



DETECTION SORTING



Detection sorting involves separating metals from a product stream using conductivity. It relies on metal's ability to alter an electromagnetic wave to alert the system that it needs to be separated and recovered.

How It Works

MPI's Detection Sorting System features a high sensitivity metal detector mounted under a belt that reliably and consistently senses fine metal particles (down to 0.5 mm diameter metals) over belt widths ranging from 24" to 96". The total detection zone is divided into multiple segmented single zones, with each sensor zone sized to meet the sensitivity level required for the application. Each segment has its own reject mechanism to remove only a small portion of material from the belt for reprocessing.

Under the conveyor belt a metal detector produces electromagnetic waves. Product flows on the belt directly over the detector. When metal in the product passes over and alters the waves, a computer processes the signal, pinpoints the contaminate location and alerts the reject to expel only that "contaminated" section of the product from the product stream.

MPI Difference

- Maintenance-free - frequent calibration eliminated; digitalized circuitry ensures years of reliable performance
- Digital balance control - counters the effects of temperature and humidity
- Auto calibration - fast and easy setup
- Digital frequency and phase control to avoid drifts - after initial setup, no further adjustment of electronics is needed
- Digital noise filters - eliminates undesirable signals such as vibrations and shocks

- Multi-channel technology - allows optimum recognition of metals
- User-friendly - software is self-explanatory; on-board “teaching assistant” helps user
- Intuitive operation - control panel shows only the information that is required
- Able to handle 120 product configurations
- Auto calibration - provides quick and easy learning of product characteristics for product effect
- Rugged construction

Specifications

Senses fine metal particles (FE 0.5 mm) over wide widths (3 ft. - 26.6 ft.)

- Detection of ferrous, non-ferrous and stainless steel metals down to 0.5mm
- Detection width ranging from 24” to 96”
- Segment sizes ranging from 4” (100mm) to 10” (250mm)

Options

The Detection Sorting System can be partnered with MPI's Cross Belt Separator's, Magnetic Head Pulley's, or Eddy Currents for a complete turnkey solution to remove all ferrous and nonferrous metals.

Videos