”, not only allows for stage controland simple X-ray operation but also features a variety ofimage processing and measurement functions.

High-resolution of one million pixels

A transparent image is displayed in real time.

X-ray controller

Controls X-ray’s ON/Off, tube voltage, and tube current.



(Eye drop cap)

Stage controller

Stage is operated by mouse.

Image controller

Configures video filter, display range setting, and other loading methods.

Operability 1

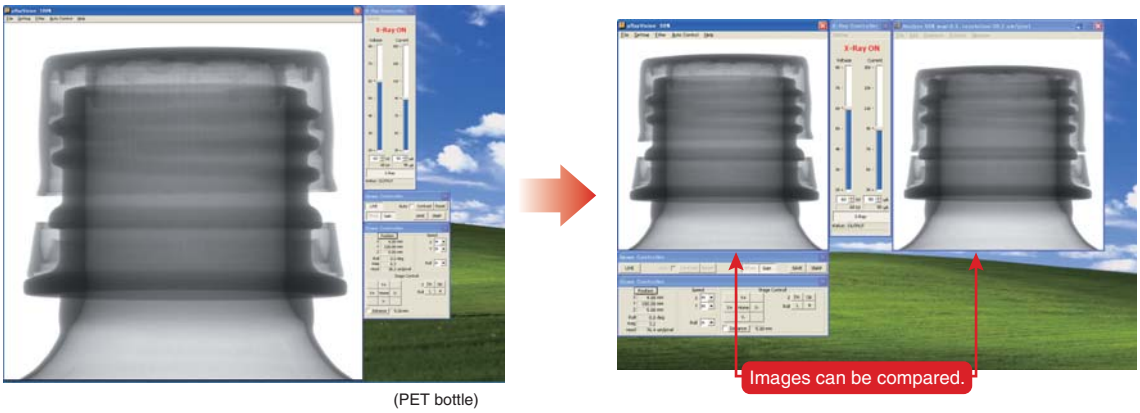
Simple observation and analysis

Easy observation and analysis at the micro/macro level and in various directions

With the reduced display function, you can easily make comparative observations.

By switching from the high-resolution display to the reduced display, you can perform observation / analysis of the sample by comparing it with previously saved images.

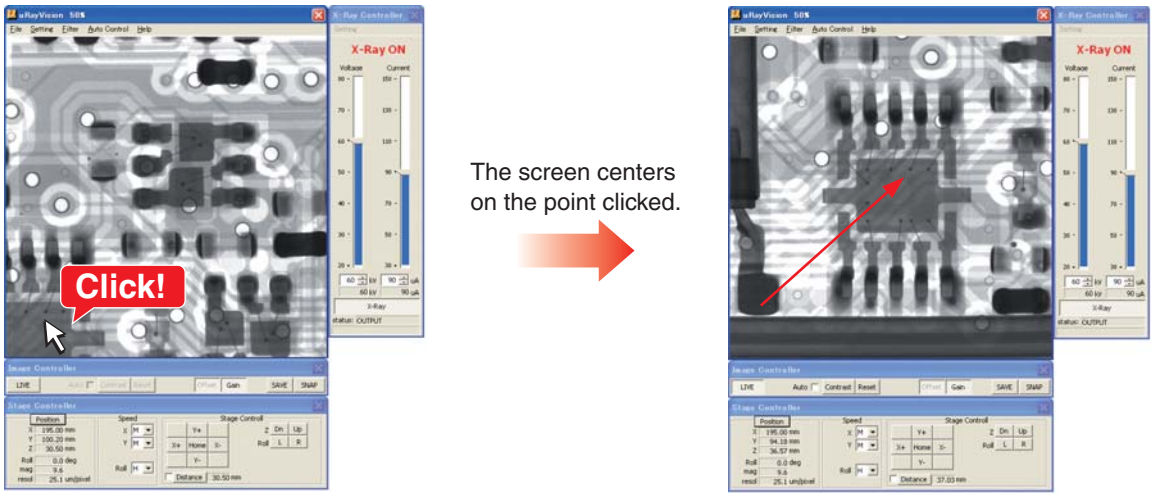
High-resolution display → **Reduced display**



(PET bottle)

With a move and a click, details can easily be observed.

This function is helpful for when you “want to observe the details of a sample while maintaining high resolution”.
Because the stage moves to the part that’s clicked, no details will be missed.
By gradually moving the stage, the whole area can be observed without missing anything.



(Electronic parts)

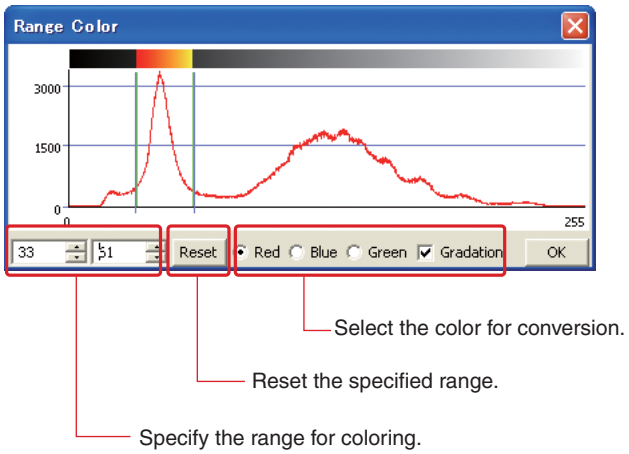
Operability 2

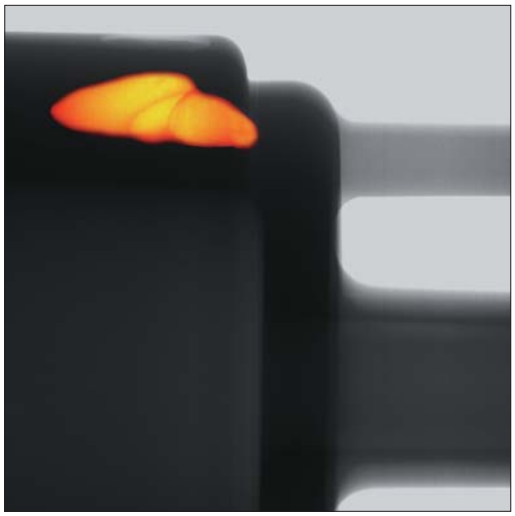
Easy lot inspection

Reduction of judgment error and wrong inspection parts is enhanced by the following functions.

With the function for coloring at the designated brightness, defective parts can be discovered easily.

This function is for identifying the concentration value for parts with foreign materials or porosity based on the defective sample.
This function can place color on the concentration for the designated range only.
Inspectors can easily make determinations as color is added to the range with the concentration value determined to be defective.

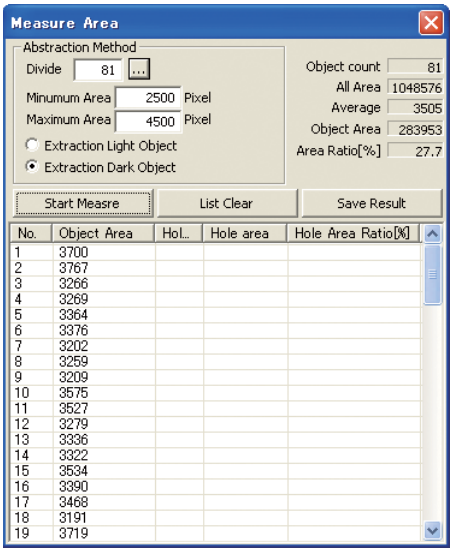


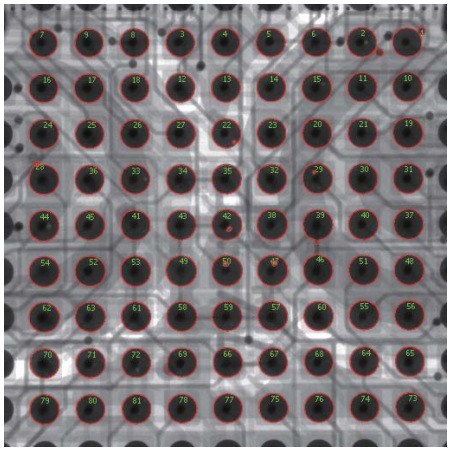


(Void of the resin molding)

With the area measuring function, conformity/non-conformity can easily be determined based on the area's size.

This function is helpful when performing void ratio of BGA or when determining the difference in size for a preset shape or in similar items.
As the measurement results are given in numeric values, making determinations is easy. The area, number, area of holes, and area ratio can all be measured.



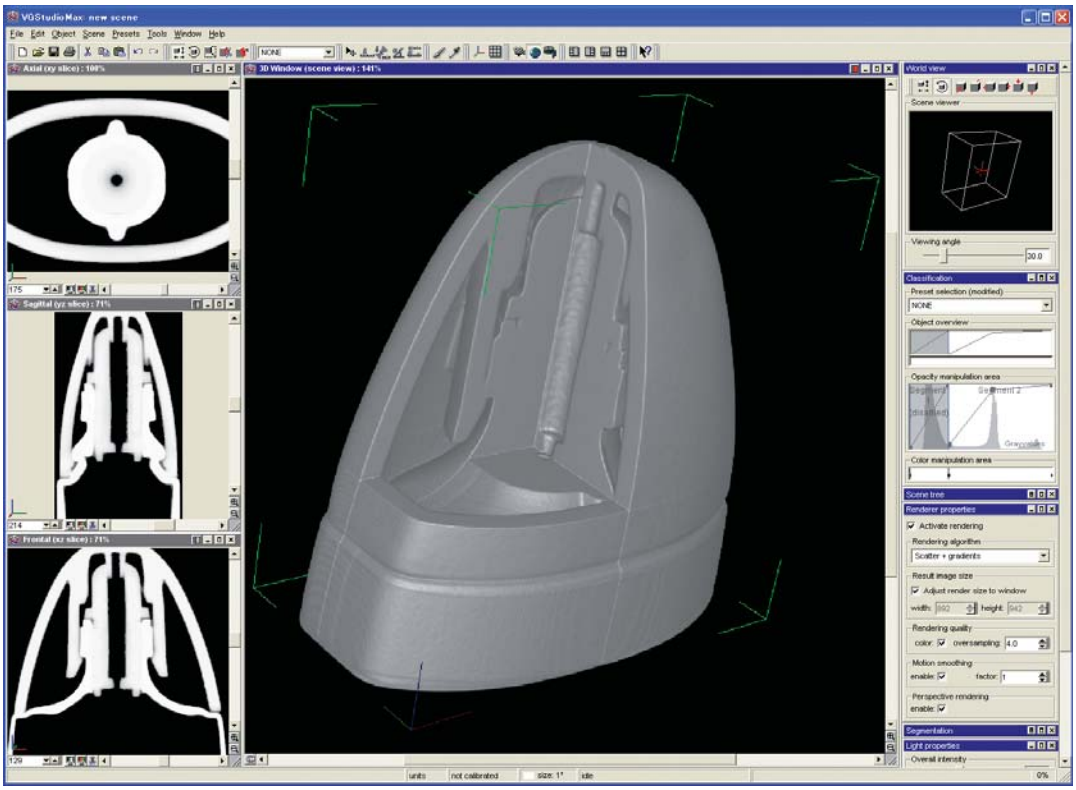


(Area measurement for the BGA)

CT unit [2D/3D analysis software]

Option μB3500-LCT

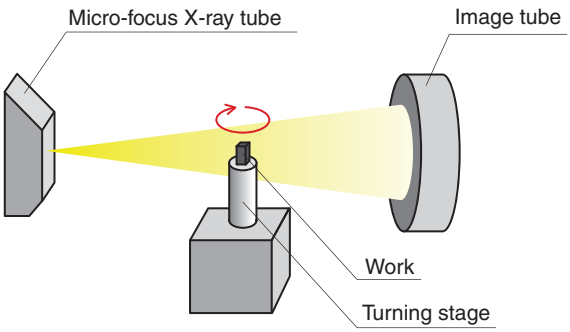
Although the fluoroscopic equipment can provide only projected images, the CT unit can provide 3D images. By specifying given surface of the 3D image, the tomographic image of the surface is displayed.



(Mating part of the resin cap)

Principle of the CT

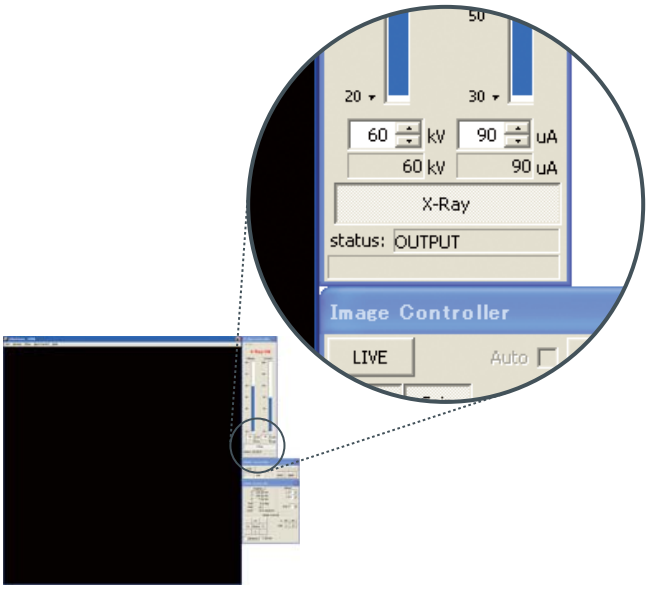
A tomographic image is obtained by using a unique algorithm for a fluoroscopic image that is created by rotating the sample 360 degrees (180 degrees for a half-scan). The smaller the feeding angle is, the more detailed the tomographic image becomes.



Functions that require no experience and function that are secure and safe

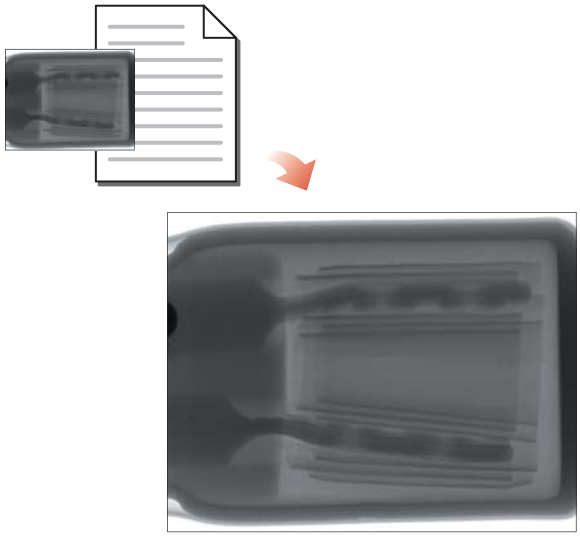
Secure No need for maintenance Automatic aging function

Date and time of initial use is recorded. This function enables automatic selection of the aging time based on the hours passed from this date on, allowing for optimal aging.



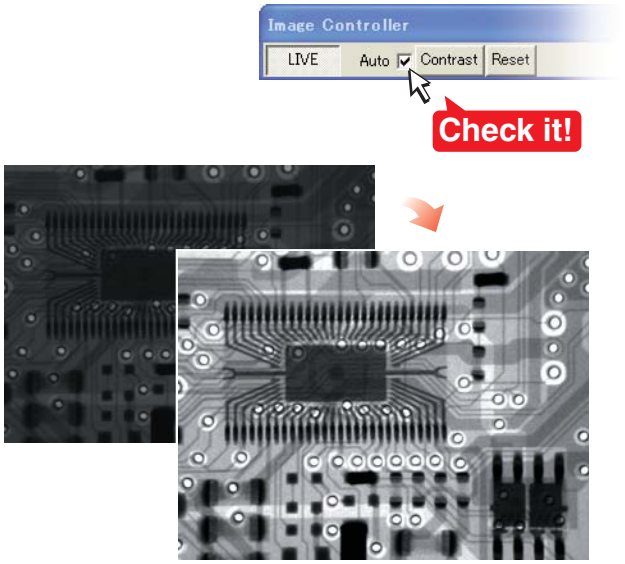
Secure Simple shooting with the previous conditions

Calling up the shooting condition file for previous images allows pictures to be taken with the same conditions. Nobody will make mistakes when setting conditions.



Secure Just click for a new work The latest ACC function

The automatic contrast control (ACC) function allows for the optimization of contrast in images. Anyone can easily obtain fine, transparent images.



Safe Interlock function

The X-ray stops the moment the door opens.

Safe Auto-OFF function

To prevent against forgetting to turn off the X-ray, the X-ray will automatically turn off after a preset time. You can set the time for up to 30 minutes.

Safe Emergency stop function

Just pushing this button during an emergency can stop the X-ray and stage.

Specifications / System configuration

Specifications

X-ray generating part	Tube voltage		20kV ~ 80kV
	Tube current		150μA at maximum
Shooting part	Visual field size inch(mm)		1.96 x 1.96 (50 x 50)
	Effective pixels		1.04 million pixels
Stage part	Sample platform	Size inch(mm)	Ø3.93 (100)
		Load capacity	2kg
	Loadable sample size inch(mm)		Ø6.30 x H8.66 (Ø160 x H220)
	XY stroke inch(mm)		X: 9.84 (250) → with CT option: 8.46 (215) Y: 7.87 (200)
	Z stroke inch(mm)		1.96 (50)
	Turning stroke		360°
	Moving operation		Direction given by a mouse operation and joystick can be used at the same time
Input voltage			AC 115V, 50/60Hz
Amount of X-ray leakage			1μSv / hr or less

[Other option]

· **-LW** : Stage with load capacity of 10 kg

[Separately sold good]

· **Aluminum dedicated desk** : XDSK300

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Customer Inquiry Sheet (μB3500)

Please copy this page and above fax number after filling out form below.

■ I would like

☐ A quotation ☐ An explanation of product ☐ A demonststration ☐ To purchase

☐ Other ( )

■ Give us your requirement / comment

■ Please fill in below.

Address:	
Company:	
Dept.:	Title:
Name:	
Tel:	Fax:
E-mail:	

Warranty

We warrant that products contained in this catalog (hereinafter, the “Products”) are free from defects in material and workmanship under normal use for a period of one (1) year from the date of shipment thereof. However, the warranty period for X-ray detectors and X-ray source shall be either one (1) year from the date of shipment or 1,000 hours, whichever shorter.The above warranty shall not apply to any Product which, at our sole judgment, has been:i)Repaired or altered by persons unauthorized by us; or ii)Connected, installed, adjusted or used otherwise than in accordance with the instructions furnished by us (including being used in an inappropriate installation environment, such as in corrosive gas, high temperature and humidity). We are not liable for any loss, damage or failure of the Products after the shipment thereof caused by external factors such as disasters.If any Product is showed to be defective as satisfactory to us, we, at our sole discretion, repair or replace such defective Products at no cost to the purchaser.We assume no liability to the purchaser or any third party for special, incidental, consequential, or other damages resulting from a breach of the foregoing warranty. This warranty excludes any and all other warranties not set forth herein, express or implied, including without limitation the implied warranties of merchantability or fitness for a particular purpose. The Products are not designed and produced for such applications as requiring extremely high reliability and safety, or involving human lives (such as nuclear power, aerospace, social infrastructure facility, medical equipment, etc.). The use under such environment is not covered by this warranty and may require additional design and manufacturing processes.

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