

X33 Series Bulk Variant X-ray Inspection System



The X33 Series Bulk Variant system has been designed specifically to inspect unpackaged products; in a bulkflow format. The X33 Series Bulk Variant x-ray inspection system utilises the new high sensitivity detector technology allowing the integration of a low power (20W) x-ray generator.

An improved user experience, sustainability credentials and highly-functional design, the X33 Series is truly market-facing and encapsulates the most advanced development in inspection capability, which cannot be matched by any of our competitors, reducing the Total Cost of Ownership (TCO) and x-ray emissions.

Unsurpassed Detection of Contaminants

The X33 Series Bulk Variant x-ray system simultaneously 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

like glass, metal, 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.

X33 Series Bulk Variant

A Functionally Rich X-ray System

The X33 Series Bulk Variant x-ray system not only offers outstanding contamination detection but also provides many other valuable benefits and features.

Software Capability

- Sophisticated yet simple to use with flat menu structure, giving the operator full control without requiring special training or previous x-ray knowledge
- Automated set up and ready to use within minutes, ensuring maximum production uptime
- Typical throughput rates of up to 5000 kg/hour (dependent on product and layer thickness)
- LED backlit display consuming less power, reducing total cost of ownership
- 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
- Specifically designed to operate at low power, using the new Hi-gain detector technology, the X33 series is able to operate using a 20 watt generator without losing any of the detection capabilities

Design / Hygiene

- Class-leading hygienic design following GMP, NSF and EHEDG principles and compliance with FDA regulations and EU Directives
- IP65 as standard and IP69K is available as an option for harsh wash down environments
- Quick release belts with no hidden bug traps, ensuring minimum downtime and optimum protection

Audits / Verification

- Full statistics traceability for quality reporting
- Performance verification built in to ensure constant optimum performance
- 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
- Reject confirm and bin full options ensure a 100% effective rejection from the line

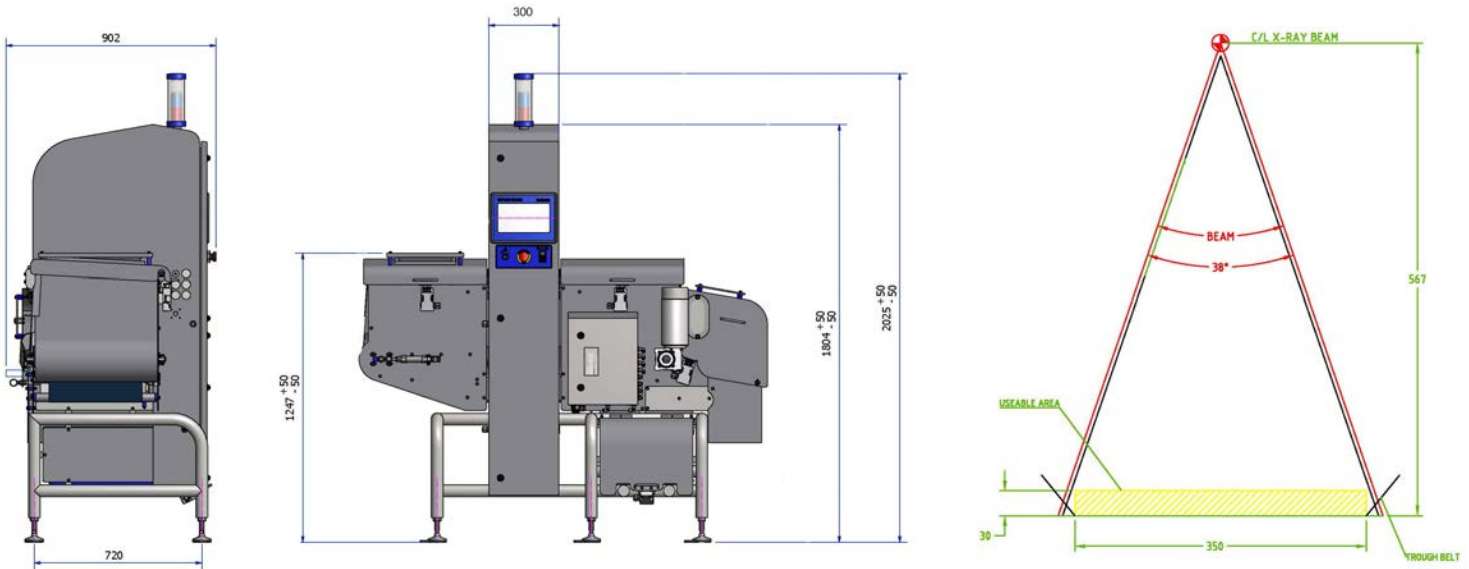
Flexibility / Safety

- 300mm and 400mm wide belt systems are available to suit varying throughputs
- Available in one size (1,800mm) enabling manufacturers to comply with rigorous industry standards and reduce energy consumption
- New slimline cabinet design gives the x-ray system a compact footprint, which means it can be fitted into the tightest of environments
- Flexible infeed: Hopper or end-fed options
- A troughed belt retains product on the belt, minimising spillage and improving the transport of the product at a constant depth
- The X33 Series Bulk Variant is also inherently safe, reliable and sustainability has been increased providing x-ray inspection with a greener solution



Integration into the Production Line

Consideration should be given to the location of the AdvanChek Bulk x-ray system in 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.



The X33 Series Bulk Variant 400mm drawing with full IP69K high pressure wash-down protection

Product size diagram for the 400mm X33 Series Bulk Variant

Sustainability Credentials

Under typical operating conditions, the X33 series offers a 20% reduction in operating power. Incorporating a 20 watt x-ray generator, instead of a 100 watt generator used previously, means the total cost of ownership is dramatically reduced. The reduction in x-ray emissions means thinner stainless steel is used all round, making the machine more environmentally friendly.



Lower energy consumption	✓
Thinner Stainless Steel used due to low power x-ray generator	✓
Recyclable materials	✓
100% lead free	✓
Fewer production steps	✓
Reduction in weight	✓
Reduction in (transport) volume	✓
Less cooling required	✓
LED display instead of CCFL	✓
Reduced electronic components, less PCB's used	✓
Miniature LED lamp stack	✓



Reject Mechanism

Four lane flap and air blast option available, suitable for a wide range of product types and throughput speeds. Multi-lane rejects and airblast options reduces unnecessary rejected product wastage. Flap reject systems are commonly used for bulk flow applications. This way, instead of rejecting a full belt width, a much smaller amount of product can be rejected; minimising product waste, saving costs and improving productivity.

All reject systems have optional reject verification, ensuring that the faulty product has been rejected into the reject bin and verifying that the reject is working.



Air-blast reject system



Multi flap reject system

Specifications

Feature	Specification
Software	X33
Casing Material	304 stainless steel, system is lead free
Ingress Protection	Full IP69K high pressure wash-down protection (bearings are blast protected only)
Finish	180-240 Grit Brushed on main components
Connectivity Options	Ethernet connection at detector
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 5000 kg/hour (dependent on product and layer thickness)
Operating height	850mm, 950mm or 1050mm (+/- 50mm)
Maximum product layer	350mm (W) x 30mm (H), dependent on product
Cooling Method	Passive fan assisted internal cooling. No external cooling
Screen Display	10.1" 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
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, 400mm width
X-ray Generator	20W, 84kV, 0.25mA Beryllium
X-ray Beams	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	Two or Four lane flaps; or Five lane air-blast option
Reject Bin	Stackable food tray with viewing window as standard over reject area
System Conveyor	FDA and EU food use approved TPU conveyor belt, 0.37kW motor unit (IP69K)

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Printed in the UK