

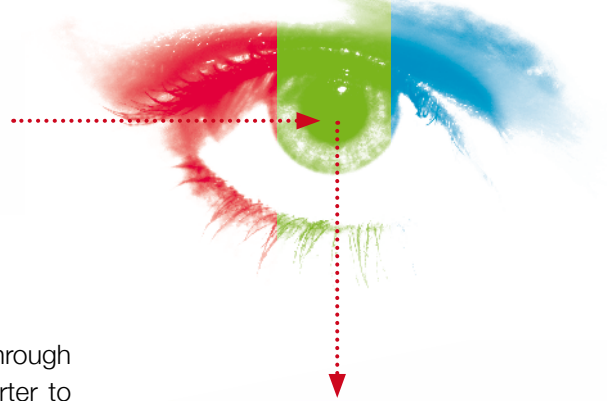


Optical Sorting to the Highest Standards

Product Information for
food and seed applications

SATAKE

Evolution™ RGB



The new Evolution is a Revolution in optical sorting.

Both the human eye and the Evolution detect colour through three wavelengths (Red, Green & 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 & long lasting LED lighting to detect & 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.



• Tree Nuts

• Peanuts

• Pulses

• Seeds

• Beans

• Coffee



Full Colour Camera



Image Capture

Products:

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

Rejects:

Minor colour differences, speck defects, foreign material

Applications:

Processors with colour defects in the food & seed industry

Models:

**RGB (Full colour recognition)
SE (UV recognition)**

Sizes:

4 or 8 chutes

Product Specifications:

- Multilingual Touch screen with a user friendly interface & image capture technology.
- Utilises full colour camera technology to precisely sort a wide range of products.
- 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 & support system
- Optical resolution: 0.23mm
- Scan rate: 9090Hz

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

- Unique full colour camera technology (RGB) for the precise detection of a variety of products.
- Electronically controlled variable lighting system (16 million colours)

SE

- High Resolution ultra violet Sensors
- UV LED Lighting system

AlphaScan™ II



Dedicated **grain & 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 & 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.



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



Product Specifications:

- High speed, digital signal processing technology
- Precision defect recognition using multiple digital high resolution CCD cameras
- Simultaneous light & 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 & components for easy trouble shooting

Product Advantages:

- Cost efficient sorting
- High ejector density for maximum reject concentration
- Low maintenance costs
- Simple changeover between products
- Specifically designed & patented feed system
- Small footprint
- Several models to handle a variety of capacity requirements

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, Infrared or Ultraviolet 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.



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



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
- Unique ultra violet technology for chip & scratch applications in tree nuts
- Real time interface to provide sorting information to your plant data system.
- Multilingual Touch screen & 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 & 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, DE, SE

Sizes

1, 2, 4 or 8 chute machine

	IE	DE	SE
Cameras	CCD Sensors Monochromatic Optical Resolution 0.38	Duplex Sensors Bichromatic Visible and Infra-red	CCPD Sensors UV Monochromatic
Lighting	Fluorescent or Halogen	Halogen	Ultraviolet Fluorescent
Applications	Nuts, coffee, sunflower kernels, pumpkin seeds, cereals, seeds, rice	Nuts, in-shell sunflower, pumpkin seeds, oats	almonds, macadamias, cashews, coffee

RMGS



The evolved RMGS series has been designed with our customers in mind for **rice & cereals** applications. The RMGS offers the highest optical resolution at 0.14mm and a high speed scanning rate. The infra-red eliminates impurities such as glass, plastic & stones but models are available without infra-red to meet more simple sorting requirements. Equipped with product centre detection and low ejector pitch the RMGS increases sorting performance and reduces the loss of good grain. An image simulation feature on the new larger touch screen allows the user to visually evaluate the effects of numerical sensitivity adjustments, instantly and effortlessly.

Products

Rice (white, parboiled, basmati, brown), Cereals

Rejects

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

Applications

Rice Mills, Food Factories & Mills

Models

IE/AIS – Monochromatic
BM/AMS - Bichromatic

Sizes

3, 6, 9, 15 chute machine

RMGS: • Rice • Cereals

RGB-Belt: • Peas • Beans • Cashew Nuts • Snack Foods • Fragile Products



RGB-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



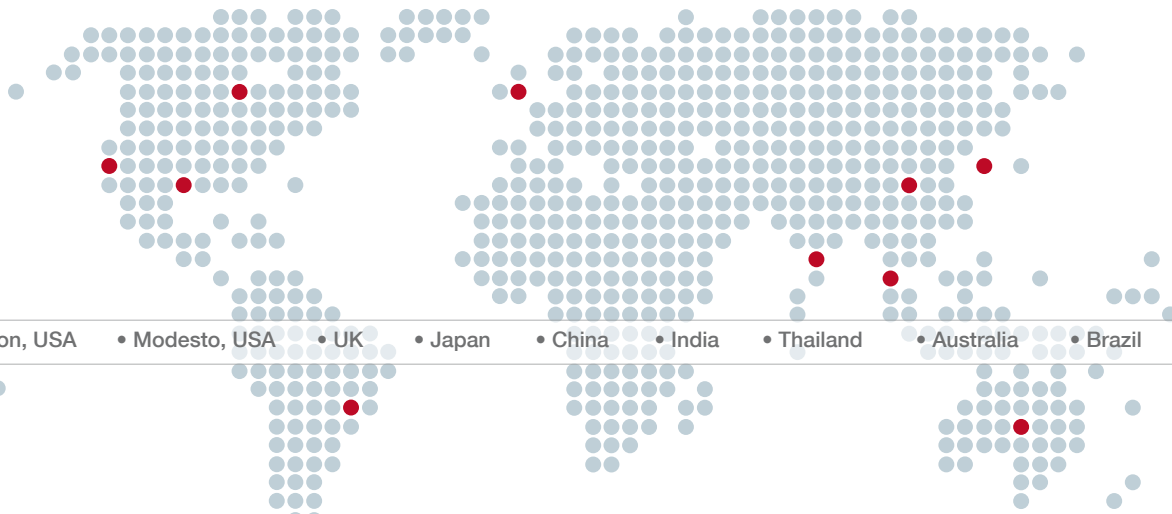
Hiroshima, Japan



Houston, USA



Manchester, England



• Houston, USA • Modesto, USA • UK • Japan • China • India • Thailand • Australia • Brazil • Canada

Satake Corporation.

Founded in 1896, the Satake Corporation manufactures over 100 different machines for the rice, cereals & 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 & fast scanning rates we can sort food & 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 & International Standards.

With manufacturing sites across the globe we meet all the local technical specifications including CE, ATEX & UL. Satake offer sales, spares, technical support staff & demonstration sites in all 5 continents. Satake Europe maintain a team of multi-lingual field service engineers & 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 & therefore your profit. Payback can be as little as a few months.

Reliability & 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 LED 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.

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Incoming product



Accepted product



Final rejected product

SATAKE