



EMBALLAGE
SATURN
PACKAGING

PRODUCT CATALOG

X-RAY SCANNERS



INTENDED

X-Ray scanners **ELEK-ON** are designed for the detection of foreign bodies in loose and packed products, in particular in metallized, aluminum, glass and metal-closed packaging and in metal cans.



RANGE OF DETECTION

X-Ray scanners are distinguished by the highest sensitivity and stability of work. The highest efficiency in the elimination of foreign bodies ensures the highest quality of products. Our X-Ray scanners detect: SUS - $\varnothing$ 0.3mm, SUS wire 0.2x1mm, glass - $\varnothing$ 1mm, ceramics - $\varnothing$ 1mm, stone - $\varnothing$ 1mm using a high power lamp and LED receiver - 0.4mm.



PRINCIPLE OF OPERATION

The X-Ray scanner detects any foreign bodies whose density and specific gravity is higher than water (any body that it sinks immediately in the water). For such foreign bodies mainly metals, stones, glass, bones or hard plastic. The **DUAL ENERGY** device raises the level detection of lower density contaminants, e.g. small bones, rubber, plastic.



MAIN FEATURES

- The highest level of detection,
- Compliant with CE, FDA, CSA directives and standards,
- Warranty on the scanner for 5 years or 31,000 hours,
- 24h technical support - WAN,
- Easy and intuitive user interface,
- Visual information system with X-rays on,
- Matched contaminated product separation systems to the type, size and weight of the product,
- Testing the product with and without packaging,
- Changing the conveyor belt in 30 seconds,
- Detection of defective products with detriment (deformed product, crumpled can, missing product or defective product)
- Automatic diagnostics and security control system (detection of open inspection door and immediate device stop/shutdown of X-ray lamp radiation).



ADDITIONAL ADVANTAGES

- System levels password protected for several levels,
- Possibility of individual adjustment of the device to the production line with high accuracy,
- Modernization of devices in accordance with the requirements and expectations of our customers.
- All our scanners are certified by the National Atomic Energy Agency No.D-178,
- Marking the X-Ray scanner in accordance with the requirements of the strategic recipient,
- Technical drawings in the form of DWG at the stage of detailing,
- Central control of additional devices, e.g. dirt separators, feeding and receiving conveyors and return conveyors.

FROST SYSTEM

The X-Ray scanner can be equipped with a special **"FROST" system** which is a built-in intelligent heating and thermostat system, inside the control pane. This system protects the internal electronics against moisture and cold. This is the only protection against sudden temperature changes when washing cold machines with hot water, this system prevents moisture absorption inside closed chambers with electronics and electrics. "FROST" is irreplaceable in the meat and fish industry, and especially for frozen food.

LIST OF COMPONENTS

FUNCTION	NAME	PRODUCER
X-Ray source	X-Ray generator	VJ USA
X-Ray receiver	X-Ray detector	DT FINLANDIA
Device management	17 " touch monitor	iEi
Data processing	Industrial computer	TANK 820
Temperature and humidity control	Air conditioner	PFANNENBERG
Conveyor belt drive	Gear motor	ORIENTAL MOTOR
Speed regulation	Inverter	YASKAWA/OMRON
Electric protection	Miniature circuit breakers	SCHNEIDER ELECTRIC /ABB
Connection between devices	Military connectors	PLT
Safety management	Limit switches	OMRON
Automation management	PLC driver	OMRON
Warning information	Optical-acoustic indicator	SCHNEIDER ELECTRIC

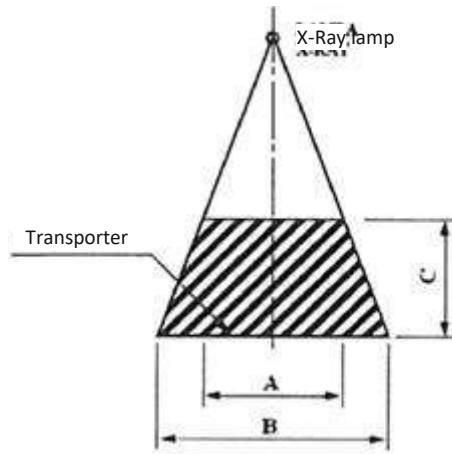
I LAPM X-RAY SCANNER ELEK-ON

- Based on the highest technical achievements,
- The only software that lets you scan asymmetric and drifting products unique position,
- Intuitive and very simple operation,
- The oversized lamp power range provides much longer life than other scanners available on the market.



Model	ELEK-ON
Specification	4080, 5080, 6080, 8040
Maximum height of the test product	110 mm, 160 mm 250 mm, 300 mm
Maximum width of the test product	240 mm, 400 mm 500 mm, 600 mm
X-Ray Lamp	MAX. 80 kV, 350W
Smallest detectable testers possible	St / st ball from 0.3 mm, wire from 0.2x1 mm Glass / Ceramic ball from 1.0 mm
Belt speed	Adjustable in the range of 0-60 m / min
Connection	LAN port, USB port
Product management	Automatic saving of the parameters of the tested product
Image management	Automatic image saving and analysis
Display	17 "touch screen
Cooling	Industrial air conditioner PFANNENBERG
Separator	Pneumatic separator, 2-track (option)
Radiation protection	Protective tunnel and security system
External radiation	< 1 μ Su/h
Working temperature	from -10°C to 40 °C
Working humidity	30-90% non-condensing steam
Supply voltage	230 VAC
Power	1200 W
IP class	IP66
Air pressure	6-8 bar
Material	glass-blasted stainless steel

X-RAY SCANNER SELECTION



The type and type of the X-Ray scanner are selected according to the customer's requirements. The product dimension must be entered in the detection cone according to the table below.

Model	4080	5080	6080	8040
Height (C)	Width (B)			
0 mm	400 mm	500 mm	600 mm	795 mm
10 mm	388 mm	489 mm	589 mm	785 mm
20 mm	377 mm	477 mm	576 mm	777 mm
30 mm	365 mm	466 mm	564 mm	768 mm
40 mm	354 mm	455 mm	552 mm	759 mm
50 mm	342 mm	443 mm	540 mm	750 mm
60 mm	331 mm	432 mm	528 mm	742 mm
70 mm	320 mm	420 mm	515 mm	733 mm
80 mm	308 mm	409 mm	503 mm	724 mm
90 mm	297 mm	398 mm	490 mm	716 mm
100 mm	285 mm	386 mm	478 mm	707 mm
110 mm	274 mm	375 mm	466 mm	-
120 mm	263 mm	363 mm	454 mm	-
130 mm	251 mm	352 mm	441 mm	-
140 mm	240 mm	340 mm	429 mm	-
150 mm	228 mm	329 mm	417 mm	663 mm
160 mm	218 mm	218 mm	405 mm	-
170 mm	-	307 mm	393 mm	-
180 mm	-	295 mm	380 mm	-
190 mm	-	284 mm	368 mm	-
200 mm	-	272 mm	356 mm	619 mm
210 mm	-	261 mm	344 mm	-
220 mm	-	250 mm	331 mm	-
230 mm	-	239 mm	319 mm	-
240 mm	-	227 mm	307 mm	-
250 mm	-	216 mm	295 mm	576 mm
260 mm	-	-	282 mm	-
280 mm	-	-	258 mm	-
300 mm	-	-	233 mm	532 mm
350 mm	-	-	-	488 mm
400 mm	-	-	-	445 mm

MINI X-RAY SCANNER ELEK-ON

Entry level X-Ray scanners for examination of dry products in cardboard packaging, plastic, PET, PE, vacuum, with metallization, aluminum, glass, in bottles and jars with a metal cap

High vigilance and work stability - the highest achievable radiation penetration through product.

Work safety - "X" radiation is less than microsievert thanks to European CE and American FDA standards certifications.



Model	ELEK-ON 1820 2820
X-ray lamp	MAX. 65kV, 100W
Detector	0.8mm
Maximum product height	150mm
Maximum product width	180mm 280mm
Maximum belt load	10kg
Tape speed	Adjustable in the range of 10-80 m/min
Connection	LAN port, USB port
Product management	Automatic recording of the parameters of the tested product
Image management	Automatic image saving and analysis
Parameter adjustment	Automatic self-learning
display	15" touch screen
Operating system	Windows
Cooling	Industrial air conditioner PFANNENBERG
Radiation protection	Protective curtains
External radiation	< 1μSu/h
Working temperature	from -10°C to 40°C
Working humidity	30-90% non-condensing water vapor
Supply voltage	230VAC
Power consumption	1200W
Tightness class	IP54
Machine cleaning level	Easy
Material	glass-blasted stainless steel

DUAL ENERGY X-RAY SCANNER ELEK-ON 4080DE

This X-Ray scanner has the highest detection level among X-Ray scanners, especially for bones detection, as well as to other bodies foreign i.e. glass, rubber, plastic.

This is due to the latest technology so-called **DUAL ENERGY**.



Model	ELEK-ON
Specification	4080 DE
Maximum height of the test product	100 mm
Maximum width of the test product	400 mm
X-Ray Lamp	MAX. 80 kV, 350W
Smallest detectable testers possible	St/st ball from 0.3 mm, wire from 0.2x2 mm Glass/Ceramic ball from 1.0 mm
Belt speed	Adjustable in the range of 1-040 m / min
Operating system	Windows 7
Display	17 "touch screen
Cooling	Industrial air conditionerPFANNENBERG
Kind of kickback	Pneumatic separator
Radiation protection	Protectivetunnel and security system
External radiation	< 1μSu/h
Working temperature	from -10°C to 40 °C
Working humidity	30-90% non-condensing steam
Supply voltage	230 VAC
Power consumption	1200 W
Tightness class	IP66
Air pressure	0.8 Mpa
Material	glass-blasted stainless steel

X- RAY SCANNER WITH DUAL ENERGY

The **ELEK-ON**-4080**DE** X-Ray scanner uses two-energy beams different levels. The first beam of ionizing radiation goes to the damping receiver. This effect occurs when the beam is filtered on part of the receiving circuit. Then the scanner generates a second beam energy to the second part of the receiver, analyzes the scanned object and compares it image.

The high and low energy signals obtained by the dual energy system are sent to computer, which are calculated on the basis of processed data and values related to the equivalent the atomic number of the substance. The software automatically compares high and low energy images, analyzes whether there is a difference in the atomic number of the stored standard and the foreign body using an algorithm hierarchical.

Scanner especially dedicated to examining frozen fruits and vegetables.

Single beam scanning technology product with a single directed lamp from top to bottom.

Auto sensitivity function - makes it possible to reduce the sensitivity for the box aluminum and an increase for its content.

Built-in air conditioner – allows the device to work in all conditions temperature.



Model	ELEK-ON	
Specification	4080	
Maximum height of the test product	110 mm	
Maximum width of the test product	400 mm	
X-Ray Lamp	MAX. 80 kV, 350W	
Smallest detectable testers possible	Steel ball from 0.3 mm, steel wire from 0.2x2 mm, Glass / Ceramic ball from 1.0 mm	
Belt speed adjustable in the range	0-60 m/min	10-120 m/min
Recoil mode	Air separator consisting of 32 independent channel repeller nozzles. Possibility to divide into 4/2/1 channels	Air separator consisting of 48 independent channel repeller nozzles. Possibility to divide into 4/2/1 channels
Operating system	Windows 7	
Connection	LAN port, USB port	
Product management	Automatic recording of the parameters of the tested product	
Image management	Automatic image saving and analysis	
Display	Touch screen	
Cooling	Industrial air conditioner PFANNENBERG	
Radiation protection	Protective tunnel and security system	
External radiation	< 1μSu/h	
Working temperature	from -10°C to 40 °C	
Working humidity	30-90% non-condensing steam	
Supply voltage	230 VAC	
Power consumption	1500 W	
Tightness class	IP66	
Air pressure	0.8 Mpa	
Material	glass-blasted stainless steel	

I LAMP X-RAY SCANNER ELEK-ON 1630I

The X-Ray scanner is designed for thorough examination of products in a standing position packed in bottles, jars with a screw cap tall metal cans.

High level of detection and stability when scanning products delivered linearly and which is unprecedented falling drifting.

Single beam technology scanning the product with a lamp sideways to the test product in a standing position.

The device has been equipped with a pneumatic separator.



Model	ELEK-ON
Specification	1630I
Maximum height of the test product	300mm
Maximum width of the test product	160mm
X-ray lamp	380-480W/ 120kV, 80mA
The smallest possible detectable testers	St/st ball from 0.5 mm, wire from 0.3x2 mm Glass/Ceramic ball from 1.5 mm
Belt speed adjustable in the range	10-60m/min
Operating system	Windows 7
Connection	LAN port, USB port
Product management	Automatic recording of the parameters of the tested product
Image management	Automatic image saving and analysis
display	17" touch screen
Cooling	Industrial air conditioner PFANNENBERG
Radiation protection	Protective tunnel and security system
External radiation	<0.5μSu/h
Working temperature	from -10°C to 40°C
Working humidity	30-90% non-condensing water vapor
Power	3.5 kW
Tightness class	IP66
Air pressure	0.8Mpa
Material	glass-blasted stainless steel

II LAMP X-RAY SCANNER ELEK-ON 2080II

Dual beam scanning technology product using two directed lamps at an angle. Intended, among others, to products like jars, cans, bottles, etc.

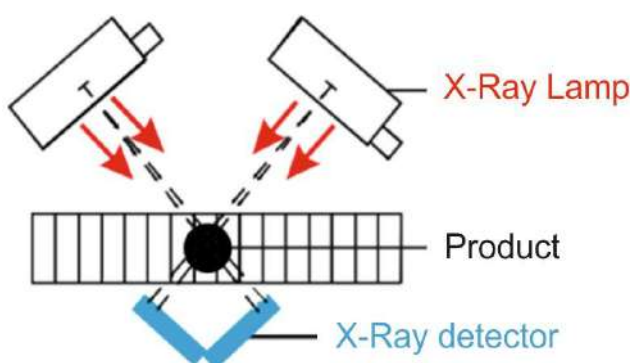
Thanks to the x-ray of the product with two different angles system which eliminates dead spots that are irregular in the edges of the packaging e.g. a glass jar or bottle.

Possibility to create several independent detection areas for selected zones product (e.g. top, middle or bottom of the product).



Model	ELEK-ON
Two X-Ray lamps	MAX. 480W/120kV, 80mA
Maximum width of the test product	160 mm
Maximum height of the test product	280 mm
Smallest detectable testers possible	Steel ball from 0.5 mm Steel wire from 0.3*2mm Glass / Ceramic ball from 1.5 mm
Transporter speed	10-60 m/min
Operating system	Windows 7
Radiation protection	Protective tunnel
External radiation	< 0,5 µSv/h
Tightness class	IP65
Working temperature	from -10 to +40 °C
Working humidity	30 ~ 90 %
Cooling	Industrial air conditioner PFANNENBERG
Recoil system	Pusher
Air pressure	0.8 Mpa
Power	3.5 kW
Material	glass-blasted stainless steel

LAMP SETTING



The technological connection of two beams examining the product ensures a high level of detection.

III LAMP X-RAY SCANNER ELEK-ON 2025III

Advanced analysis system using three sources which provides the highest level of quality in production process. Intended, among others, to products like jars, cans, bottles, etc.

Triple-beam product scanning technology

Irregular shape and defects product packaging do not have impact on the detection level.

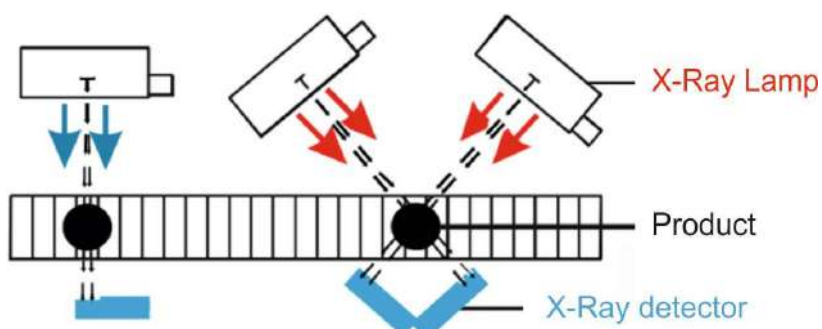
The built-in air conditioner allows the device to work in all temperature conditions.

By x-raying the product from three different angles, the system eliminates blind spots as much as possible. These blind spots are most often found at the bottom of jars and bottles



Model	ELEK-ON
Three X-Ray lamps	MAX. 480W/120kV, 80mA
Maximum width of the test product	200 mm
Maximum height of the test product	250 mm
Smallest detectable testers possible	Steel ball from 0.5 mm Steel wire from 0.4*2mm Glass / Ceramic ball from 1.5 mm
Transporter speed	10-50 m/min
Operating system	Windows 7
Radiation protection	Protective tunnel
External radiation	< 1 μ Sv/h
Tightness class	IP66
Working temperature	from -10 to +40 °C
Working humidity	30 ~ 90 %
Cooling	Industrial air conditioner PFANNENBERG
Recoil system	Pusher
Air pressure	0.8 Mpa
Power	3.5 kW
Material	glass-blasted stainless steel

LAMP SETTING



The technology of connecting three beams examining the product ensures the highest level of detection.

TYPES OF SEPARATORS

Single separator

Movable separator trapdoor to reject products served loose in one row.



Double separator

Separator in the form of two movable recoil trapdoors products served in two rows independently.



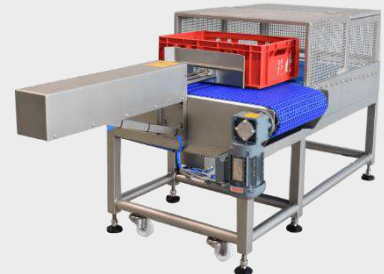
Separator in the form falling conveyor

Falling separator conveyor for rejecting products bulk in one row, with a zone closed and container locked with a key.



Bulldozer

rejection system for products packed. we offer bulldozers for products from 1 kg to 60 kg also to drop E1, E2 crates and large and heavy bags and cartons.



Blower

Very efficient and ergonomic system for lightweight products up to 0.5 kg.



ASG (air shotgun) - separator with air nozzles

the X-Ray scanner divides the transport lane for 8 independent channels, with 34 air nozzles for precise rejection of foreign bodies with a small amount of product.

