

**BIZERBA**

■ ... closer to your business

■ ... Detects more than just metal ...

... Bizerba XRE Product Inspection System ...



**Thanks to extremely effective X-ray technology, the Bizerba XRE product inspection system ensures product safety and integrity. It helps manufacturers meet IFS and HACCP guidelines, national and international legal regulations as well as trade-specific requirements.**

## ... Put an end to product recalls and customer complaints ...

### **New opportunities for reliable product inspections**

The Bizerba XRE product inspection system detects all foreign objects which due to their density, chemical composition or mechanical dimensions absorb X-rays at a higher or lower degree than the surrounding product.

This ensures that a large number of inspection tasks are carried out in production environments:

- Detection of metals, glass, ceramics, stones, calcified bones, PVC, Teflon, natural rubber, fiberglass-reinforced plastics, etc. in packed or bulk foodstuffs (non-magnetic stainless steel and non-ferrous metal within in food products packed in aluminium)
- Completeness checks even in sealed packages

Other product defects (e.g. tears or air pockets in tubes and tins/cans) can also be detected, while desired foreign objects, such as aluminium clips at the ends of sausages, are simply blocked out.



### **Perfectly tailored for individually packed and bulk products**

The Bizerba XRE is equipped with a high-performance real-time operating system for throughputs of up to 400 pieces/min. Evaluation is carried out via visualization software that allows the rapid set up of new products with the auto-train function.

It enables:

- parallel inspection of two different products
- automatic product identification for foreign object detection
- inspection of twisted or overlapping products
- the reprogramming of incorrectly ejected products without having to repeat the product test

The system is operated via a 10" LCD monitor with a touchscreen. An Ethernet interface (10/100 mbps) and numerous inputs and outputs for connecting external functions, photocells and ejector systems ensure that the Bizerba XRE can be simply integrated into new or existing production lines. Furthermore, data backup within a customer's network and remote maintenance via the Internet are also possible.



**Less space required due to the system's compact design and low centre of gravity**

Depending on the width of the conveyor belt, the Bizerba XRE is available for maximum product dimensions ranging from 200 x 150 mm to 300 x 150 mm. (W x H). In contrast to conventional X-ray systems, the inspection area is not limited when inspecting tall products. The product inspection system has an easy-to-clean and maintenance-friendly design and consists of four main components:

■ **Transport system**

A flat conveyor belt transports the product through the X-ray beam where it is scanned line by line.

■ **X-ray tube**

The X-ray tube with integrated high-voltage power source installed underneath the conveyor belt produces a fan-shaped beam of X-rays that travel upwards towards the target.

■ **Detector unit**

The high-resolution detector unit installed above the conveyor belt converts the captured X-rays into a digital X-ray image.

■ **Evaluation software**

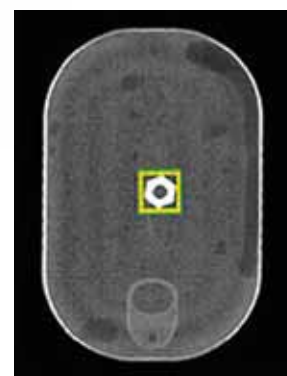
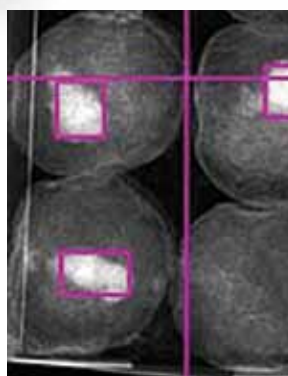
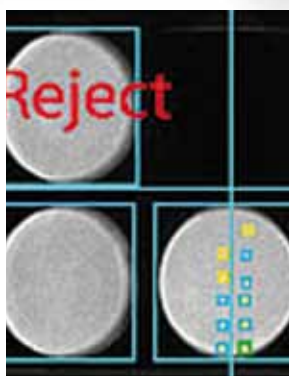
After evaluation via visualization software, contaminated or defective products are separated immediately.



*Yoghurt cups in a cardboard tray:  
Detection of missing cups and foreign objects*

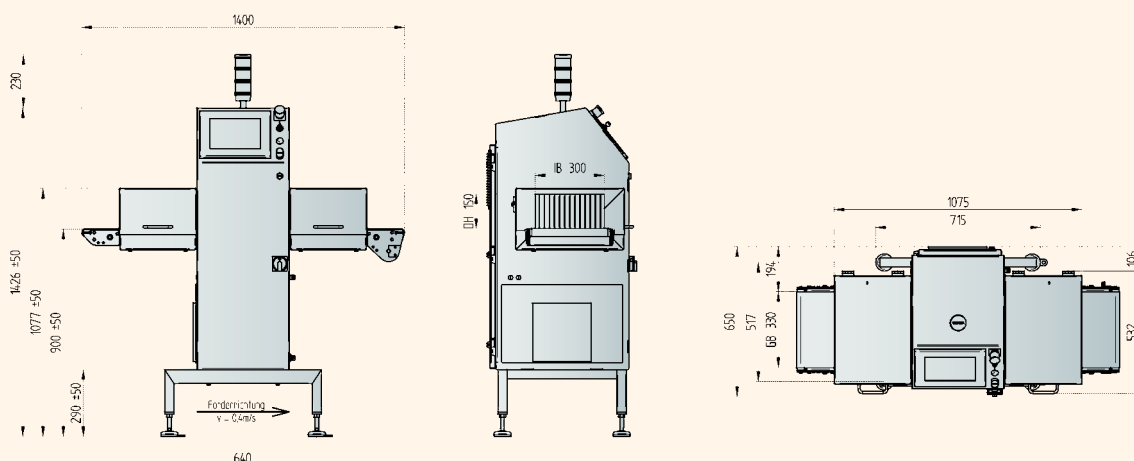
*Doughnuts filled with jam: Detection of missing jam and foreign objects*

*Sardines in a tin:  
Detection of foreign objects, e.g. pieces of glass or metal*





	XRE 200/150	XRE 300/150	XRE 450/200
■ Conveyor belt width	330	330	630
■ Max. throughput height	150	150	200
■ Inspection width on conveyor belt	200	300	450
■ Conveyor belt height	900 ± 50	900 ± 50	900 ± 50
■ Installation length	1400	1400	1400
■ Application	Foreign object detection (all magnetic and non-magnetic metals, glass, stones, bones, rubber, PVC, ...) in foodstuffs and other products, also in metal or aluminum coated packages. Optional software for the detection of other product defects, e.g.: Broken or deformed product, Product with air pockets (trapped air), Product clumping, Missing products or side dishes		
■ Maximum load	20 kg		
■ Product characteristics	Packed or solid consistency (no open fluids)		
■ Product temperature	-20 °C to +80 °C		
■ Operating conditions	-10 °C to +40 °C (other temperatures on request), no direct sunlight, relative humidity 10-90%, non-condensing		
■ Type of protection	Conveyor belt, monitor, operating elements, etc. IP 66, fan unit IP 54, optional air conditioning unit IP 34		
■ Scope of transportation	Flat conveyor belt with integrated X-ray scanner system		
■ Mechanical design	Cabinet, covers and conveyor belt frame made of stainless steel 1.4301 (AISI 304); glass pearl blasted, deflection pulley and drum motor made of stainless steel 1.4301 (AISI 304L), drive via 3-phase drum motor including thermal contact monitoring, FDA approved white polyester (PES) conveyor belt		
■ Electrical design	Combined control and operating unit for conveyor belt and X-ray system (rotary main switch, key switch, On/Off switch, Emergency Stop button), Signal lamp for "X-rays on" (red), system fault (orange), normal operation (green), all casing parts required for radiation protection secured with coded interlock switches, air conditioner for correct casing cooling also for moist or dusty environments		
■ Conveyor belt speed	0.2 m/sec, 0.3 m/sec, 0.4 m/sec, 0.56 m/sec or 0.8 m/sec (40 - 160 FPM) can be set via the integrated FC from - 50% to + 30% of the basic speed (further speeds on request)		
■ Operating voltage	200 - 240 VAC, 50/60 Hz, single-phase		
■ Fuse	16 A		
■ X-ray tube	50 kV/2 mA (tube current and high voltage can be set separately), optional: 80 kV/2 mA (tube current and high voltage can be set separately) Caution: The selection of the X-ray tube output depends on the product height and density		
■ X-ray scanner	High-resolution X-ray detector with a 14 bit A-D convertor for precise X-ray images		
■ Evaluation unit	Industrial PC with 10" LCD flat touch screen, integrated connection for Remote Portal™ (optional) for connection to a customer's network (Ethernet 10/100 mbps), electrically isolated inputs/outputs for up to four ejector systems, photocells for exact ejection or ejection monitoring, status signals for integration in the customer's overall system control, etc.		
■ Software	State-of-the-art image processing software on the basis of a real-time operating system: simple, intuitive operation via pop-up menus, password protected, automatic product identification for foreign object detection, product memory, logging and data archiving of important data (throughput, faulty product images, ejection statistics, ...), continuous monitoring of internal processes		
■ Ejector systems (optional)	Pusher or air blast nozzle(s) with lockable collection bins and transparent protective cover, compressed air connection 6 - 8 bar required		



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