

SEA NEXT

ELECTRONIC SORTING 





PROGRESS NEEDS PASSION FOR DETAILS



STATE-OF-THE-ART TECHNOLOGY

Many years of experience has made CIMBRIA-SEA a leading supplier of electronic sorting technology. When it comes to optimizing the crop qualities by sorting the grain and seed, the strong market position is a result of over 40 years of knowhow within development and production of optical electronic colour sorting equipment. This enables us to offer innovative and flexible sorting solutions based on a technical experience and a strong concept.

We offer the SEA Next colour sorter series, a result of state-of-the-art technology where traditional advantages have been improved with most advanced technology, whilst maintaining simplicity of use.



WORKING PROCESS

OPERATION

- 1 Input product is loaded into the in-feed hopper,
- 2 it moves along the vibrating plate
- 3 until it flows on to a sloping chute where it is individually checked and sorted by state-of-the-art cameras
- 4 (CCD cameras for standard version and
- 5 additional cameras for bichromatic, NIR and InGaAs versions) situated in the front and rear of the flow.
- 6 Depending on the signals received by the optical device, the sorter software controls the pneumatic device,
- 7 which physically separates the unwanted products out of the conforming ones which naturally reach their discharging hopper.
- 8 The rejected products are instead deviated by a jet of compressed air produced by the relevant ejector and discharged in the front side hopper.

In automatic re-pass versions, the sorted or rejected product is automatically conveyed to another section of the machine for undergoing an identical process.



Naklápěcí optické boxy.



POSSIBLE CONFIGURATIONS

MODEL	NEXT 1	NEXT 1,5	NEXT 2	NEXT 3	NEXT 4	NEXT 5	NEXT 6	NEXT 7
CONFIGURATION								
VIBRATOR	1	2	2	3	4	5	6	7
CHUTE	1	2	2	3	4	5	6	7
CCD CAMERAS*	2 to 4	2 to 4	4 to 8	6 to 12	8 to 16	10 to 20	12 to 24	14 to 28
EJECTORS	54	77	108	162	216	270	324	378

* Number of cameras depends on configuration. It is possible to configure any model into monochromatic, bi-chromatic, NIR and InGaAs versions depending on different sorting requirements.



MODEL	NEXT 1	NEXT 1,5	NEXT 2	NEXT 3	NEXT 4	NEXT 5	NEXT 6	NEXT 7	
DIMENSIONS	mm								
WIDTH	1560	920	1560	1560	1950	1950	2540	2540	
DEPTH	1550	1715	1550	1550	1550	1550	1550	1550	
HEIGHT	2100	2100	2100	2100	2100	2100	2100	2100	
WEIGHT	kg.	600	650	700	800	850	950	1.200	
POWER CONS.	kW	1,5	1,5	1,5	1,5	2,5	2,5	3,5	3,5
AIR CONS AT 4 BAR	l/sec	8,4	12,6	16,8	25,2	33,6	42,0	50,4	58,8



The dimensions and technical data herein mentioned are indicative and subject to changes. We reserve the right to change them at any time without prior notice.

SEA custom CCD cameras allow the simultaneous setting of 4 sensitivity thresholds and adjustment of the defect size with optical resolution of 0.1mm



MACHINE RANGE

NEXT 1.5



NEXT 4



NEXT 1



NEXT 5



NEXT 2



NEXT 6



NEXT 3



NEXT 7



MAIN FEATURES

UP TO 7 CHUTES

To satisfy even the highest production capacities.

VERSATILE CONFIGURATION

Multiple and resort sorting passes set up;
Flexible and user-friendly adjustment and programming.

LED RGB LIGHTING AND BACKGROUND

The full colour RGB Led, exclusively designed for SEA in association with one leading producer, allows the most precise focus of the beam on the inspection line;
Long lasting and reliability (over 100.000 h) and low heat dissipation.

UP TO 28 CAMERAS FOR ANY OPTICAL CONFIGURATION

Up to 4 cameras per chute for monochrome, bi-chrome, NIR and InGaAs configurations, and with size control;
2048 Pixel CCD cameras allow the highest optical resolution for camera / inspection surface ratio (0.1 mm);
The optical system grants extreme flexibility in image processing, allowing the sorter sensitivity setting based on colour/transparency and dimension of the defects to separate;
Pixel Next CCD cameras have best possible signal/noise ratio.

ELECTRONICS - HARDWARE

The hardware is organized in easy replaceable electronic boards, using the ultimate SMD and FBGA technology;
Self-control functions, such as auto-diagnosis and auto-calibration;
Back-up of the operating software by USB on board.
The high speed signal elaboration and communication to expulsion system allows an excellent performance.

EJECTION SYSTEM

State-of-the-art ejectors guarantee most accurate precision and expulsion rapidity, producing highly concentrated rejects;
Extremely fast ejectors are guaranteed for more than 2 billion operating cycles and they can easily be repaired or replaced;
Blowers are directly placed on the ejectors pneumatic lung.

NEW 15 INCHES COLOUR TOUCH-SCREEN DISPLAY

The Windows XP embedded graphic interface assures an easy connection to company networks and to remote assistance systems.

MECHANICAL DESIGN

Pressurized and conditioned optical boxes;
Airtight structure prevents dust and product outflow;
Easy product sampling collection;
The folding optical boxes enable the full opening of the sorter, facilitating its cleaning and maintenance;
SEA Next sorters are provided with standard flanges for de-dusting systems; additional pre-arrangement for aspiration system available as option.

RELIABILITY

Remote control and on-line assistance from CIMBRIA headquarters;
Prompt technical interventions on site;
Programmed technical service contracts;
Servicing and spare parts centers in several countries;
Best references in the international markets.

OTHER

CE certification of conformity can be combined with ATEX 22 certification (option)
Customized color (option)
Stainless steel (AISI 316L) version available (option)

EUROPEAN
TECHNOLOGY
MADE IN ITALY



APPLICATIONS

Best optical resolution
- Minimum rejects - High
production capacities

SORTED

Wheat



Rice



Maize



Oat



Sorghum



Soya



Barley



Millet



Onion seeds



Sunflower seeds



Lentils



REJECTED



SORTED

Chickpeas



Fava beans



Roasted Coffee



Green Coffee



Pine nuts



Pistachios



Almonds



Hazelnuts



Chestnuts



Salt and minerals



Plastic materials



Testing centers are available
in different countries for free of
charge industrial tests.



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