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separator 4.0

WE catch THEM ALL

New and improved, the Sherlock Separator 4.0 takes whole potato sorting to the next level.

CIT®
chemical imaging technology

www.insort.at

The Most Reliable Three-Way Sorting Solution!

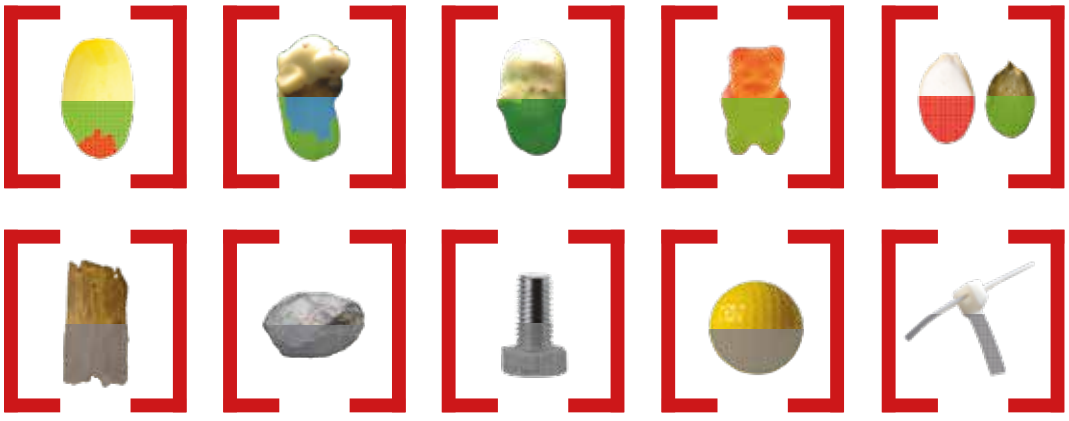
THE SHERLOCK SEPARATOR 4.0 IS THE NEXT GENERATION OF THE MOST RELIABLE THREE-WAY SORTING SOLUTION FOR WHOLE POTATOES.

With advanced CIT® 3rd Gen technology, high-resolution RGB cameras, real-time AI, and optimized design, it offers unmatched detection reliability, precise sorting, and increased yield. Combined with the Separator Rejection System and Automatic Peeler Control, it ensures maximum foreign body detection, efficient data management, and minimized operating costs. The ultimate solution for sorting by color, shape, and chemical defects.

Learn more

WE catch THEM ALL

SHERLOCK SEPARATOR 4.0 IS SPECIFICALLY DESIGNED FOR WHOLE POTATOES. WE ARE READY TO TAKE ON ANY CHALLENGE AND LOOK FORWARD TO SPEAKING TO YOU ABOUT YOUR REQUIREMENTS.



- Detection of foreign bodies
- Detection of color defects
- Detection of shape defects
- Detection of chemical defects (e.g. sugar ends, glassiness)
  Patent granted
- Peel detection (repeel function)
- Integrated peel scanner
- 3-way and 4-way sort
- Separator rejection system
- Sorting by size
- Size statistics
- Defect statistics
- Reject statistics
- Remote access

CHEMICAL IMAGING TECHNOLOGY

CIT® Gen3 - THE MOST ADVANCED SENSOR TECHNOLOGY

POWERED BY THE LATEST GENERATION OF CIT® (CHEMICAL IMAGING TECHNOLOGY) AND HIGH-RESOLUTION COLOR CAMERAS, EVEN THE SMALLEST FOREIGN BODIES AND PRODUCT DEFECTS ARE DETECTED AND SORTED WITH UNMATCHED ACCURACY.

Unlike conventional optical systems like lasers, cameras, or X-ray, CIT® analyzes the chemical composition of each product in real time—ensuring maximum reliability, regardless of product type, defect, or seasonal variation. No constant operator adjustment is needed. Just consistently precise sorting.

InlineFOODLAB 4.0

THE BEST SUPPORT FOR YOUR QUALITY MANAGEMENT

InlineFOODLAB 4.0 DELIVERS REAL-TIME CHEMICAL AND QUALITY DATA DIRECTLY FROM THE PRODUCTION LINE.

It enables accurate detection of key metrics like dry matter, rancidity, amygdalin, oil content, and Brix levels, alongside color, shape, size, and foreign material analysis with full image documentation.

Integrated via OPC UA, it ensures secure data exchange with customer systems. Remote access and maintenance are supported through a cyber-secure cloud solution developed with SECOMEA.

Its high-frequency measurement (up to 400,000 data points/hour) captures natural product variability more precisely than traditional sampling – empowering quality teams to optimize raw material usage, reduce rework, and prevent recalls.

ARTIFICIAL INTELLIGENCE

APPLIED IN REAL–TIME

SHERLOCK HYPERNOVA REVOLUTIONIZES THE SORTING PROCESS, EMPLOYING ARTIFICIAL INTELLIGENCE THROUGH THE MOST SOPHISTICATED DEEP NEURAL NETWORKS TO INHERENTLY DETECT, LEARN, PROCESS, AND OPTIMIZE DATA IN REAL TIME.

This enables the identification of even the minutest visible defects, as well as those invisible to the human eye, with unparalleled speed, allowing for their removal from high-speed product streams.

This groundbreaking technology unveils new horizons in applications and performance tiers for food processors, setting a new paradigm in precision and efficiency.

CI-LED

INTELLIGENT LIGHTING FOR MAXIMUM SORTING ACCURACY

WITH CI-LED, INSORT INTRODUCES A COMPLETELY NEW LIGHTING SYSTEM FOR FOOD SORTING. THIS LED-BASED TECHNOLOGY REPLACES TRADITIONAL HALOGEN LAMPS AND REDUCES THE ENERGY CONSUMPTION OF INFRARED LIGHTING BY UP TO 80% – WHILE MAINTAINING EXCEPTIONAL LIGHT STABILITY AND CONSISTENTLY HIGH IMAGE QUALITY.

The specially engineered CI-LED light path provides an extremely stable light spectrum in the 1000–1650 nm range. Light intensity fluctuations remain under 2% – compared to the previously common 10%. Combined with a high-resolution HSI camera, this results in even more precise imaging and significantly improved defect detection – even at high line speeds and during extended operation.

CI-LED also reduces heat generation within the system – a feature that is especially important for many customers. Lower temperatures protect mechanical components, extend their service life, and prevent product residues from burning onto the optical path. In addition, CI-LED is virtually maintenance-free, eliminating the need to replace halogen rod lamps.

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