

X36 Series Bulk Variant X-ray Inspection System



The X36 Series Bulk Variant x-ray inspection system has been designed specifically to inspect unpackaged products; in a bulkflow format. The x-ray system combines high throughputs with outstanding levels of detection, ensuring complete product safety.

The X36 Series Bulk Variant is truly market-facing and encapsulates the requirements of manufacturers by offering; IP69 hygienic rating, high sensitivity detector technology and a choice of reject devices providing a highly adaptable solution to suit individual applications.

Unsurpassed Detection of Contaminants

The bulk system works on absorption difference, rather than conductivity, and

simultaneously detects and rejects unwanted contaminants like ferrous, non-ferrous and stainless-steel as well as other contaminants such as glass, mineral stone, calcified bone and high density plastics regardless of their shape or location within the bulk food. Unlike traditional inspection systems, it is not affected by changes in product temperature or moisture, thus minimising false rejects.

X36 Series Bulk Variant

A Functionally Rich X-ray System

The X36 Series Bulk Variant x-ray system not only offers outstanding contamination detection but also provides many other valuable features and benefits.

Software Capability

- Sophisticated yet simple to use with flat menu structure, giving the operator full control, facilitating a better user experience with reduced training requirements.
- Automated set up and ready to use within minutes, ensuring maximum production uptime.
- Capable of processing high throughputs of up to 14,000 kg/hour (dependent on product density and layer thickness).
- ProdX - Product Inspection data management software options deliver Production Management a wealth of real-time information, enabling the effective control of product inspection processes and devices.

Design / Hygiene

- Class-leading hygienic design following GMP, NSF and EHEDG principles and compliance with FDA regulations and EU Directives.
- IP69 as standard for harsh wash-down environments.
- Reject scoops and chute are easy to remove for cleaning.
- Quick belt removal with no hidden bacteria traps, ensuring minimum downtime and optimum protection.
- Auto tensioning and tracking conveyor ensures that the belt stays in position during production ensuring maximum uptime.
- A troughed belt retains product on the belt, minimising spillage whilst ensuring the product is presented at a constant depth for optimised product inspection.
- 600mm wide belt system is available to ensure maximum throughputs of up to 14,000 kg/hour.

Audits / Verification

- Full statistics traceability for quality reporting.
- Performance verification built in to ensure constant optimum performance.

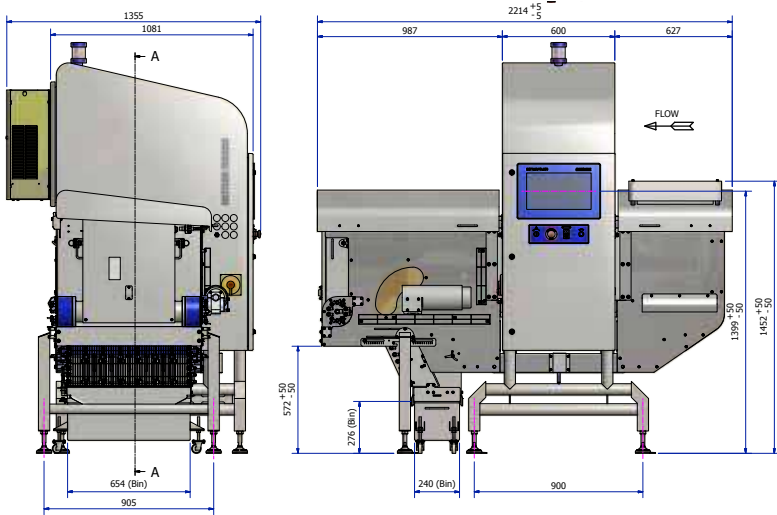
Flexibility

- Flexible infeed: hopper or end-fed options ensuring that the x-ray system can be easily integrated with existing equipment on the production line.
- Flexible approach to connectivity is offered with options for data retrieval via external USB or Ethernet ports, directly or via an OMAC compliant OPC server.

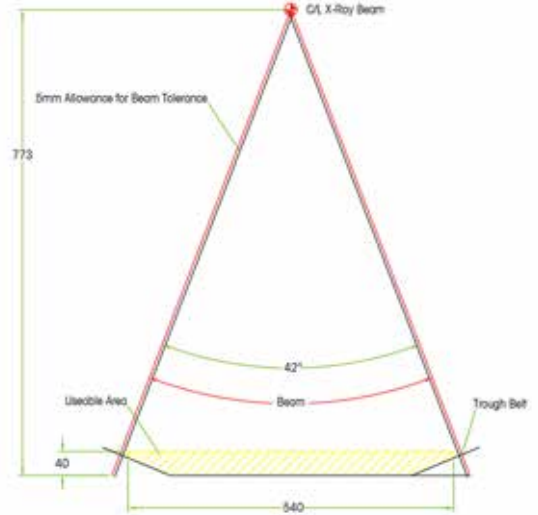


Integration into the Production Line

Consideration should be given to the location of the X36 Series Bulk Variant x-ray system on the production line. When placed early in the process, it can inspect incoming goods or raw materials. Contaminants can be removed at the source and immediately traced back to the supplier. It also means that contaminants are removed before further value is added to the product; saving costs and minimising waste.



The X36 Series Bulk Variant 600mm drawing with full IP69 high pressure wash-down protection



Product size diagram for the X36 Series Bulk Variant - 600mm detector width

X36 Series Bulk Variant Software Tools

The X36 Series Bulk Variant of x-ray systems can inspect for contamination whilst simultaneously storing all images and inspection history, ensuring all quality assurance requirements are protected.



Outstanding Contamination Detection

The X36 Series Bulk Flow Variant inspects for a range of contaminants including: glass, metal, calcified bone, high-density rubber and plastics in a range of bulk products such as dried fruit & nuts, processed meats and cereals and grains.



Meeting Due Diligence Requirements

Data management software can integrate all Product Inspection Systems on the production line by allowing multiple methods to interact with the system to retrieve critical inspection process data e.g. statistics and images and store them in one convenient location.



Scoop or Air Blast Reject Systems

Three or six lane scoop and seven lane air blast reject options are available, suitable for a wide range of bulk food products and throughput rates.

These options of multi-lane reject systems are commonly used for bulk flow applications.

Instead of rejecting the full belt width, a much smaller amount of product can be rejected;

minimising product waste, saving costs and improving productivity.

Positioning

Adjustable positioning of the chosen reject device provides complete flexibility to cover a range of application and line speeds, eliminating long periods of downtime and assisting with quicker product changeovers.



An example of a six lane scoop reject with three scoops up and three scoops down.

Specifications

Feature	Specification
Casing Material	304 stainless steel.
Ingress Protection	Full IP69 high pressure wash-down protection (bearings are blast protected only).
Finish	180-240 Grit Brushed on main components.
Connectivity Options	Ethernet connection at PC.
Conveyor Speed	Typical line speeds 20-60 m/min (dependent on product and layer thickness).
Infeed Options	Flexible infeed: hopper or end-fed option.
Throughput Rate	Typical throughput rates of up to 14,000 kg/hour (dependent on product density and layer thickness).
Operating Height	850mm, 950mm or 1050mm (+/- 50mm).
Maximum Product Layer	550mm (W) x 30mm (H), dependent on product. A mono-layer of product gives optimal inspection.
Cooling Method	IP69 Air Conditioner.
Screen Display	15.6" TFT (16:9 aspect ratio).
Operating Humidity	90% RH.
Operating Temperature	5 - 40°C.
Power Supply	230Vac, 1 phase, 50Hz, 6A.
Pneumatic Supply	Minimum 6 Bar(g) clean air supply required for air operated reject system and belt tensioning/tracking.
Traceability Options	Full event log tracks changes of parameters, users and products.
Belt Tracking	Automatic pneumatic tracking and tensioning.
X-ray Detector	0.8mm diodes, 600mm width.
X-ray Generator	100W, 84kV, 1.2mA Beryllium.
X-ray Beam	Single.
X-ray Emissions	< 1uSv/hr.
X-ray Protections	Line of sight is removed by cascade design; x-rays are fully contained within the system.
Reject Type	Six lane scoops or seven lane air-blast options.
Reject Bin	Stainless steel tote bin with castors (optional). Viewing window as standard over reject area.
System Conveyor	FDA and EU food use approved TPU conveyor belt, 0.37kW motor unit (IP69).

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