

**THE APPOINTMENT OF A SERVICE PROVIDER TO SUPPLY, INSTALL AND MAINTAIN
02 SECURITY X-RAY MACHINES AND 02 WALKTHROUGH METAL DETECTORS FOR
CEF (SOC) LTD FOR A PERIOD OF TWO YEARS.**

1 INTRODUCTION

CEF SOC Ltd is a state-owned company involved in the search for appropriate energy solutions to meet the energy needs of South Africa and the sub-Saharan African region. It also manages the operation and development of the oil and gas assets of the South African government. The company falls under the auspices of the Department of Minerals, Energy Resources (DMPR). For more information on the company, you can visit our current website: www.cefgroup.co.za

2 BACKGROUND AND OVERVIEW

The Central Energy Fund (CEF), as a South African state-owned entity critical to the nation's energy security, mandates robust security measures across its operations. The acquisition of an X-ray machine and metal detector is driven by the imperative to enhance physical security at CEF facilities, safeguarding personnel, sensitive information, and valuable assets from threats such as unauthorized entry, the introduction of prohibited items like weapons or explosives, and the illicit removal of company property. This procurement is not only a best practice for corporate security but also a compliance requirement under South African regulations, particularly the Public Finance Management Act (PFMA) governing state-owned entities, and the Hazardous Substances Act for the X-ray machine itself, necessitating specific licensing and safety protocols.

Location: CEF House (Block C, Upper Grayston Office Park, 152 Ann Crescent. Strathavon, Sandton 2031)

2.1 X – RAY MACHINE AND METAL DETECTOR SPECIFICATIONS.

2.1.1 X - Ray Machine:

X-Ray Unit Type HI-SCAN 5030C (Dual energy-material distinction) or **equivalent** with HI-TRAX technology with one 24" colour monitor able to switch to black/white.

2 X X-Ray Machine General Specifications

Tunnel dimensions / max. Object size	532 (W) x 330 (H) [mm] / 530 (W) x 320 (H) [mm] 21'' (W) x 13'' (H) / 20.9'' (W) x 12.6'' (H)
Conveyor height	approx. 190 mm / 7.4''
Conveyor speed at mains frequency 50/60Hz	approx. 0.18 / 0.22 [m/s]
Max. conveyor load (evenly distributed)	60 kg / 132 lb s

Resolution (wire recognition)	Standard: 38 AWG (0.1 mm Cu), typical: 38 AWG (0.1 mm Cu),
Penetration (steel stepwedge)	Standard: 14 mm, typical: 16 mm
X-ray dose / inspection (typical)	HI-MAT: 0.8 Sv (0.08 mrem)
Film safety	Guaranteed even for high speed films up to ISO 1600 (33 DIN)
Duty cycle	100 %, no warm-up procedure required
X-Ray Generator	
Cooling / Housing	Hermetically sealed oil bath / single tank
Anode voltage	100 kV cp
Anode current (typical)	standard: 0.07 mA
Beam divergence / beam direction	60° / diagonal from top to bottom
Image Generating System	
X-ray converter	L-shaped detector line with large scale monolithic amplifiers; conversion of X-radiation by means of scintillation crystals
Number of X-ray detectors	1024 photo diodes (HI-MAT)
Digitalization (dynamic resolution)	A/D converter 14 bit

2.1.2 Metal Detector Machine:

Multi Zone Walk through Metal Detector, panel version, complete with dual-beam photocells transit counter, four multi zones display bars programmable as pacing lights and/or 60 localization zones with left and right indication, Met-Identity technology, Random Alarm capability, low voltage DC power, Chip-Card programming, One-Touch automatic self-installation, Bluetooth and RS-232 communication, anti-tamper on/off switch. 720mm.

2 X WALKTHROUGH METAL DETECTOR: VISUAL ALARM WITH ZONE INDICATION

GATE STRUCTURE	State-of-the-art, robust and washable panels Protected against aging, weather and wear
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OPERATIONAL FEATURES	<p>High discrimination and transit flow rates five or more times greater than other metal detection systems</p> <p>Quick reset time as short as 0.2 seconds for high throughput rate</p> <p>Very high detection speed (up to 15 m/sec.)</p> <p>Built-in operational functional verification</p> <p>One-touch key reading of inbound, outbound and Security Level Data</p>
QUALITY	<p>Continuous self-diagnostic system</p> <p>Proven reliability</p> <p>No periodic re-calibration and preventive maintenance required</p> <p>No scheduled maintenance</p> <p>Fully digital design</p>
ALARM SIGNALING	<p>Multi-zone display bar for "height on person" localization</p> <p>4 light bars with selectable entry/exit and pacing indication</p> <p>Green and red metering signals proportional to the mass of the detected target</p> <p>10 selectable continuous and pulsed tone plus 34 special tones</p> <p>10 selectable sound intensities ranging from 0 to 90 dbA at 1m</p>
TYPE OF SIGNALING	<p>Fixed or proportional to the mass in transit - visible from 6m under lighting of 4000lux</p> <p>60 distinct zones (20 vertical x 3 lateral) entry and exit side</p>
PROGRAMMING	<p>Up to 50 built-in Security Programs</p> <p>Remote via Infrared Remote-Control Unit, BT or Ethernet 10/100 base T (option) interface</p> <p>Security level: International Standard (IS) command / Chip card</p> <p>Local by Control Unit alphanumeric display and keyboard</p> <p>Programming and chip card access protected by user and super-user passwords</p>
ENVIRONMENTAL DATA	<p>Power Supply: 100...277V~ $\pm 10\%$, 47...63Hz, 40 VA typical consumption</p> <p>Operating temperature: -20°C to +65°C (-37°C to +70°C upon request)</p> <p>Storage temperature: -37°C to +70°C</p> <p>Relative humidity: 0 to 95% (without condensation)</p>
INSTALLATION DATA	<p>Automatic synchronisation between two or more metal detectors with distance of down to 5 cm without the use of external cables</p> <p>Automatic Installation function (OTS)</p>

CEF SOC Ltd invites bids from suitable service providers to provide the product, installation, provide training and maintenance for the X-Ray Machine and Metal Detector that meets the following requirements:

3.1 Minimum requirements:

CEF requires support, installation, technical assistance, maintenance, and post-installation training for security officers, all to be provided on a time-and-material basis.

Requirements:

- Preventative maintenance at specified intervals as per the OEM requirements.
- Installation of the equipment and training of security personnel on the use of the equipment.
- Corrective maintenance as and when required for the duration of the warranty period.
- Predictive maintenance bi-annually, or as when required as per OEM requirements.
- Responding to emergency service requests onsite, when required.
- Maintain the system in full operating condition and maintain proper and effective record keeping. This must include all the repairs and replacements of normal wear and tear on equipment. The proposal must include response and repair time.

3.2 The winning bidder will be required to perform the following:

- To supply and install the product within a month of appointment.
- To provide equipment training to the CEF Security personnel post installation and,
- To provide preventive and corrective maintenance as per OEM requirements for the duration of the 24-month warranty period.

3.3 The proposal must include:

The service provider must provide a comprehensive breakdown of the manufacturer's warranty plan for a period of 24 months. All equipment's to be connected to the buildings power supply and additional circuit breaker, electrical accessories if required should be installed and as well as installing the required power points to the installed units. A Certificate of Compliance (COC) certificate must be issued for all electrical work.

3.4 CERTIFICATES AND INSPECTIONS:



- a) After completion of the installation, a full test will be carried out on the installation for a period of sufficient duration to determine the satisfactory working thereof. During this period the installation will be inspected to the satisfaction of the CEF representative, and the service provider shall submit a report.
- b) The service provider shall provide all instruments and equipment required for testing the machines.
- c) Test reports as specified under (a) is to be submitted to CEF SOC LTD.
- d) Submit a Certificate of compliance (COC) after installation, testing and commissioning of equipment as well for electrical work conducted.
- e) The installation shall be set up and tested in accordance with The Occupational Health and Safety Act, 1993 (Act 85 of 1993) as amended.
- f) The equipment shall comply with the Film Safety ISO 1 600 / 33 DIN high speed photographic film.
- g) All equipment must be registered and licensed with the South African Department of Health and should comply with the Occupational Health and Safety Act, No 85 of 1993 and current regulations of all other codes applicable to this work.
- h) Provide any other licenses needed to operate the equipment.
- i) Add a requirement for a radiation safety compliance certificate from SAHPRA after installation.
- J) Include operator radiation safety training certificates for compliance with the Hazardous Substances Act.
- K) Require a final handover pack (test reports, compliance certificates, warranty documentation, training attendance register).