

X33 Series

Functionally Rich X-ray Systems



The X33 series x-ray systems use a single vertical x-ray beam and utilises new high sensitivity detector technology allowing the integration of a low power (20W) x-ray generator. With an improved user experience, sustainability credentials and highly-functional design, the X33 series is the most advanced development in inspection capability for food and pharmaceutical manufacturers. The X33 series provides the tools to assist with industry standard compliance like HACCP and is ideally suited to the inspection of small and medium sized packaged products.

Superior Product Safety

The X33 series x-ray systems deliver outstanding contamination detection of foreign bodies like glass, metal, mineral stone, calcified bone and high density plastics, even for products wrapped in aluminium foil or metallised film.

Maximum Uptime

The user friendly, icon driven intuitive interface ensures product menus can be set up or adjusted by line operators, without the

involvement of an engineer and automatic product set up can readily be completed within minutes.

Protect your Profitability

The X33 series x-ray systems offer not only foreign body detection but is also able to perform gross mass measurement for calculated portion control, ensuring product integrity. This combined model protects profitability and ensures product safety and quality simultaneously.

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Functionally Rich X-ray Systems

The X33 series of x-ray inspection systems offer outstanding foreign body detection and enhanced user experience through new and improved features and benefits including a significant reduction in power of up to 45% under typical operating conditions.

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
- Will typically inspect up to 300 products per minute (depending on product dimensions)
- Depending on pack size, faster line speeds are possible without compromising sensitivity
- 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

Flexibility / Safety

- 300mm and 400mm wide belt systems are available, with an increased aperture size of the reject receptacle to suit varying throughputs
- Available in two sizes (1,800mm and 800mm), enabling manufacturers with limited factory floor space 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
- 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 of a 100 watt x-ray system
- The X33 series is also inherently safe, reliable and sustainability has been increased providing x-ray inspection with a greener solution

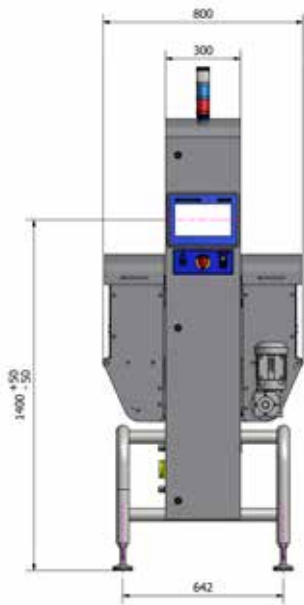
Design / Hygiene

- 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

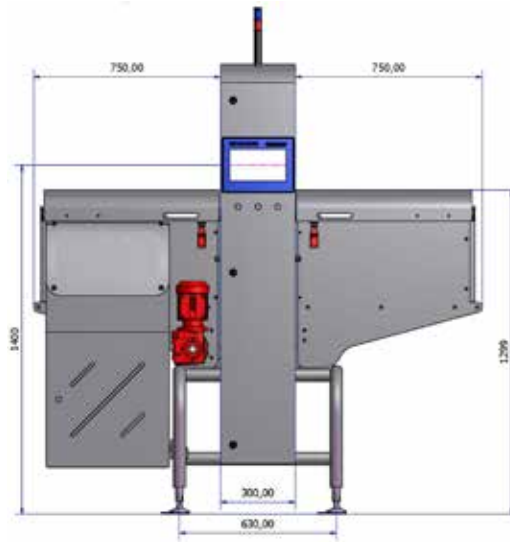
Audits / Verification

- 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

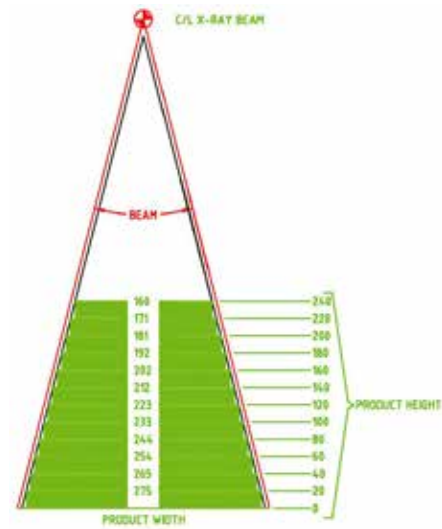




X3312 800mm short 300mm drawing front view



X3310 1.800mm long 300mm drawing front view



X3310 beam diagram with 300mm scan width

X33 Series Software Tools

The X33 series x-ray systems can perform contamination detection whilst simultaneously performing gross mass measurement, object remover and object tool on single lane applications.



Gross Mass Measurement

To check that the correct amount of product is present, the x-ray system compares each x-ray image of a pack with an image from a known good pack. If the calculated mass falls within a programmed tolerance, the pack is good. If it deviates, the pack will be rejected.



Clip Remover

The clip remover tool is used to mask out metal or dense clips on the end of packages so they do not give false rejects, such as a sausage product with metal clips or a loaf of bread with a metal tie, the tool will also reject any product with a missing clip.



Object Tool

A highly automated tool which makes for very easy setup, aimed at counting objects of the same type in shape and density in a pack which are clearly separated from one another. The object counting tool is used to ensure a product has no missing items, or to make sure there are not too many items within the pack. It can also be used to check for damaged items.

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.



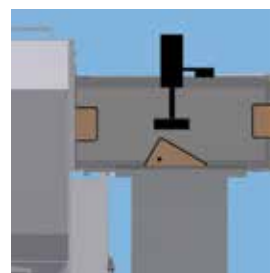
| | |
|---|---|
| Lower energy consumption | ✓ |
| Thinner Stainless Steel used due to low power x-ray generator | ✓ |
| Recyclable materials | ✓ |
| 100% lead free | ✓ |
| Fewer production steps | ✓ |
| Reduction in weight | ✓ |
| Reduction in (transport) volume | ✓ |
| Less cooling required | ✓ |
|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

Reject 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

Specification Table

| Feature | Specifications |
|------------------------|---|
| Adaptive Software | X33 |
| Casing Material | 304 stainless steel |
| Finish | 180-240 Grit Brushed on main components |
| Connectivity Options | Ethernet connection at detector |
| Conveyor Speed | Typical line speeds 10-60 m/min (dependent on product dimensions). |
| Lane Configurations | 1 lane |
| System Lengths | 1,800mm or 800mm options |
| Throughput Rate | Typical throughput rates of up to 300 products per minute (dependent on product dimensions). |
| Operating Height | 850mm, 950mm or 1050mm (+/- 50mm) |
| Maximum Product Height | 250mm |
| Cooling Method | Passive fan assisted internal cooling. No external cooling required. |
| 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 | 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 | 300 or 400mm |
| X-ray Generator | 20W, 84kV, 0.25mA Glass or optional Beryllium |
| X-ray Beams | Single |
| X-ray Emissions | < 1uSv/hr |
| X-ray Protections | Fully contained emissions within construction, lightweight lead-free blue curtains at tunnel apertures. |
| Reject Type | Pusher and Airblast |
| Reject Bin | Lockable reject bin with viewing window as standard. |
| System Conveyor | FDA and EU food use approved TPU conveyor belt, 0.37kW motor unit, 36mm diameter end rollers. |
| Guide Rails | Optional infeed or full length guide rails up to reject station. 10mm round bar style. |

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