

## ELEKTRON SYSTEM

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### III LAMP X-RAY SCANNER ELEKTRON-SXRF-2025III

- The X-Ray scanner is designed for the most demanding customers, dedicated to examining products in an upright position, i.e. bottles, jars with metal caps, tall cans, etc.
- A highly advanced analysis system using 3 radiation sources and 3 imaging systems provides the highest level of protection for the product examined in the upright position.
- Non-regular shape and defects of the product packaging do not affect the detection level.
- By x-raying the product from three different angles, in two stages and with two lamps, the system eliminates as far as possible dead spots, which most often occur at the bottom of the jar or bottle and under the cap.
- The high-powered ionising radiation lamps used power, ensure longer service life of the entire X-Ray scanner.



### ARTIFICIAL INTELLIGENCE SUPPORT

The X-Ray scanner is equipped with artificial intelligence support, which analyzes comparative data much more accurately than humans, with enormous computing speed. AI is like a virtual operator that constantly ensures the highest quality of the X-Ray scanner's work, replacing a qualified operator in this position. The AI robot learns to recognize and eliminate foreign objects, errors, damage, and deficiencies much more accurately than competing scanners. AI significantly increases the level of detection, improves the accuracy of weighing products with a fixed form and shape, and disproportionately reduces the number of false rejects.

Model	ELEKTRON -SXRF
Three X-Ray lamps	MAX. 480W/120kV
Maximum width of the tested product	200 mm
Maximum height of the tested product	250 mm
The smallest possible detectable testers	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 $\mu$ Sv/h
Tightness class	IP66
Working temperature	From -10 to +40 °C
Operating humidity	30 ~ 90 %
Cooling	Industrial air conditioner
Air pressure	0,8 Mpa
Power supply	3,5 kW
Material	Glass-blasted stainless steel

## MAIN FEATURES

- Three-lamp X-Ray scanner with three receivers at different angles.
- Touchscreen for easy operation and management of functions (possibility to fine-tune manual parameter settings).
- Detection of glass in glass (bottles, jars) and metal in metal packaging (cans).
- Possibility of filling level testing.
- Possibility of applying a mask to exclude parts of the package not subject to inspection, e.g. bottle wall, increasing the detection level.
- High conveyor belt speed allows large volumes of product to be tested.
- Intuitive and very simple operation.
- Remote 24-hour service support regardless of location.

## SYSTEM FUNCTIONS

- 2 password-protected access levels.
- The operator can manually adjust the settings.
- Detection of defective products with damage (deformed product, crumpled can, missing or defective product).
- Optional product weight check - the X-Ray scanner detects products with abnormal weight from as little as 1-5 g depending on product type.
- Quick and precise separation of contaminated or defective product.
- Automatic diagnostics and safety control system (detection of an open inspection door in the unit and immediate shutdown of the unit and switching off of the X-Ray tube radiation).

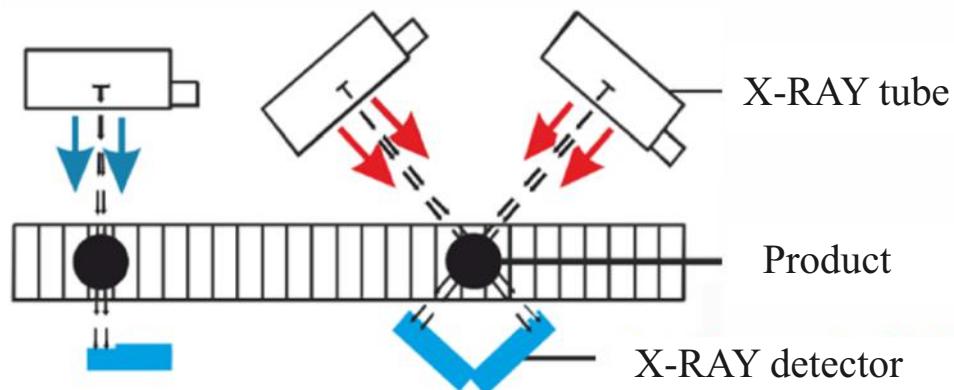
## „FROST” SYSTEM

In the low temperature zone, the X-Ray scanner can be equipped with a feature not found in other devices, **“FROST” system** - temperature and humidity control system inside control system housings. A system that protects electronic circuits against moisture, cold and sudden temperature changes while washing. Protects against moisture absorption inside (e.g. a cold machine washed with hot water).

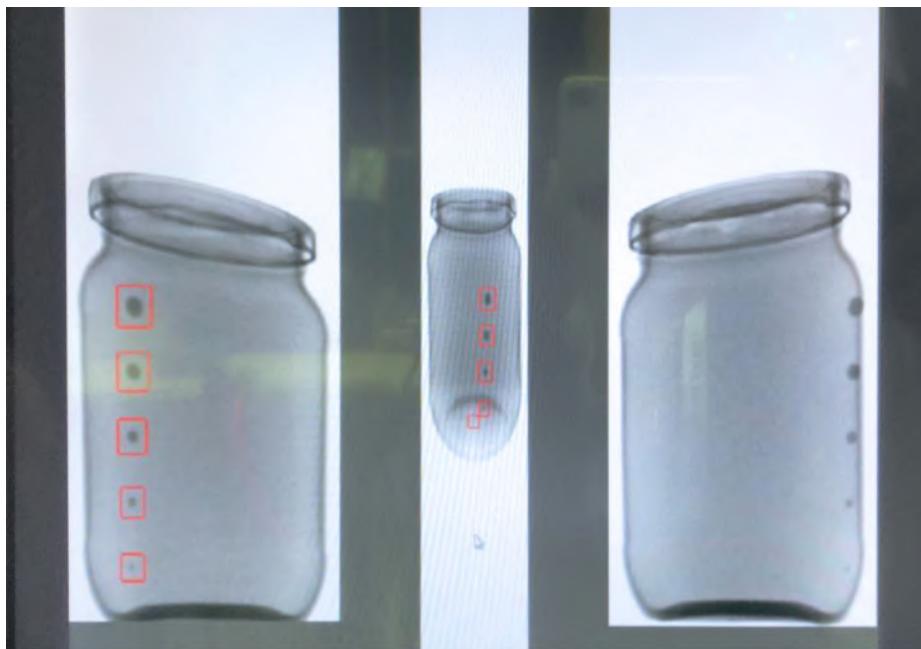
## LIST OF COMPONENTS

FUNCTION	NAME	PRODUCER
X-Ray source	X-Ray generator	VJ TECHNOLOGIES
X-Ray receiver	X-Ray detector	DETECTION TECHNOLOGY
Device management	17” touch monitor	ADVANTECH
Data processing	Industrial computer	ADVANTECH
Temperature and wetness control	Air conditioner	RITTAL
Conveyor belt drive	Engine with gear	ORIENTAL MOTOR
Speed regulation	Engine controller	ORIENTAL MOTOR
Electric protection	Miniature circuit breakers	SCHNEIDER ELECTRIC /ABB
Connection between devices	Military connectors	PLT
Safety management	Limit switches	OMRON
Automation management	PLC driver	SCHNEIDER ELECTRIC
Warning information	Optical-acoustic signaller	WERMA

## LAMP SETUP DIAGRAM



## SCANNER INSPECTION IMAGE X- RAY ELECTRON-SXRF-2025III



GLASS  
from 2,0mm



CERAMICS  
from 3,0mm



## 3D DRAWING OF ELEKTRON-SXRF-2025III

