

Enjoy the **21** experience!



CEIA THS 21 series

INDUSTRIAL METAL DETECTION SYSTEMS



- Superior Detection Capabilities
- Maximum Configurability
- Full compliance with HACCP and GMP criteria
- FDA Title 21CFR Part 11 Compliant
 - ✓ Data Security
 - ✓ Data Integrity
 - ✓ Data Traceability



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CEIA THS 21 SERIES

Best Metal Detection Solution for compliance with Reg. [EC] No. 852/2004 and FDA Title 21CFR110 requirements on manufacturing, packing or holding human food

Subpart E (Production and Process Control) of the FDA Code Title 21 CFR110 and Regulation [EC] No 852/2004 require that effective measures shall be taken to protect against the inclusion of metal in food. CEIA THS 21 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

FDA 21 Part 11 Compliant

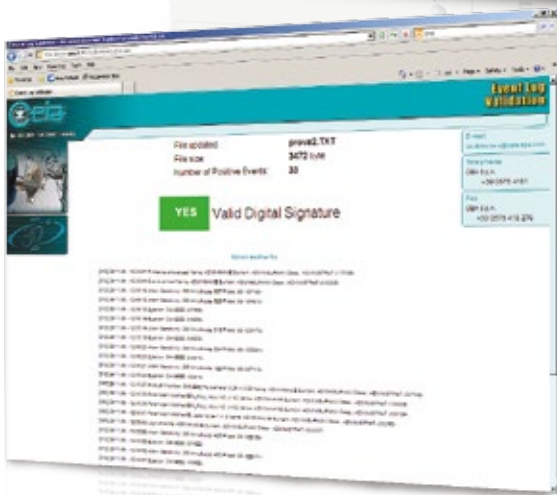
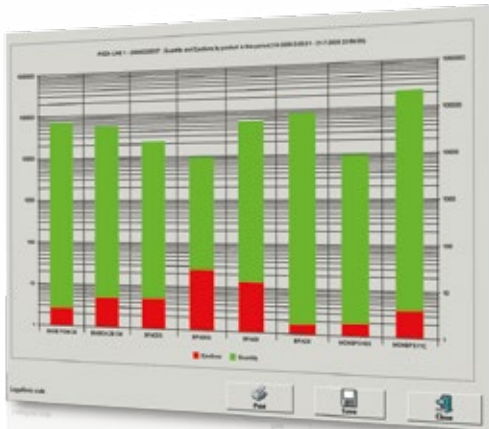
The THS 21 Metal Detector Series is a high-sensitivity, high-precision measuring instrument. The data relating to each detection and ejection are stored in an events memory and certify production quality, the inspection itself and programming operations, as well as the periodic functional test phases using standard test samples.

FDA Code Title 21 Part 11 prescribes rigorous criteria for access to programming and computer data protection which have been fully adopted in the CEIA THS 21 Series firmware.

The requirements regarding Security, Integrity and Traceability are therefore satisfied.

New Global Auto-Learn System provides simultaneous maximum sensitivity to all metals starting from a single learning transit

The THS 21 Series employs an exclusive Autolearn system for food products which allows optimization of the detection sensitivity to all metals with the maximum speed and precision, equivalent to hundreds of conventional learning transits: results in levels of precision and efficiency never before obtained.



Continuous embedded Self-Calibration control for maximum repeatability and performance consistency over time and with environmental changes

By means of specific signals sent to the transmission and reception chain of the Metal Detector, constant monitoring of the detection characteristics is carried out, with consequent constant compensation for any variations caused by environmental factors. The result is system stability and constancy in detection performance and product effect neutralization.



CEIA THS 21 SERIES

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

Continuous Auto-Test function ensuring maximum Production Safety

Special electronic stimuli are sent to the transmission and reception chain of the THS 21 Metal Detector Series, causing variations in the detection signals which provide checks on detection characteristics. These variations are compared with the reference values stored in the factory at the time of the calibration test.

This produces an **automatic certified check of the system's sensitivity**; any deviations from permitted tolerances are followed by a signal and the recording of the anomaly.



Automatic measurement of the installation Quality and Environmental Compatibility

THS 21 Series introduces **new tools for the installation and maintenance technicians** which allow them to measure the environmental compatibility of the Metal Detector.

The measurements include **general mechanical and electromagnetic environmental compatibility, specific electromagnetic compatibility and the automatic examination of the degree of metal interference from the conveyor belt**. This latter function becomes even more important when the high level of sensitivity of the THS 21 Metal Detector Series is taken into consideration.

Modern, rugged and user friendly interface

- Industrial rate design
- Rapid data entry with extended keyboard
- Easy to read, high-contrast graphic display
- Rugged, antivandalic stainless steel keyboard

The THS 21 Metal Detector Series keeps the full compatibility with programming and parameter selection procedures already implemented in earlier versions of the THS. In addition, there is a new organic graph display with extremely high contrast (3000:1) and a viewing angle up to 180°, and an extended alphanumeric keypad for quick keystrokes.

■ Quick Access Function

A new function, activated simply by pressing a dedicated key, allows the most frequently-used functions to be directly recalled. These functions are programmable by the operator, and maintain the access protection criteria according to FDA Title 21 Part 11 requirements.

■ Large Product Memory: 500 entries with easy alphabetical sorting and pattern matching

A capacious incorporated memory allows up to 500 products to be stored, each identifiable by a specific alphanumeric string. The products are automatically listed in alphabetical order, and searches are facilitated by the progressive recognition of the characters selected on the keypad.





Bluetooth Connectivity



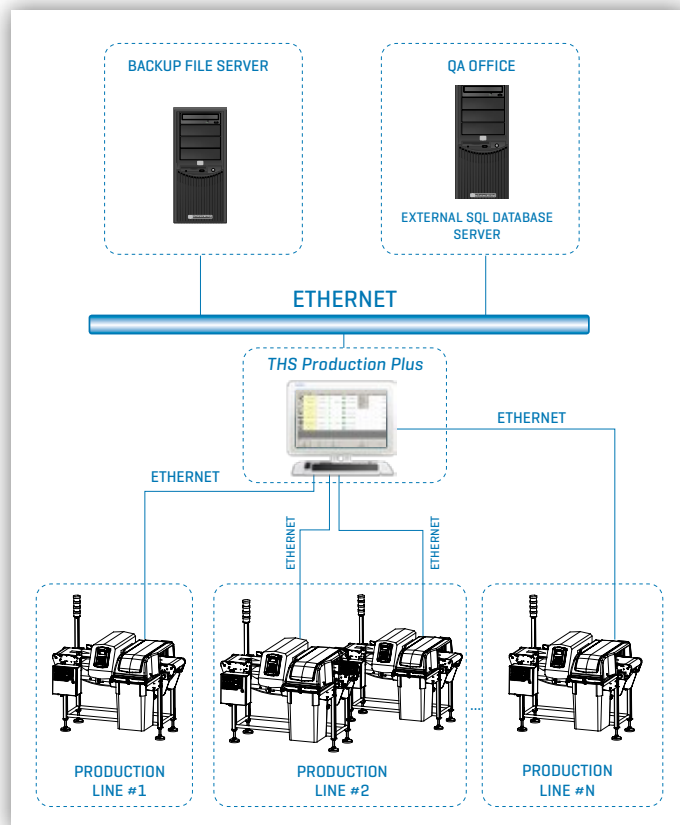
In the THS 21 Series, local connection to the Metal Detector can be made directly via a **Bluetooth device incorporated into the Control Power Box module**, without physical contact, with a consequent saving of time and greater safety for technical and operational personnel.

The Bluetooth connection can be used for programming, monitoring of the signals via the CEIA MD-Scope program and the transfer of the data contained in the Metal Detector's events memory.

Sophisticated Network Communication Capabilities

THS 21 Metal Detectors Series offer a wide range of interface capabilities: the standard version includes two asynchronous RS-232 serial connections, which can be used to integrate with the host system or process controllers, and a Bluetooth interface.

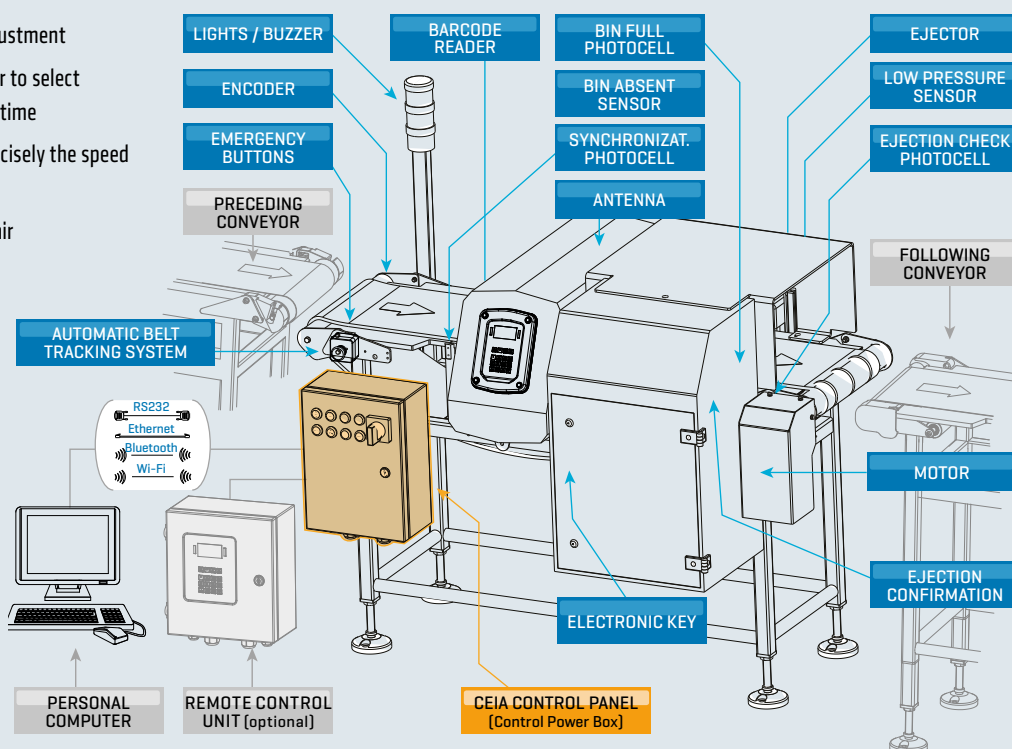
A series of optional modules for connection to Ethernet networks are also available on request.



Control Power Box: unequalled integrated connectivity performance

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

- Control of the belt motor, with speed adjustment
- Interfacing with bar-code readers in order to select automatically the chosen product in real time
- Management of encoders to measure precisely the speed of the belt
- Checking the availability of compressed air
- Ejection management with synchronization of the transit
- Verification of the successful ejection of the contaminated product
- Verification of the presence and occupied volume of the contaminated product container
- Synchronization with adjacent transport systems
- Remote management via Ethernet/Wi-Fi





THS 21
series

METAL DETECTORS WITH MULTI-SPECTRUM TECHNOLOGY

THS/21 & THS/MS21

METAL DETECTOR WITH MULTI-SPECTRUM TECHNOLOGY

- Ultra high sensitivity to all magnetic and non-magnetic metals, including stainless steel
- Multi-spectrum technology for extreme compensation of the product effect
- Continuous Auto-Test function ensuring maximum Production Safety
- Continuous embedded Self-Calibration control
- High immunity to environmental interference
- AISI 316L stainless steel construction to IP66 and IP69K protection levels
- Control Power Box available according to UL 508A and CSA-C22.2 No. 14-05
- Automatic learning & tracking of product effect
- 500 product data memories, selectable by local programming or network software
- 5000 storable events
- High-definition graphic display
- Local programming: 16 keys, 3 with double function
- Quick Access key for fast programming of user parameters




 **MULTI-SPECTRUM TECHNOLOGY**
for extreme compensation of the product effect

THS/G21 & THS/GMS21

METAL DETECTOR FOR FREE-FALLING PRODUCT APPLICATIONS



THE THS/G21 is designed to inspect powders,  liquids, granules and other loose materials in pipes

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METAL DETECTORS WITH MULTI-FREQUENCY TECHNOLOGY

THS/21E & THS/21E-3F

METAL DETECTOR WITH MULTI-FREQUENCY TECHNOLOGY

- High sensitivity to all magnetic and non-magnetic metals, including stainless steel
- Multi-frequency Technology for maximum sensitivity to Product Effect variations
- High immunity to environmental interference
- AISI 316L stainless steel construction to IP65 protection level
- Control Power Box available according to UL 508A and CSA-C22.2 No. 14-05
- Automatic learning & tracking of product effect
- 250 product data memories, selectable by local programming or network software
- 1000 storable events
- 4 X 20 character alphanumeric display
- Local programming: 4 keys, 3 with double function



MULTI-FREQUENCY TECHNOLOGY

for maximum sensitivity to Product Effect variations

THS/G21E

METAL DETECTOR FOR FREE-FALLING PRODUCT APPLICATIONS



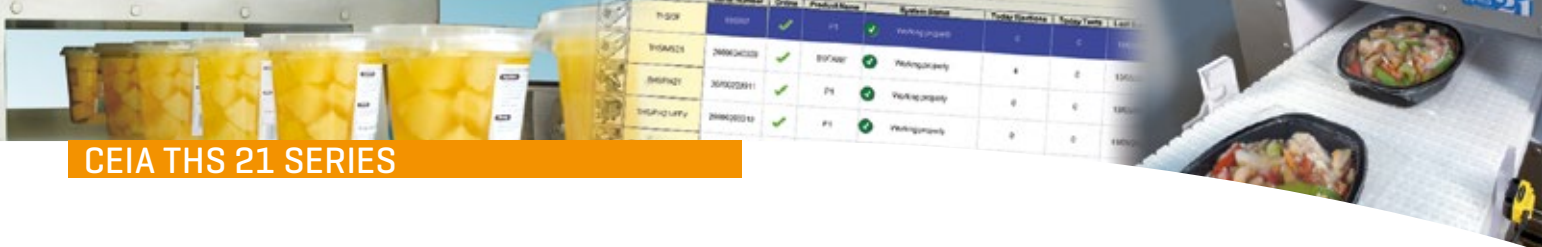
CONTROL POWER BOX



METAL DETECTOR



Digital analysis of the signal provided by the antenna [DSP] allows extremely high levels of sensitivity, immunity to interference and operational stability to be achieved



CEIA THS 21 SERIES

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

CEIA THS/FBB

FLAT CONVEYOR BELT SYSTEM FOR THS 21 & THS/21E METAL DETECTORS

- Conveyor belt integrated with Metal Detector and ejection system
- Structure and components in AISI 304 stainless steel and food-compatible plastic parts (FDA, USDA compliant)
- Digitally-adjustable belt speed
- High immunity to environmental interference
- Air blast or pusher ram ejection system with belt stop
- Easy to clean and inspect
- High reliability motor driver with stainless steel protection cover and high pull capability

STRUCTURE AND COMPONENTS IN AISI 304 STAINLESS STEEL AND FOOD-COMPATIBLE PLASTIC PARTS (FDA, USDA COMPLIANT)



EASY TO CLEAN AND INSPECT: THE CONVEYOR BELT CAN BE REMOVED WITHOUT ANY TOOLS



CEIA THS/MBB

MODULAR CONVEYOR BELT SYSTEM FOR THS 21 & THS/21E METAL DETECTORS

- Modular conveyor belt integrated with Metal Detector and ejection system
- Structure and components in AISI 304 stainless steel and food-compatible plastic parts (FDA, USDA compliant)
- Digitally-adjustable belt speed
- High immunity to environmental interference
- Air blast or pusher ram ejection system with belt stop
- High reliability motor driver with stainless steel protection cover and high pull capability

INTEGRATED SYSTEMS WITH METAL DETECTOR AND EJECTION VALVE

THS/PL 21 series

FOR LIQUID AND VISCOUS PRODUCTS

- Standard pipe sizes available to suit all applications
- AISI 316L stainless steel construction to IP66 and IP69K protection levels (THS/PLMS21)
- Easy to clean and inspect
- Minimum installation space required
- Wide range of flanges available for connection to bagging and clipping machines

THS/PLV 21 series

INTEGRATED SYSTEM WITH EJECTION VALVE FOR LIQUID AND VISCOUS PRODUCTS

- Standard pipe sizes available to suit all applications
- AISI 316L stainless steel construction
- Easy to clean and inspect

THS/PLVM 21 series

INTEGRATED SYSTEM WITH EJECTION VALVE FOR MEAT

- Standard pipe sizes available to suit all applications
- AISI 316L stainless steel construction to IP66 and IP69K protection levels (THS/PLVM MS21)
- Rapid electrical and mechanical connection system for bagging and clipping machines
- Wide range of flanges available for connection to bagging and clipping machines

THS/FFV 21 & THS/FFV 21S series

INTEGRATED SYSTEM WITH EJECTION VALVE FOR GRANULAR AND POWDER PRODUCTS

- Standard pipe sizes available to suit all applications
- AISI 316L stainless steel construction
- Very compact size
- Fast and efficient: achieve fast ejection speeds and accuracy, with the minimum amount of rejected product
- Pipe in antistatic material, certified for contact with food products



THS/PL 21

THS/PLVM 21

THS/PLV 21

THS/FFV 21S



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