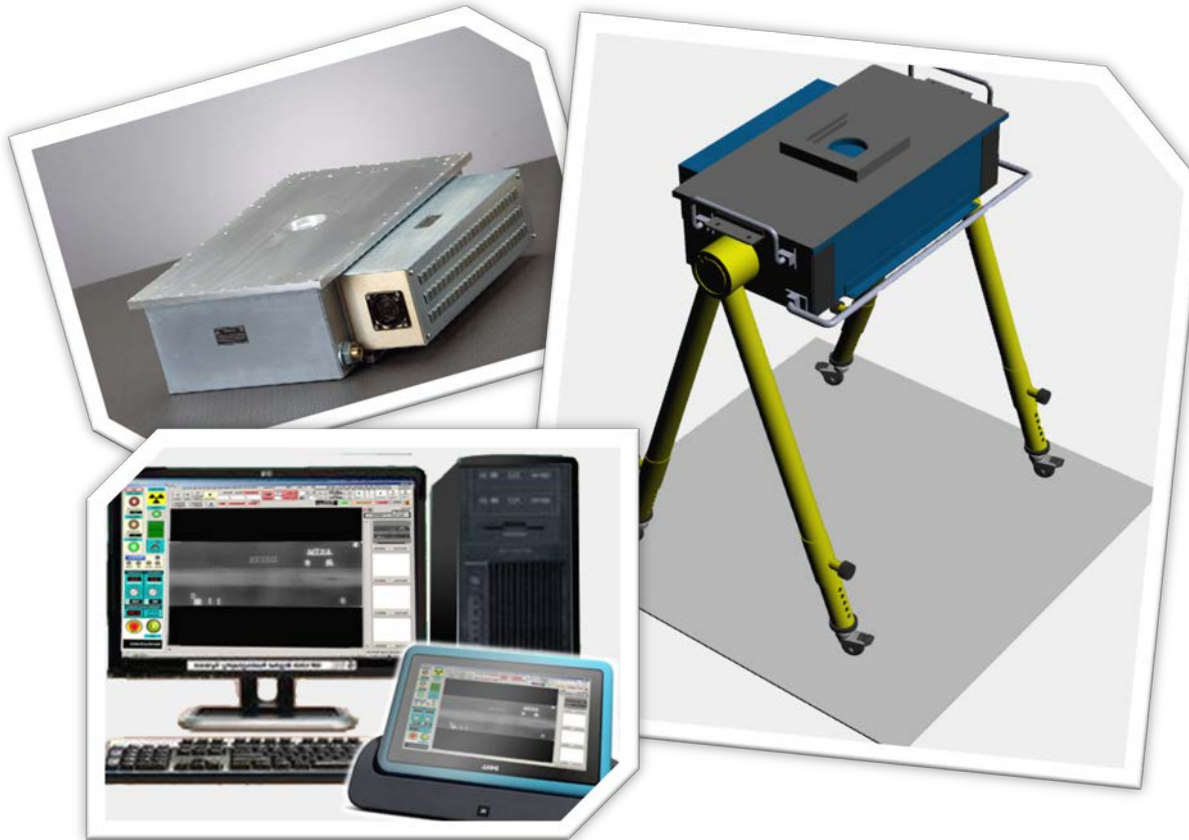


# CIT / 250 kV Constant Potential X- Ray Generator

Product Code: CIT/250kV-Mono



- ❖ 250 kV industrial radiographic x-ray source with state-of-the-art electronics and high voltage power supplies
- ❖ High stability x-rays available in two focal spot sizes
- ❖ Self-contained unit with forced air cooling and optional water cooling for continuous operation
- ❖ Audio-visual warning indicators in accordance with U.K. ionisation radiation safety requirements
- ❖ Software controlled unit, with the application integrated into any CIT digital radiographic inspection system

## *Modes of Operation*

The x-ray generator features four different modes for different types of operational needs. This means that the same unit can be used in:

- Radiation Cabinet
- Radiation Bay
- Field Radiography
- Underwater Radiography

The basic x-ray generator unit is portable for carrying out field radiography. CIT supplies various accessories so that it can be made to use in any working environment.

## *Choice of Operating Device*

Software application available either on a high performance desktop for use in radiation room or stationary environment or go for tablet version to be on the fly all the time.

## *Connectivity and Power*

The unit can be operated using either mains supply or via battery pack to support mobile operations. The unit also offers flexibility in terms of connectivity to the operating device. Choose from wired or wireless mode to operate the x-ray unit from the software interface.

## *Focal Spot Size*

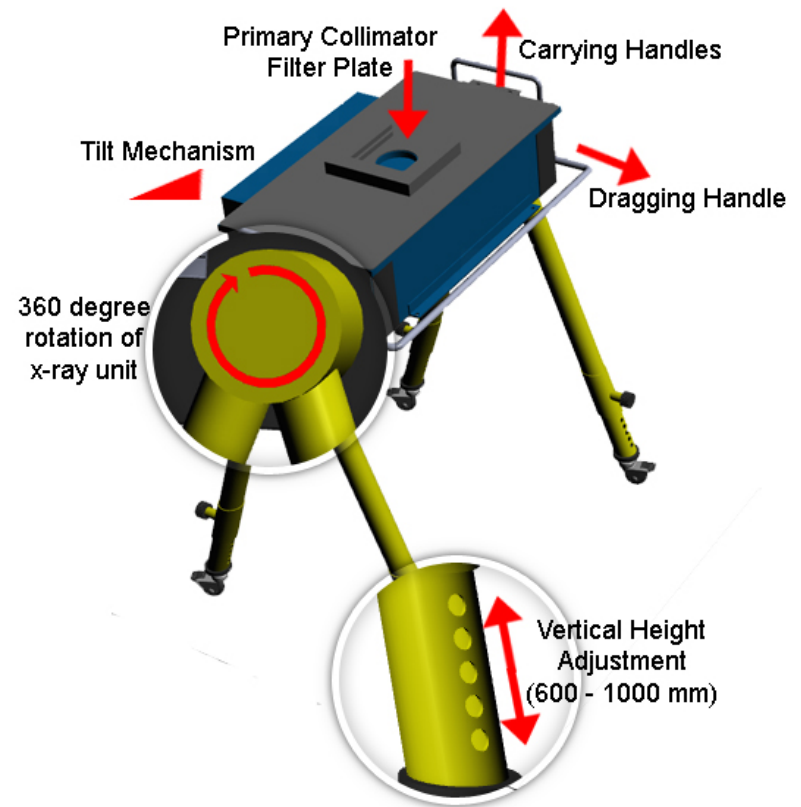
Different applications and components have specific focal spot requirements. Choose between focal size 0.5 x 0.8 mm or 2.5 x 1.5 mm.

## *Features*

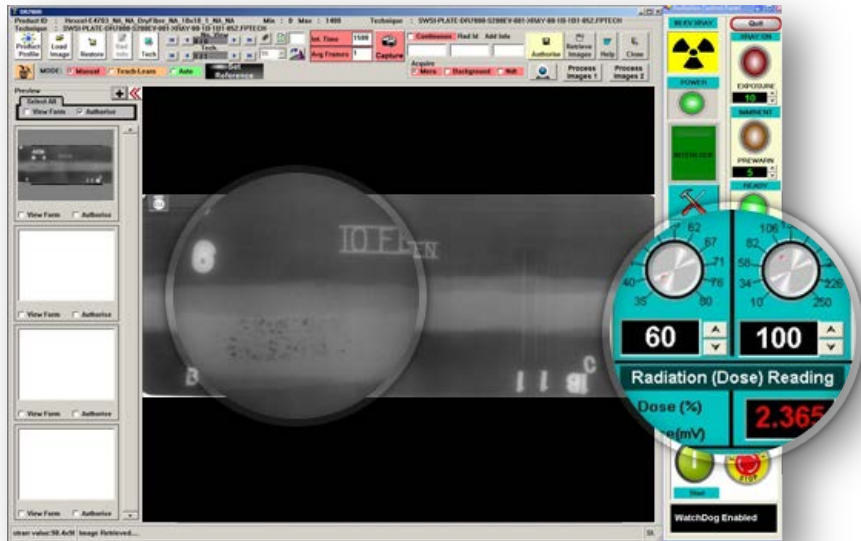
- ✓ Single pack design saves installation and setup time
- ✓ Light weight and portable
- ✓ Several configuration options make it extremely versatile for carrying out any kind of radiography anywhere

## *Applications*

- ✓ Max. Thickness inspected – 70 mm of Steel (large focal spot) with digital radiography
- ✓ Other material thickness can be calculated from above
- ✓ Pipeline inspection
- ✓ Castings and turbine blades



## Software Control Console Features



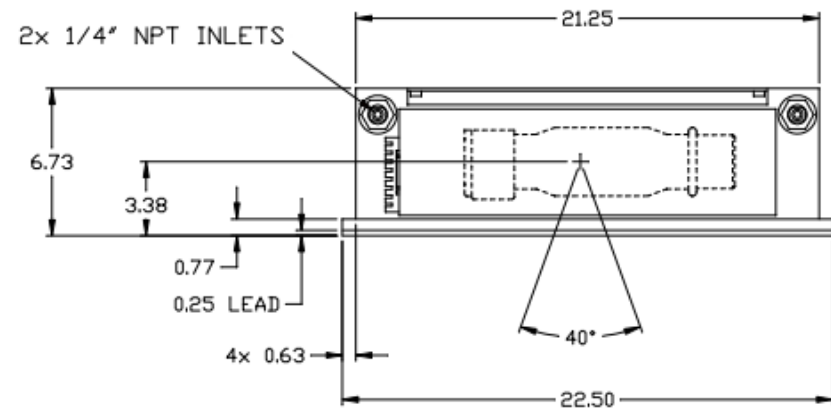
- ✓ Dose Calibration and Dose Demand
- ✓ Real time and exposure modes
- ✓ Indicator LEDs to reflect actual status
- ✓ Set control parameters
- ✓ Fault Diagnosis
- ✓ Emergency Stop

## Technical Specifications

	Specific Tube Specifications	
<b>Focal spot size</b>	0.5 x 0.8 mm	2.5 x 1.5 mm
<b>mA Range</b>	0.1 – 3.0 mA	0.1 – 4.0 mA
<b>kV Range</b>	100 – 250 kV	100 – 250 kV
<b>Power</b>	300 W	750 W
<b>Max. Steel Penetration</b>	58 mm* with Digital Radiography	70 mm* with Digital Radiography
<b>Line regulation (kV)</b>	0.1% for a $\pm 5\%$ line change	0.1% for a $\pm 5\%$ line change
<b>Load regulation (mA)</b>	0.1% for load changes 0.1-4.0 mA	0.1% for load changes 0.1-4.0 mA
<b>Line regulation (emission current)</b>	0.5% for a $\pm 5\%$ line change	0.5% for a $\pm 5\%$ line change
<b>Load regulation (emission current)</b>	1.0% for KV changes 100-250 KV	1.0% for KV changes 100-250 KV
<b>Ripple (kV)</b>	2% RMS at 250KVP, 3mA	2% RMS at 250KVP, 3mA
<b>Rise Time (kV)</b>	30 sec. from standby	30 sec. from standby
<b>Set-ability</b>	0.5%	0.5%
<b>Temp. Stability (after 30 min. warm-up)</b>	0.05%/°C per hr over 10-35°C 0.10%/°C per 8 hours over 10-35°C	0.05%/°C per hr over 10-35°C 0.10%/°C per 8 hours over 10-35°C

\*to be verified

General Tube Specifications	
Max. Anode Current	5 mA
Max. Anode Voltage	300kV [used up to 250 kV to enhance tube life]
Max. Power	1500 W
Filament Voltage	4 V
Filament Current	4 ± 0.2 A
Anode Angle	25°
Beam Angle	60° x 40°
Duty Cycle	2-3 minutes (air cooled)    100% (water cooled)



\*All dimensions are in inches

### Ordering Information

Part Code	Description	Scope of Supply
<b>CIT/250 kV/STD-CP-Xray-PKG</b>	Standard configuration with radiation safety controls and interlock circuitry, 250kV x-ray head, ruggedized computer control and x-ray control software	x-ray head, laser pointer, computer with software, wired/wireless modes of communication, primary collimators, warm-up shield, travel case, operating instructions, water cooler (optional)
<b>CIT/250 kV/Mob-CP-Xray-PKG</b>	Mobile System configuration (standard configuration mounted on movable trolley or articulated arm)	Mobile jig in a travel case
<b>CIT/250 kV/EQP-CP-Xray-PKG</b>	Inbuilt into Equipment (comes with engineering drawing package for installation)	X-ray head with wireless/wired connection and water cooler
<b>CIT/250 kV/Underwater-Xray-PKG</b>	250kV x-ray unit "marinised" container for deep water radiography	Marinised container with Ethernet cable and external battery powered connection from ROV (Remote Operated Vehicle)
<b>CIT/Battery-UPS</b>	Battery powered UPS (external)	Mains 110-240V, UPS with battery life of 30 minutes
<b>CIT/250kV/Water-cooler</b>	Water cooler for 100% duty cycle	Mains operated water cooler
<b>CIT/Dosimeter</b>	Primary dose measuring device	Radiation detector cable integrated into CIT/software panel

*Brazil*

*Norway*

*UAE*

*India*

*China*

*Malaysia*

*South Korea*



*Bahrain*

*Qatar*

*Oman*

*Kazakhstan*

*Portugal*

*Turkey*

*Italy*

*Computerised Information Technology Ltd.*

20, Potters Lane, Kiln Farm, Milton Keynes

Buckinghamshire, United Kingdom MK113 HF

Regd. Office: England 2149641 [1987]

Tel: +44 (0) 1908 260082 Fax: +44 (0) 1908 260084

Email: [info@cituk.com](mailto:info@cituk.com)

Website: [www.cituk.com](http://www.cituk.com)