

# METAL SHARK® BIG

METAL DETECTION FOR MACHINE PROTECTION



## Highlights

- The BIG sensor head has an enclosure made of aluminum. Rugged and weatherproof with short metal-free zone
- Optimal protection for wood choppers, shredders, chippers and OSB flakers
- Highest search performance and noise immunity  
4-quadrant technology, Power Drive (booster) option
- 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 width up to 2 m x 2 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

The METAL SHARK® BIG with its rectangular tunnel is specifically designed for large items such as logs, bales and recycled wood.

Thanks to its robust design, it is particularly suitable for industrial use on rough terrain commonly found in places such as timber yards. It is typically installed with a flat-belt trough conveyor or with a specially prepared vibrating feeder.

Using 3D detection technology, it detects magnetic and non-magnetic metal contaminants (iron, stainless steel, aluminum etc.) accurately and reliably, even in challenging conditions.

### Included

- BIG detection unit (sensor)
- Electronic control unit cabinet with current METAL SHARK® electronics

### Accessories & Extras

- Separate mounting for the control unit (wall mounting, up to 30 m connection cable to the sensor)
- Xenon flashing light
- Acoustic signaling devices
- SHARKNET® remote control, remote maintenance, and data recording
- Power Drive signal amplification for further improved search performance and for particularly challenging operating conditions
- Extended temperature range to below -40°C / -40°F

### Application

- Protection of processing machines from metal objects
- Monitoring of large items – particularly well-suited for monitoring tree trunks
- Monitoring of bulk materials such as wood chips
- For use preferably with trough conveyor belts

### Industries

- Wood industry
- Recycling, reusable material processing
- Paper, cardboard, corrugated board
- Textiles, fabrics and fleece
- Plastics



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### Specifications

<b>Electronics</b>	Digital signal processor, digital frequency generation, digital balance control, automatic calibration, digital noise filters, integrated flexible control functions
<b>Input</b>	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
<b>Output</b>	2 floating: "error" and "metal" 8 freely configurable 24 V DC signals, e.g. solenoid valve, visual/acoustic alarm
<b>Inspection method</b>	High-frequency magnetic field, multi-channel operation, balanced receiver coils
<b>Metal detection</b>	Ferrous, non-ferrous (e.g. tombac, brass, aluminium, lead etc.) and stainless steel
<b>Product compensation</b>	250 memory locations, TeachAssistant
<b>Enclosure rating</b>	IP 65
<b>Environmental conditions</b>	-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
<b>Temperature of goods inspected</b>	Up to 70°C / 158°F
<b>Power supply</b>	Single-phase 110-230 V AC +/- 5%, 20 W typical (60 W max.)
<b>Interface</b>	RS232, LAN (optional, for SHARKNET®), USB (optional)
<b>Maintenance</b>	Maintenance-free, self-calibrating sensors
<b>Diagnostics</b>	Integrated diagnostic software, automatic self-test

### Sensitivities of METAL SHARK® BIG

Tunnel (mm)		Sensitivity FE (mm)	
Width	Height	Edges	Center
600	600	M3	M5
700	700	M4	M6
900	900	M4	M8
1,200	1,200	M4	M10
1,300	1,300	M5	M12
1,500	1,500	M6	M16
1,700	1,700	M8	M18
2,000	2,000	M10	M20

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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### Optional extras & accessories

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

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