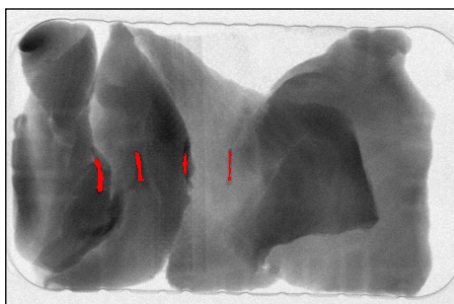
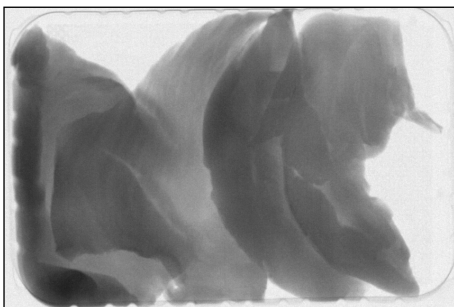


# RAYCON D+

## Intelligent x-ray product inspection system for packaged products – End of line inspection

- Longer lifetime of core components
- Application variability
- Surpassing detection requirements
- Increased ease of use



Fresh chicken bones within chicken fillet



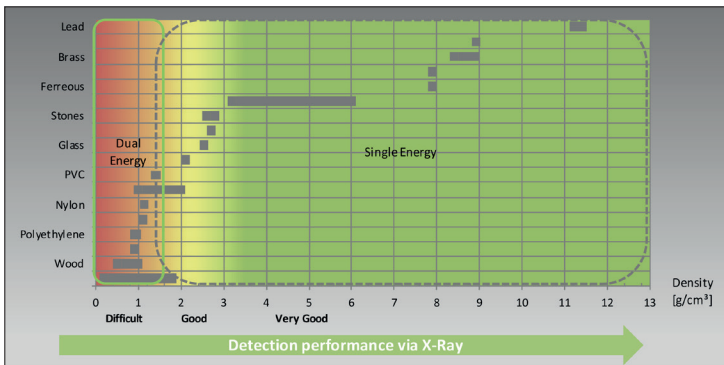
# RAYCON D+

## Performance features



The RAYCON D+ product inspection system detects all contaminants that due to their density, chemical composition, or mechanical dimensions absorb x-rays better than the surrounding product.

With its optional capability using Dual-Energy technology the performance for soft contaminants gets extremely improved for materials e.g. types of plastics (PVC, aso.), rubber, ceramics, stones, calcified bones and similar materials.

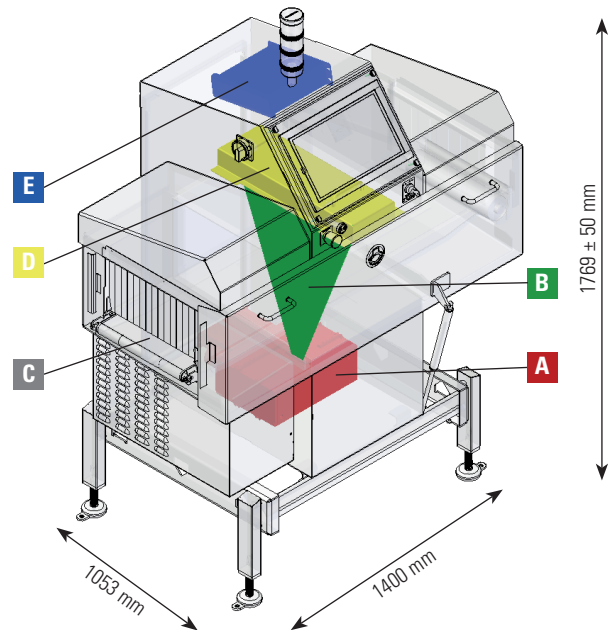


*Detectability of different materials depending on their density*

The RAYCON D+ product inspection system is characterised by the following performance features:

- Throughput: ~250 pcs./min. (product specific)
- Detection capability starting from Ø 0,3 mm
- 200W long life x-ray generator
- Highest operator safety due to low x-ray emission < 0.5 µSv/h
- Modular and stable frame design allows easy transportation and safe installation
- Ambient temperatures from 0°C to + 40°C
- IP 66 protection class within conveyor area

## Function



**The system comprises of the following main components:**

### **A** X-ray tube

This is where x-rays are electrically generated. The x-rays are emitted from the tube through a narrow slot and as a fan-shaped beam pass through the product to be inspected from back to front.

### **B** X-ray beam

### **C** Transport system

A PE flat belt (self guiding) uniformly transports the product to be inspected through the x-ray beam. This makes it possible to scan the product line-by-line.

### **D** Detector unit

The linear detector that is installed above the inspection aperture converts the arriving x-rays into an electrical signal from which a digital x-ray image is created.

- 0,4 mm HD resolution
- 0,8 mm Dual Energy

### **E** Industry-type PC

The PC is used to evaluate the images and to accurately control the reject systems.

# Key Benefits

## Longer lifetime of core components by Intelligent Power Management (IPM)

- Automatic detection of product height
- Automatic power adjustment of the x-ray source
- Extended lifetime of x-ray source
- Increase of energy efficiency
- Maximum sensitivity without special settings
- Time savings during the learning process of the different products

## Application variability

- The modular design allows adaptation to various applications
- Depending on machine configuration, foreign bodies are detected from 0,3 mm
- Modular principle enables fast, uncomplicated and cost-transparent upgrade
- Platform concept enables subsequent update
- Easy to clean due to hygienic design
- Tool-free belt change within 2 minutes
- HD (High Definition): Detects foreign bodies from 0,3 mm (e. g. stainless steel, steel, copper, glass, ...)
- Dual Energy: Detects soft impurities from 2,0 mm (e. g. bones, rubber, ...)

## Surpassing detection requirements

- Surpasses the latest and most valid food regulations by up to 400%
- False reject rate (F.R.R.) below 0,01%
- The system detects products up to a conveying speed of 1 m/s
- Maximum throughput is 250 pieces per minute

## Increased ease of use

- The 15 "HD touch display in 16:9 format offers a high resolution for excellent picture quality
- No special operating knowledge is necessary
- Automatic recognition of the product packaging by the edge filter
- Minimizing the frequency of false rejects and product wastage
- Automatic detection of the x-ray source lifetime and early warning by the system
- Warranty extension from 3 to 5 years through the optional service package

## Technology comparison

High resolution vs. Dual Energy

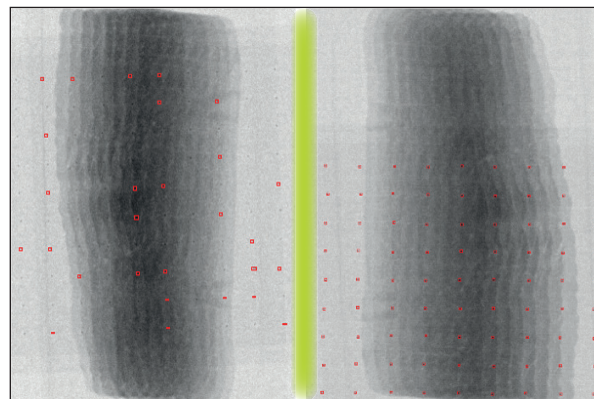
### Sensitivity:

#### Conventional systems

30% found foreign bodies

#### RAYCON D+

100% found foreign bodies



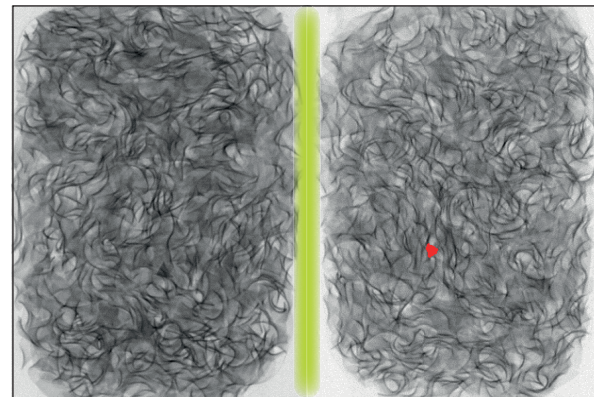
Sliced bacon with 0,3 mm stainless steel impurities

#### Conventional systems

0% found foreign bodies

#### RAYCON D+ Dual Energy

100% found foreign bodies



Noodles with glass splinter 2 mm x 3 mm (W x L)

### Important information:

X-radiation is classified as ionising radiation. However, X-radiation is not radioactive radiation! In accordance with EU directive 1999/2/EC, Sesotec x-ray systems due to the minimum radiation energy can be used for the contaminant inspection of food materials even with organic products. The RAYCON product inspection system is subject to the German x-ray ordinance and requires certification. Please observe any country-specific regulations!

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## Sesotec system world



### Detecting and separating contaminants:

Removing contaminants:

- metals
- plastics
- glass
- ceramics, porcelain, stones
- and many others

Removing from (good material):

- bulk materials
- liquids and pastes
- individually packaged product
- packed and loose items

Product types:

- end-products (food, textiles, plastics etc)
- industrial raw materials
- recycled materials

can be integrated into all types of conveyor systems



### Detecting and separating sub-standard products:

Qualitative defects:

- incorrect colour
- agglomerations
- breakages
- air inclusions in packs
- incorrect positioning / distribution

Quantitative defects:

- incorrect weight
- count errors (incorrect number of items in package)

Product types:

- end-products (food, textiles, plastics etc)
- industrial raw materials
- recycling materials

can be integrated into all types of conveyor systems



### Sorting mixed materials into single fractions:

Types of material:

- glass
- plastics
- metals
- and many others

Delivery flows:

- bulk materials
- individually packaged product

can be integrated into:

- conveying systems
- bulk material flows

## Operating Companies:



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Choose Success!