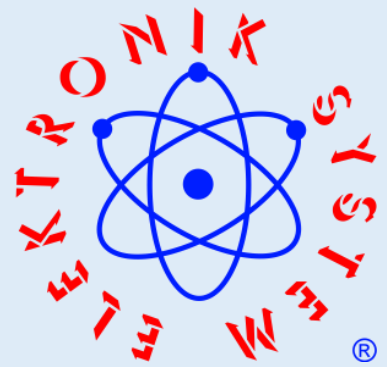


# THE NEW GENERATION X-RAY SCANNER ELEKTRON-SXRF



Ustronna 14  
89-606 Charzykowy

[wykrywaczemetali@onet.eu](mailto:wykrywaczemetali@onet.eu)  
[elektron@metaldetektor.pl](mailto:elektron@metaldetektor.pl)

+48 608 34 34 34



## PRINCIPLE OF OPERATION

### Purpose.

**ELEKTRON-SXRF** is designed for testing products in variety of packaging types starting with cardboard, plastic, PET, PEN, vacuum, metallized, aluminum, glass and even metal flat cans.

### How it works?

Popularly known as X-Ray, it works by sending a beam of ionizing radiation X-Ray, which is captured by the receiver. The inspected product moves between the lamp and the receiver. Detection is based on the principle of comparing the image of the reference product that the X-Ray Scanner has learned, the system detects the difference in density caused by the foreign body in relation to the image of the learned product. The easiest way to explain the principle of operation of the X-Ray Scanner - this technology is based on the detection of all foreign bodies, the density and specific gravity of which is higher than that of water (each body that immediately sink into water). Such foreign bodies include, first of all, metals, stones, glass, bones and hard plastic.

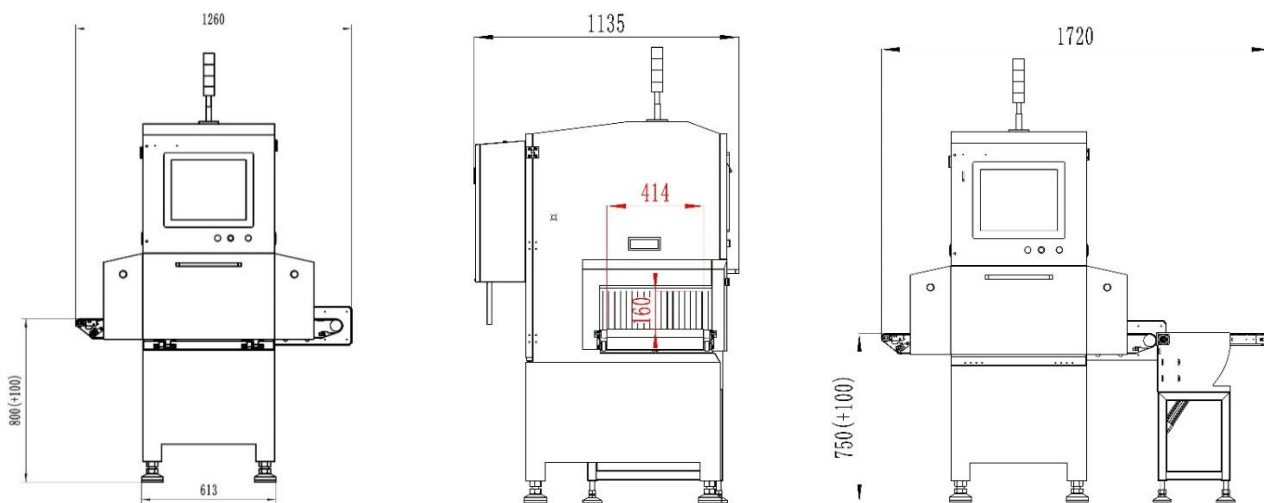
### Detection range.

X-Ray Scanner It is distinguished by high sensitivity and stability of work - the highest possible to achieve, with the highest penetration of X-Ray, through the product and its packaging: 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 for small and flat products.

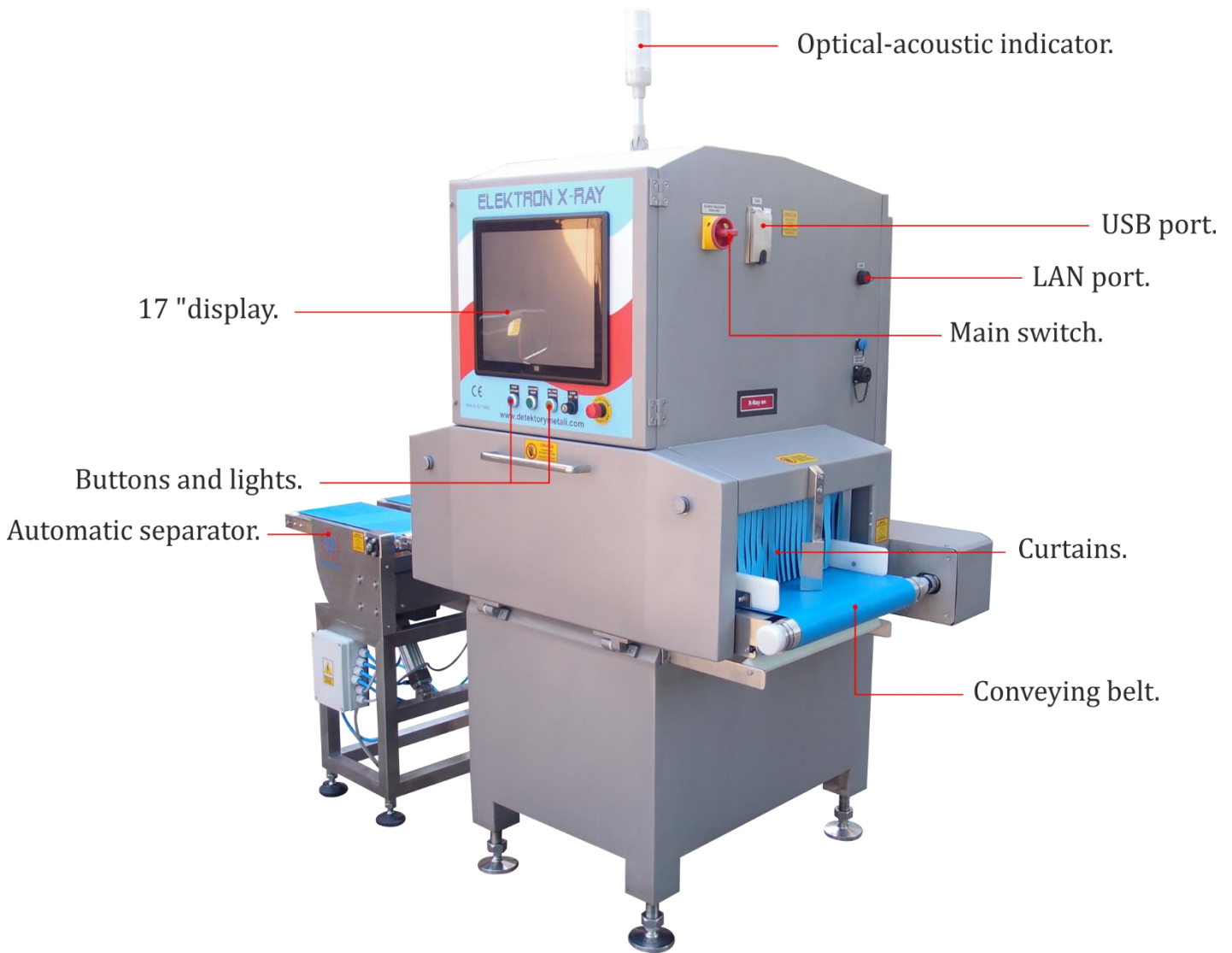
## "FROST" SYSTEM

The X-Ray scanner can be equipped with the "FROST" system, rare in other devices, with a built-in intelligent heating and thermostat system, inside the control panel, which protects the internal electronics against moisture and cold. It is the only protection against sudden temperature changes during washing and prevents the absorption of moisture inside (for example, a cold machine washed with hot water).

## TECHNICAL DRAWINGS



## COMPONENT PARTS

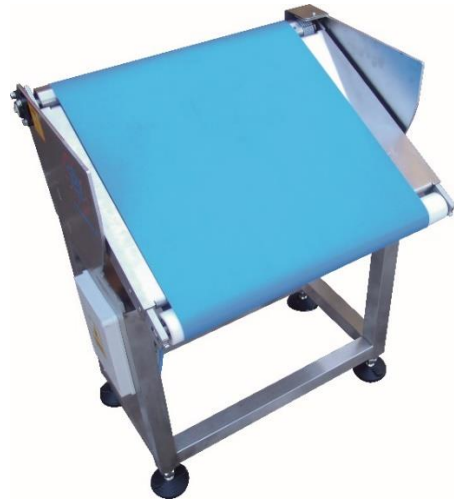


## LIST OF COMPONENTS

FUNCTION	NAME	MANUFACTURER
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	Switches overcurrent	SCHNEIDER ELECTRIC /ABB
Connection between devices	Military connectors	PLT
Safety management	Limit switches	OMRON
Automation management	PLC drivers	OMRON
Warning information	Optical-acoustic indicator	SCHNEIDER ELECTRIC

## TYPES OF REJECTORS

Single separator



Double separator



Separator in the form of a falling transporter



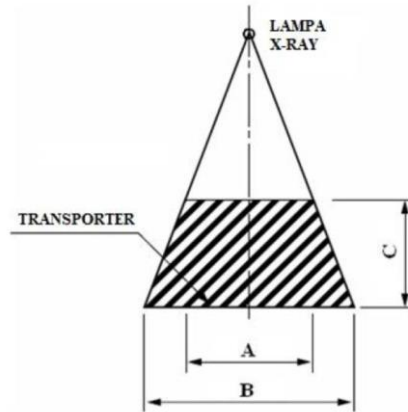
## MAIN FEATURES

- **Permit by the President of the National Atomic Energy Agency No. D-17869.**
- Single beam product scanning technology with one top down lamp.
- High level of detection and stability of operation during scanning of products fed linearly and, which is unusual, entering driftingly.
- Detection of glass in glass (jars, bottles) and metals in metal packaging (cans).
- Detection of defective products with damage or without the product in the package.
- Smooth management of each detection zone increasing the level and quality of scanning.
- Unique, full-range, multi-layer product control system.
- Easy-to-use intuitive menu.
- Service support and supervision over LAN.
- Automatic system diagnostics.
- High level of security.

## PARAMETERS

Model	ELEKTRON-SXRF
Specification	2080, 4080 5080, 6080
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
Speed of the conveyor belt	Adjustable in the range of 0-60 m/min
Connection	LAN port, USB port
Product management	Automatic recording of test product parameters
Image management	Automatic image saving and analysis
Display	17 "touch screen
Cooling	Industrial air conditioner
Type of rejector	Pneumatic separator, 2-track (option)
Radiation protection	Protective tunnel and security system
Outside radiation	< 1 $\mu$ Su/h
Working temperature	from -10°C to 40 °C
Working humidity	30-90% non-condensing water vaporise
Supply voltage	230 VAC
Power consumption	1200 W
Tightness class	IP66
Air pressure	6-8 bar
Main material	Stainless steel glass blasting

## X-RAY SCANNER SELECTION



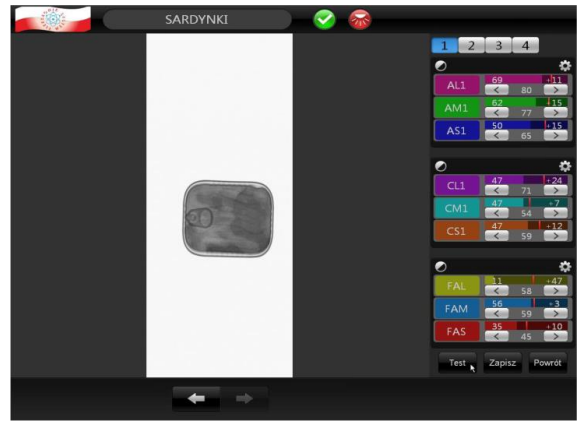
The type of X-Ray Scanner are selected according to the customers requirements. The product dimension must be entered in the detection cone according to the table below.

Model	SXRF-2080	SXRF-4080	SXRF-5080	SXRF-6080
<b>Product height C</b>	<b>Product width B</b>			
0 mm	240 mm	400 mm	500 mm	600 mm
10 mm	232 mm	388 mm	489 mm	589 mm
20 mm	224 mm	377 mm	477 mm	576 mm
30 mm	216 mm	365 mm	466 mm	564 mm
40 mm	208 mm	354 mm	455 mm	552 mm
50 mm	200 mm	342 mm	443 mm	540 mm
60 mm	192 mm	331 mm	432 mm	528 mm
70 mm	184 mm	320 mm	420 mm	515 mm
80 mm	180 mm	308 mm	409 mm	503 mm
90 mm	176 mm	297 mm	398 mm	490 mm
100 mm	172 mm	285 mm	386 mm	478 mm
110 mm	168 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
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
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
260 mm				282 mm
280 mm				258 mm
300 mm				233 mm

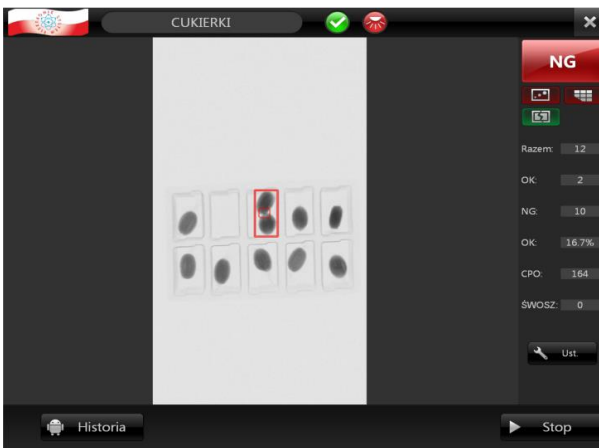
# SYSTEM FUNCTIONS



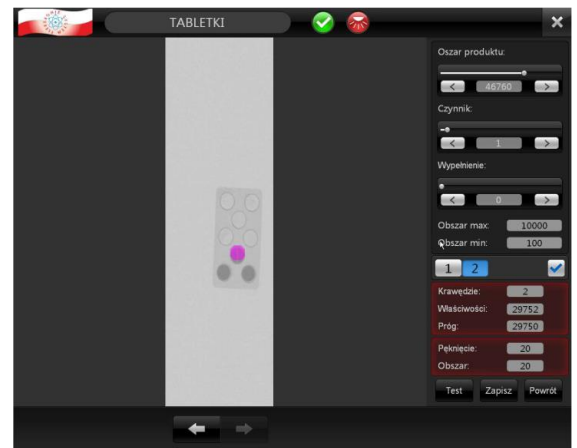
Password protected system levels.



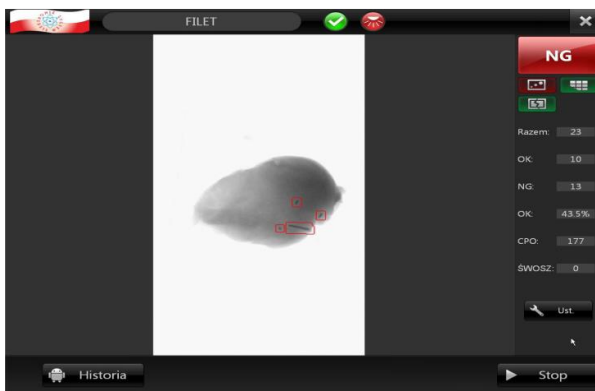
Ability to change manual settings.



Detection of defective products with damage.



Detection of missing product in the package.



A wide range of parameter adjustments enable the system to detect bone.



Reliable automatic diagnosis and safety control system.

OUR X-RAY SCANNERS ON THE PRODUCTION LINE

