

## FluidCheK

### A New Angle on Product Safety



**The FluidCheK x-ray system is specially designed to meet the needs of manufacturers and packers of beverages and other liquids. It inspects the base area of glass bottles and jars, metal cans and plastic bottles containing fluids, ensuring product safety on high speed production lines.**

#### **Increased Sensitivity**

High density contaminants in fluids will always fall to the bottom of a container; hence the FluidCheK x-ray system focuses inspection only on the base area. This allows improved x-ray imaging and results in optimised detection levels.

#### **Unsurpassed Detection**

The FluidCheK inspects down through the base of the container at an angle, making the internal raised base appear flat. Traditional "detection blind spots" caused by the raised

base are therefore removed, ensuring no hidden contaminants and only outstanding probability of detection in fluids.

#### **Brand Protection**

The FluidCheK x-ray system is ideally positioned at the end of the production line as contaminants can be introduced as part of the capping process. By ensuring product safety x-ray inspection helps processors comply with local and international regulations, retailer requirements and HACCP practices.

# FluidCheK

## A Functionally Rich X-ray System

The FluidCheK x-ray system ensures accurate detection of dense contaminants including glass, metal, stone, high density plastics such as teflon and rubber compounds like viton.

### Software Capability

- Newly developed XTP software tools analyse products with the highest possible resolution, offering unsurpassed levels of detection
- Fully automated set-up ensuring maximum production uptime
- Due to advanced image capturing beverage containers with necks can now run touching
- Adaptive filtering - meaning the container outer profile filters dynamically change for every container ensuring optimum detection and minimum false rejects

### Audits / Verification

- Full statistics traceability for quality reporting
- Images/statistics retained after power down, ensures sensitive data is retained
- Performance verification built in to ensure constant optimum performance
- All reports/images downloadable to USB or via network – paperless record keeping
- Reject confirm and bin full options ensure a 100% effective rejection from the line

### Design / Hygiene

- Class-leading hygienic design following GMP, NSF and EHEDG principles
- IP65 as standard and IP69K is available as an option for harsh wash down environments
- Easy access to all machine areas with no hidden bug traps where bacteria could breed, ensuring minimum downtime and optimum protection against pathogenic micro-organism growth
- A high-speed “shutter” ensures that x-ray’s are only emitted when containers pass through the FluidCheK, reducing emissions and machine footprint

### Flexibility

- Minimum training requirements and quick line changeovers result in minimum downtime and maximum OEE (Operational Equipment Effectiveness)
- X-ray scan speed automatically synchronises with customer belt speed, keeping one to one image ratio - no manual adjustments are required, ensuring maximum uptime of the production line, detection is optimised and rejection is never compromised

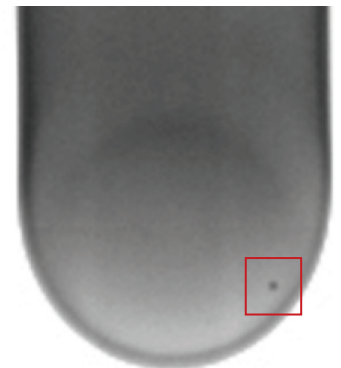
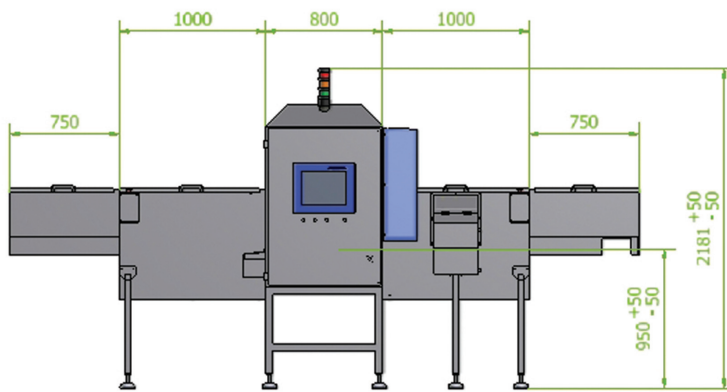
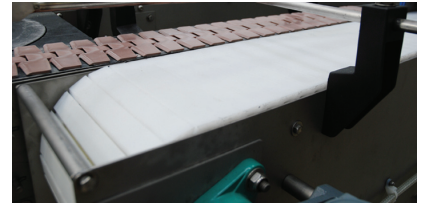


## Unique X-ray Transparent Conveyor

The FluidCheK x-ray system is using a new x-ray-transparent conveyor belt. The conveyor belt features a slat band modular design to facilitate high-speed handling of containers in various sizes.

### Features of the Slat Band Belt

- Slat band modular belt features a low absorption but durable material that does not result in any loss in sensitivity of detection
- Slat thickness is constant and no metal is in the path of the x-ray beam as the joining pins are external
- Ideal for high-speed production lines with speeds of up to 120m per minute
- Easier integration with existing modular conveyors offering smoother product transfers
- Easier rejection or diversion of contaminated containers
- If breakage occurs on the line, the belt can be easily removed in minutes for cleaning or maintenance



X-ray image - Glass bottle base

## A New Angle to Product Inspection

The FluidCheK takes a fresh approach to the detection of contaminants in fluids using a single x-ray beam.

It focuses inspection only on the base of a container which means that the x-ray generator can be moved much closer to the product. This improves the quality of the x-ray image and enhances the sensitivity and probability of detection.

The x-ray beam inspects the container base at an angle removing blind spots and hidden areas. In addition a second opposing x-ray beam can be added; offering unsurpassed contamination detection.

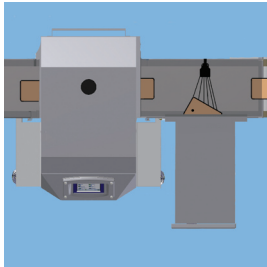
Using the x-ray-transparent slat band conveyor, the container can be inspected through the conveyor itself at an angle

without the need to tilt the container or move it in a complex manner. Therefore the FluidCheK performs a completely "non-contact inspection". This means the containers are not touched at anytime as they pass through the machine to prevent product handling issues and damaged pack labels.

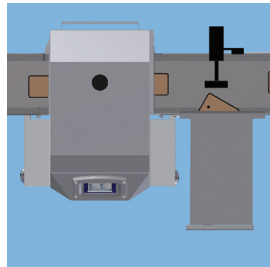


## Reject Mechanisms

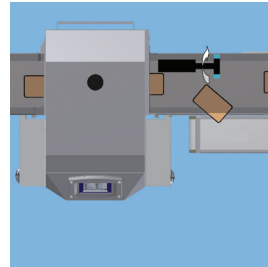
There are a number of different types of fully integrated high-speed reject systems available. The correct choice depends on a number of factors like type of environment, belt speed, container type, weight and size. All reject systems have optional reject verification, ensuring that the faulty product has been rejected into the reject bin, verifying the reject is working.



**Air blast reject system**



**Short stroke side pusher reject system**



**Servo Cam reject system**

## Specifications

Model	FluidCheK
Adaptive software	Automatic product variation compensation and real time display
Casing material	Stainless Steel - system is lead free
Connectivity	External USB (capturing data on a memory stick) or Ethernet ports directly or via optional OMAC OPC server
X-ray beam geometry	Adjustable to suit a variety of container base sizes.
Conveyor speed	Up to 120m/min. on the fully integrated modular conveyor belt (variable speed as an option)
Cooling method	Air conditioned main cabinet. Recirculating oil cooling system for optimal low x-ray tube temperature.
Display	Full color TFT 15inch touch screen
Masking function	Equipped as standard
Operation humidity	30-85%
Temperature	5-40°C
Power supply	230V (50/60Hz)
Preset memory	Unlimited amount of product menus as standard
Traceability	Full event log incl. changes of parameters, products and users
X-ray detector	Highly stable USB detector, 200mm wide with high resolution
X-ray generator	80Kv, 4.5mA
X-ray emissions	< 1microsievert per hour
X-ray protection	Protective curtains or Extended tunnel guards or side to side transfer for removal of line of x-ray sight
X-ray beams	Single x-ray beam as standard, second x-ray beam can be added as an option

## FluidCheK Capabilities

The FluidCheK x-ray system is specifically suitable for all beverages and fluids in the food industry packaged in glass bottles or jars, metal cans, plastic bottles or cartons.



Beverages



Pet Food



Condiments



Pharma



Personal Care



Tall & Rigid Containers



Metal Cans



Glass Jars



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