

MSX2500 (L) Tomography Inspection System

Feature:

- ε **Newest Technology**; Tomography by lamina-graph system.
- ε **High Speed**;The time of a tomogram is 1 seconds slightly.
- ε **High Resolution**: The accuracy of a image is 25 microns or more.
- ε **Low Price**; The price is reasonable.
- ε **Easy Maintenance**: The X ray generator is closed type, Thus Life is very long.
- ε **Both-Sided** : Inspection is possible even if BGA is in both sides of the PCB.

Abstract:

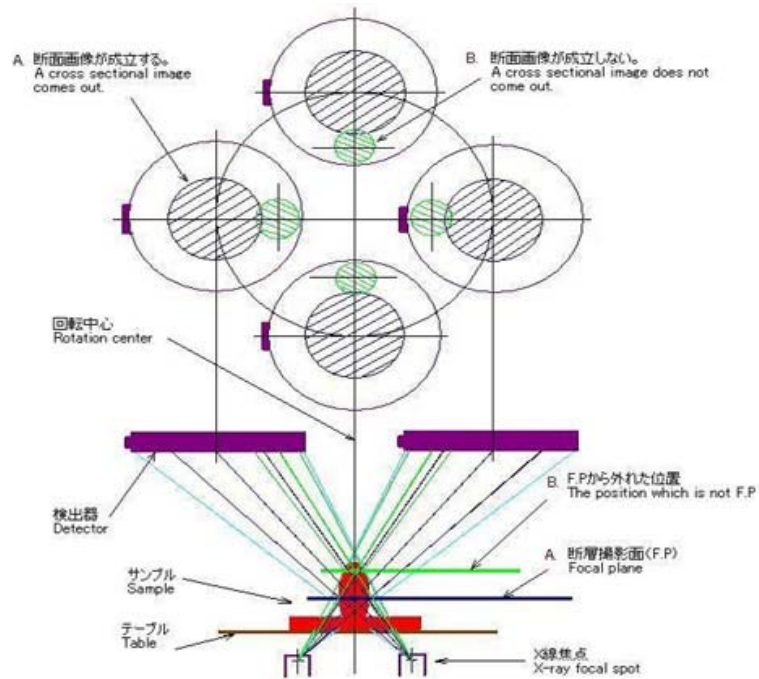
MSX2500 is tomography inspection system by lamina-graphy, It is the best inspection system to the multi-sided mounting board with high density. The system is able to operate like in-line test machine by linking conveyor system, such as board loader and un-loader.

The lamina-graphy is the theory which synchronized two items in from three items such as a X ray generator, a detector, and a test material. MSX2500 is synchronized of the X ray generator and the detector, and there are rotated within around 1 second. and also they themselves rotate. If it does so, a image focusing will be fixed, and the fixed position of the focus can be change by the relational position change of the two items.

The accuracy of the image is 25 micron or less when the image area is 10x8mm. and the position of FP can be chosen in a height of within 13mm.



MSX2500



MSX2500 Lamina-Graphy System

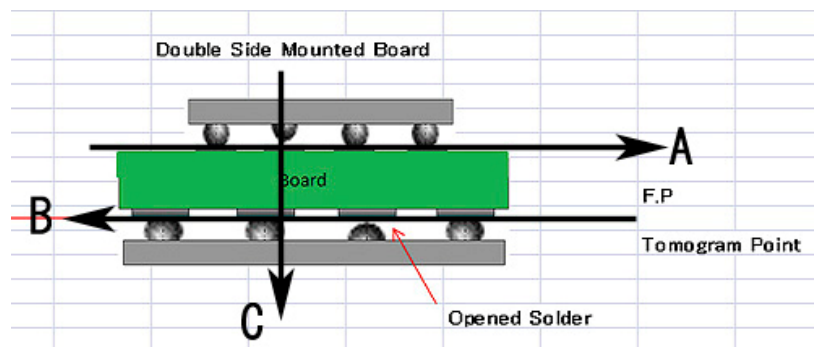
Information of the X Ray:

The X ray is an electromagnetic wave with short wave-length, it can pass through between an atom and atoms. The wavelength of visible is about several microns, but the x ray is about \AA . and a penetration is in inverse proportion to the density. Generally, It is managed by the rule of the Government. It is because, the x ray gives a physiologically effect to a live-body.

MSX2500 is managed of the radiation less than 1 micro Sv/ Hours / cm. It is lower than the color television, the CRT of the color television is always emitting the several micro Sv/H of radiation. and also there is same levels of radiation in the atmosphere always.

The radiation of MSX2500 is controlled by the very safety level. It is very safety zone. Furthermore, MSX2500 is used of the X ray in the sealed box. and it is with sufficient interlock function.

Test operation Images by MSX2500



This is an test sample, in case of two kinds of the BGA is mounted of surface and reverse-side at the board.

The tested image of the position B level is displayed on the screen when the FP of the tomogram is

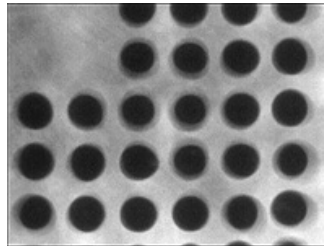
setup as B level.

And also test image of the position A will be displayed on the screen when the FP is set up as A level.

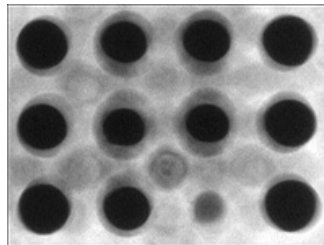
The tested image of the C will be displayed when tested by the fluoroscopy system. In this case, inspection will be impossible by the image A and B overlaps.

The test position of the FP can be adjusted in the height of a maximum of 13mm from the surface of the test table.

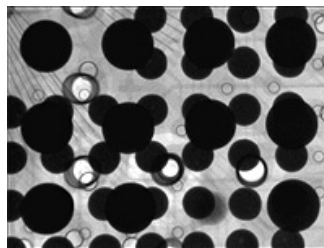
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The test image at A.



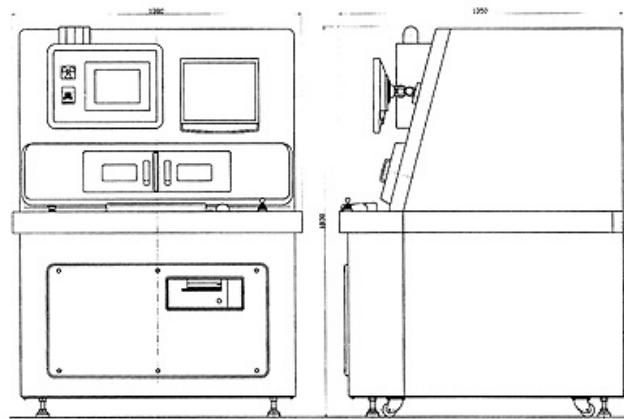
The Test image at B



The Test image by C

[SAMPLE IMAGES by Auto-Checked](#)

[SAMPLE IMAGE for Inspection](#)

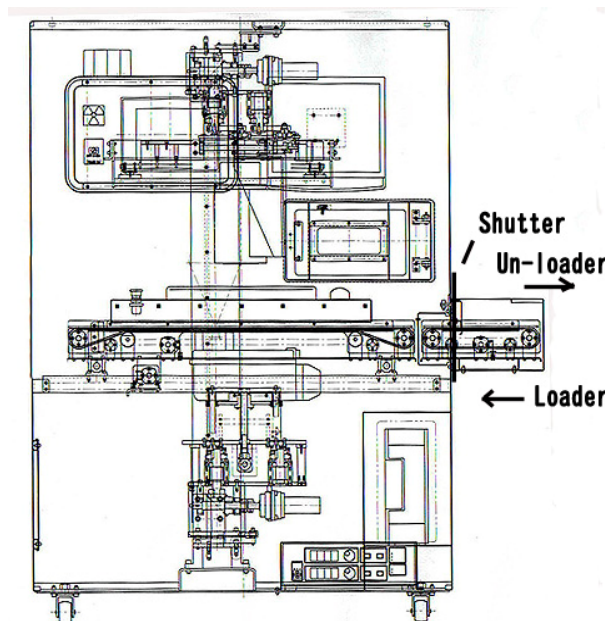
Dimensions:

MSX2500: 1020W x 1720H x 1260Dmm

MSX2500L:1300W x 1720H x 1550Dmm

Semi In-Line System:

MSX2500 can be checked with high speed, it will be inspected around 1 second by 10 x 8mm area. And also the system can be tested by the programmable XY automatic controller. Therefore, it can operate as an automatic X-ray tomography inspection system by with optional loader with the unloader system.



MSX2500 semi-in-line type Tomography system

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Specifications: Tomography Inspection System MSX2500 /(L)

Items	Specifications (L)	
Board Size	250X x 330Y mm max (470x540)	
XY Table Stroke	240Xx330Ymm (250x350)	
XY Table Control	Motor Controlled by touch panel	
XY Table Size	240W x 330D mm(470x540)	
Position marker	Red marker by laser beam	
X Ray Source Voltage	100 KV 20W max.	
X Ray Tube Current	200 micro A max.	
Focus Size	5 micron m	
X Ray Tube	Enclosed Reflection Type	
Cooling	Air cooling Closed	
Image Angle	0	
X Ray Radiation	Less than 1 μ Sv/H	
X Ray Protection	X Ray protected special Cabinet	
Image Processing software	GtAVision	
Image Magnification	20X (digital zoom 25/30/35/40)	
Detector (Flat Face)	FOV 1.5 inch	
CPU	3.1GHzIntel Core	
Memory	4GB	
Storage Unit	HDD 1st/80GB 2nd/1TB DVD	
OS	Windows XP SP3	
LCD	17 inch LCD	
Image Controller	Quality Control for Averaging, Integrating.	
	Enhancement Processing	
	Contrast & Brightness Control	
Tomogram	Scanning	Horizontal Section
	Range of Height	0 to 15mm from the XY table
	Magnification	20X (25/30/35/40 by digital zoom)
Power	AC230V 800VA	
Body Size	1020W(1300) x 1720H x 1260D(1550)mm	
Weight	800Kg (900Kg)approx.	

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