INDUSTRIAL METAL DETECTION SYSTEMS

HEAT AND CONTROL®

www.heatandcontrol.com

CONTENTS

Demonstration of the behavior 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

View of CEIA headquarters, Viciomaggio (Arezzo - Italy)

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

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.

1979
1982

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

1988

The revolutionary CEIA 02PN6 column model is selected by Federal Bodies as the device for mobile, indoor and outdoor applications.

1990

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

1991

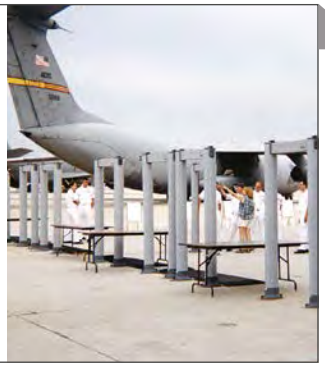
CEIA Metal Detectors are certified by FAA according to the "3-gun-test" security standard.

CEIA starts production of the new THS series of industrial Metal Detectors, characterized by state-of-the-art performance and standard all-stainless-steel construction.

1994

1997

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.



1998

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

2001

CEIA introduces the THS/FB, an integrated system for the inspection of food products which complies with the most stringent requirements of functionality, sanitation, compact size and reliability.

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.

2003

The company presents the THS/PH21® Metal Detector, designed to comply fully with FDA regulations on the criteria of construction and of electronic management of records and signatures.

2005

HEAT AND CONTROL®

Through an alliance with CEIA, Heat and Control, Inc. (Hayward, CA) provides exclusive sales and service for CEIA industrial Metal Detectors throughout North, Central and South America.

2007

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.

2008

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.

2009

The company presents the THS 21 Series with Multi-Spectrum Technology, the best Metal Detection Solution for compliance with FDA Title 21CFR110 requirements.

2010

The new THS 21 Conveyor Inspection Systems revolutionize the food market with available multi-spectrum technology, maximum flexibility, enterprise class performance and breakthrough value.

2010

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

2014

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

2015

The company presents the THS/FFV 21 series specifically designed for the inspection of granular and powder products.

2015

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.

2016

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

2018

INDUSTRIAL METAL DETECTION SYSTEMS

Supermarket specifications compliant

QUALITY CONTROL AT ITS FINEST

CEIA THS 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.

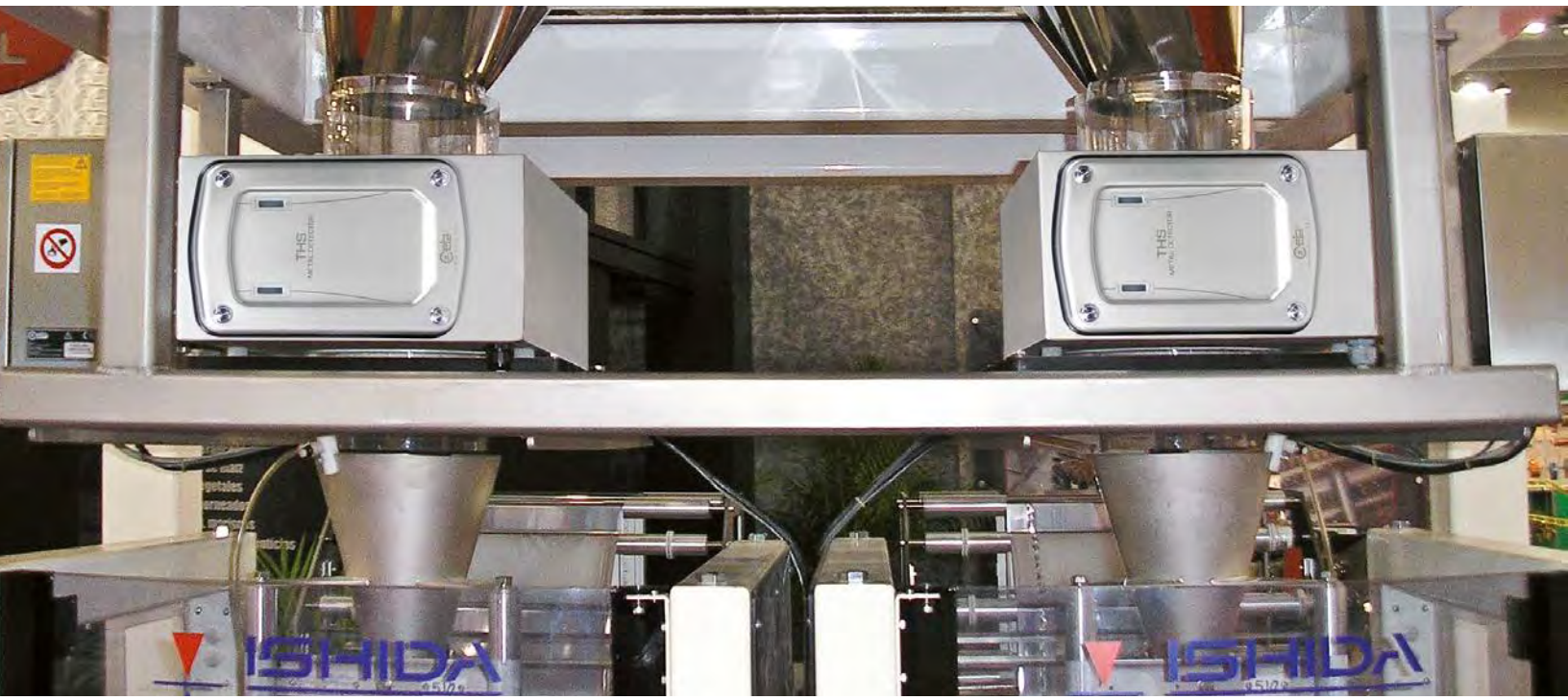
THS 21 Metal Detection Systems offer detection, construction quality and reliability characteristics that make them the most suitable and effective solution for automatic elimination of metal contaminants.

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

CEIA's approach to the development of its detectors has been to employ the most advanced electronic and mechanical technologies: Surface Mount Technology (SMT), digital signal analysis, software upgrades capability and the use of high-quality materials.

THS/G21 series
for Free-Falling Product Applications.

***ATEX** version available.*



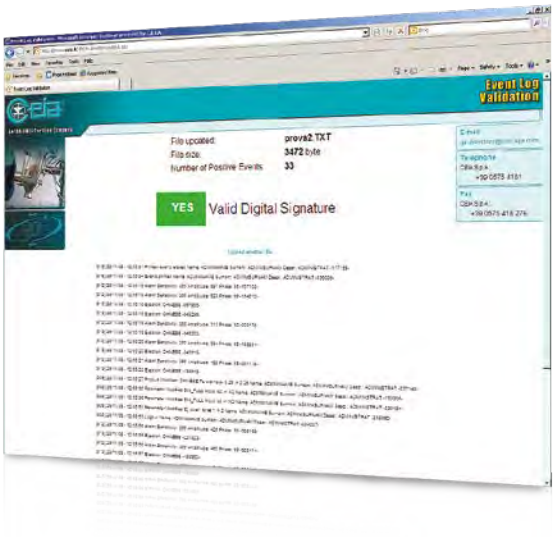
THS 21 METAL DETECTORS SERIES WITH MULTI-SPECTRUM TECHNOLOGY

UNIQUE METAL DETECTION TECHNOLOGY

Introduced by CEIA in 2009, the Multi-Spectrum technology is the world's first and only metal detection technology that both optimizes sensitivity to all metal contaminants and minimizes product effect. 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 non-magnetic.

THS/MS21
Multi-Spectrum Technology for extreme compensation of the product effect.

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 frequencies in order to determine the best operating frequencies to make up the product inspection spectrum. The chosen operating frequencies will then be transmitted simultaneously and continuously within the metal detector resulting in unsurpassed detection performance.



The Multi-Spectrum technology is the world's first and only metal detection technology that both optimizes sensitivity to all metal contaminants and minimizes product effect.

CONVEYOR INSPECTION SYSTEMS

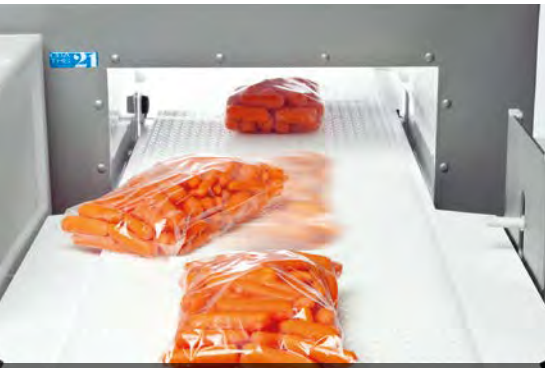
CEIA THS 21 Conveyor Inspection Systems satisfy the most stringent requirements for functionality, compact construction, accuracy and reliability of response in dealing with accidental contamination in food products.

THS 21 conveyor systems 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/RB-800

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



THS/FBB - THS/MBB

***FLAT** AND **MODULAR CONVEYOR BELT** INTEGRATED WITH METAL DETECTOR AND EJECTION SYSTEM*

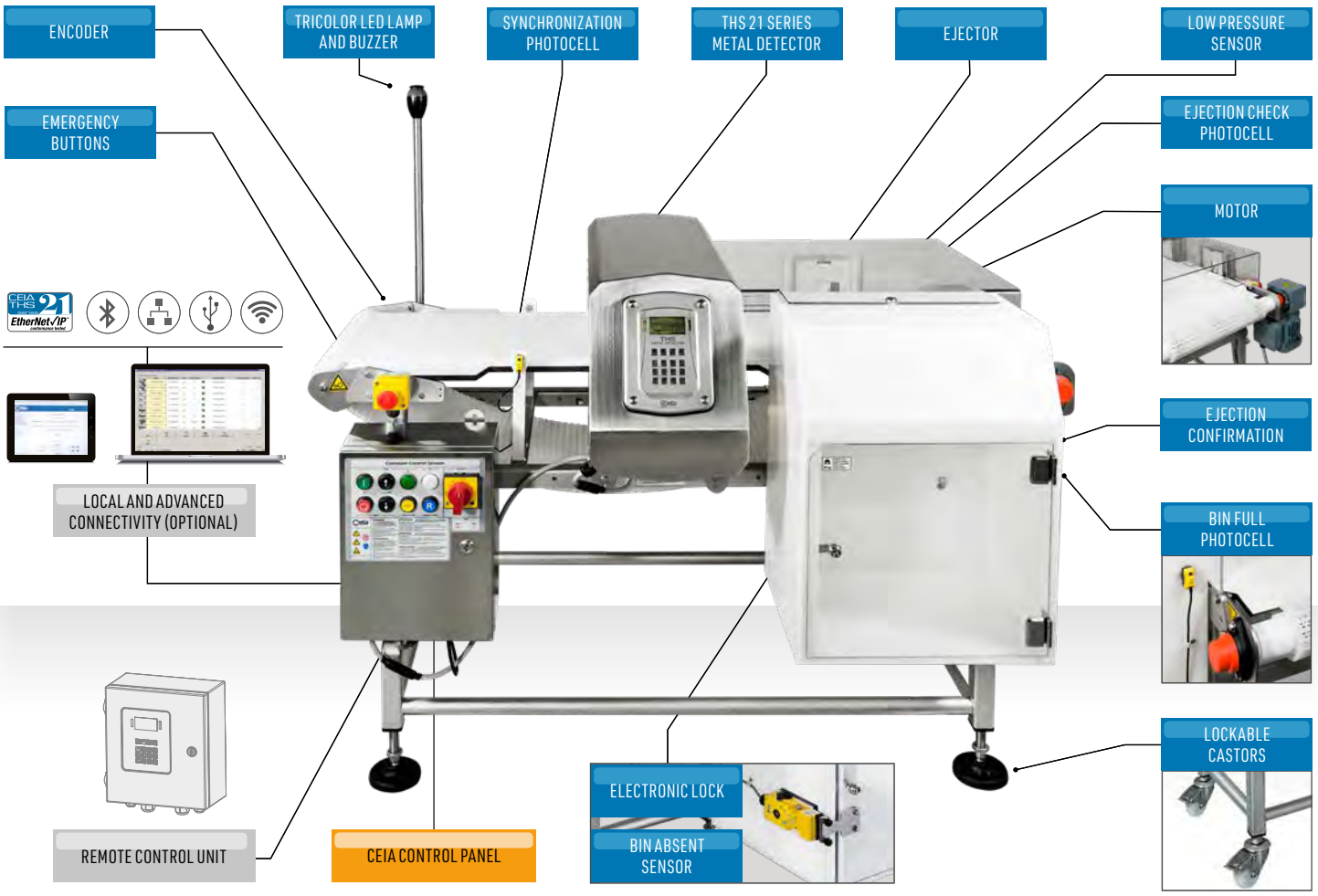
THS/MBR

***MODULAR CONVEYOR RETRACTABLE BELT** INTEGRATED WITH METAL DETECTOR AND EJECTION SYSTEM*

THS/FBV - THS/FBBV

***FLAT CONVEYOR BELT** SYSTEM FOR THE INSPECTION OF BOTTLES, BAGS AND ALL TYPES OF PRODUCTS RUNNING VERTICALLY*

CONVEYOR INSPECTION SYSTEMS: TYPICAL CONFIGURATION



The line of CEIA Quality Control equipment includes the Conveyor Inspection Systems, featuring state-of-the-art performance and full compliance with industrial sector regulations.

THS 21 Metal Detectors Series has been designed to manage all the functions required by the transport systems.

PIPELINE INTEGRATED SYSTEMS

The CEIA integrated systems are designed for metal contaminant detection in products transported/pumped via pipelines (such as liquids, slurries, meats, soups, preserves, etc).

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
for applications on meat vacuum filler machines.

***THS/PL 21** SERIES*

PASS-THROUGH INTEGRATED SYSTEM ***FOR LIQUID AND VISCOUS PRODUCTS***

***THS/PLV 21** SERIES*

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

***THS/PLVM 21** SERIES*

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

FREE-FALL INTEGRATED SYSTEM WITH METAL DETECTOR AND EJECTION VALVE

THS/FFV21 Integrated System is 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.

THS/FFV21
***ATEX** version available.*

PHARMACEUTICAL METAL DETECTION SYSTEMS

CEIA THS/PH21N Pharmaceutical Metal Detection Systems feature extremely high detection sensitivity towards contaminating metals, whether ferrous, non-ferrous 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.


LACE
Sez. LACE – ELECTROMAGNETIC COMPATIBILITY AND TESTING LABORATORY
HIGH QUALIFIED EXTERNAL LABORATORY
Certificate of Calibration
Sample Under Test
Calibration Summary
LACE Labs. Person in charge
Ing. E. Sotini

CEIA offers samples for quality assurance testing certified in composition, size, and electromagnetic response.

WASH-IN-PLACE SYSTEMS

*A **SPECIAL BUILT-IN WASHING SYSTEM** ALLOWS COMPLETE CLEANING OF THE CONDUITS AFTER COMPLETION OF EACH PRODUCTION BATCH*

DUST TIGHT SYSTEMS

***DUST TIGHT TRANSIT PIPE** AND EJECTION SYSTEM PREVENTS DISPERSION OF THE PRODUCT*

CONVEYOR INSPECTION SYSTEMS

***FLAT** AND **MODULAR CONVEYOR** INSPECTION SYSTEMS WITH MULTI-SPECTRUM TECHNOLOGY*

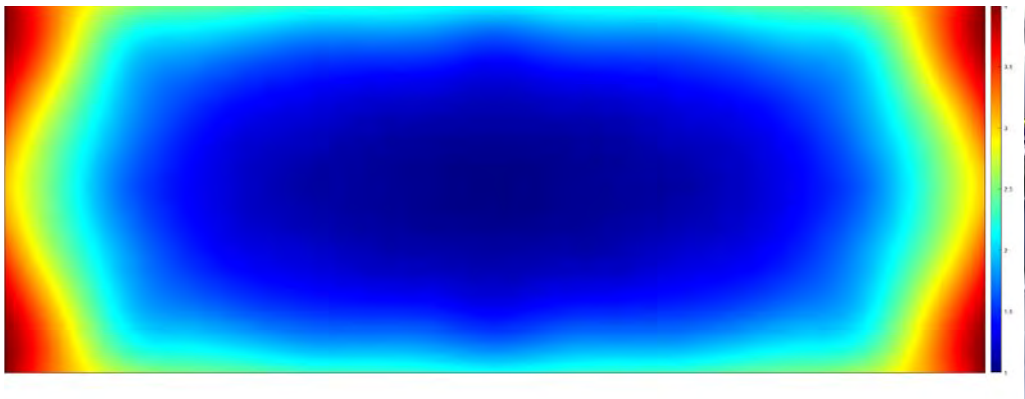
THS/PH21N-FFV
Integrated System for Granular and Powder Products.

THS/PH21N
Ultra High Sensitivity Metal Detector.

CEIA THS/PH21 Metal Detection Systems offer detection, construction quality and reliability characteristics that make them the most suitable and effective solution to automatic elimination of metal contaminants.

RESEARCH

TRI-AXIAL ROBOTIC SYSTEM FOR THS 21 MAPPING AND DETECTION COMPLIANCE VERIFICATION



ROBOT MAPPING OF THE MAGNETIC AND DETECTION FIELD

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


ACCREDIA

Accreditation Certificate

CERTIFICATO DI ACCREDITAMENTO

1714L REV. 00

DIPARTIMENTO LABORATORI DI PROVA

C.E.I.A. Spa a socio unico
Sez. LACE Laboratorio di Compatibilità Elettromagnetica

UNI CEI EN ISO/IEC 17025:2005

ISO/IEC 17025:2005

Laboratorio di Prova
Testing Laboratory

18-07-2018

18-07-2018

17-07-2022

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****.*

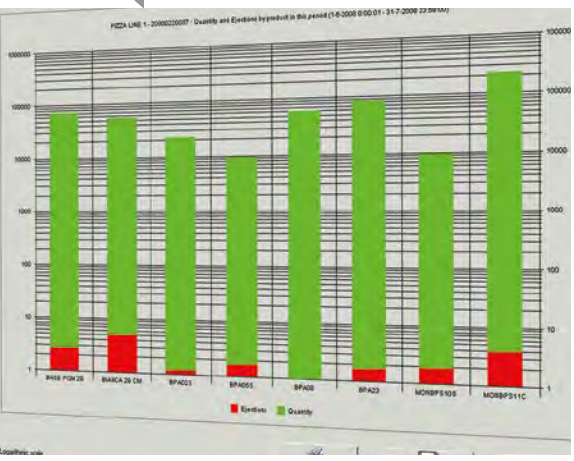
QUALITY CONTROL


IQNet
THE INTERNATIONAL CERTIFICATION NETWORK
CERTIFICATE
CISQ/IMQ has issued an IQNet recognised certificate that the organization:
C.E.I.A. SPA
VIA STRADA PROVINCIALE PESCAIOLA 54/O-56 - 52041 VICIOMAGGIO (AR)
has implemented and maintains a
Quality Management System
for the following scope:
Design, manufacture and service of: Metal detectors and electromagnetic inspection and control systems for food, pharmaceutical, textile and mining industry and for security and ground search applications; Electronic generators and relevant control systems for induction heating applications; Collision avoidance radars for installation in industrial crane bridges
which fulfils the requirements of the following standard:
ISO 9001:2015
Issued on: 2018 - 09 - 24
Expires on: 2021 - 09 - 24
This attestation is directly linked to the IQNet Partner's original certificate and shall not be used as a stand-alone document
Registration Number: IT - 8097
IQNet
Alex Stoilovici
President of IQNet
CISQ
Ing. Claudio Provetti
President of CISQ

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.

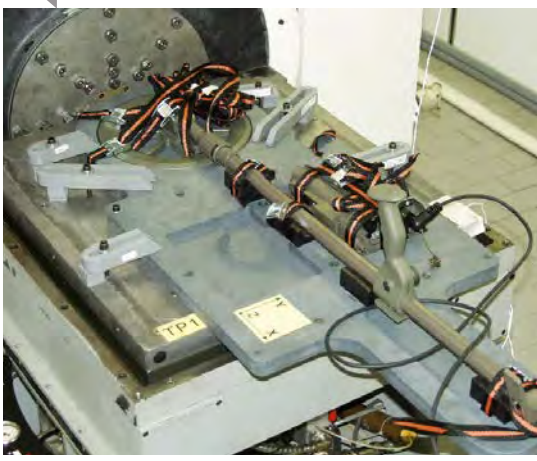
Detailed adherence to ISO 9001 standards also provides the traceability to support clients for many years after their equipment goes in to production. The tight tolerances employed during the factory acceptance test produce such consistent devices that field calibration is not required.

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.

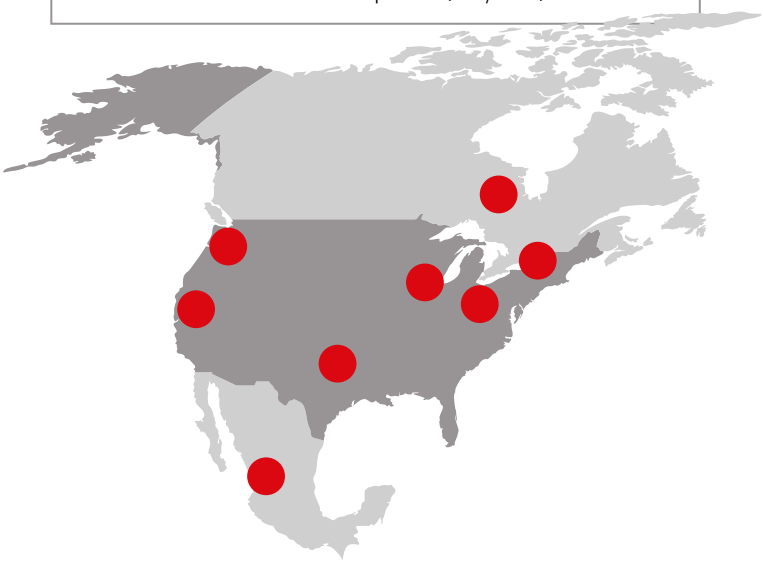


CEIA's Quality System extends throughout the company, from the design stage through production, quality control and after-sales service.

A GLOBAL PRESENCE WITH LOCALIZED SUPPORT

CEIA S.p.A. headquarters, Viciomaggio, Arezzo (Italy)

Heat and Control headquarters, Hayward, CA



APPLICATIONS

FOOD INDUSTRY

snack foods
biscuits/crackers
candy confectionery
bread and pizza
meat
pasta
rice
mills
powdered beverages
frozen vegetables
frozen fruits
fluid milk
butter
cheese
ice cream
preserved foods / in oil/pickled
coffee
pet foods
frozen foods
poultry
breakfast cereals
nuts
cakes
chocolate
sugar/confectionery
condiments
baked products
edible oils
jams and preserves
sausages
vinegar
chilled foods
fish products
beer and cider
fruit juice
mineral water
carbonated soft drinks
still soft drinks
dehydrated foods
paper
tobaccos
wine and spirits

PHARMACEUTICAL

CHEMICAL INDUSTRY

PLASTICS INDUSTRY

CEMENT WORKS

MINING INDUSTRY

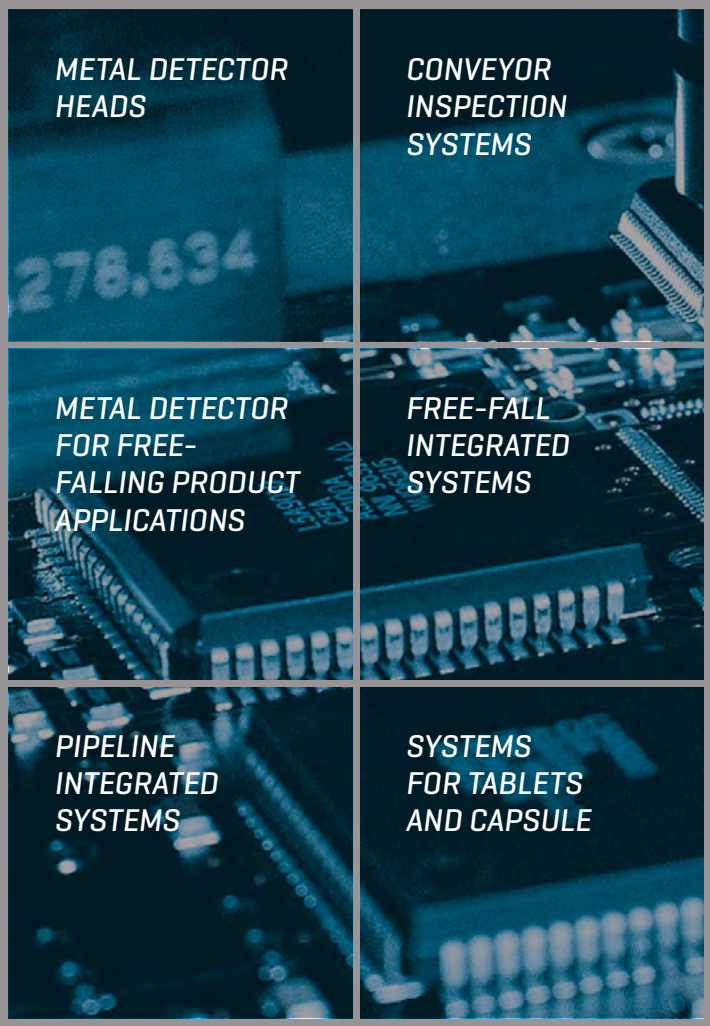
TEXTILE INDUSTRY

HEAT AND CONTROL®

www.heatandcontrol.com

INDUSTRIAL METAL DETECTION SYSTEMS

50th
1968 | 2018



DP000K0008v1000xUS-88860

HEAT AND CONTROL®

Serving North, Central and South America

21121 Cabot Blvd. Hayward, CA 94545

P 1 800 227 5980 / 1 510 259 0500 • **F** 1 510 259 0600 • **E** info@heatandcontrol.com • **W** www.heatandcontrol.com