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- Evolution™
 - Pikasen
 - AlphaScan™
 - RGS
 - ScanMaster™
 - RGB-Belt

Optical Sorting to the Highest Standards

Product Information for
food and seed applications

SATAKE

Evolution™ RGB + Shape

- Tree Nuts
- Peanuts
- Pulses
- Seeds
- Beans
- Coffee
- Confectionary
- Seed Corn

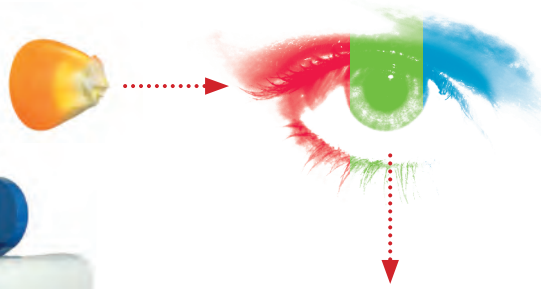
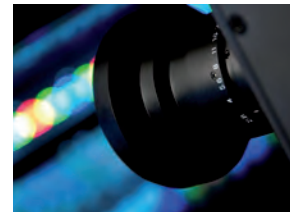


Image Capture



Full Colour Camera



The successful Evolution now combines shape technology to offer the ultimate solution to many applications. Both the human eye and the Evolution detect colour through three wavelengths (Red, Green and Blue),

allowing the sorter to match the eye's ability to see true colour. This full colour sorting machine uses 16 million colours, high-resolution cameras and long lasting LED lighting to detect and remove defects. It works like the human eye - the smallest colour deviations are identified and rejected. This machine has the ability to see true colour, precisely sort a wide range of products, even those with small shade differences. This machine really is the r-Evolution of colour sorting.

Products

Tree Nuts, Peanuts, Pulses, Seeds, Beans and Coffee

Rejects

Minor Colour Differences, Speck Defects, Foreign Material, DON Aflatoxin infected product

Shape Rejects

Sticks, Oblongs, Brokens, Foreign Material

Applications

Processors with colour defects in the food and seed industry

Models

RGB (Full Colour Recognition)
RGB + Shape
IR (InGaAs Technology)

Sizes

4 or 8 chutes

Product Specifications

- Independent shape processor
- Multilingual Touch screen with a user friendly interface and image capture technology.
- Utilises full colour camera technology to precisely sort a wide range of products
- Virtual set-up
- Fully digital electronic package
- Patented long life, high intensity LED illumination system
- Proprietary image processing software
- Improved high capacity material handling system
- High speed ejection system
- Enhanced high speed micro-processing
- Internet accessibility via 'Satake-Everywhere' remote administration and support system
- Multiple shape criteria functions
- Real time operation system

Product Advantages

- RGB optical sorter is ideal for multiple coloured applications or minor shade differences.
- No changeover between products
- High capacity
- Colour map memory
- 3D colour technology allows accurate colour mapping
- Mapping - ability to pin point defects and remove them accurately
- Movable screen to observe the defect image data during product set up
- Backup USB memory - Save settings, transfer to different machines or to your PC
- Optional mesh feeder for removal of small fines prior to sorting

RGB

Electronically controlled variable lighting system (16 million colours)

IR

InGaAs LED Multiwave Technology

Shape

For removal of irregularly shaped defects

AlphaScan™ II



Dedicated **grain and seed** sorter that matches each individual's requirements to remove all discoloured contaminants. This affordable colour sorter will help you produce the cleanest possible product in a compact, small footprint, with high capacities and using high speed digital signal processing technology. Ideal for cereals, rice and seeds at capacities up to 32 tonnes/hour. Grains are cleaned to remove contaminants such as ergot, foreign seeds, wild oats and other impurities.



Product Specifications

- High speed, digital signal processing technology
- Precision defect recognition using multiple digital high resolution CCD cameras
- Simultaneous light and dark sorting
- Self monitoring with auto calibration during operation
- User friendly multilingual touch screen for easy set up and operation
- Optimum vibratory feed system design
- Modular design and components for easy trouble shooting

- Cereals
- Coffee
- Seeds
- Tree Nuts
- Peanuts
- Beans
- Seed Corn
- Sunflower

Products

Wheat, Barley, Rye, Rice, Coffee, Rape Seed, Mustard Seed, Sesame, Oats, Hulled Sunflower

Rejects

Ergot, Wild Oats, Weeds, Foreign Seeds, Mouldy Grain, Discoloured Grain and Foreign Material

Applications

Mills, Grain Stores, Seed Companies, Mobile Seed Cleaners, Hulling plants

Models

1, 2, 3 or 5 chutes. High flow version available on 5 chutes with modified infeed assembly. AlphaLab for small seed lots.

ScanMaster™ II

The ScanMaster is the leading model for sorting granular products such as **tree nuts, peanuts, seedcorn, pulses, coffee, in-shell sunflower** and much more. Available with CCD or Infrared detectors the reliable ScanMaster II can work in a range of wavelengths both monochromatically and bichromatically. The ScanMaster is designed for industrial use with stainless steel contact parts and a unique closed loop cooling system within the frame. With 16 cameras in our largest units and 360 degree viewing it guarantees an effective sort. Access is available remotely via a secure internet connection, allowing you the flexibility to monitor your machines from a remote location.



Product Specifications

- High-resolution CCD cameras for monochromatic sorting (light or dark or simultaneous sorting)
- Patented InGas cameras that combine visible and Infrared sorting technologies
- Real time interface to provide sorting information to your plant data system.
- Multilingual Touch screen and 100 programs for quick product changeover
- Graphic display of ejector operations to promote a higher quality yield
- Diagnostic display, maintenance log and run time statistics
- Satake-Everywhere: secure, web based remote administration and support system

Products

Tree Nuts, Peanuts, Seed Corn, Coffee, Sunflower, Beans, Seeds, Cereals

Rejects

Discoloured, Mouldy Product, Foreign Material (Stones, Glass, Sticks, Chalk, Mud etc)

Applications

Food factories, Mills, Snack producers

Models

IE Monochromatic Technology, DE InGaAs Technology

Sizes

1, 2, 4 or 8 chute machine





Pikasen Alpha

- Coffee
- Seed Corn
- Vegetable Seeds
- Wheat
- Sesame
- Seeds
- Beans
- Soya
- Pumpkin

The Satake Pikasen Alpha is an automatic, cost effective, full colour RGB, portable optical sorting machine for small and medium commercial applications, pre-production lots and laboratory use.

Featuring two high resolution cameras, small ejector pitch, uniform lighting and sorting capacities from 100g up to 2 tonnes/hour this compact colour sorter is able to offer high quality sort equal to its larger counterparts.

Additionally, Satake Pikasen Alpha is offering an added benefit of minimal operator training by utilizing an intuitive full colour user interface touch screen and the ability to automatically set sorting parameters.



Product Specifications

- Automatic Smart Sensitivity System
- 3D colour technology
- Multilingual touch screen and user friendly interface and image capture technology
- Utilises full colour camera technology to precisely sort a wide range of products
- High speed, digital signal processing technology
- Smart touch screen panel
- Stable material feed due to cut gate cascade system

Product Advantages

- Automatic sorting parameter function
- Cost effective colour sorter
- No changeover parts between products
- Easy access for maintenance and cleaning
- Minimum operator training required
- Reverse sort option
- Full colour for subtle colour differences
- Quick return of investment
- Very small footprint
- Portable
- Internal exhaust system

Products

Vegetable Seeds, Coffee, Soya, Sesame Seeds, Rice, Cereals, Seed Corn, Small Beans

Rejects

Subtle colour differences, discoloured product, foreign materials, spot defects

Applications

Small and medium sized applications
Product R&D
Laboratory use

Models

Pikasen Alpha FMS2000 BI

Sizes

1 Chute (240mm) – Various Profiles

RGBS



- Lentils
- Wheat
- Coffee
- Sesame Seeds
- Beans
- Soya
- Rice

This large capacity optical sorter features advanced full colour RGB Smart Sensitivity sorting technology that is ideally suited to sort lentils and cereals in a plant environment. The full-colour camera recognizes subtle colour differences contributing to food security and improving the grains appearance.

The new user interface design has individual sensitivity adjustments for specific defects. This simple sorting control makes it easy for the operator to achieve maximum sorting performance with minimum training.

New wide chute provide high processing capacity and the option of a simultaneous tertiary sort offers higher yield. The reverse sort option provides an additional function for reclaiming good product from the reject.

Its sister machine, the SSM, offers a combined CCD and NIR InGaAs sensors to remove foreign inert defects.

Products

Lentils, wheat, coffee, sesame seeds, small beans, corn seed, rice

Defects

Subtle colour differences, discoloured product, foreign materials

Applications

Processors with colour defects in the food and seed industry

Models

BI/BM – All Primary RGB/CCD+NIR
 AIS/AMS – Resort RGB/CCD+NIR
 DIS/DMS – Tertiary RGB/CCD+NIR

Sizes

RGBS – 3, 5 & 7 chutes
 SSM – 3, 4 and 5 chutes



RGB CS-Belt



Products

Peas, Beans, Cashew Nuts, Snack Foods, Fragile Products

Rejects

Discoloured, Foreign Material (Stones, Glass, Sticks, Chalk, Mud etc)

Applications

Food Factories, Seed Processors/Cleaners

Models

BIC – Full Colour (Red, Green, Blue)
 BMC – Full Colour (Red, Green, Blue) & Infra-red

Sizes

300mm & 600mm Belt width

The Satake full colour camera **belt sorter** can detect and reject defects even with a subtle discolouration using all three wavelengths, R(red), G(green) and B(Blue). Infrared detection can be added to the full colour analysis to sort glass, stones and other inorganic materials simultaneously.

The use of a belt, rather than a chute, enables irregular shaped and fragile materials to be conveyed with stability. Sensitivity settings are adjusted by image data and the ability to detect small colour differences is achieved by comparing images with stored data.



Ceramic



Coloured Glass



Transparent Glass



Transparent Plastic



White Stone

Global Support of Satake Worldwide



Hiroshima, Japan



Houston, USA



Manchester, England



Satake Corporation.

Founded in 1896, the Satake Corporation manufactures over 100 different machines for the rice, cereals and food industries, including optical sorters for rice, nuts, cereals, seeds, pulses and plastics. The optical sorting division (originally ESM International) was founded in 1931 in Michigan, USA and was acquired by the Satake Corporation in 1992.

Quality Performance.

With a range of optical sorting equipment we meet every customers requirements. Utilising high resolution cameras, low ejector pitches and fast scanning rates we can sort food and seed to meet all of today's safety requirements. We offer a range of capacities to meet throughput requirements of small processors to large mills.

Global Support and International Standards.

With manufacturing sites across the globe, Satake offers sales, spares, technical support staff and demonstration sites in all 5 continents. Satake Europe maintain a team of multi-lingual field service engineers and sales staff in strategic cities across the globe, we are always able to respond.

Investment Return.

Our machines offer a high quality accept product with low losses. An optical sorter not only improves your product but increases your yield and therefore your profit. Payback can be as little as a few months.

Reliability and Costs of Ownership

The Satake product line has acquired a reputation for being extremely reliable and very low maintenance. All our equipment goes through a vigorous final test prior to shipment to ensure a trouble free start-up. Reliable components keep power and air costs to a minimum and efficient lighting reduces maintenance costs.

Operator friendly

The Satake machines are multi-lingual to cover all markets and operator training can be completed on site or at our global locations. The touch screen controls are user friendly to enable all operators to get the best from the sorters. Passwords are incorporated to allow access to certain levels. Satake also offer a secure internet service, Satake-Everywhere, to allow for remote assistance.

SATAKE EUROPE LTD

Horsfield Way
Bredbury Park Industrial Estate
Bredbury, Stockport
SK6 2SU, Cheshire
ENGLAND

Tel. +44 (0) 161 406 3888

Email: vision@satake-europe.com

www.satake-europe.com

All Satake products are subject of continuous development and, as a result, their specification may change and differ in detail from those shown.



SATAKE