

INSIGHT

IN PURSUIT OF PURITY...



Analyse
Detect
Report

METAL DETECTION
FOR THE
PHARMACEUTICAL
INDUSTRY

LOCK

EARNING CUSTOMER CONFIDENCE

INSPECTION SYSTEMS

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Lock Inspection Systems is the world's leading manufacturer of metal detection systems for the pharmaceutical industry.

Faced with the challenge of developing an all-new range of pharmaceutical metal detectors, Lock's R&D team were handed a simple brief – design a product to set new standards for efficiency, product quality, GMP, traceability and compliance with existing and forthcoming regulatory requirements.

The INSIGHT PH excels on all points. Highly resistant to vibration, the INTEGRATED DIGITAL SEARCH HEAD and sophisticated OPTIX detector management software enable the INSIGHT PH to clearly display the detailed product profile needed to achieve perfect product setups using Lock's unique DDS (Direct Digital Signal) vector diagram. This guarantees detection and rejection of minute metal fragments, while maintaining high productivity and market leading sensitivity to all metals.

These core technologies are complemented by an array of innovative features that deliver tangible benefits to the manufacturer at key stages in their process.

- Detection and removal of metal contamination from incoming raw materials and formulations prior to tableting and encapsulation
- Inspection of up to 30,000 tablets or capsules per minute before packing, at the highest levels of sensitivity
- Design & Construction Compliant with 21 CFR, Parts 210 and 211
- WIP/DT reject option enables use with highly potent formulations
- Compact, highly adjustable frame permits the metal detector to be integrated with all leading tablet press and encapsulation machines
- Validation Solutions: IQ, OQ, PQ, calibration and certification
- Data management systems to collect and store product quality records
- Operable in a 21 CFR, Part 11 compliant environment



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INSIGHT PH “Pharmaceutical” metal detector

The INSIGHT PH can detect and reject metallic particles in pharmaceutical production lines at speeds of up to 30.000 tablets or capsules per minute. The unit is typically installed directly after the tablet press, deduster or encapsulating machine.

- Integrated Digital Search Head and DDS vector display deliver perfect product setups
- Best in class sensitivity to magnetic and non magnetic metals
- Stable to extreme vibration and product signal
- Standard apertures of 95mm wide x 22mm or 38mm high
- Fail-safe Lift-flap, Diverter, Wash-In-Place and Dust-Tight reject units available
- Operable in a 21 CFR, Part 11 compliant environment
- Stainless steel construction sealed to Nema 4X/IP66



INSIGHT PH VF “Pharmaceutical Vertical Fall” metal detector

The quality of finished product can only be guaranteed if incoming and in-process materials are effectively screened to remove all unwanted metallic particles. Vertical Fall metal detectors are recommended to inspect incoming raw materials in free-falling powder or granular form and to inspect formulations prior to tableting or encapsulation.

- Throughput up to 3.000 KG per hour
- Sealed valve or cowbell reject mechanisms available
- Early removal of metal contaminants for machinery protection
- Standard apertures of 95mm wide x 22mm or 38mm high
- Contact material certification available to comply with FDA/USDA regulations



INSIGHT PH “BottleChek” metal detector

The INSIGHT PH BottleChek range of metal detectors for the pharmaceutical industries are especially designed for the inspection of finished and packed products at the end of the production line.

- Integrated Digital Search Head and DDS vector display deliver perfect product setups
- Comprehensive choice of reject options
- Fail-safe option comprises reject confirmation, air failure alarm and bin full alarm
- Available in single or multi-frequency format ranging from 30-875kHz
- Full range of aperture sizes available to suit application

Product quality and integrity are fundamental within the pharmaceutical industry.

The INSIGHT PH Metal Detector delivers unsurpassed protection from all types of metal contaminant.



LIFT-FLAP REJECT



DIVERTER REJECT



WIP REJECT

Efficiency

Materials Screening: The quality of a finished product can only be guaranteed if incoming and in-process materials are effectively screened to remove all unwanted metallic particles.

Cost Savings: Early detection of contamination affords significant cost savings since lower value materials rather than finished products are rejected. In addition, early removal of contaminants protects downstream machinery from damage.

Vertical Fall Metal Detectors: Recommended to inspect free falling powders or granules such as APIs. This can take place prior to shipment to contract packers, or before passing the material into the tablet press to avoid damage to expensive equipment.

Superior Performance: Mounted on a new stainless steel frame incorporating Lock's signature gas strut stand, the compact INTEGRATED DIGITAL SEARCH HEAD takes care of metal detection and signal processing, resulting in extreme sensitivity to magnetic and non-magnetic metals.

Reject Options: A selection of high speed rejects are available. Each system rejects minimal product when contamination is detected and can be easily removed for cleaning without the use of tools. To accommodate high potency preparations, Wash-In-Place and Dust Tight metal detectors are fitted with dust-tight and water-tight product chutes and reject systems.

Product Quality

High speed tablet presses and encapsulating machines are designated critical control points according to HACCP principles. Contamination from broken sieves or damaged press tooling should be detected at this stage.

High Sensitivity: Extremely resistant to vibration, Lock's Integrated Digital Search Head and sophisticated OPTIX detector management software are capable of filtering out even the most complex product signals in order to detect and reject minute fragments of metal – particularly stainless steels.

Fail-safe: Product integrity is protected if power fluctuates or is interrupted. "Test Prompt" software ensures adherence to quality systems.

System Design: Lock's signature gas strut stand is incorporated in a new stainless steel frame that offers exceptional manoeuvrability within the most compact footprint in class, making it convenient for use with all leading tablet presses and encapsulation machines.

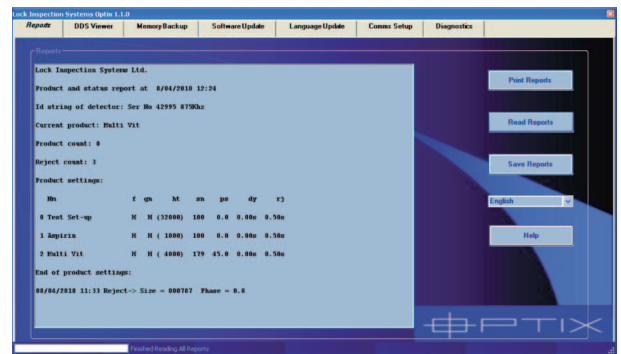
Validation: A complete validation document is available with each metal detector, incorporating IQ, OQ, PQ, calibration and certification.

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Good Manufacturing Practice (GMP)

Design and construction of the INSIGHT PH complies with FDA requirements Part 210 – Current Good Manufacturing Practice in Manufacturing, Processing, Packing or Holding of Drugs; General – and Part 211 – Current Good Manufacturing Practice for finished Pharmaceuticals – of Title 21 of the Code of Federal Regulations (CFR).

Hygiene: Finished in mirror-polished stainless steel each detector is sealed to Nema 4X/IP66 to facilitate easy wash down. All parts in contact with product are fabricated from FDA approved plastic and Stainless Steel 316.



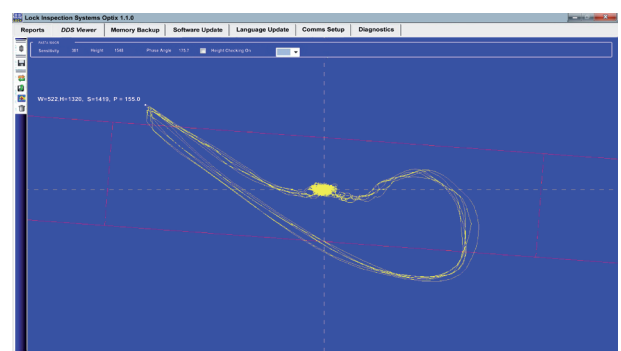
Traceability

Communications: Every INSIGHT PH metal detector is available with SCADA capability as well as wired or wireless ethernet connectivity. The external USB port allows all events and product presets to be downloaded onto a standard memory stick or PC to enable secure storage and distribution of quality records in PDF or other formats.

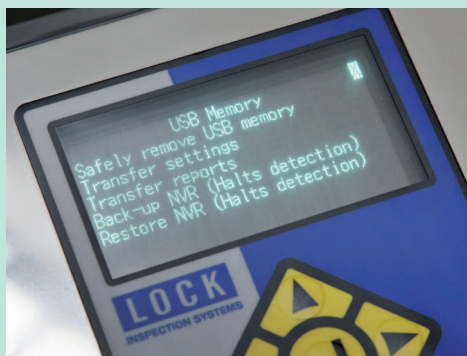
21 CFR Part 11: Each INSIGHT PH provides data security, integrity and traceability to enable operation within a 21 CFR, Part 11 compliant environment – making full compliance with Part 11 a reality for the first time. The software implements all security access controls, electronic records and signatures as required by the FDA.

Using the advanced comms options offered, the INSIGHT PH can be operated remotely or networked with other systems. Diagnostics, set-up and interrogation routines are performed by the on-board processor and reported instantly via OPTIX.

Data Management Systems: INSIGHT PH is designed to be fully compatible with Lock's DataChek software, thereby enabling data monitoring and collection from all networked metal detection equipment. This provides a comprehensive and traceable central record for product, batch and validation data.



The external USB port allows all events and product presets to be downloaded onto a standard memory stick or PC to enable secure storage and distribution of quality records in PDF or other formats.



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LEADERS IN METAL DETECTION TECHNOLOGY

With over half a century's experience of delivering custom-designed automated quality assurance solutions, Lock Inspection Systems is setting new standards in metal detection technology.

Locks technical team builds on a database of past experiences compiled from around the world to design tailored solutions to its customers individual requirements. Devoting sustained investment in new product development, the company continues to pioneer innovative equipment that sets ever-higher benchmarks in product protection.

Backed by an extensive international network, our technical and customer services in Europe, the USA and China provide unparalleled after-sales care and consultancy. Lock has secured a leading position in product protection for the food, pharmaceutical and textile industries and is proud to be allied with many of the worlds foremost manufacturers.

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