





COMPANY PROFILE



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Demonstration of the behaviour of the magnetic poles through the "Terrella", a miniaturized model of the Earth and the field generated by the same, created by William Gilbert (1544-1603), the first magnetism scholar

CEIA S.p.A., Viciomaggio (Arezzo-ITALY)









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SECURITY

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



Certified by Governmental Laboratories*

Ceia

PD140N

Reia

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. O2PN2O 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 control equipment characterized by extremely high performance in terms of both detection capability and transit flow. This equipment is currently state of the art.

BUILDING SECURITY

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.

Many buildings (government buildings, museums etc.) and schools with sophisticated architecture require Metal Detectors with a modern design which can blend well into the installation site.



Sophisticated threat detection and high visitor flow rates today require Enhanced Metal Detectors (EMD).

EVENT SECURITY

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

MOST SENSITIVE MULTI-ZONE 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

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



As people transit the system, their metal content is compared to a saved personal profile.

The SMD601 Plus Loss Prevention Metal Detector prevents the theft or accidental removal of metallic objects.





WEAPONS AND RADIOACTIVE MATERIALS DETECTOR

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.

The gamma detectors adapt themselves to the background radiation level, adjusting the threshold to the optimum value for the installation environment. At the same time, a special algorithm prevents the adaptation to unusual background levels and changes.



The gamma-ray detection technology utilized in the CEIA Walk-Through Metal Detectors has been tested in Government-Authorized Laboratories.



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.



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



STAC Certified

Guided use is provided through proper graphic animations.



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.



NetID[®] NETWORK MANAGEMENT SYSTEM

NetID[®] SYSTEM

The NetID Network Management System has been supervisioning 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.



- Centralized Monitoring of the functionality of each Metal Detector
 - Centralized Setting of the Metal Detectors working parameters

CONTROL

REPORT

MONITOR

- 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 45 cm in width and 7.5 cm 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





HIGHLY PORTABLE CELL PHONE, FERROUS WEAPON AND CONTRABAND DETECTOR



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, firearms). 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.



INSPECTION OF

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

CEIA METAL DETECTORS AND SECURITY SCREENING EQUIPMENT



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)



INDUSTRIAL

INDUSTRIAL METAL DETECTION SYSTEMS

CEIA Metal Detectors detect metal contaminants accidentally present in industrial products with levels of sensitivity, immunity to interference and response speeds exceeding the strictest Quality Control Standards.

Fully HACCP and GMP compliant, CEIA Metal Detectors are ISO 9001 certified and constructed of EC and FDA approved materials.

CEIA THS 21 Metal Detection Systems offer detection, construction quality and reliability characteristics that make them the most suitable and effective solution for automatic elimination of metal contaminants.





THS 21 METAL DETECTORS SERIES WITH MULTI-SPECTRUM TECHNOLOGY

Exclusively developed by CEIA, this is a unique metal detection technology that both optimizes sensitivity to all metal contaminants and minimizes product effect in a very wide range of possible products.

By recognizing the different frequency response of conductive products and metals, this innovative technology cancels product effect and maintains high performance levels for all types of metal contaminants, both magnetic and nonmagnetic.

The autolearn function used by CEIA Multi-Spectrum Metal Detectors equates to the repetition of hundreds of conventional transits. It explores the whole spectrum of available frequency bands in order to determine the best operating conditions resulting in unique detection performance.





CONVEYOR INSPECTION SYSTEMS

THS/RB-800

High performance Metal Detection System with Round Belt for in-line applications.

CEIA THS 21 Conveyor Inspection Systems satisfy the most stringent requirements for functionality, compact construction, accuracy and reliability of response in dealing with accidental contamination in food products.

CEIA's THS 21 are available in a wide range of sizes covering the different application requirements. The supporting structure, the Metal Detector and the belt control box are in stainless steel.

The conveyor belt is certified as fully compatible with food product handling [FDA/USDA compliant] requirements, as is the protective cover of the ejection area and the container for rejected products.

THS/MBB Modular Conveyor Belt has been designed to manage all the functions required by the transport systems.





PIPELINE INTEGRATED SYSTEMS

The CEIA integrated systems are especially designed for metal contaminant detection in products transported by pipeline especially meat, soup, preserves...

The carefully selected materials used in construction do not interact with food products, and thus do not modify or alter their composition. The design of these systems incorporates a fast reject valve drive response time to detect and reject the contaminant without slowing down the product flow.

The construction guarantees quick, easy cleaning of the components that are in contact with the product. The technological choices made by CEIA allow the parts in contact with the product to be disassembled and maintained in a short time.

> THS/PLVM 21 series Integrated System for applications on meat vacuum filler machines.





PASS-THROUGH INTEGRATED SYSTEM FOR LIQUID AND VISCOUS PRODUCTS

PASS-THROUGH WITH EJECTION VALVE INTEGRATED SYSTEM FOR LIQUID AND VISCOUS PRODUCTS

PASS-THROUGH WITH EJECTION VALVE INTEGRATED SYSTEM FOR APPLICATIONS ON MEAT VACUUM FILLER MACHINES

FREE-FALL INTEGRATED SYSTEM WITH METAL DETECTOR AND EJECTION VALVE



CEIA THS/FFV21 Integrated System is especially designed for the inspection of granular and powder products and the elimination of any contaminating metals, whether magnetic, non-magnetic or stainless-steel.

The carefully selected materials used in construction of the THS/FFV21 Integrated System do not interact with food products, and thus do not modify or alter their composition. The design of the system incorporates a fast reject valve drive response time to detect and reject the contaminant without slowing down the product flow.

The construction guarantees quick, easy cleaning of the components that are in contact with the product. The technological choices made by CEIA allow the parts in contact with the product to be disassembled and maintained in a short time. The system operates in fail-safe mode, thus avoiding the risk of contaminants passing through even when the system is deactivated or when the electrical power supply is interrupted.



CEIA INDUSTRIAL METAL DETECTION SYSTEMS

PHARMACEUTICAL METAL DETECTION SYSTEMS

CEIA THS/PH21N Pharmaceutical Metal Detection Systems feature extremely high detection sensitivity towards contaminating metals, whether ferrous, nonferrous or stainless steel, even when present in tiny quantities.

The design and construction of the THS/PH21N Metal Detection Systems comply with FDA Title 21 CFR 110 requirements.

The carefully-selected materials used in construction do not interact with pharmaceutical products, and thus do not modify or alter their composition.

The mirror finished surfaces guarantee quick, easy cleaning of the components that are in contact with the product. The technological choices made by CEIA allow the parts in contact with the product to be disassembled and maintained in a short time and without the use of machine-specific tools.

THS/PH21N-FFV Integrated System for Granular and

Powder Products.



Ultra High Sensitivity Metal Detector. <image>

Wash-in-Place Pharmaceutical Metal Detection System.

MODULAR CONVEYOR BELT

for THS/PH21N Metal Detectors.

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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-thefield 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.



Military exercise in Norway under extreme environmental conditions [November 2018].

R.DrahiQatmee de Terre

CMD & CMD-UXO

The CEIA CMD is a very high performance, high-sensitivity Compact Metal Detector designed to detect metal and minimum-metal content targets in conductive and non-conductive soils, including laterite and magnetite.





CMD/DW

Compact Metal Detector designed to detect metal and minimum-metal content targets from ground to fresh or salt water bodies down to 100 m depth.



CWD

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



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).

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 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 300 m.







COMPLETE SUPPORT FOR TECHNICAL AND OPERATIONAL COURSES

CEIA 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.

A brand new facility, specifically designed for operational and maintenance training courses, has been recently set up at CEIA headquarters. The new facility extends the already existing training site. It consists of an expanded outdoor training lanes area, dedicated to practical activities and testing over different soils and a training building for theory lessons and technical maintenance procedures.

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.

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.



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.

CEIA INDUCTION HEATING SYSTEMS

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





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.

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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.



Mechanical shock test

on MIL-D1 Digital Metal Detector.

THS Production for statistical and operational management of networked THS 21 systems. Electronic Boards Functional Burn-In: 200 hours minimum.



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, Penal Institutions, Government Buildings, Banks, Stadiums, Distribution Centers, Data Processing Centers, Hospitals

INDUSTRIAL

Food, Pharmaceutical, Textile, Mining, Chemical, Manufacturing

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



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P000K0007v2000hUK-84422



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