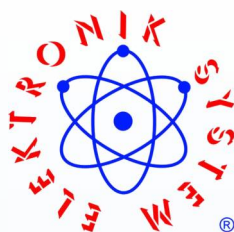


PRODUCT CATALOG

METAL DETECTORS

ELEKTRON



www.detektorymetali.com



Since 1995, we have been manufacturing detection systems for all metals and other foreign bodies in food, knitwear and industrial products. Many years of experience and inspired by our customers to implement systems that are user-friendly and intuitive. The highest level of detection, reliability and stability of the metal detectors have won the appreciation of our customers worldwide. Our machines replace human labour rather than absorbing complex handling.

The metal detectors feature a **non-contact self-learning system** and an **auto-calibration system** that is unparalleled in other detectors. The **10-year warranty** on the metal detector heads attests to the superior quality of our products.





APPLICATION

Metal detectors of the **ELEKTRON-MD** type are mainly dedicated to the food industry. We offer devices designed for packaged and unpackaged (bulk) products such as

- meat - fresh and frozen,
- fish, seafood - fresh and frozen,
- dairy products,
- vegetables and fruit- fresh, frozen and processed,
- bakery and confectionery products,
- ready-made products, e.g. pizza,
- cereal products,
- spices and herbs,
- coffee beans, ground coffee, instant coffee,
- sugar, salt,
- teas, dried fruit,
- nuts- ready-to-use mixtures for the confectionery industry
- and wherever else it is indispensable.



ADVANTAGES AND BENEFITS

- Highest level of detection, guaranteeing high quality products.
- Protects against loss of a good contract or reduction in product price due to metal contamination.
- Compliant with HACCP, CE, IFS, NEC system standards.
- Longest probe warranty (10 years).
- Non-contact automatic learning system,
- Built-in auto-calibration system - no maintenance required periodic maintenance,
- FROST' system
- 24-hour technical service support, consultation and training.
- Generally available spare parts from renowned companies.
- Repair and modernisation of our machines, even the oldest ones according to our customers' requirements.



INDICATIONS

- H** - detector dedicated to work in difficult conditions.
- F** - detector with built-in 'FROST' system.
- S** - detector with separator.
- G** - metal detector belt with rubber gripper.



WHAT MAKES US STAND OUT?

AUTO LEARNING

Series of detectors **ELEKTRON-MD** has a unique system that cannot be found in other detectors. Standalone system **touchless auto learning** analyzes the tested product and saves detection parameters (e.g. product influence and background automatically). Detector steering the transporter automatically moves the product through the probe window detecting forward and backward until the completion of learning. This solution is to facilitate help with heavy products. As a result, learning is much more accurate without interruption a also the level of detection and stability of the metal detector operation.

AUTOCALIBRATION

Metal detectors of our production have a **built-in auto-calibration system**, thanks to which devices do not require constant service inspections. The detection system oscillates accurately at the frequency of the test substance, it adjusts the variable values itself. The management system is designed so that after each disconnection of the detector from the power supply, it automatically performs background analysis and self-calibration after being switched on again.

„FROST” SYSTEM

Our devices can be equipped with a frost system, unparalleled in other metal detectors. Built-in inside the control panel of the heating system and thermostat, protects internal electronic systems against moisture and cold. It is the only protection against sudden changes in temperature during washing and protects against moisture absorption inside (for example, a cold machine washed with hot water, machine operation in cold store and with frozen product).

MAXIMUM DIMENSIONS OF THE TESTED PRODUCTS

ELEKTRON-MD	2005, 2008, 2010 2012, 2015	3005, 3008, 3010 3012, 3015, 3018, 3020	4005, 4008, 4010 4012, 4015, 4018 4020, 4025, 4030
Height [mm]	50, 80, 100, 120, 150	50, 80, 100 120, 150, 180, 200	50, 80, 100 120, 150, 180 200, 250, 300
Width [mm]	160	260	360

ELEKTRON-MD	5005, 5010, 5015, 5020, 5025, 5030, 5035, 5040	6005, 6010, 6015, 6020, 6025, 6030, 6035, 6040
Height [mm]	50, 100, 150, 200, 250, 300, 350, 400	50, 100, 150, 200, 250, 300, 350, 400
Width [mm]	460	560

MAIN FEATURES

- Clear HMI touch screen.
- Cover of the detection zone made of transparent polycarbonate.
- Transparent polycarbonate control panel cover.
- Intuitive menu and simple operation.
- Easy parameter setting system.
- Probe leakage class IP-69, conveyor drive IP-54/65.
- Additional output signals:
 - detection enabled
 - metal detection
 - start of the transporter
 - stopping another machine or the giving conveyor belt.
- Increase in efficiency and stability of work exceeding the detectors of other companies.
- Structures made of stainless steel are subjected to glass blasting - it is a surface hardening technique of stainless steel that facilitates the maintenance of hygiene and cleanliness of the device.

SYSTEM FUNCTIONS

- Menu in Polish and English (standard).
- Optional menu in any other language indicated by the customer.
- History of detection, alarms, date and time.
- USB port for reading data into a flash drive.
- Memory function for testing 100 different products.
- Auto learning system. Automatic system self-calibration.
- Detection analysis graph.
- Automatic system inducing correct detection.
- Password protected access levels.
- Confirmation of the discharge of contaminated product and signal of a filled container.

METAL DETECTOR COMPONENTS

NAZWA	PRODUCENT
Light tower	Werma
Inverter	Sew
Electric motor	Oriental Motor/Sew
IR barriers	Telemecanique
Manipulators	Baco
Display + touch screen	FLEXEM
electrical protection	Eaton/ Schneider Electric
Switching elements	Finder/ Weidmuller
Connectors	Weidmuller/ Phoenix
Cables/Wires	Lapp Kabel/ Helukabel

METAL DETECTORS FOR SMALL PRODUCTS

- ▶ Dedicated detector for testing small packaged products (e.g. meat, fish, vegetables, fruit). Can be prepared for product unpackaged bulk product in any configuration.
- ▶ What sets us apart:
 - 10-year warranty on the metal detector probe,
 - an unparalleled no-touch self-learning system,
 - built-in auto-calibration system - no need for periodic inspections,
 - FROST' system,
 - high level of detection and stable operation of the device.



Model		ELEKTRON-MD		
Specification		2008	3008, 3012 3015, 3018	4008, 4012 4015, 4018
Detection level	Fe	from Ø 0.5 mm	from Ø 0.6 mm	from Ø 0.8 mm
	NoFe	from Ø 0.7 mm	from Ø 0.8 mm	from Ø 1.0 mm
	St/st	from Ø 0.8 mm	from Ø 1.0 mm	from Ø 1.2 mm
Probe clearance working width		200 mm	300 mm	400 mm
Probe clearance working height		80 mm	80 mm, 120 mm 150 mm, 180 mm	80 mm, 120 mm 150 mm, 180 mm
The width of the conveyor belt		160 mm	260 mm	360 mm
Maximum load		10 kg/m ²	15 kg/m ²	25 kg/m ²
Transporter length		1500 mm (optional other length)		
Standard transporter height		800 + 100 mm (optional different height)		
Operator Panel		HMI touch screen (optional analog buttons)		
Type of conveyor belt		Modular (optionally polyurethane)		
The direction of the transporter's work		Left to right (right to left optional)		
Type of control panel cover		Polycarbonate (optional stainless steel)		
Sides		Permanent (optionally adjustable)		
Pollution detection signaling		Optical-acoustic alarm and stopping the conveyor belt		
Conveyor belt speed		Adjustable from 0-35 m / min (optional fixed)		
"FROST" system		Option		
Power		230 V, 50 Hz		
Working temperature		0-45°C		
Material		Glass-blasted stainless steel		

METAL DETECTORS FOR LARGE PRODUCTS

- ▶ Metal detector dedicated for testing products packed in in E1, E2 boxes (e.g. meat, fish) and large cardboard boxes.
- ▶ What sets us apart:
 - 10-year warranty on the metal detector probe,
 - an unparalleled no-touch self-learning system,
 - built-in auto-calibration system - no need for periodic inspections,
 - FROST' system,
 - high level of detection and stable operation of the device.



Model		ELEKTRON-MD	
Specification		5005, 5010, 5015, 5020 5025, 5030, 5035, 5040	6005, 6010, 6015, 6020 6025, 6030, 6035, 6040
Detection level	Fe	from Ø 1.0 mm	from Ø 1.0 mm
	NoFe	from Ø 1.2 mm	from Ø 1.2 mm
	St/st	from Ø 1.5 mm	from Ø 1.5 mm
Probe clearance working width		500 mm	600 mm
Probe clearance working height		50, 100, 150, 200 250, 300, 350, 400 mm	50, 100, 150, 200 250, 300, 350, 400 mm
The width of the conveyor belt		460 mm	560 mm
Maximum load		50 kg/m ²	50 kg/m ²
Transporter length		1500 mm (optional other length)	
Standard transporter height		800 + 100 mm (optional different height)	
Operator panel		HMI touch screen (optional analog buttons)	
Type of conveyor belt		Modular (optionally polyurethane)	
The direction of the transporter's work		Left to right (right to left optional)	
Type of control panel cover		Polycarbonate (optional stainless steel)	
Sides		Permanent (optionally adjustable)	
Pollution detection signaling		Optical-acoustic alarm and stopping the conveyor belt	
Conveyor belt speed		Adjustable from 0-35 m / min (optional fixed)	
"FROST" system		Option	
Power		230 V, 50 Hz	
Working temperature		0-45°C	
Material		Glass-blasted stainless steel	

METAL DETECTORS WITH STANDING PROBE

- ▶ The metal detector was specifically designed for testing products standing tall (e.g. jars without lids, plastic and glass bottles, tall paper or plastic bags).
- ▶ What sets us apart:
 - 10-year warranty on the metal detector probe,
 - an unparalleled no-touch self-learning system,
 - built-in auto-calibration system - no need for periodic inspections,
 - FROST' system,
 - high level of detection and stable operation of the device.
- ▶ Thanks to the adjustable side panels product in an upright position stable passage through the metal detector probe metals.



Model	ELEKTRON-MD	
Detection level (depends on probe size)	Fe	from Ø 0.8 mm
	NoFe	from Ø 1.0 mm
	St/st	from Ø 1.2 mm
Maximum load	10 kg/m ²	
Standard transporter length	1500 mm (optional other length)	
Standard transporter height	800 + 100 mm (optional different height)	
Operator panel	HMI touch screen (optional analog buttons)	
Type of conveyor belt	Modular (optionally polyurethane)	
The direction of the transporter's work	Left to right (right to left optional)	
Type of control panel cover	Polycarbonate (optional stainless steel)	
Sides	Permanent (optionally adjustable)	
Pollution detection signaling	Optical-acoustic alarm and stopping the conveyor belt	
Conveyor belt speed	Adjustable from 0-35 m / min (optional fixed)	
"FROST" system	Option	
Power	230 V, 50 Hz	
Working temperature	0-45°C	
Material	Glass-blasted stainless steel	

NONSTANDARD METAL DETECTORS



- ▶ We carry out custom designs for metal detectors for products destined for milling (grinder) e.g. frozen food, meat and fish parts. Ideal solution for harsh environments with belt loosening system to keep the machine clean and machine defrosting.

- ▶ What sets us apart:
 - 10-year warranty on the metal detector probe,
 - an unparalleled no-touch self-learning system,
 - built-in auto-calibration system - no need for periodic inspections,
 - FROST' system,
 - high level of detection and stable operation of the device.



Model	ELEKTRON-MD	
Detection level (depends on probe size)	Fe	from Ø 0.8 mm
	NoFe	from Ø 1.0 mm
	St/st	from Ø 1.2 mm
Probe clearance working width	On customer's request, from 260 mm to 1660 mm	
Probe clearance working height	On customer's request, from 50 mm to 400 mm	
Transporter length	1500 mm (optional other length)	
Standard transporter height	800 + 100 mm (optional different height)	
Operator panel	HMI touch screen (optional analog buttons)	
Type of conveyor belt	Modular (optionally polyurethane)	
The direction of the transporter's work	Left to right (right to left optional)	
Type of control panel cover	Polycarbonate (optional stainless steel)	
Sides	Permanent (optionally adjustable)	
Pollution detection signaling	Optical-acoustic alarm and stopping the conveyor belt	
Conveyor belt speed	Adjustable from 0-35 m / min (optional fixed)	
"FROST" system	Option	
Power	230 V, 50 Hz	
Working temperature	0-45°C	
Material	Glass-blasted stainless steel	

TUBE PRESSURE METAL DETECTORS

- ▶ Detector designed for testing dense masses and liquids under pressure such as stuffings, minced meat, sausages, minced fish, jams, sauces, ketchups. Most often used between the stuffing machine and clipping machine.

- ▶ Metal detector equipped with a sight glass that allows the tester to be placed with the contamination inside pipeline, ensuring the highest reliability of the test.

- ▶ What sets us apart:
 - 10-year warranty on the metal detector probe,
 - an unparalleled no-touch self-learning system,
 - built-in auto-calibration system - no need for periodic inspections,
 - FROST' system,
 - high level of detection and stable operation of the device.

- ▶ The rapid contaminated product separator is a three-way pneumatic valve that rejects only a small amount of product with the contamination. The response time is 1 s.



Model	ELEKTRON-MD		
Working diameter of the through tube	Ø50 mm	Ø63 mm	Ø100 mm
Detection level	Fe	≤ Ø 0.6 mm	≤ Ø 0.7 mm
	NoFe	≤ Ø 0.8 mm	≤ Ø 1.0 mm
	St/st	≤ Ø 1.0 mm	≤ Ø 1.2 mm
Control panel	HMI touch screen		
Memory function	For 100 different products		
Type of control panel cover	Made of polycarbonate (optionally in stainless steel)		
Pollution detection signaling	Optical and acoustic alarm		
Standard working height	1030 mm (+/- 50 mm)		
Power	230 V		
Working temperature	0-45°C		

TUBE GRAVITY METAL DETECTORS

- ▶ The tubular gravity metal detector is designed for testing dry, fine, free-flowing, non-crystalline products tested in a gravity process.

- ▶ What sets us apart:
 - 10-year warranty on the metal detector probe,
 - an unparalleled no-touch self-learning system,
 - built-in auto-calibration system - no need for periodic inspections,
 - FROST' system,
 - high level of detection and stable operation of the device.

- ▶ The design of the unit can be fitted with mountings for mounting at height and the control panel can be elevated to a distance of, for example, 10 m.

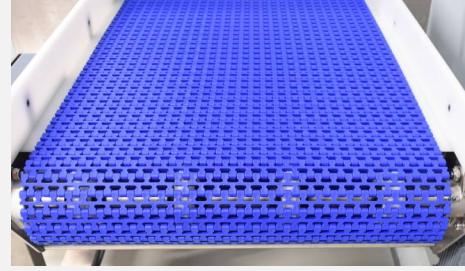
- ▶ The inner passage insert can be removable for cleaning.



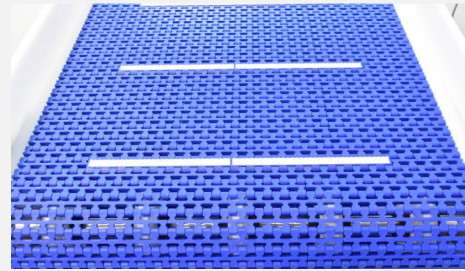
Model	ELEKTRON-MD					
Working diameter of the through tube [mm]	50	75	100	150	200	
Detection level	Fe	$\leq \varnothing 0.6$	$\leq \varnothing 0.7$	$\leq \varnothing 0.8$	$\leq \varnothing 1.0$	$\leq \varnothing 1.2$
	NoFe	$\leq \varnothing 0.8$	$\leq \varnothing 1.0$	$\leq \varnothing 1.2$	$\leq \varnothing 1.5$	$\leq \varnothing 2.0$
	St/st	$\leq \varnothing 1.0$	$\leq \varnothing 1.2$	$\leq \varnothing 1.5$	$\leq \varnothing 2.0$	$\leq \varnothing 2.5$
Display	Touch					
Control panel	HMI touch screen (optional analog buttons)					
Memory function	for 100 different products					
Type of control panel cover	Made of polycarbonate (optionally in stainless steel)					
Pollution detection signaling	Optical-acoustic alarm, NO / NC					
Power	230 V					
Power consumed	150 W					
Working temperature	0-45°C					
Working humidity	80% non-condensing water vapor					

MODULAR BELTS

The tape is used to work in difficult conditions. Quick disassembly and easy cleaning of the tape make it easier to keep the device clean.



The belt has rubber grippers that improve the adhesion of the product to the surface, which allows you to work on ascending conveyors.



POLYURETHANE TAPES

Used to transport loose or unpacked products.

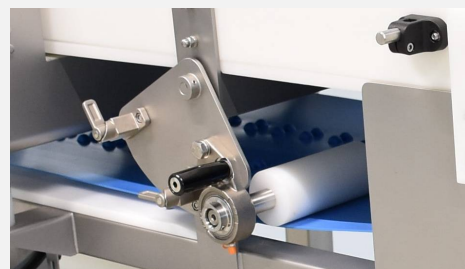


The tape is made of one piece of plastic, so it does not fray and does not contaminate food, easy to clean.



TAPE LOOSENING

„Easy clean” - the design of the detector allows loosening the conveyor belt for easy cleaning of the belt and the entire machine.



ADJUSTABLE SIDES

They make it possible the product to be directed to the right track, mainly used in the absence of a separator.



SEPARATOR SYSTEMS



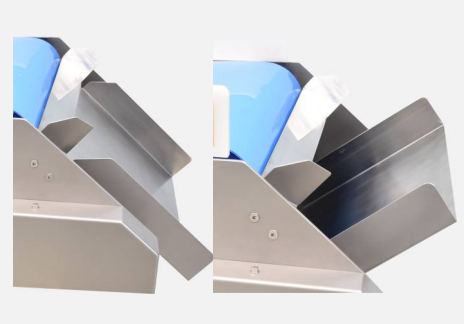
Blower

A very efficient and ergonomic system for light products up to 0.5 kg.



Pusher

Widely used rejection system for products packed. We offer pusher for products from 1 kg to 60 kg.



Trap

Reliable reject system for loose products.



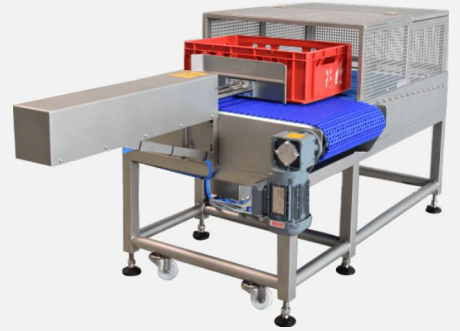
Track change

The separator redirects to the other track of the rejected product.



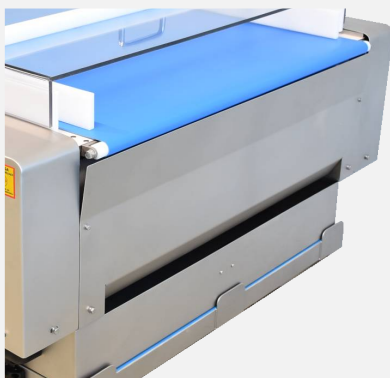
A trapdoor in the form of a falling conveyor

Rejection system designed for long products with a closed zone and a lockable container.



Roller separator for heavy products

Dedicated to E1, E2 crates and large cardboard boxes etc.



Reversing transporter

Discard system for loose products.



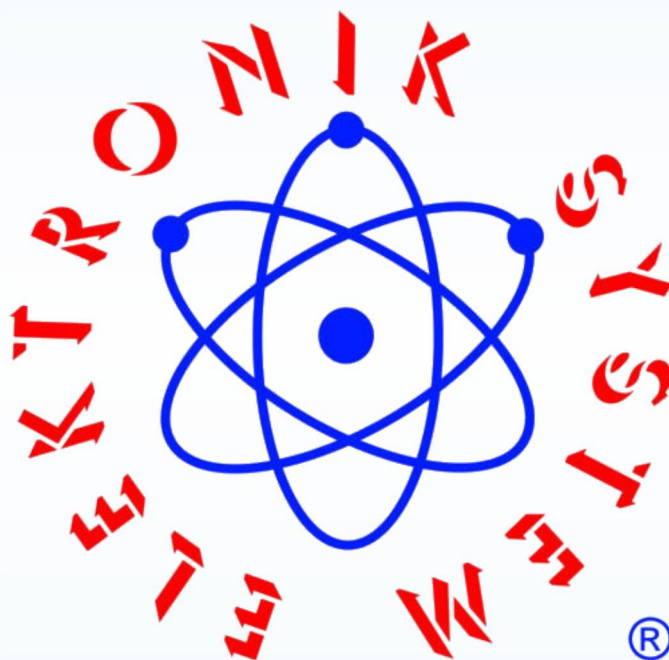
Roller conveyor

System dedicated to E2 boxes.

SAMPLE CONSTRUCTION



www.detektorymetali.com



ELEKTRONIK SYSTEM
Piotr Cieśliński
ul. Ustronna 14
89-606 Charzykowy

e-mail: elektron@metaldetektor.pl
Owner: +48 608 34 34 34
Technical department: +48 666 45 05 05