



# METAL SHARK® BIG pba

METAL DETECTOR FOR WOOD MATERIALS

## Highlights

- The BIG pba sensor head has an enclosure made of aluminium. 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 0,5 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)



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

# METAL SHARK® BIG pba

## METAL DETECTOR FOR WOOD MATERIALS



### Overview

The METAL SHARK® BIG pba with its rectangular tunnel and its fairly low clearance is specifically designed for monitoring fiber 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

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

### Accessories & Extras

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

### 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



# METAL SHARK® BIG pba

## METAL DETECTOR FOR WOOD MATERIALS

### 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>	Low maintenance, self-calibrating sensors
<b>Diagnostics</b>	Integrated diagnostic software, automatic self-test

### Sensitivities of METAL SHARK® BIG pba

Tunnel (mm)		Sensitivity 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 detection sizes are not contractually guaranteed.





# METAL SHARK® BIG pba

METAL DETECTOR FOR WOOD MATERIALS



## Accessories & 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 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

### CASSEL Messtechnik GmbH

In der Dehne 10  
37127 Dransfeld  
Germany  
**Tel.:** +49 (0) 5502 91150  
**Fax:** +49 (0) 5502 911532  
**Email:** [info@cassel.de](mailto:info@cassel.de)  
**Website:** [www.cassel-inspection.com](http://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](mailto:us.sales@cassel-inspection.com),  
[us.service@cassel-inspection.com](mailto:us.service@cassel-inspection.com)  
**Website:** [www.cassel-inspection.com](http://www.cassel-inspection.com)

