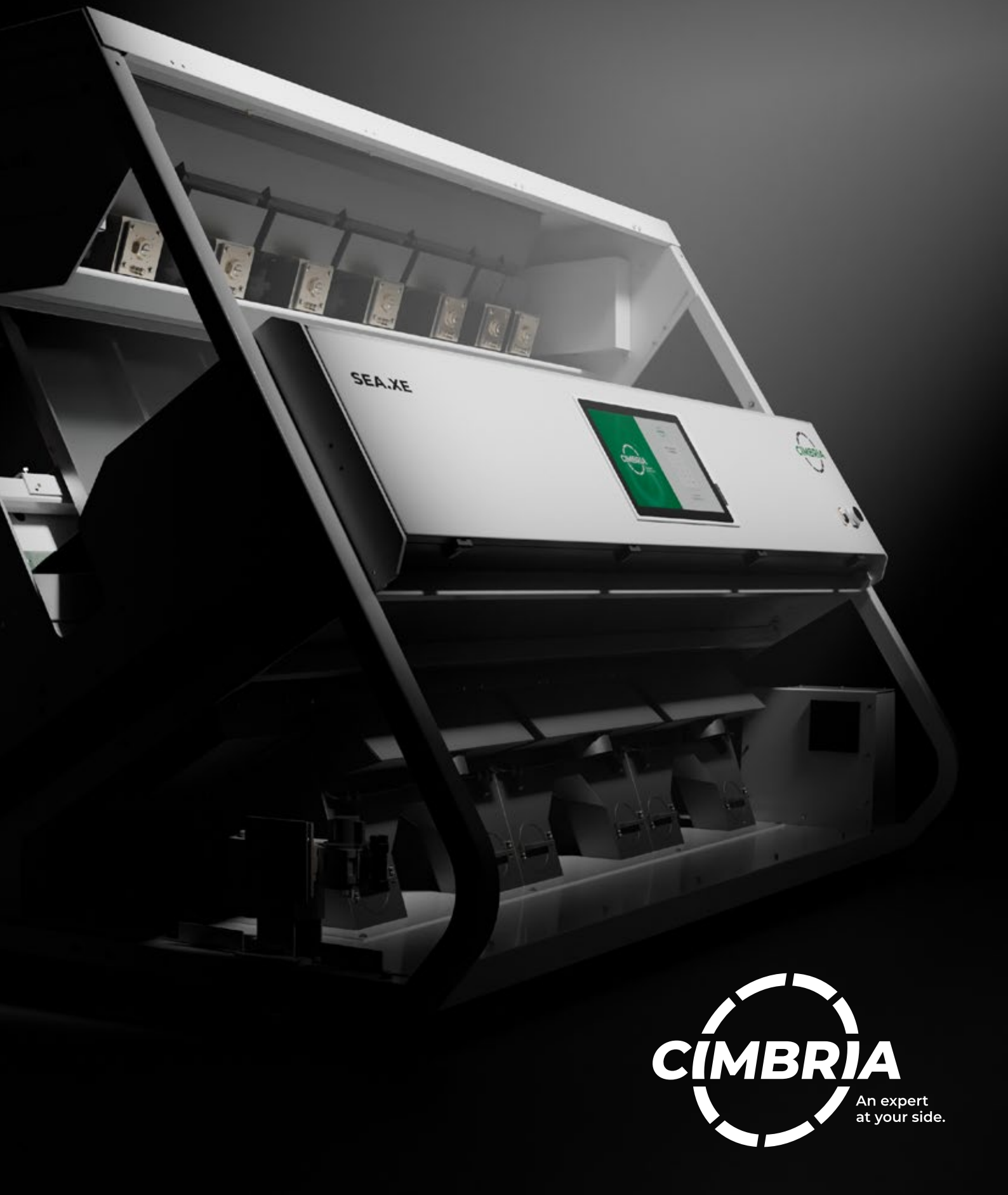
EN

SEA.XE

NAKED POWER. PURE PERFORMANCE.



CIMBRIA

An expert
at your side.

THIS IS SEA.XE

A new balance of performance, accessibility and simplicity.



SEA.XE brings together industrial-grade architecture, a high-resolution multispectral vision system, and a brand-new, innovative HMI interface — all in a single, advanced optical sorting platform.

Available in configurations ranging from 1 to 6 channels, it delivers exceptionally precise sorting across a wide range of food and non-food applications.

Advanced quad-chromatic RGB Full Color + NIR cameras inspect the product from both sides as standard. For more demanding applications, additional SWIR InGaAs cameras and a UV configuration are available to meet specific sorting requirements.

Unmatched purity

Detects and removes defects and foreign bodies that are difficult — or impossible — to spot with the naked eye.

Optimal yield

Recovers the maximum amount of good product, cuts unnecessary waste, and protects the value of every batch processed.

Industrial-grade architecture

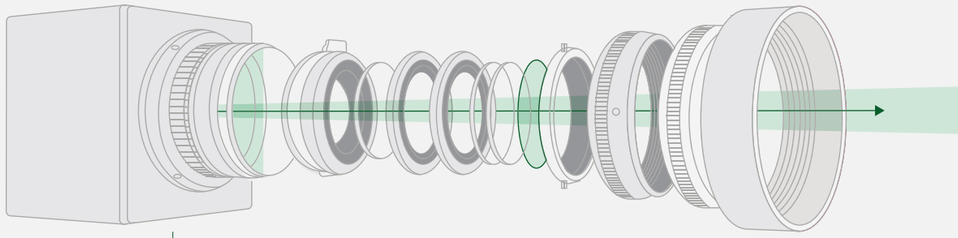
An essential, rugged load-bearing structure — sealed and pressurized, with optical box cooling and programmable automatic cleaning.

Effortless operation

Redesigned HMI with a 21.5” HD touchscreen, multilingual interface, unlimited recipes, and remote control.

High-resolution cameras

16 M
colors + infrared



The fastest vertical scanning speed in the industry

1–6
channels

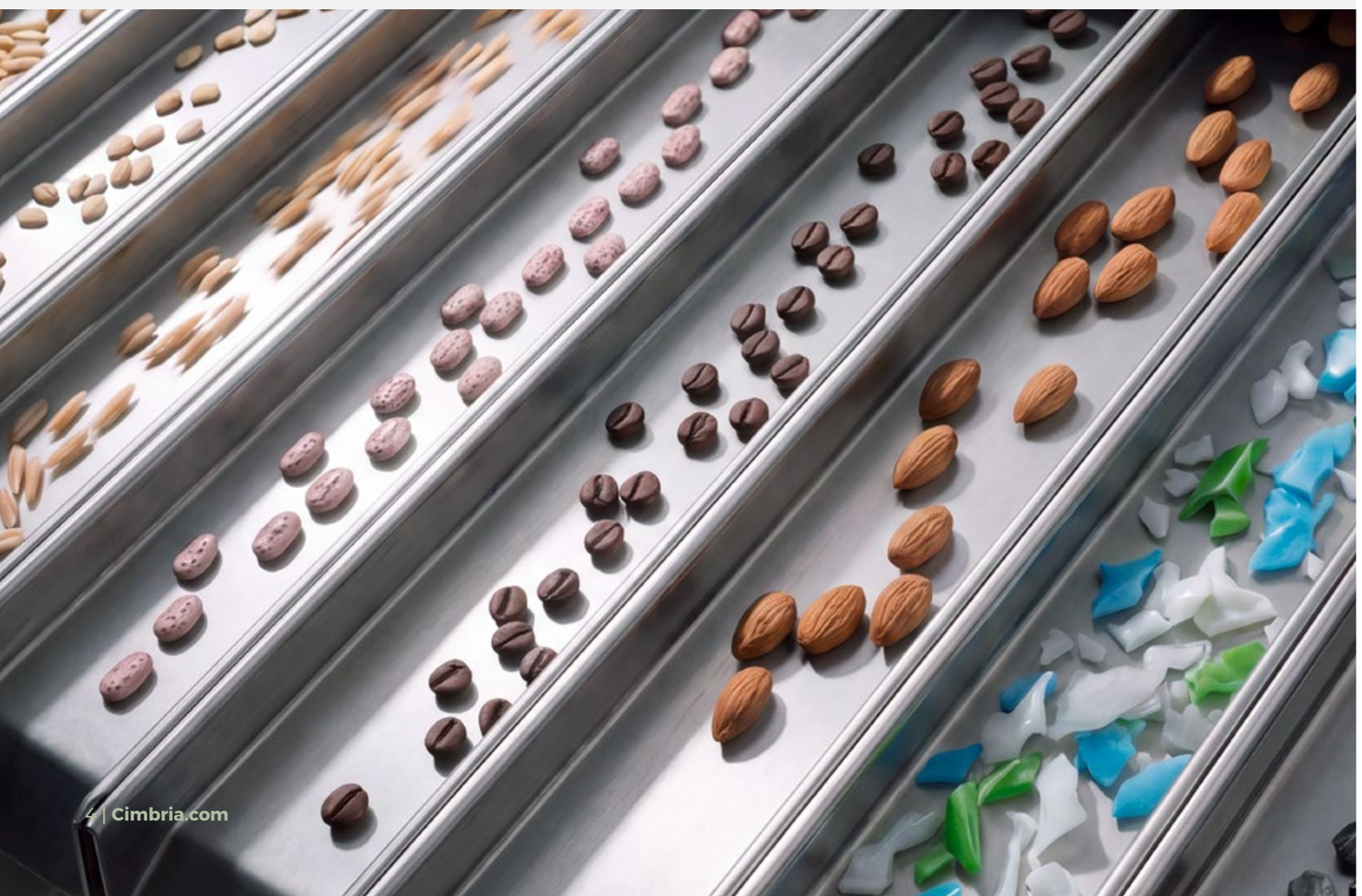
CONFIGURABLE AND VERSATILE

One sorter.
Countless applications.

SEA.XE brings advanced optical sorting performance to a wide range of raw materials and production environments.

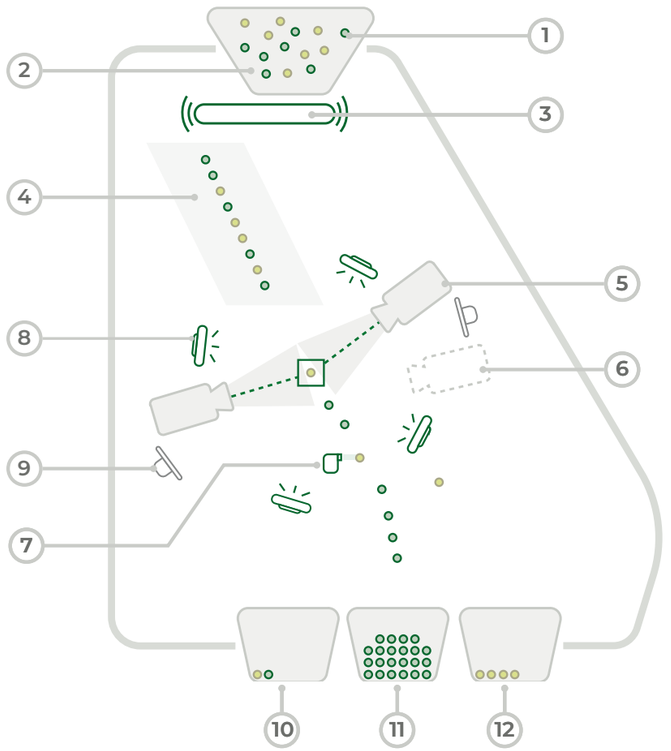
The machine is fully configurable to the product, the required purity level, and the throughput you need.

Grain Cereals Seeds Pulses Coffee Nuts Plastic Metals



How it works

1. Product infeed
2. Loading hopper
3. Vibrating plate
4. Feed chute
5. Quad-chromatic RGB Full-Color + NIR cameras (standard) / UV configuration (optional)
6. SWIR InGaAs cameras (optional)
7. Ejection valves
8. Lighting system
9. Reference backgrounds
10. Rejects (rebounced)
11. Accepted product
12. Rejected product



THE CAMERA SYSTEM

Beyond the visible.

Every grain and particle passing through the chute is photographed — front and back — across both the visible and infrared spectrum.

What the eye can't tell apart, SEA.XE sorts with precision.

RGB Full-Color with NIR

Standard, front and back. Color and infrared imaging combined in a single camera for peak performance across both spectrums, with zero compromise.

SWIR InGaAs cameras

Identify materials by their chemical composition, detecting foreign bodies that appear identical in color and are indistinguishable to the human eye.

UV fluorescence detection

UV configuration reveals the invisible, identifying fluorescent defects to achieve even higher levels of product purity.

Integrated shape-sizing

Built-in shape-sizing and defect-size control combine geometric and dimensional analysis with color and infrared inspection.

One breath, one target.

High-performance ejection valves operate at up to 1,000 cycles per second, delivering reliable, long-term performance across billions of cycles. Ejection timing and duration can be fully adjusted to match the product.

14
defect families

5mm
valve pitch

1.000/s
valve cycling

Billions
of cycles guaranteed

IP55
protection

ADVANCED HMI

More control.
Fewer steps.

The new HMI software is built around the tasks operators perform every day.

Less training, faster setup, and machine status you can read at a glance.

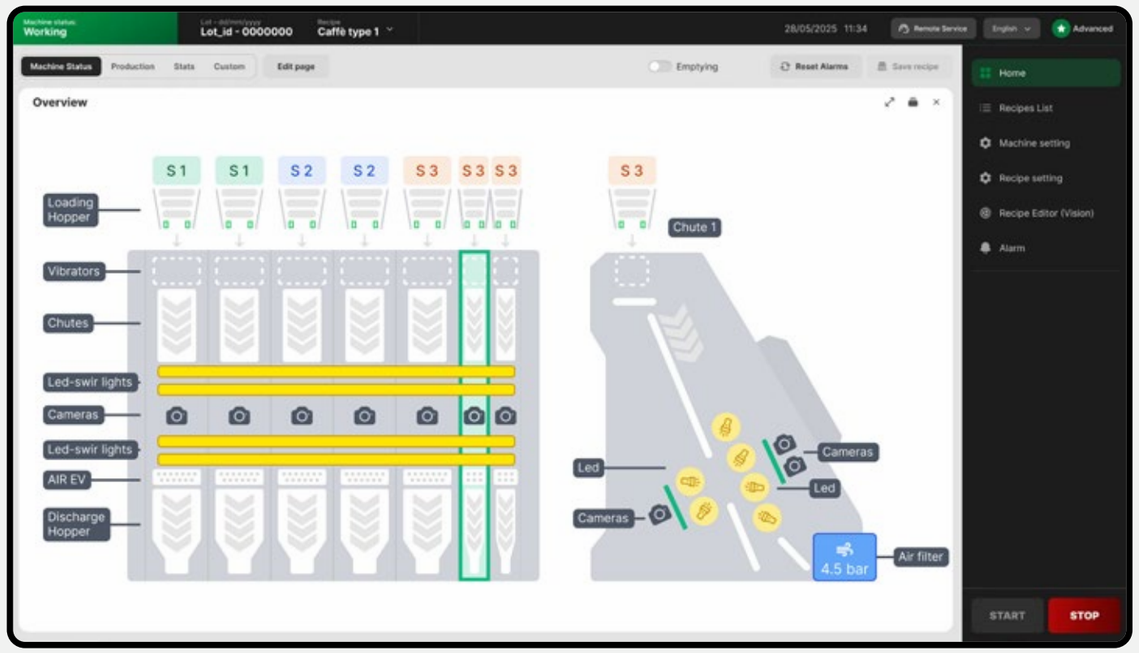
Secure access
Every shift starts with entering a PIN. User profiles and access levels define exactly what each operator can view and adjust.

Easy Set
Essential adjustments can be made without opening the full parameter set, cutting down the number of steps required.

Recipe management
Custom recipes with no storage limit — group, search, rename, duplicate, and save them as favorites.

Filters
Criteria in the visible, NIR, and — where installed — SWIR spectrums can be combined with color, geometry, shape-sizing, and defect-size control.

Real-time monitoring
Pressures, temperatures, throughput, and key signals always stay visible, with alerts that warn you before a shutdown occurs.



BRAIN™

ARTIFICIAL INTELLIGENCE FOR OPTICAL SORTING

BRAIN™ is our AI-powered software that takes precision and efficiency to a new level. With BRAIN™, you can build even the most complex recipes in an instant — unlocking peak sorting performance.

What BRAIN can do for you

- **Unrivaled sorting precision**
  Advanced AI algorithms redefine sorting accuracy with unmatched precision.
- **Greater efficiency**
  Boost productivity with rapid parameter setup, minimizing manual intervention.
- **Time and cost savings**
  Cut costs and save time by avoiding manual errors and optimizing every sorting operation.
- **Continuous support**
  Count on our dedicated support team for ongoing assistance and future-proof updates.

BRAIN™ comes built into every SEA.XE optical sorter.

UNMATCHED RESULTS. MADE SIMPLE.

A COMPLETE RANGE

Maximum flexibility.
One single platform.

SEA.XE is available in configurations ranging from 1 to 6 channels, with 320 mm chutes. Up to four sections can be set up for simultaneous re-sorting, with re-sort, double re-sort, and reverse sorting configurations. An optional 50:50 split is available on the last channel.



Contact us

Download the technical data sheets

Put us to the test
Facing a complex sorting challenge? Our global network of laboratories runs product testing on request — let our experts recommend the best solution for you.

Global support
We deliver global service support, available 24 hours a day, 7 days a week, 365 days a year.

Certifications
CE Declaration of Conformity; Machinery Directive 2006/42/CE; EMC Directive 2014/30/UE. Compatible with UL and CSA standards; optional MOCA certification.

SPECIFICATION	SEA.XE 2	SEA.XE 4	SEA.XE 6
Machine width	1360 mm	2040 mm	2720 mm
Depth	1950 mm	1950 mm	1950 mm
Height	2040 mm	2040 mm	2040 mm
Total chute width	640 mm	1280 mm	1920 mm
Compressed air, max 6 bar	640 l/min	1280 l/min	1920 l/min
Extraction air flow	1000 m³/h	2000 m³/h	3000 m³/h
Extraction manifolds	1	2	3

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Cimbria.com

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