

# The X37 Series

**SAFELINE**

X-ray Inspection



## **X37 Series**

X3710 X-ray System

X3720 X-ray System

X3730 X-ray System

X3750 X-ray System

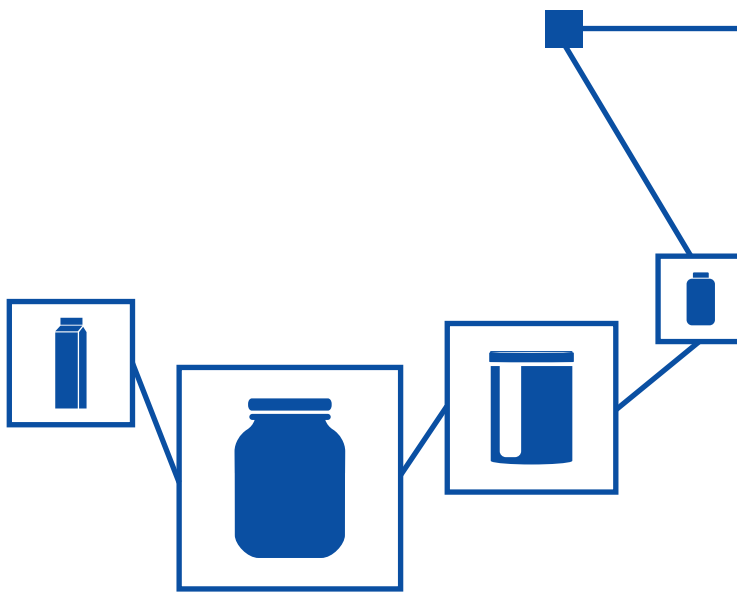


## **X37 Series of X-ray Systems** Inspection of Tall, Rigid Containers

**METTLER TOLEDO**

## X37 Series

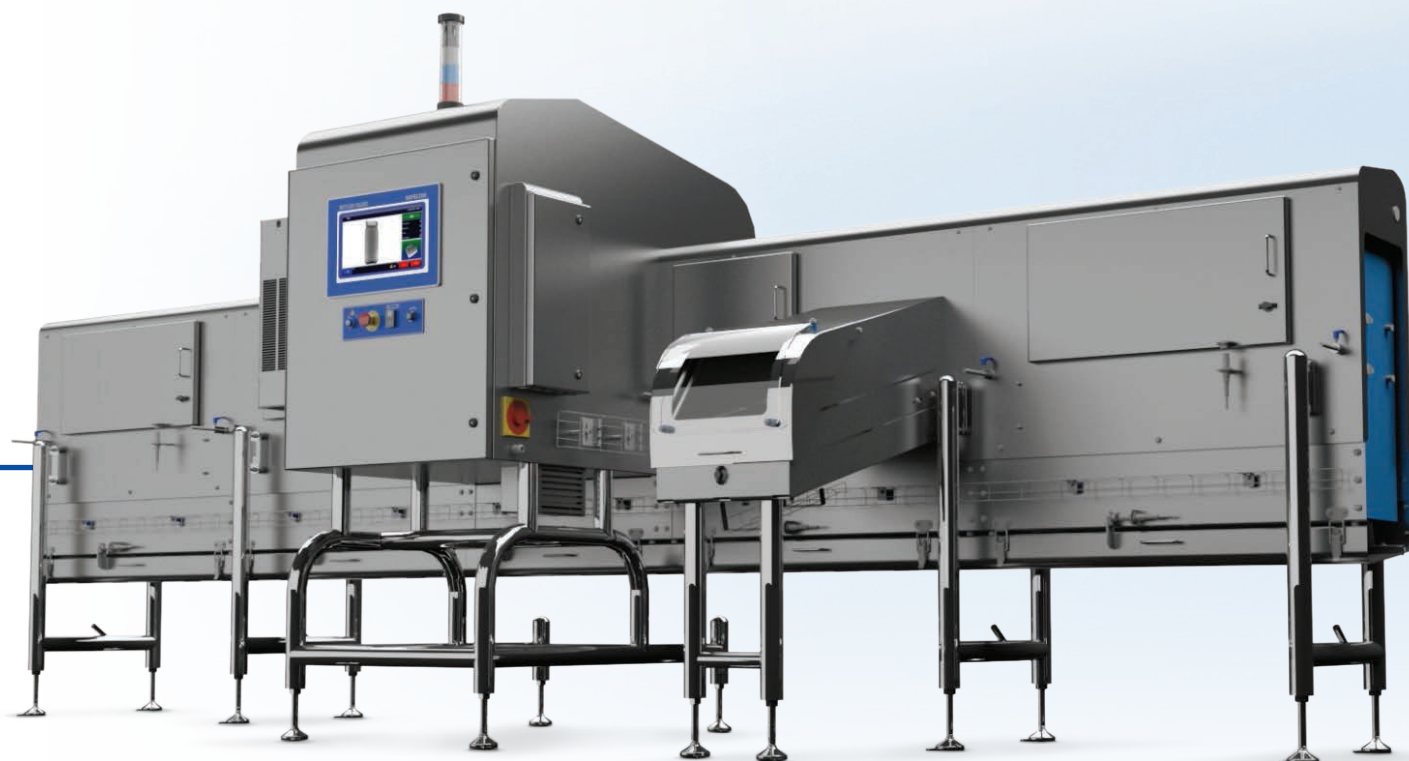
The Big Difference is in Every Detail.



**The X37 Series offers the most technically advanced x-ray inspection system on the market for tall, rigid containers. It provides a competitive advantage to food and pharmaceutical manufacturers, by providing a highly adaptable solution to suit individual applications, by offering a wide range of features, combined with low-power consumption, making the X37 a future-proof investment. The X37 Series provides the customer with the tools to achieve compliance with industry standards such as HACCP.**

An improved user experience and a highly-functional and ingenious design makes the X37 Series truly market-facing and encapsulates the most advanced development in inspection capability, reducing the Total Cost of Ownership (TCO).

With a choice of detectors and generators, the X37 offers outstanding detection sensitivity of contaminants, including glass, metal, calcified bone, high-density plastics and rubbers in a range of packaging types such as plastic, metal and glass containers, as well as doypacks, cartons, and composite cans/ tubes. Simultaneously, multiple product integrity checks can be performed, offering not just product safety but complete brand protection.



## Model and Application Overview

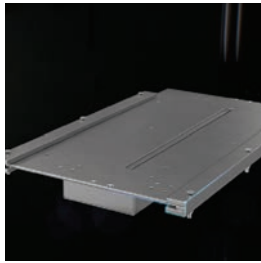
X-ray Inspection System	Generator			Detector	
	20W	100W	420W	0.4mm	0.8mm
X3710	•				•
X3720		•	•	•	•
X3730		•	•	•	•
X3750			•		•

Packaging Type	Recommended System			
	X3710	X3720	X3730	X3750
Composite Cans/Carltons/Tubes	•	•		
Plastic Containers	•	•		
Doypacks	•			
Metal Containers		•	•	
Glass Containers			•	•
Ceramic Containers			•	

\* Please note that the above table is for indication purposes only, please contact your local sales representative for more information.

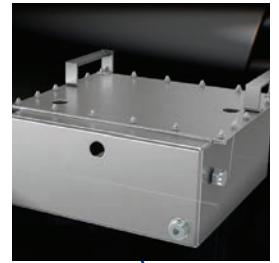
# X37 Features & Benefits

## The Big Difference is in Every Detail.

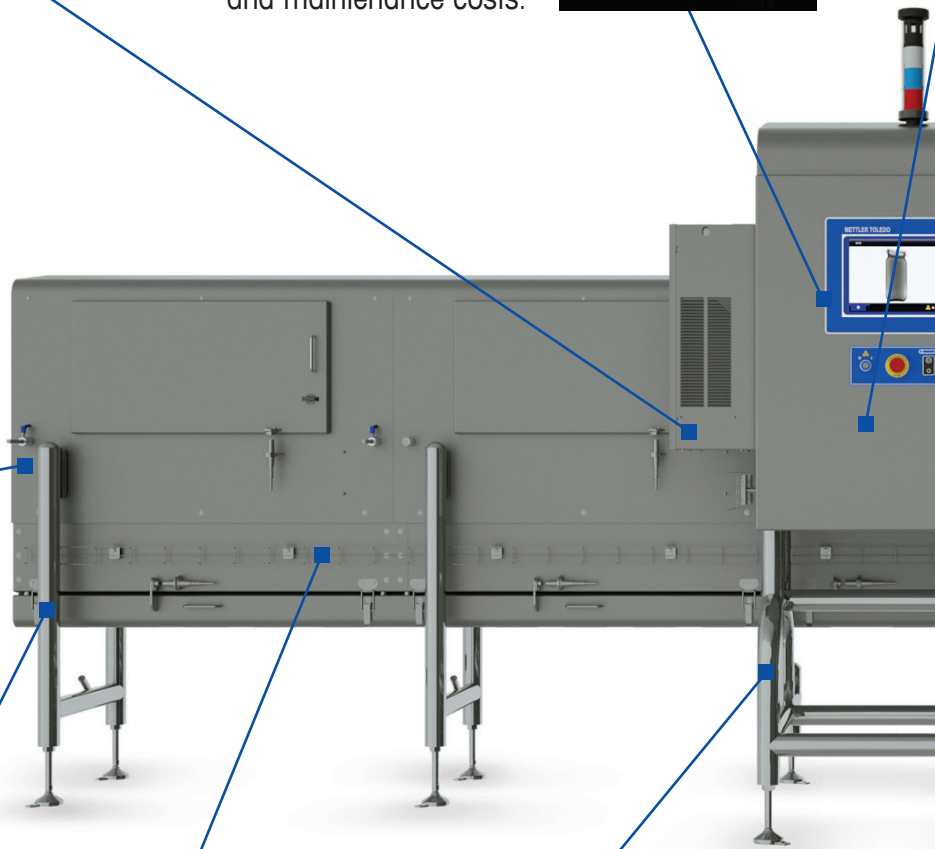


**Multiple Detector Options**  
0.4mm/0.8mm diode size options are available to best fit the customer's application and inspection requirements.

**Low, Medium and High-Powered Generators**  
No active cooling required on machines where the 20W generator is applicable, reducing power consumption and maintenance costs.



**Adjustable Full-Length Guide Rails**  
Quick and easy product set-up and change-over.



**Throughput Capabilities**  
Capable of inspecting up to 1,200 containers per minute depending on application.



**Outside Cable Trays**  
Avoiding bacteria traps and facilitating customer's existing cables.



**Robust Tubular Hygienic Frame Design**  
Hygienic design allows for water to roll off during cleaning.



**Diverse Connectivity Options**

Allows multiple methods to interact with the system and retrieve statistics/ images incl. PackML and Overall Equipment Effectiveness (OEE).



**Full Range of Inspection Tools**

Simultaneously inspects products for contamination and product integrity to ensure brand protection.



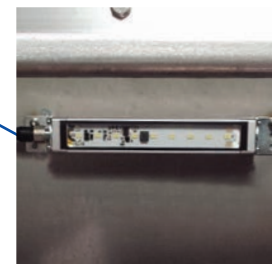
**Magnetic Safety Switches**

Open access doors are quickly identified, ensuring maximum uptime.



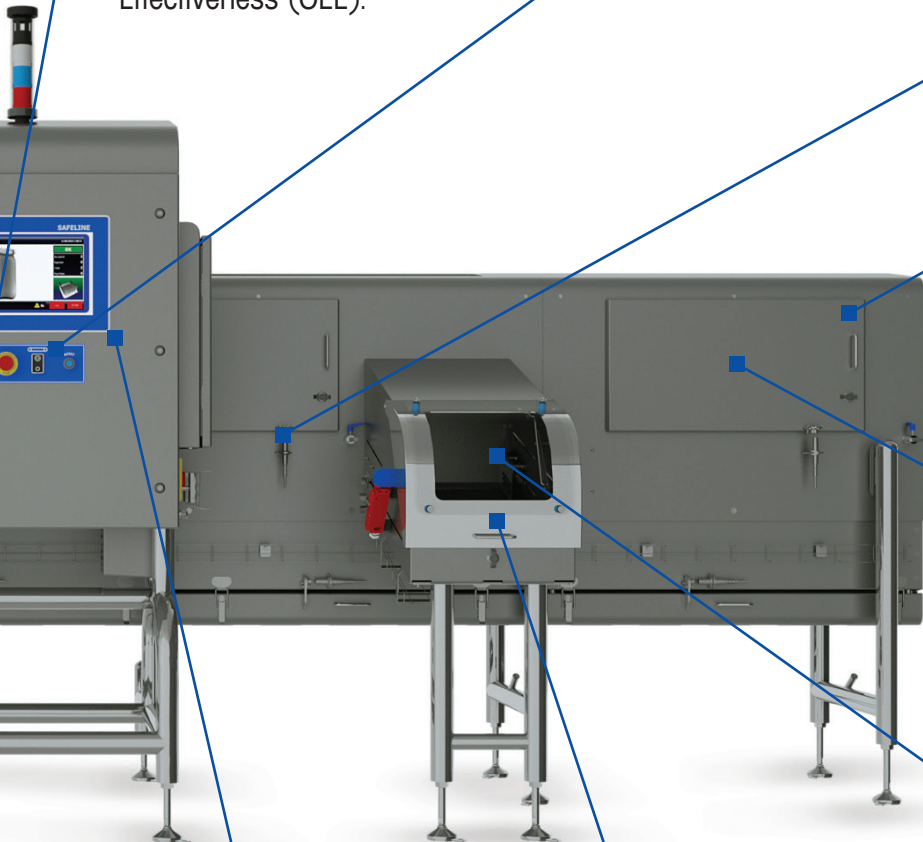
**Large Access Hatches**

Improved access for cleaning.



**LED Lighting in Tunnel**

Provides better visibility throughout the system.



**IP69 LED Touch Screen**

Suitable for high pressure wash-down (IP69 / Nema PW12).



**Lockable Reject With Large-Vision Window**

Available on the X3710/20/30, facilitates easier product set-up, demonstrating due diligence.



**High-speed Reject Devices**

Ensuring quick removal of faulty products at customer line speeds.



# X37 Applications

## The Big Difference is in Every Detail.

The X37 Series of x-ray inspection systems ensures product safety and integrity for a wide variety of tall, rigid containers within the food and pharmaceutical industries.

METTLER TOLEDO Safeline X-ray has many years of experience inspecting tall, rigid containers for a wide range of applications across the food and pharmaceutical industry, such as:

- Infant Foods
- Dairy
- Condiments
- Snacks
- Beverages
- Bakery and Confectionery
- Fruit and Vegetables
- Ready Meals
- Fish and Seafood
- Meat
- Pharmaceutical
- Pet Food

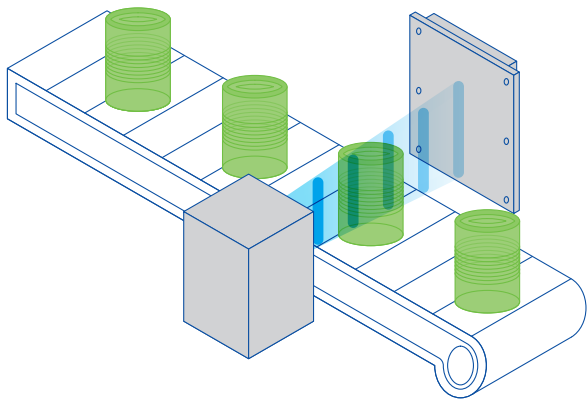
Types of Tall, Rigid Containers:

- Plastic Containers
- Metal Cans
- Glass Containers
- Composite Cans/Tubes/Cartons
- Ceramic Containers
- Doypacks

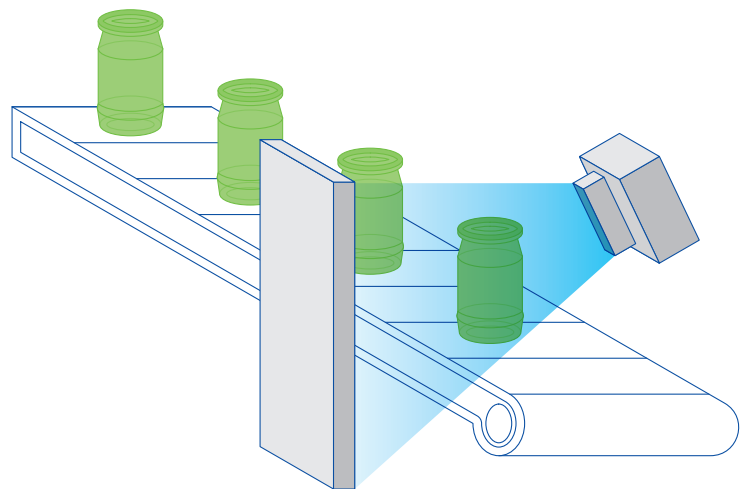
The X37 Series offers horizontal single-beam and split-beam solutions to cater for different inspection needs and to ensure reliable and consistent inspection for all types of tall, rigid container applications.

High throughput levels of up to 1,200 containers per minute can be achieved, depending on the application. The X37 can be installed onto existing production lines without slowing down the customer line speed.

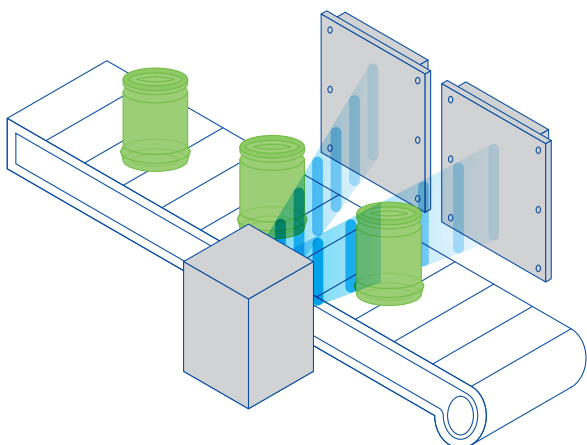
The flexible standard modular design of the X37 can be fully configured to individual application requirements. With a choice of a 0.4mm or 0.8mm detector, optimum inspection results are achieved - on most machines, even in the most demanding production environments.



X3710 & X3720 horizontal single-beam systems



X3750 horizontal angled single-beam system



X3730 horizontal split-beam system

# X37 Inspection Capabilities

## The Big Difference is in Every Detail.

### **X37 Series Product Inspection Tools**

The X37 Series of x-ray systems can perform contamination detection whilst simultaneously performing product integrity checks such as:

- Inspect fill levels and measure head space
- Detect missing closures on plastic containers
- Inspection of vacuum presence
- Reject damaged packaging
- Detect agglomerates

### **Contaminant Detection**

The X37 Series is capable of detecting a wide range of physical contaminants such as glass, metal, calcified bone, high-density plastics and rubber, ensuring product safety.

### **Inspect Fill Levels and Measure Head Space**

The X37 Series is able to inspect fill level and measure head space of each container, minimising product waste and ensuring product freshness.

### **Inspection of Vacuum Presence**

The X3730/50 use a sensor which accurately measures the height in the centre of the container's metal cap to confirm the presence of a vacuum, ensuring maximum product freshness.

### **Detect Missing Closures on Plastic Containers**

The X37 Series can reliably inspect the presence of caps or lids on plastic containers, ensuring the product is sterile, fresh and without any spillages.

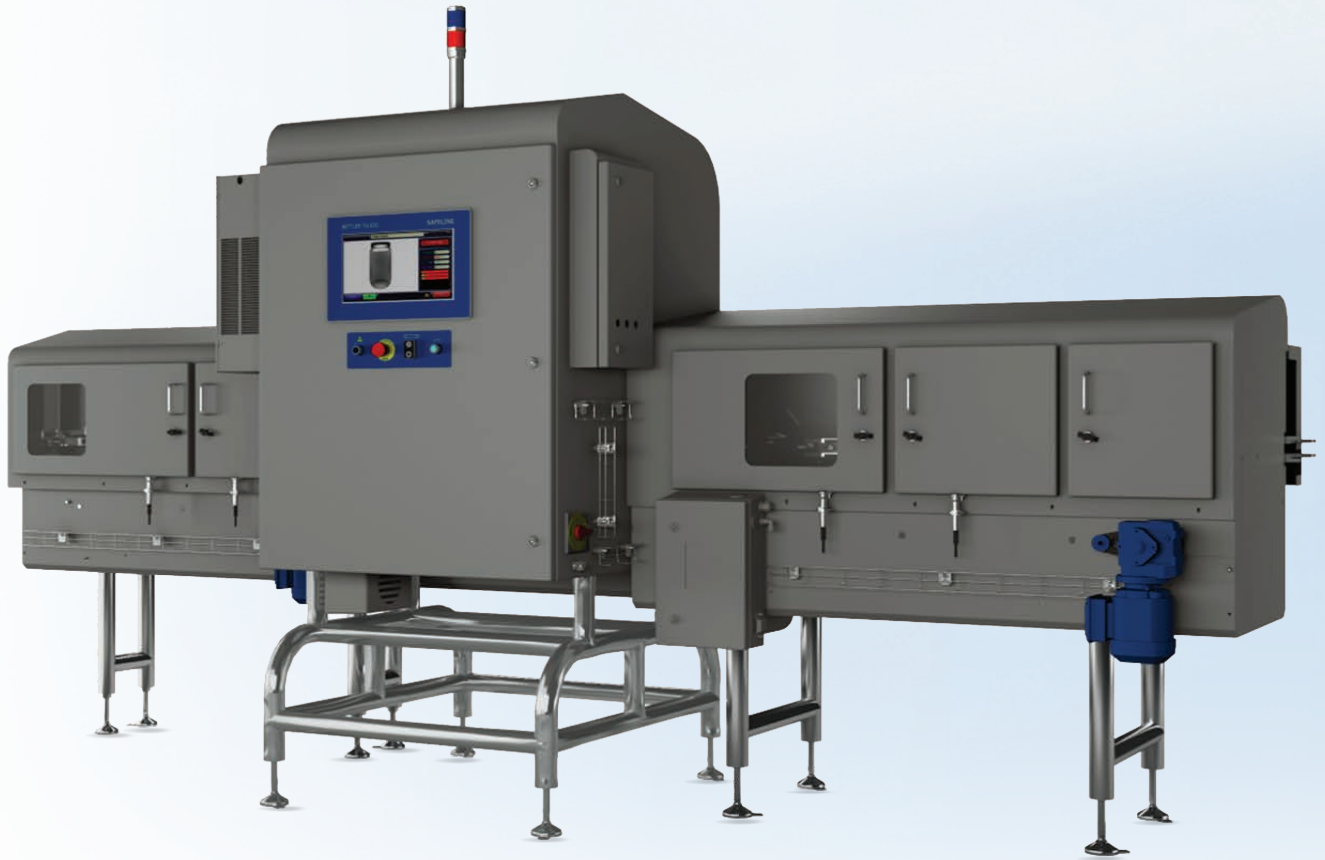
### **Reject Damaged Packaging**

Damaged products on a supermarket shelf can lower a consumer's perception of a brand. The X37 Series can detect damaged products e.g. dented cans and squashed cartons.

### **Detect Agglomerates**

The detection of agglomerates such as flavour and powder lumps ensures consistent product presentation and customer experience.



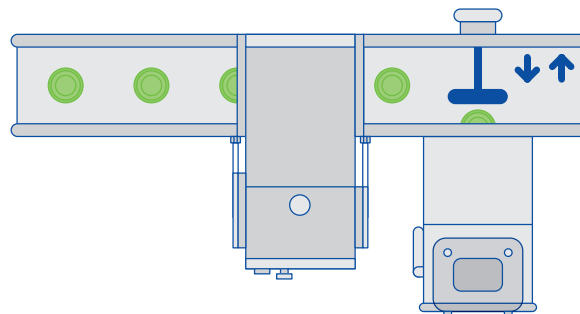


## Reject Systems

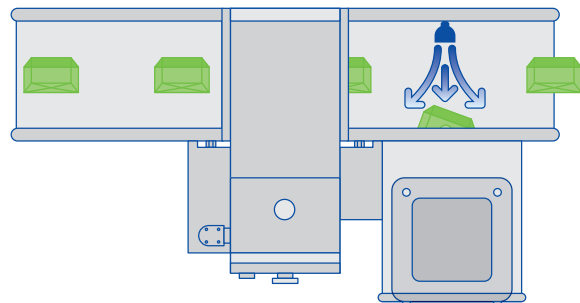
There are a number of different types of high-speed reject systems available to match manufacturers' production needs, while guaranteeing easy and effective removal from the line. The correct choice depends on a number of factors such as environmental conditions, belt speed, pack weight and pack size. The X37 Series has a choice of reject systems with vision windows and a lockable bin.

Safeline X-ray's high-speed reject systems do not slow down the customer line speed and could reject products at line speeds of up to 1,200 products per minute, depending on application.

The lockable bin ensures due diligence, since only authorised personnel can access the rejected products.



An x-ray system with a **side pusher reject system**, typically used for the rejection of medium and heavy-weight products including canning and glass-in-glass inspection lines.



An x-ray system with a **air-blast reject system**, works very well for small and medium packs including doypacks, plastic containers and composite cans and tubes.

# X37 Specifications

## The Big Difference is in Every Detail.

X37 Features	Specifications	X-ray Inspection Systems			
		X3710	X3720	X3730	X3750
Software	X37 (Flex on Windows 8)	•	•	•	•
Casing Material	304 stainless steel	•	•	•	•
Finish	240 Grit Brushed on main components	•	•	•	•
Connectivity Options	Ethernet (internal), USB (external)	•	•	•	•
Conveyor Speed	Typical line speeds 10-150 m/min for the X3750 it is 10-120 m/min (dependent on product dimensions)	•	•	•	•
Lane Configurations	Single lane applications	•	•	•	•
Throughput Rate	Typical throughput rates of up to 1,200 products per minute (dependent on product dimensions)	•	•	•	•
Operating Height	950mm, 1050mm or 1150mm (+/- 50mm)	•	•	•	•
System Length	1700mm, 2200mm or 3900mm	•			
	2000mm, 2500mm or 4200mm		•		
Maximum Product Height	260mm (230mm if inspecting fill level)			•	•
	306mm	•			
	337mm		•		
	317mm			•	
Cooling Method	20W = Internal Fan	•			
	100W = Air Conditioner		•	•	•
	420W = Radiator Pump & Air Conditioner		•	•	•
Screen Display	15.6" LED widescreen (16:9 ratio) display with improved touchscreen	•	•	•	•
Operating Humidity	Up to 90% RH	•	•	•	•
Operating Temperature	5 – 40°C	•	•	•	•
Power Supply	20W & 100W systems only - 110Vac, 50/60Hz	•	•		
	20W, 100W & 420W - 230Vac, 50/60Hz	•	•	•	•
Pneumatic Supply	6 Bar(g) clean air supply required for air operated reject system	•	•	•	•
Traceability Options	Full event log tracks changes of parameters, users and products	•	•	•	•
X-ray Detector	0.4mm	•	•	•	
	0.8mm				•
X-ray Generator	20W, 84kV, 0.25mA Glass or optional beryllium	•			
	100W, 84kV, 1.2 mA Glass or optional beryllium		•	•	
	420W, 84kV, 5.0 mA Glass or optional beryllium		•	•	•
X-ray Beams	Single Beam (20W)	•			
	Single Beam (100W & 400W)		•		
	Split Beam (100W & 420W)			•	
	Single Beam (420W)				•
X-ray Emissions	< 1uSv/hr	•	•	•	•
X-ray Protections	Fully contained emissions within construction	•	•	•	•
	Optional lightweight lead-free blue curtains at tunnel apertures on short systems	•	•	•	
Reject Type	Pusher	•	•	•	•
	Airblast	•	•	•	
Reject Bin	Front mounted lockable reject chute with vision window as standard	•	•	•	
Guide Rails	Adjustable full length guide rails. System Plast type	•	•	•	•
Hygienic Rating	IP65 as standard, upgradable to IP69	•	•	•	•

While the standard system is available in a number of different configurations, Safeline X-ray welcomes the option to work in partnership in developing a bespoke model to meet individual application requirements.



**The X37 Series is Built with Local and Global Standards in Mind**

The seriousness with which the market views safety issues is underlined by the wide range of national and international legislative and regulatory standards such as HACCP (Hazard Analysis Critical Control Points), as well as standards set by retailers. By incorporating appropriate inspection equipment into a company-wide approach to product safety, manufacturers can protect their reputations and meet legal obligations.

The X37 Series x-ray systems give food and pharmaceutical processors the tools to comply with standards such as HACCP, the Global Food Safety Initiative, and Good Manufacturing Practice.

## METTLER TOLEDO Service ProdX

METTLER TOLEDO Service wants you to maximise the return on your x-ray inspection equipment through a comprehensive services program consisting of four critical elements:

- **Uptime** - Support & Repair
- **Performance** - Set-up, Maintenance & Preventative Maintenance
- **Compliance** - Quality Assurance & Certification
- **Expertise** - Training & Education



### Start-Up Support

Ever wished you had an expert by your side? With **Start-Up Support** Mettler-Toledo will be with you through your production ramp-up.

[www.mt.com/xray-startupsupport](http://www.mt.com/xray-startupsupport)

### ProdX Data Monitoring & Management Software for Product Inspection Applications

ProdX data management software provides **Seamless Integration** of product inspection devices making processes more **Streamlined**, more **Accessible** and more **Efficient**.



The software automatically:

- Collects critical inspection process data
- Produces a wide range of reports based on stored historical data
- Shows real time data
- Archives reject x-ray images for later inspection
- Implements product changeovers remotely

[www.mt.com/prodx](http://www.mt.com/prodx)

[www.mt.com/xray-x37](http://www.mt.com/xray-x37)

For more information



**Mettler Toledo Safeline X-ray**  
Royston Business Park, Royston,  
Hertfordshire, SG8 5HN  
Tel. +44 (0) 1763 257900  
Fax. +44 (0) 1763 257909  
Email: [xraysales@mt.com](mailto:xraysales@mt.com)

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