



## COMPANY PROFILE

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[www.ceia-usa.com](http://www.ceia-usa.com)

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*CEIA USA's mission is to sell, distribute, manufacture, and service the world's most advanced technology in electromagnetic fields engineered by CEIA to public [federal, state and local governments] and private sector customers in North America.*

*CEIA USA strives to provide innovative products and services tailored to meet the specific and ever-changing needs and expectations of our customers.*

# CEIA HISTORY

1962

The activity began with the production of a patented Metal Detector for the textile industry capable of detecting tiny quantities of metal in fabrics in order to protect the production machinery.



1968

CEIA patents the first walk-through Metal Detector [1979] with microcomputer-based DSP analysis and the first column type gate [1982].



1979  
1982

The company is incorporated as CEIA and begins development and production of industrial metal detectors for food inspection, and ultrasonic cleaning machines for the gold and silversmith sectors.



1988

CEIA begins development and production of solid-state induction generators for no-contact heat treatment of metals.



1990

The revolutionary CEIA D2PN6 column model is selected by Federal Bodies as the device for mobile, indoor and outdoor applications.



1991

CEIA patents the elliptical column walk-through Metal Detector. This efficient, aesthetically pleasing device can easily and unobtrusively be used in high level government agencies and private corporations.



1996

CEIA Metal Detectors are certified by FAA according to the "3-gun-test" security standard.







CEIA USA is founded in Cleveland, OH.

1997

CEIA's in house EMC testing laboratory is governmentally accredited as a "competent body in the matter of electromagnetic compatibility".



1998

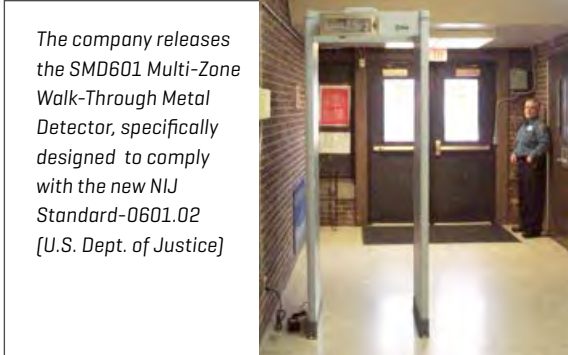


CEIA is selected by the United Nations as the Metal Detector supplier for humanitarian demining in Afghanistan and other conflict regions.

2002



CEIA 02PN20 is selected and certified for installation in North American Airports following tightening of security standards in response to the events of September 11, 2001.



The company releases the SMD601 Multi-Zone Walk-Through Metal Detector, specifically designed to comply with the new NIJ Standard-0601.02 [U.S. Dept. of Justice]

2004



New CEIA USA headquarters opened in Cleveland, OH, and it has since grown to over 42,000 square feet.

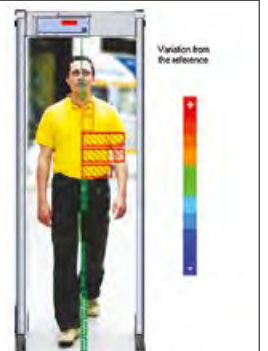
2005



The company unveils the CEIA CMD, a very high performance Compact Metal Detector. The one-piece foldable design allows the Metal Detector to be deployed quickly and to be carried easily.

2007

CEIA installs the first Loss Prevention System, a computer-aided metal detector designed to stop theft of valuable metal items in production plants and distribution centers.



2008



CEIA EMA automatic bottled liquids scanner is certified for use in Airports.

2010

EMIS, automatic screening for non-metallic cargo, is approved by Governmental Security Authorities for use in Airports.



2011

CEIA introduces the SA/80 series, the first 25, 50, 75, 100 kW High Efficiency Green Generators with integrated Quality Data Logger and Web Server.



ENERGY SAVER

2013

EMIS-MAIL letter bomb and IED detector is certified for mail security inspection.



2014



CEIA introduces the SAMDEX, Shoe Scanner Metal and Explosive Detector. SAMDEX compliance to operational requirements has been successfully verified by Government-Authorized Laboratories in 2016.

2015



EMIS, automatic screening for non-metallic cargo, meets ECAC Performance Standard.

2016

2018



# SECURITY

CERTIFIED BY  
GOVERNMENTAL  
LABORATORIES\*

## METAL DETECTORS AND SECURITY SCREENING EQUIPMENT

Today's security sector and the ever-stricter regulations relating to Metal Detectors for inspecting people in transit require equipment with the highest operational and functional performance.

With 50 years of experience in designing and manufacturing Metal Detectors, CEIA has developed a series of devices with superior sensitivity and throughput.

In high-sensitivity applications, CEIA can detect small metallic objects, such as a single razor blade while still providing optimal immunity to environmental interference.

For high flow-rate applications, CEIA offers Walk-Through Metal Detectors with extremely high discrimination of personal metal objects to minimize the incidence of nuisance alarms.

*\*Data available upon request*



### PD140N

**Compact** Hand Held Metal Detection Set.

### PD240

**Wide Search Area** Hand Held Metal Detection Set.

### PD240CB

**Long Range Dual-Tone** Hand Held Metal Detection Set.



### O2PN20 Elliptic

**Enhanced Walk-through** Metal Detector.



# AIRPORT SECURITY



In response to the recent introduction of particularly stringent Security Standards for Walk-through Metal Detectors, CEIA offers **inspection equipment characterized by extremely high performance in terms of both detection capability and transit flow.**

*This equipment is currently state of the art.*

# AIRPORT SECURITY

## ▶ ENHANCED WALK-THROUGH METAL DETECTOR



### 02PN20®

- Superior Detection and Throughput
- Compliant with and certified to the applicable Standards for Enhanced Metal Detectors
- Improved Detection, Discrimination, Spatial Resolution and Interference Immunity
- High Installation Adaptability in all Environments
- New mechanical structure with higher protection degree and easy replacement of internal mechanical and electronic parts
- Integrated Network Camera Capability

*Today, more than 8000 devices of this series (panels and columns) are installed and operating in airport and other high security applications worldwide.*





# AIRPORT SECURITY

## ▶ SHOE SCANNER METAL AND EXPLOSIVE DETECTOR



### SAMDEX®

- Certified against relevant detection standards for explosive and metallic threats
- Bulk detection, based on actual material properties measurement
- Increased checkpoint throughput by elimination shoe divestiture and X-ray check
- Increased comfort: passengers keep their shoes on
- Ergonomics: use of the Shoe Scanner is simple and stress-free
- Analysis time: 4 sec. typical/shoe
- Clear "OK/ALARM" inspection result



*Guided use is provided through proper graphic animations.*



*Passenger Screening with WTMD + SAMDEX and passenger body control through Explosive Trace Detector (ETD).*

# BUILDING SECURITY

## *SOPHISTICATED THREAT DETECTION AND HIGH VISITOR FLOW RATES TODAY REQUIRE **ENHANCED METAL DETECTORS (EMD)***

In response to the need for access controls for all those entering public buildings (government buildings, museums etc.), schools and private buildings, CEIA offers a range of very high performance walk-through and hand held Metal Detectors.

The CEIA Metal Detectors used for building access controls ensure compliance with high security standards and allow easy access at both medium and high transit flow rates.

Government buildings, museums and schools with sophisticated architecture require Metal Detectors with a modern design which can blend well into the installation site.





# EVENTS SECURITY



## CEIA ENHANCED METAL DETECTORS PROVIDE FAST AND EFFECTIVE SECURITY WITHOUT DETRACTING FROM THE VISITOR EXPERIENCE

The considerable task of planning a major security event requires the most reliable metal detectors for security checkpoint installations.

Through its research and development laboratories, CEIA is continuously investing in the design of equipment that provides the best compliance with the security requirements in public events.

The results are Metal Detectors that have extremely high immunity to outside interference and high discrimination of personal objects. This allows a higher flow rate and improved processing times.





# CORRECTIONAL FACILITIES

## SMD600 Plus & SMD601 Plus

### MOST SENSITIVE METAL DETECTORS FOR LAW ENFORCEMENT AND CORRECTIONAL FACILITIES

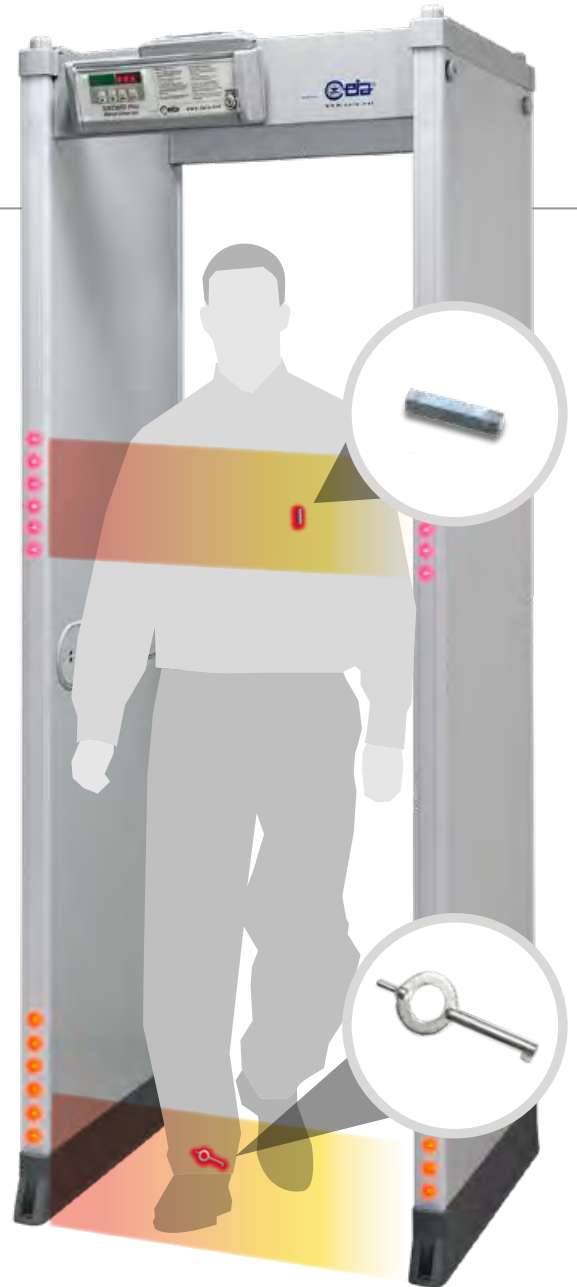
- Fully compliant with the NIJ-0601.02\* Law Enforcement Standard
- Quick, accurate analysis of all parts of the body of people in transit, from the shoe level to the crossbar
- Accurate Pinpointing of individual and multiple metal targets
- Exceptional Immunity to external interferences
- Unmatched Reliability

\* NIJ STANDARD-0601.02: "Walk-Through Metal Detectors for Use in Concealed Weapon and Contraband Detection"

ANTI-VANDALISM  
CONSTRUCTION



CEIA provides certified Test Samples reproducing for shape, material and signal on WTMDs the same effect of the reference targets.



The CEIA Metal Detectors **fully comply** with the requirements of the **NIJ0601.02 Standard for all Security Levels**, and can therefore be applied in situations from the inspection of visitors to that of inmates in top-security checkpoints, even in areas with strong electrical and mechanical interferences.

# LOSS PREVENTION

## SMD601 Plus Profiling

OPTIMIZED SOLUTIONS TO DETECT AND DETER METAL PRODUCT THEFT

- Discovers small metal masses anywhere on and in the body while discriminating non-removable metal
- Greatly reduces losses with theft detection and deterrence
- Increases throughput at security checkpoints with automated screening
- Minimizes nuisance alarms by ignoring non-removable personal metal items
- Improves privacy with non-invasive search



Each transit is compared with the individual's profile stored in the database.



The **SMD601 Plus Loss Prevention Metal Detector** prevents the theft or accidental removal of metallic objects. As people transit the system, their **metal content is compared to a saved personal profile.**



# DUAL-SENSOR TECHNOLOGY

## ► WEAPONS AND RADIOACTIVE MATERIALS DETECTOR



### METAL DETECTOR

- Detection of all-metal weapons, including light alloys threats
- High-Throughput
- Detection of radioactive substance shielding containers



### RADIATION DETECTOR

- Detection of radioactive materials
- Embedded, high-sensitivity, full-height radiation sensors
- Compliant with and certified

### DUAL THREAT DETECTION IN A SINGLE GATE

The CEIA Walk-Through Metal Detectors can be equipped or field upgraded after the installation with a high sensitivity array of gamma sensors. This array covers the full height of the transit, allowing accurate detection of radioactive substances carried by people in transit.

The detection capability includes a wide range of energies for a complete coverage of the possible radioisotopes.



### G-SCAN RADIATION DETECTOR

Checkpoint Security coverage can be completed by a **G-SCAN Radiation Detector** positioned at the exit of the carry-on baggage inspection X-Ray machine.





# DUAL-SENSOR TECHNOLOGY

## ▶ WEAPONS AND CELLPHONES/SMARTPHONES DETECTOR



### METAL DETECTOR

- Detection of all-metal weapons, including light alloys threats
- High-Throughput
- Multizone red signaling



### CELL PHONES DETECTOR

- Detection of standard and miniaturized cell phones and smartphones
- Detection of magnetized items
- Multizone yellow signaling

### SMD600 Plus-MI2™

The SMD600 Plus - MI2™ is optimized for the screening of people in applications where simultaneous detection of all metal (magnetic and non-magnetic) firearms and cellphone/smartphone devices, including the most miniaturized, low metal content versions, is required along with high-throughput and a low nuisance alarm rate.



# LIQUID EXPLOSIVE DETECTOR



## EMA SERIES

The EMA is a compact device designed for the screening of bottles and their contents with the goal of detecting the presence of combustible, flammable and explosive liquids. When the operator places the bottle in the inspection cavity, the measurement process starts automatically.

The entire volume of the bottle is analyzed in order to verify its conformity with benign liquids. After a few seconds, the unit provides an OK or ALARM message without requiring any data interpretation by the operator. Calibration is carried out automatically by the unit. The electromagnetic fields generated in the inspection cavity are weak in intensity and non-ionizing, therefore completely safe for the liquids and for the operator.



External probe for sampled liquid analysis.

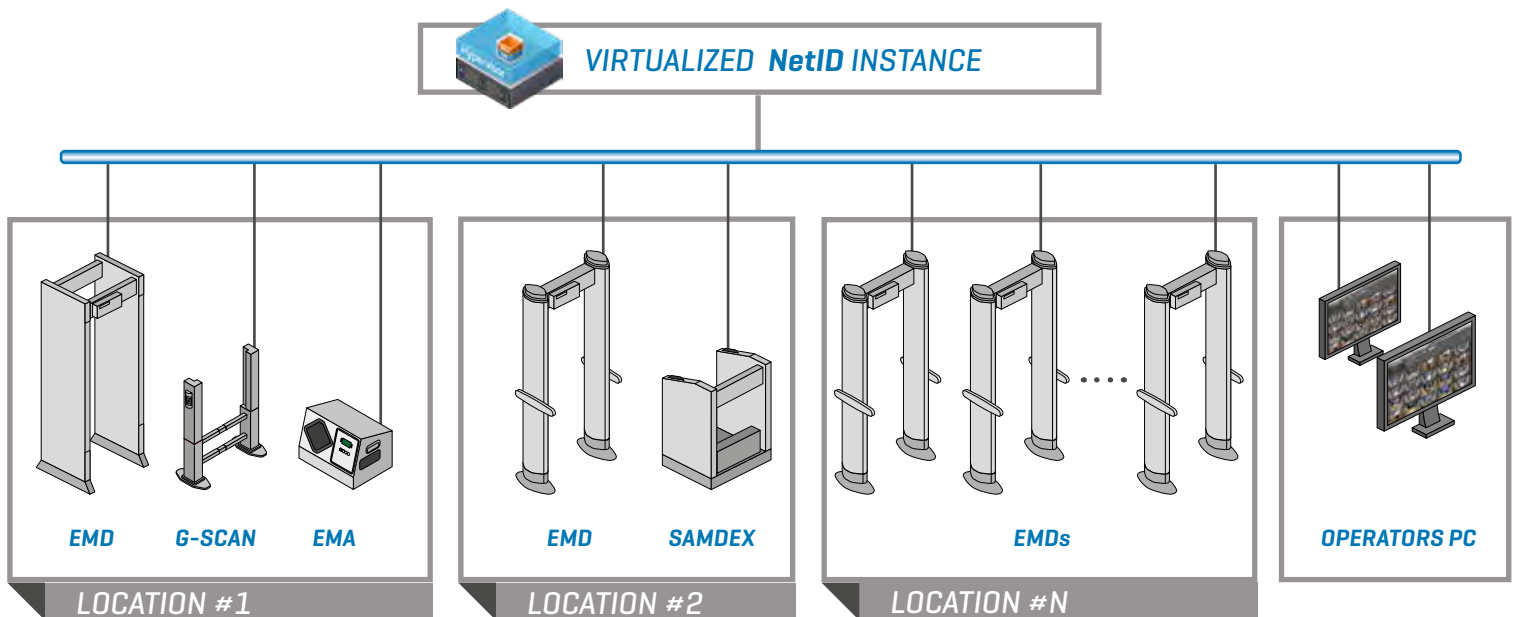
Examples of liquid containers that can be screened with EMA.



# NetID<sup>®</sup> NETWORK MANAGEMENT SYSTEM

## NetID<sup>®</sup> SYSTEM

The NetID Network Management System has been supervising CEIA IP enabled Metal Detectors since the year 2001. Today 150 instances of NetID Systems are in active use worldwide managing more 250 different sites.



**MONITOR**

- Centralized Monitoring of the functionality of each Metal Detector



**CONTROL**

- Centralized Setting of the Metal Detectors working parameters



**REPORT**

- Transits flow monitoring
- Detailed reporting of the transits data and the security device configuration data
- Data collection from each Metal Detector detailing the information on every single transit





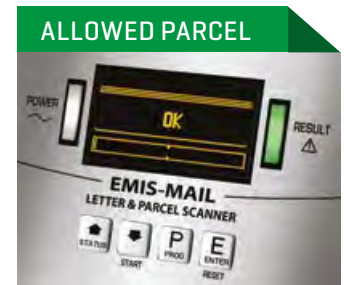
# LETTER BOMB AND IED DETECTOR FOR MAIL AND PARCEL INSPECTION

## EMIS-MAIL

- Automatic inspection of parcels and letters up to 18" in width and 3" thickness
- Detection of detonators, batteries, trigger circuits and other metal components of parcel bombs
- No alarm on metal staples, paper-clips and metal binding spirals
- Ergonomic, compact design
- Integrated battery charger
- Optional embedded detector of radioactive materials



ACCORDING TO EU REG.  
185/2010 ON MAIL  
SECURITY INSPECTION



The EMIS-MAIL is very easy to use and provides a fast and automatic **OK/ALARM signal confirmation** per each inspected package.



SCAN QR CODE TO SEE VIDEO PRESENTATION

# HIGHLY PORTABLE CELL PHONE, FERROUS WEAPON AND CONTRABAND DETECTOR

## MSD MAGNETO STATIC DETECTOR

- Detection of all cell phones and ferrous contraband concealed on the person or in body cavities (including keyfob cell phones) with or without batteries
- Constant Sensitivity across the aperture in pass-through operations [new **MSD EVO™** version]
- Multi-Zone targeting indication identifies location of contraband on the body
- Covert operation through use of Bluetooth headset (included)
- Fully weather proof for outdoor use (IP65 certified)
- 26 hours continuous use on embedded battery operation
- Unmatched detection in all environments without adjustment
- Extremely durable design
- No assembly required: 10 second set-up

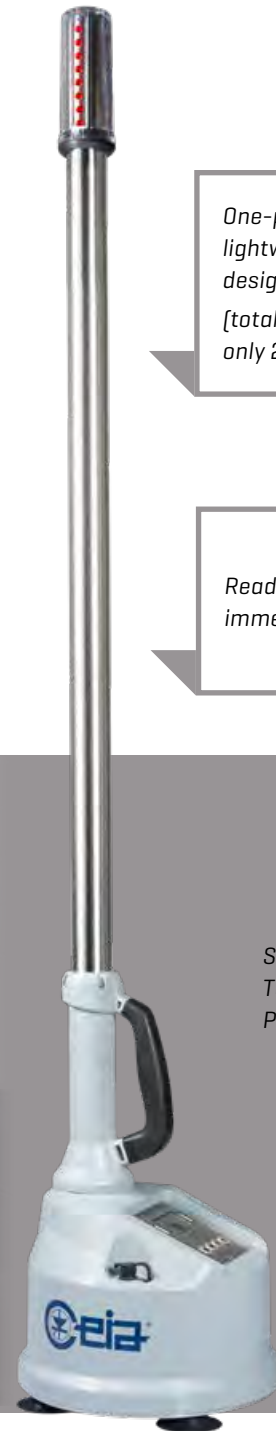
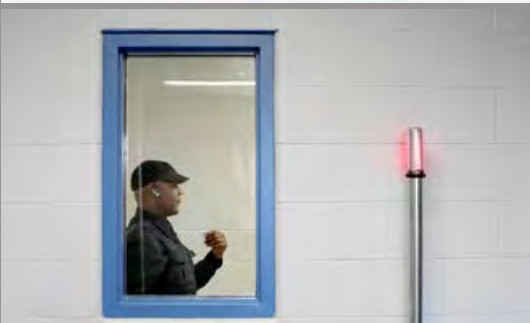


*One-piece and lightweight design  
(total weight only 21 lbs)*

*Ready for immediate use*



SCAN QR CODE  
TO SEE VIDEO  
PRESENTATION



# AUTOMATIC SCREENING FOR NON-METALLIC CARGO

## EMIS SERIES

The EMIS (Electro-Magnetic Inspection Scanner) equipment are security screening devices designed to inspect non-metallic cargo. Using CEIA exclusive Electromagnetic Profile Analysis technology, these devices ensure automatic detection of detonators and electronic circuits from IEDs (Improvised Explosive Devices), ammunition and weapons composed of metal (knives, fire-arms). In case of detection, the scanners give an audible and visual alarm.

## FULLY AUTOMATIC DETECTION

The EMIS is designed to automatically detect detonators and metal components of explosive devices inside paper, newspaper, perishable goods such as produce, fish and meat (fresh or frozen) and organic material in general. Electromagnetic inspection is the most suitable and quickest method for checking non-metallic cargo. The advanced technology employed in the EMIS minimizes the interaction with the goods themselves and does not depend on visual interpretation of an image by an operator.



SCAN QR CODE TO SEE  
VIDEO PRESENTATION

## ADVANTAGES / BENEFITS

- ▶ *Detect automatically detonators and metal components of explosive devices*
- ▶ *Low cost of ownership*
- ▶ *No dedicated operator*
- ▶ *High throughput*
- ▶ *No ionizing radiation*
- ▶ *Completely solid-state construction (no periodic maintenance or calibration required)*







**EMIS 130160**  
for palletized cargo

**EMIS 8075**  
for package inspection

**INSPECTION OF**

- *Perishable goods and flowers*
- *Paper products*
- *Textiles and Clothing*
- *Plastic and wooden products*





# GROUND SEARCH

## GROUND SEARCH METAL DETECTION

Thanks to many years of in-depth research in the field of Metal Detection, CEIA has established itself as a primary manufacturer of high-performance Ground Search Metal Detectors.

CEIA's approach to the development of its Detectors has been to employ the most advanced electronic and mechanical technologies that become available: Surface Mount Technology (SMT), microprocessor control, Digital Signal Analysis, in-the-field software upgrade capability and the use of high-quality materials for the search probes and for the other mechanical parts.

Tests carried out under controlled conditions by Authoritative International Bodies demonstrate that the CEIA Metal Detectors provide overall superior performance in the areas of detection distance, soil compensation capability and immunity to external interference.

Thanks to the extensive use of robotic and automated production systems, CEIA is able to offer the humanitarian market equipment that satisfies military quality and reliability standards at extremely competitive prices.



*Tests carried out under controlled conditions by Authoritative International Bodies demonstrate that the **CEIA Metal Detectors provide overall superior performance** in the areas of detection distance, soil compensation capability and immunity to external interference.*





**CMD series**

Clearance of unexploded ordnance and metal remnants disposal by using the CEIA CMD Compact Metal Detector.



**CMD/DW**

Compact Metal Detector designed to detect metal and minimum-metal content targets from ground to fresh or salt water bodies down to 330 ft depth.



**CWD**

Lightweight Compact Wire Detector. Detection of command wires of any diameter and type, independent of search head orientation.



**DSMD**

Deep Search Metal Detector for Medium to Large UXO targets including Cluster munitions, Bombs and other ERWs.



**MIL-D1**

Afghan deminers use the MIL-D1 Metal Detector working on top of the archaeological site of Shahr-i-Zohak [Afghanistan].





### **CEIA EMVS**

*CEIA EMVS is a complete system, aimed at the detection of metallic UXOs and ERWs, designed to be installed in front of vehicles. In the box, remote display unit inside the vehicle.*



### **CEIA MTZ-UXO-MDA FOR SUBMARINE OPERATIONS**

*Innovative Metal Detector equipped with a linear antenna array designed to operate attached to a manned or unmanned submersible vehicle and capable of functioning at depths up to 328 yards.*







**CEIA TRAINING FACILITY  
FOR TECHNICAL AND OPERATIONAL COURSES.**



**COMPLETE SUPPORT FOR TECHNICAL  
AND OPERATIONAL COURSES**

CEIA USA provides complete support for technical and operational courses, given by certified personnel, either on site or at its own premises. The curriculum includes first and second line maintenance, training for operators and a course for operator instructors.

The teaching activities are backed up by comprehensive documentation, and are divided between classroom seminars and practical work in the field.



# INDUCTION

## INDUCTION HEATING SYSTEMS

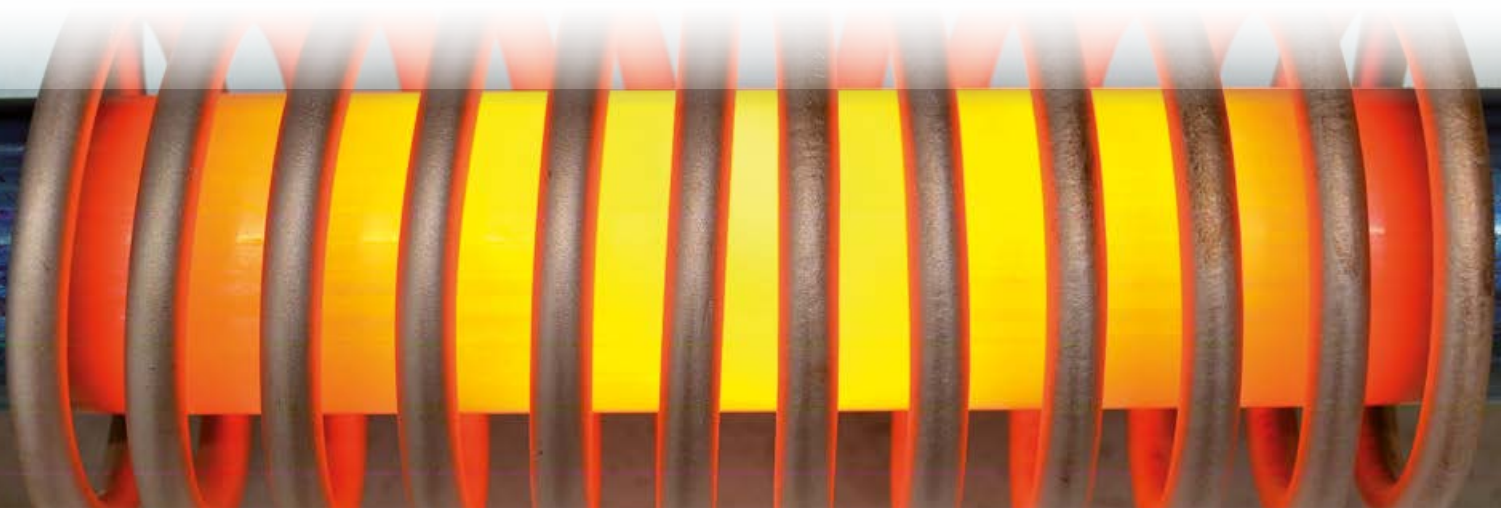
For more than 30 years CEIA has been working on the design and manufacture of no-contact Induction Heating Devices for metal treatment. High and medium-frequency generators, control units, optical sensors for measuring temperature and automatic solder-alloy wire supply devices make up the line of products known as the Power Cube Family, which are ideal for industrial processes of heat treatment and braze welding.

CEIA's unique technological solutions allow the manufacturing of power equipment with compact size, extremely high-energy efficiency and long-term reliability.



### **POWER CUBE 45/900**

High Frequency Generator, 900 HI-PE series.



**CEIA's unique technological solutions** allow the manufacturing of power equipment with compact size, extremely high-energy efficiency and long-term reliability. The high performance they offer contributes to the widespread use of CEIA systems in the most important industrial fields, where they have received the approval of end users and final-product manufacturers.



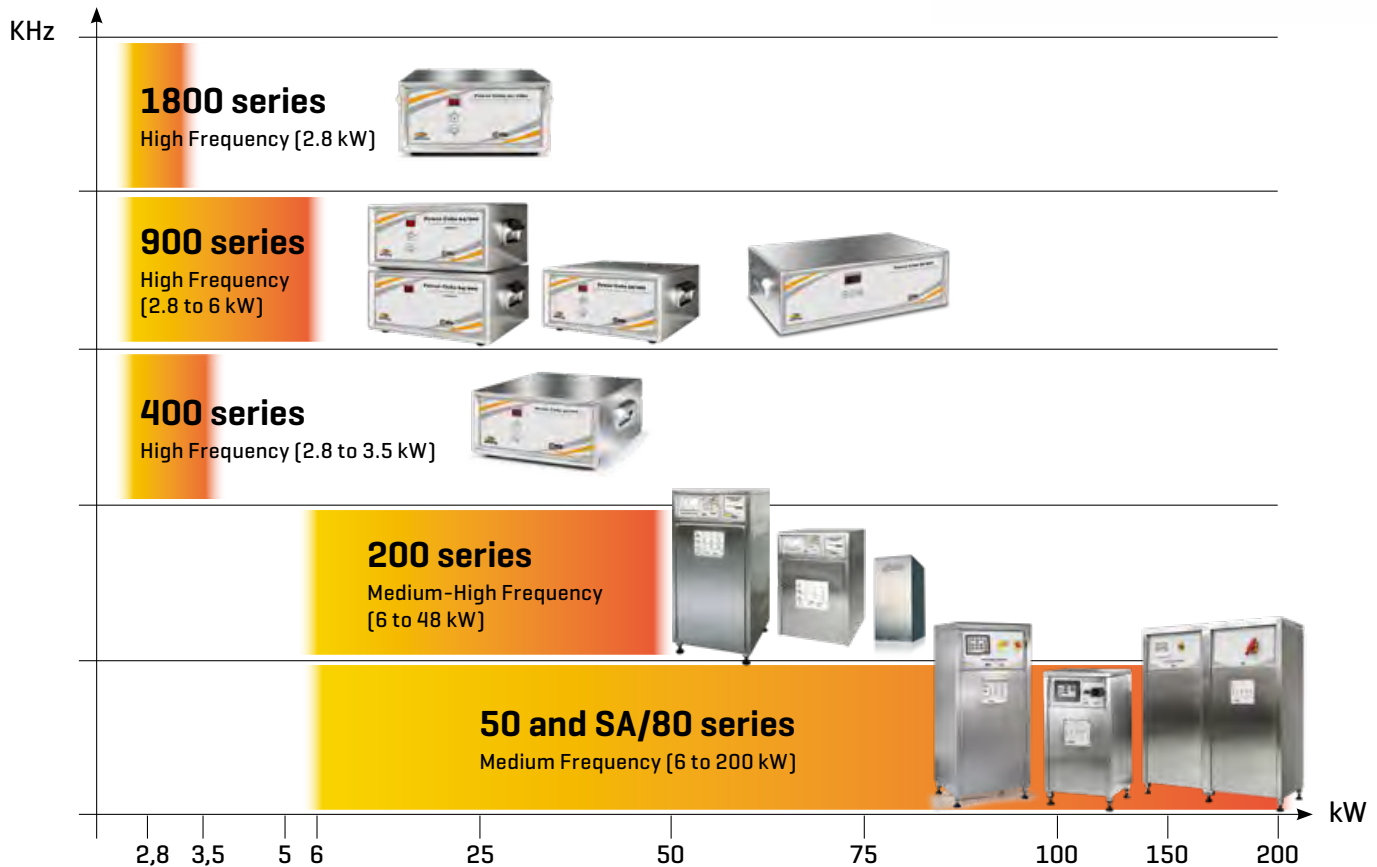
# GENERATORS



## THE CEIA SYSTEM'S ADVANTAGES

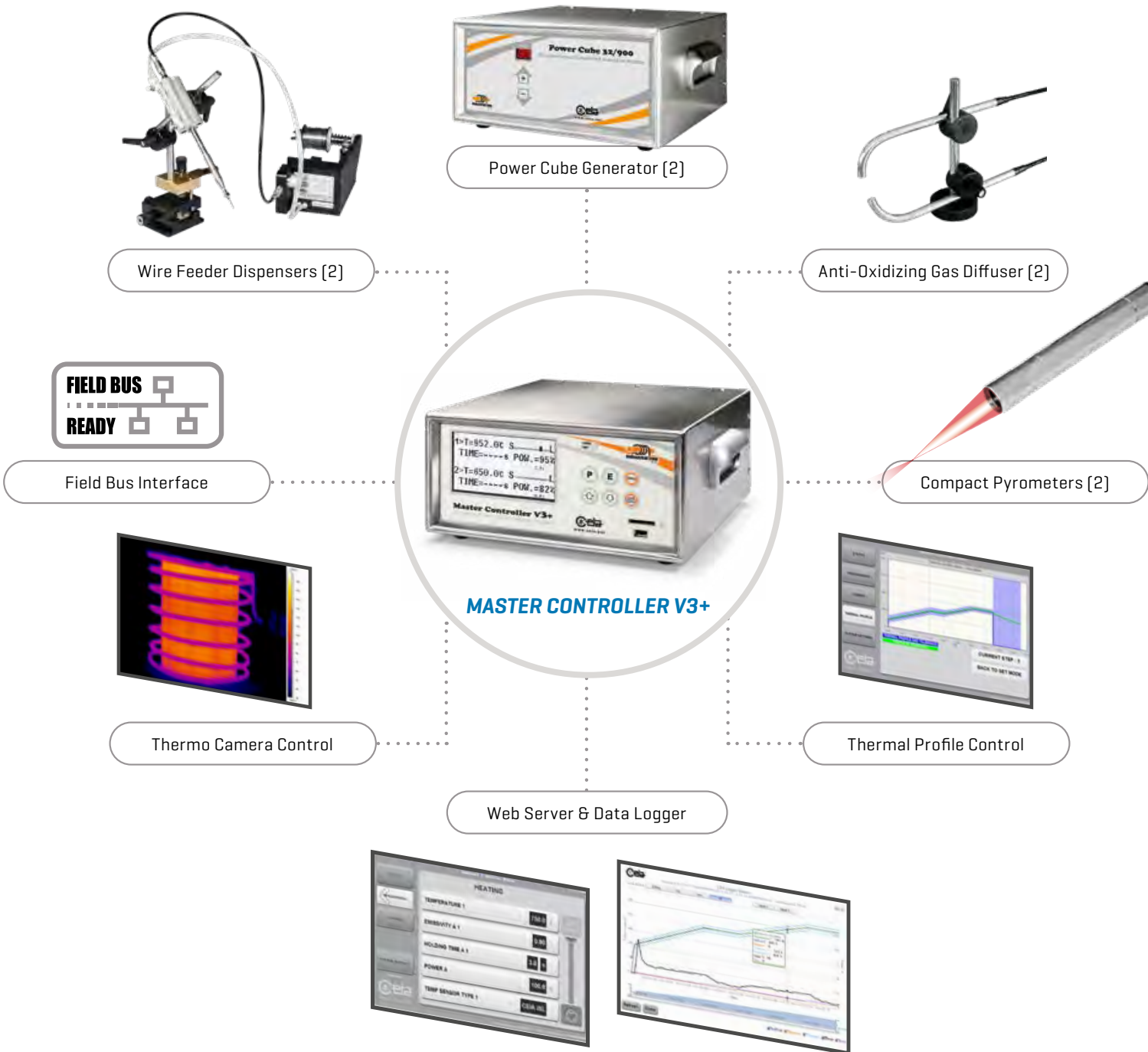
- Efficiency and Compactness
  - High level of performance with minimal operating costs
  - Lower energy consumption
- Complete Operator Safety
  - EMC and CE certified
  - Standard Galvanic isolation
- Process Control and Repeatability
  - Auto frequency tuning for optimal energy transfer to any load
  - Certified stability of power output
- Reliability and Flexibility
  - MTBF certified

**POWER CUBE SA/80 series**



# CONTROL UNITS

**The Master Controller V3+ is a multifunction industrial control unit, designed for automatic management of programmable heating processes. All operating parameters for each phase of the heating cycle can be programmed within a wide range of values.**



# TEMPERATURE SENSORS

## SH/SLE SERIES

Ceia offers a wide range of infrared optical sensors, equipped with low-intensity LED aiming, which covers an operating temperature range from 80°C to 2200°C:

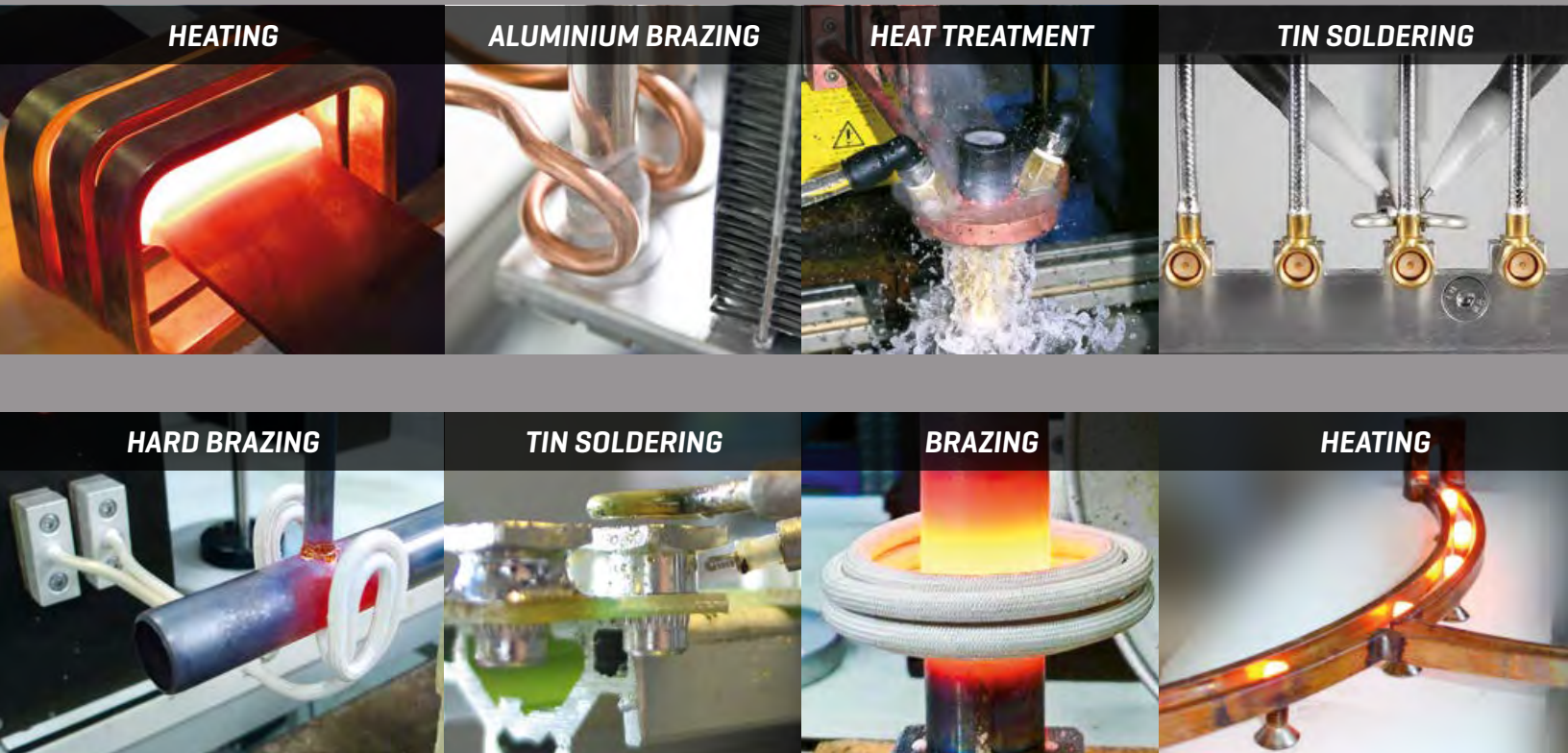
- >> **SH15/SLE** Single-color Series  
from 80°C to 2000°C
- >> **SH2C/SLE** Dual-color Series  
from 600°C to 2200°C



**SH/SLE PYROMETER**

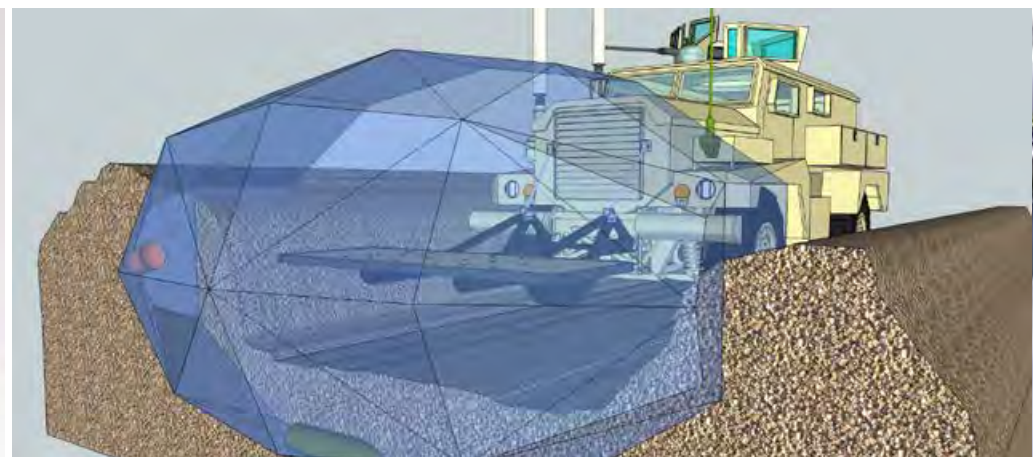
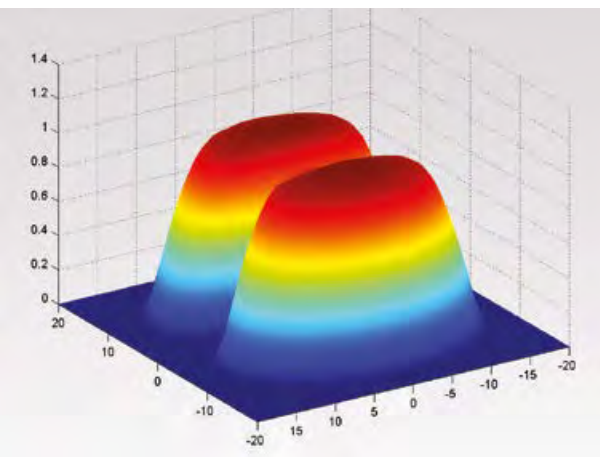
Pyrometer mounted on ES3M micrometric optical sensor base.

# APPLICATIONS





# RESEARCH



## Professional Qualifications and Experience

CEIA maintains its dedication to cutting edge electromagnetic research. Nearly 20% of CEIA's staff is focused on researching tomorrow's threat detection technology using electromagnetics.

# TECHNOLOGY



## *Advanced Technology Production Systems*

*The quality and reliability levels of CEIA equipment are recognized throughout the world by private companies and governmental institutions, who have chosen it following stringent comparative testing. This objective has been achieved by using the most advanced technology in all phases of production.*



# COMPLIANCE



## CEIA LACE - Laboratory of Electromagnetic Compatibility

User safety is a primary focus of CEIA product development. All CEIA equipment meets or exceeds local and international standards for electromagnetic emissions and immunity as well as electrical safety standards used worldwide. **The CEIA EMC Laboratory is accredited according to the ISO/IEC 17025 standard.**



# QUALITY CONTROL

CEIA equipment has a strong reputation for reliability and maintenance-free operation. This is achieved through extensive factory testing for product conformance to strict internal standards.

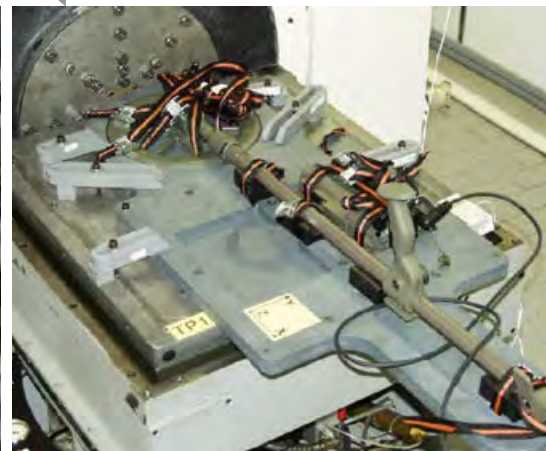
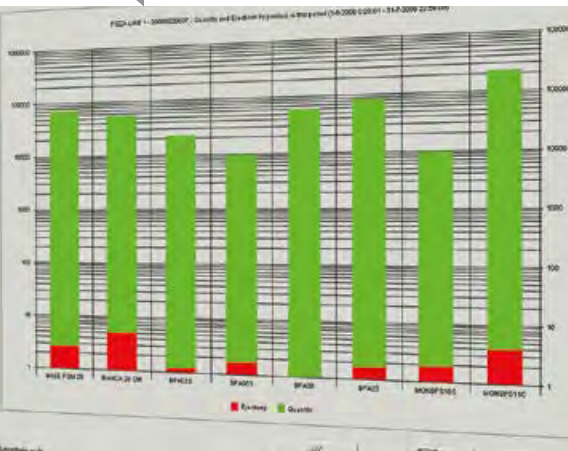
Detailed adherence to ISO 9001 standards also provides the traceability to support clients for many years after their equipment goes out of production. The tight tolerances employed during the factory acceptance test produce such consistent devices that field calibration is not required.



*THS Production for statistical and operational management of networked THS 21 systems.*

*Electronic Boards Functional Burn-In: 200 hours minimum.*

*Mechanical shock test on MIL-D1 Digital Metal Detector.*



*CEIA's Quality System extends throughout the company, from the design stage through production, quality control and after-sales service.*

# APPLICATIONS

## *SECURITY*

Airports and Ports, Embassies,  
Military Installations, Industry, Law Enforcement  
Institutions, Government Buildings, Banks,  
Stadiums, Distribution Centers, Data Processing  
Centers, Hospitals

## *GROUND SEARCH*

Humanitarian Demining, UXO Clearance,  
Underwater Detection, Crime Scene  
Investigation, Vehicle Protection

## *INDUCTION*

Brazing, Cap Sealing, Forging,  
Hardening, Localized Heating, Melting,  
Metal Glass Sealing, Sintering, Tempering,  
Tin Soldering





CEIA USA Ltd., Cleveland, Ohio



Classroom training



Practical training



WTMDs, Hand Held Metal Detector, Ground Search Metal Detectors and spare parts ready for delivery to customers

# COMPANY PROFILE



DP000K0007v3000uUS



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