

Accurate fat/lean ratio in every batch

SensorX Modus provides ground beef and pork processors with stable, reliable fat/lean ratio measurements, precise weight measurement, and metal detection capabilities for contaminants as small as 2 mm in the ground meat product stream, all in a single machine.

X-ray delivers precise, calibration-free fat/lean readings unaffected by temperature or product shape. Detection accuracy is unaffected by material temperature, product shape, or grind size. SensorX Modus is built on the proven SensorX X-ray platform and 15 years of fat/lean measurement expertise.

When end products consistently match customer-specified fat/lean ratios, customer claims and complaints are minimized. The optional recipe guidance for manual lines directs operators on how much fat or lean to add to batches, so they meet recipe specified fat/lean ratios. Additional full automation of recipe control and mixing is achieved with integrated AXIN Preparation Process Solution. SensorX Modus integrates with SCADA or other recipe control systems with OPC UA protocol.

If metal is detected in the ground meat, The SensorX Modus stops to allow the operators to remove section of contaminated product from the outfeed conveyor, helping to optimize food safety. The bone fragment report ensures supplier benchmarking and upstream process monitoring can be backed by provable detail.



✦ The stable X-ray technology of SensorX Modus is simple to operate and provides consistent and accurate results.

Why Choose SensorX Modus?

Integrated contaminant detection

Metal detection and bone-fragment counting in the same unit – capability the NIR-based FatScan did not have

Recipe guidance

Optional recipe guidance feature – Cuts operator guesswork and keeps output on-target without extra training

Backed by SensorX and global Service

Shares core technology with trusted SensorX platform and JBT Marel's service network

Accurate stable chemical lean measurement in every batch

X-ray delivers precise, low-calibration fat/lean readings, unaffected by temperature or product shape

Calibration free

Built-in beef and pork calibrations simplify species changeovers, reducing setup time and maximizing production efficiency.

Drop-in replacement

1:1 footprint compatibility with FatScan and EagleEye for a smooth changeover

Reduced claims risk

Consistent and precise batch quality reduces disputes and claims from inaccurate fat/lean measurements



SENSORX MODUS SPECIFICATIONS

Product	Ground fresh or frozen beef or pork in stream with maximum thickness of 100 mm (3.9in), scan width 450 mm (17.7 in)
Throughput max.	Fresh Product: up to 20,000 kg / hr (approx. 40,000 lbs / hr) Frozen Product: 9,000 kg / hr (approx. 20,000 lbs / hr)
Belt speed	Fixed 0.8 m / s
CL measurement accuracy	Fat: $\pm 0.5\%$ RMSEP (1SD) $\pm 1\%$ at 95% reliability (2SD) – both for batch size over 100 kg (220.5 lbs.)
Weighing accuracy	3% from the actual weight for product amount over 100kg
Additional parameters	Moisture, protein
Ferrous metal and stainless steel	> 2 mm with 99% reliability Other metals: Metals heavier than iron are detected with similar accuracy
Bone fragment reporting	Reports on fragments > 5 mm, detected with 95% reliability
Dimensions (WxLxH) [mm]	1055x2078x1943

Seamless line installation and integration

SensorX Modus was developed to replace obsolete fat measurement systems. With the same footprint as the FatScan and EagleEye, the SensorX Modus seamlessly fits into prepared food grinding lines.

It's compact design and titling mechanism, the SensorX Modus fits easily behind grinders on any production or preparation line, and can be wheeled out for hygienic purposes access.

Accessories

Recipe Guidance

The optional Recipe Guidance provides operators, via a workstation screen, with live fat/lean percentages, weight, and precise instructions on what material needs to be added to reach specified batch targets

For customers replacing an Eagle Eye or other NIR measurement unit without a full line-control/SCADA system.