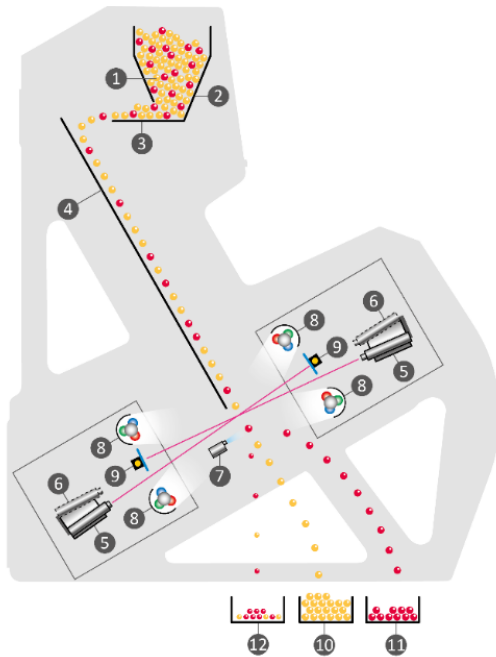


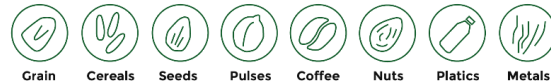


Cimbria's SEA.CX color sorter offers the ultimate Full-Color RGB technology with 0.06 mm optical resolution to meet the most demanding quality standards with respect to seeds, grains, food and non-food commodities



PROCESS

1. Product to sort
2. In-feed hopper
3. Vibrating feeder
4. Feeding chute
5. RGB Full-Color cameras
6. NIR, InGaAs and UV cameras (option)
7. Ejectors
8. Lights
9. Backlights
10. Sorted flow output
11. Reject flow output
12. Bounce output



MAIN CHARACTERISTICS

- Up to 4 sections for simultaneous resorting
- Available configured with re-sorting, re-resorting or reverse sorting
- Image acquisition perfectly conform to reality
- Color analysis like that of the human eye
- Can be controlled and reprogrammed even remotely with the customer's specific recipes

ELECTRONICS

- Easy-to-replace electronic boards
- Auto-diagnostics and auto-calibration functions ensure operational best performances
- Ethernet connection allows real-time monitoring and remote assistance
- OPC System (option)

EXPULSION SYSTEM

- N.54 Ejectors per chute
- Ejectors working speed up to 1,000 cycles/s guaranteed up to 2 billion cycles
- Ejection time and duration adjusted according to needs

OPTICAL SYSTEM

- SEA.CX standard version has RGB Full-color cameras (front and back) with 4096 pixels working in the visible spectrum. The inspection system recognizes 16 million colors that combined to 0.06 mm optical resolution sees almost as the human eye
- Additional NIR and/or InGaAs and/or UV cameras (option)
- Scan rate up to 15,000 Hz
- Optical resolution 0.06 mm (60 μm)
- The software controls 14 families of defects
- Shape-sizing integrated into the system
- Defect size control and adjustment
- Active LED light and background

MECHANICS

- Available from 0.5 to 7 chutes
- Reversible chutes
- Tilting optical boxes simplify cleaning and maintenance
- Pressurization and airtight structure prevent dust entering
- Automatic programmable cleaning system
- Cooling system to grants the ideal temperature inside the optical boxes
- Pre-arrangement for the aspiration system installation



EXAGON HMI

- Windows 10® operating system allows easy use and smart connection to customer networks
- High visibility in low light conditions thanks to its HD 15" full color touch screen
- Intuitive graphics and multilingual interface to program and control recipes in an easy and fast way
- Easily customizable recipes (can store up to 200) named at user's will
- Mark-good mark-bad function
- Out of good programming mode
- Active synoptic system with machine status (vibrators and sensitivity)
- Machine status and control of the production capacity
- Real-time statistics (e.g. rejects/s, throughput, reject/channel and others)
- Data backup

- Product control inside the hopper (level sensors)
- PLC status
- Alarms and instructions to restore functionality

SEA.CX CONFIGURATION

Front		Back	
T	+	T	Standard version. n.2 RGB Full-Color cameras/chute (front&back)
T	+	TN	n.2 RGB Full-Color cameras/chute (front&back) + n.1 additional NIR camera/chute (in the back-side)
TN	+	TN	n.2 RGB Full-Color cameras/chute (front&back) + n.2 additional NIR camera/chute (front&back)
T	+	TR	n.2 RGB Full-Color cameras/chute (front&back) + n.1 additional InGaAs camera/chute (back-side)
TR	+	TR	n.2 RGB Full-Color cameras/chute (front&back) + n.2 additional InGaAs cameras/chute (front&back)
TN	+	TR	n.2 RGB Full-Color cameras/ chute (front&back) + n.1 additional NIR camera/chute (front-side) + n.1 additional InGaAs camera/chute (back-side)

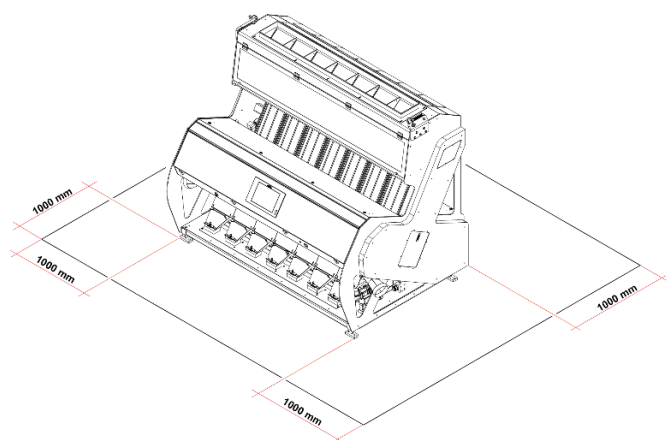
T= RGB Full-Color Camera / N=NIR Camera / R=InGaAs Camera

* On request, the pre-wired Plus version is available to accept additional cameras in future

EXTERNAL EQUIPMENT REQUIRED FOR THE CORRECT WORKING*

- 230 V - 50 Hz single-phase power supply
- Voltage stabilizer (strictly necessary)
- Pneumatic system including rotary compressor, tank, filters and dryer
 - ISO 8573-1:2010 [5:4:3] for NON-FOOD PRODUCTS
 - ISO 8573-1:2010 [1.2.1] for FOOD PRODUCTS
- 1" minimum diameter air supply hose
- Supporting frame (Minimum one meter of free space each sides)
- Infeed and discharging hoppers (optional Cimbria supply)
- Product conveyors systems
- Fast internet connection

*Customer must provide and install the above












Leave at least one meter of free space around the sorter

TECHNICAL DATA

- White RAL 9003 Standard (custom colors as option)
- Working temperature in workrooms min +5°C max+35°C
- IP 55 protection
- CE conformity certificate
- 2006/42/CE on machinery safety
- 2014/30/CE on Electromagnetic Compatibility
- Compatible with UL and CSA standards
- ATEX standards Certificate (option)
- Sorting machine in stainless steel AISI 316 L (option)

MACHINE TECHNICAL DATA

		0,5	1	1,5	2	3	4	5	6	7
										
No. of vibrating feeders/chutes		1	1	1,5	2	3	4	5	6	7
No. of cameras (front+back)		2	2-4	2-4	4-8	6-12	8-16	10-20	12-24	14-28
No. ejectors/chutes		27	54	77	108	162	216	270	324	378
Compressed air consumption (max value at 6 bar)	l/min	150	300	450	600	900	1200	1500	1800	2100
	m ³ /h	9	18	27	36	54	72	90	108	126
Compressed air hose	∅	1"								
Power supply/frequency	V/Hz	230/ 50 - 1 Ph (L + N + PE)								
Power consumption (max. value)	kVA	0,8	0,8	0,8	1,5	1,5	2,3	2,3	2,7	2,7
Power absorption (max. value)	A	3,1	3,1	3,1	6,4	6,4	9,7	9,7	11,8	11,8

DIMENSIONS (mm/ in)

	0,5		1		1,5		2		3		4		5		6		7	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
Length	1031	40,59	1031	40,59	1031	40,59	1700	66,93	1700	66,93	2125	83,66	2125	83,66	2675	105,32	2675	105,32
Width	1690	66,53	1690	66,53	1690	66,53	1690	66,53	1690	66,53	1690	66,53	1690	66,53	1690	66,53	1690	66,53
Height	2100	82,67	2100	82,67	2100	82,67	2100	82,67	2100	82,67	2100	82,67	2100	82,67	2100	82,67	2100	82,67

WEIGHT (Kg/ lbs)

	0,5		1		1,5		2		3		4		5		6		7	
	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs	Kg	lbs
Weight	700	1543	750	1653	800	1764	1000	2205	1060	2337	1250	2756	1300	2866	1600	3527	1650	3638