



C

Color sensor

M

Metal sensor

N

NIR sensor

SORTING SYSTEMS

VARISORT+ FLEX

The flexible sensor technology in plastics &
light packaging recycling

Efficient sorting of various material streams

Fluctuating material availability and the associated fluctuating material quality are among the biggest challenges facing recycling companies – and can quickly impact their profitability. Our VARISORT+ FLEX reliably detects and separates plastic types, colors, shapes, metals and foreign objects in various material streams. Thanks to its flexible system concept, it can be integrated into any production line and also operated with a conveyor belt and separator housing provided by the customer. The VARISORT+ FLEX convinces with a comparatively high separation reliability and a simultaneously high material throughput of up to 8 t/h.



Color sensor

High-resolution color line scan camera for approximately 17 million teachable colors combined with innovative lighting options

- Incident light – detection of reflection
- Sorting by colors and shapes
- Separation of unwanted materials like e.g. silicone cartridges



Metal sensor

Inductive metal sensors for identification/detection of magnetic and non-magnetic metals

- Detection from 1 mm
- Easy to operate
- Simple sensitivity settings
- M – Detection of all metal types
- M+ – Identification of stainless steel



NIR sensor

Hyperspectral camera for identification of different polymer types and materials as well as for various special applications

- Detection of PET trays as well as bottle/label combinations
- Recognition of different material types (LDPE / HDPE)
- Detection of mono and multilayer materials

Possible sensors composition



Application areas

Sensor combination/application	C	CN	CM	CMN	N	MN
Bottle recycling	+	+++	+	+++	++	++
Mixed plastics (PS/PE/PP)	+		+	+++	++	++
Light packaging	+	+	++	+++		+++
MSW	+	+++	+	+++	++	++
Color sorting	+++	+++	+++	+++		
Metal detection	Option (M): Metal sensor					



Efficient

The VARISORT+ FLEX reliably detects and sorts plastic types, colors, shapes, metals and foreign objects from different material streams. It achieves a high throughput of up to 8 t/h and convinces with a reject reliability of up to 99%.



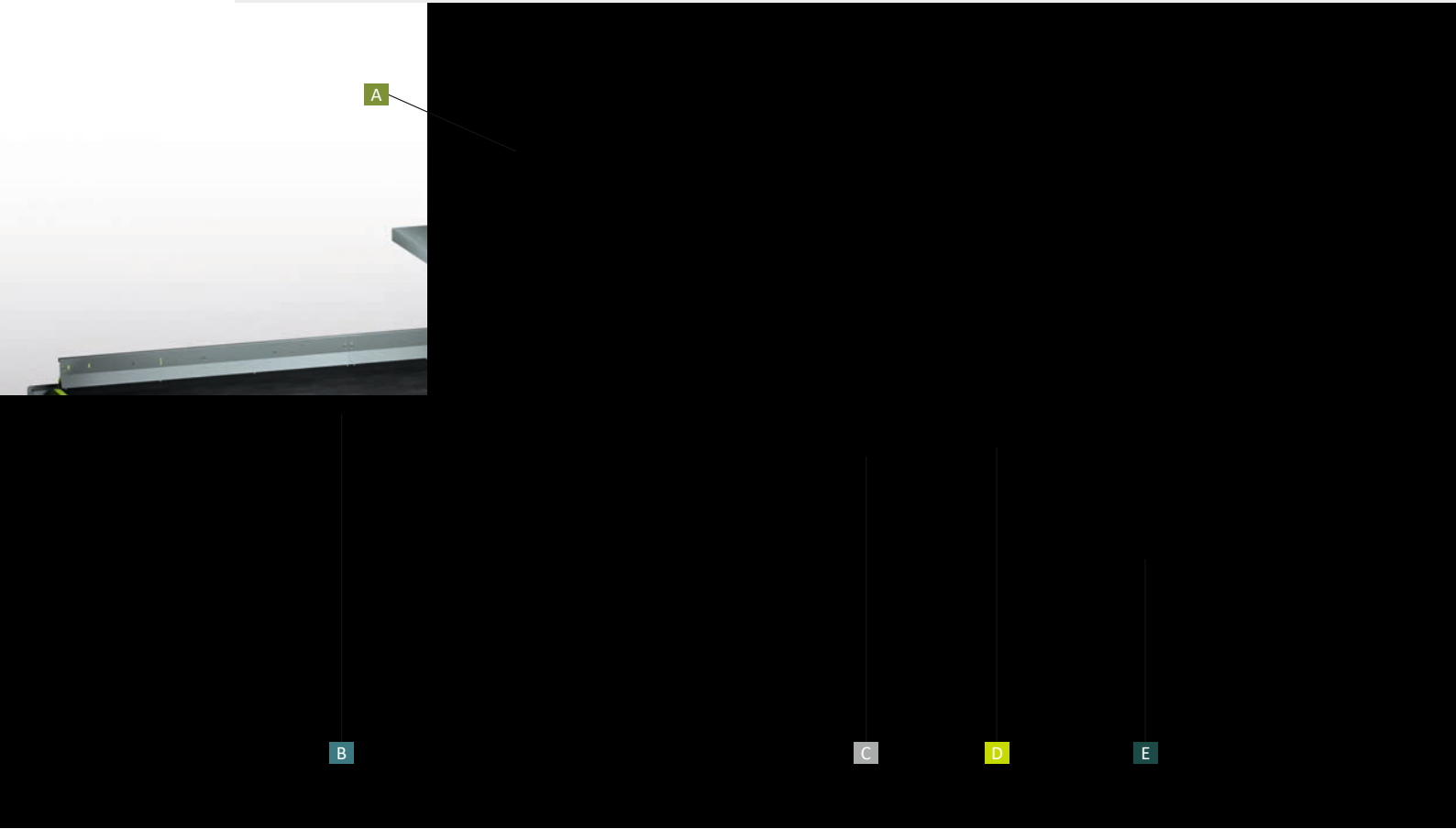
Flexible

The combination of up to three sensors, different working widths, the choice of different lighting systems and the option of operation with a customer- or plant-provided conveyor belt allow maximum flexibility.



Profitable

The VARISORT+ FLEX is synonymous with a profitable sorting process thanks to the best possible sorting results even with poor material quality, high system availability with low maintenance and cleaning requirements, and a flexible system configuration.

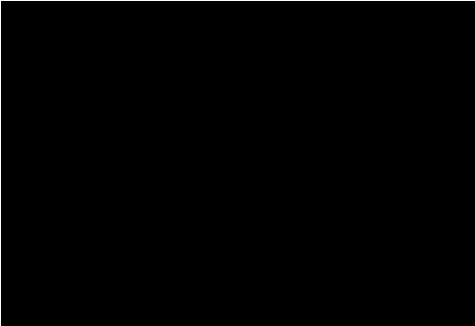


The system has the following components:

- A** AI-assisted color, shape and NIR sensor for detecting objects of a wide range of colors, shapes and materials
- B** High speed conveyor belt
- C** Metal sensor: for the detection of smallest metal impurities
- D** Blow-out system: with various nozzles for the separation of foreign bodies with precise timing and positioning
- E** Rejector housing

Artificial Intelligence

Based on artificial intelligence (AI) in combination with the innovative sensor technology, the VARISORT+ enables the sorting of previously indistinguishable materials.



The VARISORT+ Family

In addition to the VARISORT+ FLEX, there is the VARISORT+ for plastics recycling and the VARISORT+ WEEE for metal and electrical scrap recycling.

Free consultation

<https://www.sesotec.com/emea/en/contact-form>



VISUDESK – Visualization software

To improve product quality and the efficiency of sorting and recycling plants, process data is essential for operators. With the VISUDESK visualization software, this data can be easily and clearly displayed on all Sesotec equipment. Based on this data, they can derive targeted measures to increase efficiency and effectiveness on the one hand and minimize downtimes on the other.

The OPC UA-based machine communication model is available on both implemented both on the devices and on a server, thus enabling both stationary and mobile access to the application.

Service

Remote Access

For troubleshooting, our service technicians can access your machine via Ethernet.

Remote Support with Augmented Reality

For troubleshooting via video support, simply download a free app and send us the access data.

Service Hotline Sorting

+49 (0) 8554 - 308 129
service.sorting@sesotec.com

Technical data

Working width [mm]	1024	1536	1920	2816
Throughput up to [t/h]	3	4.5	6	8
Number of valves	64/40	96/60	120/75	160/110
Valve pitch [mm]	16/25.6	16/25.6	16/25.6	17.6/25.6
Suitable grain sizes [mm]	15–350	15–350	15–350	15–350
Power [max. KVA]	0.5-1.5			
Protection class	IP 54			

Options

Device division	Division of the sorter for parallel sorting of two different material streams or for 2-stage sorting
Valve grid	Alternative valve pitch possible for certain sorting applications
Sensor upgrade	Pre-wiring for possible sensor upgrade
M+: selective metal sensor	Selective inductive multi-channel detection coil for detection of stainless steel, steel and non-ferrous metal