

Let there be light...



And there is CIT

Manufacturer's of World's Most Advanced Digital Computed Radiography Imaging Technology



PRODUCT SHEET

## 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

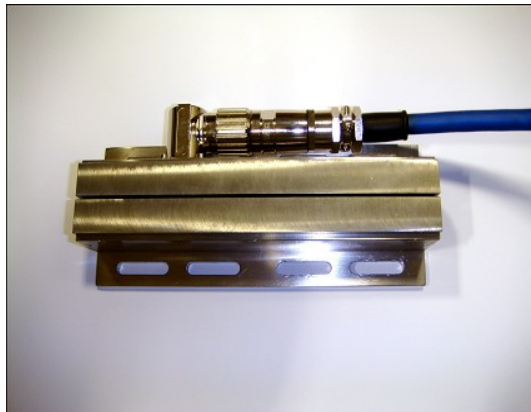


Figure2 – Linear Radiographic Detector



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
<b>T3-Series</b>						
<b>Up to 160 kV</b>						
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
<b>W1-Series</b>						
<b>Up to 225 kV</b>						
W1-80	78.4 mm	104 mm	37 mm	80 mm	926	1.5 kg
W1-160	156.8 mm	184 mm			1854	3.0 kg
W1-320	313.6 mm	344 mm			3710	5.5 kg
W1-480	470.4 mm	500 mm			5566	7.9 kg
W1-640	627.2 mm	660 mm			7422	10.5 kg
<b>W2-Series</b>						
<b>Up to 320 kV</b>						
W2-80	78.4 mm	104 mm	37 mm	80 mm	926	1.8 kg
W2-160	156.8 mm	184 mm			1854	3.3 kg
W2-320	313.6 mm	344 mm			3710	5.9 kg
W2-480	470.4 mm	500 mm			5566	8.7 kg
W2-640	627.2 mm	660 mm			7422	11.6 kg
<b>W3-Series</b>						
<b>Up to 450 kV</b>						
W3-80	78.4 mm	104 mm	42 mm	80 mm	926	2.2 kg
W3-160	156.8 mm	184 mm			1854	3.6 kg
W3-320	313.6 mm	344 mm			3710	6.8 kg
W3-480	470.4 mm	500 mm			5566	10.1 kg
W3-640	627.2 mm	660 mm			7422	13.4 kg

Other Linear Detector lengths available on request

	Resolution							
	0.08 mm	0.16 mm	0.25 mm	0.33 mm	0.5 mm	0.75 mm	1.0 mm	1.3 mm
All Detector Types	80 mm/s 4.8 m/min	160 mm/s 9.6 m/min	250 mm/s 15 m/min	330 mm/s 20 m/min	500 mm/s 30 m/min	750 mm/s 45 m/min	1000 mm/s 60 m/min	1333 mm/s 80 m/min

Maximum scanning speed in mm/seconds and meter/minute

#### 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

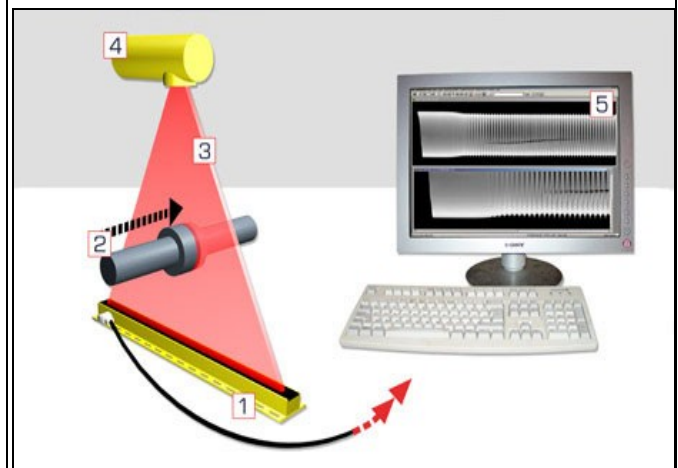
- Display type: 15." [approx.]
- Display resolution: 1920 (V) x 1080 (H) pixels
- Pixel pitch: 165 micron (0.165 mm)
- Feature: colour /high brightness

#### Software

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

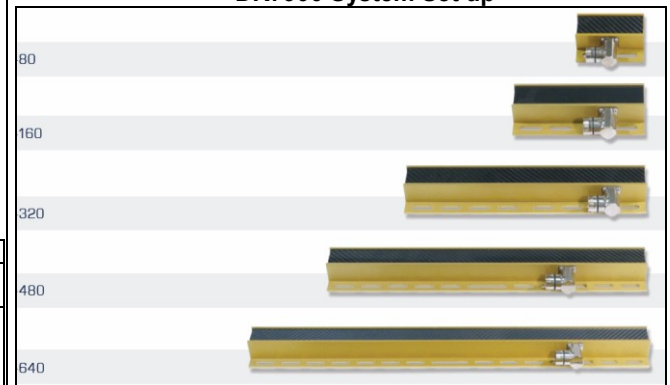
#### Environmental

- 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