



**0,4  
mm**

Detector

**up to 5  
t/h**

Performance

**200  
Watt**

X-ray source

**X-RAY INSPECTION**

# RAYCON D+ HX Bulk

The high-end model of intelligent X-ray inspection systems for unpackaged products

- Conformity & Accuracy
- Safety for people & product
- Simple operating concept
- Hygienic design concept
- Efficiency in all areas
- Reliable and fast service

YOUR PRIORITIES, OUR ANSWERS:

# Optimum X-ray inspection with the 6P concept

Our X-ray systems have been specially developed for use in the food industry and reliably detect foreign bodies such as metals, 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 are fulfilled and reliable protection against complaints and recalls can be ensured. The RAYCON D+ HX Bulk is especially suitable for unpacked, dry bulk materials for the removal of contaminants with high density.

RAYCON exceeds international standards:



## Real-time operating system

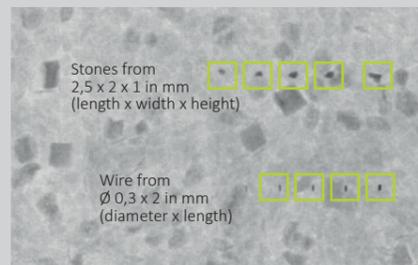
Fastest processing of image data and exact separation with very high detection accuracy from 0.3 mm.

## High throughput

The RAYCON D+ HX Bulk can detect peppercorns at a rate of, for example, one ton per hour with a single-layer product feed. With a filling height of 20 mm, even up to three tons per hour.

## Hygiene concept

Thanks to an optional extraction device, the RAYCON D+ HX Bulk succeeds in preventing dust in the area around the product sorting system.



### ⌘P1 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+ HX Bulk X-ray inspection equipment offers detection accuracy from 0.3 mm stainless steel, better than the 0.8 mm required by IFS
- Complete logbook, optimum traceability and error prevention even with a large number of rejects
- Insight.NET and Interlink can be used for status messages on machines
- UL/CSA certified

### ⌘P2 Safety for people & product

Thanks to highly effective radiation protection and dosed use of X-rays, the RAYCON D+ HX Bulk 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's air is de-energized
- The X-ray inspection equipment can be used without any concerns even for organic products
- RFID login: maximum access protection

### ⌘P3 Simple operating concept

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

- An Auto-Learn function makes the operation very simple and intuitive
- The RAYCON provides the optimal X-ray power for maximum detection accuracy automatically during the teach-in process (Auto KV)
- RFID Login for increased ease of use

### ⌘P4 Hygienic design concept

Open modular design provides for easy access to the conveying area in the product zone without tool for simplified cleaning and maintenance.

- No radiation curtains required – eliminates risk for re-contamination after cleaning and reduces operating costs
- Complete construction in stainless steel and plastics with suitability for the food industry (according to EC1935/2004)
- The materials are designed in such a way that they can be cleaned repeatedly and intensively without abrasion. Water runs off automatically due to beveled surfaces.
- Conveying area: Protection class IP66

### ⌘P5 Efficiency in all areas

Thanks to a high belt speed of up to 1.4 m/sec, up to 5000 kilograms per hour can be inspected in real time.

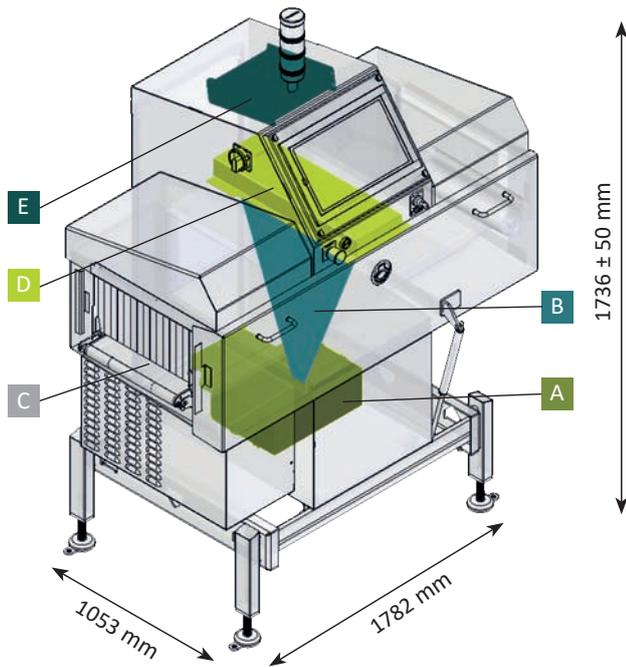
- Durable and sophisticated core components with 200 W X-ray source and 0.4 mm high-resolution detector
- Detection of X-ray source lifetime (early warning system for source replacement)
- ECO Mode

### ⌘P6 Reliable and fast service

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

- Spare parts packages including wear parts ensure maximum up-time
- 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

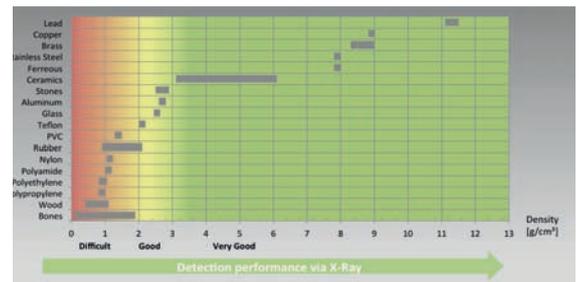


The system consists of the following main components:

- A** X-ray tube: Here the X-rays are generated electrically. They exit the tube through a narrow slit and penetrate the products to be inspected/examined from the bottom to the top 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: 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.

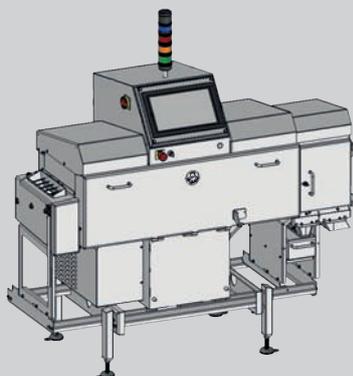
## Detection performance

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+ HX Bulk, 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 Bulk



The standard curtainless model of the RAYCON family with high detection precision from 0.6 mm for unpackaged products.

### RAYCON D+ HX Bulk



**Belt width:** 360 mm

**X-ray source:**  
40 - 60 KV / 3,3 - 5,0 mA (200W)

**Detector:** 0,4 mm

**Max. Inspection area (W x H):**  
330 x 50 mm

**Variations:** Integrated reject system with 4 flaps (optionally up to 20 flaps)

**Belt width:** 660 mm

**X-ray source:**  
40 - 60 KV / 3,3 - 5,0 mA (200W)

**Detector:** 0,4 mm

**Max. Inspection area (W x H):**  
630 x 50 mm

**Variations:** Integrated reject system with 4 flaps (optionally up to 20 flaps)