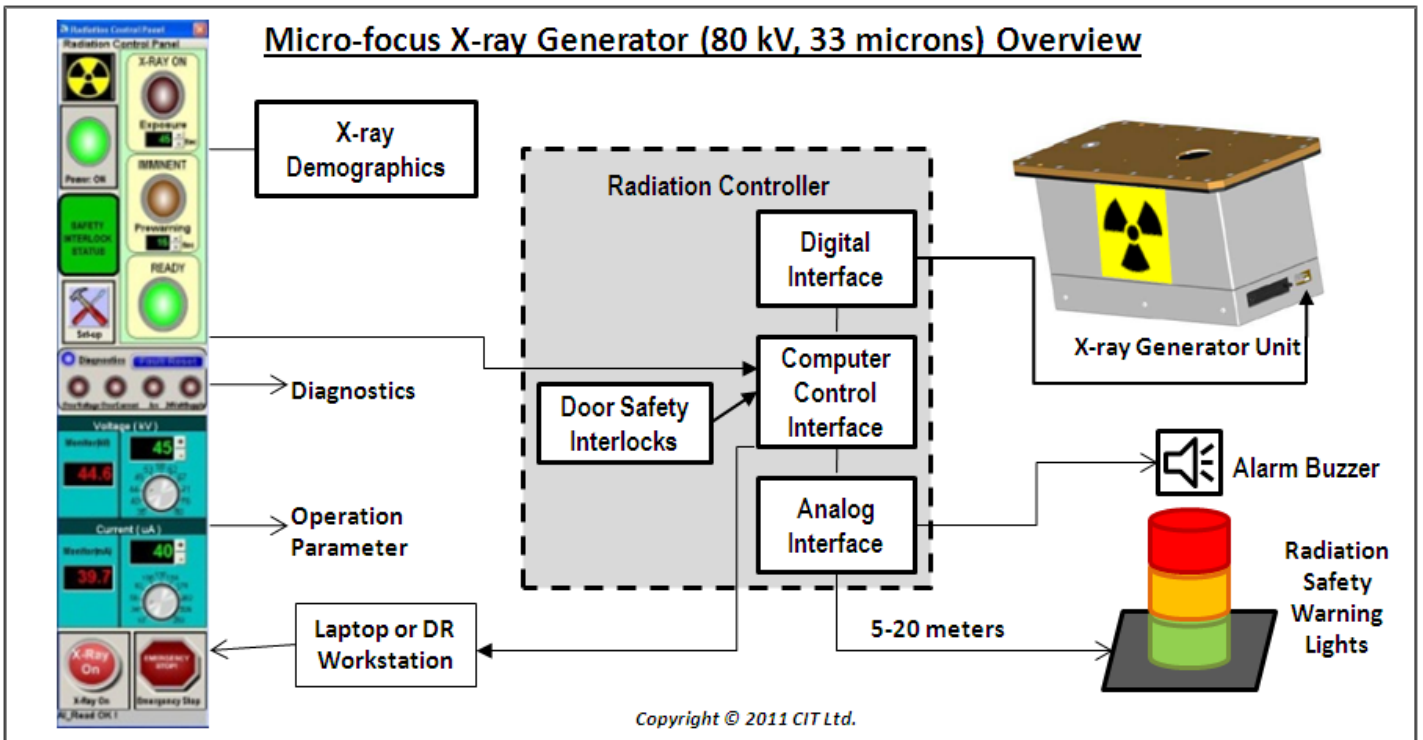


## CIT / 80kV Microfocus X- Ray Generator

Product Code: CIT/80kV-33m x-ray unit

The latest NDT Digital Radiography trends require **high definition radiographic images** to be achieved. This compact micro-focus x-ray generator offers high stability x-rays with **33 microns** focal spot. The operation of the x-ray generator is computer controlled and integrated into software application making it fulfill the **U.K. ionisation radiation safety requirements**. Hence, the end customers can use this technology by integrating it into their NDT department.

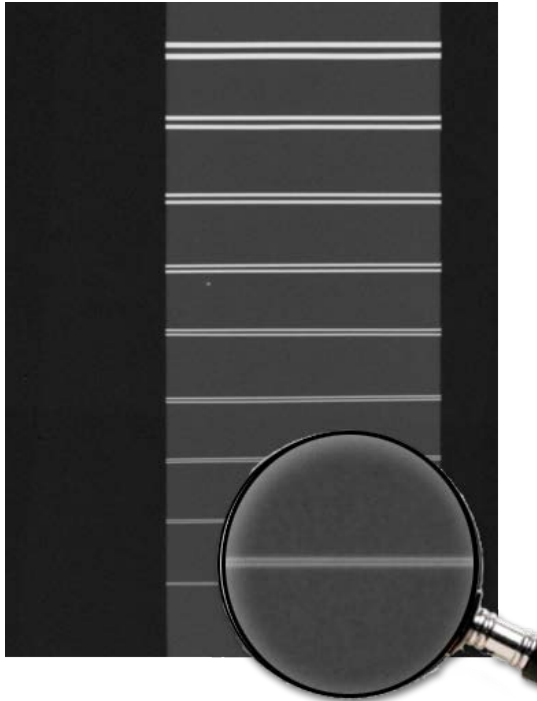


The latest CIT/80kV X-ray unit is a completely revolutionary innovation that integrates the x-ray tube, the filament supplies, control circuitry and the digital interface into a single assembly weighing only 7.7 Kg.

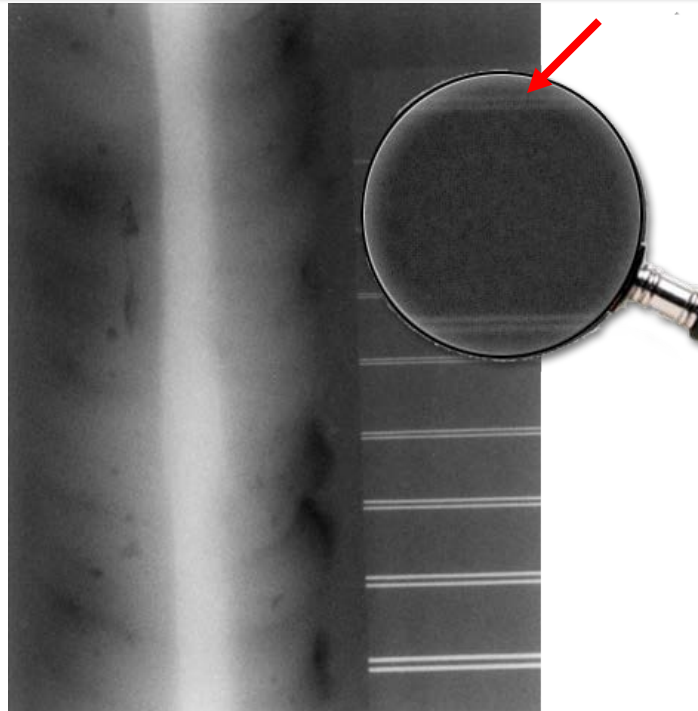
The CIT/80kV source block comes with a digital control interface, which along with the basic controls provides the feature of **Automatic Tube Conditioning**. The x-ray tube needs conditioning in case it is unused for duration of over 90 days. The Automatic Tube Conditioning feature performs the necessary operations to recondition the x-ray tube.

- ### Applications
- Max. Thickness inspected – 2mm of Copper
  - Other Material thickness can be calculated from above
  - Composite Inspection
  - Thin welds from 100µ to 2 mm thickness (Equivalent Cu thickness)
  - Thin foils from thickness 30µ and above

- ### Benefits
- Single pack design enables *CIT/80kV* to be turned on and set up within a matter of seconds on any type of terrain
  - Light weight and single package makes it highly portable
  - Minimum focal spot of 33µ provides very sharp images and possibility to make geometrical enlargement.
  - Continuous operation and air cooled
  - Configurable with analog or digital interfaces
  - Highly compact form allows the operator to X-ray objects located in very confined spaces



13<sup>th</sup> Line pair visible on Duplex IQI

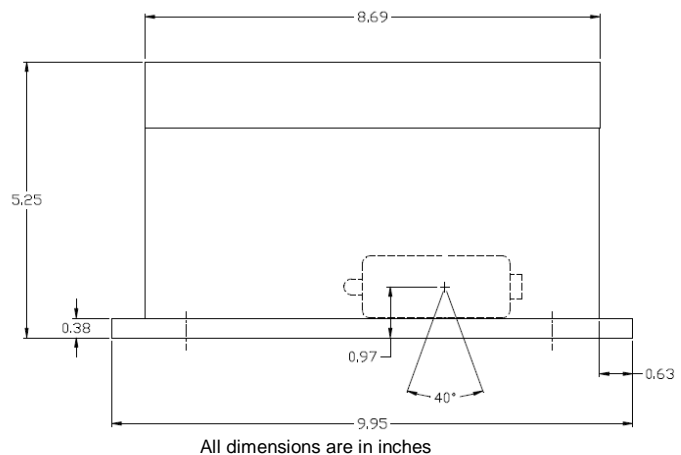


12<sup>th</sup> Line pair visible on Duplex IQI

**Technical Specifications**

Max. Anode Current	0.7 mA
Max. Anode Voltage	80 kV
Max. Power	56 W continuous
Nominal Filament Voltage	2.25 V @ 80 kV, 0.7 mA
Max. Filament Current	1.7 A
Stability	0.2% over 4 hours
Focal Spot Size (Nominal*)	33 $\mu$ m
<small>*nominal per IEC336, JISZ47045, NEMA</small>	
Cathode Type	W filament
Anode Material	W
Approx. Weight	0.25 lbs (114g)

**Outline Dimensions of CIT/80kV X-ray Unit**



**Electrical Specifications**

Input Power	24VDC @ 2A	Line Regulation (emission current)	0.5% for a $\pm$ 5% line change
Duty Cycle	CW (100 CFM airflow required for safe operation)	Load Regulation (emission current)	0.5% for KV changes 35-80 KV
KVP Range	35-80 kVP	Ripple (kV <sub>p</sub> )	1% RMS at 80KVP, 250 $\mu$ A
A Range	10-250 $\mu$ A max.	Rise Time (kV <sub>p</sub> )	250 ms from standby
Line Regulation (KVP)	0.1% for a $\pm$ 5% line change	Set-ability	0.5%
Load Regulation (KVP)	0.1% for load changes 10-250 $\mu$ A	Temp. Stability (after 30 min. warm-up)	0.01%/°C per hr over 10-35°C 0.02%/°C per 8 hours over 10-35°C

\*CIT is authorised system OEM distributors

*CIT can provide a tripod or heavy duty articulated arm on request*