Solid Waste Recycling

Cost Effective recovery of high-quality secondary raw materials

- Color separation
- Metal separation
- Polymer separation
- Material separation
Abstract:

All plastics are produced from limited natural resources such as crude oil, coal, natural gas, and plants. Many end up in the waste bin after having been used. Plastic waste is often detrimental to the environment, hence the need to remove it in an environmentally friendly manner. The only way to do this is by recovery and recycling.

Mixed plastics, such as those used in light packaging, require sorting by different criteria. Light-weight and laminated components must be separated and different plastic types identified. Only the highest quality recycled fractions can be reused in new products. Nowadays sophisticated sorting technologies make it possible to classify plastic waste into separate high purity fractions.
Multi-Sensor Sorting Systems

VARISORT
Solid waste & mixed plastics recycling

The multi-sensor sorting system VARISORT can be used universally in many different recycling applications (e.g. plastics, metal, electronic waste and solid waste recycling). It will sort mixed streams into single fractions, playing a pivotal role in ensuring the highly pure recycled material can be profitably reprocessed in the production cycle.

Optimally scattered on a fast-running conveyor belt the waste reaches the detection area. The electronic evaluation unit determines the exact position of the unwanted products, and with accurate timing and positioning activates the corresponding nozzles of the air-blast unit.

VARISORT 2816

Specifically designed for solid waste and plastic bottle recycling applications, our new 2816 mm wide VARISORT systems can sort up to 8 metric tons of material per hour. Even at a working width of almost 3 meters, the VARISORT provides the highest resolution for NIR, color and metal detection. A 6.2 m long high speed conveyor belt ensures optimal spread of material at remarkable throughputs rates. If required for lightweight material or film, belt speeds can be reduced to optimize performance.

The new VARISORT 2816 is a perfect fit for any MRF/PRF where high efficiencies and throughputs are critical. With the highest sensor resolution and impressive conveyor speeds, paired with the modular design and several automatic cleaning mechanisms for lights, sensors and valves, the VARISORT 2816 is one remarkable sorter.

Roller Splitter

The VARISORT can be equipped with rotating roller splitters to prevent material from building up on the splitter and influencing the sorting process. For 3-chute sorting applications two roller splitters can be installed.

A door on each side of the separation housing makes the VARISORT very accessible for operating, maintaining and cleaning.

Sensors: C Color and Shape Sensor  M Metal Sensor  N NIR Sensor
Sorting Modules

Sesotec can also provide single modules like separation housing with color sensor or a NIR sensor bridge for existing recycling facilities looking to upgrade their process. These separation housing and NIR bridge modules can easily be combined with a third party or existing conveyor system.