CASSEL
INSPECTION

METAL SHARK® BIG RD
Metal detector for forestry and sawmills

Highlights

- The BIG RD sensor head has an enclosure made of aluminium. Rugged and weatherproof with short metal-free zone

- Perfectly suited to the monitoring of whole timber logs

- Highest detection performance with excellent noise filtering

- Low maintenance due to automatic calibration and automatic balance control.

- Easy installation and intuitive operation

- Remote control and remote maintenance (with optional SHARKNET software) with documentation of all settings, metal detection alerts, etc.

Features

- Standard tunnel diameter 1,6 m (other sizes on request)
- Easy setup with TeachAssistant function
- Simple operation: intuitive and multilingual

- Password protection including permission management

- Extended temperature range down to -40°C / -40°F with specially adapted sensor and specially equipped control unit (both available as optional features)

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Overview

METAL SHARK® BIG RD is specifically designed for use in the timber industry and in sawmills. Due to its cylindrical tunnel, it is ideally suited for the inspection of timber for metal objects such as shrapnel, bullets, fragments, nails, screws, bolts and other metal objects.

It identifies magnetic as well as non-magnetic metal contaminants (iron, tombac, brass, stainless steel, etc.) accurately and reliably even in challenging conditions.

Included

- BIG RD detection unit (sensor)

- Control unit in electric control cabinet with current METAL SHARK® electronics

Application

- Protection of processing machines from metal objects

- Monitoring of large products – especially suitable for tree trunks

- Monitoring of bulk materials such as wood chips

- For use preferably with troughed conveyor belts

Accessories & Extras

- Separate mounting of the control unit (wall mounting, up to 30 m connection cable to the sensor)

- Xenon flashing lights

- Acoustic signaling devices

- SHARKNET® for remote control, remote maintenance and data recording

- Power Drive signal amplification for further improved search performance and for particularly challenging operating condition

- Extended temperature range to -40°C / -40°F

Industries

- Timber
- Recycling, reusable material processing
- Paper, cardboard
- Textiles, fabrics and fleece
- Plastics

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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, buttons
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 mode, balanced receiver coils
Metal detection	Ferrous, non-ferrous (e.g. tombac, brass, bronze, aluminium, lead etc.) and stainless steel
Product compensation	250 memory locations, TeachAssistant
Enclosure rating	IP 65
Environmental conditions	Standard: -30°C to +40°C / -22°F to +104°F UL version: -20°C to +40°C / -4°F to +104°F Optional: to -40°C / +40°F or +55°C / +122°F Relative 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® BIG RD

Ø Tunnel (mm)	Senistivity FE (mm)	
	Edges	Center
800	6	10
900	6	10
1,000	6	10
1,100	6	10
1,200	6	10
1,300	8	12
1,400	8	14
1,500	8	14
1,600	10	16

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 detection sizes are not contractually guaranteed.

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Special version & optional extras

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 possible.
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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