

DR7900 – Digital NDT Radiography Inspection System
(based upon Linear Detectors)

CIT Part Code: CIT-DR7900

Nondestructive Examination (NDE/NDT) of products based upon radiographic inspection technique can be inspected by using Digital Radiography Technology. CIT's DR7900 System is based upon using **Linear Radiographic detector, X-Ray Generator Unit (20kV-450kV) and High Performance NDT Workstation.** The system can be installed in your existing NDT X-Ray radiograph facility, laboratory or used for Site Radiography or alternatively CIT can supply Radiation Bay with the above system.



Figure1 – X-Ray Generator



Figure2 – Linear Radiographic Detector



Figure3 – DR7900 Radiography Computer System

Salient Features

Radiography Sources

- YTB Gamma Source
- Up to 450kV X-Ray Source and up to 6MeV with additional shielding
- Pulse / CP / Half wave sets

Linear Radiographic Detector

- Superior resolution and image quality up to 12 pixel/mm
- 12 bit Digital Contrast resolution
- 83µm resolution
- Supports X-ray energies up to 450kV and with additional shielding higher energies can be considered
- High scanning speed up to 80 m/min
- Low operating costs due to no films and no processing
- Insensitive to scattered rays
- Multicam up to 3 cameras on one PC

Radiography NDT Workstation

- 15" Diagonal Screen
- 1920 x 1080 Resolution
- Colour / High Brightness
- Standalone / networked

Applications

- Carbon Composite Inspection
- Inspection of Foils
- Casting Inspection
- Weld Inspection

Market Sectors

- Petrochemical Refinery
- Power stations
- Aerospace Industry
- Automotive Industry
- PCB / Electronics
- Foreign Bodies
- Forensic
- EOD / EID

Integrated as OEM and distributed by CIT

Technical Specifications

Radiation Sources

- YTB Gamma Source
- Up to 450 kV X-Ray Source
- Pulse / CP / Half wave sets

Inspection Capability

- Volumetric defects in welds and casting of different material
- Magnesium, Aluminum, Steel, Inconel, Plastics, Composites
- Material characterisation, density analysis
- Material calibration

DR7900 Linear Radiographic Detector Specifications

Detector Type	Effective Sensor length	Detector Length	Detector Height	Detector Width	Pixel	Detector Weight
T3-Series	Up to 160 kV					
T3-80	78.4 mm	100 mm	34 mm	80 mm	926	0.5 kg
T3-160	156.8 mm	180 mm			1854	0.9 kg
T3-320	313.6 mm	340 mm			3710	1.7 kg
T3-480	470.4 mm	480 mm			5566	2.5 kg
T3-640	627.2 mm	640 mm			7422	3.3 kg

Radiograph Computer Processor

- Industrial Standard High Performance Computer System
- Intel Core 2 Duo Processor, 4GB DDR3 RAM, 1T HD, BluRay Drive
- Ethernet, Satellite and Modem Connectivity

Radiograph Display Options

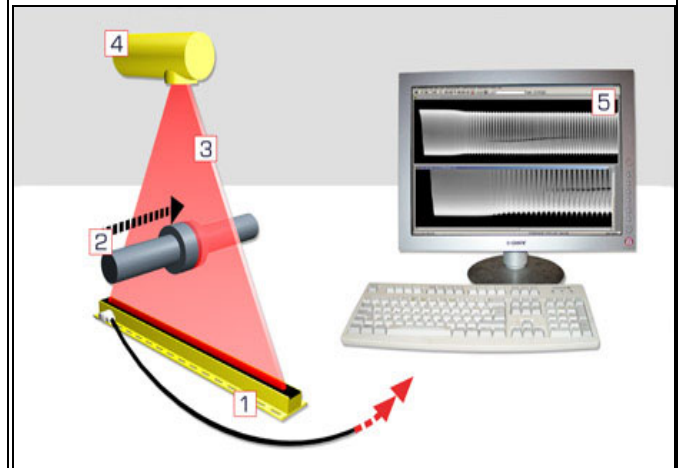
- Display type: 15." [approx.]
- Display resolution: 1920 (V) x 1080 (H) pixels
- Pixel pitch: 165 micron (0.165 mm)
- Feature: colour /high brightness

Software

Easy to repeat testing procedures, enhanced diagnosis tools and data storage and query options, user friendly interface.

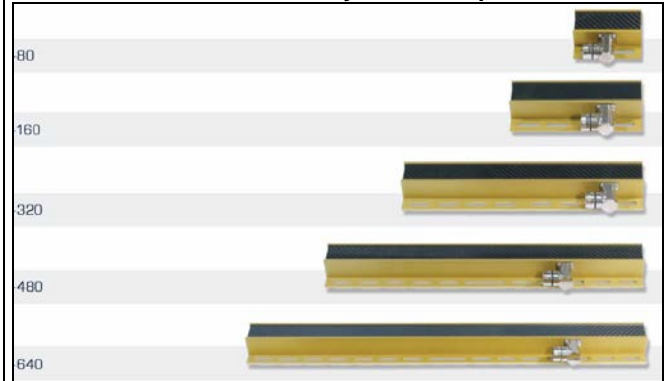
Environmental

- Temperature Range – Operating 0°C to 50°C (max.) (Ambient) – Storage -25°C to + 85°C
- Humidity – Operating (non-condensing) 10 to 80% Storage (non-condensing) 10 to 80%



(1) Linear Detector (2) object (3) x-ray beam (4) x-ray tube (5) x-ray images

DR7900 System Set up



Linear Radiographic Detector Range