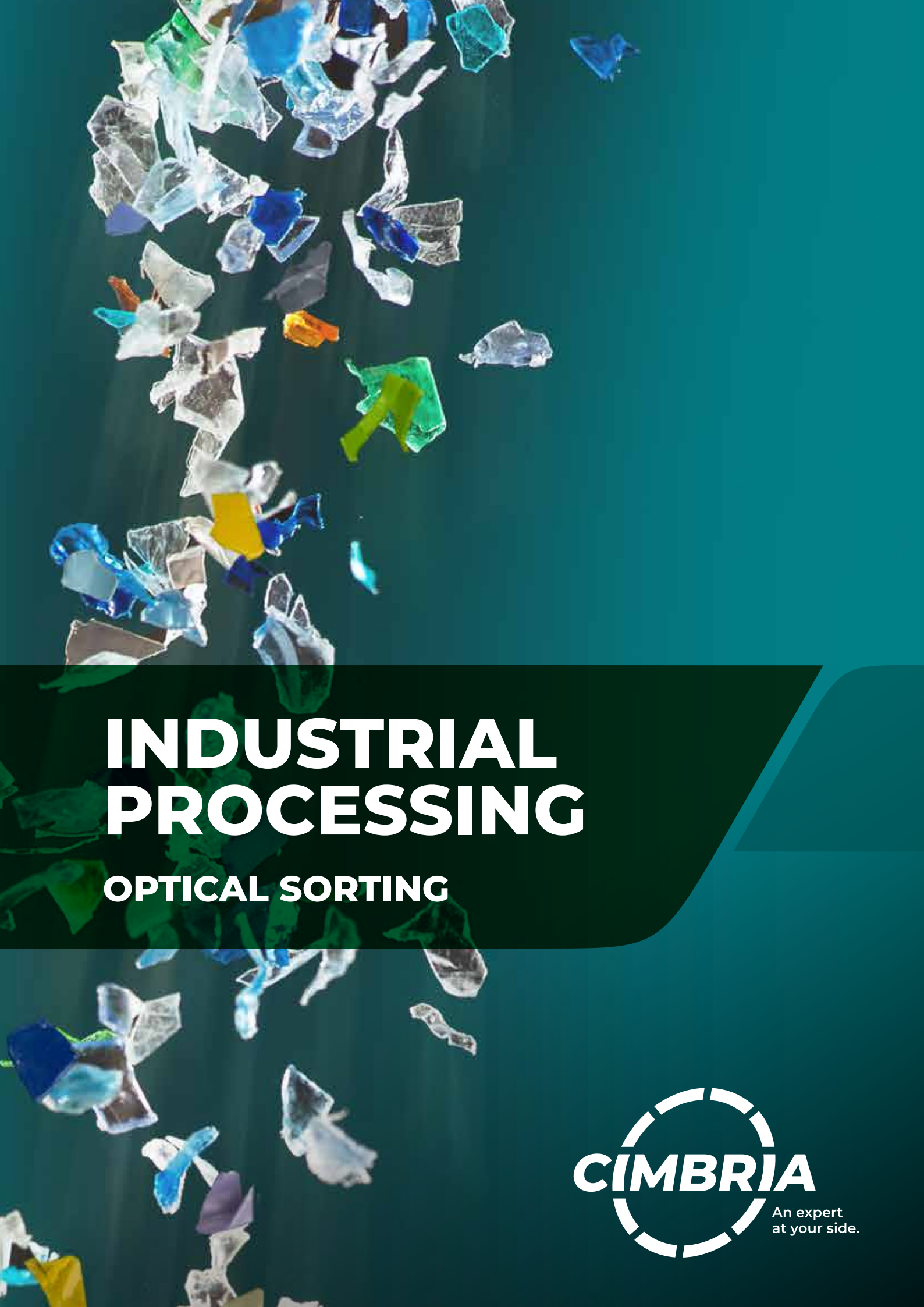


INDUSTRIAL PROCESSING

OPTICAL SORTING

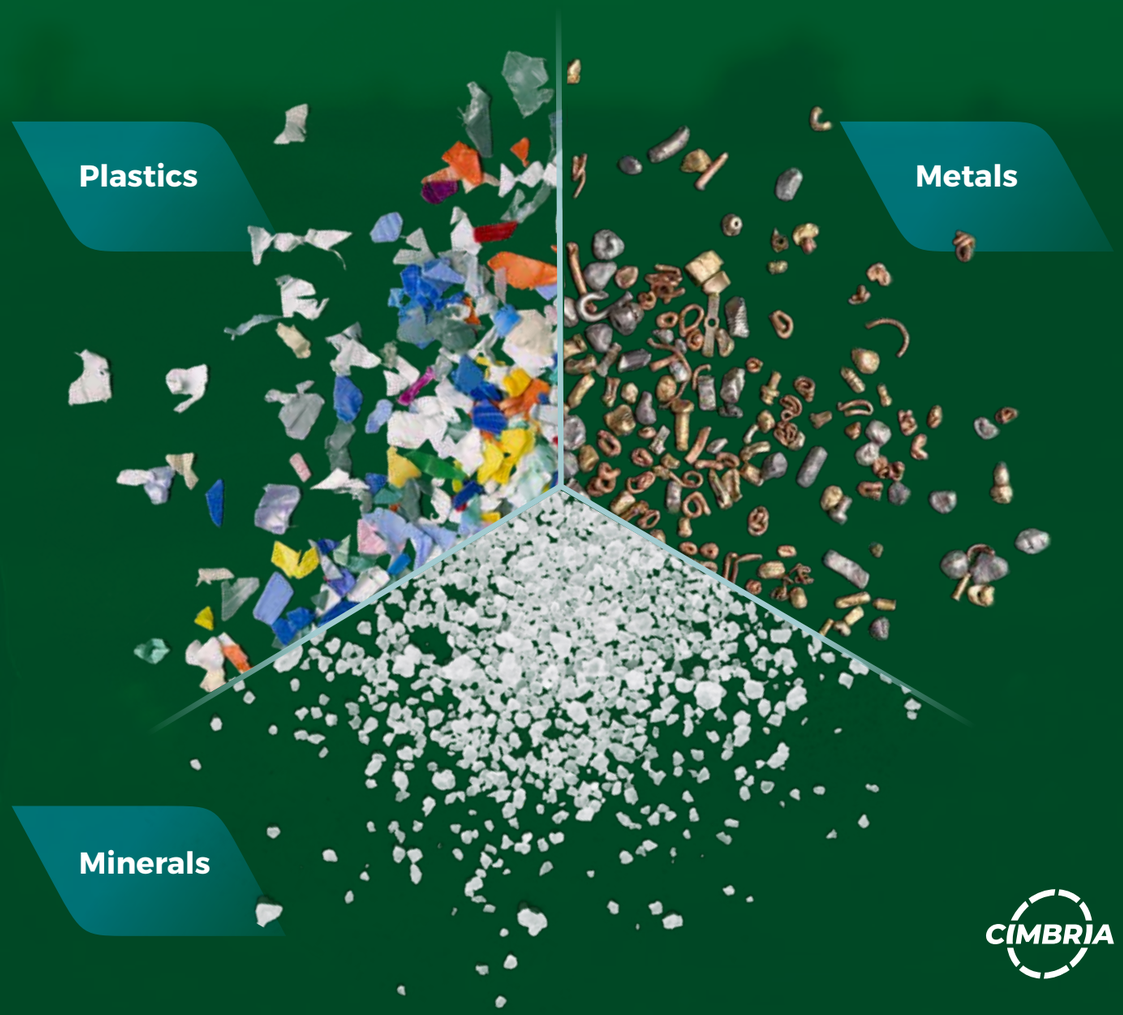
CIMBRIA

An expert at your side.

An expert at your side.

Optimized Solutions for Industrial Bulk Processing.

Designed for industrial-scale operations, our state-of-the-art solutions excel in cleaning, conveying, storage and sorting plastics, minerals, metals and other industrial bulk materials. With innovative and high-performance capabilities, our cleaning and optical sorting machines are crafted for extreme precision, supporting efficient recycling efforts and sustainable practices. Our conveying systems are built for maximum volume handling and flexibility.



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 industrial products, you can feel confident you will get **the right system tailored to your business**.

Cimbria's Vision Technology.

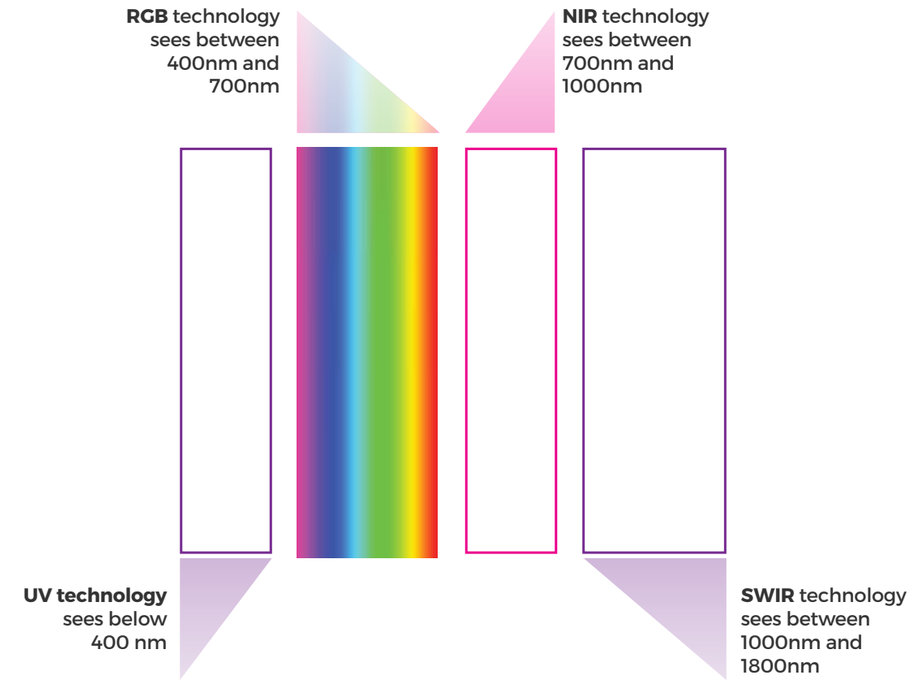
All Technologies For Color Sorting

Our inspection technology is the result of many years of dedicated innovation and expertise in the research and development of optical sorting systems. Through the integration of cutting-edge imaging solutions and sophisticated algorithms, this technology precisely captures and analyzes the entire color spectrum, distinguishing subtleties that are beyond human perception. This leap forward in technological capability significantly enhances production workflows, delivering unparalleled precision and reliability in sorting processes.

The inspection systems applied to the SEA Optical Sorters are able to determine and sort the smallest color and shade differences with **0,06 mm optical resolution**.

NIR and SWIR Technology For Polymers Sorting

By analyzing the infrared spectrum, these technologies optimize the sorting of foreign materials and defects that are visually indistinguishable, going beyond the capabilities of the human eye. The ability to identify the chemical nature of elements allows, for precise separation, such as distinguishing PVC from PET, resulting in homogeneous material streams suitable for efficient recycling with minimum waste.



The NIR & SWIR (InGaAs) vision systems, either individually or in combination, enhance sorting performance.

SEA.IQ+

Designed With Your Business in Mind

SEA.IQ PLUS redefines efficiency and precision in sorting technology. Equipped with Cimbria's SEA optical system, it features state-of-the-art full-color RGB cameras with NIR integrated, offering exceptional versatility that can be further enhanced with SWIR and UV technologies. This powerful setup effectively removes any color defects and foreign bodies to meet and exceed the stringent quality standards of the recycling business.
The combination of various cameras ensures that we can tailor our solutions to precisely meet your unique sorting requirements, delivering unmatched performance and value.

ACCESS OUR PRODUCT PAGE

			1	2	3	4	5	6
Dimensions	Length	mm / inch	1720 / 67,71	1720 / 67,71	2400 / 94,49	2400 / 94,49	3100 / 122,04	3100 / 122,04
	Width	mm / inch	1887 / 74,29					
	Height	mm / inch	2090 / 82,28					

THE POWER OF ARTIFICIAL INTELLIGENCE FOR OPTICAL SORTING

BRAIN™

Your business is driven by quality. To succeed, you need to maximize the positive and minimize the negative results. And it all begins with a precise recipe. Getting it right takes time even with years of experience. Until now.

Cimbria AI combines computer vision and machine learning algorithms to improve the sorting process. By simply marking two elements—one as "good" and the other as "bad"—the software autonomously analyzes visual data and sets the optimal recipe. This automated approach not only improves accuracy but also significantly simplifies the operator's role, saving valuable time for the operator to focus on more critical tasks.

FIND OUT MORE

CIMBRIA

SEA.XL

XL Performance, AI Precision

FIND OUT MORE HERE

SEA.XL is an advanced optical sorter for industrial applications. Powered by BRAIN AI and multi-angle high-resolution cameras, it delivers exceptional precision. Its compact design maximizes space efficiency, while its innovative vision system identifies materials by color or by chemical difference for unmatched sorting accuracy. Built for reliability, SEA.XL reduces downtime, lowers costs, and ensures high-speed, precise sorting for high-volume industrial needs.

			SEA.XL 2	SEA.XL 4	SEA.XL 6
Dimensions	Length	mm / inch	1330 - 52.36	1960 - 77	2590 - 102
	Width	mm / inch	1985 - 78,15	1985 - 78,15	1985 - 78,15
	Height	mm / inch	1720 - 67,72	1720 - 67,72	1720 - 67,72

SEA.TN

Simply High Tech

FIND OUT MORE HERE

Designed for versatility and user-friendliness, SEA.TN is engineered for high productivity in various industrial applications. Its advanced configuration features full-colour RGB cameras integrated with NIR and optional InGaAs technology. Built for long-lasting durability, SEA.TN not only promises extended performance but also delivers your business reliable operations, making it an indispensable asset for any forward-thinking production facility.

			1	1.5	2	3	4	5	6	7
Dimensions	Length	mm / inch	1093 - 43.03	1093 - 43.03	1700 - 66.93	1700 - 66.93	2125 - 83.66	2125 - 83.66	2675 - 105.32	2675 - 105.32
	Width	mm / inch	1690 - 66.54							
	Height	mm / inch	2100 - 82.68							

The Mechanical Traits Making The Difference.

IN-FEED SYSTEM

- The in-feed system ensures ideal product upload
- From 1 to 7 chutes to meet any production capacity requirements

EJECTING SYSTEM

- Rapid firing ejectors guarantee precise expulsion and highly concentrated rejects
- In automatic re-sort version, the accepted or rejected product can be conveyed to another section to undergo multiple passes of the sorting process
- The accurate sorting process ensures best end-product and its added value
- Highly concentrated rejects improve profitability

ELECTRONICS

- Self-diagnosis and self-calibration functionality maintain consistent performance
- Custom-made electronic boards with the highest technology

STRUCTURE

- Dust-proof and airtight
- Cameras heat reduction system to maintain the ideal temperature inside the optical box
- Easy cleaning and maintenance
- Standard color RAL 9003. Customized colors upon request

Special Options For Every Application.

- AISI 316L for corrosive environments
- Anti-wear and/or enhanced high-pressure ejectors for metal processing
- Special treatments to ensure optimal durability characteristics for abrasive products sorting
- Narrow pitch solenoid valves for ultra-fine products

Our Test Lab At Your Service.

Our state-of-the-art Test Lab serves as an interactive arena where customers are invited to bring their products for testing. In this lab, clients have the unique opportunity to observe firsthand the performance of our sorting technology on their specific materials.
By conducting thorough examinations, we ensure that clients can witness the precision and
efficacy of our machines in real-time. The results observed in the Test Lab are reliable predictors of the machine's long-term performance. This transparency guarantees that the high sorting standards seen during testing will be consistently maintained throughout the machine's operational life once purchased.
The Test Lab embodies our commitment to customer satisfaction: precision engineering, and excellence in sorting.

SCAN THE QR TO SET UP YOUR TRIAL

PUT US TO THE TEST

Send us your most challenging sorting task. Cimbria's multiple testing centers are available for customizable lab trials worldwide. Let our experts recommend the best solution.

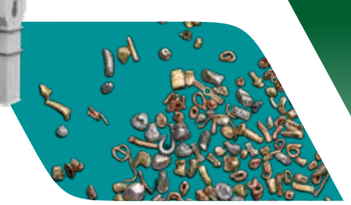
Our Proven Approach

01. Sample Receiving and Analysis
02. Contaminant Deep Consideration
03. Machine Setting
04. Testing and Sorting
05. Analysis of Results
06. Test Report Generation
07. Customer Evaluation and Feedback

Improve Your Industrial Processing With Our Comprehensive Solutions.

Leader in Cleaning

With a complete lineup of precise cleaners designed by Cimbria to effectively remove impurities, you can achieve optimal product quality, improved efficiency, and enhanced operational performance. The machines ensure the dedusting, screening and aspiration of light materials (films, labels, etc.), ensuring that the production cycle consistently yields a clean product. This advanced technology enhances both the quality of final product output and the processing efficiency environment.
Our experts collaborate with you to understand your business needs and ensure you have the right systems for your production. Cimbria's Delta series of pre-cleaners, cleaners, and graders are user-friendly and highly efficient, enhancing both productivity and profitability.



FIND OUT MORE HERE

Conveying Systems

Designed for efficient and safe transportation of bulk materials, the Cimbria's conveying technology ensures non-contamination of materials. With customizable solutions, Cimbria meets the specific needs of flexibility and volume of the industrial sector.

Square Storage

Square silos offer a modular construction, perfectly adaptable to the customer capacity needs. These robust and space-efficient design facilitates easy handling and organization. Ideal for the recycling industry, they ensure a streamlined workflow and effective inventory management.

FIND OUT MORE HERE

Turnkey Projects.

Setting up a fully operational processing facility can be a complex task. That's why we offer comprehensive turnkey support - from initial consultation to final installation and commissioning.

Our team of experienced engineers and project managers work closely with our customers to design a **customized processing plant** that integrates **cleaning, sorting, storage, and handling systems**. We leverage our deep domain expertise to identify the optimal technologies and configurations that will maximize the efficiency and productivity of your operations.

Our turnkey solutions include detailed engineering, procurement of equipment, on-site installation, and comprehensive services.
We work tirelessly to deliver a fully functional processing plant that meets your specific requirements and is ready to operate at peak performance from day one.

CHECK OUR WEBSITE HERE

Service First.

- Remote connection on Optical sorters
- Start-up and training at customer site
- Yearly maintenance contracts
- 24/7 technical assistance
- Financing services

Delivering Reliability and Dependability

You are committed to delivering the highest quality for your customers. Cimbria can help you deliver. With our customer service team and partners we offer exclusive after-sales service, for qualified assistance at all times. Aftersales service not only includes spare parts, but also regular maintenance services, plant check-ups and consulting services.

CONNECT TO OUR CUSTOMER SERVICE

Release date: Sep. 2025/EN

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