



2-50
mm

clarity

the next dimension
in plastics sorting

we process the future

binder+co

CLARITY – THE NEXT DIMENSION IN PLASTICS SORTING

Both economically and ecologically speaking, plastic flakes are an indispensable basic material in the manufacture of new synthetics.

In the course of processing surrogate fuels, it is often necessary to purify the source material, i.e. separate domestic, industrial or commercial wastes from impurities, such as ferrous and non-ferrous materials, and chlorous or inert substances.

Binder+Co is a real pioneer in plastics sorting.

As early as in the 1990s, the company developed the first recycling system world-wide for a sensor-based processing of plastic packaging materials. Now in its 4th generation, the CLARITY is equipped with cutting-edge valve and camera technology. In this way, even the finest flakes can be sorted, thus meeting the highest customer demands.

“Revolutionary and prizewinning – there is no other sorting system that has changed the world of recycling as sustainably as CLARITY”

CLARITY. THE NEXT DIMENSION IN FINES SORTING OF PLASTICS.

2-Way Solution

the revolutionary system from Binder+Co is highly adaptable

The system is individually customised with the appropriate camera, illumination and sensor technology to achieve the best results for the respective task. CLARITY has been designed in modular form to enable a trouble-free integration into existing installations.

320 Valves

High-speed on 1 m sorting width

CLARITY works using the latest high-speed technology to sort finest grain sizes. The high-speed valves developed by Binder+Co are installed with the smallest possible distances to the object, thus effecting high-precision ejection of material. The valves can be exchanged individually or, to save time, in a block of 32 valves.

2 – 10 mm

for more accurate ejection of valuable secondary raw material

The latest generation of the CLARITY sorts flakes in a range of grain sizes from 2 – 10 mm.

Intelligent Recognition

Improved camera technology

Ejector unit at very close range to object

The CLARITY works with high-resolution camera technology, enhanced computing power and optimised material feed for high-precision sorting with lowest possible material loss.

The distances between the recognition unit and ejector unit, and between the ejector unit and object to be ejected, are minimal and thus ensure precise ejection of single fractions.



2-50 mm

Improved

Quick and simple service and maintenance accessibility

The CLARITY is easily accessible for maintenance and operational checks: The camera casing, valve strips and lighting can be swung out for inspection.

Self-Cleaning

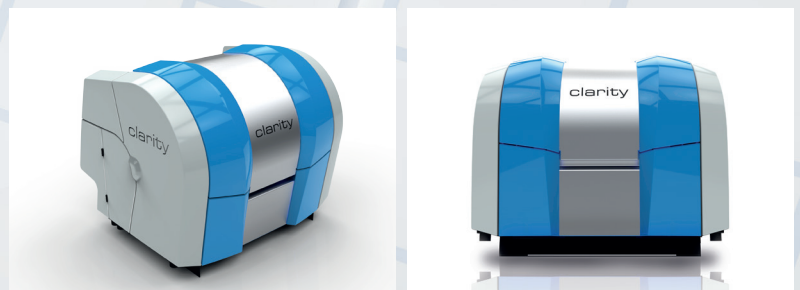
Recognition system cleans itself

The CLARITY has innovative cleaning possibilities: The machine can be optionally fitted out in the sensor and recognition area with an automatic cleaning system using an air-water mix or a metal partition. Cleaning ensures not only optimum recognition of the feed material, but also high availability of the sorting system and minimum maintenance.

Controllable Performance

for optimum production and end-product quality

Single machines and complete systems can be equipped with an automatic control system tailored to the respective task. The SortVisu programme records the states of the single sorting machines. Using further systems which are situated at sensitive positions in the complete system to record data, exact information about the state and performance of the respective machines and system components can be retrieved. Integrated alarm systems are able to report errors and critical states. As a response to these, measures can be introduced to achieve desired production and end-product quality, or an intervention in the control system to eliminate these errors can be automatically initiated.



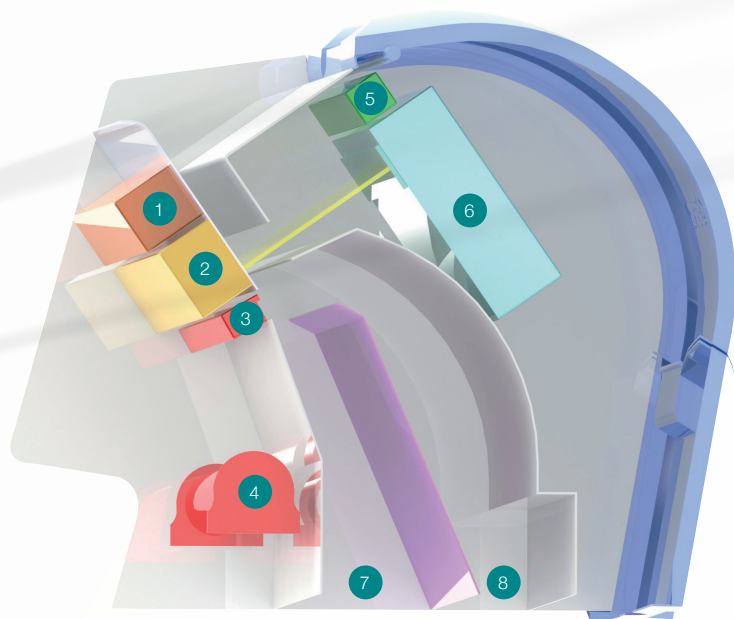
OPERATION

CLARITY is loaded with flakes in grain sizes between 2 mm to 50 mm. The material stream runs along an angular chute and the flakes are illuminated with light of a particular colour spectrum.

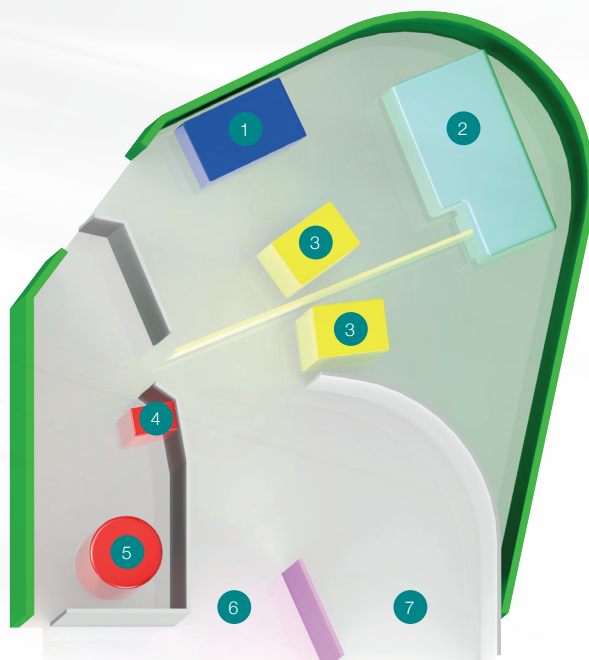
valves attached to the ejection unit are activated at the right moment. Depending on the programmable menu, contaminants and predefined colours are blown off into the freely selectable sorting ways.

The transmission/reflection information is recorded by highly sensitive cameras and analysed. The

- 1 Metal detection
- 2 Transmitted light
- 3 Sorting valves
- 4 Compressed air supply
- 5 Cleaning system
- 6 Sensor unit
- 7 Fraction passing through
- 8 Ejected fraction



- 1 Valve control
- 2 Sensor unit NIR
- 3 NIR lightening
- 4 Sorting valves
- 5 Compressed air supply
- 6 Fraction passing through
- 7 Ejected fraction



TECHNICAL DATA CLARITY plastic flakes, plastic granules and weee

Contamination and color sorting

Sorting width	700 mm	1000 mm	1400 mm
Capacity*	0,5 t/h*	0,7 t/h*	1 t/h*
Valves**	112	160	224
Grain sizes	10 - 50 mm	10 - 50 mm	10 - 50 mm
Sensor systems	VIS (RGB) transmission VIS (RGB) reflection NIR material recognition metal recognition		

Fine grain sorting (contamination and color sorting)

Sorting width	1000 mm	1400 mm
Capacity*	0,7 t/h*	1 t/h*
Valves**	320	448
Grain sizes	2 - 10 mm	2 - 10 mm
Sensor systems	VIS (RGB) transmission VIS (RGB) reflection metal recognition	

*dependent on the respective task and on the specific bulk density of the main fraction

**maximum number of valves per machine

To optimally equip the CLARITY for individual tasks, various valve configurations are available:

Distance in mm between valves	3,125	6,25	8,33
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