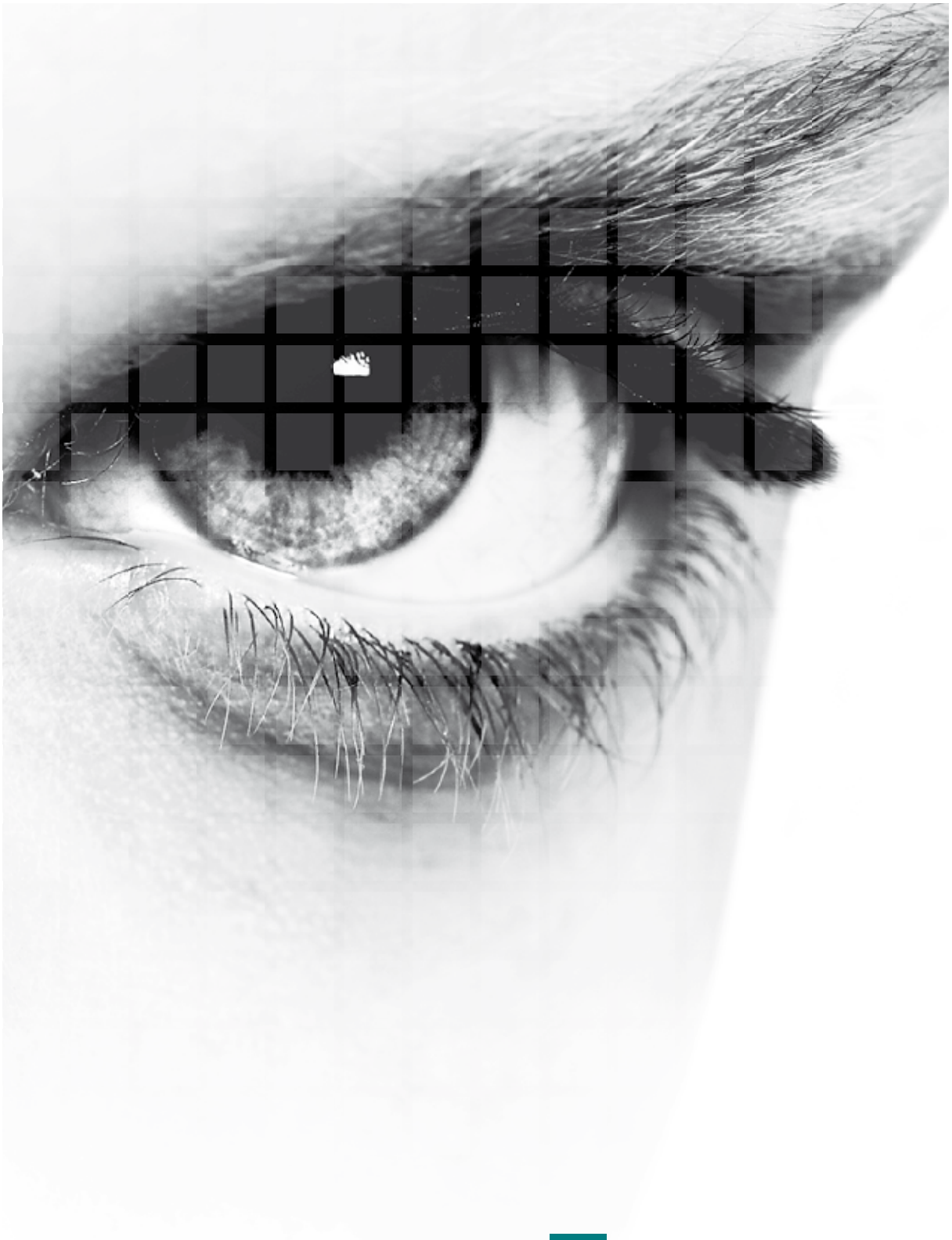
binder+co

clarity - the new generation

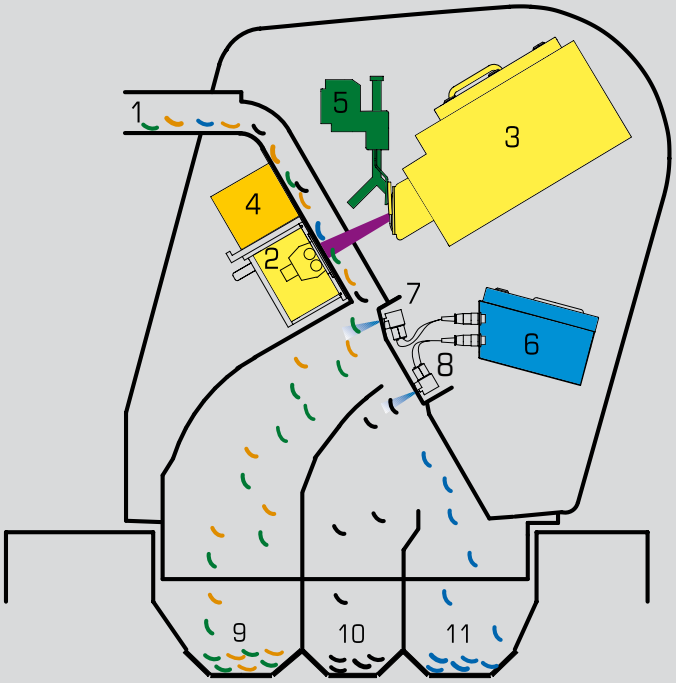
Environmental Technology

WASTE GLASS SORTING

Glass is a unique material. Its characteristics do not change – even in repeated recyclings. The highest standards of quality in finer and finer fractions with the lowest loss of glass – these are the requirements for the use of glass as a secondary raw material. Next to the removal of contaminants and sorting on the basis of colour, the separation of special heat-resistant types of glass is the chief challenge of modern sensor based sorting systems.



SORTING SYSTEM



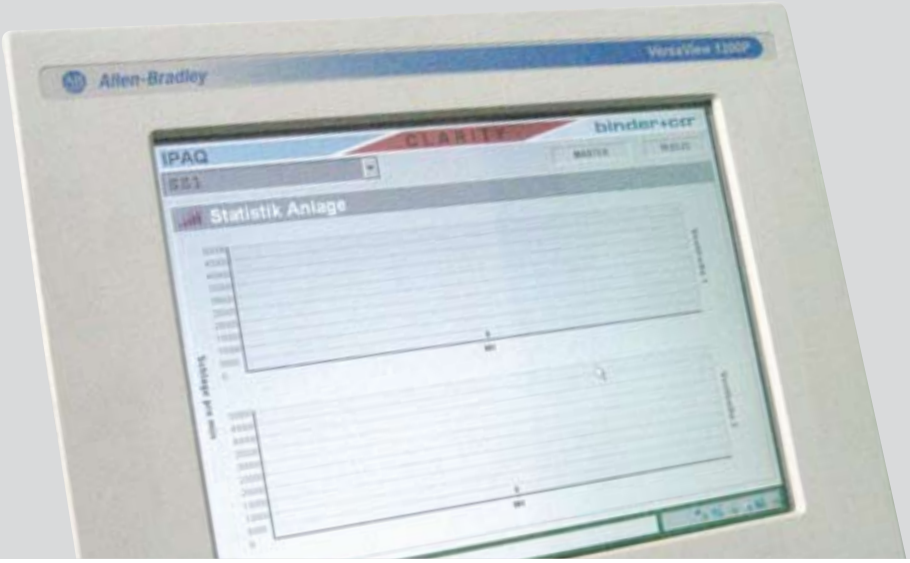
1 - Oscillating conveying trough
2 - Transmitted light
3 - Sensor unit
4 - Metal detection
5 - Cleaning System
6 - Direct valve control
7 - Sorting valves with nozzles (Series 1)
8 - Sorting valves with nozzles (Series 2)
9 - Ejected Fraction 1
10 - Ejected Fraction 2
11 - Fraction passing through

Binder+Co AG developed the first three-way cullet sorting system in the form of the CLARITY as early as the 1990s. This opened a variety of new possibilities for a flexible and efficient process design. The hitherto unachieved quality of CSP/NF recognition (ceramic, stone and porcelain/ non-ferrous materials), colour improvement and mixed-glass processing set new standards.

With the latest generation of CLARITY, Binder+Co AG is underlining its claim to technology leadership. Sorting special types of heat-resistant glass is an impressive addition to the capability of the system.

TECHNOLOGY

The system is charged with cullet of grain size 3 – 50 mm. The material stream runs over a glass chute at a 60° inclination. The cullet is arranged in single pieces by means of the acceleration.
CLARITY is a transmission system, and while on the chute the cullet is transilluminated using light of a special colour temperature. The transmission information is recorded by highly sensitive CCD cameras and analysed. The valves mounted on the blow-off strips are activated at the right time. Contaminants and predefined colours are blown off into the appropriate tracks according to the programmed menu. The sorting paths are freely selectable.



TECHNOLOGY

The co-ordination between camera units and lighting is carried out automatically. The cameras have a resolution of 0.35 x 0.4 mm per pixel. The system is equipped with differing numbers of valves depending on the specific application. Distances between the valves of 8.3 mm and 12.5 mm conform to the grain size of the material to be processed. The valve-opening times are automatically adjusted to the size of the object. This guarantees the highest possible sorting quality with the lowest loss of glass.

Specification of the sorting parameters and analysis take place by means of a PC with touchscreen. Up to eight CLARITY units can be controlled by one computer. Apart from pre-programmed menus, various recipes for combinations of sorting parameters and fine adjustments can be entered using the MMI on the touchscreen. Remote maintenance can be carried out using a modem and data line; something which has a positive impact on the quality of service. CLARITY is control-station compatible: it can be flexibly integrated into central control systems.

OPERATION

CLARITY has been designed in module form to enable a trouble-free integration in existing glass-recycling systems. CLARITY has a swing-type valve strip and is thus accessible for maintenance and operational checks.

CLARITY has innovative cleaning possibilities. The machine can be optionally fitted out in the sensor area with an automatic cleaning system using an air-water mix or a metal partition. The separator can be cleaned manually or with an optionally fitted automatic mechanism.

Self-cleaning, low consumption of machinery materials and long service life are some of the advantages of efficient waste glass processing by Binder+Co. Binder+Co is setting new standards in industrial goods not only by virtue of generous user-friendliness, but also in aesthetics and looks.

TECHNICAL DATA

Sorting widths	700 mm	1000 mm	1400 mm
Capacity*	6 t/h	10 t/h	12 t/h
Grain sizes	3 - 50 mm	3 - 50 mm	3 - 50 mm
Grain sizes HR	8 - 50 mm	8 - 50 mm	8 - 50 mm
Sensor system	CSP and colour recognition; optional NE sensor system		
Sensor system HR	CSP and colour recognition; optional NE sensor system		

*Values are mean values.

binder+co

- Processing Technology
- Environmental Technology
- Packaging Technology

Binder+Co AG, Grazer Strasse 19-25, A-8200 Gleisdorf, Austria
Tel.: +43-3112-800-0*, Fax: +43-3112-800-398
e-mail: ut@binder-co.at
www.binder-co.com

2008

Binder+Co AG's know-how in processing bulk materials and recycling materials is demonstrated in its broad range of special machinery, which is used world-wide in the extractive and recycling industries.

A special strength of Binder+Co is in the development, planning, design, manufacture, assembly and commissioning of one-stop customised solutions for specific customer requirements.

CLARITY is the top product from Binder+Co Environmental Technology.
Efficient technology in an exciting design.
CLARITY – the new generation – the standard in glass recycling.

Environmental Technology