



SEA.HY

OPTICAL SORTING





Global Pioneer in Optical Sorting.

To find the right optical sorter for your business, you need a partner you can rely on. One who understands your biggest sorting challenge, allows you to put their solutions to the test and offers expert advice. You need support at every stage of the selection of the solution, installation and after-sales process. Cimbria has been helping customers succeed for more than 75 years. With a wide range of technologically advanced and user-friendly optical sorters to sort seeds, grains, food commodities and industrial products, you can feel confident you will get the right system tailored to your business.



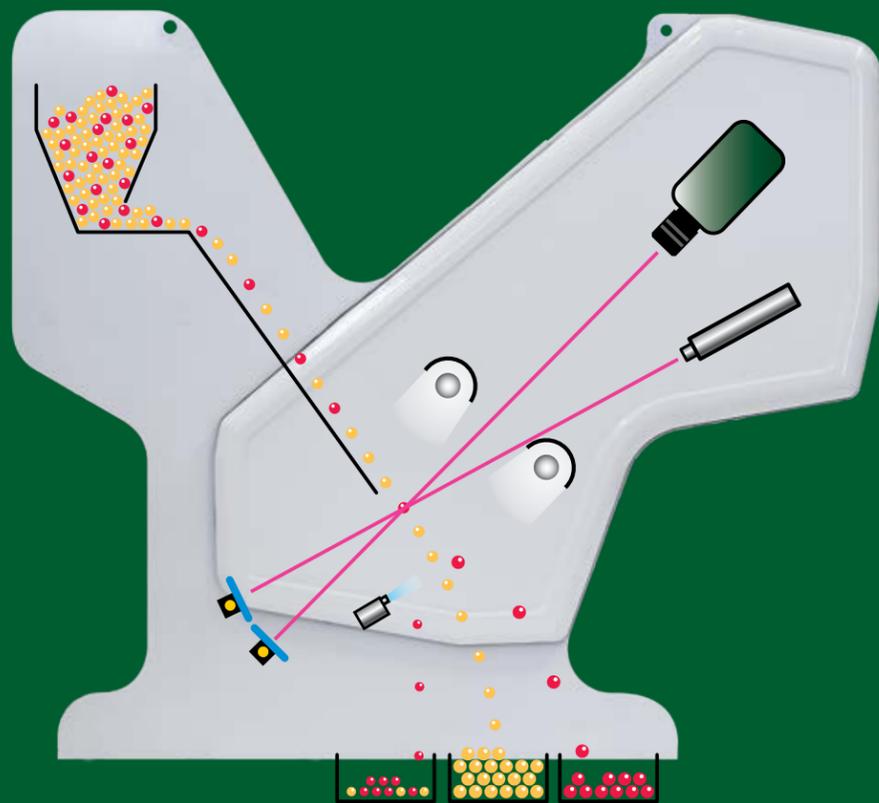
Beyond the Visible.

Previously known as Hypersort, the SEA.HY Optical Sorter is ideal for food sorting applications and plays a leading role in the recycling industry worldwide. Using Hyperspectral Near-infrared cameras, SEA.HY excels with food like almonds, hazelnuts, pistachios, and other nuts separating foreign bodies such as fragments of shells or stones, and other contaminants like wood, glass and plastics. SEA.HY combines high resolution RGB Full-Colour with SWIR cameras and is synonymous of maximum purity and food safety for challenging sorting of elements sized from 2 to 30 mm. In industrial applications, SEA.HY is the right choice for added value processes and to make the recycling of different polymers possible. The separation of different polymers that have the same colour has always been a challenge in dry processing, as the polymers cannot be distinguished visually. Now, thanks to SEA.HY, all PET, PVC, PE, PP, PS, HDPE or other polymers can be recycled in order to conform to the purity standards required in the market today.



Key Features.

- The in-feed system ensures ideal product upload. It can be separated into two sections to handle different sizes of material
- Our advanced near-infrared (SWIR) spectrometry sensor recognises the difference in materials based on their specific and unique spectral properties
- The **SWIR camera**, combined with full-colour technology, allows for the identification of material to be sorted by type and colour
- **RGB camera** snapshot rate can reach 18,000 times/sec (18 KHz)



Settings.

EJECTION SYSTEM

- State-of-the-art ejectors guarantee maximum precision and expulsion, producing highly concentrated rejects
- Rapid-firing ejectors are guaranteed for more than 2 billion operating cycles and can easily be repaired or replaced
- SEA.HY specially designed ejection devices grant optimal expulsion of the rejects by precisely addressing them to the discharging hopper

ELECTRONICS

- High-speed signal elaboration and communication to the ejection system ensures excellent performance
- Self-control functions, such as self-diagnosis and self-calibration ensure consistent sorting performance

MECHANICAL DESIGN

- The pressurized and conditioned optical boxes keep sensitive parts safe from any infiltration of dust
- SEA.HY automatic cleaning system can be programmed based on working environmental conditions
- The built-in conditioning system enables the electronics to work at appropriate operating temperatures



SCAN THE QR
TO SET UP
YOUR TRIAL

PUT US TO THE TEST

Send us your toughest sorting challenge. Cimbría's multiple testing centers are available for customizable lab trials worldwide. Let our experts recommend the best solution.



Food



Recycling



Quality first.

SEA.HY is equipped with Hyperspectral Near-Infrared Sensors able to recognise defective products according to their chemical nature inspecting over 230 frequencies. This challenging sorting task is carried out by focusing on the specific spectral properties of the light that is reflected off the relevant elements. The ability of the infrared hyperspectral sensors (SWIR) to “see beyond the visible” allows SEA.HY to separate out all foreign bodies with the same colour and shape as the conforming products, such as fragments of shells, stones, wood, glass, etc. Optimum sorting efficiency is obtained through the best available SWIR technology, combined with the latest RGB Full Colour high-resolution cameras.

CERTIFICATIONS

- CE conformity certificate
- 2006/42/CE on machinery safety
- 2014/30/CE on Electromagnetic Compatibility
- Compatible with UL and CSA standards

MACHINE TECHNICAL DATA

		M			L			
								
Standard vibrating feeder		2			4			
Chute width 300 mm for chute		2x300=600			4x300=1200			
Hyperspectral SWIR cameras		1			2			
Full-Color RGB cameras		1			2			
No. ejectors/chutes		126			252			
Compressed air consumption (max value at 6 bar)	l/min	1700			2500			
	m ³ /h	102			150			
Compressed air hose		Ø			1"			
Power supply/ frequency		V/Hz			230/50 - 1 Ph (L + N + PE)			
Power consumption (max. value)		kVA			1.2			1.8
Power absorption (max. value)		A			5.2			7.9
Dimensions L x W x H	mm	1330	1980	1780	1960	1980	1780	
	inch	52,40	78	70,10	77,20	78	70,10	
Weight	kg	970			1250			
	lbs	2138			2757			



PLEASE DOWNLOAD THE DATA SHEET FOR MORE TECHNICAL INFORMATION.

Easy, Fast, Intuitive, Exagon™ HMI.

The Exagon system analyzes the acquired images almost as effectively as the human eye. The image processing system by photographic acquisition compares the object to user-defined accept or reject thresholds in order to identify it as a genuine defect or as an accepted element. The HMI software allows the user to set the defect size and can categorize them by specific categories. Windows 10 graphic interface assures easy connection to company networks and to remote assistance systems.

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