PRODUCT CATALOG

METAL DETECTORS
ELEKTRON

www.detektorymetali.com

NEW FACTORY OUR COMPANY

Here, in Elektronik System, we have been producing detection systems for all metals and other foreign bodies in food, knitting and industrial products since 1995. Many years of experience and improvements inspired by our clients have allowed us to implement user-friendly and intuitive systems over the years. The highest level of detection, reliability and stability of metal detectors and X-Ray scanners is appreciated by our customers around the world. Our machines replace human work and do not require complicated handling. In our metal detectors, we have introduced a non-contact auto-learning system and an auto-calibration system - unparalleled in other detectors. 10-year warranty on metal detector heads proves the highest quality of our products. X-Ray scanners using state-of-the-art solutions in the field of ionizing radiation are at the forefront of world leaders.

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Kartofelek

MAKO

Rizoma

malmon
1998
powody do wypieków

APPLICATION

Metal detectors of the **ELEKTRON-MD** type are dedicated mainly to the food industry. We offer devices intended for packed and unpackaged (supplied loose) products such as:
- meat, cold cuts - fresh and frozen,
- fish, seafood - fresh and frozen,
- meat and fish semi-finished products for grinding,
- dairy products ,
- vegetables and fruits - fresh, frozen and processed,
- bakery and confectionery products,
- ready-made products, e.g. pizza,
- cereal preparations ,
- spices and herbs,
- coffee beans, ground coffee, instant coffee,
- sugar, salt,
- teas, dried fruit,
- nuts and dried fruits - mixtures ready for the confectionery industry.

BENEFITS AND ADVANTAGES

- The highest level of detection, guaranteeing high quality of products.
- It protects against the possibility of losing a good contract or downgrading product prices due to metal contamination.
- Compliance with the standards of the HACCP, CE, IFS and NEC system.
- Longest probe warranty (10 years).
- 24h technical support, consultations and training.
- Publicly available spare parts from reputable companies.
- Repair and modernization of our machines, even the oldest ones, in accordance with the requirements of our customers.
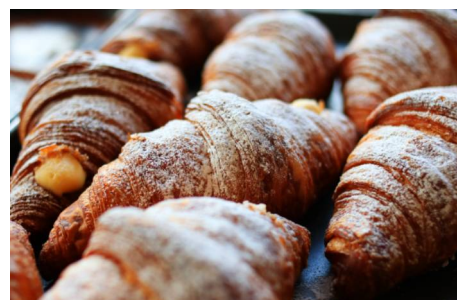
SIGNS

H - heavy duty, detector dedicated to work in difficult conditions.
F - detector with a built-in "FROST" system.
S - detector having a separator.
G - metal detector belt equipped with rubber grippers.

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

NAME	PRODUCER
Optical-acoustic indicator	Schneider Electric
Inverter	Yaskawa 1000
Engine	Oriental Motor/Sew
IR barriers	Telemecanique
Buttons and lights	EMA
Display	WE!NVIE W
Conveying belt	Synchrotech

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

METAL DETECTORS FOR SMALL PRODUCTS

➢ Detector dedicated to testing small packaged products (e.g. meat in vaccum) as well as unpackaged loose products (frozen vegetables and fruits).

➢ Thanks to the use of a modular tape, the detector is adapted to work in difficult conditions, the tape can be easily removed for cleaning, and thus it is easy to keep the device clean

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 to testing products packed in E1, E2 crates (e.g. meat, fish) and large cardboard boxes

➢ The machine can be equipped with a roller separator for E1 and E2, boxes or a chute with a pusher for large and heavy bags and cartons.

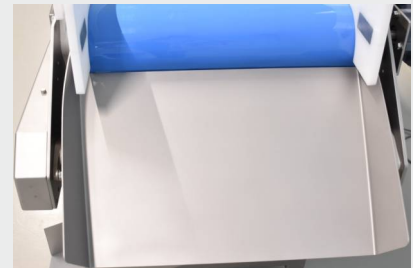| Model	ELEKTRON-MD		
Specification	5010, 5015, 5020 5025, 5030, 5035		6010, 6015, 6020 6025, 6030, 6035
Detection level	Fe	from Ø 1.0 mm	from Ø 1.0 mm
	NoFe	from Ø 1.2 mm	from Ø 1.2 mm
	St/st	from Ø 1.5 mm	from Ø 1.5 mm
Probe clearance working width		500 mm	600 mm
Probe clearance working height		100, 150, 200 250, 300, 350 mm	100, 150, 200 250, 300, 350 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 is specially designed to test tall products in an upright position (e.g. jars without lids, plastic and glass bottles, tall paper or plastic bags).

➢ Thanks to the use of adjustable side boards, the product stably passes through the probe of the metal detector in a standing position.

➢ The device can be equipped with an automatic separator such as a pusher or a blower, and contaminated products will be separated into an open side platform or a side platform with a rejection area cover or a standing, locked container.

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 implement non-standard structures for metal detectors for difficult products intended for grinding.

- ➢ „Easy clean" – the design of the detector allows the conveyor belt to be loosened by means of a lever for easy cleaning of the belt and the entire machine.

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 GRAVITY METAL DETECTORS

➢ The tubular gravity detector of metals is intended for testing fine, loose - non-lumpy products tested in the gravity proces.

➢ The structure of the device can be equipped with fasteners for mounting at a height, and the control panel can be lifted up to a distance of e.g. 10 m.

➢ The inner insert of the passage can be optionally removable so that the remaining elements are easy to clean.

➢ The detector can also be used to test plastic granules.

Model	ELEKTRON-MD				
Working diameter of the through tube [mm]	50	75	100	150	200
Detection level Fe	≤ Ø 0.6	≤ Ø 0.7	≤ Ø 0.8	≤ Ø 1.0	≤ Ø 1.2
NoFe	≤ Ø 0.8	≤ Ø 1.0	≤ Ø 1.2	≤ Ø 1.5	≤ Ø 2.0
St/st	≤ Ø 1.0	≤ Ø 1.2	≤ Ø 1.5	≤ Ø 2.0	≤ Ø 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℃				
Working humidity	80% non-condensing water vapor				

TUBE PRESSURE METAL DETECTORS

➢ The detector is designed to test dense masses and liquids under pressure, such as stuffings, meat and fish luncheons, as well as jams or spaghetti sauces, etc.

➢ Contaminated product separator implemented by means of a three-way pneumatically controlled valve.

➢ The system rejects only a small amount of the product along with the contamination.
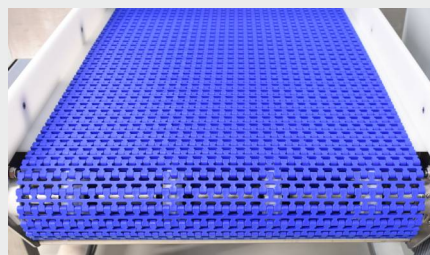
➢ Quick response time is 1s.

Model	ELEKTRON-MD		
Working diameter of the through tube	50 mm	63 mm	80 mm
Detection level	Fe	≤ Ø 0.6 mm	≤ Ø 0.7 mm	≤ Ø 0.8 mm
	NoFe	≤ Ø 0.8 mm	≤ Ø 1.0 mm	≤ Ø 1.2 mm
	St/st	≤ Ø 1.0 mm	≤ Ø 1.2 mm	≤ Ø 1.5 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℃		

EQUIPMENT FOR METAL DETECTORS

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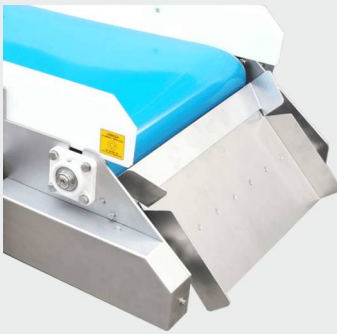A very efficient and ergonomic system for light products up to 0.5 kg.

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

Flipper
Fast recoil system to save installation space for products up to 2 kg.

Trap
Reliable recoil system for loose products.

A trapdoor in the form of a falling conveyor
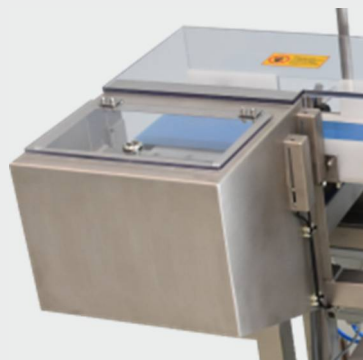Rejection system designed for long products with a closed zone and a lockable container.

Roller separator for heavy products
Dedicated to E1, E2 crates and large cardboard boxes etc.

TYPES OF REJECTED PRODUCT CONTAINERS

Hanging container with front opening

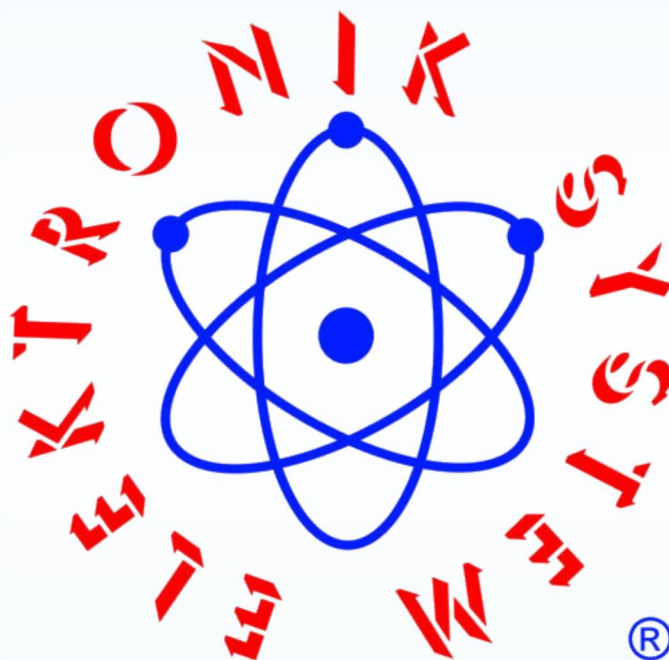### Top-opening hanging container for light products

A standing container with front opening for heavier products

www.detektorymetali.com

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