SORTIMAX
SMART SORTING

AI WASTE SORTING INNOVATION

THE NEW GENERATION OF INTELLIGENT SYSTEMS FOR AUTOMATED WASTE SORTING

SORTIMAX™ is a solution developed by Rixera to make sorting and recycling plants more efficient, automated, and high-performing. By integrating artificial intelligence, machine vision, and air-jet ejection systems, SORTIMAX™-IQ identifies and sorts materials in real time, acting directing on waste streams moving along the conveyor belt. SORTIMAX™-IQ automates sorting operations, the removal of unwanted materials, and material quality control, improving the purity of the resulting material fractions and ensuring greater continuity throughout the production process.

SORTIMAX™-IQ: PRECISION, SPEED AND AUTOMATION

The latest evolution of SORTIMAX™-IQ combines advanced artificial intelligence algorithms with optical analysis technologies to recognize materials, objects, and packaging, supporting sorting operations even in high-throughput waste streams.

The system can be configured according to the characteristics of the facility, conveyor belt width, and specific application requirements. Sorting takes place automatically, reducing the need for manual intervention and enabling the automation of quality control asks traditionally performed by operators in manual sorting cabins.





HIGHER PRODUCTIVITY LESS MANUAL INTERVENTION

SORTIMAX™-IQ is designed to integrate into existing industrial process and contribute to:

- Increase productivity by automating high-speed sorting operations;
- Improve the quality of of recovered materials by identifying and removing unwanted fractions;
- Reduce reliance on manual sorting by supporting the automation of repetitive tasks and quality control activities;
- Optimize recycling processes through sorting configurations tailored to the facility's specific requirements;
- Promote resource recovery by helping make circular economy processes more efficient.

With SORTIMAX™-IQ, Rixera brings artificial intelligence directly into industrial processes, transforming waste sorting into an increasingly automated, precise, and measurable operation.

MAIN APPLICATIONS

Smart technology to maximize the value of every material. The dataset is built gathering millions of real waste data point, collected from plants spread across the world - 30 billion images a year.



PET bottles


Film



HDPE



Trays



Plastic Other



Black Plastic


Paper



Metals



WEEE



Glass



Fabric

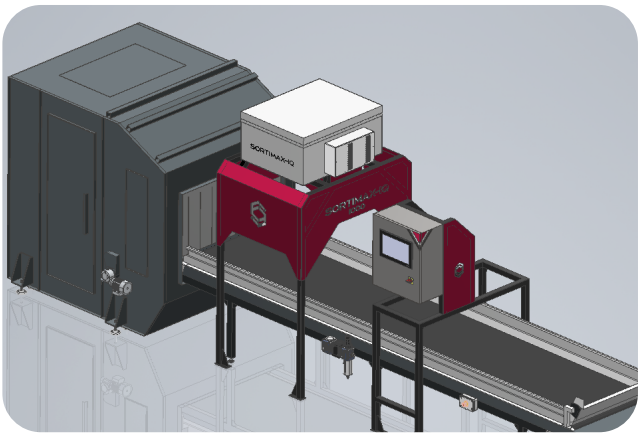


Tetra Pak

MODELS

SORTIMAX™-IQ

ELEVATED PURITY STANDARDS SORTING WITH ARTIFICIAL INTELLIGENCE



Waste sorting Recycling

BELT SIZE APPLICATION **1000 | 1400 | 2000 | 2800**

Speed: max 3,7 m/s
Energy consumption: nominal power 1 kW (mod. 1000mm)
Weight: 150 kg - mod. 1000mm (accelerator belt and flight chamber not provided)
Ejection system: MAC bullet valves
- nozzles pitch 25mm
- from bottom to top
- from top to bottom

FEATURES:
- deep learning system
- food vs. non food grade recognition
- high speed and stable sorting
- facilitated servicing
- modular structure
- user-friendly HMI software

SORTIMAX™-IQ HSI

ADVANCED MATERIAL IDENTIFICATION VIA HYPERSPECTRAL SENSOR COMBINED WITH ARTIFICIAL INTELLIGENCE

FEATURES:
- integration of HYPERSPECTRAL imaging technology (HSI) with AI
- advanced recognition of materials and packaging types
- expanded identification capabilities and more targeted sorting

SORTIMAX™-IQ DYNAMIC

HIGH PERFORMANCES WITH REAL-TIME DATA CONTROL VIA ANALYZER AI

FEATURES:
- user-friendly HMI software with retroactive system
- dynamic control with Analyzer AI or Analyzer AI + NIR
- real-time quality reports of selected product

SORTIMAX™-IQ QC SAMPLING LINE

AUTOMATION OF ANALYSIS:
SORTING FOR OBJECT-LEVEL QUALITY CONTROL

FEATURES:
- automation of waste composition sampling
- standardized and more efficient quality control
- customized configuration based on material characteristics, sampling requirements, and production process organization

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RIXÈRA SRL

SORTIMAX™ is a Rixera S.r.l. brand.

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