Thermo Scientific Xpert C400
X-Ray Inspection System

- Detects a range of contaminants
- Verifies product integrity
- Modular, reliable, robust design

high performance contaminant
detection and product inspection
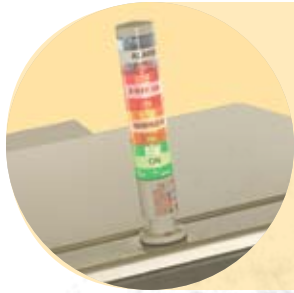## for packaged products

The Thermo Scientific Xpert x-ray system offers innovative design and advanced technology. Its application flexibility makes it easy to install and use in many different applications.

Thermo
S C I E N T I F I C

Thermo Scientific Xpert

Foreign object detection, product integrity, and mass estimation

Features & Benefits

- High resolution and sensitivity detectors for state-of-the-art performance
- Suite of inspection algorithms for reliable detection and minimal false rejects
- High reliability x-ray sources with long life expectancies
- Food safe materials employed for areas close to the products being inspected
- Modular, robust mechanical design improving reliability and facilitating service
- Built-in, remote monitoring for quick problem determination

Safety is assured via an LED light pole, multiple e-stops, X-ray key switch, inspection area door lock and safety interlocks on all doors.
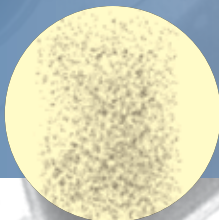
Conveyor belt changes in minutes. Modular design with many infeed/outfeed lengths, rejecters, bins, and shields.

No lead X-ray shielding curtains on fully adjustable and removable frame for safety, flexibility and easy maintenance.

Popcorn	Fruit cups	Cracker box	Toothpaste tube	Foil candy bag

x-ray system

The Thermo Scientific™ Xpert™ inspection system enables compliance with worldwide HACCP and retailer food safety requirements as well as offering X-ray image analysis for other critical quality verifications. It is a high performance, yet very robust platform that can be utilized to immediately identify problems so you can take fast corrective action.

Protected, large touchscreen for washdown and durability.

Watertight USB port for data import and export. Ethernet connection also built in.

High-quality, stainless-steel air conditioning cooling. Wide operating temperature range and IP65 rating.

Air blast and pusher rejection options. Lockable reject bins with reject verification and bin full photoeyes, too.

Options to Customize Your System

- Extended length in/out feed conveyors
- Reject mechanisms
- Single or dual reject bins
- Lockable system wheels
- Guiderails
- Barcode readers
- Low or high x-ray power sources
- Stainless steel IP65 rated air conditioner
- Radiation safety meter
- Advanced weight and virtual containment software
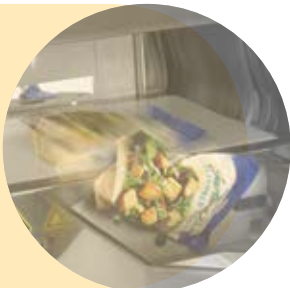- Customized inspection software
- UL508 compliance
- Spare parts kits

Sensitivity, Durability, Reliability

With industry leading resolution and detection intelligence the Xpert system can find contaminants other systems miss. This means your production shipments are safe and annoying false rejects are minimized. To address the TCO (Total Cost of Ownership) of X-ray systems the Xpert system was designed to be simple, modular, flexible and insensitive to its environment. To minimize training, a five-step, Easy Set-Up process was created and a simplified, password protected operator interface was designed. To facilitate application optimization and troubleshooting advanced software capabilities like real-time software filter adjustment, reject image storage/ analysis, I/O and source/detector testing and full machine data logging are included. The result is the first X-ray inspection system that truly is an expert in finding and fixing food safety and quality problems.

Product Assurance Services & Solutions (PASS)

Through the Thermo Scientific Product Assurance Services & Solutions (PASS) program, we can thoroughly test every suspected product for contaminants so that you can continue producing products that your consumers rely on! Learn more at www.thermoscientific.com/PASS.

Raisin boxes

Breath mint pack

PASS
Product Assurance Services & Solutions

Thermo Scientific Xpert C400 X-Ray Inspection System

Application and X-Ray Specifications

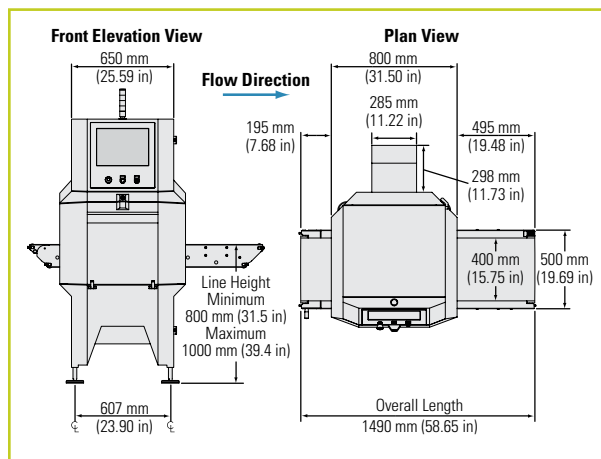|	
X-Ray Power	70 kV, 1.2 mA (84 W) or 80 kV, 2 mA (160W)
Detector Scan Rate	Up to 2800 lines/second
Detector Resolution	0.8 mm standard, 0.4 mm optional
Detection Algorithms Available	Binary, Contrast, Gradient, Groups, Morphology
Inspection Algorithms Available	Weight, Count, Grid and customizations
Aperture Width and Height	See beam coverage drawing
Belt Speed Range	10 m/min to 80 m/min (33 ft/min to 263 ft/min)
Multilane Operation	Up to 8 lanes
Conveyor Heights Available	800 mm to 1400 mm (31.5 in to 55 in)
Conveyor Lengths Available	1.5 m (4.9 ft) standard, others available on request
Belt Material	FDA approved urethane
X-Ray Curtain Material	Proprietary no-lead material
Safety/Security Features equipped	X-ray power key, emergency stops, radiation curtains, LED X-ray imminent/on lights, all doors with magnetic interlocks
Human Machine Interface (HMI)	15-inch diagonal touchscreen with protective cover
Interface Languages Available	English, Spanish, Italian, French, German, Chinese; Others available on request

Environmental, Electrical and Operational Specifications

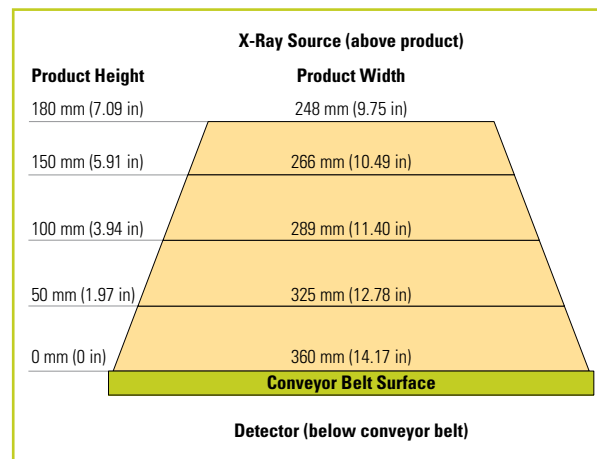|	
Operating Temperature	+5°C to +40°C (+41°F to +104°F)
Machine Cooling	Built-in 2083 BTU (610 W) cabinet airconditioner
Relative Humidity	20% to 90% non-condensing
Electrical Input	190 to 240 VAC, 50/60 Hz, 20-amp service
Digital Outputs	4 available
Digital Inputs	6 available
USB Port	2.0, watertight port on outside of machine
Network Port	Ethernet
Compressed Air (for rejection devices)	80 psi to 100 psi (5.5 bar to 6.9 bar)
Machine Weight (standard model)	415 kg (915 lbs)

Conformance Tests and Certifications

Radiation Safety Conformance	FDA CFR 21 part 1020.40, UK IRR 1999, RED act (contact factory for other regional certifications)
Export/Safety	CE, UL or CSA 508A on request (verified by ETL)
Intrusion Protection Rating	IP 54 or IP65

Thermo Scientific Xpert C400 X-Ray Inspection System Dimensions

X-Ray Inspection System Beam Geometry

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