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The Sherlock Hypernova is specifically designed for sorting small-sized bulk products such as nuts and dried fruits with unprecedented precision, while simultaneously providing quality product data in line and in real time.





www.insort.at

Welcome to the Future of Food Sorting!

WE ARE PUSHING THE BOUNDARIES OF WHAT HAS PREVIOUSLY BEEN POSSIBLE AND SETTING NEW STANDARDS IN THE DETECTION AND EJECTION OF FOREIGN OBJECTS AND FOOD DEFECTS. HIGHLY FLEXIBLE IN ITS APPLICATION AND EQUIPPED WITH CUTTING-EDGE TECHNOLOGIES, SHERLOCK HYPERNOVA ENHANCES SUSTAINABILITY AND OPENS ENTIRELY NEW DIMENSIONS IN FOOD SORTING.

THE SHERLOCK HYPERNOVA OPERATES AUTONOMOUSLY. SIMPLY SET IT AND FORGET IT!

WE CATCH THEM ALL

THANKS TO OUR CHEMICAL IMAGING TECHNOLOGY (CIT[®]), WHICH USES HYPERSPECTRAL IMAGING TO CAPTURE PRECISE CHEMICAL INFORMATION FROM EACH PRODUCT, THE SHERLOCK HYPERNOVA CAN SORT NOT ONLY BY COLOR BUT ALSO BY UNIQUE CHEMICAL SIGNATURES.





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.



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.



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.



MODULAR EJECTION TECHNOLOGY HIGHEST SORTING EFFICIENCY AND FOOD SAFETY STANDARDS

THE SHERLOCK HYPERNOVA FEATURES A MODULAR DESIGN FOR MAXIMUM FLEXIBILITY ACROSS APPLICATIONS AND EJECTION TYPES—DELIVERING UNMATCHED PRECISION AND EFFICIENCY.

Its patented combination of high-precision air and flap separation enables three-way sorting (good, defective, foreign bodies) in a single pass. Powered by next-gen Chemical Imaging Technology (CIT® Gen3), it determines the optimal sorting strategy in real time, boosting yield and setting new standards in food safety.











The Sherlock Hypernova is used throughout the line from start to final inspection.



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