

Elevate Optical Sorting Performance



MIND™

From the trusted MACH Hyspec® to the AI-powered add-on Hyspec MIND™, Machinex delivers optical sorting solutions shaping the waste & recycling industry. Using both the proven hyperspectral technology and advanced artificial intelligence, these systems offer unmatched flexibility, precision, and performance.

Choose the solution that fits your operation, or scale with confidence as your needs evolve.

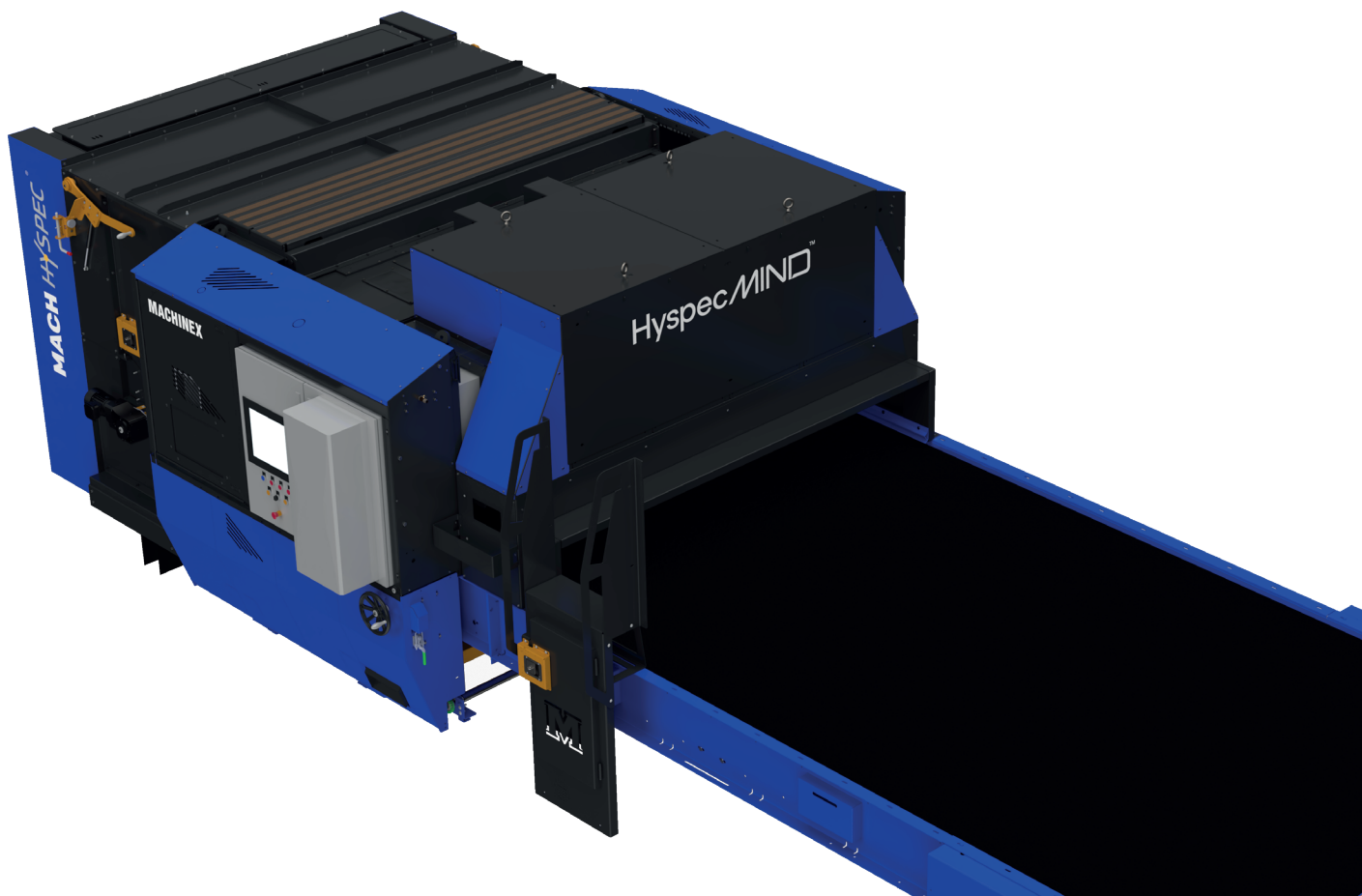
**From Proven Technologies to Intelligent Sorting,
We've Got You Covered.**



Using technology made more efficiently by a high-speed, short wave infra-red (SWIR) hyperspectral detection system, the MACH Hyspec[®] can sort different types of material, such as plastics (PET, HDPE, PVC, LDPE, PP, PS, etc.) and fiber products. It also includes carton container detection, wood product recognition, wood by grade (natural versus painted), color recognition and metal detection. The MACH Hyspec[®] can be used in different types of material recovery facilities, such as single-stream, construction & demolition, municipal solid waste, plastic recycling, and other applications.

BENEFITS OF THE MACH HYSPEC[®]

01 High-Volume Object Detection Depth up to 430 mm: Increased product recognition	02 Fast Detection & Analysis Outstanding accuracy & capacity	03 Static Acquisition System Superior reliability & stability (no moving parts)	04 No Compromise on Safety Internal guard rail, safety sensors, retractable mobile platform & splitter on rail	05 ANSI Z245 Standard Compliant Proud members of the National Waste & Recycling Association Safety Committee
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Powered by MIND™, Machinex-engineered artificial intelligence, Hyspec MIND™ upgrades the MACH Hyspec® optical sorter with an advanced add-on AI module. Going beyond material identification, it detects color, shape, and object form to deliver more precise, granular sorting, such as separating UBCs from non-UBCs and PET bottles from PET trays. The result: higher purity rates, increased recovery, and greater value from every output stream.

BENEFITS OF THE HYSPEC MIND™

01 Powered by MIND™ Machinex-Engineered Artificial Intelligence: Delivers more precise sorting actions	02 Multiple Configurations Available 3-channel; double ejects possible	03 Future-Ready Technology Consistently evolving through advanced AI development	04 No Compromise on Safety Internal Guard Rail, Safety Sensors, Retractable Mobile Platform & Splitter on Rail	05 ANSI Z245 Standard Compliant Proud members of the National Waste & Recycling Association Safety Committee
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Whether you're maximizing performance or wanting to extract higher value commodities, our optical sorting solutions deliver results.

Not sure which solution is right for your facility? Our experts are here to help you identify the best fit to optimize performance, improve recovery, and maximize value.

To support your decision, here's a quick comparison of the MACH Hyspec® optical sorter and the Hyspec MIND™ with AI-enhanced add-on module.

Intelligent Performance

Detection Technology

Material Identification

Material Type

Typical Applications

Value Contribution

MACH HYSPEC®

Hyperspectral

Material composition & color
(Clear PET, Natural HDPE, OCC, fibers, etc.)

Plastics, fibers, metals, wood



Clear PET



Clear PET

Primary sorting, quality control, recovery

Reliable & high precision detection, high throughput, high purity

Hyspec MIND™

Use Mach Hyspec® technology combined with AI-enhanced add-on module

Adds shape & function recognition (bottles vs trays, food vs non-food, wood A vs B)

Enables finer segmentation within the same material



Clear PET bottle



Clear PET tray

Same applications as MACH Hyspec® but useful where finer segmentation is required (shape & function)

Increased purity through finer segmentation (shape & function)



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