

# METAL SHARK<sup>®</sup> BD E2

Metal detector for wet and frozen meat in E2 meat boxes



CASSEL METAL SHARK<sup>®</sup> BD E2

## Features

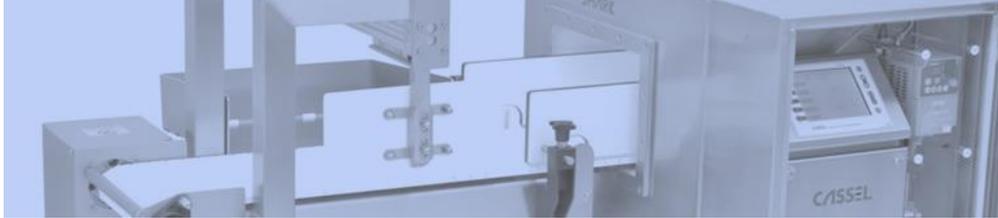
- Reliably detects magnetic and non-magnetic metals in frozen or raw meat
- Optimized to E2 boxes
- Highest sensitivity with wet or frozen products and stable against product change due to 3D detection
- Autocalibration and TeachAssistant for intuitive control and easy installation
- Low maintenance with automatic balance and calibration control
- Compliant to important food standards like IFS Food, HACCP, BRC\*

## Highlights

- 4-quadrant technology provides maximum detection performance with the highest available reliability in the detection area
- Storage space for up to 250 products
- Easy to use with intuitive and multilingual menus
- 4-level password system, automatic log out after time lapse
- Documentation of all events and metal messages
- IFS5 and HACCP reports available on the display at the touch of a button
- Optional: Data transfer to USB interface or connection to the company network via SHARKNET<sup>®</sup> 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.



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## Overview

The METAL SHARK® BD metal detector is available as a free-standing system or combined with conveyor belts or chutes. Using 3D detection technology, it detects the smallest magnetic and non-magnetic metal contaminants (iron, stainless steel, aluminium etc.) precisely and reliably even under difficult conditions. The robust, closed stainless steel housing is easy to clean and therefore ideally suited to the food industry.



## Application

- Monitoring of packed or unpacked meat in E2 boxes
- Quality assurance for incoming goods, outgoing goods or during running production
- Machine and customer protection

## Industries

- Food
- Pet food

## Included

- Detection unit (sensor) BD
- Control unit METAL SHARK®
- HQ conveyor

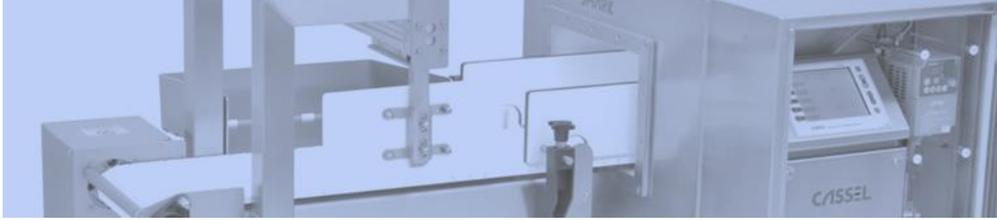
## Detection systems

METAL SHARK® BD can be integrated into existing production lines as a customized system solution including conveyor belt, signal unit and rejection unit.

## Accessories & Extras

- Versions for hose cleaning (LPW) or cleaning with high-pressure cleaner (HPW) possible, available with IP67 or IP69k
- SHARKNET® connection for automatic documentation according to HACCP, IFS or BRC standard
- Alarm devices (optical/acoustic)
- Performance Verification Certificate (proof of functionality for audits) by CASSEL service technicians, e.g. during commissioning or maintenance
- Optional BRC kit provides full compliance of the British Retail Consortium, including lockable reject bins, reject covers, monitors for product accumulation, bin full, reject verify, product counter and compressed air monitoring.

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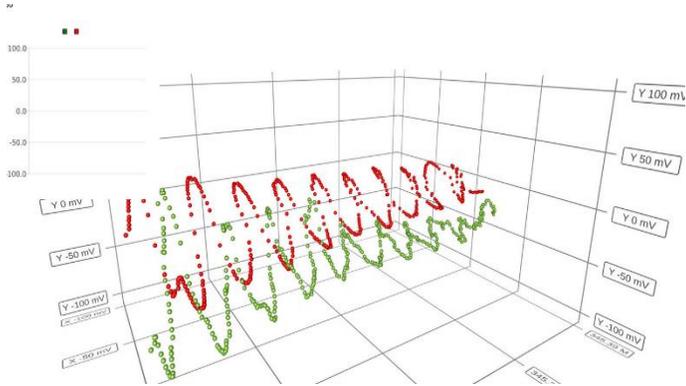


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## 3D Detection



CASSEL Inspection's unique 4-Quadrant-Technology has evolved to the 3rd dimension. The MultiPhase and BOOST FACTOR technologies add multiphase 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 1 mm smaller compared to conventional detectors.

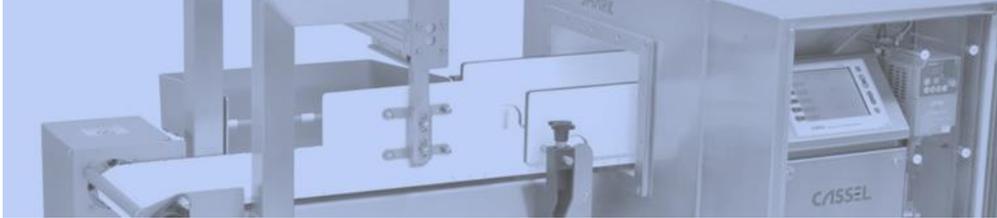
### MultiPhase:

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

<b>Electronics</b>	Digital signal processor, noise filter, digital balance control, digital frequency control, PowerDrive circuit
<b>Input</b>	8 freely configurable 24 V DC signals, e.g. for reject confirmation or conveyor belt control
<b>Output</b>	2 potential-free: "Error" and "Metal" 8 freely configurable 24 V DC signals, e.g. for optic/acoustic alarm or start conveyor belt
<b>Measuring Method</b>	Inductive, multichannel operation, balanced receiver coils
<b>Metal detection</b>	Ferrous, non-ferrous (e.g. aluminium or copper) und stainless steel
<b>Product Compensation</b>	250 storage spaces, compensation performed automatically, with Teach-Assistant
<b>Protection Type</b>	IP65 (IEC 60529) IP69k possible with surcharge LPW-/HPW
<b>Ambience</b>	Standard: -10°C / 14°F bis +40°C / +104°F, rel. humidity 30% up to 80% (non condensingd)
<b>Power supply</b>	110-240 VAC, 1ph, 50-60 Hz
<b>Interface</b>	RS232, optional USB and/or Ethernet for HACCP and IFS documentation
<b>Maintenance</b>	Low maintenance, self-calibrating sensors
<b>Diagnostics</b>	Integrated diagnostic software, automatic self-test
<b>Frame conveyor</b>	Stainless steel AISI 304 / ISO 1.4301 (CrNi 18/10), profiles closed on all sides, tubular frame of 40x40x2 mm and 80x40x2 mm, available with adjustable feet or castors
<b>Running height</b>	800 mm ± 100 mm, other heights and designs possible
<b>Belt speed</b>	12 -24 m/min (variable speed with variant), others on request
<b>Engine</b>	SEW 0.37 kW
<b>Belt control</b>	Belt control with frequency converter for 230V
<b>Product weight</b>	Up to 50kg (110 lbs.)
<b>Compliance</b>	CE in standard, BRC possible





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## Customizing

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

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

## Options

<b>3D Detection</b>	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).
<b>Multifrequency</b>	Use of 4 different frequencies significantly increases the stability against product variations (density, position, temperature, etc.).
<b>Temperature extension cold</b>	Temperature range extended to -40°C / -40°F, cold-elastic grouting material, insulation, switch cabinet heating and other measures.
<b>Temperature extension hot</b>	Temperature range extended to +55°C / +131°F, Adaptation of control cabinet, additional thermal insulation, replacement of filter fan, heat exchanger and/or active cooling units.
<b>High temperature extension for product</b>	Product temperature up to max. +120°C / +248°F, with this option, the sensor has protection class IP54
<b>LPW/HPW</b>	Increase of the IP protection class by adapting the sensor seal, installing additional seals and a double housing for the control electronics.
<b>SHARKNET®</b>	The SHARKNET® software connects METAL SHARK® metal detectors to a central computer for central storage of all operating data as well as batch and alarm documentation for HACCP and IFS conformity.
<b>Twinhead design</b>	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.

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