



## **UNISORT C**

**It's the color that counts.**

> Sorting by colors – simple, fast and reliable

# UNISORT C

## It's the color that counts.

Although widely believed to be unimportant color actually plays a large role in determining the value created by recycling, especially when sorting plastic material and paper.



The general rule in the recycling process is to start with the light colors, then deal with the darker ones – e.g. from white to brown or yellow, but never the other way around. The better the color separation, the better the secondary product.

In order to obtain such added value, STEINERT has developed the UNISORT C series which is characterized by a process that complements pure sorting by material type. High-definition color cameras permit the material to be efficiently sorted by color criteria which the customer is free to choose. The working width of these cameras is up to 2.8 m (110").

Together with other sorting equipment made by the STEINERT group, such as the metal separators and the UNISORT P nearinfrared (NIR) sorting system, a wide range of unique recycling products is available. With constant attention to the overall process, the staff of the STEINERT group are experts in the interfaces and therefore guarantee the most economical solution for each specific application.

### Applications

The UNISORT C series has been designed for the color-based sorting of coarse and fine plastics, paper and glass. However, it is also possible to sort other types of bulk material. Usually, such materials are separated by a pre-sorting system from packaging waste, general household waste, old wood products or electronic scrap.

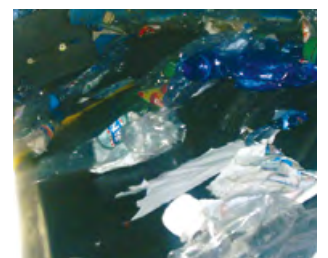
### Types

Transparent materials such as PET bottles or PET flakes are normally processed by using transmitted light systems whereas reflected light systems are used for non-transparent to opaque materials like housing scrap or granulate. The latter systems use the visible light reflected from the surface for determining the color.

The grain size and the scope of color changes in the material determine the level of definition to be chosen for the HD camera. In any case, the optical equipment is laid out for very high sensitivity. This permits the precise focusing of the system on the point of interest and a good differentiation of the material type on the one hand, and energy-saving operation of the system on the other. Moreover, the general design of the UNISORT C series allows a fast switch-over from one sorting task to another without the need for time-consuming extra installation work.

### Tried and tested complete systems

An exact color determination is but one basic requirement for a successful sorting process. This is why the feeding and discharge equipment of the STEINERT sorting systems are mostly delivered together with well-matched feeding devices, highly efficient blow-off nozzles, and discharge hoods optimized under fluid mechanics aspects.



A unique active nozzle control system takes care of the precise opening and closing of the nozzles –which saves approximately 30 % of the compressed air demand and results in an even better separation of the products.

### Options

A third product flow can be achieved by installing one more nozzle bar. A reflected light kit comprising the main components sensor, controller and nozzle bar is available for refitting work, technological updates and plant construction work. This kit can be matched with the individual requirements such as the working width.

For more complex tasks, the system can be complemented by a near-infrared (NIR) identification unit and/or an (induction-based) metal detector.

### Good serviceability

The system is easy to include in plant-specific data networks, and a cost-saving remote maintenance option is also offered. The worldwide service network of STEINERT Elektromagnetbau GmbH provides a reliable support to our customers around the globe.

### Working principle

The material stream is evenly distributed across the working width and fed to an identification system. Regularly arranged high-performance color sensors (in figure: transmitted light sensors) identify all objects with a high accuracy at the respective positions whereupon precise ejection pulses from compressed-air nozzles blow the identified object out of the material stream.



### Technical data

- Sorting speed: max. 3 m/s
- Resolution: min. 3 mm
- Sorting width: max. 2.8 m (110")
- Grain size: min. 10 mm (½")
- Nozzle grid pitch: 31, 25, 12.5 or 6.25 mm (1¼", 1", ½", ¼")

#### Throughput:

- Grain size 60 – 250 mm: 2 – 7 t/h•m (2½ – 10")
- Grain size 10 – 60 mm: 0.8 – 3 t/h•m (½ – 2½")



**STEINERT Elektromagnetbau GmbH**

Widdersdorfer Straße 329–331  
50933 Köln

Germany

Phone: +49 221 4984-0  
Fax: +49 221 4984-102  
E-Mail: [sales@steinert.de](mailto:sales@steinert.de)  
[www.steinert.de](http://www.steinert.de)

**Tochtergesellschaften**

Subsidiaries

**RTT STEINERT GmbH**

Hirschfelder Ring 9  
D-02763 Zittau  
Germany  
Phone: +49 3583 540-840  
Fax: +49 3583 540-8444  
E-Mail: [sales@steinert.de](mailto:sales@steinert.de)  
[www.unisort.de](http://www.unisort.de)

**North America**

STEINERT US Inc.  
285 Shorland Drive  
Walton, KY 41094  
U.S.A.  
Phone: +1 800 595-4014  
Fax: +1 800 511-8714  
E-Mail: [sales@steinertus.com](mailto:sales@steinertus.com)  
[www.steinertus.com](http://www.steinertus.com)

**Australia/Asia**

STEINERT Australia Pty. Ltd.  
14 Longstaff Road  
VIC 3153, Bayswater  
Australia  
Phone: +61 3 8720-0800  
Fax: +61 3 8720-0888  
E-Mail: [sales@steinert.com.au](mailto:sales@steinert.com.au)  
[www.steinert.com.au](http://www.steinert.com.au)

**Japan**

STEINERT Japan Co. Ltd  
703 President Roppongi  
3-2-16, Nishi-Azabu  
Minato-ku, Tokyo 106-0031  
Japan  
Phone: +81 3-6804-5607  
Fax: +81 3-6804-5608  
E-Mail: [sales@steinert.jp](mailto:sales@steinert.jp)  
[www.steinert.jp](http://www.steinert.jp)

**South America**

STEINERT Latinoamericana Ltda.  
Av. Heráclito Mourão de Miranda, 2080  
Bairro Castelo  
31330-382 Belo Horizonte  
Brazil  
Phone: +55 31 3372-7560  
Fax: +55 31 3372-6995  
E-Mail: [steinert@steinert.com.br](mailto:steinert@steinert.com.br)  
[www.steinert.com.br](http://www.steinert.com.br)

**Niederlassungen**

Branches

**China**

STEINERT China Ltd.  
Room 1009, Building B,  
Jinhai Wealth Commercial Centre,  
Baiziwaxili, Chaoyang District,  
Beijing 100124  
China  
Phone: +86 1059694456  
Fax: +86 1059694459  
E-Mail: [china@steinert.de](mailto:china@steinert.de)  
[www.steinertchina.com.cn](http://www.steinertchina.com.cn)

**Singapore**

STEINERT Asia  
33 Maude Road #02-01  
Singapore 208344  
Phone: +65 62939556  
Fax: +65 62988231  
E-Mail: [singapore@steinert.de](mailto:singapore@steinert.de)  
[www.steinertasia.com](http://www.steinertasia.com)

**Africa**

STEINERT Africa  
IMS Engineering (Pty) Ltd  
10 Derrick Road, Spartan  
Kempton Park, 1620  
Republic of South Africa  
Phone: +27 10 001 8200  
Fax: +27 11 970 3200  
E-Mail: [south-africa@steinert.de](mailto:south-africa@steinert.de)  
[www.imsengineering.co.za](http://www.imsengineering.co.za)

Subject to technical changes.

Your local STEINERT consultant:

