



PHARMACEUTICAL & NUTRACEUTICAL METAL DETECTION SYSTEMS



KEY FEATURES

- **SUPERIOR & CONSISTENT DETECTION**
- **ENHANCED PRODUCT THROUGHPUT RATE**
- **MAXIMUM CONFIGURABILITY / INTEGRATION**
- **FDA 21 CFR PART 11 COMPLIANT**
 - ▶ Data Security
 - ▶ Data Integrity
 - ▶ Data Traceability
- Design and Construction **COMPLIANT** with **GMP CRITERIA**
- **AISI 316L** stainless steel construction
- **THS ANYWHERE** remote support (available with IXC module)



✓ TABLETS ✓ GEL CAPS ✓ GRANULAR ✓ SYRUPS
 ✓ CAPSULES ✓ POWDERS ✓ LIQUIDS



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QUALITY CONTROL AT ITS FINEST

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.

Validation Solutions Available:

- ✓ Calibration Standards ✓ Validation Manuals ✓ Comprehensive Service & Support
- ✓ Compliance Tools ✓ On-line Production Data Validation

FDA 21 PART 11 COMPLIANT

The THS/PH21 Metal Detector Series is a high-sensitivity, high-precision measuring instrument. The response from the device is used to directly command ejection of the contaminated product and to verify that it has in fact been eliminated.

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/PH21 Series firmware. User access is only possible via a User Name and Password login under the control of the System Administrator, who programs and manages individual user profiles and user functions. As a result, the requirements for security, integrity and traceability are satisfied.

All events performed by the THS/PH21 Metal Detector are recorded in a data log to comply with FDA Part 11 protocol and assist in root cause analysis. The events include detection, ejection, program operations, passwords and periodic functional test phases using standard test samples.



CONTINUOUS AUTO-TEST FUNCTION
ensuring maximum Production Safety

FDA 21 Part 11 Compliant

Exclusive Global
AUTO-LEARN SYSTEM

METAL DETECTOR TEST PROCEDURE
after critical setup change

Real-time embedded
SELF-CALIBRATION CONTROL

Modern, rugged and
USER FRIENDLY INTERFACE



IXC module advanced connectivity



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CEIA Metal Detectors are specially engineered so that **no manual calibration or tuning is needed.**

CEIA Metal Detectors have an **internal Auto-diagnosis** for automatic balancing of the antenna with continuous embedded **Self-Calibration control.**

REAL-TIME EMBEDDED SELF-CALIBRATION CONTROL

The Self-Calibration control allows **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.**

EXCLUSIVE AUTO-LEARN SYSTEM

The Auto-Learn System provides **simultaneous maximum sensitivity to all metals starting from a single learning transit.** The THS/PH21 Series employs an exclusive Auto-Learn system for pharmaceutical products, which allows optimization of the detection sensitivity to all metals with the maximum speed and precision, equivalent to hundreds of conventional learning transits. This results in levels of precision and efficiency never before obtained.

CONTINUOUS AUTO-TEST FUNCTION

Special electronic stimuli are sent to the transmission and reception chain of the THS/PH21 Series Metal Detector, causing variations in the detection signals which provide checks on detection characteristics. These variations are compared with the reference values stored in the memory of the metal detector at the time of the factory calibration test. This produces an automatic certified check of the system's sensitivity.

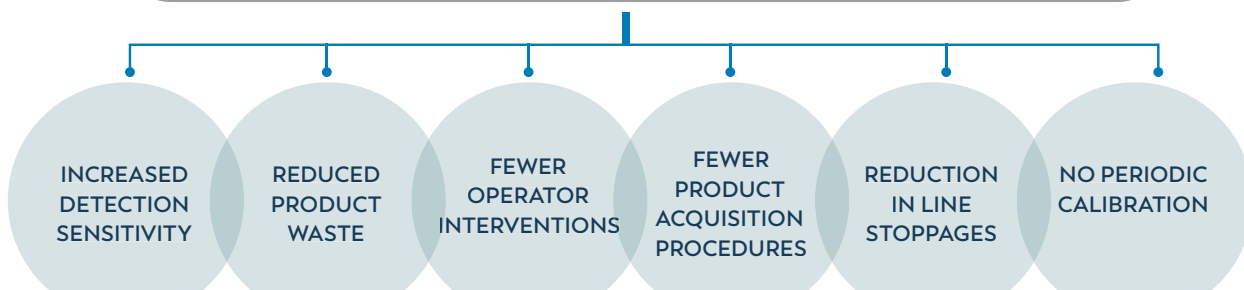
CEIA AUTOMATIC CALIBRATION TEST

To comply with the daily Metal detection and ejection verification requirements, the CEIA Metal Detectors THS 21 Series provide:

- ✓ **A full digital internal structure,** completely free from internal trimmers to be calibrated, as the analog processing has been replaced by digital numerical analysis.
- ✓ **An automatic, wide dynamics, antenna balance tracking system** to maintain in-range performances in all installation environments.
- ✓ **A continuous embedded Self-Calibration control.**
- ✓ **A continuous Auto-Test function** which generates stimuli corresponding to the manual metal samples transits.
- ✓ **A calibration test in automatic mode.** During the automatic test, the Metal Detector generates a stimulus equivalent to the same excitation signal of the last manual test, verifying the correct activation of the alarm and the ejector.

All test results are recorded into the Events buffer and are available for data traceability. The THS 21 Series provides the possibility to determine and program the mix of manual and automatic test operation in a wide ratio range, depending on the User Quality procedures, through the MTI parameter.

INCREASES IN PRODUCTIVITY AND COST SAVINGS



HIGH PERFORMANCE PHARMACEUTICAL METAL DETECTION SYSTEMS



THS/PH21N

ULTRA HIGH SENSITIVITY METAL DETECTOR

- Ultra high sensitivity to all magnetic and non-magnetic metals, including stainless steel
- AISI 316L stainless steel construction
- Control Power Box available according to UL 508A and CSA-C22.2 No. 286 
- 500 product profiles, selectable by local programming or network software
- 10,000 storable events
- High-contrast graphic display
- Local programming: 16 stainless steel keys, 3 with double function
- Quick Access key for fast programming of user parameters
- Automatic Calibration Test



THS/PH21N model

THS/PH21E

HIGH SENSITIVITY METAL DETECTOR

- High sensitivity to all magnetic and non-magnetic metals, including stainless steel
- AISI 316L stainless steel construction
- Control Power Box available according to UL 508A and CSA-C22.2 No. 286 
- 250 product profiles, selectable by local programming or network software
- 1,000 storable events
- 4 x 20 character alphanumeric display
- Local programming: 4 stainless steel keys, 3 with double function

PRODUCT		VERIFIED THROUGHPUT (items / h)
		THS/PH21N - THS/PH21E (100 mm x 40 mm)
	19 mm x 10.3 mm x 7.88 mm	1 200 000
	ø6.6 mm x 19 mm	800 000

► Tilt Angle: 35°

► Max throughput rates are related to the shape and



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