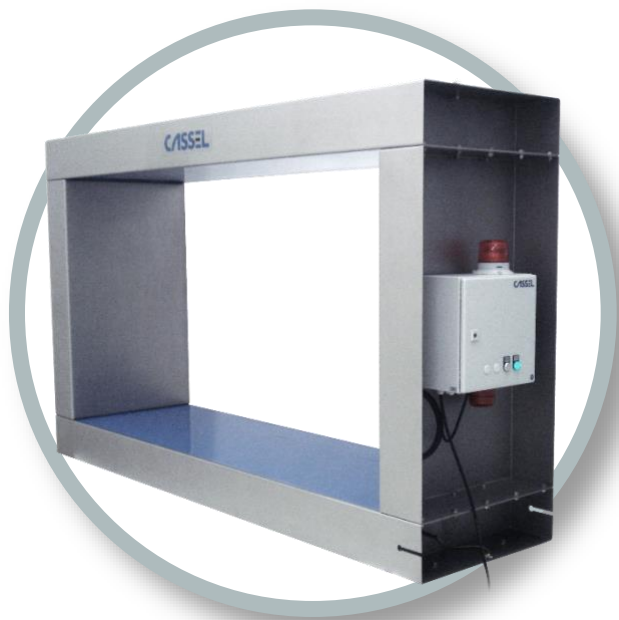# METAL SHARK® TU

Metal detector for non-separable conveyors

Highlights

- 4-Quadrant technology provides maximum detection performance with the highest available reliability in the detection space

- Simple setup with TeachAssistant

- Memory for up to 250 products

- Easy to use with intuitive and multilingual menus

- 4-level password system, automatic log out upon timeout

- Documentation of all events and metal detection alerts

- IFS 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® software

- Cyclical function monitoring with Performance Validation System (PVS)

Features

- Reliably detects metals in packaged and unpackaged products on conveyors

- Removable sides make it particularly easy to install, ideal for belts that cannot be split

- Highest sensitivity with 4-quadrant technology

- Automatic calibration and TeachAssistant for intuitive control and easy installation

- Maintenance-free due to automatic balance and calibration control

METAL SHARK® TU
Metal detector for non-separable conveyors

Overview

The METAL SHARK® TU metal detector is used in combination with conveyors or chutes where these cannot be split or dismantled. The side walls of the TU can be removed so that sensors can be pushed over and under the belt without any need to split it up.

Thanks to 4-quadrant technology, it detects magnetic and non-magnetic metal contaminants (iron, stainless steel, aluminium etc.) accurately and reliably. The stainless steel housing is easy to clean and rugged, making it suitable for a wide variety of industries

Applications:

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

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

- Machine protection, e.g. in the recycling industry

Industries

- Pet food
- Recycling
- Paper, cardboard, packaging
- Chemicals and pharmaceuticals
- Textile and fleece

Included

- TU detection unit
- METAL SHARK® control unit (can be mounted separately, e.g. wall mounting)

Accessories & extras:

- High temperature version
- Versions for hose cleaning (LPW) or cleaning with high-pressure cleaner (HPW)
- SHARKNET® connection for documentation, control and maintenance from a PC
- Signalling devices (visual/acoustic)
- Performance Verification Certificate (proof of functionality for audits) by CASSEL service technicians, e.g. during commissioning or maintenance
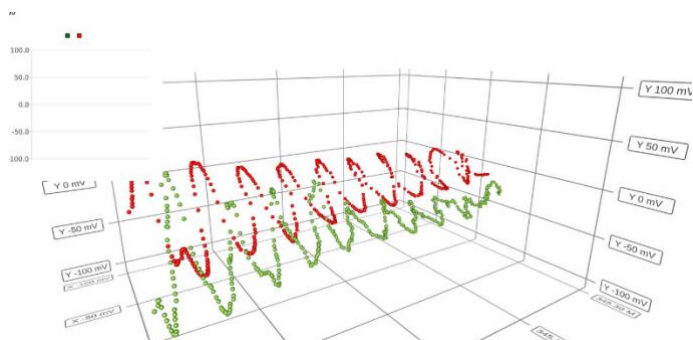
CASSEL
INSPECTION

METAL SHARK® TU
Metal detector for non-separable conveyors

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.
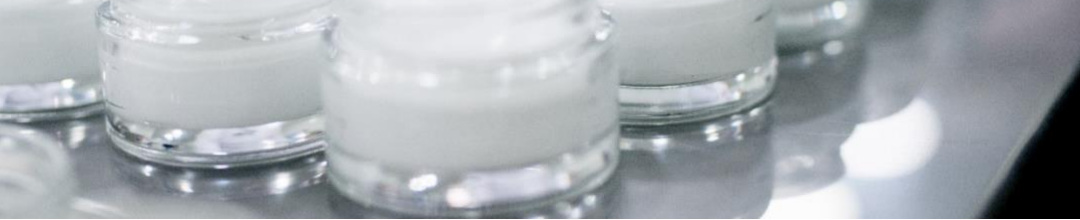
BOOST FACTOR:

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

Electronics	Digital signal processor, digital frequency generation, digital balance control, automatic calibration, digital noise filters, integrated flexible control functions
Input	2 analog 0 ... 10 V DC (option: 4-20 mA) 8 freely configurable 24 V DC signals, e.g. for encoders, product recognition, buttons
Output	2 floating: "error" and "metal" 8 freely configurable 24 V DC signals, e.g. magnetic valve, visual/acoustic alarm
Measuring method	High-frequency magnetic field, multi-channel operation, balanced receiver coils
Metal detection	Ferrous, non-ferrous (e.g. aluminium or copper) and stainless steel
Product compensation	250 memory locations, TeachAssistant
Enclosure rating	Control unit: IP65 Sensor: IP54, optional IP66
Environmental conditions	Controller: -20°C to +40°C / -4°F to 104°F, optional: -40°C / -40°F or +55°C / 131°F, rel. humidity 20% to 90% non-condensing Sensor -30°C to +60°C / -22°F to +140°F, optional: +90°C / 194°F
Temperature of goods inspected	Standard: -30°C to +55°C / -22°F to 131°F optional: -40°C to +120°C / -40°F to 248°F
Power Supply	Single-phase, 110-230 V AC +/- 5% 20 W typical (60 W max.)
Interface	RS232, LAN (optional, for SHARKNET®), USB (optional)
Maintenance	Very low maintenance, self-calibrating sensors
Diagnostics	Integrated diagnostic software, automatic self-test

CASSEL
INSPECTION

METAL SHARK® TU
Metal detector for non-separable conveyors

Special versions, optional extras & accessories:

Temperature extension cold	Temperature range extended to -40°C / -40°F Resin seals remain elastic at low temperatures. Special insulation, heated enclosure and other features
Temperature extension hot	Temperature range extended to +55°C / +131°F Adapted enclosure, additional thermal insulation, replaceable filter fan, heat exchanger and/or active cooling units
High temperature extension for goods inspected	Goods temperature up to +120°C / 248° F max. This option provides IP54 grade enclosure for the sensor
LPW/HPW	IP rating upgrade: adapted sensor seal, installing additional seals and dual housing for the control electronics
SHARKNET®	The SHARKNET® software connects METAL SHARK® metal detectors with a central computer, providing centralized storage of all operating data plus batch and alert documentation for HACCP and IFS compliance.
Flashing light, XENON red	Very bright and eye-catching alarm light, 24 V DC, IP 65 RB 10-100 V, 2 W Xenon beacon Suitable for mounting on stand or wall mounting
Alarm horn	Emits a very loud alarm sound, 24 V DC Suitable for mounting on stand or wall mounting
Flashing light + horn on stand	Acoustic and visual alarm on stand, stainless steel, with bright red Xenon flashing light and horn for conveyor mounting
Test sticks, set of 6	Certified, 100mm x 10mm x 10mm, acrylic, types and certificate number engraved in colour 2x Fe, 2x non-Fe, 2x VA 1.4401 (sizes depending on application)
Miscellaneous	Makrolon cover for control unit

CASSEL Messtechnik GmbH
In der Dehne 10
37127 Dransfeld
Germany
Tel.: +49 (0) 5502 91150
Fax: +49 (0) 5502 911532
Email: info@cassel.de
Website: www.cassel-inspection.com

CASSEL Inspection US
2440 W Corporate Preserve Drive, Ste. 600
Oak Creek, WI 53154
USA
Phone: +1-414-574-4220
Email: us.sales@cassel-inspection.com,
us.service@cassel-inspection.com
Website: www.cassel-inspection.com

CASSEL INSPECTION