**+:+ sesotec**

Secotec 6-Points Concept

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Discover how Sesotec supports you 6-fold in food safety

RAYCON D+ MX

Intelligent X-ray inspection system for packaged products

- **Conformity & Accuracy:** The RAYCON D+ MX offers detection accuracy from 0.6 mm, better than the IFS requirement.
- **Safety for people & product:** The legal limit of 1 mSv/a is clearly undercut at every point.
- **Simple operating concept:** Thanks to the Auto-Learn function, no specific prior knowledge is required.
- **Sophisticated hygiene concept:** Open, modular design as well as tool-free access to the conveyor area for easy cleaning.
- **Efficiency in all areas:** High belt speeds and multi-lane inspection on up to four parallel lines.
- **Reliable and fast service:** Lifetime warranty package and remote service via Teamviewer / Pilot app, among others.
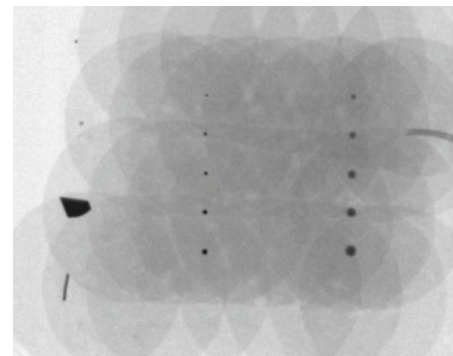
X-ray image of a packaged sliced sausage tested with different foreign bodies

The new RAYCON D+ MX

Our X-ray systems have been specially developed for use in the food industry and reliably detect foreign bodies such as metals, as well as glass, ceramics, stones, raw bones, PVC and many other product defects. Through this precise inspection, conformity with all important guidelines of the food industry such as IFS, BRC or FSSC 22000 is fulfilled and reliable protection against complaints and recalls can be ensured.
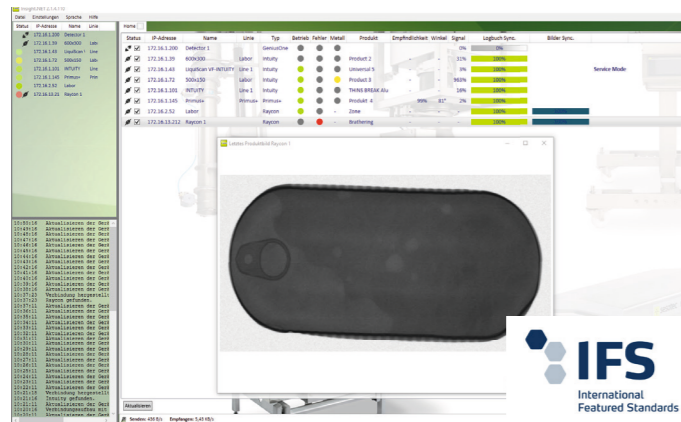

The Sesotec 6-point concept for optimal X-ray inspection

One system, numerous advantages:

Conformity & Accuracy

Reliable detection of metallic and non-metallic foreign objects throughout the inspection area enables compliance with all current specifications and standards.

- RAYCON D+ MX X-ray inspection equipment offers detection accuracy from 0.6mm stainless steel, better than the 0.8mm required by IFS. In addition, no blind spot even with tall products (bottom-up X-ray inspection).
- Optimal traceability through complete logbook and optional image archiving (insight.net or interlink)
- UL/CSA certified

Safety for people & product

Thanks to highly effective radiation protection and dosed use of X-rays, the RAYCON D+ MX enables all-round safe operation for people and products.

- X-ray radiation for operators is less than 0.1 µSv/h, which eliminates the need for documentation of operating times
- When a cover is opened, the X-ray radiation is switched off and the pneumatic system is vented
- The X-ray inspection equipment can be used without any concerns even for organic products
- RFID login for maximum access protection

Simple operating concept

Thanks to a large touchscreen, easy-to-understand user guidance and features such as the Auto-Learn function, the RAYCON D+ MX offers particularly easy handling in everyday use.

- An auto-learn function makes operation very simple and intuitive. Specific prior knowledge of image processing and triggering threshold determination is not required
- Multi-product software enables automatic inspection of different products on one line
- RFID login for increased ease of use

Sophisticated hygiene concept

The open, modular design and the possibility of access to the conveyor area without tools simplifies cleaning and maintenance.

- Suspension device for the radiation protection curtains during cleaning- reduces the risk for re-contamination after cleaning
- Complete construction in stainless steel and plastics with suitability for the food industry (according to EG1935/2004)
- Protection class IP66 in the conveying area
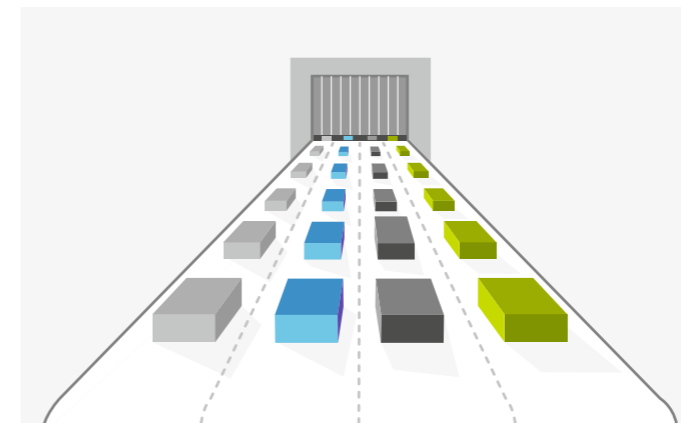
Efficiency in all areas

Thanks to high speeds and multi-lane capability, up to 300 products per minute can be inspected in real time - on a maximum of four parallel lines.

- Durable and sophisticated core components with 100 W X-ray source and 0.8 mm detector
- Automatic detection of the lifetime of the X-ray source (early warning system for source replacement)
- Suitable for high belt speeds up to 1.4 m/sec
- Reliable Detection of other product defects such as missing, broken or deformed products

Reliable and fast service

With warranty services, a combined on-site and remote service, and targeted training, you have optimal support for smooth operation.

- Wear and spare parts packages for fast resumption of production
- Remote service via Teamviewer / Pilot App
- Customer-specific training for operation, radiation protection and service/maintenance
- High overall system efficiency and stable operation
- Lifetime warranty with the Sesotec Lifetime Warranty package

Functional diagram
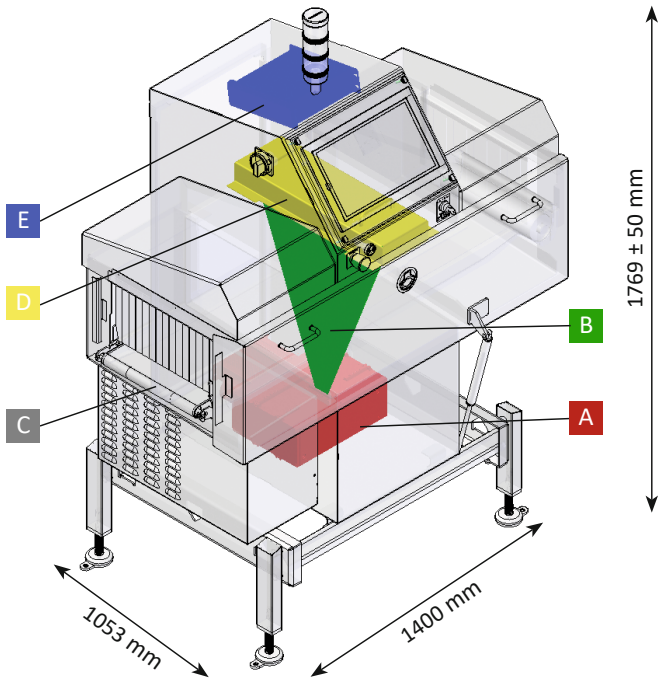
The system consists of the following main components:

A X-ray tube: Here the X-rays are generated electrically. It exits the tube through a narrow slit and penetrates the product to be examined from the back to the front as a fan-shaped beam.

B X-ray beam

C Transport system: A PE flat belt (self-guiding) transports the product to be examined evenly through the X-ray beam. This makes it possible to scan the product line by line.

D Detector unit (0.4 mm and 0.8 mm resolution): The linear detector installed above the inspection aperture converts the incoming X-ray beams into an electrical signal from which a digital X-ray image is generated.

E Industrial PC: This is where image evaluation and precise control of the reject systems take place.

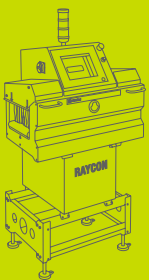1769 ± 50 mm
1053 mm
1400 mm

Detection performance

The detectability of foreign bodies in X-ray systems with single-energy technology depends primarily on the density of the foreign body. All foreign bodies with a density significantly higher than the product density are very well detectable. These include, for example, metals, glass, stones, ceramics in products such as sausage, cheese, meat, etc. However, thanks to the high-resolution detector and the sophisticated software evaluation using a large number of filters in the RAYCON D+ MX, bones, rubber, Teflon, PVC, etc. can also be reliably detected. A free test with your product provides you with a meaningful basis for decision-making.
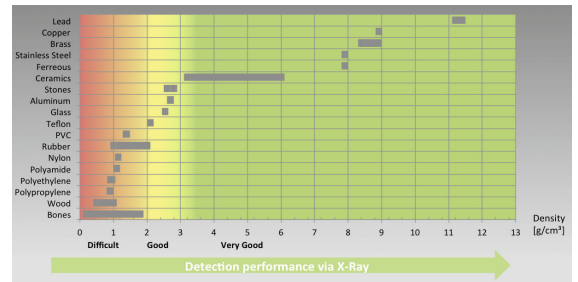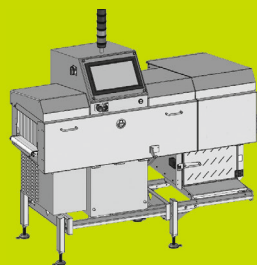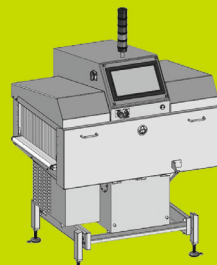

The RAYCON Family

RAYCON D+ MX

Belt width: 360 mm	**Belt width: 660 mm**	
X-ray source: 50 KV / 2,0 MA (100W)	**X-ray source: 50 KV / 2,0 MA (100W)**	
Detector: 0,8 mm	**Detector: 0,8 mm**	
Max. Inspection area (W x H): 330 x 200 mm	**Max. Inspection area (W x H):** 450 x 250 mm 600 x 120 mm	
Variations: Signal only Integrated Separated	**Variations:** Signal only Separated	

RAYCON EX1

The RAYCON typical accuracy for simpler applications

RAYCON D+ HX
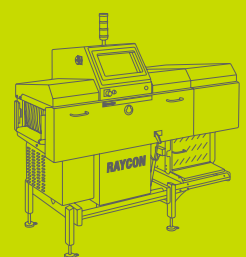
The top device of the RAYCON family for highest precision from 0.4 mm