METAL SHARK® BIGpba
METAL DETECTOR FOR WOOD MATERIALS

Features

- Specifically designed for the inspection of wood, fibre boards and related upstream products in the production process

- AutoSens technology for automatic adjustment of the sensitivity to the mat height

- Maintenance-free with automatic balance and calibration control

- Durable aluminium design: particularly robust and easy to clean

- Highest sensitivity with 4-quadrant technology

- Auto-calibration and TeachAssistant for intuitive control and easy installation
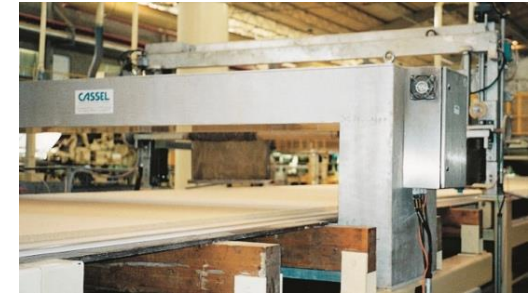
Advantages

- Maximum search performance and high reliability in the entire detection space due to 4-quadrant technology

- Simple setup with TeachAssistant

- Memory for up to 250 products

- Easy to use with intuitive and multilingual menus

- 4-level password protection

- Documentation of all events and metal detection alerts

- Cyclical function monitoring with Performance Validation System (PVS)

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

- Resilient to adverse environmental conditions such as high and low temperatures

METAL SHARK BIG pba with Super Power Drive for more accurate metal detection plus belt seam detection to reduce false alarms

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Function

The METAL SHARK® BIG pba with its rectangular tunnel and its fairly low clearance is specifically designed for the monitoring fibre mats, MDF, OSC or chipboard as well as other panel materials.

It is typically installed with a flat belt conveyor.

Due to its 3D detection technology, the METAL SHARK® BIG pba detects magnetic as well as non-magnetic metal contaminants (iron, stainless steel, aluminium, etc.) accurately and reliably even in challenging conditions.

Included

- BIGpba detection unit (sensor)
- Control unit electronic control cabinet with current METAL SHARK® electronics

Accessories & Extras

- Xenon flashing light and acoustic signal generator
- AutoSens for automatic adjustment of the sensitivity to the panel height
- SHARKNET® access for perfect documentation and device monitoring from a PC
- Control unit can be mounted separately (e.g. wall mounting)
- ATEX version optionally available

Application

- Protection of tools and machines from metal objects such as nails, bolts or screws
- Monitoring of particularly large but flat products e.g. paper, cardboard, paper and related upstream products

Industries

- Wood industry
- Plastics
- Recycling, reusable material processing
- Paper, cardboard

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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 rotary encoders, product identification, pushbutton
Output	2 floating: "error" and "metal" 8 freely configurable 24 V DC signals, e.g. solenoid valve, visual/acoustic alarm
Inspection method	High-frequency magnetic field, multi-channel operation, balanced receiver coils
Metal detection	Ferrous, non-ferrous (e.g. tombac, brass, aluminium, lead etc.) and stainless steel
Product compensation	250 memory locations, TeachAssistant
Enclosure rating	IP 65
Environmental conditions	-30°C to +40°C / -22°F to +104°F UL version: -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 > 95% relative humidity (condensing) with control unit closed
Temperature of goods inspected	Up to 70°C / 158°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	Maintenance-free, self-calibrating sensors
Diagnostics	Integrated diagnostic software, automatic self-test

Sensitivities of METAL SHARK® BIGpba

Tunnel (mm)		Senistivity FE (mm)	
Height	Width	At 40 mm height	Center
75	2.400		1.3
100	1.300	1.0	1.5
150	2.800	1.8	3.0
200	2.800	2.5	3.5
250	3.650	3.0	5.0
300	3.150	2.5	4.0
400	3.250	3.0	4.5
500	3.350	3.7	5.5

Disclaimer: Sensitivities largely depend on ambient conditions as well as on the properties and conditions of the goods to be inspected. The sensitivities listed above are provided for general indication only. Please note that these dimensions are not contractually guaranteed.

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Sensitivities of METAL SHARK® BIG

Material	Properties
SHARKNET®	The SHARKNET® software connects METAL SHARK® metal detectors to a central computer, providing central storage of all operating data as well as batch and alert documentation and remote control and remote maintenance via a PC
Fast Power Drive (FPD)	Significantly improves metal detection capability and reliability in industrial environments that do not meet electromagnetic compatibility standards. Various IP protection classes available, ATEX Zone 22 version optionally available
Temperature extension (cold)	Temperature range extended to -40°C / -40°F Resin seals remain elastic at very 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, heat exchanger and/or active cooling units
Flashing light, XENON	Very bright and eye-catching alarm light, 24 V DC, IP 65, RB 10-100 V, 2 W, 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

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