METAL SHARK® BD

Metal detector for conveyor belts

CASSEL INSPECTION

Highlights

- Maximum detection performance with the highest reliability in the detection area due to 4-quadrant technology

- Stable against temperature or product changes through 3D detection

- Storage spaces for up to 250 products

- Easy to use with intuitive and multilingual menus

- Documentation of all events and metal messages

- Optional: Data transfer to USB interface or connection to the company network via SHARKNET® software

- Cyclical function monitoring with Performance Validation System (PVS)

- Available as a system solution with additional devices

*BRC-Kit

With this option, the device meets the requirements of the British Retail Consortium (BRC) Global Standard for food safety and thus also the common standards for HACCP and IFS.

Features

- Reliably detects metals in packaged and unpackaged goods on conveyor belts

- Very high sensitivity in dry, moist, salty, or frozen goods

- Easy setup and intuitive operation due to auto-calibration and wizard guidance

- Maintenance-free design with automatic and continuous calibration of detector coils

- Compliant with food safety standards (IFS Food, HACCP, BRC*)

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Overview

The metal detector METAL SHARK® BD is used free-standing or combined with conveyor belts or chutes. Using 3D detection technology, it detects the smallest magnetic and non-magnetic metal contaminants (iron, stainless steel, aluminum etc.) precisely and reliably under difficult conditions.

Application

- Monitoring of packed or loose goods free or on conveyor belts or chutes

- Quality assurance for incoming goods, outgoing goods or during running production

Industries

- food, petfood

- chemicals, pharmaceuticals and hygiene

- paper, cardboard, packaging

- textile and fleece

- wood, recycling

Included:

- Sensorhead BD

- METAL SHARK® Controller

- Optional: Customized conveyor system

- Optional: wide range of reject devices

Accessories & Extras:

- High temperature version

- Versions for hose cleaning (LPW) or cleaning with high-pressure cleaner (HPW) possible

- SHARKNET connection for automatic documentation according to HACCP, IFS or BRC standard

- Separate mounting of the control unit (e.g. wall mounting)

- Signalling devices (optical/acoustic)

- Performance Verification Certificate (proof of functionality for audits) by CASSEL service technicians, e.g. during commissioning or maintenance

- BRC-kit for a fail-safe system (MD failure, ejection failure, ejection box full, air pressure failure) including product jam monitor, required covers, ejection, container and compressed air monitoring, product counter etc.
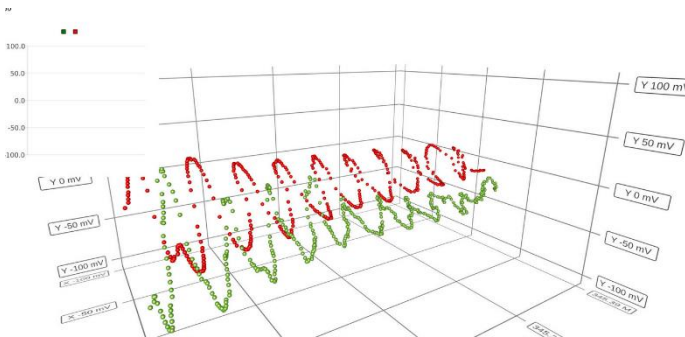
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3D-Detection

CASSEL's unique 4-Quadrant-Technology has evolved to the 3rd dimension. The MultiPhase and BOOST FACTOR technologies add multi-phase measurement and signal amplifying factors to this established technology and thus create 3-dimensional signal models of your products signatures - as unique as a fingerprint.

BOOST FACTOR:

Up to 50% more accuracy - METAL SHARK® detects stainless steel up to 1mm smaller compared to conventional detectors.

MultiPhase:

Continuous adjustment to changing conditions for even more stability. The METAL SHARK® can easily cope with frozen or heated products, changing product orientations or temperatures as well as cooled, heated or humid environments.

Specifications

Electronics	digital signal processor, noise filter, digital balance control, digital frequency control, PowerDrive circuit
Input Signal	8 freely configurable 24 V DC signals, e.g. for reject confirmation or convyeor belt control
Output Signal	2 potential-free: "Error" and "Metal"; 8 freely configurable 24 V DC signals, e.g. for optic/acoustic alarm or start conveyor belt
Measuring Method	inductive, multi-channel operation, balanced receiver coils
Metal Detection	ferrous, non-ferrous (e.g. aluminium or copper) and stainless steel
Product memory	250 storage spaces
Protection Type	IP65, optional IP66 or IP67
Ambience	standard: 14°F to 104°F, rel. humidity 30% up to 80% (non condensing) optional: -40°F or 131°F
Product Temperature	standard: -22°F to 104°F optional: -40°F to 140°F
Power Supply	One phase 110-240 VAC, 50/60 Hz, typ. consumption 20 W (max. 60 W)
Interface	RS232, provides documentation according to HACCP- and IFS-standard, USB- or ethernet option
Maintenance	maintenance-free, selfcalibrating sensors
Diagnosis	integrated diagnostic software, automatic self-test

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Customization

The METAL SHARK® BD metal detector can be individually adapted to the requirements of your products, production lines or hygienic requirements. Increased documentation requirements can be handled via the SHARKNET®.

If you need to ensure certain sensitivities, send us samples of your products and we will adapt the device perfectly to your requirements.

Special Designs & Extras

3D Detection	Additional light barriers and update of the control software (BOOST factor) enable an exact signal evaluation over the detection period of each individual product (MultiPhase).
Multifrequency	Use of 4 different frequencies significantly increases the stability against product variations (density, position, temperature, etc.)
Temperature extension cold	Temperature range extended to -40°F, cold-elastic grouting material, insulation, switch cabinet heating and other measures
Temperature extension hot	Temperature range extended to +131° F, Adaptation of control cabinet, additional thermal insulation, replacement of filter fan, heat exchanger and/or active cooling units
High temperature extension for product	Product temperature up to max. +248°F, with this option, the sensor has protection class IP54
LPW/HPW	Increase of the IP protection class by adapting the sensor seal, installing additional seals and a double housing for the control electronics
SHARKNET®	The SHARKNET® software networks METAL SHARK® metal detectors, checkweighers and x-rays with a central computer and offers central storage of all operating data as well as batch and alarm documentation for HACCP and IFS conformity.
UltraSens version	Fast Power Drive (FPD) significantly improves metal detection and reliability in industrial environments that do not meet electromagnetic compatibility standards, with various IP protection ratings possible.
Twinhead design	Special version for the detection of difficult contaminants: Magnetic chips can, for example, align themselves on the conveyor belt so that they run perfectly parallel to the magnetic field and thus remain undetected. Two magnetic fields offset against each other ensure metal detection even in such cases.