

# JewelBox-90T

*Precision X-Ray Imaging Essential for the Inspection of  
BGA, micro BGA, QFN, Flip Chip, LED, Wire Bonds*



The JewelBox 90T delivers precision x-ray images of ultra high resolution and gray scale accuracy without the aberrations of Voltage Blooming and Pin cushioning prevalent in other systems. The patented, award-winning x-ray camera technology, in conjunction with its 90 kv, 5-7 micron focal spot x-ray tube, delivers precise x-ray images at magnifications from 7X to 2000X with a resolution of 100 line pairs/mm.

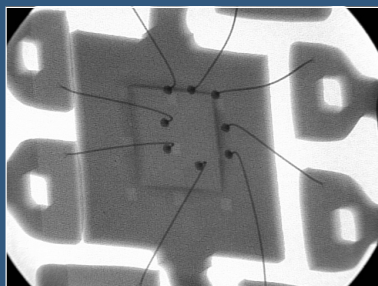
The broad energy sensitivity range of this camera permits x-ray imaging of both high density and low density devices.

What's more, the JewelBox 90T saves you floor space. It's half the size of comparable systems, yet it provides the most extraordinary microfocus x-ray image quality at the highest magnifications. The JewelBox 90T offers five-axis control of the inspected product, including 360° rotation and tilt with the option of Programmable Motion Control.

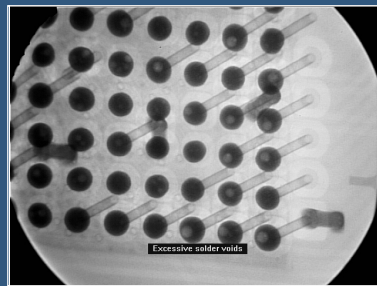
Applications for the Jewel Box 90T include advanced electronic packages such as BGAs, micro BGA's, QFN, Flip Chips, Wire Bonds, die attachment, as well as critical medical devices.



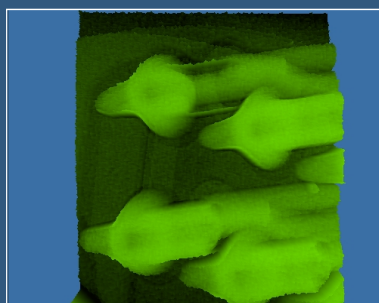
## *Progressive magnification allows inspection of multiple details:*



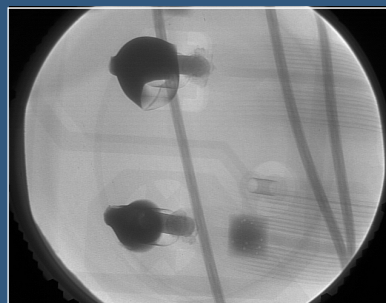
*Wire Bond detail at angle*



*Angle view BGA solder voids*



*3D rendering of lack of solder fill*



*Lack of solder in barrel fill*

### **Specifications**

- Operating voltage: 120v/60 hz or 220v/50 hz
  - Anode voltage and current: 90 kV, 5-7 micron focal spot x-ray tube
  - Resolution: 100 line pairs/mm
  - Magnification: variable from 7X up to 2000X
  - Focal spot size: 5-7 micron
  - Focal spot to image plane distance: 9-12 inches (factory preset)
  - Nominal exterior dimensions: 35 1/8"W x 43 1/8"D x 72 3/4"H
  - Inspection compartment dimensions: 28 1/2"W x 30"D x 23 3/4"H
  - Computer Console Options: Computer table or side arm mount
  - Manipulator: five-axis joystick positioner
  - GTI-50 Image Processing Software and USB frame grabber
- Optional
- Programmable Motion Control in 5 Axis
  - Dual 25 mm and 82 mm diameter field of view x-ray camera

