

# Mobile Continuous Radiography



## Product overview

The Continuous Mobile Radiography system can effectively monitor and report upon internal damage events & severity. The mobile configurations allows for quick installation and ultimately a speedy review of the belts current health status.

The system utilises sophisticated X-ray imaging and direct digital technology incorporating leading "fingerprint identification" software to process generated images, conduct intelligent identification and provide for timely and appropriate reporting of events as they are categorised.

The output can be further interrogated and specific images magnified to better understand those anomalies identified, the end result being a complete damage and severity belt map.

The system is also available as a permanent installation.

## Key Features

### 1. Mobile / Modular Design.

The system is split into individual elements and is designed to be used in a mobile configuration.

### 2. Convenient installation.

Installation of the equipment only takes 30mins under normal conditions.

### 3. Simple operation.

Upon successful installation the system is operated in manual mode using a laptop computer.

### 4. Reliable protection & Safety.

Enclosure protection rated IP57; X-ray source leakage dose is greatly lower than the value range permitted by national standards, and the leakage dose within 5cm around the equipment is  $\leq 5\mu\text{Sv}$ . The addition of an exclusion zone around the equipment through use provides further protection.

### 5. Real-time display.

The current conveyor belt operation condition displayed in real time.

### 6. Video playback.

The software allows for playback of the entire belt length.

### 7. Automatic identification

Frequency domain and Value domain are used to conduct automatic analysis, the software automatically identifies broken strands, cord corrosion, cord displacement, damaged / pulled splices, rubber tearing, etc for the entire belt length.

### 8. Accurate distance measurement.

The distance between any two points on the belt can be measured simply and the measurement can be as precise as 1mm.

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## 9. Illustrated reporting.

Upon completion of the detection process, the complete report can be generated with a single click of the "report button".

## 10. Accurate detection.

The system allows for maximum protection for your asset through accurate detection and subsequent analysis and reporting.

## 11. Accurately detect joint movement.

1. Utilises "fingerprint identification" technology.
2. Measurement of voids left by pulled cords
3. Utilise pixel data to calculate Splice length.

## 12. Defect positioning.

The system utilises pixel data to accurately position every identified defect

## 13. Strength calculation.

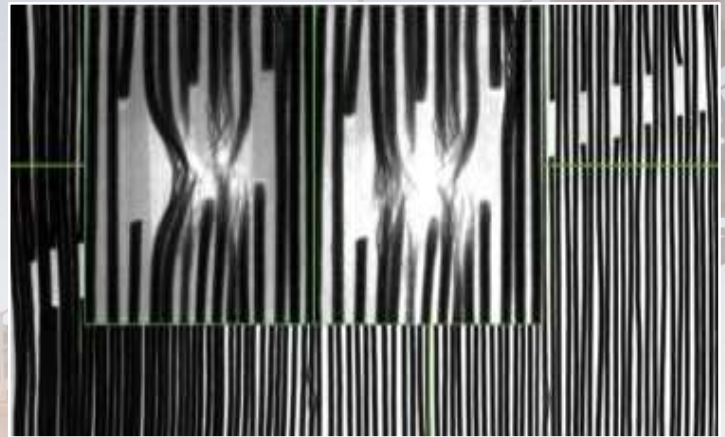
Included within the evaluation of the belt condition.

## 14. Holographic storage.

The collected belt data is stored on hard disk.

## 15. High-magnification.

The system utilises magnifier principles to conduct detailed observations.



SPECIFICATION		
Performance Parameter	System Operating Voltage	AC 220v
	System Operating Current	<2A
	Belt Speed	0 – 9.6 m/s
	Belt Width	< 2.2 m
	Belt Gauge	<40/80 mm
	Communication Mode	Ethernet
	Communication Distance	<100 m
	Protection Rating	IP57
	Resolution Rate	0.8mm x 0.8mm
	Minimum Cord Damage	1.6mm
	Minimum Splice Movement	3mm
	Detection Error	Horizontal<1cm Longitudinal <5cm
	Operating System	Windows XP/NT/9x/7/8
	Work Environment	Environment Temperature
Humidity		<95%
Atmospheric Pressure		86 – 106KPa
Electrical Environment	Supply Voltage	AC127v sustainable fluctuation range 75% – 110%
	Input Operating Current	<2A
	Consumed Power	<255W