



WE CRAFT ASSURANCE



## P-SERIES VISION INSPECTION SYSTEMS



# Automated In-Line Vision Inspection for Processed Meat and Poultry



The KPM Analytics P-Series Vision Inspection Systems bring cutting-edge automation to the meat and poultry industry. These systems are designed to automatically classify and sort meat and poultry products based on their dimensional properties and visual characteristics, examining both the top and bottom surfaces. They operate at full-line speeds, ensuring high efficiency in the production process.

The P-Series Systems incorporate the latest advancements in vision inspection technology, making use of multi-spectral imaging and artificial intelligence (AI) capabilities. These technologies empower packers and processors to fortify their quality inspection and food safety programs. With the ability to detect foreign materials and ensure precise sorting, these systems contribute to maintaining the highest standards in product quality and safety within the meat and poultry industry.

## Redefine Quality

- Achieve 100% product inspection with accurate, consistent, and objective measurements.
- Reduce labor costs and remove human error from your quality assurance process.

## Protein Tailored Solutions

- Designed and proven to meet the sanitary & operational demands of meat and poultry processors.

## Data-Driven Efficiency

- Comprehensive data collection at all stages of processing fuels effective decisions.

## Cut Waste

- Balance quality and production efficiencies by rejecting only critical defects from the production flow.
- Respond to production issues as they happen.
- Leverage production data for better decisions.

## CONFIGURABLE SOLUTIONS FOR WHOLE, PORTIONED, AND PROCESSED PROTEIN PRODUCTS



# End-to-End Process Control & Food Safety

P-Series and other KPM custom solutions collect data, monitor process performance, and control product quality at each stage of production.



**LEGEND**

- Custom Solutions
- P-Series Solutions

## CORE P-SERIES SYSTEM COMPONENTS



INTEGRATED CONTROL SYSTEM



CAMERAS & LASER



LIGHTING



CONVEYOR & PRODUCT HANDLING



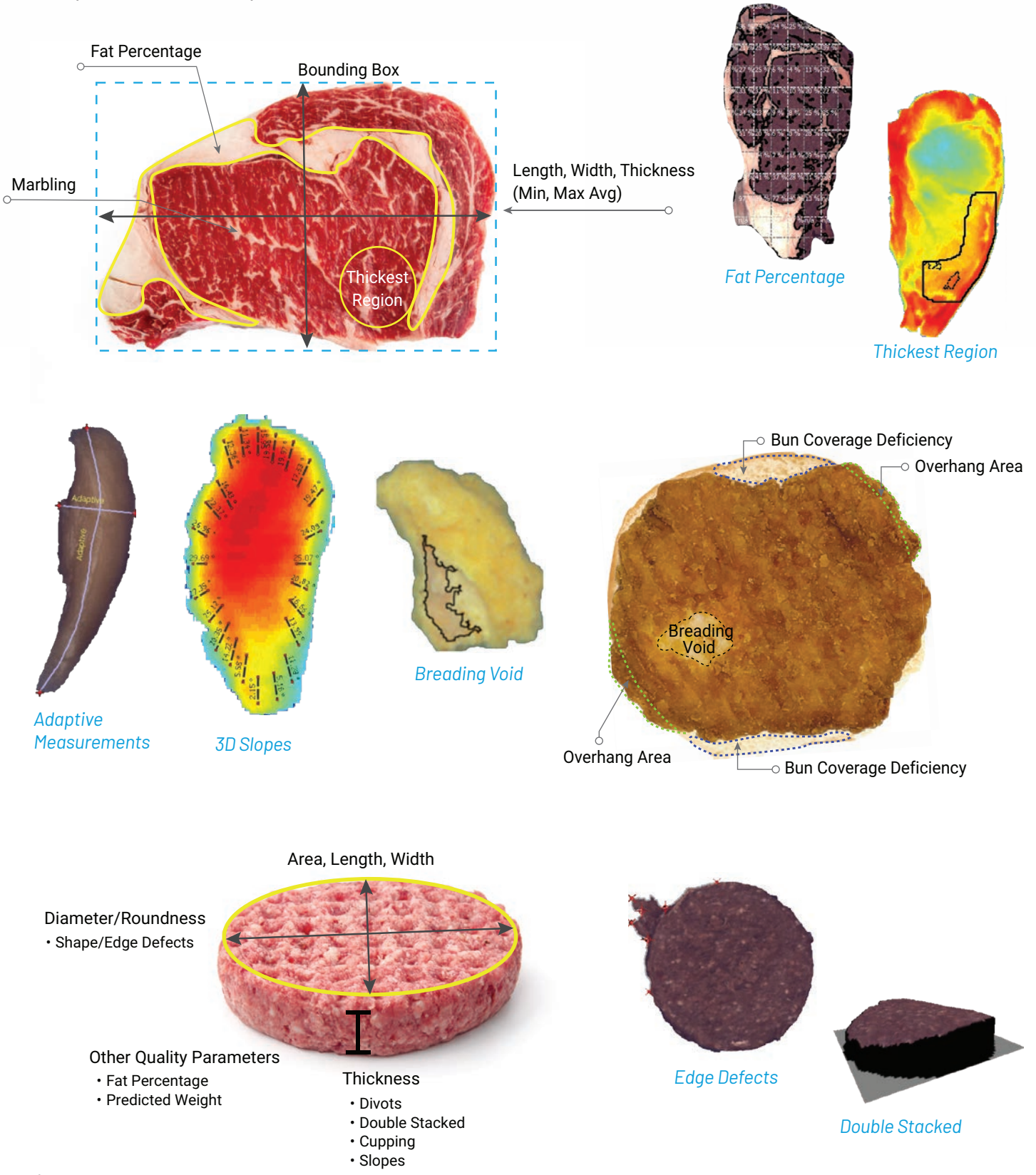
REJECTION & SORTING



SOFTWARE & DATA

# Measurement Capabilities

P-Series Systems are available with an extensive product measurement library developed through years of experience working with meat and poultry processors. Specialty tools allow users to create and configure measurements that suit their product needs. Examples include:



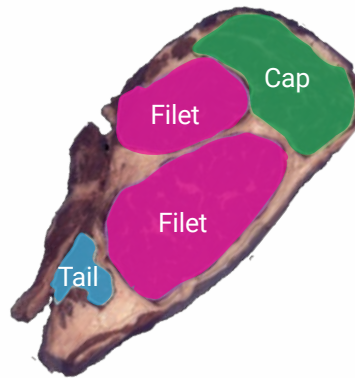
# AI-Driven Inspection Innovations

The P-Series System uses statistical analysis and deep learning to expand inspection capabilities and increase ease of use.



## ANOMALY DETECTION

Trained on your product to identify anomalies such as defects and foreign materials.



## FEATURE ANALYSIS

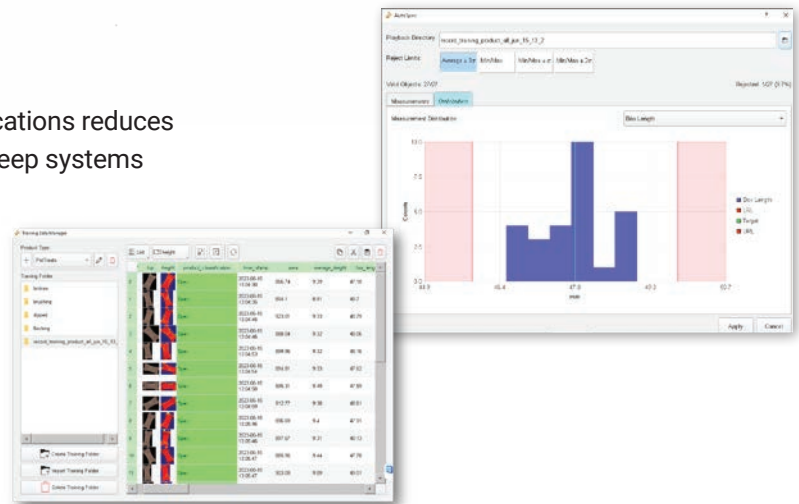
Identify and measure elements of your product.

## SIMPLIFY SETUP AND MAINTENANCE

Automated learning of product features and specifications reduces complexity and promotes continuous operation to keep systems running longer with less work.

## TRAINING AND DATA HANDLING TOOLS

Support deployment and configuration with a purpose-built training environment.



# Foreign Material Detection

Expand your capabilities to detect low density defects that can't be found by x-ray such as foils, films, plastic, paper, and compositional defects.

## Non-Visible Spectrum

Infrared and hyperspectral imaging analyze properties like moisture and oil content to enable advanced foreign material detection.

## Visible Spectrum

High-resolution calibrated cameras detect foreign materials on top and bottom surfaces.

## Advanced Analysis

KPM's advanced measurement and AI tools are able to pick up minor variations in color, texture, size, and shape patterns.



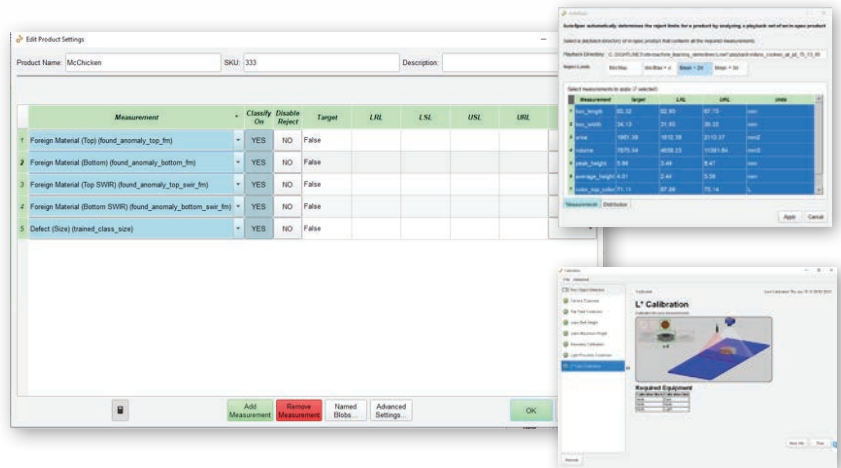
# measura<sup>®</sup>

## SOFTWARE SOLUTIONS

The measura<sup>®</sup> software suite enables simple setup and operation of the P-Series System. Easy to use and intuitive, the measura<sup>®</sup> software suite collects real-time quality metrics and generates reports on product trends and production performance, helping companies make data-driven quality control decisions with confidence.

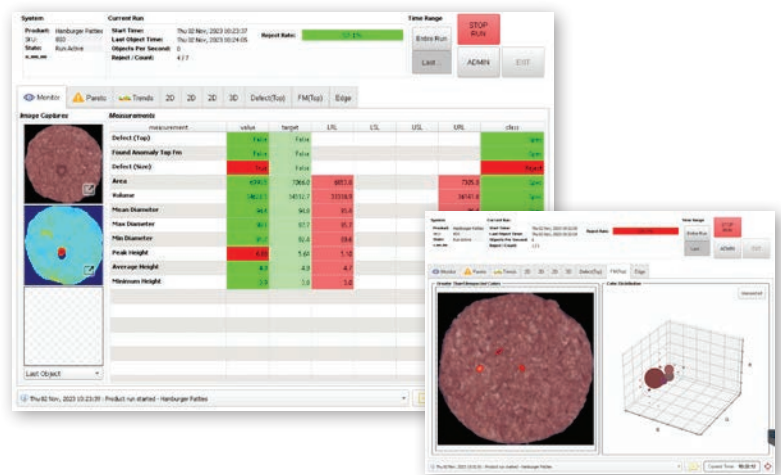
### measura<sup>®</sup> toolbox

Dedicated tool to configure products and measurements and calibrate the system.



### measura<sup>®</sup> inspection

Control and monitor the operation of the vision system from the user interface. Displays real-time feedback to operators with trends, lane data, defect summaries, and more.



### measura<sup>®</sup> dashboard

Visualize key production metrics throughout your facility in real time and alert operators to issues as they happen.

### measura<sup>®</sup> analytics

Automated data extraction facilitates the creation of valuable reports, available on-demand or via scheduled delivery. Additionally, data can be collected from multiple production lines and various facilities to provide a comprehensive overview of your operations.

# Utilizing Data to Modernize Your Organization

## DATA COLLECTION

P-Series Systems collect objective product measurements and extensive process metrics, helping companies establish and maintain optimal standards for quality.

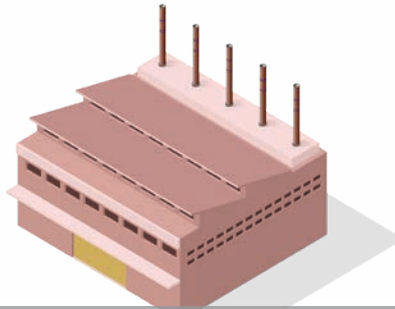
## DATA VISIBILITY

The data collected by the P-Series System helps support the efforts of various groups within an organization, including:



FLOOR LEVEL

Enable operators on the processing floor to make decisions on quality and food safety.



PLANT LEVEL

Determine root causes to process issues and formulate plans for improvement.

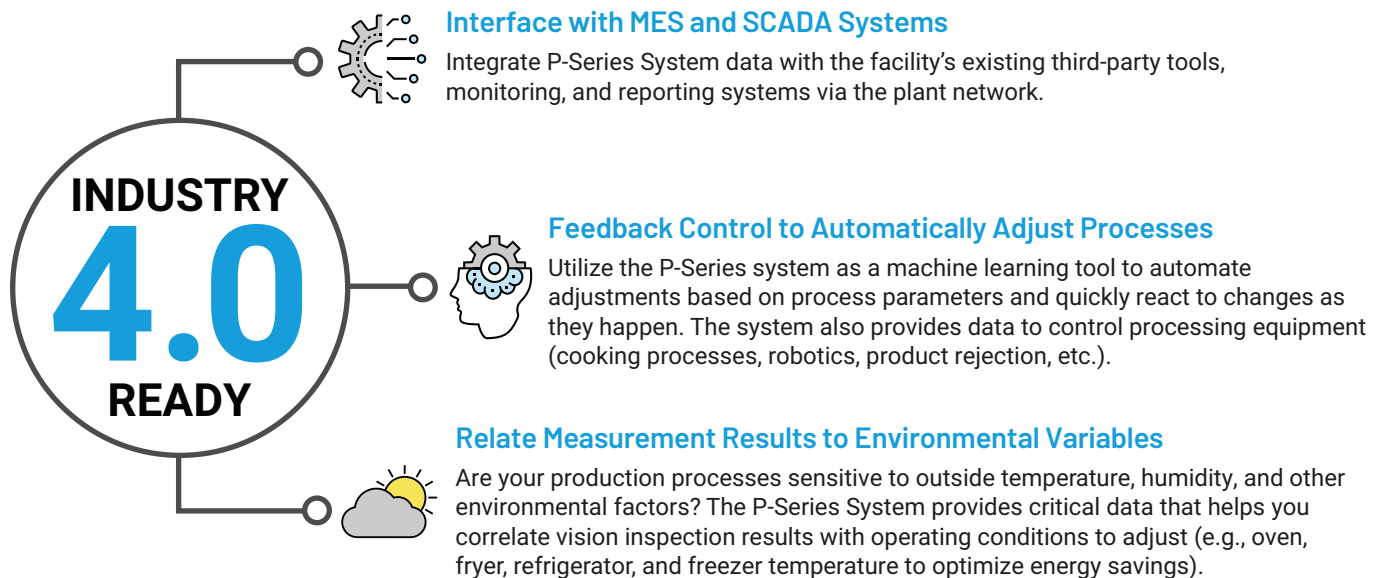


CORPORATE LEVEL

Analyze performance trends company-wide; aids in the decision to invest resources that correct global challenges.

## DATA INTEGRATION

The P-Series System integrates seamlessly with existing quality control platforms to support Industry 4.0 efforts.



## COMPANION PRODUCTS

As you consider the P-Series System for your organization, KPM Analytics is pleased to offer these companion products, all of which offer robust sanitary design features tailored for use in food production facilities. These options are thoughtfully crafted to further support your food quality and safety programs.



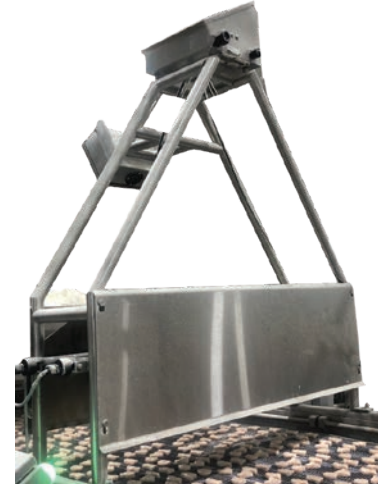
*TheiaVu® P-Series Off-Line Vision Inspection System*

A cost-effective offline vision inspection system used for quality sampling of meat and poultry products.



*Smart Vision Works SiftAI® Foreign Material Detection System*

Seamlessly integrates with existing bulk material flows, utilizing AI to effectively identify challenging items like hair, plastic, cardboard, and other difficult-to-detect indigenous materials.



*Over-Line Vision Inspection System*

Our Over-Line systems are mounted above your existing production line for process monitoring at full line speed. Implementation is faster and easier making this a great reduced-cost option for 100% inspection.

## CUSTOMIZATIONS AND OPTIONS

Available custom configurations for various applications.

### Customizations

- Camera configurations
- Rejection systems
- Top and bottom imaging
- Conveyor width
- Hygienic/sanitation options

### Options

- Dashboard
- Clean in place
- Cooling
- Metal detector integration



*Belt Lifter for Cleaning in Place*



*measura® Dashboard*

### KPM Analytics

8 Technology Drive | Westborough, MA 01581 USA  
Phone: +1 774.399.0500  
www.kpmanalytics.com | sales@kpmanalytics.com

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### Sales and service benelux

M.C. TEC  
Distributiestraat 73 | 4283JN Giessen, Netherlands  
Phone: +31 0183 445050  
www.mctec.nl | info@mctec.nl

