Datasheet

Eagle™ Pack 400 HC

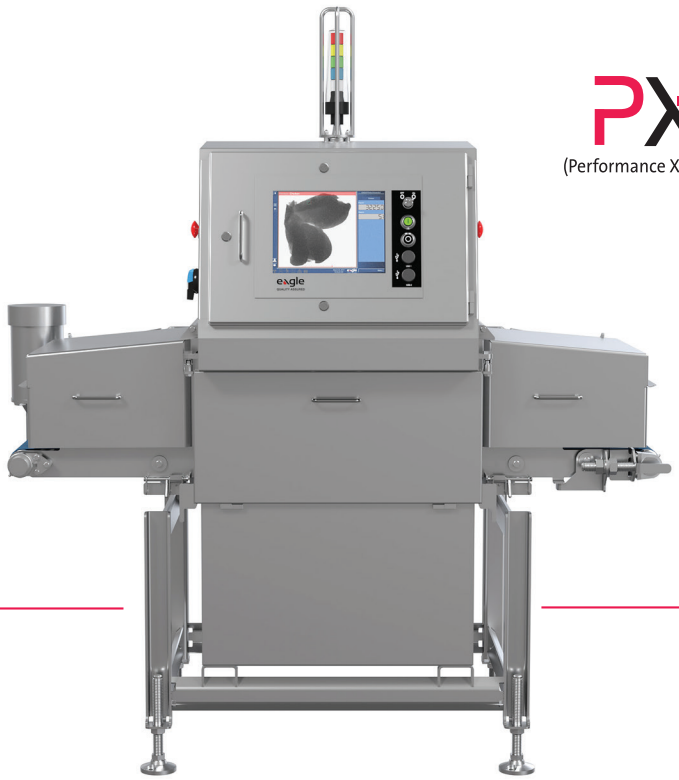
X-ray Inspection System

The Pack 400 HC is a high performance x-ray inspection system designed for easy and efficient cleaning in the harsh wash-down environments of the packaged meat, poultry, dairy and other food industry segments where daily sanitization of equipment is mandatory.

The requirements of the food processing industry are highly demanding with the need for precise contaminant detection critical for compliance with stringent retailer specifications and food safety regulations. The Eagle Pack 400 HC x-ray inspection system has been designed to meet strict industry standards required for machine construction and sanitation for wet food environments making it ideal for inspecting fresh or frozen packaged products.

The Pack 400 HC is compliant with IP69 ingress protection specifications, unobstructed sight lines and contoured surfaces minimize potential material harborage areas ensuring fast visual inspection and cleaning. The entire machine can be disassembled by a single person in a matter of minutes for thorough sanitation and quick reassembly to maximize production uptime. Furthermore the Eagle Pack 400 HC is built to strict mechanical and electrical machine safety standards with Hazard Based Risk Assessments available for each machine produced.

The Pack 400 HC comes equipped with Eagle's SimulTask™ PRO image processing software, providing superior detection and automatic rejection of foreign body contaminants such as metal, glass, stone, bone, and high density plastics and rubber. Additionally, it can accurately evaluate fill levels, check the item's mass, count its contents, look for missing items, broken pieces, or unwanted voids.



PXT™
(Performance X-ray Technology)

eagle
QUALITY. ASSURED.

Eagle™ Pack 400 HC

X-ray Inspection System

Eagle™ Pack 400 HC Features

Sanitary system thrives in harsh wash-down environments with its robust construction designed to NAMI standards	✓
Superior detection of contaminants including calcified bone, metals, glass and stones	✓
SimulTask™ PRO image processing system for unparalleled detection with simple touch screen operation	✓
Quick disassembly by a single person for fast and thorough sanitation routines to minimize production downtime	✓
Safe machine design to performance level PLd (EN13849) compliant operation with on-screen status and diagnostics	✓
Eagle Repository™ stores and displays production information, add TraceServer™ for network based data and image transfer and storage	✓

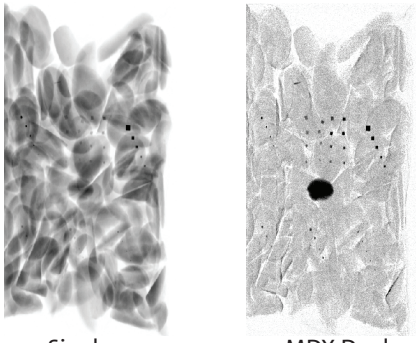
SimulTask™ PRO Optimized for Inspection

Eagle's SimulTask™ PRO user proven image processing system is optimized to inspect for a variety of contaminants ranging from bone, metal, glass and stone simultaneously, without performance degradation, ensuring all applicable contaminant types are detected. Additional inspection checks further ensure a quality product is produced, these include missing components, void and clip detection, fill level, shape and position inspection.

SimulTask ™ PRO easy to use touchscreen operation.

Material Discrimination X-ray (MDX) Technology Clears Up Busy Images

Locating hard to find contaminates through busy product images is a common and very difficult challenge. Material Discrimination X-ray (MDX) technology from Eagle clears up those images to reliably identify contaminants and isolate the non-conforming product. Having the best technology options available such as MDX can be critical to reach your inspection goals.

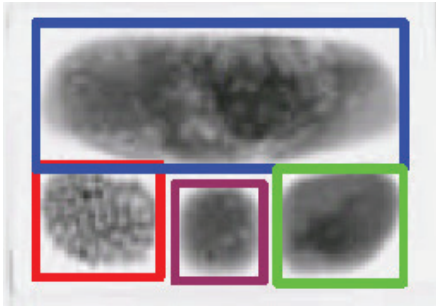


Single Energy | MDX Dual Energy

MDX can locate hard to find golf ball fragments inside potato wedges.

Saving Product Delivers Profits

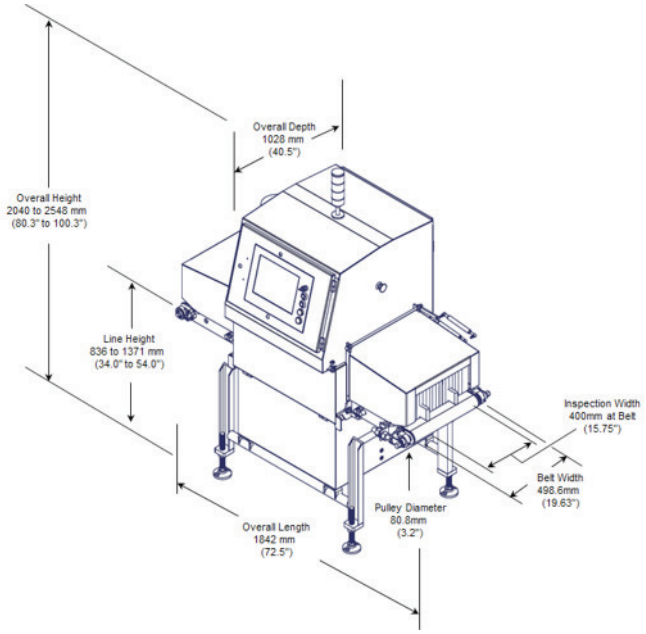
Eagle pioneered the use of x-ray for measuring the mass of in-line food products providing checkweighing functionality to prevent costly product giveaway. Traditional multi-zone operation is available complete with EU tolerances. Systems can also be used for zonal measurement if the weight of multiple areas within a package needs to be measured and monitored. Statistics including count and reject by zone, mean value correction, giveaway calculations and more are actively tracked to further optimize your process.



SimulTask PRO™ Zonal inspection ensures all components are placed correctly, contaminant free, with the exact amount delivered.

Beam Geometry Diagram

BEAM WIDTH	PACKAGE HEIGHT
237 mm (9.3”)	158 mm (6.25”)
292 mm (11.5”)	101 mm (4”)
341 mm (13.4”)	50 mm (2”)
389 mm (15.3”)	BELT



Designed for Hygiene, Built to Last

Machine uptime is critical for a profitable operation. For applications where environments are harsh and cleaning routines extreme, the machine must be designed for hygiene but built to last. The Eagle Pack 400 HC integrates proven design principles from respected industry authorities including NAMI, NSF, ANSI, and others, delivering a system which can be quickly disassembled, thoroughly cleaned and reassembled by a single person to save time, labor and maximize uptime. A cornerstone of the Pack 400 HC is its heavy duty open conveyor design which delivers fast belt removal and unparalleled access to all surfaces for effective cleaning while being extremely robust to survive the rigors of everyday production.

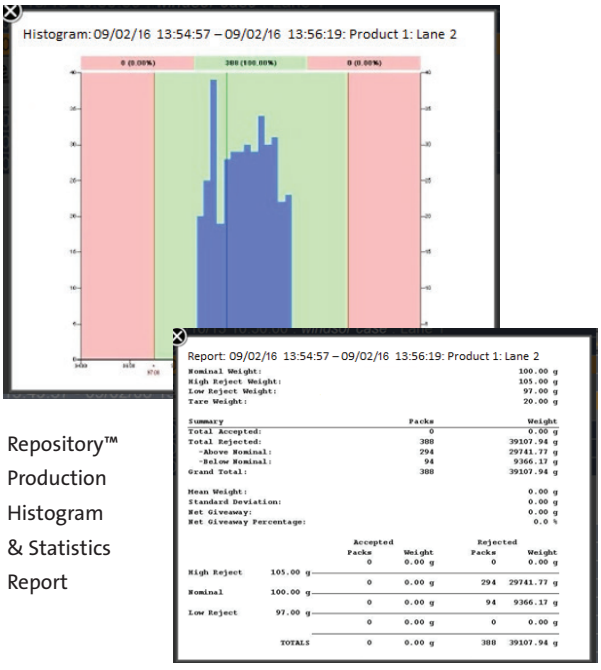
Quick release system enables fast machine disassembly to reduce cleaning times.

Safety is Everyone’s Job

Machine safety is an important criteria when selecting the right supplier, at Eagle, recognized electrical and mechanical safety design standards are integrated into all of our products. They meet the criteria for Category 3 (EN954) and Performance Level “d” (PLd, EN13849) safety circuits including full visualization of safety system status for the operator through the user interface. A Hazard Based Risk Assessment is also available to integrate into a users risk management and safety program .

Application Ready

The Pack 400 HC is ideal for a wide variety of applications where sanitary design, robust construction, impeccable detection and high throughput are required. To record and document the inspection process Eagle Repository™ is supplied as standard for ease of storing, viewing and transferring production information. Optional TraceServer™ can be provided which delivers enhanced machine monitoring, data transfer and storage via external database for one or more Eagle x-ray machines.



Repository™ Production Histogram & Statistics Report

Specifications

Model	Eagle™ Pack 400 HC
Packaged Product	Fresh, refrigerated or frozen packaged foods up to 6” (152 mm) tall. See beam geometry for maximum product heights and widths
Inspection Modes	Detection modes for contaminant, missing item, clip, void and premium, plus modes for mass/weight, shape/position, fill level and filler feedback
Mass/Weight Module	2, 3, 5 Zone operation; total weight, EU tolerance, selective area weight; moving average and automatic mean correction; total accepts and rejects by zone for; mean, standard deviation, net giveaway, % giveaway
Remote Diagnostics	Radmin and TeamViewer™ service tools supplied as standard for remote machine diagnostics and product set-up services
Conveyor	
Length & Width	Available lengths: 1828 mm (72”), 2438 mm (96”) & 2895 mm (114”); Conveyor width: 498 mm (19.6”); Beam width at belt: 400 mm (15.75”)
Line Heights	836 mm (34”) to 1371 mm (54”); additional heights upon request
Speed Range	21 to 61 MPM (70 to 200 FPM)[1]
System	
Display & Operating System	15” TFT color touch screen, 250GB memory, Windows Embedded 8 OS, Eagle SimulTask™ PRO imaging software
Safety	(2) E-Stops, LTO Main Disconnect, Category 3 (EN954), PLd (EN13849) safety circuit with system visualization via machine user interface. A Hazard Based Risk Assessment compliant with ISO EN 12100:2010 is available
Ingress Protection & Finish	IP69 Ingress protection, type 304 stainless steel #4 finish enclosure, surface finish less than 32u-inch RA. Designed to NAMI Sanitary Standards; NSF / ANSI / 3A 14159-1 and 3
Operating Range	0°C to 40°C (32°F to 104°F) 25% to 90% relative humidity non-condensing
Power Requirements	230 VAC +10/-15% single phase 50/60 Hz, 16A Fused
System Cooling	Water cooled; plant water supply ≥7.6 LPM (≥2.0 GPM), 13°C to 21°C (55°F to 70°F) required
Compressed Air	Air not required for base system; optional reject systems may require 5.5 bar (80 psi), 3/8” (9.5 mm) line, dry & filtered air supply
Belt Specification	Blue homogeneous food-grade urethane non-wicking friction belt; product contact temperature range -29°C to 99°C (-20°F to 210°F); compliant with regulation 21CFR of the FDA, EC 1935/2004, & EU 10/2011 for transport of unpackaged foodstuffs
X-Ray Subsystem	
X-ray Generator	EA100 (84kV/1.2mA), EA420 (84kV/5mA), HR7 (140kv/1mA), HR9 (140kV/3mA)
X-ray Type & Emissions	Single beam; x-ray emissions <1 µS/hr; compliant to 21 CFR 1020.40, 21 CFR 179.21, EURATOM EU nationalized standards
Detectors & Maximum Speeds	0.4 mm, 0.4 mm high performance, 0.8 mm, 1.2 mm pitch single energy detectors or 1.2 mm dual energy detector[2]. Maximum speeds: 0.4 mm standard detector - 26 MPM (85 FPM); 0.4 mm high performance detector - 52 MPM (170 FPM); 0.8 mm, 1.2 mm single energy, & 1.2 mm MDX dual energy detectors - 61 MPM (200 FPM)[3]
Communications	(2) USB 2.0 ports, (1) Ethernet 10/100/1000 mbps port, (1) RS232 serial port; (1) Ethernet-IP Fieldbus interface port optional
I/O	(4) Input signals, (4) reject output signals, (5) output signals; 5 PLC monitoring signals for: reject detect, system processing, system calibrating, fault condition, x-rays on
Options	
Reject	24 VDC signal, air blast, side push arm, other rejects available upon request
Software & Accessories	TraceServer™ software, Ethernet-IP fieldbus interface, reject bins, product guides, reject verify, bin full & low air pressure sensors, audible alarm, general purpose water chiller

[1] Maximum speed varies depending on the type generator and detector selected; contact Eagle Product Inspection for further details & assistance.
[2] Dual energy detectors for use with HR7 or HR9 generators only.
[3] Maximum speeds listed are based on use with the highest power generator available for the listed detector, if voltage (kV) or current (mA) are reduced a corresponding reduction in speed will occur, contact Eagle Product Inspection for further details & assistance.

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ISO 9001:2015 BUREAU VERITAS Certification

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